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TOBACCO RESEARCH LABORATORY

HEARINGS
BEFORE THE
SUBCOMMITTEE ON TOBACCO
OF THE
COMMITTEE ON AGRICULTURE
HOUSE OF REPRESENTATIVES
EIGHTY-EIGHTH CONGRESS
SECOND SESSION
ON

H.J. Res. 885, H.J. Res. 891, H.J. Res. 894,
H.J. Res. 915, and H.J. Res. 916

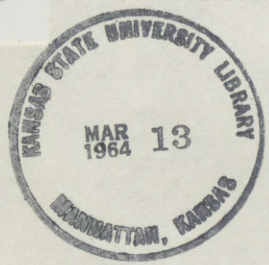
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TOBACCO RESEARCH LABORATORY

WEDNESDAY, JANUARY 29, 1964

HOUSE OF REPRESENTATIVES,
SUBCOMMITTEE ON TOBACCO OF THE
COMMITTEE ON AGRICULTURE,
Washington, D.C.

The subcommittee met, pursuant to notice, at 10:15 a.m., in room 1310, Longworth House Office Building, Hon. Watkins M. Abbitt (chairman of the subcommittee) presiding.

Present: Representatives Abbitt, Cooley, McMillan, Matthews, Stubblefield, Leggett, Dague, Short, Latta, and Hutchinson.

Also present: Representatives Grant, Jones of Missouri, Purcell, Hoeven, Abernethy, Fountain, Watts, Kornegay, Tuck, Taylor, Hall of Missouri, Jennings, Natcher, Lennon, Whitener, and Henderson.

Staff members present: Christine S. Gallagher, clerk; Francis LeMay, consultant; Hyde Murray, assistant clerk; and Robert Bruce, assistant counsel.

Mr. ABBITT. The subcommittee will come to order.

We have called this hearing of our Tobacco Subcommittee of the Committee on Agriculture of the House at the request and the suggestion of Congressman Cooley, the chairman of the full committee. The purpose of the hearing is not to criticize the report that has been presented, regarding smoking and health, but rather to see where we go from here, to look into and investigate and try to have a thorough study, a thorough research study, made by the Department of Agriculture. It is one of the most important aspects of our economy, tobacco. Tobacco, as you know, brings in approximately \$3 or \$4 billion annually in taxes to the Federal Government and to the State and local governments.

It is enjoyed by millions and millions of people. We hope to set in motion a study that might make it possible for these people to continue to enjoy tobacco free from any health hazard.

I would like to ask Chairman Cooley if he has a word that he would like to say at this time before we proceed with the witnesses.

Chairman COOLEY. Mr. Chairman, all I have to say is that I introduced the resolution calling for a broad program of research. It was not something that just recently occurred to the members of this committee, because I think a year and a half ago or possibly 2 years ago, the members of the committee interested in the tobacco industry sought to obtain an increased appropriation for research and at that time we failed in our efforts. This is not something that is new to us, because we know that all through the years there has been some question about the harmful effects of tobacco, especially in cigarettes. As has been brought out by Mr. Abbitt, this is an important economic

problem that faces us, but most important of all is the health of our people, and I hope that these hearings may be restricted to the resolutions and not a discussion of this report which has been presented. The report speaks for itself and is subject to different interpretations and different conclusions, which may be drawn from the evidence that was taken, the data that was selected and considered.

We have invited everybody interested in this subject to come here, to appear in this forum, to present their views. We will have the Governors of the tobacco-growing States, the commissioners of agriculture from the tobacco-growing States, and officials of the tobacco organizations and other associations who are interested in this problem. We will also hear from the farm leaders and from Members of the Senate and Members of the House in the tobacco-growing areas. I am sure that the hearings will not be restricted to that list of witnesses that I have just enumerated, but that an opportunity will be accorded anyone interested in presenting their views, either in support of the resolution or in opposition to the resolution.

We have several resolutions pending before the committee. I know that in addition to my resolution, there is one by Mr. Natcher, of Kentucky; one by Mr. Abbitt, of Virginia; and one by Mr. Kornegav, of North Carolina. We hope that following these hearings, we will be able to reach an agreement, and if there are differences, to compose those differences, and to come out with a resolution that will have the unanimous support of the committee. We will also urge that our Government embark upon a broad, comprehensive research program and try to find out the true facts about cigarettes and if they are dangerous and a menace to health. And, if so, people should know it and we should not drift along as we have been drifting.

We are spending about \$1.5 million, I think, in research in this industry which is valued at billions of dollars. And the expenditure of that amount of money to build a laboratory to conduct scientific research would be absolutely negligible in relation to the dollar value of the industry with which we are dealing.

That is about all I have to say, Mr. Chairman.

I would like to suggest this, since we have many very distinguished people here this morning, some very busy people—and I know that they have come here at a great sacrifice to themselves—I would like to suggest that we hear the Surgeon General and that we withhold questions until we have had an opportunity to call at least the two Governors who are present, the Governor of my own State and the Governor of Kentucky. I am sure that they will be very brief. And I am certain that if it meets with the wishes of the Surgeon General, I suggest that we let him make his statement and then hear the Governors.

Mr. ABBITT. Without objection, we will proceed that way.

Dr. Terry, we are delighted that you can be with us today. We will be glad to hear from you at this time. We appreciate your being here. And in line with the suggestion that we have heard from the chairman, we shall proceed to hear you, without asking questions at the end of your statement. And then we will be pleased to hear the Governors, and if there are any questions we will have those, and if you have any further statement to make then, we will be glad to hear it, too. We will be glad to hear from you now.

(H.J. Res. 885 by Mr. Cooley and H.J. Res. 894 by Mr. Abbitt are identical and the text of these resolutions follows:)

JOINT RESOLUTION To authorize and direct the Secretary of Agriculture to conduct research into the quality and health factors of Flue-cured tobacco

Resolved by the Senate and House of Representatives of the United States of America in Congress assembled, That the Secretary of Agriculture is authorized and directed to establish and place into operation at the earliest practicable date a laboratory and any associated field stations necessarily appurtenant thereto for the purpose of conducting research into the plant breeding, culture, production, and handling of cigarette tobacco designed to ascertain and emphasize those quality factors and other characteristics which will preserve the desirable characteristics of cigarette tobacco and eliminate therefrom any characteristics which may be detrimental to health. Such laboratory shall be established in the Flue-cured tobacco area so that its studies and findings shall be related as closely as possible to typical soil, climatic, and environmental factors existing in such area. There is hereby authorized to be appropriated for the construction and operation of such laboratory and field stations such sums as the Congress may from time to time determine to be necessary.

(H.J. Res. 891 by Mr. Kornegay follows:)

JOINT RESOLUTION To authorize and direct the Secretary of Agriculture to conduct research into the quality and health factors of Flue-cured tobacco

Resolved by the Senate and House of Representatives of the United States of America in Congress assembled, That the Secretary of Agriculture is authorized and directed to establish and place into operation at the earliest practicable date a laboratory and any associated field stations necessarily appurtenant thereto for the purpose of conducting research into the plant breeding, culture, production, handling, processing, manufacturing, and consumption of tobacco and tobacco products designed to ascertain and emphasize those quality factors and other characteristics which will preserve the desirable characteristics of tobacco and tobacco products and eliminate therefrom any characteristics which may be detrimental to health. Such laboratory shall be established in the Flue-cured tobacco area so that its studies and findings shall be related as closely as possible to typical soil, climatic, and environmental factors existing in such areas and in close proximity to tobacco products manufacturing centers so that its studies shall be related as closely as possible to the processing of the leaf and the manufacturing of cigarettes and other tobacco products. Such laboratory shall consult with and cooperate with State and private organizations engaged in similar programs. There is hereby authorized to be appropriated for the construction and operation of such laboratory and field stations such sums as the Congress may from time to time determine to be necessary.

(H.J. Res. 915 by Mr. Cooley, and H.J. Res. 916 by Mr. Abbitt were introduced subsequent to the hearings and the text of these identical resolutions follows:)

JOINT RESOLUTION To authorize and direct the Secretary of Agriculture to conduct research into the quality and health factors of tobacco and other ingredients and materials used in the manufacture of cigarettes

Resolved by the Senate and House of Representatives of the United States of America in Congress assembled, That the Secretary of Agriculture is authorized and directed to establish and place into operation at the earliest practicable date a special program of research into the production, handling, manufacture, and use of tobacco designed to ascertain and preserve the desirable quality factors and characteristics of tobacco products and eliminate therefrom factors, properties, or substances which may be detrimental to health. Such special research program shall include authority to establish and operate laboratories and field stations, including the acquisition of land or interest therein, as determined by the Secretary to be necessary, so located as to relate the research studies and findings as closely as possible to typical soil, climatic, and environmental factors in the production and handling of cigarette tobacco. There is hereby authorized to be appropriated, without fiscal year limitation, for purposes of such special research program such sums as Congress may from time

to time determine to be necessary. For purposes of this resolution, the Secretary of Agriculture may, notwithstanding other provisions of law, (1) use, on a reimbursable basis, the available personnel, facilities, and services of other Federal agencies and instrumentalities as he deems necessary, and such agencies and instrumentalities shall furnish such assistance to the Secretary; (2) enter into contracts and agreements with State agencies and private interests; and (3) accept contributions from non-Federal sources.

STATEMENT OF DR. LUTHER L. TERRY, SURGEON GENERAL, ACCOMPANIED BY DR. JAMES M. HUNDLEY, ASSISTANT SURGEON GENERAL FOR OPERATIONS, PUBLIC HEALTH SERVICE, DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE

Dr. TERRY. Mr. Chairman and members of the committee and other Members of Congress, I am pleased to be invited to appear before this subcommittee. I would like first to make a few general observations. Our staff has now had an opportunity to study the report of the Advisory Committee on Smoking and Health. We believe it is an excellent report and agree with all of the major findings and conclusions. Consequently, I announced just 2 days ago that I had endorsed the main findings and conclusions, which will now constitute general policy for the Public Health Service. I was very pleased to learn last week that the Surgeons General of the military medical services are supporting the report—and propose to take action in accord with it.

Within the limits of our legislative authorizations and appropriations, the Public Health Service intends to take actions in accord with the nature and magnitude of the health hazards as revealed by the Committee's report. Our staff is still working out the details of these actions which we hope to announce soon. Broadly speaking, however, they will fall into two fields—education and research.

EDUCATION

I would like to mention briefly the first of these—education. I will be brief since I realize that this facet of our planned actions is not the primary purpose of these hearings. I think this committee should know, however, that our basic legislation authorizes and directs the Surgeon General to make health facts known to the American people. This is one of our major and continuing functions.

The public release of the Committee's report constitutes one means of making the facts about smoking available to the people. But this is not enough. Scientific findings must be kept before the people if they are to take and sustain actions to benefit their own health. Prevention is the traditional public health approach to health problems. In the long run we believe it will be the most effective approach to this problem. Our primary efforts, therefore, will be focused on young people—attempting to motivate them not to take up the smoking habit. We realize full well that many confirmed smokers will continue to smoke, and that many of those who stop will resume the habit.

Consequently, we feel that our educational efforts must also include measures designed to minimize adverse health effects in those who continue to smoke. The available scientific evidence suggests a number of ways in which this could be accomplished, such as smoking less, in-

haling less, switching from cigarettes to pipes or cigars, and so on. We also need more effective methods to help the smoker break the habit. This is particularly important for those individuals whose physical condition makes it imperative that they cease smoking.

Now with regard to research, which is much more appropriate to this hearing, this is our second major program category. Three kinds of research are called for:

1. First we need to know much more about the relationship of smoking to certain diseases as well as to overall mortality. Coronary artery disease, now the leading cause of death in this country, is a good example. The Committee was unable to reach a firm conclusion as to the role smoking plays in causing or precipitating death from this disease. We need to find out for sure whether smoking is a factor in this disease or whether it should be exonerated.

2. Social and behavioral research is another important field. We need much more knowledge about why people start smoking, why they maintain this habit, how they can stop once started. We need to know more about the alleged beneficial effects of smoking. If such exist, we need to know how to measure them so that the benefit can be balanced against the hazard. This is one of our dilemmas in the smoking problem. In other areas—automobiles and traffic accidents, pesticides and insecticides—we can at least approximate a balance of benefit against risk. We cannot do this with smoking because we can't at this time measure the benefit.

3. The third research category is how to make smoking safer. There are a number of approaches which are feasible and definitely need increased support.

We need to know much more about the substances in tobacco smoke which produce the health hazards. Until we know more in this area, we will be handicapped in our efforts to remove the hazard. It is difficult to design a method of removing something if you don't know what it is. For example, the known substances in tobacco smoke can account for only a small portion of its cancer-producing power. We have no real clues as to what it is in tobacco smoke that influences coronary artery disease—if indeed it does.

There would seem to be a fertile field for research such as that proposed in the resolution now before this committee. In this specific context, I am sure the committee will realize that I must speak with some caution and reservations since I am not an agricultural or horticultural expert.

I still feel nonetheless that I can wholeheartedly support additional research of the types which the resolution would authorize and direct. It is well known that strains of tobacco differ quite widely in various constituents. It is well known that the levels of some of these constituents influence the amount of hazardous or potentially hazardous substances in tobacco smoke. I would give a great deal to know whether the types of tobacco used for pipes and cigars have anything to do with the lesser hazards associated with these modes of tobacco use. If tobacco behaves as other vegetables, I am sure that the amount of some of its constituents will vary with the conditions of culture, soil, climate, fertilizer, and other agricultural practices.

This suggests, however, another area of research. Any vegetable material, when burned under the conditions prevailing when tobacco is smoked, will produce hazardous substances. Coal, oil, paper, even spinach, all produce benzo(a)pyrene, a potent cancer-producing sub-

stance, when burned. The efficiency of the combustion process makes a marked difference in the amount of this chemical in the smoke. As a matter of fact, most of the cancer-producing compounds identified in cigarette smoke are not present in the native tobacco leaf but are formed during the burning process.

These facts suggest that it will not be enough simply to develop better strains of tobacco and better methods of cultivation. We must also develop better methods of preventing the formation of these substances during the burning of tobacco, as well as of removing by filtration or other means the hazardous substances that are formed. Both of these areas are promising avenues for further development—and have the potential of making smoking safer.

It is well known that cigarettes can now be produced which yield quite low amounts of tars and nicotine, either by selection of the types of tobacco, by filters, or other means. It is relatively easy to measure this quantitatively. What isn't so well known, or so easy to measure, is the biological significance to man of the substances which do come through. Tobacco smoke is an exceedingly complex mixture of many different substances. It is not the amount of tars and nicotine removed that counts, it is the type and amount of hazardous substances that get into man that is important.

In summary, gentlemen, the actions which I have outlined have the common purpose of avoiding or minimizing the intake of hazardous substances by the American people. Action on many fronts is urgently needed. The Public Health Service intends to do what it can. This important and complex problem also calls for appropriate action by other Federal agencies, by State and local agencies, by nongovernmental organizations, and by the tobacco industry.

This concludes my prepared statement. I have with me Dr. James M. Hundley who is Assistant Surgeon General for Operations in my immediate office. Dr. Hundley was officially Vice Chairman of the Committee but actually served as the working Chairman of the Committee throughout its deliberations.

At the appropriate time, Mr. Chairman, we shall be happy to answer any questions.

Mr. ABBITT. Thank you very much, Dr. Terry. If it is agreeable, will you please wait?

Dr. TERRY. Thank you; yes.

Mr. ABBITT. The Chair would like to recognize Mr. Cooley at this time.

Chairman COOLEY. Mr. Chairman, I have the honor and the privilege of presenting the next witness, the very distinguished Governor of North Carolina, who has been interested in the problems we are now discussing for many years. I think you know that he was here when we were trying to obtain larger sums of money for tobacco research. He represents the largest tobacco-growing State in the Nation, and I think that we all agree that tobacco means more to the economy of North Carolina than it does to any other State in the Nation, both from the standpoint of the production of the crop and the profit from it.

I take great pleasure in presenting to you the Honorable Terry Sanford, Governor of the State of North Carolina.

Mr. ABBITT. We will be very pleased to hear from you. We thank you very much for coming.

STATEMENT OF HON. TERRY SANFORD, GOVERNOR, STATE OF NORTH CAROLINA

Governor SANFORD. Thank you very much, Mr. Chairman and members of the committee.

I do represent the No. 1 tobacco-producing and tobacco-manufacturing State in the Nation, but I do not come here today because I have any fear about the economy of North Carolina. I do not come here in any mood to protect the industry or the farming segment of the economy concerned with growing tobacco, because I do not think that is necessary. I do think that really the problem is that the people are not going to quit smoking all of a sudden, causing the economy to collapse. I come here with a broader concern, a concern that our tobacco people have, our manufacturers, our growers, just as many other Americans have, the problem affecting the health of many Americans.

And, certainly, judging by the 70 million Americans who enjoy smoking, it is obvious that a large proportion of the population of this Nation gets satisfaction from cigarettes. As evidenced by what happened in England and other countries after the release of reports comparable to the recent report we had in this country, the vast majority of these people are going to keep on smoking.

It has long been suspected that excessive smoking, like excessive eating, excessive drinking, and excessive speed in automobiles, could be dangerous to health.

The recent report of the Surgeon General's Committee has statistically confirmed these suspicions. The question is what do we do about it.

It would seem that the sensible solution would be found in research, to determine what in cigarette smoke causes a correlation between cigarettes and health problems. I believe all the experts have agreed that the cause of the health problem is yet to be determined.

It may be smoke itself. The problem may arise from the way tobacco is fertilized. It may be that the problem stems from the way the tobacco is cured. It may be the way tobacco is processed. It could conceivably be what goes into the production of the cigarette paper.

Recently a letter came from a distinguished scientist in England suggesting that maybe the same kind of tense person who was inclined to smoke excessively would be the kind of person who was most susceptible to cancer, regardless of smoking.

Last night a citizen of ours down in Congressman Cooley's district suggested that I suggest that maybe the cause was not cigarettes, but the cigarette lighter. I thought maybe that was carrying it a little bit too far. He wanted me to bring in a china dish and show the stains that the cigarette lighter would leave, as compared to cigarette smoke. While this is an example that is a little bit beyond reason, nevertheless it points up the fact that we do not really know just what is causing the damage to health.

For example, researchers at Harvard University recently have identified a radioactive element, polonium, in cigarette smoke. We do not know whether this is the cause of the health problem or not. If it is, surely we can remove it. The answer to this and a multitude of other questions can be settled only through extensive and exhaustive research.

Health is more valuable than any industry, but as an indication of the magnitude of any solution, the value of the tobacco industry to the United States is estimated at more than \$8 billion a year.

Some 750,000 or 800,000 farm families depend on tobacco as either their No. 1 money crop or one of their major money crops.

The economic welfare of some 17 million Americans is dependent to one extent or another on tobacco.

The tobacco industry is the purchaser of one-fourth of the Nation's foil and is the third largest user of cellophane and one of the largest consumers of paper products.

Total cash receipts to tobacco farmers is in excess of \$1.3 billion a year.

In our free enterprise economy, the tobacco industry is one of the most important advertisers.

The tobacco industry is a highly important revenue source to Federal, State, and local governments. The Federal Government itself collects more than \$2 billion annually from tobacco taxes. The State governments of our Nation collect another \$1 billion a year.

I would respectfully suggest to the members of this committee that anything as important to the agricultural, industrial, and commercial economy of our Nation is well entitled to research support in the form of a substantial appropriation from the Federal Government.

Whatever the size of such appropriations, they would be but a small fraction of the money that the growers, processors, manufacturers, distributors, and consumers of cigarettes have paid to the Federal Government over many years.

In brief, I believe that our Nation can afford neither ill effects on the physical health of its citizens nor ill effects on the economic health of our people.

Whether this research program should be done at an institute especially set up for such purpose, or through grants to already established centers for research, or to university and medical centers, is up to the good judgment of the members of this committee and of the full House and Senate.

Where this research will lead, of course, will be determined by the researchers. It could well lead to thorough studies of fertilizers and insecticides used in the growing of tobacco. It could lead to a thorough investigation into the manufacture of cigarettes.

It might lead to any of a number of studies.

As the Governor of a State which is the No. 1 grower and the No. 1 manufacturer of cigarette tobacco, I do not suggest we should close our eyes and protect the industry regardless of human costs. I must say that all of the people I know in the tobacco industry—maybe at times they appeared to be a little defensive which is human—from the farmer to the retailer they are just as interested in health as any group in this Nation.

But I cannot believe that the solution will be found in attempts toward prohibition, just as I do not believe that the solution for overweight is the abolition of food.

In the old days we did not try to abolish water drinking simply because some water was polluted and some water caused some people to have typhoid fever.

We have not required automobile manufacturers to put hair-raising danger signs on steering wheels of their products simply because a lot of people do not properly use their cars and because a lot of people are killed in automobile accidents.

The Federal Government does not require deadly warnings on airline tickets simply because there is an occasional plane crash.

By the same token, I don't see how we, in good sense, can subscribe to a theory that the solution to this problem is to require printing a skull and bones or any other scary labels on cigarette packages.

The members of this committee may recall the story of what happened to Sir Walter Raleigh when a member of his household first saw him smoking. This was tobacco that had been taken back from North Carolina. It was at a place in North Carolina then called Virginia, gentlemen. [Laughter.] This friend, fearing that Sir Walter was on fire, rushed to his rescue by dousing him with a pail of water.

I do not believe in this day we could, or should, douse some 70 million Americans.

With the Surgeon General, I believe rather that the Government should give full support to continued and expanded research that will lead us to the answers to this problem.

Therefore, I am here to solicit your support for authorization and appropriations for a research program that will provide us with the answers.

Mr. ABBITT. Governor, on behalf of the committee, especially those of us who introduced the resolutions, I want to say that we appreciate so much your coming here.

Chairman Cooley has some comment.

Chairman COOLEY. Governor, this is not the first indication of your interest in this problem, is it?

Governor SANFORD. Well, as you know, we have contended for a long time that there were many things that needed research and, particularly, the health problems, from the time that this has been raised. And, certainly, that is from the time that I have been in office. You and I, and Congressman Kornegay and many others have certainly been concerned with pointing out that research is necessary. And I think now that specifically it is demonstrated that there is a correlation which adds strong evidence to what we have been trying to say all of the time.

Chairman COOLEY. As you know, a year and a half ago we sought to increase the appropriations for research in the field of tobacco.

Governor SANFORD. That is exactly right. And we failed for many reasons, but I think now that we have all of the evidence that we need to justify research.

Chairman COOLEY. In other words, this report would substantiate our conviction at the time we sought to get an increase.

Governor SANFORD. I certainly think so.

Mr. ABBITT. Thank you again very much.

Governor SANFORD. Thank you.

Mr. ABBITT. I would like at this time to recognize Congressman Stubblefield from Kentucky.

Mr. STUBBLEFIELD. Thank you, Mr. Chairman and gentleman of the Committee. Kentucky is also keenly interested and is deeply concerned about the tobacco report. In Kentucky this is the No. 1 cash crop; that is, tobacco. We have a keen interest in the tobacco hearing to determine several things, and one is that we need more research in this field. Indicative of our deep interest in this subject is the presence here of the Governor from our State. I would like to present the distinguished gentleman who is the Governor of Kentucky, who has come to attend this hearing. And with him is Wendell P. Butler, the commissioner of agriculture for the Commonwealth of Kentucky; Field McChesney, the executive assistant to the Governor; and Dr. William A. Seay, the dean of the college of Agriculture and Home Economics and the director of the Kentucky Agricultural Experiment Station and Kentucky Cooperative Extension Service.

Before I go any further, I would like to say that I should like to recognize the fine First Lady, Mrs. Edward T. Breathitt. Will you stand up, please? [Applause.]

I would like now to present to this committee from my home district, my neighbor. I am delighted and honored to present to you the Honorable Edward T. Breathitt, the Governor of Kentucky. And may I add, Mr. Chairman, that perhaps he would like to have the others sit with him.

Mr. ABBITT. You may do so, Governor. It is indeed an honor for us to have you appear before us. We appreciate your coming. We will be glad to hear from you at this time.

STATEMENT OF HON. EDWARD T. BREATHITT, GOVERNOR OF THE STATE OF KENTUCKY; ACCOMPANIED BY FIELD McCHESNEY, EXECUTIVE ASSISTANT; WENDELL D. BUTLER, COMMISSIONER OF AGRICULTURE; AND DR. WILLIAM A. SEAY, DEAN OF THE COLLEGE OF AGRICULTURE AND HOME ECONOMICS

Governor BREATHITT. Thank you, Mr. Chairman, Congressman Cooley, and members of the Kentucky delegation and other distinguished Congressmen who are present at this hearing. I deeply appreciate this opportunity to be invited to speak in behalf of the resolutions of Congressman Cooley and others in support of additional money for tobacco research.

It is a privilege to appear before you to discuss the importance of research in accomplishing maximum assurances of health in the use of tobacco.

Within the past few days I have discussed the contribution which the University of Kentucky at Lexington is ready and eager to make in an intensive investigation of the problem of tobacco and health. I talked with Dr. John W. Oswald, president of the university; Dr. William R. Willard, vice president for the medical center; and Dr. William A. Seay, dean of the College of Agriculture and Home Economics and director of the Kennedy Agricultural Experiment Station. I also talked with Beardsley Graham, president, Spindletop Research,

which research center also is at Lexington and which cooperates closely with the University of Kentucky. All are vitally interested in tobacco research pertaining to health.

The university as a whole, and especially the medical center and the Agricultural Experiment Station with the National Tobacco Research Laboratory, stands ready to undertake expanded research on tobacco and health.

Our new \$4.5 million Agricultural Research Center, which houses the National Tobacco Research Laboratory—a facility which received a doubling of its support to approximately \$400,000 from Congress this year for which we are deeply grateful in the tobacco industry—is physically adjacent to the new \$27.8 million university medical center, and Spindletop Research has recently occupied a new \$4 million facility nearby—all of which have been built primarily by Kentucky money rather than by Federal funds. These institutions are ideally located for a completely integrated program of research on tobacco from the agronomic through the medical phases.

They are staffed by able scientists capable of taking hold of a research problem of this kind and pursuing it with ability and imagination. They are now working together in several areas of research, for example, in enzyme chemistry, in germ-free animal laboratory techniques, and in identification of tobacco smoke constituents. All these are pertinent to the effects of tobacco on health.

I should mention that it is the philosophy of President Oswald, who himself is a well-known scientist, from the University of California, that the total applicable resources of the university shall be brought to bear on each major problem regardless of college and departmental lines. University scientists in general chemistry, biochemistry, biology, or any other discipline would thus be brought into the study if it were felt that they could make a contribution to it. There is an intensification of graduate work in these lines at the present time.

What seems to be needed is identification of the compounds or constituents of smoke which are detrimental and should be controlled, including such matters as the possible buildup of radioactive materials in stored leaf. Research required for this identification needs to be done with the plant and its smoke by agricultural and chemical researchers, and with the effects of the smoke on animals by medical researchers. These two groups of researchers need to be in close cooperation. Thus a completely integrated program of research from the agronomic and the medical standpoint is essential. The University of Kentucky, located as it is in an important tobacco-producing area, with the National Tobacco Research Laboratory adjacent to a medical center, and all these within a few miles of Spindletop Research, is in a unique position to carry out such a program.

Only yesterday, January 28, it was announced that the University of Kentucky Medical Center has been granted the sum of \$784,805 from the Public Health Service to establish a center for the clinical study of human illness. For that we are also grateful, gentlemen.

Obviously the study of disease induced by smoking would be closely related to this soon-to-be-established center for the study of human illness.

May I here add my comment on what I conceive to be a responsibility of the utmost importance on the part of the Federal Govern-

ment to support a greatly expanded program of research into the question of tobacco and health. Tobacco has great social and economic importance to our people and to the Government. It provides jobs, tax money, solace, and satisfaction. These must be protected.

We have noted a tendency in some quarters to begin seeking substitutes for tobacco in cigarette making. The report that has caused so much of present concern, "Smoking and Health," states that the products of burning when cigarettes are made of vegetable fibers other than tobacco have the same inherent properties of possible carcinogenic materials that are in the tobaccos presently being used. This avenue, therefore, is no way out of our dilemma. Since smoking of some form of materials will undoubtedly continue for a long while to come, it seems clear that Agriculture, and Health, Education, and Welfare, and all other agencies and departments concerned should join forces to do a thorough and objective job of finding out the facts and devising means of meeting them.

On the basis, therefore, of an outstanding background of successful experience into tobacco research, and of a desirable complex of agricultural, chemical, and medical research already in existence at Kentucky, and of a strong research program already underway in our National Tobacco Research Laboratory and at Spindletop Research, I would propose that a sizable appropriation be made annually to the University of Kentucky, to be used in intensive investigations into the relationship between tobacco smoking and health and the means of controlling or eliminating the injurious effects.

And not only to the University of Kentucky, but we feel that every possible support can be given to all other research facilities in this Nation, and in Congressman Cooley's State, and in the other States, and in the other institutes that can give research in this vital field. We feel that a crash program is important to resolve the problem that confronts the people today.

This is a program that should be started at once and scheduled on a crash basis. I assure you that we are ready for it and believe that the use of the facilities I have described will hasten the day when people may smoke with maximum assurance of health.

I pledge the cooperation of all departments of the University of Kentucky and of all agencies of the Commonwealth of Kentucky in making this research successful.

Mr. Chairman and members of the subcommittee, I appreciate this opportunity to make this statement and the recommendations I have included.

I pledge our support in the overall research program to the members of this committee, the Members of Congress, and to industry toward the overall solving of this problem, in addition to those facilities which we have available and which we desire and hope to be the recipient of additional funds, so that we can accelerate our crash program.

I thank you.

Do you prefer to hear from our commissioner of agriculture while he is here with us now? He has a very short statement.

Mr. ABBITT. I want to thank you for your splendid statement, Governor. I appreciate your being here.

Chairman COOLEY. Let me ask the Governor one question. I want to congratulate and commend you upon your fine statement. Specifi-

cally, do you not regard these problems that we are talking about as national problems and not ones which only concerns Kentucky and the tobacco States?

Governor BREATHITT. Yes, sir.

Chairman COOLEY. Problems which concern all areas of the country?

Governor BREATHITT. I agree with that.

Chairman COOLEY. The reason that I brought that out is that someone has suggested that it is something which Mr. Cooley has started because of our interest in our own district.

Governor BREATHITT. I think that it is of concern in every State in the Union.

Chairman COOLEY. It is now a national problem?

Governor BREATHITT. I agree with you, Congressman Cooley.

Chairman COOLEY. Thank you.

Mr. STUBBLEFIELD. Governor Breathitt, is it not true that during the last session of the legislature, the State appropriated a million dollars for building a tobacco research center?

Governor BREATHITT. It is true, Congressman Stubblefield.

Mr. Chairman, with your permission, we have brought exhibits showing the facilities which we have built with State funds, and also with the appropriations which you have been so gracious to grant us, for a national tobacco research center. And I would ask that these be presented to the committee. You will notice that on these pictures there is the new medical building, the \$27.5 million medical center, immediately adjacent to the National Tobacco Research Institute. And directly behind them you will see the greenhouses.

We have the dean of the college of agriculture available for any questions which any of you might ask concerning these facilities.

Mr. ABBITT. I want to thank you again.

Governor BREATHITT. Thank you.

Mr. ABBITT. We will be glad to hear from you now, Commissioner.

STATEMENT OF WENDELL BUTLER, COMMISSIONER, DEPARTMENT OF AGRICULTURE, STATE OF KENTUCKY

Mr. BUTLER. Mr. Chairman and members of the subcommittee, I have heard Governor Breathitt's statement and I would like to say that I concur. He has expressed my viewpoint. I have a statement, but since I would be duplicating a lot that he has said and I am supposed to appear tomorrow, I would like to ask at this time that it be made a part of the official record.

Mr. ABBITT. Without objection, that will be done.

Mr. BUTLER. And then I should like to make a few brief comments. I realize the value of time. We do feel that the tobacco industry in the Nation, not only in Kentucky, is challenged, and there never has been a time when it faced a greater challenge. And if there has ever been a time when we need some research it is, certainly, now on health in tobacco. And I want to congratulate this committee and especially, Congressman Cooley for his effort to focus attention on the importance of research on smoking and health at this time.

The Surgeon General's report, certainly, has made this situation urgent. We are here to say that we really see the need of additional

research. And, secondly, it should be a crash program, because now is the hour.

And third, we do not oppose research anywhere else. We think anywhere at this time is good. It is a national problem.

Mr. ABBITT. Thank you very much, Mr. Butler. Your formal statement will appear in full in the transcript.

Mr. BUTLER. Thank you.

(The prepared statement of Wendell P. Butler follows:)

STATEMENT OF WENDELL BUTLER, COMMISSIONER, DEPARTMENT OF AGRICULTURE,
STATE OF KENTUCKY

My name is Wendell P. Butler, and I am commissioner of the Kentucky Department of Agriculture. My interest in this subject is due to the responsibilities that our agency of State government has for preserving and promoting the welfare of Kentucky agriculture and the impact of the tobacco industry on the economy and the general well-being of our State and Nation. For this reason, I appreciate this opportunity to emphasize the importance of a more intensive tobacco research program which we believe will be in the interest of the public as well as the industry itself. We want the necessary facts, and we believe that scientists can objectively evaluate what is known and what is not known about tobacco.

On January 13, exactly 1 week after I assumed the office of Kentucky commissioner of agriculture, I asked for a Federal crash program of research to evaluate the voluminous private studies financed by the tobacco companies and health agencies. I also suggested that the new national tobacco research laboratory located at Lexington, Ky., would make a most adequate facility for an exhaustive research project of this type—at a minimum of cost to the Federal Government. Kentuckians take pride in the fact that our State is the home of the National Tobacco Research Laboratory—a part of one of the most modern and complete State agricultural science centers in America. Federal appropriations have already been made for tobacco research at this laboratory, and outstanding progress is being made. In addition to the sizable amount of State money that Kentucky has put into tobacco research, we are now in the process of constructing a complex of buildings, that will finally cost \$10 million. Within this science center will be an arrangement of research operations and facilities that may be expected to supplement in all possible ways the urgent research problems conducted within the National Tobacco Research Laboratory. In addition the entire research center including the National Tobacco Research Laboratory is in the proximity of \$28 million Government financed medical center.

The tobacco business is at a crisis—the Surgeon General's report on "Smoking and Health," has caused great concern and the reactions of this subcommittee and the entire tobacco industry may decide the future and prosperity of an \$8 billion enterprise which pours \$3.3 billion in taxes into State, local, and Federal Governments each year. Tobacco provides employment for perhaps 5 million Americans, and in my home State it is our No 1. business.

Kentucky has a huge stake in the tobacco problem for a threat to this industry is a threat for all Kentuckians and to their way of life.

In my State, tobacco prices set real estate values; bring good times, or bad, for our economy; furnish additional money to go to Detroit for autos, trucks, and tractors; permit homes to be modernized; and oftentimes make a college education possible for deserving young men and women. Annually over one-half million Kentucky farm people turn the soil, plant, cultivate, cut, cure, and finally market some 550 million pounds of tobacco. In December 1963, unemployment insurance records show that 16,363 Kentuckians were employed in the processing of tobacco only. These people earn more than \$60 million in salaries and wages which is another great contribution to our economy. This does not account for all the employment that occurs before the product reaches the jobs that are covered by the unemployment program.

During 1963, in Kentucky, our farmers were entitled to 172,860 allotments to produce Burley, Dark Air-cured, or Fire-cured tobacco. The selling season in our State has not been completed at this time, but it can be conservatively estimated that the growers will receive more than one-third of a billion dollars for the sale of last year's crop. Applying a rule of thumb used by certain States

to measure economic activity we might conclude that the Kentucky tobacco industry alone has a \$1½ billion impact on our total business economy.

The significance of tobacco for Kentucky is not entirely measured in dollars and cents, jobs, and taxes—it has a historic impact on the social development of our Commonwealth. Smoking has been a favorite pastime for about 80 million Americans; therefore, tobacco has great social, as well as economic, implications. Psychologically, tobacco for many years has helped our people cope with numerous tensions. For these reasons the use of tobacco is of personal interest to millions of consumers served by this industry including farmers, processors, and handlers, as well as all people interested in the well-being of our State and Nation.

May I conclude my remarks, Mr. Abbitt, with the following observations:

1. A program of unbiased research in the breeding, culture, the processing and manufacture of tobacco, and tobacco products must be commenced now.
2. All tobacco people will agree that if such a program is to begin operation at the earliest possible time, it must be developed along the lines of feasibility and availability of facilities.
3. Such research must be conducted at a point where an adequate pool of experienced tobacco scientists already exist or can readily be supplemented.
4. Such a facility already exists at the new national tobacco research laboratory located at the Agricultural Science Center in Lexington, Ky.
5. This facility would serve the expediency of haste because it is already constructed and equipped and awaits only assignment of new tasks.
6. Of course, the limiting factor in progressive research is human resources. This resource now exists at Lexington, Ky. There we have an adequate reservoir of tobacco scientists who have an impressive list of credits in the areas of plant breeding, cultural innovations, black shank, root-rot and nematode control, etc.
7. Research can be expedited at Lexington because Kentucky produces five of the major types of tobacco.

8. Last, but by no means least, the great University of Kentucky Medical Research Center is located on the campus just adjacent to the national tobacco research laboratory in Lexington.

Again, may I say that I appreciate the opportunity to appear before this committee to discuss a problem of great concern to all Kentuckians. I thank you for your attention and consideration.

Mr. BUTLER. If there are any questions that you would like to direct to Dean Seay how your money is being spent at the National Research Institute, he is available and will answer any questions that you might have.

Mr. ABBITT. That is very fine. Thank you so much for being here.

Mr. BUTLER. Thank you, gentlemen.

Mr. ABBITT. I recognize our colleague, Mr. McMillan.

Mr. McMILLAN. I should like to state that our Governor, the Honorable Donald Russell, and the State commissioner of agriculture, William L. Harrelson, find it impossible to be present here today, but I ask that permission be granted to insert two telegrams and a statement in the record.

Mr. ABBITT. Without objection, that will be done.

(The telegrams and statement follows:)

COLUMBIA, S.C., January 28, 1964.

Hon. JOHN L. McMILLAN,
House Office Building, Washington, D.C.:

Re your telegram of Monday. Regret that previous engagements prevent appearance on Wednesday. Have deep interest in the proceedings of your tobacco subcommittee and am anxious to cooperate fully in any program that may aid our tobacco farmers. Will be in touch with you soon and will look forward to opportunity to discuss fully this subject with you and your subcommittee.

DONALD RUSSELL,
Governor of South Carolina.

COLUMBIA, S.C., *January 29, 1964.*

HON. JOHN L. McMILLAN,
House Office Building, Washington, D.C.

DEAR CONGRESSMAN: Please file with the committee this statement expressing my serious concern in favor of creating a standing research laboratory to find out everything about cigarettes and tobacco in general.

The tobacco crop is an exceedingly important source of income for our people, and I feel that everything possible should be done in order to insure a safe and sound future for the tobacco industry. An investment in scientific research is a sound approach to the problems which now face tobacco.

Sincerely,

DONALD RUSSELL,
Governor of South Carolina.

STATEMENT OF WILLIAM L. HARRELSON, COMMISSIONER OF AGRICULTURE FOR THE
STATE OF SOUTH CAROLINA

As commissioner of agriculture for South Carolina, I have been on record as favoring the erection of adequate research facilities and the employment of recognized authorities for conducting exhaustive research in the production of tobacco and the health protection of users of tobacco products. I still maintain that position.

Inasmuch as past health claims have been centered on cigarettes, it is deemed wise that the research facilities be located in the area where the cigarette type tobacco is grown.

South Carolina has been long recognized as a leader in quality tobacco, and also in the production of specific varieties of tobacco for sugar, tars, and nicotine content. Our seed breeders have demonstrated the ability to meet needed production demands.

I endorse the need of research facilities, but respectfully urge that the facilities be placed in South Carolina.

MR. ABBITT. Without objection I want to insert in the record at this point a telegram from the Governor of Tennessee, the Honorable Frank G. Clement, and another one from the Governor of the State of Georgia, the Honorable Carl E. Sanders.

NASHVILLE, TENN., *January 31, 1964.*

Representative HAROLD D. COOLEY,
House Office Building, Washington, D.C.:

I am intensely interested in an accelerated research program to accomplish maximum protection to the tobacco industry and the consuming public. May I urge support of legislation to accomplish this purpose. Tennessee will be represented by Mr. Eugene Holman of the State department of agriculture at the hearing today.

FRANK G. CLEMENT.

ATLANTA, GA., *January 28, 1964.*

Representative HAROLD COOLEY,
Chairman, House Agriculture Committee,
House of Representatives, Washington, D.C.:

Because of important legislative matters here, I will be unable to attend hearings on House Joint Resolution 885 tomorrow. I urge your group to implement an impartial research program and assure you of my complete support and cooperation. I look forward to attending your meeting on February 5.

CARL E. SANDERS,
Governor, State of Georgia.

MR. ABBITT. We will now hear from Mr. Richard D. Chumney at this time who is speaking on behalf of the Governor of Virginia. Mr. Chumney is originally from my district. He is commissioner of agriculture for the Commonwealth of Virginia and doing an outstanding job of which I am proud.

Off the record.

(Discussion off the record.)

Mr. ABBITT. Back on the record.

We are glad that you are here, and we look forward to hearing your statement.

**STATEMENT OF RICHARD D. CHUMNEY, COMMISSIONER OF
AGRICULTURE, COMMONWEALTH OF VIRGINIA**

Mr. CHUMNEY. Mr. Chairman and distinguished Members of Congress, my name is Richard D. Chumney and I am commissioner of agriculture for the Commonwealth of Virginia. On behalf of Gov. Albertis S. Harrison, Jr., and the people of the Commonwealth, I appreciate this opportunity to appear before this subcommittee. I have been requested by Governor Harrison to express his regret in not being able to appear. Our State legislature is now in session and I know you can appreciate the demands upon his time by reason of that fact. The Governor shares the views and concern which I shall outline in this statement.

I wish to convey to the members of this subcommittee that the Commonwealth of Virginia strongly endorses the provisions outlined in House Joint Resolutions 885 and 894.

Tobacco has been closely associated with the history of our State since the establishment of the first permanent English colony at Jamestown.

From Virginia, tobacco spread to bring pleasure to millions throughout the world and economic opportunity to thousands of our citizens in the production, manufacturing, and marketing of tobacco products.

History records its use as being subject to controversy almost simultaneously with its introduction into the civilized world. During the last decade, the industry has been buffeted by countless charges and countercharges concerning the effects of tobacco on those who use it.

This controversy reached a new plateau when the Advisory Committee to the Surgeon General of the Public Health Service issued its recent report entitled "Smoking and Health."

The report has brought together a great deal of statistical data which continues to raise questions yet unanswered. The tobacco industry, through its extensive research programs, is doing everything within its power to pinpoint all facets of the problem.

In addition to this research, more scientific inquiry into this problem is essential so that we will know what action might be needed, if any, to assure the people of the world a supply of tobacco that will not be injurious to health. Such scientific inquiry is also needed to insure the continuance of our tobacco production to the well-being of our entire economy.

If tobacco consumption is reduced substantially, many people who are now engaged in the production, processing, and manufacturing of tobacco products will lose their opportunity to earn a living. They will become a part of our Nation's most pressing economic problem—unemployment.

A 10-percent reduction in cigarette sales would eliminate the need for the principal crop on thousands of farms; add substantial numbers to the ranks of the unemployed; and lessen tax revenues from tobacco by many millions of dollars.

The proper use of funds needed for a strengthened research program to properly evaluate the impact of the use of tobacco on human health,

as compared to the \$3 billion collected in taxes appears small in relation to the good that can be accomplished.

In conclusion, the Commonwealth of Virginia:

1. Recognizes the need for additional research so that the effect of the use of tobacco on human health can be more properly evaluated.

2. Believes that through additional research our people will be assured a safe supply of tobacco which will make it possible for them to continue the enjoyment and satisfaction of smoking and, at the same time, not endanger their health.

3. Is firmly convinced of the need for the establishment of a tobacco research center as outlined in House Joint Resolutions 885 and 894.

We strongly endorse these resolutions and recommend that this research program be initiated without delay.

Mr. ABBITT. I certainly appreciate your fine statement. You are appearing here on behalf of the Governor and I am sorry he could not be here but I know that his sentiments are those expressed by you. And we appreciate your being here.

Mr. CHUMNEY. Thank you so much.

Mr. ABBITT. We have another witness who can only be here this morning. I think we ought to hear him before we have any questions. This is Dr. Nyle C. Brady, Director of Science and Education of the U.S. Department of Agriculture.

While he is coming to the witness chair, I should like to read a telegram which has been sent to our Chairman, Mr. Cooley, from the Honorable Carl E. Sanders, Governor of the State of Georgia, which reads as follows:

Because of important legislative matters here, I will be unable to attend hearings on House Joint Resolution 885 tomorrow. I urge your group to implement an impartial research program and assure you of my complete support and cooperation. I look forward to attending your meeting on February 5.

Just one other thing, I should like to recognize our colleague Mr. Matthews at this time.

Mr. MATTHEWS. On behalf of the Governor of Florida I would like to say how much he regrets that he cannot be with us today, but to express his great interest in this legislation. He has a representative here, our commissioner of agriculture, who will testify for him later.

Mr. ABBITT. Thank you very much. We will be glad to hear from you now, Dr. Brady.

STATEMENT OF DR. NYLE C. BRADY, DIRECTOR OF SCIENCE AND EDUCATION; ACCOMPANIED BY DR. W. D. MACLAY, ASSISTANT ADMINISTRATOR FOR UTILIZATION RESEARCH; AND DR. T. THEIS, BRANCH CHIEF, TOBACCO AND SUGAR CROPS, RESEARCH BRANCH, CROPS RESEARCH DIVISION, AGRICULTURAL RESEARCH SERVICE, U.S. DEPARTMENT OF AGRICULTURE

Dr. BRADY. My name is Nyle C. Brady, and I am Director of Science and Education of the U.S. Department of Agriculture.

I appreciate the opportunity to appear before you to express the views of the Department of Agriculture with regard to tobacco research.

First, may I make a general observation relative to research in the Department of Agriculture. Our policy has always been to do research which will provide the public with high quality agricultural products. We consider freedom from health hazards as an integral part of quality and as a consequence are concerned with the recent report on "Smoking and Health" as it relates to our research responsibilities.

Research on tobacco crops is supported by (1) Federal funds appropriated to the U.S. Department of Agriculture, (2) Federal and State funds appropriated to 12 State agricultural experiment stations and Puerto Rico, and (3) private funds allotted to research carried on in private laboratories or to support of State or USDA work.

The U.S. Department of Agriculture conducts comprehensive research on tobacco, including investigations of utilization and production problems. The research program is flexible, and its emphasis can be shifted as new scientific information makes it desirable to do so.

Research on tobacco constituents is conducted by Department chemists at the Eastern Utilization Research and Development laboratory at Philadelphia. This work may eventually provide a complete inventory of the dozens of organic compounds present in tobacco leaf and in tobacco smoke. Major domestic and foreign varieties are being analyzed.

Identification of these compounds and determination of their amounts in various types of tobacco will aid development of processing steps aimed at eliminating any that are not wanted. Such information will also help geneticists in planning breeding experiments to develop tobaccos that are deficient in or free of undesirable components.

The availability of sophisticated chromatographic and other recently developed equipment is helping chemists in their investigations of classes of chemicals such as hydrocarbons, fatty acids, resins, sterols, and terpenes and in the identification of individual components of each class.

Laboratory investigations are supplemented by taste panel studies to determine correlation between composition and taste characteristics of tobacco. An example of a possible result of these studies is the discovery that two chemical compounds—isovaleric acid and methylvaleric acid—are primarily responsible for the characteristic aroma and flavor of certain premium tobaccos.

The studies on the composition of tobacco were augmented by an additional \$200,000 in the appropriation bill just passed by the Congress. This will finance expanded studies of the constituents of the resins in tobacco leaf and the fate of such constituents on the burning of the leaf.

The Department's production research is aimed at aiding farmers to produce tobaccos of a quality which meets the requirements of domestic and foreign buyers and consumers and that will produce profitable yields. To attain these objectives, research is carried out on the many complex cultural, disease, and handling problems that have a direct influence on the quality and use volume of tobacco. Investigations are conducted in the various U.S. tobacco producing areas in close cooperation with 12 State agricultural experiment stations.

Promising advanced breeding lines of tobacco having resistance to the important black shank fungus, root knot nematodes, and tobacco

brown spot have been developed. Hybrid Flue-cured and burley tobaccos are being tested.

Experiments using a new carbamate fungicide have given highly successful control of blue mold, a constant hazard to production of certain tobacco seedlings. Recent findings indicate progress toward development of plants resistant to this mold.

The effects of various fertilizer rates on tobacco quality (chemical composition) are being studied. Research on development of tobaccos having various levels of total alkaloid content is continuing.

Experiments involving use of polyethylene films and cotton cloth as coverings for plant beds are in progress as are tests of planting dates, day length and temperature, sucker control, and cropping systems.

Research in certain phases of air pollution involving weather fleck damage to tobacco has demonstrated correlation between the appearance of weather fleck on tobacco and high values of ozone in the air.

An experimental mechanical tobacco harvester has been developed and is being modified and tested for improvement. Better methods of harvesting, handling, and curing stalk-out tobacco are also subjects of Department research.

Field-scale tests of light traps for control of tobacco hornworms indicate that hornworm moth populations can be reduced by use of electric insect traps. Additional research is needed before recommendations on use of light traps can be made.

The Department has a continuing program involving basic and applied research on tobacco insects to develop effective control methods that will not lead to insecticide residue in manufactured tobacco products. This work includes more intensive investigation on lures, traps, sterilization, and other new approaches to insect control; better utilization of predators, parasites, and diseases of tobacco insects; evaluation of insect resistant tobacco varieties, and continued research for chemicals that leave no residue.

In addition, the Department conducts research dealing with the physical and biological aspects of assembling, packaging, transporting, storing, and distribution from the time the product leaves the farm until it reaches the ultimate consumer. Economic research is conducted dealing with marketing costs, margins and efficiency, economics of product quality, supply and demand, and outlook and situation.

A large part of the Department's research on tobacco is cooperative with the State experiment stations. Cooperative work is jointly planned, frequently with the representatives of the producers or industry participating. The nature of cooperation varies with each study. It is developed so as to fully utilize the personnel and other resources of the cooperators which frequently includes resources contributed by interested producers or industry.

Including both cooperative and State station projects, tobacco research is carried on by 12 of the 53 State agricultural experiment stations and in Puerto Rico. The types of work to which the largest amount of effort is devoted include breeding and genetics, diseases, variety evaluation, plant culture, and weed control. There is a regular exchange of information between station and Department scientists to assure that the programs complement each other, and to eliminate all unnecessary duplication. A more detailed breakdown by location,

funds, personnel and type of research conducted is attached as a supplement to this statement which clearly indicates the extent of the Department's programs on tobacco research.

As will be noted from the outline given above, the Department's research programs on tobacco to date have emphasized the quality factors and have not been directly involved with the effects of smoking on human health. However, with the release of the report of the Surgeon General of the U.S. Public Health Service entitled "Smoking and Health," Secretary Freeman believes that the Department's research should now be directed to identifying the constituents of tobacco responsible for these health problems and to finding means to reduce or eliminate them.

Research of relevance to the problems of smoking and human health is being conducted at the North Carolina, Connecticut, and Kentucky Experiment Stations. A research project at the North Carolina Experiment Station includes research on the isolation and identification of organic constituents contained in tobacco leaf, such as the aromatic carbonyls, esters, acids, alcohols, and phenols. The Surgeon General's report, "Smoking and Health," states on page 145 that—

One hypothesis suggests that promoting agents present in tobacco and tobacco smoke, such as various phenols, enhance the potency of the carcinogenic hydrocarbons so as to account for the biological activity of the tobacco products.

Research at the Connecticut Experiment Station includes a study of factors affecting the distribution of phenols in harvested leaf. The role of light in the control of phenolic content of the leaf is under study, together with its effect on the metabolism of harvested leaves.

Much interest has been stirred in the role of radioactive elements in cigarette smoke as a possible factor in the genesis of bronchial cancer in smokers. The Surgeon General's report states that polonium 210 as a source of radioactivity in cigarette smoke merits further study as a possible factor in carcinogenesis. The report further notes that there appear to be no published data on the uptake by the tobacco plant of radioactive constituents from fallout. Such constituents include strontium 90 and cesium 137.

Consideration is being given to expansion of research on factors affecting phenol content of tobacco leaf and to initiate further research on polonium 210 content and on the uptake by tobacco of other radioactive elements.

Among many other conclusions, the Surgeon General's report states the following judgment:

Cigarette smoking is a health hazard of sufficient importance in the United States to warrant appropriate remedial action.

Remedial action poses a problem of great difficulty since it is by no means certain at the present time what components of tobacco leaf and smoke are the responsible agents, although many chemical substances have been implicated. Nevertheless it is important that extensive investigations be undertaken to solve this problem both by chemical studies aimed at eliminating the suspected carcinogens from the smoke and through genetic, cultural, physiological, and chemical studies designed to eliminate harmful substances from the leaf. The complication involved in the problem is in part illustrated by the fact that the "pyrolysis of nontobacco cigarettes made from vegetable

fibers and spinach resulted in formation of benzo(a)pyrene." (the carcinogen) (Smoking and Health, p. 59).

Past research experience in the chemistry of tobacco serves as a sound basis for launching more extensive investigations. Work on tobacco leaf has involved studies on the isolation of acidic resins and products formed from the resins on burning. Thus far work on cigarette smoke has been concerned with a study of the volatile acids, bases, and neutral substances which may influence flavor and aroma. The composition of cigarette smoke is dependent to a large extent on the physical conditions of burning in the cigarette. Alteration of smoke components by changing the burn temperature through catalytic and other means needs to be investigated looking to the elimination of suspected carcinogens. To accomplish this, information is needed on the effect of such factors as burning temperature, leaf cut, degree of combustion, burning rate, tobacco type, and so forth, on the final composition of smoke. It is planned to redirect efforts along these lines. Additional investigations on the composition of the neutral resins of tobacco leaf will be conducted either under contract or through a grant arrangement. This information is essential for further studies on the possible relationship of such components to carcinogenicity of cigarette smoke.

The composition of tobacco smoke is influenced by chemical composition and physiological properties of tobacco leaf. It has been shown in production research conducted by the Department that tobacco leaf can be modified with respect to chemical and physiological characteristics. For example, tobacco breeding technology has reached the point that tobacco varieties with varying levels of chemical components can be developed. Cultural practices, within limits, may modify leaf components. Curing is a physiological process also influencing the chemical composition of tobacco. Basic research is needed to obtain information on resulting physiological and biochemical changes. With respect to carcinogenic materials, avenues are open through the development of new tobacco varieties and through research on physiological changes and cultural practices to reduce or eliminate these materials or their precursors.

Research of long standing in tobacco genetics and physiology provides a base on which to initiate further work in these fields related to the health hazard in smoking and additional research is being undertaken in fiscal year 1964 along these lines.

Carcinogenicity studies, when required, will be carried out in cooperation with the Department of Health, Education, and Welfare or other qualified organizations.

The experiment stations, in cooperation with medical schools, have opportunity for expanding research on reported carcinogenic, chronic respiratory, and cardiovascular effects of tobacco smoke generated from various tobaccos in various forms. They can also conduct mortality and morbidity studies with laboratory animals.

The Department visualizes that in a redirected, intensive tobacco research program we would—

1. Expand present studies on the mechanism of smoke formation and on methods to reduce or eliminate known carcinogenic related substances by altering the normal burning pattern of cigarettes and by filtering the smoke selectively.

2. Expand present studies on the nature of the chemical substances formed on burning specific known constituents of cigarette tobacco, with special emphasis on the mode of formation of known carcinogenic and related compounds in cigarette smoke.

3. Expand current studies to accelerate progress on the isolation and identification of chemical substances in cigarette leaf and smoke.

4. Conduct studies on the range of variability in germ plasm with respect to components in tobacco leaf which may be precursors of carcinogenic substances in smoke.

5. Expand present studies on the nature of the inheritance of genetic factors in the tobacco plant which control leaf composition with the object of eliminating or reducing carcinogenic precursors.

6. Initiate investigations on tobacco to reduce or eliminate carcinogenic precursors through studies on breeding, physiological changes, and cultural practices.

7. Initiate studies on chemical, physical, and biochemical means of reducing or eliminating carcinogenic precursors from tobacco leaf.

8. Determine the influence of cultural and other treatments on radioactive components of tobacco suspected of being carcinogenic.

The research program of the Department would be greatly benefited by the establishment of a laboratory for the purpose of conducting investigations on tobacco and tobacco products. The studies would be designed to ascertain and emphasize those quality and other factors which will preserve the desirable characteristics of tobacco and tobacco products and eliminate therefrom any characteristics which may be detrimental to health. Reasons for this are—

1. The report "Smoking and Health" has indicated that the smoking of tobacco is or can be detrimental to health.

2. The chemical constituents of tobacco that are responsible for the reported carcinogenicity of the smoke are incompletely known as is also the mechanism by which they may be converted to carcinogens. Such information must be developed and applied through intensified chemical, genetic, processing, and related research before practical procedures can be developed for eliminating the characteristics of tobacco that may be detrimental to health.

3. The problem is a complex and difficult one. A concerted effort by a team of highly trained specialists—geneticists, agronomists, chemists, physiologists, pharmacologists, physicists, fermentologists—working together in a fully adequate facility, and in cooperation with Federal and State research groups, represents the best way to mount an effective assault on the many phases of this problem and to provide leadership for a meaningful supplementary research contract and grant program.

4. The Agricultural Research Service and the State Agricultural Experiment Stations have developed considerable information in this field and have the necessary nucleus of capable research personnel and leadership upon which an effective expanded program can be built. They plan to intensify research to the extent present space and facilities will permit. By the time the proposed laboratory becomes operable, ARS would be in a position to fully prosecute the research and development program required to yield meaningful results within a reasonable period.

5. A new laboratory could also provide facilities for scientists from cooperating Federal research agencies, including the Department of Health, Education, and Welfare and the Atomic Energy Commission.

The Department is moving ahead in making contact with representatives of the Department of Health, Education, and Welfare to make certain that our efforts will be coordinated with theirs. We have also taken steps to reorient our own research program.

And may I say that these steps were taken at our initiative in trying to get in touch and work with and cooperate with the people in the Department of Health, Education, and Welfare. And we are getting complete cooperation.

Gentlemen, I appreciate the opportunity to discuss the Department's research program with you, and if there are questions, I shall try to answer them.

I believe that you do have a copy of the supplement to the statement I have made which gives a breakdown in terms of the expenditure of funds, not only those that are handled completely by the U.S. Department of Agriculture but those grant-in-aid funds that are given to the State experiment stations indicating how the funds are being spent.

(The document follows:)

SUPPLEMENT TO STATEMENT BY DR. NYLE C. BRADY, DIRECTOR OF SCIENCE AND EDUCATION, U.S. DEPARTMENT OF AGRICULTURE, BEFORE THE SUBCOMMITTEE ON TOBACCO OF THE HOUSE COMMITTEE ON AGRICULTURE, JAN. 29, 1964

Summary of funds, tobacco research

<i>Type of research</i>	<i>Fiscal year 1964</i>
Federal funds:	
USDA agencies:	
Production.....	\$1, 514, 200
Utilization.....	276, 500
Marketing and economic.....	168, 600
Federal grant funds to States:	
Production.....	337, 121
Marketing.....	82, 151
Total Federal funds.....	2, 378, 572
Non-Federal funds at State experiment stations:	
Production.....	328, 609
Marketing.....	31, 430
Total non-Federal funds.....	360, 039
Grand total funds, tobacco research.....	2, 738, 611

U.S. DEPARTMENT OF AGRICULTURE

Estimated obligations for research on tobacco, fiscal year 1964

SUMMARY

	Fiscal year 1964			
	Funds ¹	Estimated program man-years		
		Professional	Other	Total
Production research:				
Agricultural Research Service:				
Crops: Production breeding, quality, and disease investigation; weeds; nematodes; plant disease reporting and mycology; plant introduction; and all other crops research.	\$1,112,300	32.5	37.2	69.7
Entomology: Entomological studies of tobacco insects, insect identification, and pesticide residues research.	195,600	6.9	7.1	14.0
Agricultural engineering: Mechanical harvesting of tobacco and other engineering studies.	182,300	6.8	.8	7.6
Total, Agricultural Research Service.	1,490,200	46.2	45.1	91.3
Economic Research Service: Farm economics research.	24,000	1.0	1.2	2.2
Total, production research.	² 1,514,200	47.2	46.3	93.5
Utilization research and development, Agricultural Research Service: Investigations of chemical constituent of tobacco and tobacco smoke in relation to quality improvement (East).	276,500	9.1	7.9	17.0
Marketing research:				
Agricultural Marketing Service: Marketing quality research.	72,700	4.0	1.0	5.0
Economic Research Service: Marketing economics and economic and statistical analyses.	80,300	3.0	4.4	7.4
Farmer Cooperative Service: Strengthening farmer cooperatives.	15,600	.7	.5	1.2
Total, marketing research.	168,600	7.7	5.9	13.6
Total, tobacco research.	² 1,959,300	64.0	60.1	124.1

DETAIL BY LOCATION

Production research:				
Florida, Quincy: Entomological studies on tobacco insects.	14,600	-----	0.1	0.1
Georgia, Tifton: Agronomy, pathology, and physiology of Flue-cured tobacco (\$43,300); control of nematodes in tobacco by use of chemicals and through crop rotation (\$6,600).	49,900	3.0	1.0	4.0
Kentucky, Lexington: Agronomy and breeding of burley and Dark-fired tobacco (\$133,400), and basic physiological research on tobacco (\$106,700); harvesting and curing of tobacco (\$86,600).	326,700	8.0	7.0	15.0
Maryland:				
Beltsville: Basic research on tobacco genetics, diseases, alkaloid composition, and physiological and air pollution research (\$235,300); evaluation of herbicides and formulations for weed control in tobacco (\$3,100); identification and taxonomy of organisms affecting tobacco (\$12,500); persistence and degradation of pesticides in plants and soils (\$1,300); introduction and sanitary inspection of tobacco germ plasm from foreign countries (\$2,500); pesticide residue studies (\$31,800); printing, biometrics, and other centralized administrative services located at Beltsville, Md., Washington, D.C., and the 4 field administrative divisions (\$218,000).	504,500	12.0	14.3	26.3
Upper Marlboro: Production, breeding, and diseases of Maryland-type tobacco.	12,100	.5	.5	1.0
Total, Maryland.	516,600	12.5	14.8	27.3
New Jersey, Moorestown: Identification of tobacco insects.	300	-----	-----	-----

Footnotes at end of table.

Estimated obligations for research on tobacco, fiscal year 1964—Continued

SUMMARY

	Fiscal year 1964			
	Funds ¹	Estimated program man-years		
		Profes- sional	Other	Total
North Carolina:				
Oxford: Agronomy, breeding, and pathology of Flue-cured tobacco (\$181,000); entomological studies on tobacco insects (\$55,000); research on tobacco insects through light traps (\$16,600); and planning and cultivating practices in growing tobacco (\$24,900).....	277,500	8.0	8.2	16.2
Raleigh: Basic physiological research on tobacco (\$14,800) and developing procedures for accurately forecasting outbreaks of tobacco blue mold (\$3,400).....	18,200	2.0	-----	2.0
Waynesville: Agronomy, disease, and breeding of Burley tobacco.....	16,100	1.0	-----	1.0
Total, North Carolina.....	311,800	11.0	8.2	19.2
Pennsylvania, Landisville: Agronomy and breeding of cigar tobacco.	11,600	1.0	1.2	2.2
South Carolina, Florence: Breeding and pathology of Flue-cured tobacco (\$50,400) and entomological studies on tobacco insects (\$33,000).....	83,400	4.0	6.6	10.6
Tennessee:				
Greenville: Agronomy, breeding, and pathology of Burley tobacco.....	80,300	4.0	3.0	7.0
Knoxville: Physiological investigations on Burley tobacco.....	16,200	-----	1.0	1.0
Springfield: Testing of Dark-fired tobacco.....	1,500	-----	-----	-----
Total, Tennessee.....	98,000	4.0	4.0	8.0
Texas, Brownsville: Entomological studies on tobacco insects (\$1,300) and identification of tobacco insects (\$200).....	1,500	.3	.7	1.0
Virginia, Blacksburg: Testing advanced lines of tobacco (\$1,600) and electric light traps for survey and control of tobacco insects (\$23,000).....	24,600	.8	.8	1.6
Wisconsin, Madison: Breeding and pathology of cigar tobacco.....	14,300	1.0	.5	1.5
Puerto Rico, Mayaguez: Breeding, disease, and physiological research on burley and Flue-cured tobacco—(winter testing)....	21,200	-----	-----	-----
Washington, D.C.: Identification of tobacco insects (\$15,700) and economic analysis of alternative adjustment on tobacco farms, and of annual changes in investments, costs, and income of farms (\$24,000).....	39,700	1.6	1.4	3.0
Total, production research.....	1,514,200	47.2	46.3	93.5
Utilization research and development:				
Pennsylvania, Wyndmoor: Chemical investigations to provide basic information for development of improved quality and extended utilization of tobacco.....	250,300	9.1	7.9	17.0
Washington, D.C.: Printing, biometrics, and other centralized administrative services located at Washington, D.C., Beltsville, Md., and 4 field administrative divisions.....	26,200	-----	-----	-----
Total, utilization research and development.....	276,500	9.1	7.9	17.0
Marketing research:				
Georgia, Savannah: Basic studies on insecticide evaluation to develop better insect control methods in stored tobacco.....	14,000	1.0	-----	1.0
Virginia, Richmond: Methods to prevent insect damage during longtime storage in tobacco warehouses, including studies on the ecology of stored tobacco insects.....	48,000	3.0	1.0	4.0
Washington, D.C.: Tobacco quality and pricing system, the organization, costs, and efficiency of tobacco redrying plants; marketing margins and costs for tobacco leaf and products; costs and efficiency of looseleaf tobacco auctions; study of Canadian tobacco auctions (\$20,700); programs of economic and statistical research and service work related to tobacco (\$59,600); related program planning, technical direction and supervision, development and publication of reports on research results and other management and supporting services (\$10,700); and strengthening of farmer cooperatives (\$15,600)....	106,600	3.7	4.9	8.6
Total, marketing research.....	168,600	7.7	5.9	13.6
Total, tobacco research.....	1,959,300	64.0	60.1	124.1

¹ Does not include amounts that may become available under transfers from Commodity Credit Corporation for utilization and cost of production research.

² Excludes allocation of \$65,000 from the contingency research fund for more extensive research on tobacco sucker suppressants.

U.S. DEPARTMENT OF AGRICULTURE, COOPERATIVE STATE RESEARCH SERVICE

Estimated obligations for research on tobacco, Federal grant and non-Federal funds, fiscal year 1964

SUMMARY

	1964	
	Federal grant	Non-Federal
Production research.....	\$337, 121	\$328, 609
Marketing research.....	82, 151	31, 430
Total.....	419, 272	360, 039

DETAIL BY STATES

	Production research		Marketing research	
	Federal grant	Non-Federal	Federal grant	Non-Federal
Connecticut: Breeding, genetics, mechanical harvesting, and quality.....	\$13, 000	\$13, 500	\$30, 500	\$24, 000
Florida: Breeding, culture, mechanical harvesting, and insect control.....	22, 076	30, 000	-----	-----
Kentucky: Breeding, genetics, disease control, culture, mechanical harvesting, insect control, quality, and marketing.....	95, 580	101, 519	17, 536	1, 215
Maryland: Breeding and culture.....	2, 920	14, 730	4, 000	4, 000
North Carolina: Genetics, disease control, culture, mechanical harvesting, insect control, quality, economics, and marketing.....	83, 811	95, 525	26, 536	2, 015
Pennsylvania: Culture and marketing.....	940	11, 035	3, 579	200
Puerto Rico: Breeding, culture, insect control, and economics.....	40, 538	29, 100	-----	-----
South Carolina: Culture.....	6, 356	1, 200	-----	-----
Tennessee: Breeding, disease control, and culture.....	19, 000	4, 000	-----	-----
Virginia: Breeding, disease control, culture, and insect control.....	37, 000	28, 000	-----	-----
West Virginia: Culture.....	15, 900	-----	-----	-----
Total.....	337, 121	328, 609	82, 151	31, 430

DESCRIPTION OF PROGRAMS

Breeding.—Breeding tobacco for improved resistance to diseases and nematodes and acceptable quality. (Connecticut, Florida, Kentucky, Maryland, Puerto Rico, Tennessee, and Virginia.)

Genetics.—Fundamental studies of genetics of tobacco are being made. The work involves interspecific hybridization, the determination of mechanisms for transfer of heritable disease resistance between species, inheritance of biochemical mechanisms, and the development of basic genetic stocks for varietal improvement. (Connecticut, Kentucky, and North Carolina.)

Disease control.—Disease of the leaf, root rots, nematodes, and viruses are receiving attention. In addition, most of the breeding effort is oriented toward resistance to disease. Other areas of tobacco disease study include root rot complexes, mode of action of fumigants and nematocides and nematode population dynamics. (Kentucky, North Carolina, Tennessee, and Virginia.)

Culture.—The States are determining the effects of plantbed practices, planting methods, spacing, crop rotations, fertilizer practices, sucker control, topping and curing on the yield and quality of tobacco. All types of tobacco are involved. (Florida, Kentucky, Maryland, Pennsylvania, Puerto Rico, South Carolina, Tennessee, Virginia, and West Virginia.)

Mechanical harvesting.—Developing methods of harvesting tobacco mechanically. Modifications of and a better basic understanding of the curing process are under study. (Connecticut, Florida, Kentucky, and North Carolina.)

Insect control.—Work in this area includes basic biology and physiology, insecticidal and cultural control, insecticide residues, biological control and varietal resistance to insects. (Florida, Kentucky, North Carolina, Puerto Rico, and Virginia.)

Quality.—Work includes chemical composition and physical properties of leaf, chemical composition of smoke, and new and improved processing technology. (Connecticut, Kentucky, and North Carolina.)

Farm economics.—The study of production economics. Price research to meet the needs of farmers, labor availability and other production and harvesting costs are receiving attention. (North Carolina and Puerto Rico.)

Marketing.—Projects in this area deal with factors affecting the dispersion in prices, tobacco auction, warehouses, alternative parity formulas, market potential in Egypt, labor requirements in marketing, and market structure. (Kentucky, North Carolina, and Puerto Rico.)

Mr. ABBITT. Dr. Brady, I want to commend you highly for your excellent statement. It shows the importance and the necessity of going forward with a program of this kind. I assume that you and those in the Department share our views that more research should be had, and that it should be a crash program, so as to find out the answers.

Dr. BRADY. That is right. May I also introduce two gentlemen who are with me, both scientists in the Department, Dr. W. D. Maclay, Assistant Administrator for Utilization Research of the Agricultural Research Service, and Dr. T. Theis, Branch Chief of the Tobacco and Sugar Crops, Crops Research Division of the Agriculture Research Service.

Mr. ABBITT. I understand that the Department is ready to go ahead as soon as we can provide the necessary funds?

Dr. BRADY. That is right. We have, in fact, already started in a preliminary way, and our plan is to move ahead.

Mr. ABBITT. I thank you very much for your statement, Dr. Brady.

Now we have one other witness who has a short statement. I think that we should hear from him and then we will have questions.

Next is Mr. George V. Allen, president of the Tobacco Institute, Inc.

We will be pleased to hear from you now, Mr. Allen.

STATEMENT OF GEORGE V. ALLEN, PRESIDENT, THE TOBACCO INSTITUTE, INC.

Mr. ALLEN. Thank you, Mr. Chairman. The Tobacco Institute is, perhaps, as the members of the committee are aware composed of manufacturers of, perhaps, 90 to 95 percent of the tobacco manufactured in the United States.

Mr. Chairman, on behalf of the members of the Tobacco Institute—manufacturers of cigarettes, smoking tobacco, and other tobacco products, I wish to affirm, at the outset, the seriousness and sincerity of purpose which characterize our thoughts on the vital subject before us today.

The tobacco crop which saved Jamestown and became the taproot of American commerce has grown, multiplied, and developed into a primary economic factor in the affairs of our Nation and the world. Since 1620, American tobacco has set the international standard. It is well known that American tobacco products, when given a competitive opportunity anywhere in the world, have taken the market—either leaf tobacco or its manufactured products.

This giant of our own native creation is nurtured by 750,000 farm families in 21 States. About 1.5 million businesses share in the

tobacco trade, supplying equipment, materials, transportation, and distributing and merchandising services. In the United States, there are about 578 plants, big and small, in 30 States that manufacture tobacco products. Overall, it is estimated that some 17 million people depend on tobacco for all or part of their livelihood. Tobacco is this Nation's fifth largest cash crop and is third in dollar value among our agricultural exports. Federal, State, and local excise taxes on tobacco products in 1963 yielded \$3.3 billion.

While these figures are not new to any of you here, they are unquestionably significant. What is too often overlooked is that these impressive figures are merely the end product of human effort, ingenuity, dedication—and research; pursued with diligence and perseverance, year after year. From its meager beginnings, the tobacco industry has constantly been in the forefront of our quest for an increase in man's productive, commercial knowledge. Our industry has honorably and responsibly sought to meet a well-established consumer demand for products that bring pleasure and relaxation to millions of people the world over.

Those of us who work with tobacco share with the millions who use tobacco products a concern over questions regarding smoking and health. Indeed, we have a double interest in the matter. First, as human beings, we are interested in the health of our fellow man. Second, we have a natural interest in the future welfare of our industry—and of the industry's customers.

We have previously endorsed wholeheartedly and without reservation Surgeon General Terry's call for more research by the Public Health Service.

We have endorsed the resolution of the American Medical Association and other public and private groups of scientists who are seeking the facts we so urgently need.

We recognize and endorse the need for responsible research at every level—in the agricultural stations, the scientific laboratories and the great hospitals and medical centers of the Nation.

In this same spirit, we look with favor upon this legislation as a means of expanding research capabilities in the areas cited in the text of the resolution.

The tobacco industry, which is already supporting a considerable body of health research, stands ready to increase that support, and also to cooperate fully with the Government and with other groups on any projects which offer possibilities for filling the gaps in knowledge which still exist in this broad field of scientific concern.

Various avenues of research must be pursued simultaneously. If there are characteristics in the tobacco plant which should be strengthened, we want to know what they are and how to strengthen them. If there are characteristics which should be diminished or bred out, we want to know what they are and how best to do it, in what soils and under what cultivation practices.

Tobacco as an agricultural commodity is at an important crossroad today, not only in the United States, but everywhere in the world. The preeminence which this important U.S. farm crop has long enjoyed is being challenged by growers and researchers in many foreign countries. If we are not energetic in plant research, tobacco grown in Rhodesia and a number of other countries where urgent agri-

cultural experimentation is going on, will replace our native and, up to now, superior product.

While the research activity provided for in the present joint resolution refers to the Flue-cured area, I wish to make it clear that U.S. tobacco manufacturers use many types of tobacco in their manufacturing process. These include, notably, the burley type of tobacco grown chiefly in Kentucky and Tennessee, and, in fact, the types grown in all of the 21 tobacco-growing States of the Union. We are equally interested in those types and want them to retain their high standing in national and international trade. We are particularly aware of the fine work already being done at the tobacco research laboratories in Lexington.

As a matter of fact, as you gentlemen well know, much of the basic research pertaining to tobacco is applicable to all types and thus a strong research center as provided in the bill under consideration would be highly beneficial to all types of tobacco and to the tobacco industry generally.

Mr. ABBITT. We thank you very much for your splendid statement. I share your views, as does Congressman Cooley, and I am sure that I speak for every member who is interested in this subject, that when we are talking about tobacco, we are talking about all tobacco that is raised and grown. I know that all share your views.

Are there any question?

Chairman COOLEY. I want to commend you on your splendid statement which indicates your interest in this subject. This resolution that I introduced is, of course, subject to amendment by the committee. We have other resolutions.

I agree that we should not permit this research for only one type of tobacco. I am planning to have my resolution modified or changed so as to include all tobaccos. We have burley, and low burning and fast burning, and Flue-cured and all types of tobaccos. I assure you that those changes will be made in the resolution.

Mr. ALLEN. I am very glad to hear that.

Mr. ABBITT. Thank you very much again.

Dr. Terry was kind enough to remain, and good enough to let us go ahead with the other witnesses. I wonder if Dr. Terry would come back to the witness stand, if there are any questions. Are there any questions that members of the committee would like to ask Dr. Terry?

Chairman COOLEY. I want to clear up one thing, if I may, and ask this question of Dr. Terry. I understand that you are supporting our efforts to have a broad research program in this field?

Dr. TERRY. Yes, sir.

Chairman COOLEY. That is all I want to ask.

Mr. ABBITT. Does anyone else desire to address a question to Dr. Terry?

Mr. FOUNTAIN. I want to thank the chairman for inviting those of us who are not on the Agriculture Committee to this hearing this morning.

Mr. ABBITT. I would like to say that we are always anxious to have anyone in who is interested in this tobacco subject to be present. I just want to say that many have done so, and have been most helpful to this committee. And I am, indeed, grateful to everyone of those who have attended. I hope that each of you will feel free to attend

and to give the clerk your names, so that those who are present will be shown in the record.

Mr. FOUNTAIN. Before asking a question, I would like to say that I come from a congressional district which probably grows as much or more Flue-cured tobacco than any other congressional district in America—probably any comparable area in the world. And I have no hesitancy, notwithstanding the news comments to which Mr. Cooley referred earlier, in stating that I am extremely interested in the impact of this report upon people that I represent and especially this particular industry. I think this report can serve to encourage our Government to do what it should have been doing long before now—investigate the causal relation, if any, between tobacco and the health of its users. When I was in the public schools there was a section in some of the books we read—I do not recall which—discussing the harmful effects of tobacco. Notwithstanding that, after I finished college and while preparing for the North Carolina Bar examination I started smoking. I have smoked cigarettes for 30 years. I do not want to be a prophet by ending up being one of cigarette's victims. Notwithstanding that possibility, if this report on smoking and health should be true, I think all of the testimony we have had here this morning indicates the importance of this particular industry—tobacco—to so many of our people and our Nation. As Mr. Allen pointed out, there are some 17 million people who are dependent upon this industry, and there is no telling how many other people are employed or otherwise affected directly or indirectly by the tobacco industry. I want to say, Mr. Chairman, that I wholeheartedly support the purpose behind these resolutions. I have no way of knowing what kind of resolutions are to come from this committee. I think this ought not to be the only type of research that goes on. I am sure that it will not be. I think that supplementary research through other agencies, public and private, including tobacco companies ought to be going on. Now, I'd like to ask Dr. Terry just what has been going on through the Public Health Service in recent years along these lines.

Dr. TERRY. In relation to research, Mr. Fountain, we estimate that as of this year, something in the vicinity of \$1.2 million is being spent by the Public Health Service supporting research in this subject. I think that you can well appreciate it is very difficult to identify all of the matters which are under scientific study which might impinge on the subject.

Mr. FOUNTAIN. Is it not true, in addition to what might be initiated by this committee and by the Congress pursuant to action by this committee that one or more of the many institutions which you have jurisdiction over are also equipped to do and can do a vast amount of research in connection with tobacco?

Dr. TERRY. Yes, sir. We can do a great deal of research.

Mr. FOUNTAIN. As a matter of fact, the National Institutes of Health is now supplying considerable sums of money, almost \$1 billion a year throughout the country, to universities, hospitals, individuals, and organizations in the interest of scientific research. Could not some of your future grants be made to encourage research of the kind we're advocating here today?

Dr. TERRY. Certainly, grants can be made in the field of medical research, as you well know, which fall within our legislative authoriza-

tions. I might say further that we at the present time are reexamining our programs in several fields in terms of what more we can do, not only within our own intramural research efforts, but what also we can do in terms of encouraging and supporting research in other medical and scientific institutions outside of our own National Institutes of Health.

Mr. FOUNTAIN. Mr. Chairman, one more question and I will be through. Dr. Terry, your testimony indicates, notwithstanding any harmful effects from smoking, and other uses of tobacco, that smoking will continue. I think this report on smoking and health places upon the Department of Health, Education, and Welfare a responsibility which is much greater than ever before. This is especially true of the Federal Public Health Service. Even though you put on an educational campaign, such as you've talked about, to discourage young people from taking up smoking, or to encourage others to stop it—recognizing as you do the fact that it is going on—that it is one of the things people do and will continue to do for one reason or another. I hope you and your other colleagues will increase your department's research in connection with tobacco, supplementing similar work in any other groups, and coordinating with all tobacco research efforts to the end that we can make smoking of tobacco and the use of tobacco a minimum hazard to the health of our people.

I suspect that if you scientists were to get a group of infants together, look after them, feed them, determine all their habits, give them instructions and surround them with all the things necessary, they could probably, be kept living for 150 or 200 years. However, such persons probably would not get much satisfaction out of living. The price would be too dear and I therefore think we have to be realistic as we approach this problem, taking into account the health hazards involved, trying all the while to decrease them and the excessive use of tobacco, while recognizing what tobacco does mean to its users and to its producers, processors, manufacturers, wholesalers, and retailers, and all others who earn their food, clothes, and shelter as a worker in one way or another in the tobacco industry. To me, moderation is really the prime answer to most of the sins and ailments of mankind.

Thank you very much, Mr. Chairman, for permitting these observations.

Chairman COOLEY. I would just like to point out that Dr. Brady indicates that the Department of Agriculture has already laid out the plans for that program and they indicated in their remarks to the subcommittee that the Department is ready to move right now. He outlined eight different areas in which they were ready to proceed immediately if funds were made available.

Mr. GRANT. May I make an observation, Mr. Chairman? Dr. Terry happens to be from my congressional district in the State of Alabama. And I might say that all of us in Alabama are justly proud of Dr. Terry and his record. His father before him was a doctor. I am sure that Dr. Terry, like myself, when he was a boy, smoked corn silk and rabbit tobacco. And I might say as to corn silk and rabbit tobacco, that like tobacco, it might have been harmful, but I am sure that those two items, probably, killed some harmful germs in our bodies.

[Laughter.] So I might say, on behalf of the committee that we are happy to have Dr. Terry with us today.

Mr. ABBITT. Thank you very much. I notice Congressman Tuck is here. Do you have some comments to make?

Mr. TUCK. I am sorry that I was late in arriving. I want to say that I share the concern of yourself and the chairman of the full committee and the other Members of Congress for the tobacco growers. We grow quite a bit of it in the district which I have the honor to represent. I want to say that tobacco is so connected with the economy and the history of this country that I think almost all citizens are interested in the subject. They are interested, too, in the public health. The importance of tobacco to our economy is very definite. I hope very much that the resolutions introduced by Mr. Cooley, the chairman of this committee and others, will be passed and that a thorough research will be made in regard to this subject.

Mr. ABBITT. Thank you very much, Congressman Tuck.

Are there any questions that you would like to ask?

Mr. NATCHER. I want to thank you and, of course, Chairman Cooley and the members of the subcommittee for holding this hearing at this time.

Certainly, Dr. Terry, we know that tobacco is in trouble, but we can correct this trouble, I believe, through a crash program in research. It is imperative that this program take place and as quickly as possible.

Mr. Chairman, I certainly want to commend you and the members of your subcommittee and the chairman of the full committee for calling this hearing at this time. As I understand it there will be other witnesses tomorrow who will testify for the tobacco industry and the growers and the different organizations, and then on Friday the Members of Congress will appear to give testimony. And at that time I will be present.

I do want you to know that this is one of the most important industries in my home State of Kentucky. Dr. Terry, as you probably know, of all of the agricultural commodities produced in the Commonwealth of Kentucky, the amount received from tobacco amounts to a little more than one-half of all of the agricultural commodities in my home State. We have burley tobacco and different types of dark tobacco produced in Kentucky. My people are very much concerned about this industry at this time. This is an important hearing, Mr. Chairman. And, certainly, I want to thank you for permitting me to be present and to make this statement.

Mr. ABBITT. Off the record.

(Discussion off the record.)

Mr. ABBITT. We will go back on the record.

Chairman COOLEY. Let the record show right here that Mr. Henderson is here and Mr. Taylor is also here.

Mrs. GALLAGHER (clerk). Everybody who has been present is recorded in the record.

Mr. GRANT. Pardon me again, but I think that this might be off the record.

(Discussion off the record.)

Mr. ABBITT. On the record.

Mr. STUBBLEFIELD. I should like to ask your permission for Dean Seay, dean of the College of Agriculture, to file a statement in the record.

Mr. ABBITT. Without objection, that may be done.

(The prepared statement of Dean William A. Seay, dean of the College of Agriculture and Home Economics follows:)

STATEMENT OF DR. WILLIAM A. SEAY, DEAN AND DIRECTOR, COLLEGE OF AGRICULTURE AND HOME ECONOMICS, UNIVERSITY OF KENTUCKY

Mr. Chairman, tobacco research has always been a major concern of the Kentucky Agricultural Experiment Station. Of the total personnel, facilities, and funds being devoted to research, nearly one-fourth are devoted entirely to tobacco or contribute to tobacco research. Personnel now employed in tobacco research (including employees both of the agricultural experiment station and of the USDA Agricultural Research Service in the National Tobacco Research Laboratory recently established at the University of Kentucky) totals 24 professional workers and 25 workers at a subprofessional level such as laboratory technicians and research assistants. Over the past decade tobacco researchers at Kentucky have published 59 research papers or bulletins and 274 reports of progress about their tobacco research.

The research projects cover a very wide range of tobacco studies, from genetics and varietal development through culture, insect and disease control, harvesting, curing, and marketing, control programs, chemical analysis, and cooperative work with tobacco manufacturers on quality factors.

Research in genetics and cytogenetics has played a prominent part in development of numerous new varieties carrying various types and degrees of disease resistance, and as the disease picture is ever changing this work is constantly in progress. Through techniques developed at Kentucky the agricultural experiment station now has a stockpile of germ plasm in genetically uniform tobacco lines, the progeny of which are as genetically alike as identical twins. The precision which these homozygous lines make possible constitutes a major step forward in genetic studies of disease resistance and alkaloid and other organic constituents, and in other physiological studies of tobacco.

In work on insect control on tobacco major emphasis is being given to analysis for insecticide residue on leaf from time of application to time of manufacture into consumer products, and on research into the resistance of tobacco lines to several insect pests.

In chemical and physiological studies work is being done on cured leaf in relation to nutrient uptake, alkaloid production, and sugar content, and on chemical and physical changes during curing. Considerable progress has been made in relating alkaloid content to genetic characteristics and to environmental and cultural factors. This work has been greatly speeded up and made more efficient by a technique (developed at Kentucky) of relating the chemical content of cured leaf to the chemical content of very small plants, and then using the small plants as a screening mechanism to discover the desirable lines.

Work is constantly going on to check the quality potential of new varieties being developed. This is done through cooperation with the manufacturers of tobacco products. Each variety before release goes through a series of tests designed to reveal inborn faults if such are present. The manufacturers buy, process, analyze and smoke-test experimental lines, and the data from the manufacturers' laboratories are returned to the National Tobacco Research Laboratory for final analysis. Cooperative work with the manufacturers is also underway to define "quality."

Because of the very high labor requirements of tobacco production using conventional methods (some 400 man-hours per acre as contrasted with about 10 man-hours for mechanized corn production), major attention is being given to determining the fundamental requirements and functional specifications for machines and methods which might be used to reduce the labor requirements. Areas now being most emphasized are establishing a growing crop in the field, harvesting and handling operations in moving the crop from field to market, and curing. Within each of these areas efforts are made to establish physical measurements which will aid in designing systems to reduce the labor and time required in the production of the crop while maintaining or improving quality of product. In this work a mechanical seeder with plastic attachment (for direct field seeding)

has been developed but its success still is hampered by inadequate control over the field environment. A machine for harvesting tobacco and a system for moving the crop mechanically into curing facilities are being developed. Precise environmental control equipment is being used to study the thermodynamics of the curing process. Investigation of moisture and heat transfer to and from the leaf during and after the cure are yielding information on the basic nature of transfer process between tobacco and its environment.

Research in lighting at the tobacco markets has revealed that the intensity and quality of light under which tobacco is inspected and sold influence prices materially. This has enormous implications to the marketing of tobacco. Studies of the organization and operation of sales warehouses, together with materials-handling research techniques, point out possibilities for increased efficiency in tobacco marketing. Findings on demand relationships among different types of tobacco used in cigarettes are fruitful in meeting changing conditions in the industry. Research into the effects of agricultural adjustment programs on yields, income and production practices has developed a basis for modification of price support and production adjustment programs.

In recent months, with increasing general concern about the problem of smoking and health, researchers at the National Tobacco Research Laboratory have given added thought to this problem in planning their research. Discussions have been held to involve the medical center and other segments of the university in planning and conducting research, and Dr. John W. Oswald, president of the university, has stated his intention of appointing a universitywide committee on tobacco research.

In summing up, tobacco research at the University of Kentucky has been greatly stimulated by creation of the National Tobacco Research Laboratory, which is supported both by Federal and by State money and private grants. The researchers at Kentucky, it should be added, work in close cooperation, with much interchange of information and ideas, with tobacco scientists in other States and the USDA, so that utmost progress can be made in solving the basic and common problems of the tobacco industry.

Mr. Chairman, I wish to take this opportunity to thank you and members of the committee for giving me time to express my views on this most important subject.

Mr. ABBITT. Without objection I will insert in the record a resolution of the Governing Council of the American Public Health Service.

RESOLUTION OF THE GOVERNING COUNCIL OF THE AMERICAN PUBLIC HEALTH
ASSOCIATION

CIGARETTE SMOKING AND HEALTH

The size of the lung cancer problem in this country at the present time is such as to warrant urgent implementation of any and all preventive measures that have reasonable prospects of success. Evidence indicates that cigarette smoking is an important factor in the etiology of squamous carcinoma of the lung, and that the most reasonable explanation for the increase in the frequency of this form of cancer since 1920 is the increase in cigarette smoking that has occurred in the same period. Moreover, the desirability of public health action in relation to cigarette smoking is augmented by evidence that cigarette smoking is associated with increased risk of other disease states, in particular coronary heart disease, chronic respiratory disease, and cancer of the urinary bladder.

Additional information is needed on the mechanism or mechanisms whereby cigarette smoking increases susceptibility to these disorders. But until these mechanisms are identified and are shown to be susceptible to manipulation, preventive action can be directed only at reduction of the total amount of cigarette smoking prevalent in the population.

Believing that the above considerations require immediate and serious action to reduce cigarette smoking by the American people, the American Public Health Association—

1. Urges its members, in their professional activities and by private example, to provide leadership in the Nation, the States, and in their individual communities in educational activities on the fact that the level of cigarette smoking in the United States at the present time constitutes a serious health hazard.

2. Offers to the Surgeon General of the U.S. Public Health Service, to other official and voluntary health agencies and professional health organizations, to schools and other community agencies, the support of the association in initiating, planning, and implementing an educational program, and other measures that may be devised to deal with this problem.

3. Urges the tobacco industry, their advertising services, and the National Association of Broadcasters to continue taking voluntary steps for the control of cigarette advertising in print media and on television and radio, particularly but not exclusively that directed at young people.

4. Urges those legislative bodies and bureaus that have appropriate functions to consider taking action within their legal powers to regulate the advertising of cigarettes that by its content or implications portrays cigarette smoking as being a wholesome or safe activity.

5. Urges continued research and demonstration of educational and action programs in schools and communities based on research in methods of deterring young people from beginning the smoking habit and of encouraging adults to give up or cut down on their smoking.

Adopted by the APHA Governing Council November 13, 1963.

Mr. ABBITT. The subcommittee will adjourn until tomorrow morning at 10 o'clock.

(Whereupon, at 11:55 a.m., the subcommittee recessed to reconvene at 10 a.m., Thursday, January 30, 1964.)

TOBACCO RESEARCH LABORATORY

THURSDAY, JANUARY 30, 1964

HOUSE OF REPRESENTATIVES,
SUBCOMMITTEE ON TOBACCO OF THE
COMMITTEE ON AGRICULTURE,
Washington, D.C.

The subcommittee met, pursuant to recess, at 10:10 a.m., in room 1310, Longworth House Office Building, Hon. Watkins M. Abbitt (chairman of the subcommittee), presiding.

Present: Representatives Abbitt, Cooley, McMillan, Matthews, Stubblefield, Leggett, Duncan, Dague, Short, Latta, and Hutchinson.

Also present: Representatives Scott, Chelf, Bonner, Fountain, Watts, Kornegay, Natcher, Lennon, and Henderson.

Committee staff present: Christine S. Gallagher, clerk; Hyde H. Murray, assistant clerk; Robert Bruce, assistant counsel; and Francis LeMay, consultant.

Mr. ABBITT. The subcommittee will come to order.

We will proceed with our tobacco hearings. I recognize Mr. Cooley.

Chairman COOLEY. Mr. Chairman, I have the honor of presenting a distinguished constituent of mine. He is known throughout the length and the breadth of this great country of ours. He has devoted his life to the cause of agriculture, and has held many high positions in our State. He has been a Lieutenant Governor, and has held other positions of trust. He is entirely familiar with the problems that are now facing the tobacco industry of America, and the problems with which we are now contending. I present to you Mr. L. Y. Ballentine, better known as Stag, who has for many years been an able and competent commissioner of agriculture in our State.

I would like, Mr. Chairman, to have Mr. Ballentine, at the end of his statement, present the other commissioners of agriculture who are here with him from the tobacco-growing areas. It is a pleasure to present you, Mr. Ballentine.

Mr. ABBITT. We are pleased, indeed, to have you with us again.

STATEMENT OF L. Y. BALLENTINE, COMMISSIONER OF AGRICULTURE, STATE OF NORTH CAROLINA

Mr. BALLENTINE. Mr. Chairman and members of the subcommittee, I shall make a very brief statement this morning even though this subject entices me to go into much detail.

My name is L. Y. Ballentine. I am commissioner of agriculture for North Carolina.

I am concerned about the recently released report on "Smoking and Health," as are millions of other Americans. Indeed, I have been concerned for some years about the volume of written and spoken

condemnation of a product of great economic importance, based on highly inconclusive evidence. The new report is merely a distillation of such theories and opinions, but it has the effect of officially pointing an accusing finger at smoking as a health hazard, though it presents no scientifically proven knowledge of the nature of that purported hazard. It proposes "remedial action" against this theoretical danger, although no similar remedial or punitive measures have been proposed for many products which have been scientifically proven to be hazardous and the nature of their dangers clearly determined.

If there seems to be evidence to support a theory that smoking is linked with cancer and other dread diseases, then the place to begin on the problem is the place where every true scientist goes to test any theory—the laboratory. The place to begin is not by arbitrarily labeling as poisonous a product that millions of people have enjoyed for hundreds of years.

The report on "Smoking and Health" is not something to be taken lightly. At stake is the livelihood of millions of people, the comfort and convenience of millions of cigarette smokers, and, even more important, the possibility of increasing hazards to the public health by proceeding without full knowledge of the true causes of the serious diseases cited.

The overwhelming majority of America's estimated 70 million smokers smoke cigarettes. Approximately 17 million people depend on tobacco for all or part of their livelihood. Many types of manufacturing exist primarily to supply the needs of tobacco manufacturers. Excise taxes on tobacco products at more than \$3 billion annually, plus additional untold millions paid as ad valorem taxes on tobacco, provide governmental services that benefit the health and welfare of all the people.

We urgently need intensive research to find out exactly what does cause cancer and other serious diseases. If something in tobacco or tobacco smoke is a cause or contributing factor, we need to find out what that something is, so that it can be removed from tobacco products—and possibly from other consumer products as well. From such intensive research could very well come a definitive scientific breakthrough as to the cause of cancer in smokers and nonsmokers alike—a breakthrough that might be delayed indefinitely if tobacco is made the scapegoat and generally accepted as such.

We cannot afford to continue playing guessing games with these serious diseases or with a commodity of so much economic importance.

Chairman COOLEY. Mr. Ballantine, I would like to ask you one or two questions, but first I want to thank you for your interest and to compliment you on a very fine statement.

I want to ask you this: This is not your first indication of interest in the problem we are dealing with now—you and others sought to obtain additional funds to carry on tobacco research many months ago, did you not?

Mr. BALLENTINE. Yes, sir.

Chairman COOLEY. At that time you indicated your interest, as many of us did. Now this report has brought about a situation which has alarmed the whole Nation and if we are not able to embark upon a strong and comprehensive research program at this time, following this report, it would seem that we are derelict in our duty to the Ameri-

can public. I commend you for your continuing interest in the problem, and I think that we owe it to the American industry, the tobacco industry, and the people in the processing and distribution channels to have intensive research determine what the facts are. I think that you and your colleagues should be commended for coming here and giving us the benefit of your statements.

I thank you for that.

Mr. ABBITT. And I thank you very much, too. Mr. Latta has a question.

Mr. LATTA. I would like to direct attention to a sentence in the second paragraph, on page 2 of your statement. You state, "If something in tobacco or tobacco smoke is a cause or contributing factor"—can we read into that that you doubt or have some reservation in your mind as to whether or not tobacco is a contributing factor?

Mr. BALLENTINE. There are very definitely some. And that is why we are here advocating and strongly urging a scientific study, in order to determine whether there be any element in tobacco smoke that may be related to cancer or other dread diseases.

Mr. LATTA. You disagree with this report in that respect then?

Mr. BALLENTINE. I do not disagree with that. They have specifically determined that there is some relationship to it, but I also recognize the many fallacies in statistical determinations. And I think that the least we could do—the least that we should do—would be to operate on the basis that the statistical information indicates that there is something, but that it has not been proven, and we should pursue scientific courses for a clear determination if it does, and if so, what are factors involved.

Mr. LATTA. With reference to this report, what fallacies can you point out in it?

Mr. BALLENTINE. Well, I would say this, that statistics do not always prove the truth. If you will let me make a personal reference.

My father had three brothers, which made four boys and only one of them smoked, and he lived quite a few years longer than any of the rest. Does that prove that smoking is healthy?

Mr. LATTA. Now directing your attention to the report, can you point out any fallacies in it, for the benefit of the committee?

Mr. BALLENTINE. I am not here to challenge the statistical findings. I am here to urge that we approach it scientifically and determine by scientific study just what the facts are.

Chairman COOLEY. Will you yield?

Mr. LATTA. I am not quite finished.

Chairman COOLEY. I am not certain that you heard all of the testimony given by the Surgeon General.

Mr. LATTA. I was here yesterday.

Chairman COOLEY. I just wanted to remind you that he himself, the man who submitted this report, said that he agreed with the resolutions now pending, and he agreed with Mr. Ballentine's view that we do need a broad, comprehensive research program.

Mr. LATTA. I believe that myself, Mr. Chairman.

I also agree with you that we need to find out what that "something" is. The question that I was asking is as to the first part of this statement, "if something in tobacco or tobacco smoke is a cause or contributing factor."

Mr. BALLENTINE. Mr. Congressman—

Mr. LATTI. That is pretty well established.

Mr. BALLENTINE. Mr. Congressman, I did not say that there was no indication that there was something. I just put it on the "if" basis. And I do not think that puts me in a position of trying to disqualify the report. It only puts me in the position of questioning. And I think that there is some question left. I do not think it is conclusive. If it was conclusive and you had all of the facts it would be futile for us to be here asking for a scientific determination.

Mr. LATTI. I do not quite agree with you there, because in the last part of your statement you admit there is something there when you say, "We need to find out what that something is, so that it can be removed from tobacco products—and possibly from other consumer products as well."

I appreciate your clarifying that point and you are not just saying that you do not agree with the report. Thank you.

Mr. ABBITT. Thank you very much, Mr. Ballentine. I am personally appreciative of your help in the past. You have always been most helpful to our subcommittee.

Mr. HUTCHINSON. May I ask a question?

Mr. ABBITT. Yes.

Mr. HUTCHINSON. I enjoyed very much spending the evening with you a couple of weeks ago down in Raleigh. I am sure that there is a certain amount of tobacco research going on now and has been going on for quite a while. Do you know in dollars the present volume of tobacco research that is being carried on, not only by governmental agencies but by the industry?

Mr. BALLENTINE. No, sir; I am not prepared to say, and I doubt that this figure has been compiled.

Chairman COOLEY. Will you yield for a minute?

Mr. HUTCHINSON. Yes.

Chairman COOLEY. I obtained information yesterday that indicates the Department is spending about \$1.5 million in research and most of that, according to Dr. Brady's statement, is not with respect to the health factors but rather the cultivation and production, and so forth. I have asked for information as to what the industry is doing and we will have that information very soon.

Mr. HUTCHINSON. Mr. Chairman, you indicated, I believe, about how many dollars is contemplated in this research program?

Chairman COOLEY. I said \$5 million. That may not be enough. However, Dr. Brady said that the Department of Agriculture has already arranged a series of research projects and they are ready to move right now.

Mr. ABBITT. Yes, he said that.

Mr. BALLENTINE. If you will indulge me for one other statement.

Mr. ABBITT. A figure of \$5 million in an industry of several billion dollars?

Chairman COOLEY. The money that would be needed to build and equip a laboratory would be absolutely negligible as compared to the great amount of money invested in the industry or the annual tax income, both Federal and local.

Mr. LATTI. With reference to this study do you know how much it cost?

Chairman COOLEY. I do not have any idea. I think that we can obtain that information from the Surgeon General, and we should have the information for this record.

Mr. ABBITT. We will make a request for it.

(The information follows:)

Dr. James M. Hundley, Assistant Surgeon General, Public Health Service, Department of Health, Education, and Welfare supplied the following information concerning the study on smoking and health:

Cost of study-----	\$240, 000
Cost of publication-----	90, 000

Mr. BALLENTINE. I would like to make this further brief statement with reference to what Congressman Hutchinson has had to say, that we have had considerable research in the field of the production of tobacco, for the purpose of increasing its productivity and the quality of the plant. And much of that work may find a very definite place in this expanded program or crash program of research, because it does seem that it involves biological aspects, as well as physiological aspects, and also genetic phases of tobacco production. It may be that genetics will have an important part of the remedial processes that we go into, if they need to be gone into. I think it is related, but it is not going far enough in this crucial period to determine the health factors.

Mr. ABBITT. Thank you very much again.

Mr. BALLENTINE. Mr. Chairman, I was asked to present to you the other commissioners of agriculture, or their representatives. Commissioner Butler from Kentucky was supposed to be here today. He was here yesterday. I am not sure whether or not he has come in. Is Commissioner Butler here?

(No response.)

Mr. ABBITT. Mr. Chumney gave his statement yesterday.

Mr. BALLENTINE. Mr. Chumney spoke for himself and the Governor, I believe, on yesterday.

Next is Mr. Frank Risher, assistant commissioner, Florida, who is here. He is representing Commissioner Conner. And if Mr. Risher has a statement to make, with your permission, we will be glad to hear it now.

STATEMENT OF FRANK RISHER, ASSISTANT COMMISSIONER OF AGRICULTURE, STATE OF FLORIDA

Mr. RISHER. Mr. Chairman and members of the committee, I guess you might classify us as the baby in the tobacco production field. I think that most people think of Florida as producing oranges only, but we do have two categories of tobacco grown in Florida.

Chairman COOLEY. You are not talking about lettuce leaf, are you? [Laughter.]

Mr. RISHER. We can grow those, too, if necessary. But I understand that they have a stigma attached to them, too. We have the bright Flue-cured tobacco, like most of you have.

Mr. ABBITT. If I may interrupt, I might say that some of the members of the subcommittee—I know that Mr. Dague as well as Mr. McMillan—were in your tobacco area 5 or 6 years ago. We had a very enjoyable trip. I was surprised to see the tobacco that you do have there.

Let us go off the record.

(Discussion off the record.)

Mr. ABBITT. Back on the record.

Mr. RISHER. I am glad that you had a fine trip. And I hope that the rest of you gentlemen will come down, too and enjoy Florida with us.

We in Florida, in the department of agriculture, would certainly welcome a program of experimentation that you Congressmen might think up that would definitely clear the situation that we are in at the present time.

In Florida I think that most of the work, as has been done in North Carolina, has been in the field of production, rather than in trying to find out the harmful effects. By the way, somebody was bragging here yesterday about Sir Walter Raleigh carrying tobacco back to England and smoking it and that someone doused him with water to put out the fire. We have reports showing that the Spanish found tobacco in Florida in the 1500's. I guess that we are one of the old boys when it comes down to that.

We have approximately \$25 million income on tobacco to the farmers. And that probably would amount on a business basis, maybe, to \$75 million. I am not talking about the retail end of it or anything like that. I am just talking about what we spend for fertilizer and seeds and the other items like that.

We have 4,200 farm laborers engaged in the production of tobacco. We have 37 factories in Florida that employ another 5,000 people. You might think of Winston-Salem in North Carolina as having all of the factories, but they do not. Our factories largely are producing cigars.

As small as our income is from tobacco, especially the Flue-cured, it is concentrated, as you might well see, in about five counties. And if we take away the \$2 million income from each of the five counties that would be a rather serious blow.

Besides that, like every other State, we have a tobacco tax that helps support the State government with its schools and other things.

To show you how much science has done for the production of tobacco, in 1940 we averaged 925 pounds of tobacco to the acre. And because of work done by the experiment stations and the extension service, last year our production was 1,858 pounds of tobacco. In other words, in 22 or 23 years we have doubled the production capacity per acre.

If we can do that much in the field of production I see no reason why we cannot do something in the field of trying, at least, to bring tobacco back into good repute.

Unless somebody has a question, I believe that is all. I thank you.

Mr. ABBITT. We thank you very much for your statement. We will go off the record.

(Discussion off the record.)

Mr. ABBITT. Back on the record.

Mr. McMILLAN. I would like to say to the gentleman that his Congressman, Billy Matthews is one of the most active members of this committee and takes a great interest in all problems confronting tobacco.

(The prepared statement of Doyle Conner, commissioner of agriculture, State of Florida, follows:)

STATEMENT OF DOYLE CONNER, COMMISSIONER OF AGRICULTURE, STATE OF FLORIDA

Florida's 1963 tobacco crop income amounted to \$24,504,000. This is \$3 million less than 1962 sales.

Income received from the sale of Flue-cured tobacco totaled \$14,732,000, and shade tobacco brought in another \$9,781,000.

Tobacco has a special place in Florida's agricultural history. It was first reported in existence by the explorers of the early 1500's.

Since then it has grown into a vital segment of the State's economy. Approximately 4,200 farm laborers are hired each year to plant, cultivate, and harvest tobacco. Another 5,137 workers are used to staff the 37 tobacco factories in the State.

Florida tobacco is classified into two different categories. The first is Flue-cured tobacco which is used in cigarettes, and the second is shade tobacco used as cigar wrappers.

Flue-cured tobacco farming is centered in north Florida in Suwannee, Hamilton, Madison, Alachua, Columbia, and Lafayette Counties.

In 1940, farmers had an average yield of 925 pounds of Flue-cured tobacco per acre, and the average price was 17.5 cents a pound.

Taking advantage of the continual technological advances in production, the average yield per acre was raised to 1,858 in 1963; and the average price was 66.7 cents a pound. Total production in 1963 amounted to 25,830,000 pounds.

Due to the possibility of overproduction of Flue-cured tobacco, acreage allotments have been enforced by the Federal Government for a number of years. This year acreage allotments were cut 10 percent, and only 13,600 acres will be planted as compared to 15,000 in 1962.

Nearly all of the Florida produced shade tobacco is grown in Gadsden County. A small amount is harvested in Madison and Leon Counties.

There are no price supports or controls on shade tobacco at this time. It is estimated that 3,900 acres will be planted in Florida in 1964. Production in 1963 amounted to 5,148,000 pounds.

Since the normal supply of Cuban type tobacco has been cut off, experiments in growing this product have been conducted in Florida.

John Russell, Gadsden County Agricultural Agent, says Florida has successfully duplicated the Cuban tobacco leaf wrapper through a Fire-cure method. "Local farmers planted 550 acres of this type of tobacco last season, and they are enthusiastic over its success," he said.

Russell also pointed out that the North Florida Agricultural Experiment Station at Quincy is conducting research on the production of Cuban "filler" tobacco for cigars, "which would have the same flavor and aroma as the Cuban leaf."

Mr. BALLENTINE. Mr. Chairman, Commissioner William L. Harrelson, of South Carolina, wired me that he could not come, but that he had sent in a statement for the record.

Mr. ABBITT. You may submit that telegram for the record and Commissioner Harrelson's statement was included in the record of the hearings yesterday.

(The telegram referred to follows:)

COLUMBIA, S.C.

Y. BALLENTINE,
Commissioner of Agriculture,
Raleigh, N.C.:

Notifying Congressman Cooley today "reaffirmed position expressed in statement to you January 24 regarding tobacco research laboratory. Regret official duties prevent appearance at hearing. Request my statement be included in testimony."

WILLIAM L. HARRELSON,
Commissioner of Agriculture for South Carolina.

Mr. BALLENTINE. Mr. Ottaway, representing the commissioner of agriculture of Georgia, was supposed to be here this morning. Has he come in?

(No response.)

Mr. ABBITT. If you will let us know when he does come in we will hear from him then.

Mr. BALLENTINE. Commissioner Moss called me yesterday and told me that due to conditions which he could not remedy or control he was sending in his stead Mr. Eugene H. Holman, State chemist, who directs the food and drug program in the State of Tennessee. Mr. Holman will now speak for Commissioner Moss of Tennessee.

Mr. ABBITT. We appreciate your attendance here, and we will be glad to hear from you at this time.

STATEMENT OF EUGENE H. HOLMAN, STATE CHEMIST AND DIRECTOR OF THE FOOD AND DRUG PROGRAM, STATE OF TENNESSEE

Mr. HOLMAN. Thank you, Mr. Chairman and members of the committee.

I want to go back for just a minute to 1938 when my father died and we were on a little farm in west Tennessee and one of the newspapers in the city of Memphis was writing about some of the accomplishments and failures of Father Holman, and one of them said that the squire was a lifelong member of St. John's Episcopal Church; however, he seldom attended, because it made him nervous. [Laughter.]

I am not exactly in the church, but I do get a little nervous appearing before this committee.

As Commissioner Ballentine stated, I am in the Tennessee Department of Agriculture and in that department I am director of food and drug work and am the State chemist.

I believe that positions such as this throughout the country in departments of agriculture are one of tension, because in our accomplishments you will find tension—it is a position of commitment, and we hope it is a position of accomplishment.

The reason that I say those three things is because we are charged with the protection of the public health from poisons, deleterious foods, drugs, cosmetics, chemicals, and so forth, and we are placed in the department of agriculture where foods and other commodities that make up our economy are produced and processed. It is therefore imperative that we not only understand and perform our duties as regulatory officials, but we have to understand and appreciate the problems of farm production and food and drug and cosmetic processes.

In this area, of course, I have had to be and am familiar with the crisis programs that we have had throughout the country, both in the legislative halls here in Washington as well as in our State legislature on products which might be deleterious to health such as the food additives amendments of 1958 and 1959 and others that were placed on the substances in foods, whereby any substance which might have any degree of carcinogenic activity would be banned from use in any food.

And then in 1962, the Kefauver-Harris new drug amendments came about and there were others in the Congress, which more or less brought

us up to date, but they are classified or might be called crash programs.

I do not have the time to go into this type of background, except to say with relation to tobacco that it would take one simple amendment to the Food and Drug Act in the section on "definitions" to define tobacco as a drug or as a compound of drugs and chemicals and it would be immediately banned from commerce entirely. Yet because of the historical background and because of the pleasure, the luxury, and to some people the necessity for the use of tobacco, I cannot visualize that we would go into any precipitous action without a fair investigation from scientific laboratory sessions and from sound legislative thinking to determine the exact causes of deleterious effects from the use of tobacco.

With those preliminary remarks I would like to read for the record a short statement that I have prepared.

Gentlemen, I am here to present these remarks at the request of the commissioner of agriculture, Mr. Moss, and the Governor of the State of Tennessee, Mr. Clement, representing the State government of Tennessee. The consumers of tobacco in Tennessee, the growers of tobacco in Tennessee, and the sales, processing, and distributing industry in the State. We are vitally concerned with all health and public well-being and the economics of the tobacco industry and the consuming public.

Over a period of several years we have vigorously supported and recommended adequate budgets and excellent staffs and research facilities in the Department of Health, Education, and Welfare to make the necessary and long-range studies needed on the effects of drugs, food additives, and pesticides, residues and human and animal health.

Now we have been confronted with increasing medical evidence that there are some harmful effects from excessive smoking of cigarette tobacco. The public demands, and the related tobacco industry demands adequate scientific investigation in order to determine the exact causes for any deleterious effects from tobacco, and to require the growing, processing, and use of tobacco which would eliminate these deleterious substances. We therefore urge and strongly recommend that the research program, adequately financed and staffed, as recommended by Congressman Harold D. Cooley of North Carolina, and Congressman Abbitt, chairman of this subcommittee, and the Agriculture Committee of the House, be adopted.

Mr. ABBITT. Thank you very much for your statement. We appreciate your being with us.

Mr. HOLMAN. Thank you.

Mr. BALLENTINE. Mr. Chairman, would I be imposing on the committee to make a little further statement?

Mr. ABBITT. We will be pleased to hear from you.

Mr. BALLENTINE. It was on November 11 that I was privileged to speak to the American Public Health Association in Kansas City, Mo., on the economic significance of the American tobacco industry, which is quite a subject.

I went into to some extent an effort to determine some of the factors that I thought would be informative and interesting and I would like to break down, to some degree, this \$8-plus billion business by stating that this industry annually effects the fertilizer and lime industry of this country to the extent of \$45 million; the pesticide industry \$20

million; the fuel oil business, petroleum, by \$7 million; and \$8 million a year is spent for tobacco bed canvas which, of course, is a product of the textile industry. And the replacement of tobacco cures, \$11 million annually; \$2.5 million is spent for twine; and a like amount for plastic covers; about \$1.5 million is spent each year for tobacco seeds; and then when you get into the field of advertising we find that the tobacco industry, 21 brands of cigarettes, are responsible for over \$146 million a year.

These payments go to the television, radio stations, magazines, and newspapers.

I am not giving you these figures to indicate that we would want to pit the economics of our country against the health of our people, but I am saying that because of the significance of the industry in the economics of our country and the Government of our country, that it justifies everything that we are asking and even more.

Thank you.

Mr. ABBITT. We certainly appreciate that fine statement. We appreciate your helping us here.

Mr. BALLENTINE. If Mr. Ottaway comes in I would like to have the privilege of getting him before you.

Mr. ABBITT. Very well.

Next we have on the list the farm organizations. Our first witness is Mr. Arthur C. Lawrence of Apex, N.C., chairman of the Agriculture Committee of the North Carolina State Grange.

**STATEMENT OF ARTHUR C. LAWRENCE, APEX, N.C., CHAIRMAN,
AGRICULTURAL POLICY COMMITTEE, NORTH CAROLINA GRANGE**

Mr. LAWRENCE. Mr. Chairman and members of the Agriculture Committee, my name is Arthur C. Lawrence, Apex, N.C. I am a tobacco farmer and am chairman of the Agricultural Policy Committee of the North Carolina Grange, and appear here today for our organization.

The report of the Advisory Committee to the Surgeon General of the Public Health Service has focused attention on the existence of problems drastically affecting the tobacco industry, which has established itself through the years as the backbone of the economy of North Carolina. Tobacco represents a way of life for thousands of people in tobacco growing and manufacturing areas. Tobacco stands high as an income-producing commodity of our Nation. The welfare of our Nation depends upon the golden week for tax revenues of around \$2 billion each year. There are indications that this figure may be hiked considerably. States draw large sums of public revenues from tobacco taxes. Consumption of cigarettes has been on the rise in this country during the past year—and indications are that this trend, after a short lapse, will continue. Everything possible should be done to keep the tobacco industry in a healthy state, both from the standpoint of the producer and the consumer. The welfare of both is involved.

The Grange has a long history of support for research, and for education. We assert that all progress in agriculture is based primarily on research and education. Our land-grant colleges and the U.S. Department of Agriculture through their research programs have con-

tributed tremendously to the success of agriculture in this country. Their efforts along this line should be continued and expanded with special emphasis on tobacco.

The problems of tobacco are so critical, with the general welfare of all our people affected, the North Carolina Grange urges an acceleration, or crash program of research for tobacco. We support the proposal for a research laboratory in the tobacco-growing area to search out ways of removing health hazards from tobacco. The possibilities and rewards of such a project are tremendous—for all involved with tobacco.

Mr. ABBITT. Thank you very much, Mr. Lawrence. We appreciate your statement.

Mr. LAWRENCE. Thank you.

Mr. ABBITT. The next witness is from the National Farmers Union. And we are fortunate to have with us Mr. Jack Hall, president of the Virginia Farmers Union. We are pleased to have you with us. We appreciate your coming here. We will be glad to hear from you.

STATEMENT OF JACK HALL, PRESIDENT, VIRGINIA FARMERS UNION

Mr. HALL. Mr. Chairman and members of the committee, I am happy to be here on this occasion. I am sorry that I have not prepared a statement. I only found out about the hearing when I returned home from quite a long trip. And what I want to say is off the cuff, but I promise that it definitely is in the interest of all of our growers.

I have here with me Mr. Clay H. Rice, of Chatham, Va., who is chairman of the Virginia Farmers Union Tobacco Committee.

I am from down near Smithfield, Va. I cannot tell you exactly where I am from, because I am a farmer—I am between Smithfield and Suffolk, but I also live very near the farm on which most of the early tobacco was grown in this country. As you know, John Smith married Pocahontas, and there the tobacco industry was developed from the beginning of it. There is where it all began.

We have talked that Virginia grows the best tobacco in the world, but to keep from injuring somebody's feelings here today, I had better not say more about that. It seems that some of our neighboring States are in some respects surpassing us, so that the teachers' child has learned a good lesson from us, to put it that way.

[Laughter.]

On behalf of the tobacco growers in Virginia and throughout the Southland, which we have memories scattered throughout the area, I speak, but I am here principally to represent the growers in Virginia.

Over one-half of the membership in the Farmers Union is composed of tobacco growers, because the Farmers Union seems to attract the small growers and the family-type farmers, of which the tobacco growers in Virginia are in that class.

There are several thousand growers in Virginia. And not only because of the interest of our State, from the growers' standpoint, and the industry itself, I speak. And I have made some notes and I will refer to them, and I hope that you will bear with me. I will try to be concise and not take up too much of your time.

Tobacco in our economy is a pretty important commodity. It is an \$8 billion business. There are some 400,000 farmers engaged in agriculture and dozens of manufacturers as mentioned by the previous speakers who spoke as to the fertilizer industry and the other various segments of the economy supplying farmers.

There are some 1,500,000 grocers, druggists, and other retailers who are encompassed within this economy.

The tobacco industry buys one-fourth of the Nation's fuel oil, and is the third largest user of cellophane, and one of the largest users of paper products. And their expenditure of a quarter of a billion dollars helps to support the Nation's communication media, such as radio, television, newspapers, magazines, and so forth.

And last of all, but I think not insignificant, is the amount of taxes that the tobacco industry and tobacco itself brings into the economy. Taxes from the tobacco industry earned more than \$1 billion for the 50 States and over \$2 billion for the Federal Government.

We are glad to say that we will accept the report of the 10 eminent people who made the survey and have gotten out this official report. It deserves most serious consideration from the public and the tobacco industry. And I know that the tobacco industry, and I am speaking of the manufacturers and the end users of tobacco—those that produce it for the trade—will certainly bend every effort to see if this crisis can be overcome. When such eminent doctors come out with a report of this kind it deserves the attention of the people. And the conclusions that they reached certainly cannot be ignored. However, the findings of the Surgeon General's report, in our minds, are such that we are not exactly satisfied, because I remember that when I was a boy we were told not to go out on foggy nights, that we would get malaria. It was true the mosquitos would bite you. Nobody knew what happened, what caused malaria or yellow fever, Dr. Walter Reed in his experiments showed us that it was something there that was not the foggy night, but something else that caused it.

Can it be possible, that with the statistics available in the findings of this report, with a piecemeal approach, that we have adequate knowledge and whether this report is truly the entire picture?

We recommend that the Congress act immediately to make a study of this report on smoking and health, and that funds be appropriated to be used to get more accurate statistical methods than those employed in this study.

The Surgeon General's Committee is frank to admit—and it stated so in its report—that it does not know all of the answers and that more scientific inquiry is essential, and we generally agree. We urge that a crash program by both the Congress and the tobacco industry come to grips with this crisis so that the actual livelihood, the value of thousands of small farms and the very living and existence of these family-type farmers in the tobacco-growing areas and the economics of these States so affected and the people affected will, certainly, get a fair show in this matter.

We do not wish it to go any further, if it is harmful to the people of America. In general we know that. But we want to be sure, absolutely sure that all of the inquiries are made before we wreck an industry that contributes \$8 billion to our entire national growth product.

I thank the committee for its attention. If there are any questions I will try to answer them as best I can, Mr. Chairman.

Mr. ABBITT. We appreciate so much your statement. We are glad to have had you with us.

Does Mr. Rice have anything to say?

Mr. HALL. I do not believe that Mr. Rice has anything to say. I asked him that before, because Clay is never at a loss for words. I am happy to be here. I thank you very much.

Mr. ABBITT. Our next witness is Mr. Charles Russell, administrative assistant, North Carolina Farm Bureau.

We are pleased to have you here. I have a telegram from Mr. John C. Lynn, legislative director, American Farm Bureau Federation which states as follows:

Farm Bureau is vitally concerned with respect to the welfare of the many thousands of tobacco farmers included in our membership. We historically have favored expansion of agricultural research as an important and appropriate function of government. The specific proposals before the subcommittee concerning research relative to the quality and health factors of tobacco will be scheduled for consideration at a meeting of our executive committee February after which we would like to file with your subcommittee any recommendations which are developed relative to such matters. It will be appreciated if you will include this wire in the hearing record.

STATEMENT OF CHARLES RUSSELL, ADMINISTRATIVE ASSISTANT, NORTH CAROLINA FARM BUREAU

Mr. RUSSELL. Mr. Chairman and members of the committee, I am Charlie Russell, administrative assistant of the North Carolina Farm Bureau. I am here to express the North Carolina Farm Bureau's support of the House Joint Resolution 885.

At the 1963 annual convention of the North Carolina Farm Bureau the voting delegates approved the following resolution:

We are concerned about the use of many groups of inconclusive information which attempts to link the use of tobacco products to certain health problems and we request extensive research to determine the true facts.

The Surgeon General's report states that there is a relationship between smoking and certain health problems. However, the report does not identify the specific cause of the problem.

They do not know whether it is the paper around the cigarettes, or the pesticides and herbicides used in green tobacco, smoke contents, or if the problems are caused by any of these.

The Surgeon General's finding is a report and should be treated as such. As I understand the report, it is not a conclusive, scientific paper on the causes of certain health problems but merely points out that there is a relationship between smoking and certain health problems.

The North Carolina Farm Bureau Federation is already on record of: "Supporting and encouraging farmers to use cultural practices that will maintain and improve the quality of their tobacco." This past year, farmers in North Carolina did try to do just this. Farmers are willing to do their part in helping solve the problems. But not enough is known on the connection between smoking and health problems to give the answers to the cause of the problems. If and when the answers are found, I feel confident that you can count on the farmers to do their part.

To accept the findings of the Surgeon General's report and say that tobacco is bad and that we should outlaw the production of tobacco would be as foolish as saying that "We find that a large number of deaths are caused by automobiles and that automobiles are bad and we should stop production."

Already proposals are being made that cigarette advertisements contain the words (a) "Caution, cigarette smoking is a health hazard," or (b) "Caution, cigarette smoking is dangerous to health. It may cause death from cancer and other diseases." This is proposed even though there have been no scientific studies to show what causes the relationship between smoking and health problems. In other cases where we know the cause of deaths, we have taken no such action. Take for example, automobile driving, we know that driving an automobile too fast, or under the influence of alcohol, or in the middle of the road will cause death. Since we know this, does it make sense to word advertisements (a) "Caution, automobile driving may lead to death," or (b) "Caution, driving automobiles may cause death if you drive too fast or in the middle of the road."

In the case of tobacco we do not know the specific cause, yet in the other example the cause is known.

The economic contributions of tobacco to the State and Federal governments are over \$3 billion annually. The production of tobacco involves over 700,000 farm families and approximately 100,000 factory workers. To take the findings of the Surgeon General's report and say let's call it quits, would be a serious blow to the livelihood of all these people, therefore, we must be sure that if there is a relationship between smoking and health it is backed up by scientific studies.

Only through proper and adequate research can we find the specific reasons why there is a relationship between smoking and certain health problems, if any. Once we find the reasons, then we can take steps to eliminate the causes. By going this route, we will continue to have a significant and worthwhile tobacco industry.

Mr. Chairman, the North Carolina Farm Bureau wholeheartedly supports the proposed research program and pledges its help in every way possible.

Mr. ABBITT. We appreciate very much your statement and we thank you.

Chairman COOLEY. Mr. Chairman, I take great pleasure in introducing another very distinguished North Carolinian, a man who is chairman of the board of the Wachovia Bank & Trust Co. of Winston-Salem, N.C. The Wachovia Bank & Trust Co. is the largest bank south of Philadelphia, and east of the Mississippi. It is a bank that functions and has functioned for many years in the tobacco-growing area. Mr. Davis has interested himself in State activities. He is a businessman and a banker. He is the spokesman for a large number of trade associations and chambers of commerce in North Carolina on behalf of the resolutions under consideration.

There are a large number of my fellow Tarheels here today, and I would like to have them stand up and be recognized. I take pleasure in presenting to you Mr. Archie Davis.

Mr. ABBITT. We appreciate having you here, and we will be glad to hear from you now.

Chairman COOLEY. Before you start, I would like to have the people from the various areas stand up and see how many we have from North Carolina. I should like to have the people from Durham stand up; those from Greensboro, Henderson, Raleigh, Winston-Salem, Apex. We just had a distinguished speaker from Apex. Wendell, Williamston—we had a very distinguished member of the Farm Bureau here from there—Chapel Hill—Mr. Ballentine was a witness. I am sure that our next witness, Mr. Davis, will tell us something of interest and we will be glad to hear from you now.

Mr. ABBITT. We will be glad to hear you now, Mr. Davis.

**STATEMENT OF ARCHIE DAVIS, CHAIRMAN OF THE BOARD,
WACHOVIA BANK & TRUST CO., WINSTON-SALEM, N.C.**

Mr. DAVIS. Mr. Cooley and gentlemen of the committee, as Mr. Cooley has stated I am probably here as a minister without portfolio. I have been invited by a great number of chambers of commerce and other trade organizations in North Carolina to speak, not as a banker, but simply as a lay citizen as to the importance of tobacco in the economy of North Carolina. And if I may, Mr. Chairman, I would like in the interest of time, perhaps, to file my formal report.

Mr. ABBITT. Without objection, that will be done.

(The prepared statement of Mr. Archie Davis follows:)

STATEMENT OF ARCHIE K. DAVIS, CHAIRMAN, WACHOVIA BANK & TRUST CO.

It is an honor to appear before this distinguished committee on behalf of a number of chambers of commerce and other trade groups in North Carolina in support of House Joint Resolution 885, House Joint Resolution 891, and other similar resolutions. These resolutions aptly express the imperative need for expanded and coordinated research in tobacco by the Department of Agriculture.

Previous testimony has already demonstrated how vital the tobacco industry, from farm to factory, is to our national economy. By way of emphasis, it seems proper to repeat that hundreds of thousands of farm families in 21 States are engaged in the growing of tobacco * * * that there are some 550 plants, employing 96,000 workers in 30 States, engaged in the manufacture of tobacco products * * * that approximately 1½ million businesses share in the tobacco trade * * * and that Federal, State, and local excise taxes on tobacco products amounted to \$3.3 billion in 1963. (See exhibit A attached.)

If, as these figures demonstrate, tobacco is a major segment of the U.S. economy, a brief account of the tobacco situation in North Carolina will dramatically illustrate the extent to which the economic and sociological well-being of the State's citizens depends upon the successful growing, handling, processing, and manufacture of tobacco products. (See exhibit B attached.)

Obviously, the physical health of this Nation is of completely primary concern, and this objective must be the guiding motivation behind all research activity. Eminent authorities have already spoken to this point. My concentration upon the economic aspects of the tobacco problem is simply to reemphasize the absolute need for the immediate and coordinated expansion of research at all levels. A problem of such profound importance to both the physical and economic well-being of our Nation deserves the immediate, objective, and co-operative support of all.

For generations in North Carolina, tobacco has provided a substantial portion (ranging between 35 and 50 percent) of total farm income. In 1962 tobacco sales accounted for \$545 million—or 48.8 percent—of a total of \$1.1 billion in cash receipts from farm marketings.

Total farm cash receipts, 1962

[Millions of dollars]

State	Total	Tobacco	Tobacco, per- cent of total
North Carolina.....	\$1,116	\$545	48.8
Kentucky.....	621	254	40.9
South Carolina.....	389	108	27.8
Virginia.....	498	101	20.3
Tennessee.....	522	72	13.8
Georgia.....	757	85	11.2
Connecticut.....	143	20	14.0
Maryland.....	283	24	8.5

Today, major emphasis is being placed on continuing efforts to improve the quality of this basic crop which provides support, wholly or in part, for more than 165,000 North Carolina farm families—or one-ninth of the State's total population.

These thousands of farm families hold tobacco allotments in 86 of North Carolina's 100 counties and each year grow more than 900 million pounds of tobacco. For Flue-cured tobacco alone, there are allotments covering 467,000 acres in 73 counties.

Burley tobacco is also an important cash crop for many North Carolina farm families, and allotments total 11,500 acres in 35 western North Carolina counties.

There is no need to belabor the impact on the North Carolina economy of more than \$500 million worth of tobacco marketings each year. It is an impact felt directly or indirectly from one end of the State to the other.

The tobacco growers of North Carolina and the 4 other Flue-cured producing States sell their crops in 93 separate community markets with a total of 433 warehouses providing employment during the marketing season for about 20,000 persons. Of these community markets, 44 (with 218 warehouses) are in North Carolina. From the warehouse, tobacco moves to dealers and manufacturers, both domestic and overseas. Exports of Flue-cured tobacco were valued at \$405 million last year alone.

Only a few relevant facts and figures are needed to express the significance to the North Carolina economy of the manufacturing process. Tobacco manufacturing provides jobs for more than 40,000 people, generating annual payrolls in excess of \$156 million. The original cost of tobacco manufacturing plants and equipment in the State is estimated at more than \$360 million. And last year, sales of North Carolina tobacco manufacturers totaled \$3.1 billion—a figure that would be considerably higher if measured at retail price levels.

Data relating to the tremendous volume of Federal taxes paid by the tobacco industry already has been presented to this committee. At the State level, it may be of interest to note that in 1962 North Carolina collected \$14.4 million in corporate income and franchise taxes from the tobacco industry. The industry paid about \$7.5 million in county and municipal property taxes. Tobacco workers paid \$2.9 million in individual income taxes and about \$2.5 million in sales taxes—while consumers were paying \$2.6 million in sales tax on tobacco products.

These statistics which I have presented cannot tell the whole story. They furnish only an outline, a set of reference points which I trust will provide a background for your deliberations as you consider the urgent need for tobacco research.

I am aware that the situation which you have been discussing involves both economic and health factors, and again may I say it is not my purpose to equate the two. My purpose to suggest only that the major role of tobacco in our economy makes it absolutely necessary that all interests concerned, both public and private, expand and coordinate their research activities to the fullest extent and at the earliest practicable moment.

For many years several governmental agencies and private industry have been actively engaged in cooperative research efforts. In fact, North Carolina State College at Raleigh—about 10 years ago—recognized the importance of a team approach by combining the tobacco research efforts of nine separate scientific departments under a single coordinator.

This innovation unified the tobacco research efforts in the departments of agricultural economics, agricultural engineering, botany, crop science, entomology, genetics, plant pathology, soil science, and experimental statistics.

This effective team approach, unique to North American tobacco research by reason of its single administration, is held in high professional esteem by scientists the world over. This acclaim is the end result of new knowledge obtained from studies involving all aspects of tobacco production, breeding, disease, insect, and quality investigations.

Frankly, these scientific advances in tobacco have resulted from the cooperative efforts of research talent, not just at the North Carolina State College campus level, but also from technical direction and assistance at the great nearby universities of Carolina and Duke. Additionally, similar valuable counsel and guidance have come from the nearby research laboratory leaders of industry. It is estimated that within recent years the State of North Carolina has appropriated approximately \$750,000 annually for tobacco research. This does not include additional financial assistance from private industries.

Recognizing the complexity of the tobacco plant and its response to environmental influence, genetic composition and the interaction of those two factors in all phases of growing, handling, and processing, it is recommended that the scientific personnel and research facilities of all existing institutions be supplemented to give immediate attention to our problem.

Thank you, gentlemen.

EXHIBIT A

SOME FACTS ABOUT TOBACCO

In 1963, around 70 million Americans, more than half the adult population including oversea Armed Forces, bought:¹

Over 523 billion cigarettes, 14.9 billion more than in 1962 and 20.3 billion more than in 1961;

More than 7.1 billion cigars, up 115 million over 1962;

About 69.5 million pounds of smoking tobacco;

Nearly 64.8 million pounds of chewing tobacco;

Over 32.5 million pounds of snuff.

Tobacco users spent \$8.08 billion in 1963 for tobacco products. Of this, over \$3.3 billion went directly to Federal, State, and local governments in excise taxes.

Tobacco products pass across sales counters more frequently than anything else—except money.

Here are some more facts about the agriculture, the manufacture, distribution, taxation, and the cost and services of the tobacco industry.

(In the following, all figures are for 1962 unless otherwise indicated:)

FARMING

Tobacco growers.—Tobacco is grown in 21 of our Nation's States by some 750,000 farm families, averaging 3 to 4 workers to a family. Total tobacco acreage exceeds 1.2 million with a total yield of over 2.2 billion pounds.

Major crop.—Tobacco is the fifth largest cash crop in the country following cotton, wheat, corn, and soybeans, and ranks third in agricultural exports.

Farmer's income.—Farmers received \$1.3 billion for the sales of tobacco crops, representing 8 percent of the total for all crops in the United States. The income from tobacco crops of the major States was:

North Carolina.....	\$564, 015, 000	Virginia.....	\$100, 885, 000
Kentucky.....	277, 856, 000	Georgia.....	86, 894, 000
South Carolina.....	116, 249, 000	Tennessee.....	84, 043, 000

Other tobacco producing States include: Alabama, Connecticut, Florida, Indiana, Louisiana, Maryland, Massachusetts, Missouri, Ohio, Pennsylvania, West Virginia, Wisconsin, and to a minor extent: Kansas, Minnesota, and New York.

¹ According to 1963 estimates prepared by the U.S. Department of Agriculture.

MANUFACTURING

Factories.—About 550 tobacco products factories, large and small, operate in 30 States. Cigarette production in 1963 is estimated to exceed 550 billion cigarettes.

North Carolina leads in cigarette production with an annual rate of about 325 billion. Virginia produces around 115 billion cigarettes annually, and Kentucky puts out over 90 billion.

Employment and wages.—Tobacco manufacturers directly employ more than 96,000 men and women. In 1961 employees of U.S. tobacco manufacturers received \$379 million in wages.

Assets and stockholders.—The net assets of publicly held tobacco companies total over \$3 billion and there are over 300,000 stockholders of record of tobacco stocks.

COST AND SERVICES

(All figures cited in this section are estimates from various sources.)

Number of businesses.—About 1.5 million businesses share in the tobacco trade supplying equipment, materials, transportation, and distributing and merchandising services.

Farmer's expense.—Tobacco farmers paid about \$155 million for hired labor and about half a billion dollars for other expenses such as:

\$45 million for fertilizer and lime.

\$8 million for tobacco plant bed cloth.

\$2.5 million for twine used in tying tobacco.

\$1.5 million for tobacco seed.

\$2.5 million for plastic covers used in plant beds.

Other services and supplies.—In addition to the amounts paid for tobacco, wages, machinery, precision instruments, electronic equipment, wooden hogsheads, and cases used for shipping, the tobacco industry spent:

\$25 million for cigarette paper.

\$79 million for transportation, mostly by truck.

And annually uses:

Over 40 million pounds of moisture-proof cellophane.

More than 71 million pounds of aluminum foil.

Nearly 27 billion printed packs and 2.7 billion cartons.

DISTRIBUTION

Wholesalers.—Over 4,500 independent wholesalers handle the distribution of tobacco products, buying them directly from the manufacturer.

Retailers.—Tobacco products are sold by more than 1.5 million outlets in the United States, including thousands of small retailers.

Exports.—Over 28 percent of the tobacco leaf sold in free world markets in 1963 came from the United States—some 505 million pounds, up 36 million pounds from 1962, and valued at \$405 million.

In addition, the United States continued to be the world's leading exporter of cigarettes—23.2 billion in 1963, valued at over \$105 million, compared with \$68 million 6 years ago.

Expenditure.—In 1963 the total consumer expenditure for tobacco products was \$8.08 billion, a \$326 million increase over the previous year.

More than \$7.1 billion of the total expenditure was for cigarettes, up some \$312 million over 1962.

TAXES

Total excises.—Federal, State, and local excise taxes on tobacco products in 1963 yielded \$3.3 billion, more than 3 times the amount received by tobacco farmers for their crop. Over 98 percent of this came from excises on cigarettes.

In 1962, the \$3,232,183,000 collected in excises on tobacco products—chiefly cigarettes—went to:

Federal.....	\$2,030,304,000
State.....	1,129,879,000
Municipal.....	72,000,000

EXHIBIT B

North Carolina tobacco information, 1963

[U.S. Department of Agriculture figures]

Number of North Carolina tobacco farm families over-----	165, 000
North Carolina Flue-cured allotments (73 counties)-----	119, 632
North Carolina Flue-cured allotted acreage-----	467, 395
North Carolina Flue-cured production (pounds)-----	901, 663, 000
North Carolina Flue-cured yield per acre (pounds)-----	1, 958
North Carolina Flue-cured crop value-----	\$525, 828, 000
Average price North Carolina Flue-cured (per hundredweight)-----	\$58. 30
North Carolina burley allotments (35 counties)-----	18, 205
North Carolina burley allotted acreage-----	11, 553
North Carolina burley production (pounds)-----	23, 100, 000
North Carolina burley yield per acre (pounds)-----	2, 100
North Carolina burley crop value-----	\$12, 820, 000
Average price North Carolina burley (per hundredweight)-----	\$55. 50
Value North Carolina tobacco crop (all types)-----	\$538, 648, 000
Tobacco accounts for about 48 percent North Carolina cash agricultural receipts.	
North Carolina grows about 65 percent of all U.S. Flue-cured tobacco.	
North Carolina tobacco plants produce over 61 percent of all U.S. cigarettes.	
Total U.S. cigarette and tobacco full-time workers over-----	96, 000
North Carolina full-time cigarette and tobacco workers over-----	40, 000

Mr. DAVIS. I have received a great number of telegrams from some 28 communities as well as letters asking that I represent them in speaking in support of the joint resolution, 885, 891 and others. Calling for the urgency of a standard and coordinated research in the field of tobacco.

(A list of letters and telegrams follow; these communications may be found in the files of the committee.)

TELEGRAMS AND LETTERS FROM NORTH CAROLINA CHAMBERS OF COMMERCE IN
SUPPORT OF TOBACCO RESEARCH FACILITIES

Ahoskie	Fayetteville	Roxboro
Asheboro	Granville County-Oxford	Salisbury-Rowan County
Asheville	Greensboro	Sanford
Benson	Henderson-Vance County	Selma
Blowing Rock	Hendersonville	Tarboro
Burlington-Alamance County	Hickory	Wadesboro-Anson County
Chapel Hill-Carrboro	Kinston	Williamston
Clinton	Laurinburg	Wilson
Durham	Mount Airy	Winston-Salem
	Rocky Mount	

Mr. DAVIS. At the outset I must say beyond any question of doubt that it would be a grave mistake to attempt to equate physical well-being with economic well-being. No one can question the absolute importance of the physical health of this Nation. That comes first. That is completely primary.

I think from the standpoint of the economic factors it is important to bring that out, because it is exceedingly vital to the economy of this entire country and is just another way of underscoring the urgency of this immediate program in expanded research. Whether it is a matter of health or a matter of economics, in my judgment, stands and is validated on its own basis.

Much testimony has already been presented. I cannot take the time of this committee with respect to the national impact of tobacco in our economy. Much of that would be repetitive, but I think by way of emphasis and without showing any unusual comparisons, so far as North Carolina is concerned, I would like to speak a bit about the impact of this industry and of this particular agricultural product on North Carolina. And, Mr. Chairman, as you have aptly stated, as you did yesterday—and I think your fellow citizen, Mr. Hall, reiterated the point this morning—I would take issue with the gentleman from Florida that we in North Carolina have conceded for well over 300 years that the Flue-cured tobacco that we know today and that commands such a premium in the market was originated and grown in Virginia, going all the way back to 1670 at Jamestown. And I think you indicated, perhaps, that some of your sister States appropriated your development for their own uses. We plead guilty to that fact.

I think it would be a matter of interest to you to know that last year Flue-cured tobacco alone, that our farmers grew and exported, amounted to approximately \$200 million, most of it going to Great Britain and Western European nations. And I shall be equally frank in saying that the premium that it commands in the foreign market is because of the fact that it is sold under the brand name of "Virginia, No. 1." I think we must plead guilty, not only to having appropriated your product, but we appropriated your good name to our own uses and very profitably, may I say.

Mr. ABBITT. I appreciate your statement.

Mr. DAVIS. It would be an understatement to say that tobacco is a big business in North Carolina. It is deeply woven into the economic fabric of our State, not only from the standpoint of manufacturing, but from the standpoint of the grower or the farmer, as well as from the standpoint of the warehousing complex that markets it.

Just by way of example, in the farming end alone last year we had 155,000 farm families engaged in the production of tobacco in North Carolina. They resided in 86 of our 100 counties. If you take these farm families and multiply by a factor of 3 people to the family, that involves 495,000 people. And if you use a factor of 4 which I think is reasonably conservative, we are talking about 660,000 farm people directly engaged in the production of tobacco for either their whole income or support or in part. In terms of dollars for a great number of years tobacco income or cash receipts from the marketing of tobacco annually have approximated somewhere between 35 and 50 percent of our total farm cash income in North Carolina. In 1962 that figure was \$1,115 million of which \$545 million was derived from the sale of tobacco.

We are heavily concentrated in what might be termed the Flue-cured area. There are some 120,000 farm allotments for Flue-cured tobacco, involving 457,000 acres. We have some 18,000 allotments, I think, in burley, involving about 11,500 acres in 35 counties.

The Flue-cured is concentrated in 73 counties.

But the importance from the standpoint of North Carolina is that in our State we produce 65 percent of all of the Flue-cured tobacco produced in America.

And then if you figure that \$400-and-some-odd million annually of Flue-cured tobacco is exported out of this country, North Carolina accounts for about 50 percent, and that is of no mean consequence insofar as our balance-of-payments problem is concerned.

With respect to the marketing system in tobacco, it is unique. Referring to the five Eastern States in which Flue-cured tobacco is heavily concentrated, there are 93 community markets or, rather, 93 towns or cities that have these warehouses involving some 433 warehouses in the 5 States. And then relating that to North Carolina, 44 of our communities—44 of these 93 are in North Carolina embracing about 218 warehouses.

As I understand it, in the Flue-cured marketing end alone there are some 20,000 people involved in that process that receive a great part of their income during the marketing season. Of that amount I would say, roughly, 10,000 are in the State but to use this multiple factor of 4 we are talking about, essentially, there are 40,000 people in the area who are dependent upon this warehousing income for their sustenance.

As to manufacturing, again heavily concentrated in our cities, there are some 40,000 employees at all levels engaged in the manufacturing processes of tobacco in our State. Their annual payroll approximates \$156 million.

The original plant investment in our manufacturing facilities, both plant and equipment, totals some \$360 million. Last year, in 1962—and the facts are appended to my formal statement which will bear out the accurate data—the total sales of all manufactured tobacco products in North Carolina was slightly in excess of \$3 billion. That is at the manufacturers' price level.

Someone who has already testified previously has referred to a total volume in this country of \$8 billion at the consumer level. So it is apparent that if we took the value of our manufactured products and translated them in terms of consumer value, it is not going too far I think to say that probably 50 percent of the consumer value of all types of tobacco products come from the State of North Carolina. And certainly 61 percent of all cigarettes are produced in our State.

Now with respect to tax revenue. And I again speak only in terms of North Carolina. If you take our corporate income and franchise taxes—if you take sales taxes and income taxes, paid by the tobacco workers only, and and likewise take the sales taxes on the tobacco paid by the consumers in North Carolina alone—we are talking in terms of about \$22.5 million annually going into the general fund of our State. In addition to that, the manufacturing companies pay about \$7.5 million of taxes, ad valorem taxes on inventory and on fixed assets.

I make that point for this reason: Insofar as our State is concerned, 75 cents out of every general fund revenue dollar that goes into the treasury of our State is devoted to education in North Carolina. You can appreciate just from a direct standpoint what these dollars that are derived from tobacco directly—and this does not include indirect relationships—that produce taxes, what they mean to the economic welfare of our State.

Now just one brief word about research. There is no question that but for many years several Government agencies, private in-

dividuals, have actively engaged on a cooperative basis in research. Years ago it became quite apparent and for that reason our North Carolina State Agriculture Land-Grant College embarked upon research in tobacco from the standpoint of the plant, but 10 years ago the need was recognized for a complete coordination of research activities, not only at the college level, but throughout the State. As a consequence—and this was unique and has been unique in North American research, insofar as tobacco is concerned—nine separate departments that would have some relationship to research on tobacco were combined under one coordinator, economic, agricultural engineering, botany, crop science, soil science, and an amount of genetics and the like.

They have taken still another step during these past few years. They have coordinated the work within the State colleges and then that in turn has been coordinated, in the North Carolina scientific degree courses at North Carolina University at Chapel Hill, and with research divisions at Duke University. That has taken another step by coordinating with the research activities of some of our major tobacco industries in the States.

Someone earlier on the committee asked about the dollars that have been devoted to research. This may be subject to check, but I think that it is fair to say and a reasonable estimate, that within recent years our State government alone has spent about \$750,000 annually on research in tobacco which would include, perhaps, 20 to 25 percent of Federal funds, but administered by the State, which would leave a net, say of \$600,000 of tax money devoted by the State to research. That is in addition to any contributions made by private industry.

So, in conclusion, Mr. Chairman, may I say, first of all, that we in North Carolina, as far as I am permitted to speak are duly grateful to this committee and commend this committee upon the step it is taking to move into this problem quickly. And may I also say, that I think it is fair to say that I can safely speak on behalf of our university complex, on behalf of our research centers and industry, that everyone in North Carolina and every agency that can conceivably contribute to this problem that we now are facing in tobacco, stand ready to be of every possible assistance.

I thank you very much for your time and attention.

Mr. ABBITT. You have made a splendid statement and I commend you highly upon it.

Mr. DAVIS. Thank you.

Chairman COOLEY. Only a banker could handle figures as well as Mr. Davis has been handling them. It clearly indicates that he is not nervous, because he has given us some very valuable information. As a boy out in the elevator said, this report made him so nervous that he started smoking. [Laughter.]

I appreciate your being here. I think you have been very helpful in giving us your views. These telegrams and letters which Mr. Davis has placed the record, come from all over North Carolina.

Mr. DAVIS. Thank you.

Mr. ABBITT. The next witness is Mr. Malcolm B. Seawell, of the Leaf Tobacco Exporters Association, Inc.

Chairman COOLEY. May Mr. Kornegay present this witness?

Mr. ABBITT. Yes.

Mr. KORNEGAY. I will be delighted to present him. I appreciate your courtesy. Mr. Seawell is one of the most distinguished citizens of our State. He is a lifelong resident of North Carolina, comes from a distinguished family, and has had a very long and distinguished career as a public official. He was prosecuting attorney for 8 years, judge of the Superior Court of North Carolina and, also, served several years as attorney general for the State of North Carolina. It is, certainly, a pleasure, Mr. Seawell to have you with us. And I want to say that he is one of my fine constituents.

Mr. ABBITT. We are very delighted to have you here, and we shall be glad to hear from you now.

STATEMENT OF MALCOLM B. SEAWELL, GENERAL COUNSEL AND EXECUTIVE SECRETARY, LEAF TOBACCO EXPORTERS ASSOCIATION, INC.

Mr. SEAWELL. Mr. Chairman and members of the committee, thank you very much, Mr. Kornegay. I am sure that I will remember your kind words in November. [Laughter.]

Mr. ABBITT. Let us go off the record.

(Discussion off the record.)

Mr. ABBITT. Back on the record. Let the record show that Congressman Matthews regrets that he could not be here a few minutes ago.

Mr. MATTHEWS. I was on the telephone talking about tobacco. [Laughter.]

Mr. SEAWELL. My name is Malcolm B. Seawell; my home address is Glen Lane, Chapel Hill, N.C., and I am general counsel and executive secretary to the Leaf Tobacco Exporters Association, Inc. This association numbers 75 American companies which buy and export American leaf tobacco, and has its offices in Raleigh, N.C. The greater volume of exported tobacco is flue-cured; however, the 75 companies buy and export burley and all other types of leaf tobacco grown in the United States. Association members also sell to domestic manufacturers of cigarettes and other tobacco products.

Approximately one-third of the United States Flue-cured tobacco is exported.

Although others have touched on the economic importance of tobacco, I would like to emphasize that tobacco represents one-half of the cash farm receipts in North Carolina—a total of one-half billion dollars.

Normally, about 2 billion pounds of tobacco are grown annually in the United States. The farmer gets about \$1,300 million gross for his part. The Federal Government, through taxes on tobacco products, realizes the equivalent of \$1 for each pound of tobacco grown in this country. State and local governments receive the equivalent of 50 cents for each pound grown. In all, over \$3 billion are paid in tobacco taxes in this country.

That is the tobacco tax stake which Federal, States, and local governments have in tobacco, and is, of course, exclusive of the millions in corporate and individual income taxes of those to whom tobacco represents a livelihood.

The amount of annual tobacco taxes (\$3 billion) involved may not, in this day, be overpowering, but it represents more money than the net Federal receipts during the first 128 years of our national existence.

The companies which I represent hope to stay in business just as they and their counterparts have remained in business for over 300 years. We feel a responsibility not alone to our foreign and domestic customers but to the public as well. We feel that the research program provided in House Joint Resolution 885 should be adopted, to the end that the conclusions reached by the Surgeon General's Committee may be proved or disproved (other than on a statistical basis), and that corrective steps may be taken, if needed.

Although the causes of cancer and of some circulatory diseases are still unknown, during the past year or so, various doctors and scientists have made headlines in their health pronouncements:

(1) You will recall the clamor which arose when our late President endorsed milk drinking. The statement was condemned as being one encouraging consumption of a product which would increase cholesterol, thus bringing about heart and circulatory diseases.

(2) The eating of pork and other fatty meats has been condemned.

(3) Whisky, wine, and similar products (without suggestion of warning labels) have been called health hazards.

(4) It has been suggested that automobile riding, with the attendant fumes, leads to lung cancer.

(5) Living in industrial cities has been decried.

(6) Sunshine has been cited as a cause of skin cancer.

(7) Tobacco has been segregated for a frontal attack.

But, to cap the climax,

(8) Certain doctors have recently stated, on the basis of statistical studies, that marriage is conducive to cervical cancer; that a woman married more than once is more susceptible to such cancer than a woman married only once; that Protestant women are more susceptible to such cancer than are Catholic women.

So, if we accept the so-called scientific approach to our health problems and project that approach to its future goal, this country will have no dairy industry, no pork or cattle industry. There will be no more dry martinis. Automobiles and superhighways will be gone. Beach resorts will close. We will live in the rural areas, and return to our boyhood habit of smoking rabbit tobacco, corn silk, and cubebs. The home will cease to exist, because a marriage license will have to carry the warning: "Marriage promotes cancer"; and the preacher will have to warn the bride: "Marriage is an honorable estate, but it leads to cancer."

Mr. Chairman, if there is anything wrong with tobacco, let us find out what it is. If it is a health hazard, let us find out why, and take corrective measures.

Leaf Tobacco Exporters Association is committed to the research goals set forth in House Joint Resolution 885.

When the tobacco industry is being weighed in the balance, we hope that we within the industry will not be found wanting, and neither should the Federal Government.

Mr. ABBITT. Thank you very much for that fine statement.

Chairman COOLEY. He just brought up another objection. [Laughter.]

Mr. ABBITT. The Chair recognizes Mr. Cooley.

Chairman COOLEY. Mr. Royster, will you please come around? Mr. Royster is from Henderson. We do not need to introduce this witness, because he is here every time that we meet on tobacco. He has always been interested in tobacco and is always helpful to our committee.

Mr. ABBITT. We will be glad to hear from you now.

**STATEMENT OF FRED ROYSTER, BRIGHT BELT WAREHOUSE
ASSOCIATION, HENDERSON, N.C.**

Mr. ROYSTER. Thank you, Mr. Chairman and Congressman Cooley. I took note of Congressman Cooley's statement that I am here every time you meet. And it has been my good fortune to be here a number of occasions.

Mr. ABBITT. And you have been very helpful to us at all times.

Mr. ROYSTER. Thank you.

I come this morning, Mr. Chairman, without a prepared manuscript. And quite frankly the reason for the absence of a prepared manuscript is that I have been so close to the subject under consideration here today, since it first came into the public forum in 1953, and with the organization of the Tobacco Industry Research Committee, of which I happen to have been one of the original members of the board of directors of that organization, have served in that capacity throughout the intervening years. One of the first acts of the Tobacco Industry Research Committee was to make available in substantial amounts grants to a great number of individuals and institutions throughout this Nation without any restriction as to the treatment or publication of any findings by any of the recipient individuals or institutions of those grants. Those funds have now accumulated to a substantial amount of more than \$8 million.

Another thing that organization did upon its inception was to establish a scientific advisory board, comprised of a number of outstanding scientists and medical people in this area as to the possible relationship between tobacco and health and, more specifically, lung cancer. At that time the information against tobacco and any possible connection with human health was primarily and almost entirely of a statistical nature. And when I received a copy of the report of the Surgeon General's Committee—and please let me say for the record, Mr. Chairman and gentlemen, that my remarks are in no way intended to impugn the motives of any of the outstanding Americans who served on that Committee—but when I received the report and studied it as carefully as I am capable of doing, after having, of course, had prior to that studied the conclusions from the press release and the news media, I was perplexed and I am perplexed and, Mr. Chairman, that accounts for my being unable to assemble my perplexed thinking into an intelligent manuscript for this appearance.

Now, Mr. Chairman and gentlemen, insofar as I can ascertain there is nothing new—nothing new is claimed in the contents of this report. It is a very intelligent compilation of statistics which have been prevalent for a long number of years. And I might add, Mr. Chairman, that we have not agreed with the interpretation of many of those statistics. And that is my position here this morning. We have taken

the position throughout these 10 years of controversy in this area that we, of course, were as concerned about the health of our people as any other group of business in this Nation. We reiterate that position this morning.

However, Mr. Chairman, if there is anything new I have been unable to find it, as I have said. My position is this morning is that everything possible should be done as quickly as it can be done in line with the resolution under consideration before this committee, but attending conclusive medical proof that this industry should not be subjected to what I think may lie ahead for us.

I shall not reiterate or repeat a great number of statistics that have been presented so ably to this committee. I think that there are two things that might become of benefit to the tobacco industry. I have lived long enough to learn that out of all situations, regardless of how bad they may appear, some good does come. One is that I sincerely hope and I hope that this immediate situation will cause a reunification of the tobacco industry in America.

Mr. Chairman, as you and the distinguished members of this committee know, the success of tobacco, the tobacco program, and the tobacco industry has been because of the mutual understanding and cooperative attitude of that industry. And, certainly, I hope that out of this situation which, to say the least, is a very serious one, that a reuniting and a reunification of that spirit of cooperation might evolve.

Secondly, out of all of the statistics that have been presented in this and other forms since the report was published, certainly, the magnitude and the importance of the tobacco industry necessarily must be impressed upon the minds of the people of this Nation as it has never been before.

So with this tremendous industry, I think that when one analyzes all of the aspects concerned with it, that even though admitting that I am in a selfish position, but in spite of that I think one would be forced to the conclusion that regardless of the amount of function that will be required, they should be forthcoming with all possible haste in order that research might be expanded and in order that we might get for once and all to the primary basic cause of this dreadful situation.

I would cite this as one means of emphasizing the statement just made. The incoming president of the American Cancer Society, Dr. Murray Copeland, made an address, Mr. Chairman, in your State, in your fine city of Richmond, and a report was carried in the January 23 issue of the Richmond Times-Dispatch, and I should like to quote this much from what Dr. Copeland said:

(1) Cancer is not a single disease, so varied are its manifestations, its rates of growth and susceptibility to treatment.

(2) Experiments have shown 450 chemical compounds that can cause cancer, but some forms of cancer can be controlled by chemicals.

(3) Both hereditary and environment may favor the development of certain types of cancers.

(4) Hormones can cause certain cancers, control others.

I suggest, Mr. Chairman and gentlemen of the committee, that that statement in itself by an eminent authority in the field of cancer indicates to me that, in the first place, we do not, or medical science does not even know what cancer is. If that be true, how would it be possible to say what the causes are or what all of the answers may be?

So, Mr. Chairman, again I am happy to appear before you. I appreciate this opportunity, representing the tobacco Flue-cured warehousemen, about 85 percent of the warehousemen in the five States in my capacity as managing director of the Bright Belt Warehouse Association, to strongly endorse these resolutions for more research on this most important product.

Mr. ABBITT. Thank you very much. We appreciate very much your fine statement.

Chairman COOLEY. And I thank you, too.

Mr. FOUNTAIN. Mr. Chairman, may I make this observation? I apologize for interrupting you, but I would like to say that the able and distinguished witness, Mr. Royster, who just testified, is now a constituent of mine. Due to the action of the State legislature in redistricting North Carolina, Mr. Royster inherited me as his Representative and I very happily received him and all of the other wonderful people of Vance County as my constituents. They were formally in Congressman Cooley's district. Mr. Royster is a longtime personal friend of mine. We served in the North Carolina State Legislature together. He has been actively associated with tobacco in one capacity or another for many years. He has given much of his time and thought to it. The committee is most fortunate to have had one of his experience come and testify here today upon this subject of such extreme importance to so many people.

Mr. ABBITT. Thank you.

Chairman COOLEY. Mr. Chairman, I present Mr. John Williamson, president of the Flue-Cured Tobacco Growers Association of Raleigh, N.C. He is a tobacco farmer. He has been a friend of mine for many years, and is a distinguished citizen of our State. He is very much interested in the problems we are now discussing and has a very brief statement to present to the members of the committee. Please come around, Mr. Williamson, and we will be glad to hear from you now.

Mr. ABBITT. We appreciate your being here before this committee again and we will enjoy hearing from you.

STATEMENT OF JOHN C. WILLIAMSON, PRESIDENT, FLUE-CURED TOBACCO GROWERS ASSOCIATION, RALEIGH, N.C.

Mr. WILLIAMSON. Mr. Chairman and members of the committee, I would like to say that I have been married long enough and I still enjoy smoking and still am very fond of my wife, despite the Surgeon General. [Laughter.]

I am John C. Williamson of Raleigh, N.C., and am appearing here as president of the Flue-Cured Tobacco Growers Association.

On January 18 the board of directors of the Flue-Cured Tobacco Growers Association voted unanimously to support Congressman Cooley's request for \$5 million for an immediate or "crash program" of research on smoking and health. I am here today to ask that you gentlemen press for the immediate congressional approval of the necessary funds to commence this vital research program with all possible speed.

The Advisory Committee's report has laid its opinion before the American people, and they can now weigh this opinion in the light of their own personal experience and their own needs. The right to

smoke or not to smoke is still an individual right and an individual freedom. Any attempt to legislate or administrate against this freedom would usher in a dictatorial type of thinking which I believe could be more sweeping and more dangerous than any hazards from smoking tobacco.

Mankind indulges in many practices which, when done to excess, are injurious to his health. Perhaps overeating is the worst abuse of all. Yet who would even suggest that it be prescribed by law how much and what kind of food a person might eat? Automobiles have taken the lives of more Americans than all the wars in which this country has participated, but no person has advocated the abolition of the automobile industry.

Let us not overlook these facts:

(1) That the Committee's report was not based on any new or different research; (2) that scientific opinion is still divided on these questions; and (3) that new discoveries by further comprehensive research may give different answers.

Certainly within the memory of everyone in this room the medical opinion and practice considered right at one time has become outmoded and wrong in later years. This may well prove to be the case in the present instance.

Let the outside zealots who urge hasty and drastic action without further study remember this: We are concerned with an industry from which about 17 million Americans are securing a part or all of their livelihood. We know that last year taxes on tobacco products yielded about \$31½ billion to Federal, State, and local governments. We know that tobacco is our third largest agricultural export and a very significant item in our country's balance-of-trade problem. How foolhardy would we be, if on insufficient evidence any drastic steps were taken by governmental decree.

Tobacco is to North Carolina as steel is to Pennsylvania, oil is to Texas, or oranges to Florida. In North Carolina 200,000 farm families and seasonal help depend mainly on the production of tobacco. Another 40,000 people are engaged in the manufacture and processing of tobacco or tobacco products. Only last year the tobacco farmers of North Carolina received \$525 million for their crop of tobacco. From these few figures, you gentlemen can see that tobacco is very vital to the economy of the people of my State.

We, as tobacco growers, plan to stay in business and at the same time give the smoking public a product that is safe. After all, most of us are smokers as well as growers. If smoking is a threat to the good health of the country, we want to know the harmful element in tobacco. If there is a harmful element in our product, we believe that research can show how to remove this element and still give the world our traditionally fine tobacco products.

With an adequate research program, some of the "whats and whys" of cancer, heart disease, and other health problems may be uncovered. Certainly the answers to these medical questions should be answered before the "gypsy curse" is placed on our industry.

One thing we can certainly agree upon: In the past there have been some rather sharp differences of opinion within the tobacco industry; and sometimes the growers have found themselves at odds with the companies. Now surely we need to join hands and work closely together to solve a common problem.

Mr. ABBITT. Thank you very much for your fine statement.

Chairman COOLEY. I should like to comment as to Mr. Williamson's reference to food being dangerous and people overeating. I remember that somebody wrote a little poem some 46 years ago about "Some Little Bug," and it goes something like this:

In these days of indigestion
It is oftentimes a serious question
As to what to eat and what to leave alone;
For each microbe and bacillus
Has a different way to kill us,
And in time they always claim us for their own.
There are germs of every kind
In any food that you can find
In the market or upon the bill of fare.
Drinking water's just as risky
As the so-called deadly whisky.
And it's often a mistake to breathe the air.
Some little bug is going to find you some day,
Some little bug will creep behind you some day,
Then he'll send for his bug friends
And all your earthly trouble ends;
Some little bug is going to find you some day.
The inviting green cucumber
Gets most everybody's number,
While the green corn has a system of its own;
Though a radish seems nutritious
Its behavior is quite vicious,
And a doctor will be coming to your home.
Eating lobster cooked or plain
Is only flirting with ptomaine,
While an oyster sometimes has a lot to say,
But the clams we eat in chowder
Make the angels chant the louder,
For they know that we'll be with them right away.

And so I agree with you that a lot of people do overindulge in eating and in many other ways.

Thank you very much for your statement.

Mr. WILLIAMSON. Thank you.

Mr. ABBITT. A former colleague of ours and a former member of this committee, Mr. Watts, is here. He has contributed very much to this question. And he would like to present the next witness.

Mr. WATTS. Mr. Chairman and members of the committee, it gives me a great deal of pleasure to introduce to this committee the next witness to be called, a fine constituent of mine. He is the president of the Burley Cooperative Association. He is a tobacco raiser and one of the most knowledgeable men in the tobacco field today. I would say that he, along with several other burley and Flue-cured tobacco people have done as much for the fine program that we have as anyone else that I could name. I am sure that I do not have to make any further statement to this committee, because frankly, everybody in the tobacco industry knows John Berry. We are glad to have you here, John.

Mr. ABBITT. Mr. Berry, we are grateful for your attendance here today and we shall be glad to hear from you now.

Mr. STUBBLEFIELD. I should like to welcome Mr. Berry, too. We are all proud of him and glad that he is here.

Mr. CHELF. I would like to associate myself with these statements. Mr. Berry is an outstanding man and really knows this business and

has always been on our team helping us in every problem we have. I have been here 20 years and you have been in every fight we have had. We have seen a lot of them come and go. And this is going to blow over, too.

Mr. ABBITT. I appreciate these comments.

You may proceed.

STATEMENT OF JOHN BERRY, BURLEY COOPERATIVE, LEXINGTON, KY.

Mr. BERRY. Mr. Chairman and gentlemen of the committee, I appreciate these comments. I have known these gentlemen from Kentucky, as well as other members of this subcommittee, for a long time. And I have had the honor and the pleasure of appearing before this committee on former occasions, and always I have been the recipient of the most considerate and courteous treatment.

I received Mr. Cooley's invitation to appear here today and I am grateful for it, and I am very grateful to Mr. Cooley who has been always very alert and attentive to the problems of tobacco, wherever they have arisen in this country.

I shall not deal with revenues, statistics, or any matters of that sort, because it would simply be cumulative in the record, but I should like to refer to one or two or three things.

Tobacco, of course, is vital to the economy of all of the States that the Burley Association of Kentucky administers the price support program in. This year, for example, in Kentucky we have had a good year, a good market and a good market price, with the result that in that State alone we will sell 520 to 525 million tons of tobacco at a total price of \$310 million or more.

The Burley Association of Kentucky administers the price support program in the States of Kentucky, Ohio, Indiana, West Virginia, and Missouri and it has been engaged in contacts for that purpose with the Commodity Credit Corporation since January 1941. I think this organization has come to understand and to appreciate the value and the importance of burley tobacco to the people who grow it in all of those States.

All of us have been agitated and concerned for the past decade over the charge that there is a causal relationship between the use of tobacco and health. We have been hopeful that all of that time the problem would pass and that we should hear no more about it or of it, but contrary to that wishful thinking and that hopeful thought, tobacco stands charged in the public mind today by the report of the Surgeon General's Advisory Committee, and whether the charge is well founded or whether it is supported by valid and competent evidence, or whether people of competence and knowledge agree or disagree, tobacco stands indicated and we can talk about all of the economic benefits of it and all of its importance to the national economy and to the National Treasury as well as to the treasurers of the States and local government, which is sizable, but the issue before this committee now and before the tobacco constituents and before the country is, what shall we do about it—can we delay—can we argue—can we talk longer?

It is imperative that we act now and that this suggested crash research program be at once implemented. The immediacy and the urgency of the question is apparent now and we cannot dodge it. We cannot avoid it. And so it is a very happy and a very reassuring development that there is pending before this Congress the resolutions that call for a sizable and extensive research program into this controversial question.

Mind you, the Federal Government can well afford to inaugurate and to establish and activate at once a research program irrespective of the causes. Presently the Federal Government, notwithstanding the high revenue that it takes from tobacco products, is spending only \$1,500,000 in tobacco research, less than one-tenth of 1 percent; in fact the figure is 0.072 of 1 percent of the revenue collected from tobacco products. Every available facility should be enlisted at the earliest possible moment to conduct the most exhaustive research into the question and the collection and correlation of all possible evidence bearing upon the issue. Then we shall know. Now we do not. But we stand charged and we must answer, and tobacco will either be acquitted or convicted depending upon the quantity and the quality of competent evidence that a program of this kind will develop and produce.

It is not going to pass. We must meet it. And all of us in tobacco, I am sure, are grateful to you men who are aware of the problem, of its gravity and who are alert to the need of answering it as quickly as possible.

Mind you, \$5 million might be enough—\$10 million might not be enough, but whatever the requirements may be, let us ask Congress to be liberal and generous in providing the money necessary to do the job, for Congress in so doing will preserve one of its richest resources of revenue.

It is a fact that the Government of the United States has a greater interest at stake than the growers of tobacco. The Treasury of the United States takes 8 cents a pack on every package of cigarettes produced and used in this country, and the grower gets about 3.25 cents.

All over the country there are facilities, I am sure, that could be practically used. In Kentucky I would remind you that we have a complex of facilities at Lexington that, perhaps, is second to none in the whole United States. We have there the National Tobacco Research Laboratory at the University of Kentucky provided by a State appropriation of \$1 million where there are 40,000 square feet available for continuous tobacco research suitable for inquiry into an investigation of this problem. In addition, we have at Lexington, Ky., the Spindletop Research Center, an independent agency.

Yesterday afternoon I talked to some of the people out there and they informed me that they are interested in tobacco and are going into the inquiry, into many phases of it, of the tobacco problems, and they said to me, "We have readily available seven competent people having Ph.D. degrees who are desirous and anxious of proceeding at the earliest moment possible, with an inquiry into this question."

In addition, we have at Lexington, Ky., the Public Health Service hospital that is devoted to addiction diseases. And in addition we have the veterans hospital, the hospital at the University of Kentucky

that is part of the \$27 million medical unit there. We have other modern, well-equipped hospitals in the city of Lexington.

And so I would ask you and suggest to you that in the course of your deliberations and those further deliberations that shall come when the matter of allocation of funds is concerned, the appropriation and allocation of funds is under consideration, that this complex at Lexington, Ky., be considered and not be minimized either in its value or its importance or in its status.

Gentlemen, I appreciate appearing before you. And as before, I must thank you for your reception.

Mr. ABBITT. Thank you so much, Mr. Berry, for that splendid statement.

We have a man, I see, in the audience who was not heard on Wednesday and I cannot imagine this hearing not including hearing him.

Chairman COOLEY. I would like to interrupt the program for a moment to introduce Mr. B. C. Mangum, president of the North Carolina Farm Bureau Federation. He will make a very brief statement. You have heard from many distinguished North Carolinians—Mr. Lawrence, one of the leaders in the State and you have heard from Mr. Russell, and Mr. Williamson, and I would like to now have us hear from Mr. Mangum. If you will come around and be recognized, we will be happy to hear your statement, Mr. Mangum.

Mr. ABBITT. It will be a pleasure to see and hear you again. I could not pass you up. We appreciate your coming here. I am glad that you are here.

STATEMENT OF B. C. MANGUM, PRESIDENT, NORTH CAROLINA FARM BUREAU FEDERATION, RALEIGH, N.C.

Mr. MANGUM. Mr. Chairman and gentlemen, I shall not take but just a minute. I would like to say this that we are concerned in North Carolina as well as they are in other places of the country about the effect that this report might have upon the domestic tobacco industry and, also, the health of its people. I would like at this time to urge this committee to take action as quickly as possible and move in the direction where we can develop a research program that will clear up this atmosphere that now exists in the tobacco industry.

And with that, Mr. Chairman, I appreciate very much this opportunity.

Mr. ABBITT. Thank you so much.

Our next witness is Mr. J. B. Hutson, president of the Tobacco Associates, Inc. It will be a pleasure to hear from you now.

Mr. STUBBLEFIELD. I want to say that I appreciate his being here as he comes from my home county. He also comes from the strawberry country, and I used to work and pick strawberries for him. I am glad that you are appearing before us today, and I might add that picking the strawberries was not too many years ago. It is a great pleasure, John, to welcome you to this committee. I am sure that you need no further introduction.

STATEMENT OF J. B. HUTSON, PRESIDENT, TOBACCO ASSOCIATES, INC.

Mr. HUTSON. Mr. Chairman, Mr. Stubblefield and Mr. Cooley, and members of the committee, I am the president of Tobacco Associates, Inc. This is an organization primarily concerned with the promotion of tobacco exports. I am not an expert in this area, but I would like to comment briefly on the need for additional research on tobacco along three lines.

1. There is definite need for additional research as to the particular elements in tobacco or in the smoke of tobacco that may be injurious to health. For about 10 years, we have had claims and counterclaims relating to tobacco and health but even the most recent report of the Advisory Committee to the Surgeon General does not pinpoint or identify any particular substance in tobacco or smoke that is a health hazard. Obviously, intensive research is needed in the area concerned. So far as publicly financed activity is concerned, this seems to me to be a challenge to research workers affiliated with the Department of Health, Education, and Welfare.

2. As and when substances are identified in tobacco or smoke that are a health hazard, research will be needed in connection with the control or elimination of these substances. Research in this area, particularly that relating to plant breeding, cultural practices and curing methods, should be conducted by scientific workers in the field of agriculture.

I do not mean to imply that this part of the research should wait until the other is concluded. It takes time to train research workers. It takes time to organize research people. It takes time to get research going. And it may be that the people in this area will have to help pinpoint the particular things in tobacco that may be injurious.

3. More research is needed with respect to the quality of tobacco. A great deal has been done in this area in recent years but much remains to be done. And, we need to know whether and to what extent a removal of elements that may be hazardous to health will itself affect the quality of products. Problems of this category are complicated by the fact that at present no defined standards of quality for tobacco actually exist. As a matter of fact, different manufacturers both here and abroad have different quality standards and even the standard of a particular manufacturer may change from time to time. Research in this area seems to me to be a challenge to scientific workers in the field of agriculture.

With respect to the pending proposal I would favor expanded research, greatly expanded research in my old alma mater, the University of Kentucky, where a laboratory has recently been built. I would, also, be for the expansion of work in North Carolina and in the Flue-cured areas and, perhaps, the quickest and best way to expand that is to establish a regional research laboratory.

I thank you.

Mr. CHELF. I want to agree with you wholeheartedly in what you have said. We are in trouble. The industry is in trouble. And all

of us should put our shoulders to the wheel and work for the common cause, for the good of the whole industry, in Kentucky, in North Carolina, and in every other tobacco-producing State. I commend you on your statement. You are exactly right. We must work together, close together, pull together, and stick together.

Thank you.

Chairman COOLEY. Is it your understanding that each manufacturer has his own formula and that regardless of anything else they guard the formula very carefully? We originated the blended cigarette here in America. There is no advertising on the pack that could mislead anybody. It does not say that it is good or bad for the health, and the formula that goes into the final product is definitely unknown. I do not suppose that any company knows the formula of another company. I do not know of any scientific investigation of the different brands to determine what goes into them. I have read in the paper that they use licorice, apple juice, sugar and other additives in the cigarette. Sometimes I think that we get some alfalfa in them, because they do not taste right. In England, I understand they have a law that prohibits the use of anything other than all tobacco.

Mr. HUTSON. They use a little licorice in England. That is all that they can use in the way of treatment.

Chairman COOLEY. Is it not your understanding that all companies have their own formulas?

Mr. HUTSON. Yes. Their formulas are different. The differences are not great so far as our cigarettes are concerned. They represent within a range of 5 percent between the various types of tobaccos. There would be a little difference in the things that they put in, in the way of sweetening, but they are not greatly different, that is my understanding. But it is, as you say, that each manufacturer has his own formula, which is a trade secret.

Mr. ABBITT. We have received a telegram which was sent to the committee which reads:

Regret other commitments prevent my appearance regarding House Resolution 885. Please express our strong support for broadened research in the interest of tobacco growers.

And that is signed by J. Millard Tawes, Governor of Maryland.

Chairman COOLEY. Mr. Chairman, I would like to state that while in our resolution we only put in Flue-cured tobacco, we stated later that we intended to change that, so that these other types of tobacco will be included.

Mr. ABBITT. All of them will be covered.

Chairman COOLEY. That is right.

Mr. ABBITT. Our next witness is Dr. David Young Cooper, University of Pennsylvania Hospital, Philadelphia, Pa. We will be glad to hear from you.

Chairman COOLEY. He is another distinguished North Carolinian who just moved up into Yankeeland.

Dr. COOPER. I would say that I was from Pennsylvania, but that my accent came from North Carolina. [Laughter.]

Chairman COOLEY. That is right.

Mr. ABBITT. We will be pleased to hear from you now.

STATEMENT OF DR. DAVID YOUNG COOPER, UNIVERSITY OF
PENNSYLVANIA HOSPITAL, PHILADELPHIA, PA.

Dr. COOPER. Mr. Chairman and members of the committee, I wanted to come and put in a plea in behalf of the basic scientists who are working in the basic science problems in this country. In this day and time when Congress is cutting gack somewhat on our budgets, we find that our amounts of money available for pure scientific research is somewhat reduced, and I would like to put in a plea here that we fully support our existing organizations; such as the National Science Foundation and the Public Health Service.

I, also would like to say that I find, on the basis of the work which we are doing, that this is a very exciting and stimulating problem which this report has brought out with regard to biochemical approaches to arrive at a solution as to possibly a finding as to what was in the tobacco that is most harmful. I am at the present time somewhat optimistic that it can be removed with a good systematic and detailed scientific program.

I think that since nobody knows what is the cause of cancer or how tobacco smoke influences other things that have been inferred from the report—we do not know what it is, in other words, what lines of approach do we really have to use to arrive at a solution?

To begin with, I would like to say that our work started out in studying high blood pressure. It turns out that when we finally get to the things that we are interested in we find that our problem really is involved with the toxification of carcinogens which we read in the newspapers that the Surgeon General, Dr. Terry, states that we are setting the system by which these are detoxified. It also turns out that on the basis of these there is carbon monoxide, a known constituent of smoking, which activates the system.

I want to point out to you that we did not start out studying tobacco problems, but we came up to them. You do not know really where to put your money, except in energetic young men who are willing to think and devote their time to this problem.

As a representative of the basic sciences, I spend my time, full time, in the laboratory and am interested in a very basic approach to this problem. And I would like to say that I hope that this type of support can be extended. I would strongly recommend that we have an assay system by which you could tell the possible harmful substances. And since we do not know the source, it seems foolish to condemn all of the tobacco until we know what it is in the tobacco leaf that has to be removed.

I can see that the approach to this problem is going to be difficult. I do not feel that it is impossible. It is going to be expensive. And it is going to require patience and time, but if it is supported I am sure the answers will come.

It reminds me very much of what Dr. Richards of the University of Pennsylvania once said. He said, "To get a baby in 1 month, we do not make nine women pregnant. We have to get one woman pregnant and wait until it matures."

And the same way with our ideas in research. We have to get an idea. And it will take some time for it to mature, but in time I am sure that it will come. I am optimistic. I feel that there will be some

answers. And in the not too distant future. But I think that the main thing is that we should have a very systematic and a very well-organized scientific approach, with a strong emphasis on a very basic approach to the problem, because unless we have the fundamental facts, we do not know where to go.

Thank you.

Chairman COOLEY. If we undertake the broad research program that we are talking about, do you not think that we would have the complete cooperation of the American Medical Association?

Dr. COOPER. I think, yes. I have talked over all of this problem with several others. This thing has been mulling in my mind for about 6 months, when suddenly we found that these systems were poisonous, containing carbon monoxide and other elements. I have been considering possible approaches. I have talked with people at the University of Pennsylvania. I have been to the Tobacco Research Committee. I do not know but just one thing: that all of these gentlemen are interested in trying to find the solution to make smoking safer.

I go on this basis, I accept the Surgeon General's report. I think it is a very elegant study. It has been a difficult study and one I have read, and to me it is a very impressive document. I have been a statistician in the past. Statistics are a necessary thing, and I have been impressed with them, because it tells you where to look, but the basic proof is doing the experiment and getting a result. In other words, you have to actually do something and get the result of it. I think a proper approach to this problem will lead us into one of the most fundamental areas of biochemistry and that is into the oxidatives and the enzymes or oxidatives which has been a long-neglected system. And I think that work along this line will be rewarding in the future. I think that it will not only be of benefit to the tobacco industry, but I think that it will be of benefit to understanding basic biochemical mechanisms and that research into this problem can eventually, perhaps, tell us something about cancer which we do not know at the present time.

Chairman COOLEY. I am one of the authors of one of the resolutions. I want to thank you for your interest and for your willingness to come here and give us the benefit of your views. I am sure that they will be helpful to all of us.

Mr. ABBITT. I concur in Chairman Cooley's remarks. I appreciate so much your being here.

Mr. CHELF. I want to say, "Amen," Doctor, and thank you very, very much.

Dr. COOPER. We have to come from Pennsylvania to solve the problems of North Carolina. [Laughter.]

Mr. CHELF. We had another one who came from Pennsylvania to Kentucky and wrote a very fine song, "My Old Kentucky Home."

Mr. ABBITT. We will next be pleased to hear from Mr. Lassiter of the Virginia Farm Bureau Federation.

**STATEMENT OF A. T. LASSITER, JR., DIRECTOR, COMMODITY
DIVISION, VIRGINIA FARM BUREAU FEDERATION**

Mr. LASSITER. Mr. Chairman and distinguished members of the committee, my name is A. T. Lassiter, Jr., and I am director of the commodity division of the Virginia Farm Bureau Federation. I was born and raised on a tobacco farm in the Fourth District of North Carolina, Congressman Cooley. And I have been in Virginia for several years now.

I am representing the tobacco growers and the members of the Virginia Farm Bureau Federation. And in the interest of time I would like, on behalf of our membership, to say that we are in full support of the need of this research. And the effect that it might have on the health. And that this research be conducted, so that we can get a proper evaluation.

Thank you.

Chairman COOLEY. Thank you.

Mr. ABBITT. Thank you.

Our next witness is Mr. Mel Bergheim of the Americans for Democratic Action.

**STATEMENT OF DAVID COHEN, AMERICANS FOR DEMOCRATIC
ACTION**

Mr. COHEN. Mr. Chairman and members of the committee, I am David Cohen and I am the legislative representative for Americans for Democratic Action. Mr. Bergheim had a sudden appointment, and with the permission of the subcommittee, if he can join me later, I would appreciate it greatly.

Mr. ABBITT. We will be glad to have you present the statement and we will have him sit with you when he comes in.

Mr. COHEN. I will just read Mr. Bergheim's statement after the first paragraph which gives his credentials and which states that he feels as a member of the national board of Americans for Democratic Action and as a professional writer who has taken a special interest in the relationship between smoking and health, as a 20-year veteran two-pack-a-day cigarette smoker:

ADA has always supported and defended the consumer's point of view. Thank you for permitting us to testify.

As the list of witnesses before your committee indicates, the tobacco industry has had an ample opportunity to put its case before the American public. The mass media and the advertising agencies have not been reticent about praising the virtues of tobacco. Using the techniques of mass persuasion, coupled with the resources of concentrated economic power, the tobacco industry consistently has insisted that smoking is safe and that more research is necessary before any other conclusion may be drawn or any public policy is adopted. Always there is the call for "more research." This is the main thrust of House Joint Resolution 885.

ADA is not opposing House Joint Resolution 885, although we have some suggested improvement which will appear later in the statement.

Now comes the Surgeon General's report, which proves for our satisfaction, and we daresay to the satisfaction of reasonable men, that smoking is a health

hazard. In other words, from now on the unassailable fact is, the tobacco industry notwithstanding, that smoking is not safe. Gentlemen, the burden of proof that it is safe to smoke rests with the tobacco industry.

I would hope that the tobacco industry has the foresight and the responsibility not to debate the merits and the conclusions of the Surgeon General's report. I think that together we could put our shoulders to the wheel to try to find acceptable public policies that would at the same time maintain the tobacco industry and protect the consumer.

What the tobacco-consuming public lacks in concentrated power, it more than makes up in numbers and in contributions to tax revenues. The tobacco consumers of the United States number some 70 million, and their tax outlay as smokers is in the neighborhood of \$3 billion.

ADA supports enactment of an immediate four-point health program that will begin to protect the health of the cigarette consumer:

1. Require that the health consequences of continuous cigarette smoking be placed on all cigarette packages and advertisements.
2. Grant to the FTC the same authority to regulate cigarette advertising and labeling that the FTC has in food, drug, and cosmetic advertising and labeling regulations.
3. An education program developed by the Public Health Service Office of Education to warn and discourage young persons from cigarette smoking and to aid older persons to control their cigarette smoking.
4. Government supported research to help eliminate the poisonous effects of cigarette smoking.

Research is only one aspect of consumer protection. Research requires dispassionate interest. It requires the same scientific orientation that the report of the Surgeon General's Committee on Smoking and Health demonstrated. The standards of proof set by the tobacco industry on finding the causal connection between cigarette smoking and lung cancer should be followed in determining the elimination and isolation of health dangers that result from cigarette smoking. Indeed, there is no magic in research for it may be impossible to develop a cigarette that is safe.

The Surgeon General's report requires immediate consumer protection.

I am saying that is one of the open-ended questions that a researcher has to keep in mind. I am quite aware, as is the ADA of the discussions between Senator Cooper and Surgeon General Terry in which the Surgeon General thought it quite possible, although he was not definite, that the poisonous aspects of cigarette smoking could be eliminated.

The question before Congress is what must the Government do to protect immediately the total health needs of the 70 million that smoke cigarettes. This is especially important since in our opinion the tobacco industry is not pursuing a policy of immediately protecting the health needs of the cigarette smoker. The tobacco industry advocates a do-nothing policy except for research. Meanwhile lung cancer and chronic bronchitis march on.

Cooley resolution, House Joint Resolution 885—ADA supports the following changes in the Cooley resolution:

1. Elimination of "flue-cured" from the resolution. Surely Chairman Cooley is not suggesting that only flue-cured tobacco is cancer causing.

I heard earlier the fact that there is general agreement that the words "flue-cured" be eliminated from the Cooley resolution and we think that is a sound change and are grateful that it is happening.

2. The intent of the resolution should be limited to the elimination and isolation of any tobacco characteristics detrimental to health. To pursue research to "preserve the desirable characteristics of cigarette tobacco" is an unwise and unnecessary extension of Government power. The Government is not in the business of assuring that cigarette tobacco has desirable qualities. That is a personal matter.

3. ADA opposes unnecessary spending. The Federal Government is not in the business of enlarging the pork barrel. ADA supports increased spending in research but a new tobacco research laboratory appears unnecessary. The cost of a laboratory, we believe, would be more wisely spent on actual research and education programs about smoking.

Neuberger-Blatnik bill, H.R. 9655: ADA suggests the early passage of H.R. 9655 and its companion measure in the Senate—S. 2429, the "Cigarette Advertising and Labeling Act."

I realize that this committee does not have jurisdiction of H.R. 9655 that Congressman Blatnik has introduced. The reason that ADA is commenting on this bill is that I think it is obvious to anyone sitting in this room that you gentlemen sitting at the table here, you Congressmen, have a respect of the tobacco industry. And this in an appeal of ADA to you to use your leadership to try and encourage the tobacco industry to pursue the minimal programs, the minimal provision in the Blatnik bill. I do not think that the Blatnik bill is going to stop cigarette smoking. I think we have had our experience with Great Britain. The fact is that I do not think that the economic involvement of the tobacco industry is in that great a danger and, certainly, not immediately. I think by putting our shoulders to the wheel and having a full program that the tobacco industry, if it would support H.R. 9655, and if you gentlemen would open the negotiations to begin support of that bill, you could get it through the Congress a lot easier and a lot quicker.

ADA sees no reason why the public should not know the truth. The right to be informed is a democratic right. Cigarette smokers, as a health measure, should be cautioned that "habitual smoking is injurious to health" and to know the average yield or index of those substances found in cigarette smoke that tend to contribute harmful health effects.

Finally, all misleading advertising should be forbidden, particularly that advertising which places positive social aspects on smoking for children.

I notice that in the New York Times yesterday that one of the radio stations in New York has a program that is on the basis of a survey, which has shown that a lot of teenagers listen to it from 7 to 11 at night, is voluntarily going not to accept cigarette ads. I think this is a tremendous step forward, but I do not think that we can expect many other stations, from our experience in the past, which indicates that this will be done solely voluntarily. I think that the Federal Trade Commission should be given the authority to formulate an advertising code and, if necessary, for the Federal Trade Commission to adopt regulations. I think this would be a tremendous step in the right direction, particularly as it relates to children. The ADA is not suggesting that teenagers should not be encouraged to smoke. And perhaps, given what the Surgeon General report said, pipes and cigars, that they ought to be made fashionable for children, as much as being a Marlboro man.

In short, the FTC should have the same authority, including injunctive powers, to regulate cigarette advertising and labeling that the FTC has in food, drug, and cosmetic advertising and labeling regulations.

Education programs: The Department of Health, Education, and Welfare should immediately undertake educational programs that will actively discourage cigarette smoking among youths pending the discovery of a safe cigarette. For adults, programs should be developed to control their cigarette smoking.

This four-point program is a minimal but necessary program to begin to protect immediately the health needs of 70 million Americans.

I thank the committee for allowing us to present this statement.

Mr. ABBITT. Do you want to add something?

Mr. BERGHEIM. No.

Chairman COOLEY. You just presented Mr. Bergheim's statement?

Mr. COHEN. That is right.

Mr. ABBITT. Are there any questions?

Mr. CHELF. Do you not agree that Congress should not legislate either the morals or the habits of our people?

Mr. COHEN. I think—

Mr. CHELF. You remember we tried this before.

Mr. COHEN. I am not suggesting a constitutional amendment. I am not suggesting prohibition of cigarette smoking. We are only suggesting, and I wish that Mr. Bergheim would supplement me—we are only suggesting that the consumer has the right to be informed. This is not a question of prohibition or anything else. No one is suggesting that the Federal Government should prohibit cigarettes, the sale of cigarettes, or the purchase of cigarettes to anyone. The suggestion was that there be some balance—

Mr. CHELF. In other words, you would advocate, as I would advocate, moderation not only in cigarette smoking but in everything else?

Mr. COHEN. Absolutely.

Mr. CHELF. In what we might eat and drink, that we might eat and drink too much?

Mr. COHEN. Absolutely. This is a moderate program.

Mr. BERGHEIM. May I answer that, sir, to say that what we have now is that the Government is in effect subsidizing and, in fact, is subsidizing certain segments of the tobacco industry. The subsidy to the tobacco raiser is well known to you gentlemen. On the other hand, there are some 70 million consumers of cigarettes who pay \$3 billion in taxes—or more or less—and I think that these 70 million people have as much right and entitlement to whatever protection Government can give them as anyone else associated with the tobacco industry.

Mr. CHELF. But by the same token would you agree that we cannot kill the goose that lays the golden egg? First let me say that in rank of payment of taxes, first is personal income taxes, and No. 2 is the distilling tax which pays \$3,200 million a year to the Federal Treasury; and close to No. 2 is the tobacco industry, with some \$3 billion of taxes a year. We do not want to do anything that would kill the goose that lays the golden egg here. There are many programs that you ADA people advocate—such as our poverty-stricken people program, the elderly people programs, and all of those, but they have to be financed somehow, some way.

Mr. BERGHEIM. The goose that lays the American golden eggs is the American people and their health and well-being, the concern for that is why we appear here today.

Mr. CHELF. Please do not misunderstand me, sir. I am not saying that we should not have more research. I am an open advocate for it. I, too, have introduced a resolution. And those of us from Kentucky and from North Carolina and from the other tobacco-raising States, we want you to know that we are very much interested in this.

I studied this tobacco report; I haven't smoked in 10 years, but that tobacco report made me so upset I had to light up a cigarette to relax my nerves.

Mr. BERGHEIM. It scared me so badly that I gave it up.

The ADA does not take the position, we assure you, that smoking should be proscribed by the Government or that the tobacco sales should be prevented. Our position is that tobacco, the use of tobacco in cigarettes, is clearly a danger to the health, and that the American people must have this fact borne and impressed upon them, and it must be reinforced by proper labeling and other kinds of safeguards we have been talking about.

Mr. CHELF. I must confess that I did not see anything new or different in this report than that which has already been known. For that very reason this same thing happened in Great Britain not too long ago and they panicked, they went underground—into bunkers—when it all “blew over” they started smoking all over again.

Mr. BERGHEIM. I admit that the material in the Surgeon General's report is not new material, but I think that it is evaluated and collected by a group of scientists whose reputations are beyond challenge. And as the result of this I think it is a little bit like the analogy

of whether the earth is round or flat. Up until the Surgeon General and his committee collected this information on tobacco the tobacco industry was saying to America, "Prove to us that the world is round, that is, prove to us that tobacco is unsafe." I think now that we have gone into a new era where the Surgeon General and his committee have proved to the satisfaction of many, I dare say most Americans, that cigarette smoking and some other forms of tobacco use are, indeed, unsafe and that the world is now round, according to the Surgeon General, and it remains for the tobacco industry from now on to prove to the American people that cigarette smoking is not unsafe or to prove, in fact, that the world is not round.

Mr. CHELF. Well, as I understand it, regardless if we smoke now we will die, and if we do not smoke, we will die. So if we are going to die anyhow, we might as well smoke and enjoy ourselves while we live. That is my idea. I am starting to smoke again after a lapse of 10 years.

And I might add that I love a cigarette as much today as I did 10 years ago.

Mr. BERGHEIM. I smoked for 20 years, two packs a day, and decided that I love life more and I gave it up, sir.

Mr. CHELF. You will start all over again.

Mr. BERGHEIM. It was before the report came out, but as we have just heard, the information in the Surgeon General's report is not new. There was ample evidence before it came out that persuaded me that cigarette smoking was harmful, and so I gave it up.

Chairman COOLEY. I stop smoking several times a year and I start all over again. Do you know how many of these committeemen on the Surgeon General's Advisory Committee smoke cigarettes?

Mr. BERGHEIM. I believe that there are two of them that smoke cigarettes.

Chairman COOLEY. How many of them smoke cigars and pipes?

Mr. BERGHEIM. I think that of the 10 people there were 5 who were smokers and 2 of them were cigarette smokers.

Chairman COOLEY. Do you know whether any of them gave up smoking?

Mr. BERGHEIM. One of them gave it up at 6 o'clock the day after the report was published.

Chairman COOLEY. He knew about the report long before he gave up smoking—he gave it up after the report came out?

Mr. BERGHEIM. I am here merely to suggest—

Chairman COOLEY. I am not going to argue about it. I want to point out that—I want to get this straight—your statement says that the public should know—and that the ADA sees no reason why the public should not know the truth. You stand by that, do you not?

Mr. BERGHEIM. Of course.

Chairman COOLEY. The purpose of these resolutions is to get the truth and to give it to the public.

Mr. BERGHEIM. Yes. What our concern is—

Chairman COOLEY. Do you know that the Surgeon General came before this committee and publicly endorsed these resolutions?

Mr. BERGHEIM. As I understand what he said it was this, that research is a splendid thing.

Chairman COOLEY. He endorsed the purposes of these resolutions. There will be some compromise in the resolutions. I asked him one question. I said, "Mr. Surgeon General, do I understand that you approve and endorse the purposes of these resolutions?" And he said, "Yes."

Mr. BERGHEIM. I did not hear his statement, but I did read the morning Post, sir.

Chairman COOLEY. As I understand your statement, you are not opposed to further research, are you?

Mr. BERGHEIM. No. We do not—we do not oppose further research, but I—

Chairman COOLEY. Every witness appearing up to now approves these resolutions.

Mr. COHEN. Let me interject for a moment. I think, first of all, granted that the Surgeon General endorsed the resolutions, the fact is that even the resolution is that health hazards have to be eliminated from cigarette smoking. That is point No. 1.

And point No. 2, the issue is not to smoke or to smoke. That is a personal choice. The issue is how best to protect the health of the American people.

The resolution is a step in that direction, but it is not the only step, because by the very standards of proof as set by the tobacco industry on whether or not cigarette smoking causes cancer, if we want to follow those standards of proof we are going to have to wait a long time before we know that cigarette smoking is safe again.

Chairman COOLEY. Do you smoke?

Mr. COHEN. I smoke—I smoke pipes, cigars, cigarettes, I do not smoke 10 cigarettes a day.

Chairman COOLEY. You look like a strong and healthy person to me.

Mr. COHEN. I hope so.

Mr. ABBITT. You do advocate the resolutions?

Mr. BERGHEIM. Yes.

Mr. COHEN. I do not think then that the Congress should say that we have done our job, we are now going to find out how to make cigarettes better or whether cigarettes cause cancer.

The second question I should have is a closed question that we can concentrate on how to make cigarettes healthier per se. But until we do—until we know, there are other things that Congress has to do.

Chairman COOLEY. Let me get this straight. Do you know any cigarette manufacturer who now or heretofore has advertised to the world that cigarette smoking promotes good health?

Mr. BERGHEIM. The Camel "T" zone advertising of some years ago, certainly, gave the impression that smoking Camels was good for the nose and the throat.

Chairman COOLEY. "T" zone, what is that?

Mr. BERGHEIM. The "T" zone—it gave the impression to me that it was a perfectly healthy thing—9 out of 10 doctors smoke Camels. I do not know what other kinds of cigarettes.

Chairman COOLEY. Do you know of any tobacco manufacturer who tries to encourage smoking by children?

Mr. BERGHEIM. Yes, sir.

Chairman COOLEY. What company?

Mr. BERGHEIM. Until recently every high school or college newspaper was virtually supported by the tobacco advertising.

Chairman COOLEY. They are not trying to encourage children to smoke.

Mr. BERGHEIM. Why are they advertising in high school publications?

Chairman COOLEY. All through the years children have been discouraged from smoking. I have one boy. He has been discouraged—never smoked a cigarette in his life. He is sitting back there now. But the statement here is somewhat different. Nobody objects to education. The Surgeon General said that we should put on some sort of educational program. I do not object to that. But then you tell me that we should brand and tag the cigarette package. You can look at a package of cigarettes. There is only advertising on it. It does not say that it is good for the health. Somebody did say at one time that some cigarettes were too sweet, and the Federal Trade Commission moved in to cover that.

But as to this bill of Mr. Blatnik's, you are not in the right forum, because we have no jurisdiction here over branding problems you are talking about.

Mr. COHEN. We acknowledge that. I think that there is a realistic political problem.

We recognize that this committee does not consider labeling legislation, but our concern and our reason for expressing our thoughts to you today is that we think there are limits to what can be accomplished and certain limits to the time within which anything can be accomplished by research and we think that research is fine, and that until whatever research is undertaken, and then find a safe cigarette, some other cautions have to be impressed upon the American people. And from other activities we believe as indicated by the Government. And we simply do not want the impression to be gotten abroad that research and research alone are going to find a safe cigarette to prove, possibly, that cigarette smoking is not as unsafe as the Surgeon General would have us believe. And that this is the limit of the Government's responsibility or the consumer's needs in this instance.

Mr. CHELF. At this juncture may I read a newspaper clipping? It says, the headline, that Mary Webster Porter, 104 years of age, derides smoking dangers:

One-hundred-and-four-year-old great-great-grandmother has taken issue with reports that smoking can damage a person's health. "Smoking never hurt anybody," said Mrs. Porter, as she lit a clay pipe, topped with homegrown long-grain leaf tobacco. "After 80 years I think I might just quit smoking because I am losing my taste for the stuff."

Mr. BERGHEIM. Perhaps you would like to have her as an aid in your research program.

Mr. CHELF. You would not deny her the right to continue to smoke?

Mr. BERGHEIM. No, sir; we are not denying that. This is her prerogative. We certainly do not want to interfere with that but we do believe that the Government has the responsibility to 70 million of its citizens to impress upon them that they give this information that cigarette smoking is a health hazard. I think that this is a very plain obligation upon the part of the Government of the United States.

Mr. CHELF. That is what we are right here for.

Mr. LENNON. I see that your organization supports H.R. 9655. That is the Cigarette Advertising and Labeling Act. And that they should have legible type on the face of the cigarette package that the use of this product is likely to be injurious, and that sort of thing. I assume that is one of the premises on which you believe it would let the American people know the truth. And that smoking is injurious to health. You quote those six words. Is drinking injurious to health, in your judgment?

Mr. COHEN. It is.

Mr. BERGHEIM. Yes.

Mr. LENNON. If legislation were introduced in the House and the Senate which would require the labeling on all alcoholic beverages that the frequent and continuous use of the product is likely to be injurious to health, I assume that, of course, that the ADA would support and insist upon the democratic way of the people of America to know that.

Mr. COHEN. I would so urge it—I would so urge it. I would also say this, though, it was pointed out earlier that the distilling industry pays in taxes—next to income taxes in volume. They do not have any advertising on television. They do not seem to be suffering.

Mr. CHELF. That is not true—they are suffering financially.

Mr. COHEN. Well—Kentucky is in a real bad way then.

Mr. CHELF. I can get into a long discussion with you on that.

May we go off the record?

Mr. ABBITT. Yes.

(Discussion off the record.)

Mr. ABBITT. Back on the record.

Mr. CHELF. From the standpoint of taxation, the distilling industry pays into the Federal treasury over \$3.3 billion per year. This does not include the \$1.4 billion paid to city, county, and State governments. Yet the industry is being greatly discriminated against. Constantly, the import duty on Canadian and Scotch whisky is being lowered while there are terrible roadblocks in the way of exporting American distilled bourbon. As a result, the imports of Scotch and Canadian whisky into the United States have increased 158 and 88 percent, respectively. While Americans spent \$300 million for imports of Scotch and Canadian whisky into the United States, our distilling industry was only exporting the sorry little amount of approximately \$5 million; a ratio of over 300 to 5. So don't tell me the distilling industry does not have its troubles. It is suffering. I could preach you a sermon on this subject matter.

Mr. COHEN. We in the ADA mostly drink bourbon.

Mr. CHELF. Thank you, sir—you are a wise man—you know good whisky.

Chairman COOLEY. Let me tell you about the doctor who was talking to this old sot advising him that if he did not stop drinking, he would not live to be an old man. The old drunk said, "I think I know more old drunkards than I do old doctors." [Laughter.]

Mr. HUTCHINSON. Does your organization support and favor legislation prohibiting television advertising of cigarettes?

Mr. COHEN. No, sir.

Mr. BERGHEIM. No, sir.

Mr. COHEN. I would hope that it could be settled on a voluntary basis, and I would hope that when we have discussed it—I do not think that we would support such legislation at this point, because I do not think that there is a need for it, particularly, if you had the Blatnik-Neuberger bill I think you would have a fair regulation of what a fair act is, of what fair ads are, and that is why I do not think that you have to go that far—that you have to take that step.

Mr. ABBITT. The committee is now adjourned until tomorrow morning at 10 o'clock.

(Whereupon, at 12:50 p.m., the committee adjourned to reconvene at 10 a.m., Friday, January 31, 1964.)

TOBACCO RESEARCH LABORATORY

FRIDAY, JANUARY 31, 1964

HOUSE OF REPRESENTATIVES,
SUBCOMMITTEE ON TOBACCO OF THE
COMMITTEE ON AGRICULTURE,
Washington, D.C.

The subcommittee met, pursuant to recess, at 10:10 a.m., in room 1310, Longworth House Office Building, Hon. Watkins M. Abbitt (chairman of the subcommittee) presiding.

Present: Representatives Abbitt, Cooley, McMillan, Matthews, Dague, Short, Latta, and Hutchinson.

Also present: Representatives Chelf, Fountain, Kornegay, Natcher, Lennon, Henderson, and Bass.

Committee staff present: Christine S. Gallagher, clerk; Hyde H. Murray, assistant clerk; Robert Bruce, assistant counsel; and Francis LeMay, consultant.

Mr. ABBITT. The subcommittee will come to order.

We will call as our first witness Mr. Herschel Newsom, master of the National Grange. We have great admiration for your testimony, and we will be very glad to hear you now. You have been most helpful to us and we appreciate your being here.

STATEMENT OF HERSCHEL D. NEWSOM, MASTER, THE NATIONAL GRANGE

Mr. NEWSOM. Mr. Chairman and members of the committee, I came simply to make it clear that the Grange is greatly concerned with the implications of the recent report concerning the use of tobacco with reference to the health of tobacco users. We are likewise concerned over the possibility, which seems inherent in the present situation, of the widespread social and economic implications and ramifications of this report.

We have no intention, or willingness, to disregard the health factors; neither are we inclined to permit serious damage to individual producers, nor to an industry of economic importance, unless or until reasonably accurate and complete facts are determined.

It is not our purpose here, or elsewhere, to discredit the importance of the report, which seems to give substantial evidence to the effect that certain forms of health dangers are inherent or, at least, are associated with the smoking of cigarettes, and perhaps to a lesser extent, other tobacco uses. It seems clear to us, as we understand the facts available now, that efforts to expand vigorously and stimulate research to determine the basic reasons for this apparent association, should be undertaken, and where such research efforts are underway, either by

the tobacco industry itself or by public agencies, that such research should be stimulated in every reasonable and appropriate manner.

Discovery of specific factors which underlie the seeming association of smoking with results pointed to in the recent report, may very well point this way to appropriate plant breeding and selection, genetic control and manufacturing and processing practices that might eliminate such evil effects from the use of tobacco, and thereby make it possible to avoid serious economic consequences to individuals in producing, distributing, manufacturing, and sales programs of the whole tobacco industry, and indeed, of the industry itself, without, in any manner, contributing to the seeming impairment of public health, to which reference has been so forcefully made.

Before we embark, therefore, on any program which might unnecessarily destroy this important segment of our American economy, we should make certain that this action is the only possible or reasonable approach to the problem so forcibly called to our attention.

The National Grange would, therefore, support legislation to implement or augment public efforts at research. We would vigorously support the private research heretofore carried out, and we would hope that it would be stepped up substantially; to the end that such a massive research effort to get all of the important or available facts may bring us as speedily as possible to the possession of the necessary information to arrive at the most objective and mature judgment possible concerning the future of the Nation's health, and whether, or what kind of regulatory or educational programs should be undertaken in the total national interest.

Mr. ABBITT. We thank you for your fine statement. We appreciate having it. We appreciate your help not only now, but in the past.

Are there any questions?

Chairman COOLEY. I would like to join with you in commending the worthy master of the Grange for his forthright statement. Mr. Newsom is always fair and honest in all of his testimony before this committee. I am sure that this committee appreciates the help he has been to agriculture and to the Nation. He is one of the greatest farm leaders we have ever had in the 30 years that I have been on the committee, and I think that he has the complete confidence of the committee. I know that his statement will be given every consideration by the members of the committee, all of whom have known him for many years. So many times we have witnesses of importance appear here, who are not helpful, simply because they do not take an interest in our subject. Mr. Newsom has taken a position and agrees that more knowledge and research is necessary; that we cannot be panicky and go out and wreck an industry just because somebody says that it is dangerous. I have been told about the danger of smoking cigarettes since I was a child.

Nobody has been foolish enough to say that they contribute to good health. But the question is whether or not they contribute to bad health and that is something that should be determined. The money that is involved in these proposals is peanuts when related to the dollar volume invested in this industry which means the livelihood of hundreds of thousands of people. We must pass these resolutions authorizing this objective. It must be financed, so that we may be

able to give the people of the country some positive information on the effects of smoking on the health of our people.

I thank you very much for appearing.

Mr. NEWSOM. Thank you.

Mr. ABBITT. Dr. Paul Kotin—has he come in yet? He is Associate Director of the National Cancer Institute. He does not appear to be present at the moment.

We will call next on our colleagues. I know that all members of the subcommittee appreciate our colleagues coming before the committee to give us the benefit of their thoughts and opinions. I will call them as they are on the agenda.

Our first witness will be Mr. Kornegay of North Carolina. He has a big interest in tobacco, I know, and I am sure that he has this interest in the future of it.

I want to express to you our appreciation for your help in the past. We will be glad to hear from you at this time.

STATEMENT OF HON. HORACE R. KORNEGAY, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF NORTH CAROLINA

Mr. KORNEGAY. Thank you very much, Mr. Chairman and members of the subcommittee. I would like to express to you my appreciation for those kind remarks and also for this opportunity to appear before the subcommittee on the subject of the need for an immediate and massive research program into the quality and health factors of tobacco, a matter of intense interest to my district and my State, and I think to the Nation.

Mr. Chairman, this is a time of crisis for tobacco. In serious jeopardy today is the pastime of more than 70 millions of Americans, the livelihood of thousands of farmers and industry workers, and a substantial source of income for Federal, State, and local governments. The reason for this delicate position of this important industry is a delusive and inconclusive report on "Smoking and Health."

I say this with all due respect to the Surgeon General of the United States and the members of the advisory committee that worked long and hard on the report. The report, as a whole, is a very comprehensive summary of the past research on smoking and health. However, the implications of the report are vastly more far reaching than its conclusions. These are the implications that have been impressed upon the public.

For instance, the implication of the report to the public is that smoking is detrimental to health, that it causes cancer and/or other diseases. The conclusion that I gathered from reading the report is that smoking, like many other things, may or may not be a contributing factor to cancer in some individuals.

The report has, as a summary, this statement:

Medical perspective requires recognition of significant beneficial effects of smoking primarily in the area of mental health. These benefits originate in a psychogenic search for contentment and are measurable only in terms of individual behavior. Since no means of quantitating these benefits is apparent, the advisory committee finds no basis for a judgment which would weigh benefits versus hazards of smoking as it may apply to the general population.

Still, on the basis of the report to the Surgeon General, there has been a number of rash proposals to ban smoking or to stamp a skull and crossbones on every package of cigarettes. This is utterly absurd on the basis of information published thus far. To be sure many people who smoked have died of cancer. Some who did not smoke also have died of cancer. For the Government to require a warning to be placed on every package of cigarettes is just as farfetched as putting a warning on every car that comes out of Detroit simply because thousands died in automobile accidents last year.

The human side of this matter is the important side, but there is another side to the smoking pleasure in the United States. This is the economic side. This factor is tremendously important to my State of North Carolina, which raises half of the tobacco grown in this country and produces about 60 percent of the cigarettes. But, and let me emphasize this, tobacco is an important economic factor in every State in this Nation and in the United States as a whole. Millions of individuals depend upon tobacco for their livelihood.

Speaking of the importance of tobacco and tobacco products to Americans, Time magazine recently said :

The \$8 billion a year business affects dozens of manufacturers, 400,000 farmers, and 1,500,000 grocers, druggists, and other retailers. It buys one-quarter of the Nation's foil, is the third biggest user of cellophane and one of the largest consumers of paper products. Its \$250-million-a-year advertising budget helps to support the Nation's communications media—newspapers, magazines, and, notably, television.

For the United States, tobacco and tobacco products are important sources of revenue. Tax on tobacco manufactured products during the fiscal year ending June 30, 1963, brought the U.S. Government \$2,079,237,000. Of this amount, \$1,263,316,000 was collected in North Carolina, with \$1,263,144,000 being collected on cigarettes manufactured in our State. In the same light, the new budget presented to Congress by President Johnson does not look for any reduction in smoking by the people. In fact, it anticipates an increase in the consumption of tobacco products.

Tobacco and tobacco products are taxed in 47 of the 50 States. The 47 States that tax tobacco gained \$1,123 million in this manner in fiscal 1963. New York collected almost \$128 million; Texas, \$92 million; Pennsylvania, \$91 million; California, \$72 million; Michigan, \$69 million; Ohio, \$66 million, and so on down to North Dakota, \$4 million, and Wyoming, which collected almost \$2 million in fiscal 1963. In addition, 219 cities and 6 counties in the United States collected over \$38 million with tobacco taxes in 1963. An important added benefit of tobacco to the Federal Government is in the balance-of-payments areas. More than \$500 million worth of tobacco is exported annually from the United States. This is a big item and the United States would be hard pressed to find some other commodity to take its place in international trade.

The situation then is this: Smoking, on the basis of inconclusive evidence, has been branded a major health hazard causing unnecessary concern among millions of smokers, jeopardizing the economic stability of millions of American families and endangering a major source of public moneys. This is all unnecessary as far as smokers are concerned and unfair as far as the farmers, manufacturers, and governments are concerned.

To correct this situation and to find if there are any factors which could endanger health and to discover the means to eliminate them, I introduced House Resolution 891. It would authorize and direct the Secretary of Agriculture to conduct research into the quality and health factors of tobacco. In many respects my resolution is similar to that introduced by the distinguished chairman of the House Agriculture Committee and to others introduced in the House, and now before this subcommittee for consideration. However, my resolution could allow research into all areas of the tobacco growing and manufacturing industry to find if there are factors detrimental to health and the means of eliminating them.

It would provide for research into the plant breeding, culture, production, handling, processing, manufacturing, and consumption of tobacco and tobacco products. This would encompass the complete cycle of tobacco from the plant bed to final consumption. The research would be done, under the provisions of my resolution, in facilities close to the area where the tobacco is grown and close to the area where cigarettes and other tobacco products are manufactured.

There is already considerable research being done in this area. Private organizations as well as the tobacco manufacturing companies are constantly studying the effects of smoking. Their findings undoubtedly would be very beneficial in the research proposed under the resolution I have introduced. My resolution would provide that any research facility established by Federal Government consult and cooperation with State and private organizations engaged in similar programs. This cooperation and coordination would be an extremely important aid to an early and convincing conclusion.

The testimony of the Surgeon General before this subcommittee, I feel, gives impetus and complete justification for proceeding without delay to set up a Federal research facility. He said:

These facts suggest that it will not be enough simply to develop better strains of tobacco and better methods of cultivation. We must also develop better methods of preventing the formation of these substances during the burning of tobacco, as well as of removing by filtration or other means the hazardous substances that are formed.

The Surgeon General then concluded:

Both of these areas are promising avenues for further development—and have the potential of making smoking safer.

In my opinion this statement by the Surgeon General points to the need for research not only into the culture of tobacco but also into the manufacturing process. In short, it points to the need for research in the whole tobacco complex.

From the standpoint of our people, it is imperative that Congress act at the earliest possible time to establish a research facility for the study of tobacco and the effects it has on the health of human beings. Our people are going to continue to smoke. I think that even national prohibition, such as the "noble experiment" with alcoholic beverages some years ago, could not stamp out smoking. Yet, the situation as it now stands is causing a great deal of apprehension among many of our people, and this should be cleared up as quickly as possible.

Let me say that I have no quarrel with the findings of the Advisory Committee. I strongly feel it did not go far enough, however. The

Committee established a statistical correlation between smoking and health hazards, but it did not pinpoint the cause of these health hazards in tobacco or tobacco products. It did not provide methods for eliminating any such hazards. This is what should be done before smoking by adults is attacked by a host of Government agencies. I want to emphasize, however, that I do not condone smoking by minors and wholeheartedly support efforts, educational or otherwise, to stop this.

In conclusion, I emphasize again that this is a time of crisis for tobacco. The report to the Surgeon General on smoking and health has raised serious questions affecting the future of smokers, farmers, and manufacturers. These questions must be answered and answered as soon as possible. Coordinated research and only research can provide the answers. Comprehensive research into the whole area of tobacco growing and manufacturing is necessary now. Mr. Chairman and members of the subcommittee, in view of the public concern and the questions raised by the report to the Surgeon General on smoking and health, I urge your careful and speedy consideration of my resolution and the other resolutions relating to the establishment of a tobacco research center.

And I say again how much I appreciate this opportunity and the few minutes that I have taken to present this statement to your distinguished subcommittee.

Mr. ABBITT. I again want to express to you the gratitude of this committee for your splendid cooperation here. And we thank you so much.

I understand that Dr. Paul Kotin, Associate Director of the National Cancer Institute, has come in. Doctor, we appreciate very much your coming down here and we will be very grateful for any statement that you care to make.

Chairman COOLEY. May I interrupt to say that we invited the Director of the National Cancer Institute to appear here as a witness, but he was unable to attend. The Director of the Institute designated Dr. Kotin, the Associate Director, and I would like to say to you, Dr. Kotin, that these hearings are important, and that we did not want to close the hearings without giving someone in the Institute an opportunity to speak and to tell us just what you think about the resolution now pending before the committee. I am sure that the subcommittee will not expect you to discuss the details or the controversies involved in the Surgeon General's report. Certainly, you are aware of the fact that the Surgeon General did appear here and did endorse this resolution and in broad terms urged us to embark upon a penetrating, comprehensive research program into the health aspects of the use of tobacco and into the problems presented by the report. You may feel free to say what you have to say about the objectives sought to be determined by this report without going into any details. I am sure that the members of the subcommittee will appreciate your doing that. And with that, I join with the chairman of the subcommittee in thanking you for coming here on such a short notice to give us the benefit of your views.

**STATEMENT OF DR. PAUL KOTIN, ASSOCIATE DIRECTOR, NATIONAL
CANCER INSTITUTE**

Dr. KOTIN. Thank you, Mr. Chairman. First, I think that there is really no point in reiterating what the Surgeon General has said or the report of the Committee in the sense that I heartily subscribe to this position and feel that, perhaps, even though the time in which to prepare this testimony has been very short, I could mention some of the things that have transpired since.

The Surgeon General has asked the various segments in the Public Health Service to prepare what he would hope to be considered suggestions as to programing in the way of supporting his statement that he believes additional research is necessary and, indeed, the National Cancer Institute, in common with other segments of the Public Health Service, has submitted to the Surgeon General a program for expansion of on-going research and development of newly indicated approaches.

In addition to this, just yesterday a meeting was held in my office at the National Cancer Institute with scientists and representatives of the Department of Agriculture and the National Cancer Institute. The groundwork for a joint program was laid. While their activities are differently oriented, we uniquely complement one another in what we plan to do. With the passage of time, we have agreed to maintain a very intimate liaison and to utilize the skills that each has for the benefit of the other's on-going programs and responsibilities and future direction of research.

I think that, certainly, obvious paths for the expansion of research exist. I think they are indicated reasonably well in the Advisory Committee's report. And with the fundamental information we now do have—as little as it is—I think that some progress can be made in the direction of ameliorating some of the conditions that that "Smoking and Health" report indicates exist.

I will be very happy to answer any questions. I was called less than an hour ago and I have not prepared anything.

Mr. ABBITT. It was very short notice, indeed. Do you subscribe to the sentiments expressed by the Surgeon General and others that this research should be started and should be gone into thoroughly, so that we could receive information?

Dr. KOTIN. Without any reservation. As I say, I not only subscribed to it, but, at least, from the National Cancer Institute's point of view, we have been concerned with preparing a program that we feel is indicated in the light of the Surgeon General's recommendation and position.

Mr. ABBITT. You think that we are on the right track in having further research?

Dr. KOTIN. I certainly do.

Mr. ABBITT. Are there any other questions?

Mr. FOUNTAIN. May I make an observation at this point?

Mr. ABBITT. Yes.

Mr. FOUNTAIN. I am sure all of us are interested in the subject matter of this hearing as it relates to the general welfare and health of our people.

I want to thank you, Dr. Kotin, for your appearance here this morning. I also want to thank the Public Health Service for its willingness to cooperate and participate with the Department of Agriculture in a joint, independent, or supplementary research effort to the end that we can find the answers to the problems which have been discussed during the course of these hearings.

Mr. ABBITT. Thank you so much for that statement.

Mr. KORNEGAY. Could I join in endorsing the fine comments of my colleague, Mr. Fountain?

Mr. ABBITT. Yes, sir.

Dr. KOTIN. Thank you.

Mr. ABBITT. We will call next the members who are present. I see Congressman Natcher is present, from Kentucky. He has always been quite interested in tobacco. And I might say that we appreciate that. We shall be glad to hear from you now, and I might say that all tobaccos will be included, not just burley or Flue-cured. You have been most helpful to us in the past. We do appreciate your being here.

Mr. CHELF. May I say a word?

Mr. ABBITT. Yes.

Mr. CHELF. One cannot realize the great value of the work that has been rendered to the entire tobacco industry by this gentleman. All facets of the industry, the warehousemen, the manufacturers, all segments of our great tobacco industry have been greatly befriended, in my opinion, by the outstanding work of Mr. Natcher from Kentucky. He realized many months ago that it was very necessary that we have research in our industry and in the development of a better and finer leaf of tobacco. And he worked hard. He got Federal appropriations for the State of Kentucky, as stated here before by other witnesses, and Kentucky appropriated \$1 million for the construction of our research laboratory. I just want to state this publicly and to compliment Mr. Natcher for his wonderful work, not only for Kentucky but for the entire industry that is more or less now on trial.

Mr. NATCHER. Thank you, sir.

Mr. McMILLAN (presiding). I would like to associate myself with the remarks made by Mr. Chelf. I, certainly, know that there is no man in the Congress who has done more than Mr. Natcher to get funds to assist in research.

Mr. HENDERSON. May I say one thing before he speaks? I do not know what he is going to say, but I should like to say something as he comes to the table about our appearing before the Appropriations subcommittee of which he is chairman, with regard to a request for funds for research in pickles, which are vital to the consumer. I should like to commend him for his courtesy and kindness to me and to the other witnesses, which was most impressive.

There is another point that I would like to make, and that is the interest that on that occasion this gentleman, this distinguished member of the Appropriations subcommittee, had in a farm product and its problem.

I believe that we have seen through the years that our friends from the cities on this subcommittee have been most interested in our problems, and I believe that due credit belongs to Bill Natcher for his efforts in informing the city members, for the fine manner in which farm problems have been resolved. All members of the Appropriations Committee are most appreciative of his services.

**STATEMENT OF HON. WILLIAM H. NATCHER, A REPRESENTATIVE
IN CONGRESS FROM THE STATE OF KENTUCKY**

MR. NATCHER. Mr. Chairman, when tobacco is in trouble, Kentucky is in trouble. Forty-six percent of all of the money received in agricultural commodities in Kentucky is received from tobacco. Kentucky, as you know, is the second largest tobacco producing State in our country. And as has been pointed out by a number of witnesses who have testified before this subcommittee this in an \$8 billion industry, paying into the Federal Treasury, the State treasuries and the county treasuries, a little over \$3 billion a year in taxes, with the tobacco producers receiving about \$1,400 million in revenues.

Now, Mr. Chairman, we have had some research as far as tobacco is concerned, in production and marketing. It is generally agreed by everyone on this subcommittee and everyone on the full Committee of Agriculture that the American farmer knows how to produce tobacco. We have plenty of tobacco.

As far as research is concerned, down through the years, I know, as a member of the Appropriations Committee, and the Subcommittee on Agriculture Appropriations, I have followed carefully the research program in the production and marketing of tobacco.

It is true, Mr. Chairman, that some \$1,500,000 a year is appropriated for tobacco research, but I want to say to you quite frankly that this money is scattered all around the country. It reminds me somewhat of a little item that we carried in the agricultural appropriations bill for a great many years pertaining to bull heaves in mules. That went on for years and years. Finally, Mr. Chairman, one day we asked the officials from the Department of Agriculture, "Why do we carry \$15,000 every year in the appropriations bill for research into bull heaves in mules?"

You know as well as I do that if you want to see a mule now you have to go out to the zoo and take a look at him. Well, they informed us that they had a scientist who was stationed in one of our States not too far away from here who had been working on this project for years, and he was retiring in about 2 years and they hoped that we would carry this item a little longer.

I say to you quite frankly each year when they come in to get the money we talk to them about research, and we talk to them about research in tobacco. We ask them what they are doing.

I know that we appropriate \$15,000 for research at Philadelphia to determine the components and the constituents of tobacco. It has been going on for a great many years.

Now to get right down to the facts, Mr. Chairman, we are appropriating \$1,500,000 a year for tobacco research, scattered all over the United States, and it has produced results only insofar as production and marketing research is concerned.

Beginning in 1955 I started to talk to these people from the standpoint of a research program that would do some good insofar as tobacco is concerned.

My people in the Commonwealth of Kentucky believe that if tobacco is harmful to the health of our people we must do something about it. That is the way we feel. So beginning in 1955 I started talking to these people about tobacco research and as to what was being done. That went on from 1955 to 1960, and in 1960 the Subcommittee on Agricultural Appropriations decided to appropriate \$250,000 to start a tobacco facility at Lexington, Ky. That money was appropriated after the Commonwealth of Kentucky, through its legislature, had appropriated \$1 million to build a building and in addition to appropriate \$50,000 to assist in a tobacco research program. You gentlemen saw a picture of this building which was passed around day before yesterday. It is now a \$4,500,000 building. After the legislature appropriated the \$1 million the Governor decided that he would add to the building.

That building was dedicated on December 5, 1963. Over \$1 million has been appropriated by the Federal Government for this facility since 1960. The appropriations bill for fiscal year 1964 carries \$415,000 for this facility.

We have this facility in Kentucky. It is now ready for use. We have some good tobacco scientists there. We have some equipment. It is a \$4,500,000 building. We have constructed hothouses that go with the tobacco research facility.

When you pass your resolution you must get your money. It will come either in the regular agricultural appropriation bill or it will come up in a supplemental. Gentlemen, if it comes up in the supplemental it goes to the Agricultural Appropriations Subcommittee, because we no longer have a deficiency or supplemental subcommittee. By the time the President signs the bill it will be up in August, September, October, or November. As a general rule, in appropriating money for facilities such as the request that is pending before this subcommittee, the money for the building is appropriated first. Then the next year you ask for your equipment and for your staffing.

In 1960 we finally got \$250,000 to start the facility at Lexington, Ky. It was dedicated and opened on December 5, 1963.

Mr. Chairman, we should keep in mind an expanded program in research is necessary at this time.

I introduced a resolution that provided for an expanded program in tobacco. I was glad to hear Mr. Cooley say that his resolution no longer applies only to Flue-cured tobacco and that it should apply to tobacco generally.

In Kentucky we raise burley and two types of dark tobacco. We have about six types of tobacco that are produced in this country today. This is a matter that concerns all of us, and if we want to do a good job in this program we have to stay together.

There is no reason at all why we should not have had a good research program in tobacco many years ago. Maybe we would not be here today if we had started this particular program.

The money that has been appropriated for the facility in Kentucky is money that I consider well expended. It will produce results.

In preparing this resolution and reporting it out I think you should keep in mind the time element. If you want a program that will answer the questions today, let us move this program along.

This is an important matter. It means a lot to 21 States in our Nation. Not a single Member of the Congress should object to an expenditure this year of \$10 million for this program. I am willing to join with you and march right down the line and fight for this program.

Mr. Chairman, again I want to thank you and the members of this fine subcommittee for permitting me to appear in behalf of an expanded research program at this time.

With your permission I would like to file, as a part of the record, at this point, a prepared statement.

I want you and the members of your subcommittee to know that I join with you and I will do everything that I can to be of assistance. I want to thank all of you gentlemen for your nice comments.

Mr. ABBITT. Thank you very much. And without objection, your statement will be made a part of the record at this point. I want to commend you for this splendid statement you have made and for the great help and assistance you have rendered the tobacco industry.

Mr. NATCHER. Thank you.

(The prepared statement of Hon. William H. Natcher is as follows:)

STATEMENT OF HON. WILLIAM H. NATCHER, A REPRESENTATIVE IN CONGRESS
FROM THE STATE OF KENTUCKY

Mr. Chairman, we must immediately expand the program of research into the plant breeding, culture, production, and handling of tobacco. We must include studies of factors which may be detrimental to health, and ascertain as soon as possible those quality factors and other characteristics which will preserve the desirable characteristics of tobacco and eliminate any factors which may be detrimental to health. This additional research program should be carried out at the National Tobacco Research Laboratory in Lexington, Ky., which was established in 1960.

This committee should authorize the expenditure of \$10 million for the purpose of expanding immediately the tobacco research program, and this amount should be expended at the existing research laboratory for tobacco.

While much good tobacco research has been done, more remains to be done. Our tobacco industry has reached the point where more basic fundamental research needs to be done in production, quality, utilization, and distribution. One of the most urgent needs at this time is improvement in quality. In this connection, it should be recognized that quality tobacco is produced by control of plant material, disease, and environment during growth. Quality is maintained with accurate environmental control in the curing and aging processes. Quality depends on the total of all factors of production, processing, and aging.

Tobacco curing involves the interaction of complete physical, chemical, and biological processes which today are only partially understood. The lack of fundamental knowledge in this area demonstrates the need for expanded research on tobacco curing.

Research in the chemistry and physiology of tobacco has increased in recent years. We must have an expanded program of study of chemical constituents of tobacco of all types. Such research will aid the plant breeder in producing varieties of desirable composition and will provide information that will enable the farmers to put on the market a product desirable to the manufacturer and to the consumer.

Because of the implications to the health of the consumer from the use of tobacco with insecticidal residues, there is a continuing and urgent need for safer and yet more effective methods of control of insect pests of tobacco. We must have an expanded program of research on the residues left by various insecticidal programs and by research on control of insects by biological means.

Additional studies must be made on the effect of methods of application of insecticides on time of application before harvest. Prior to the establishment of the National Tobacco Research Laboratory at the University of Kentucky, in Lexington, Ky., in 1960, some research had been done in tobacco production and marketing by the agricultural experiment stations of the tobacco producing States. Much of this research had been of the applied type, performed with limited resources. Since fundamental studies are basic to applied research, well-trained investigators and adequate facilities are required to answer the questions facing the tobacco industry today. It was to meet this need for fundamental research in all types of tobacco that the National Tobacco Research Laboratory was established. One of the reasons for setting up the National Laboratory in Kentucky, aside from the fact that Kentucky was one of the States which has taken a predominant role in tobacco research previously, was the fact that the State had just approved plans for construction of a new Agricultural Science Center and offered to provide housing for the National Tobacco Research Laboratory. The Legislature of the Commonwealth of Kentucky first appropriated \$1 million for this agricultural research building, and later this amount was increased until the total cost of the building and equipment at the present time amounts to approximately \$5 million. This enabled the funds provided by Congress since the year 1960 to be used directly for equipment and staffing rather than construction of a major building. Since the annual appropriation of funds for this National Research Laboratory started, laboratories, shops and other facilities have been completed and are in use. Additional facilities are nearing completion. A competent staff has been acquired and is being expanded, with equipment purchased and research projects underway. The National Tobacco Research Laboratory has received in Federal funds a little over \$1 million since it was established in 1960. This laboratory is producing results. Additional research data is being produced daily.

To meet the present day requirements, more research projects, more staff, more equipment are needed than have been provided for at the level of appropriations so far made. The additional sum of \$10 million is necessary at this time to expand immediately at the National Tobacco Research Laboratory in Lexington, Ky., a program of research into the plant breeding, culture, production, and handling of tobacco, and studies must be included concerning all factors which may be detrimental to health.

Mr. Chairman, I appreciate this opportunity to appear before your committee in behalf of an expanded research program in tobacco.

Chairman COOLEY. I am delighted that you came here and gave us your statement because those of us in the tobacco-growing areas have been subjected to criticism. You have emphasized the fact here this morning that those of us in the tobacco areas have been fighting for research all through the years. Now when this report comes out and has such an impact on the public, the public thinking, public opinion, it seems to me that if we do not get what we are asking for now, we, probably, will never get it. I am glad to know that you will cooperate with us. We know how vitally interested you are in this, and how much you have contributed and will continue to contribute. I can tell you that you are the keyman, the one outstanding distinguished Congressman from the tobacco growing areas on this important committee with which we will have to deal when we take action here on this pending resolution. I appreciate very much your coming here. I know that all of the members present join me in that sentiment.

Mr. NATCHER. I want to thank you for your fine statement, Mr. Chairman, and to say to you that I will join with you and march all the way.

Chairman COOLEY. Thank you.

Mr. CHELF. I think that I can tell you something that is no secret. He is like a bulldog. Whenever he sets his teeth into something he never stops—he does not tire very easily. He stayed with the Senators on into the night recently and forced a favorable decision on a conference report. Bill, God bless you.

Mr. NATCHER. Thank you.

Mr. ABBITT. Our next witness is Mr. Don Fuqua, of Florida. We are pleased to have you with us. We appreciate your appearing before the committee. I know that you are vitally interested in tobacco. We will be glad to hear from you at this time.

**STATEMENT OF HON. DON FUQUA, A REPRESENTATIVE IN
CONGRESS FROM THE STATE OF FLORIDA**

Mr. FUQUA. Mr. Chairman, I appreciate the opportunity allowed me to appear before this Subcommittee on Tobacco. It is a privilege and pleasure for me to be able to speak on behalf of the Florida tobacco grower and to present my remarks for this hearing, along with those of Mr. Frank W. Risher, Florida's assistant commissioner of agriculture, who appeared here just yesterday, and the able member of your committee and my good friend, Congressman Billy Matthews.

You are already aware of my interest in matters affecting the tobacco industry since I have appeared before you previously on behalf of the interest of those I represent. In the areas which Congressman Matthews and I represent, the tobacco-growing industry is of considerable importance to our people. Just yesterday, you heard Chairman Abbitt say a few years ago this subcommittee appeared in Florida for hearings which were held in Live Oak, Suwannee County, Fla., then represented by Congressman Matthews, and now I am pleased to have it in my district. In Live Oak we have the largest tobacco market in the Flue-cured tobacco belt of our region.

In order that you might have some idea of the importance of the tobacco industry in the State of Florida, I want to give you some facts and figures. In 1963 our Flue-cured crop produced the gross amount of 25,830,000 pounds of tobacco. This crop, in the dollar sense, came to the gross figure of \$14,400,000. Last year there were 14,000 acres of tobacco grown in Florida on 6,881 allotments. The ASCS has 15,091 acres allotted for the Flue-cured acreage in Florida.

Also, in my congressional district, we have the distinction of growing the shade-type tobacco which is used for the wrapper tobacco of the cigar. Furthermore, as you heard Mr. Risher state yesterday, we have some 37 factories in Florida for tobacco products. Therefore, I am sure you can understand the significance of anything which might affect this industry and what it means to us.

I am sure that the statements you have heard here for the past 2 days have been most revealing and eye opening as to just how great the economic importance of the tobacco industry is to this country. I feel there is no need to reiterate in this respect since these have all been so ably presented by men of the industry or who in some way are affiliated with it. These are points of emphasis we cannot overlook or let fall into second place.

However, we are also here in view of the recent presentation of facts which are considered to indicate the relationship of health problems of our people and the smoking of tobacco. Of course, the health of us all is always of utmost importance and is of interest to everyone since we cannot humanly neglect the well-being of ourselves and those about us. Just as was stated by Mr. Archie Davis, of the Wachovia Bank & Trust Co., yesterday, it would be a mistake to equate physical well-being with that of economic well-being.

It appears to me we are faced with a double concern and purpose: that of trying to prevent detrimental effects to an economic factor involving billions of dollars and that of wanting to know more specifically the facts surrounding the use of tobacco and what can be done to help in this respect. As Chairman Cooley has emphasized, this is a matter of national concern and is certainly not limited to any particular area of the tobacco industry.

Therefore, I am in accord with the resolutions under consideration here today and as stated in these resolutions that there is a need for—research into the plant breeding, culture, production, and handling of cigarette tobacco designed to ascertain and emphasize those quality factors and other characteristics which will preserve the desirable characteristics of cigarette tobacco and eliminate therefrom any characteristics which may be detrimental to health.

Mr. CHAIRMAN. I, along with the preceding witness, Congressman Natcher, want to join with you in any program that you come up with. And I, likewise, pledge my support to help in any way possible.

Mr. ABBITT. Thank you so much for your most splendid statement.

Mr. McMILLAN. I would like to commend my colleague from Florida for his fine statement. And, in fact, to state that the members of the Tobacco Subcommittee are very much appreciative of your continued assistance. I know of your great interest in trying to encourage the tobacco farmer to produce a fine quality tobacco.

Mr. FUQUA. Thank you very much.

Mr. ABBITT. Our next witness is our colleague Mr. Sickles, of Maryland. We are pleased to have you here. We will be glad to hear from you now.

STATEMENT OF HON. CARLTON R. SICKLES, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF MARYLAND

Mr. SICKLES. Mr. Chairman, as Congressman at Large from the Free State of Maryland, I represent one of the most intensive five-county tobacco producing areas in the United States. In our five southern Maryland counties, tobacco provides nearly three-fourths of the cash farm income each year. It is the principal source of income on nearly 7,000 farms and the 15,000 farmworkers engaged on those farms. Very few other areas in the United States have such complete dependence upon tobacco as a source of cash farm income.

We in Maryland have a particularly deep interest in the subject of broadened tobacco research and in adequate facilities through which to carry out this research. Consequently, we wish to express our unqualified support for House Joint Resolution 885 which would provide a broadened research program, and at the same time, provide for the facilities through which this research would be carried out. We recognize that a considerable period of time will be required to obtain funds for and construct new research laboratories. Moreover, we recognize that certain phases of research work probably must be advanced, if not completed, before other phases can be effectively started. In view of this, some of the preliminary phases of this work should be started immediately in existing facilities, so that as much of the basic and preliminary work can be accomplished as possible while needed additional research facilities are being constructed.

While we are deeply interested in this problem from the point of view of those who grow, market, and handle our leaf tobacco, we are also vitally interested in the health of the millions of our citizens who derive great pleasure from smoking. This additional research effort provided in this bill should be concentrated on identifying and removing any hazardous compounds in the tobacco leaf. Also, it must be a "massive" rather than a "modest" research effort. An \$8 billion industry and 80 million Americans are relying on its success. Although we are focusing today on the need for research on the tobacco plant, it is equally important for other legislation to expedite related research. First, additional research should be conducted regarding removal of any health hazards existent in smoke itself, and second, full information should be developed regarding the beneficial effects of cigarette smoking on our population. Little was said about this in the report of the Surgeon General's Advisory Committee. In fact, they stated that—

Since no means of measuring the quantity of these (smoking) benefits is apparent, the Committee finds no basis for a judgment which would weigh benefits against hazards of smoking as it may apply to the general population.

In short, we feel that research will be fully beneficial only if it develops complete information on all sides of this question. It is for this reason that I support the broadening of tobacco research, including the needed facilities for this expansion.

And let me once again thank you for the opportunity of appearing and testifying this morning.

Mr. ABBITT. We thank you, indeed, for this splendid statement. We express to you our subcommittee's appreciation for your help in the past, and for your presence here today.

Mr. SICKLES. Thank you.

Mr. ABBITT. We are pleased, indeed, to have a former member of this subcommittee appear here today. Do you have any statement that you would like to make? If so, we will be glad to hear it now.

STATEMENT OF HON. ROSS BASS, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF TENNESSEE

Mr. BASS. Mr. Chairman and members of the subcommittee, I am glad to be back on the committee. I served with this subcommittee for 8 years. I enjoyed working very much with the members of the committee who are interested in tobacco legislation in trying to promote the interests of the tobacco growers, producers, and manufacturers throughout the country.

I thought that we had programs that worked out very well, that were pleasing to both the producers and the manufacturers as well as the consumers.

And all at once a great drama came on the American scene, with many announcements. It really did not tell us anything that we had not heard about for 10 years. It was put before the people in such a dramatic way that its impact, I feel, has had a greater consequence on an important part of the economy of my State and many other States in the country.

I am not here to claim that tobacco is not a health hazard. It may be a very dangerous health hazard, but if it is we should find out exactly what the problem is, and if there is any way to solve it.

I, therefore, commend the Committee for taking the attitude they have taken in trying to concern itself with this and to go through with a program of research in order to find out if there is any way to alleviate the hazard from the use of tobacco, rather than to eliminate tobacco as a commodity in the United States.

Every day we are slaughtering people on the highways with automobiles, about 50,000 a year in the United States. We do not ban the manufacturing of automobiles. We build more highways and more automobiles, and people are using more automobiles. We are trying to find ways to keep people from being killed in automobiles.

And the same thing with our diets. We spend millions and millions of dollars a year trying to have proper diets for the people, trying to make food as healthy as possible.

I talked with an eminent heart specialist a few days ago and he told me that the biggest cause of the health problem with respect to the heart was overeating. We do not keep people from eating because of heart trouble.

People get killed in many, many ways every year, for instance in hunting accidents. We do not quit manufacturing and selling guns because people get killed. We try to find ways of preventing it.

This is a course which should be followed with reference to the health hazard of tobacco. I think that no one can deny the fact that many Americans enjoy the use of tobacco, just as they enjoy the use of any other commodity that is dangerous, but we in the Government, we in America, have the responsibility to try to make all of these things as safe and as healthful as we possibly can for the people who consume them, and not to outlaw them.

So, certainly, this Congress, this administration and the people of the United States should be willing to spend all the money that is necessary in order to explore completely the problem in an effort to try to alleviate the health problem involved and the danger, if there is any. At the same time I do not think that there is any need now to panic completely because we have known that this situation existed for many years. No new factor has come up that we did not know of previously.

So let us go about it, and in a calm and deliberate manner, do all that is necessary to protect the health of the people. At the same time let's not destroy an industry that is so important, not only to our domestic trade but to international trade at this time.

Thank you very much.

Mr. ABBITT. Thank you very much.

Mr. McMILLAN. I want to say that I heartily agree with the statement just made by Congressman Bass. I think it is, certainly, the duty and the responsibility of the Government to see what part tobacco or cigarettes are playing in connection with human health, whether it is the tobacco, the paper, the nicotine, or insecticides, because at the present time no one is certain what causes cancer. I think that we should find out more on this subject through research.

Mr. ABBITT. Thank you very much.

We will next hear from Congressman Lennon, of North Carolina. We are pleased to have you here and we appreciate very much your coming here. I cannot remember an open meeting of our subcommittee since you have been in the House of Representatives that you have not attended. You have been most helpful to us.

I just want to take this opportunity of expressing my deep gratitude for the help and the advice that you have given us in the past.

Mr. McMILLAN. I think that he is one of representatives of some of the finest grown tobaccos in this area.

Mr. HENDERSON. I might say so, too.

STATEMENT OF HON. ALTON LENNON, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF NORTH CAROLINA

Mr. LENNON. Thank you, Mr. Chairman, and members of the subcommittee and the other Members of Congress who are present. During these past 3 days now we have had documented rather vividly, rather dramatically, but, nevertheless, I think very accurately, the estimate of the impact—not only on North Carolina, the principal producer of Flue-cured tobacco, but on the entire Nation—of an industry at all levels from the grower to the consumer of the products consisting of \$8.5 billion-plus of our gross national product. Some 17 million people in the United States are dependent upon the various facets of our tobacco industry for their total livelihood or some part of their livelihood.

Mr. Chairman, I would attempt to relate this total economic impact that we have heard about so graphically in these past 3 days to my own congressional district in North Carolina which is, as the gentleman from South Carolina, Congressman McMillan, knows, the so-called border market. There are eight counties in my congressional district. In six of those eight counties tobacco is not the way of life—it is the life of our people. Easily it could be said, and I think accurately, that 75 percent of the income of the people of those six counties is dependent upon the growing of tobacco, not only the farm families who produce it, but the many people who are engaged working for these farm families, the redrying plants, the storage plants, and the warehousing.

There are eight auction markets in my congressional district. All of the North Carolina border markets are in my district.

I think it would be interesting to some of you gentlemen on the committee who are not close to our tobacco problem for me to say to you that in the selling season of 1963 there were sold on those eight markets in my district—four of them in one county, gentlemen—179,815,793 pounds of Flue-cured tobacco. That does not mean, gentlemen, that we do not raise more than that in my congressional district. That means what was sold in the markets of my congressional district, because so frequently in the earlier part of the season a part of our tobacco goes to the Florida-Georgia belt for early sale, and at the end of the sale, after our markets close, our growers take their tobacco to what we call the eastern belt or the middle belt or the old belt. But suffice it to say, gentlemen, that the average price per pound paid to the grower for those 179-million-pounds-plus, was 59.65 cents, coming to a total actually paid to the growers in my markets, in my district, of \$107,257,277.

Every store, every merchant, every bank, every fuel oil dealer—and I could name the whole category of economic life—is dependent upon the success of the good marketing and sales season as well as on the growing season. That is the economic aspect of it as it affects my congressional district.

Of course, I am cognizant of what prevails in other sections of North Carolina, because we have not only Flue-cured in some 83 of our 100 counties, but we have the burley in 33 of our western counties in North Carolina, or to put it in another way, our growers received \$547 million for their tobacco crop in 1963.

We have during the past few years been vitally concerned about unemployment and underemployment in our country. We are faced today, as you gentlemen are so well aware of, approximately in round figures 5 million so-called unemployed or underemployed. But I call your attention to the fact that during the past 2 years the taxpayers of the United States, through grants made by this Congress, have allocated and spent in excess of \$1,500 million, to do what? To fund the Manpower Training Act and a wider scope of the Vocational Training Act; to provide funds for ARA, HEW, which were under the guidelines and the preambles of those pieces of legislation to help and to assist in training or retraining those who have been moved from the farm, so to speak, to our industrial complex.

What would it mean if there is a substantial diminution in the consumption of cigarette tobacco? We would be paralyzed, not only in North Carolina but South Carolina, and Georgia, and Maryland, and Virginia would be to a degree comparably affected. But the story does not stop there. You can bring it all the way down to the ultimate consumer in order to account for the almost \$9 billion of our gross national product that comes from this industry.

Now, gentlemen, if we can spend in round figures in 2 years, \$2 billion in an effort to find methods to train and retrain our unemployed, constituting approximately 5 percent of our labor forces, we can easily and we should quickly find the method and the way to move into a research program costing, perhaps, \$5 million, \$10 million. So what? If it costs \$50 million, the Federal Government in tobacco excise taxes receives today annually \$2.1 billion from tobacco taxes. And our States and our municipalities receive \$1.1 billion in excise taxes.

I say to you that it is something we must do and do immediately.

I am from North Carolina. I have great pride in it. And we have hoped for a long time and we think we are suited for the tobacco research center to find these imponderables, to find the solution to these imponderables that have been projected by the Surgeon General's Advisory Committee as related to smoking and health. But I recognize that we have facilities in other States and that we have them down in the Department of Agriculture and in the Department of Health, Education, and Welfare, that could move now if they were funded under this resolution that is offered by you, Mr. Chairman, and by the distinguished North Carolinian who is chairman of the full committee.

I know that we cannot equate our economy to the tobacco economy with human health. I share the views expressed by you, Mr. McMillan, and by Mr. Cooley, and by Mr. Bass, when he said unequivocally

cally that the so-called report was nothing but a rehash. There was no new scientific discovery set forth in the compilation of that report—no new finding or conclusion was reached. It was simply a rehash of the existing papers and documents that were assembled that have been produced in the past number of years.

We do not know whether or not it is the ash, the burning of the cigarette—whether or not it is the nicotine—whether or not it is the tar, or whether it is a combination of all. We know that there is already medical evidence which has come forth since the publication of that report that even if you took dry spinach leaves and put them into the form of a cigarette and smoked them that you might find some chemical properties that were related to cancer, that were radioactive. We do not know.

I can only say to you gentlemen that I am grateful to you that you have moved into this field as rapidly as you have.

The thing that concerns me, gentlemen—and I think those of us who have this obligation—is that we ought to do all that we can to discourage other Members of Congress who do not have a full cognizance and evaluation of our total problem in the program—to discourage them from introducing these so-called panic button bills. I am afraid that some of the agencies of the Federal Government, the Federal Communications Commission, the Department of Health, Education, and Welfare, some of them will go off at loose ends and try to outdo the others, to frighten the people into believing that they must stop now.

We do not do that in other facets where questions are raised about health. And we should not do it in this instance. We have too much at stake. We must find a solution. The doctor who was here yesterday, Dr. Cooper, formerly from North Carolina, now at the University of Pennsylvania Medical School, was very enthusiastic. He was very encouraging in his belief that we can find an answer to something that could destroy a program, and do irreparable damage, not only to North Carolina and the Southern States, sir, but to the total economy of this country.

Thank you.

Mr. ABBITT. Thank you very much for your splendid statement.

Mr. CHELF. Could I say a word?

Mr. ABBITT. Yes.

Mr. CHELF. I will be very grateful to you, sir. I shall be very brief. Mr. Chairman, as you know, and as all of the members of your very splendid subcommittee know, it has been now but just a few days that all of us, representing the tobacco areas throughout the country, went over to the Department of Agriculture and there, as representatives of our people and this great industry, trying to do that which we thought was best for the industry as a whole, we literally asked the Department of Agriculture to reduce our acreage allotments by 10 percent. What did that 10 percent reduction mean? It literally meant that the people in North Carolina and in Kentucky, Tennessee, Maryland, and all of the other tobacco-producing States asked for a salary cut of 10 percent. And this is a hard thing to do.

So I would say to you quite frankly whenever we have seen that overproduction was getting out of hand, for instance, this past year—I was told that 25 percent of the total crop was taken by the Govern-

ment. I learned, also, that we had 3 years and 3 months supply on hand at the present time, which is out of balance and in the danger zone.

I was also told, that in 1962 there was 94 million pounds in the background after the disappearance. And in 1963 I was told that approximately 135 million pounds landed in the hands of the Government above the disappearance.

But I say to you quite frankly, Mr. Chairman, that any industry in order to preserve, maintain, and support itself; that is willing and ready and courageous enough to come in and ask voluntarily for a cut, not only this year, Mr. Chairman, but in years gone by, is very courageous.

Mr. Chairman, this health report is an indictment of the tobacco industry. Personally, I think that the answer to the problem is research and more research. Let us continue on with the development and expansion and enlargement of the facilities at Lexington, Ky. And I am for one down in North Carolina. And I am for one wherever it may be needed. I think that we ought to construct them. I think that we have a job to do. And I think that we will do this job, because the research that we have had in the past has helped and more is to come. I think that we will whip this thing.

Now, Mr. Chairman, as I say, this is a very vital thing to me and to my people, as it is to my dear friend, Mr. Henderson.

The Fourth Congressional District that I have the honor to represent here in Congress, and the Sixth Congressional District that is represented by the very able, outstanding gentleman, Mr. Watts, are two districts, Mr. Chairman, that produce 75 percent of the total Burley tobacco grown in the State of Kentucky, which, in turn, produces almost two-thirds of the total Burley tobacco produced in the world. So it is just as my friend has said, that this is more than just a passing thing with us. It is our economy, our lifeline.

But, Mr. Chairman, I hope that we will not panic over this thing.

Mr. ABBITT. I assume from what you say that you are for the resolution.

Mr. CHELF. I am very much for this resolution; yes, sir. But let me say in conclusion that I hope that we do not panic. This same thing happened in England. It "blew over." And when they came out of the bunkers and were above ground they came out with a song in their hearts, and a smile on their faces and they started smoking again. And with more research we will all help to make it so that it is healthy and all right for them to smoke.

Mr. McMILLAN. I want to commend the gentlemen from North Carolina and Kentucky on their fine statements. I do not know of any men in Congress who have worked harder for the tobacco farmer than these two gentlemen. I personally appreciate their very fine statements and in my opinion they will prove to be of great assistance in solving this problem.

Mr. ABBITT. Thank you so much. We will next hear from our colleague, Carl D. Perkins, of Kentucky. We will be very pleased to hear you and we are pleased to have you here with us.

STATEMENT OF HON. CARL D. PERKINS, A REPRESENTATIVE IN
CONGRESS FROM THE STATE OF KENTUCKY

Mr. PERKINS. Mr. Chairman and members of the committee, I am here to join with my colleagues in support of the resolutions, and I, for one, do not care to take issue with the report, but at the same time I want to make a few observations concerning the economic well-being of the farmer. And I, personally, feel his confidence in the tobacco farmer that he can grow the quality of tobacco that is necessary to cope with any problem that may exist.

In my district I have about 21,000 small growers. And, naturally, I am vitally concerned about their welfare.

The Congress of the United States has a long history of interest and action in areas of national health, the physical health of their people, and their economic well-being. This is reflected in Federal expenditures for medical research, for public hospitals and the construction of them, as well as in the statutes covering food and drugs and many other things.

Its concern for the economic health is demonstrated in social security programs, small business, housing loans, farm price supports, and many other domestic programs.

The position of public health and the position of economic health are often wrapped up in the same package. This is true of tobacco. And I am sure that with the resources that our country has in research and know-how, plus the ability to turn the results of research to the public good, that we need not sacrifice the physical health for economic health, nor make a trade in the opposite direction. If we are willing to make the investment, for adequate research, such as it requires, we can wind up achieving two goals simultaneously.

Approximately 700,000 farm families eke a share in tobacco sales of around \$1,300 million. Tobacco ranks in the first five agriculture crops in terms of value to producers, and accounts for about 8 percent of cash receipts from all farm crops.

In my State of Kentucky there are more than 170,000 tobacco farms—approximately 21,000 of them in my own congressional district—and tobacco income accounts for nearly 40 percent of Kentucky's cash receipts from farming.

The significant \$1,300 million in farm income, of course, represents only part of the total value of tobacco to the economy because it does not cover the processing and distribution and retailing areas with their many thousands of employees.

Mr. Chairman, Members of the Kentucky delegation to the Congress on January 27 introduced in the House of Representatives a joint resolution which would require the Secretary of Agriculture to expand the current research into the quality and health factors of tobacco.

I share with my colleagues the belief that immediate action is required in the interests of both the physical and the economic health of the entire Nation.

Thank you.

I ask that my entire statement be made a part of the record at this point.

Mr. ABBITT. Without objection, that may be done.

(The prepared statement of Hon. Carl D. Perkins follows:)

STATEMENT OF HON. CARL D. PERKINS, A REPRESENTATIVE IN CONGRESS FROM
THE STATE OF KENTUCKY

Mr. Chairman, the Congress of the United States has a long history of interest and action in two areas of national health: the physical health of our people, and their economic well-being. This is reflected in Federal expenditures for medical research, for public hospital construction, as well as in statutes covering the purity of food and drugs, and in many other ways.

Concern for economic health is demonstrated in social security programs, small business and housing loans, farm price supports, efforts to expand foreign trade, urban renewal, and a variety of other programs.

Protection of public health and protection of economic health are often wrapped in the same package. This is true of tobacco. And I am sure, with the resources our country has in research know-how, plus ability to turn the results of research to the public good, we need not sacrifice physical health for economic health nor make a trade in the opposite direction.

If we are willing to make the investment adequate research requires, we can wind up achieving two goals simultaneously.

Approximately 700,000 farm families each year share in tobacco sales of around \$1.3 billion. Tobacco ranks in the first five agricultural crops in terms of value to producers, and accounts for about 8 percent of cash receipts from all farm crops.

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Mr. Chairman, members of the Kentucky delegation to the Congress on January 27 introduced in the House of Representatives a joint resolution which would require the Secretary of Agriculture to expand current research into the quality and health factors of tobacco.

I share with my colleagues the belief immediate action is required in the interests of both the physical and economic health of the entire Nation.

Mr. ABBITT. Thank you for your splendid statement.

Chairman COOLEY. I ask that the statement of our colleague, Mr. Taylor, be included in the record at this point.

Mr. ABBITT. Without objection it will be included in the record at this point.

(The prepared statement of Hon. Roy A. Taylor follows:)

STATEMENT OF HON. ROY A. TAYLOR, A REPRESENTATIVE IN CONGRESS FROM THE
STATE OF NORTH CAROLINA

I am glad to express my interest in finding the right answer to the tobacco smoking problem. We must give first consideration to the health of our citizens, and provide maximum assurances of health for tobacco users. Also, we must give consideration to the welfare of the tobacco industry on which 17 million American citizens depend for all or part of their livelihood.

Tobacco is this Nation's fifth largest cash crop and stands third in America's agricultural exports. Both from the standpoint of production and manufacture, tobacco means more to the economy of North Carolina than to any other State.

In facing the problem we can assume that confirmed smokers will continue to smoke, which causes the health problem created to be national in scope.

We need to learn how to make smoking safer. We need to know what substances in tobacco smoke cause lung cancer or other disabilities. We need to know whether the cancer-producing compounds come from the nicotine in the tobacco or from the use of chemicals and fertilizers or from a combination of these or other factors.

The answer lies in research. If there are characteristics in the tobacco plant that should be strengthened or eliminated, we want to know what they are.

I am glad to give my support to the resolution pending and to appropriations making possible thorough and candid research.

Mr. ABBITT. I have a letter from Senator Jordan, dated January 28, which he asks to be made a part of the record at this point, and without objection, it will be done.

(The letter dated January 28, 1964, follows:)

U.S. SENATE,

Washington, D.C., January 28, 1964.

HON. WATKINS M. ABBITT,

Chairman, Tobacco Subcommittee, Committee on Agriculture,
House of Representatives.

DEAR WATT: I had hoped very much that I would be able to appear in person in support of the proposal made by Congressman Cooley, you, and other Members of the House in connection with the urgently needed research program for tobacco. I have hearings scheduled in the Senate on both Wednesday and Thursday and it will be impossible for me to be in attendance, and I would appreciate your making this letter a part of your proceedings.

I strongly support a vastly expanded program of research for tobacco as an urgent national need at this time.

In recent years tobacco has received an undue amount of abuse and difficulty, and I think the Federal Government has a responsibility to see to it that an adequate research program is launched without further delay.

Certainly, if one agency of our Federal Government can raise questions about tobacco, then the Federal Government as a whole has the responsibility to find the answers to these questions. I am confident that through research we can find the answers. If there is anything wrong with tobacco, then we should know what it is and what causes it and remove these wrongs through research.

Thank you very much for your cooperation in this matter.

Sincerely,

B. EVERETT JORDAN,

U.S. Senator.

Mr. ABBITT. He wholeheartedly supports the resolutions before the committee.

Chairman COOLEY. Let me ask that permission be granted for any other Members of Congress who desire to do so, to insert statements in the record.

Mr. ABBITT. The permission is granted.

(The statements follow:)

STATEMENT OF RALPH J. SCOTT, A REPRESENTATIVE IN CONGRESS FROM THE STATE
OF NORTH CAROLINA

Mr. Chairman, and distinguished members of the committee, the Advisory Committee to the Surgeon General of the United States has filed a voluminous report containing more than 380 pages commenting and speculating upon the possible effects of tobacco on health.

At the outset, let me say that I would not be understood as placing the economics of tobacco ahead of the health of our people. Health considerations should and must receive top priority in our evaluation of the report on smoking and health. The tobacco industry, including production, manufacture, and distribution, are of high economic importance in North Carolina. Hundreds of thousands of our people are literally dependent economically upon the success and growth of this industry. Facts and figures which have already been presented to your committee and made a part of the record indicate that the tobacco industry is of national importance and that its destruction or injury should have an appreciable adverse effect upon the national economy.

Since childhood, for more than 50 years, I have heard, as have many of you, a variety of theories about the effect of smoking on health. We were told that smoking would cause heart trouble, shortness of breath, stunted growth, and even that it affects the complexion. These theories have been bruited about for half a century and more, but the proof has not yet been presented. The mystery surrounding the cause or causes of the many types of cancer has in more recent years brought suspicion upon tobacco. If this suspicion is well founded in whole or in part, we wish to know it. If it is only a "bear in the woods" scare we want to know that, too.

We want to know (1) whether the use of tobacco is a hazard to health; (2) the areas and extent of any such hazards; and (3) if tobacco is in fact a hazard to health we want to know what, if anything, can be done in the production and manufacturing process to reduce and eliminate the harmful ingredients. The only way we can do this is through intensive research on a scale never before undertaken. Mr. Chairman, I desire to join my colleagues and friends in urging the importance and necessity of immediate congressional action on the proposal for a federally supported research program, large, broad, and intensive enough to bear promise of early answers to the questions which have been raised. One of the strongest arguments for such a research program is the report on smoking itself. It raises the questions but the answers are unsatisfactory.

Thank you, Mr. Chairman, and distinguished members of the committee.

STATEMENT OF HON. JOHN C. WATTS, A REPRESENTATIVE IN CONGRESS FROM THE
STATE OF KENTUCKY

Mr. Chairman, I appreciate this opportunity to present my views to the Committee on Agriculture, and urge that the committee approve legislation which would provide for increased research into the quality and health factors of tobacco. I have introduced the bill, House Joint Resolution 902, for this purpose which is now before the committee along with many other similar bills, all providing for expanded research in the field of tobacco.

There is little doubt in most people's minds that we need to know more about tobacco smoking and its relationship to health. The report, "Smoking and Health," recently issued by the Advisory Committee to the Surgeon General of the Public Health Service, has created public concern and raised the question: "Does smoking present a health hazard?"

On behalf of the economy of our Nation—both the 17 million people whose livelihood is dependent upon the tobacco industry as well as the \$3.3 billion in revenue dollars contributed annually by this industry—and in consideration of the millions of people who do not wish to forfeit the pleasant, relaxing enjoyment of smoking, it is urgent that the Federal Government undertake basic research immediately to determine (1) whether or not tobacco contains any harmful ingredients and (2) if so, what can be done to eliminate them.

The State of Kentucky stands ready and prepared to assist in seeking the answer to the tobacco issue. The University of Kentucky with its medical center, and the Agricultural Experiment Station with the National Tobacco Research Laboratory, are both interested in and uniquely qualified, to perform tobacco research. The adjacent location of these institutions makes possible a completely integrated program of research on tobacco from the agronomic through the medical phases. Equipment and facilities are used cooperatively, and researchers from both the University of Kentucky and the Agricultural Research Service work together to effect a much stronger research program than could be accomplished by working separately. The institutions are staffed by able scientists capable of taking hold of a research problem of this kind and pursuing it with ability, imagination, and insight.

Research projects in the past have covered a very wide range to tobacco studies, from genetics and varietal development through culture, insect and disease control, harvesting, curing, and marketing, control programs, chemical analysis, to cooperative work with tobacco manufacturers on quality factors.

Mr. Chairman, the economic factors of the tobacco industry, tremendous as they may be, should not outweigh health considerations. Nevertheless, they should insure that the tobacco question be considered very objectively. It is for these reasons I believe that only comprehensive basic research of tobacco will provide our Nation with the answer.

U.S. SENATE,
Washington, D.C., February 5, 1964.

HON. HAROLD D. COOLEY,
Committee on Agriculture,
U.S. House of Representatives,
Washington, D.C.

DEAR MR. CHAIRMAN: I regret that I was unable to attend the hearings held last week before the Subcommittee on Tobacco in connection with the current disconcerting situation facing the tobacco industry. However, I wish to make my position known for the record and, therefore, request that this communication be included as part of the subcommittee proceedings.

The House members of the Kentucky congressional delegation and our Governor, the Honorable Edward T. Breathitt, submitted the position of the Commonwealth of Kentucky with an excellent presentation in which I concur wholeheartedly.

It is apparent to those most closely associated with the smoking and health issue that great gaps still remain in the total information picture and that research must be accelerated on a broad scale to fill in these gaps.

In my opinion, there is a need for expanded medical research to determine the causes of various illnesses and the relation of these causes to tobacco and other substances; for agricultural research into the development of new tobacco varieties free of possible harmful substances; for product research to determine additional utilization of leaf tobacco, and for manufacturing research to develop better techniques to remove harmful substances either before or during burning.

Kentucky now has in operation a complex of resources with a capability to participate immediately in accelerated research on the tobacco problem. The recently completed Agricultural Research Center, with its National Tobacco Research Laboratory at the University of Kentucky, the university's new medical center, and the Spindletop Research Center offer a combination of resources which could go to work without delay in the research area.

I agree with the position of the tobacco producing and manufacturing industry that the health aspects of the matter must be of primary importance. In view of the lack of total knowledge, I feel that we can best discharge our responsibility to the public by undertaking research in the broad areas I discussed above.

With best wishes,
Sincerely yours,

THRUSTON B. MORTON.

CONGRESS OF THE UNITED STATES,
HOUSE OF REPRESENTATIVES,
Washington, D.C., February 3, 1964.

HON. HAROLD D. COOLEY,
Chairman, House Committee on Agriculture,
Longworth House Office Building.

DEAR MR. CHAIRMAN: I would like to take this opportunity to express my complete support for your bill, House Joint Resolution 885, which would provide for a Federal research program into the quality and health factors of tobacco.

Unquestionably, the Federal Government has a responsibility to publicize the known effects of tobacco on health, and the recent report of the Advisory Committee to the Surgeon General of the Public Health Service on "Smoking and Health" partially fulfills this responsibility. But the Government also has the responsibility to answer the questions raised by this report and to see that ways are developed, if at all possible, to remove the health hazards from tobacco. The research program envisioned under House Joint Resolution 885 would enable the Government to fulfill this additional responsibility.

It is not known at this time, for instance, to what extent filters remove any health hazards from tobacco, and particularly what effect filters might have on

the recently discovered radioactive metal apparently found on the leaves of tobacco. The research proposed under House Joint Resolution 885 could provide the information needed about the filter problems and possibly develop one which would remove the hazards. This is only one of the many problems the program could solve.

As you probably know, I have the privilege of representing a district which produces \$20 million worth of tobacco a year. In fact, tobacco is the No. 1 cash crop of the entire State of Maryland, although its production is limited primarily to four of the counties in my district. I am fully aware of how important tobacco can be to a State's economy and, therefore, am naturally interested in programs designed to help the tobacco industry. But I am more interested in seeing that the Federal Government's responsibility to all the American people is fulfilled—that is discover and publicize all possible information pertaining to health and tobacco.

Thus, I strongly urge approval of House Joint Resolution 885.

Sincerely yours,

RICHARD E. LANKFORD,
Member of Congress.

Mr. ABBITT. I have a statement from Senator Maurine B. Neuberger, which she asks to have placed in the record, because she is unable to be here today. And without objection, that will be done.
(The statement follows:)

STATEMENT OF HON. MAURINE B. NEUBERGER, A U.S. SENATOR FROM THE STATE OF OREGON

Mr. Chairman, because I agree that research directed toward the elimination of hazardous substances in cigarette smoke must form a part of any comprehensive Government program to bring the hazards of smoking under control, I am pleased to be the Senate sponsor of legislation substantially identical with the bills now before your committee.

As the Surgeon General's Committee found, cigarette smoking for "a large fraction of the American population, appears to satisfy the total need of the individual for a psychological crutch." The Committee concluded that this function of the cigarette habit was part of man's age-old tendency to "utilize pharmacologic aids in his search for contentment," and that "in the best interests of the public health, this should be accomplished with substances which carry minimal hazard to the individual and for society as a whole."

Deprived of cigarettes it is therefore conceivable that the needs reflected in the smoking habit would turn significant numbers of Americans toward even "more potent pharmacologic agents"—narcotics and drugs.

Nevertheless, if the tobacco industry is unable to sanitize the cigarette, it will doubtless meet with rising public demand for drastic controls upon the sale of its product. I myself have received hundreds of letters from deeply concerned citizens calling for just such restrictions. In short, Mr. Chairman, time is running out for the industry.

There are those who have said that it is not the Government's business to perfect safer cigarettes. But the Surgeon General's Committee included among its disturbing findings the judgment that cigarette smoking was "habituating." Surely the shadow of such "habituation" bars us from dismissing the habitual smoker as undeserving of Government assistance. He is not a willful suicide. And if he cannot be helped to abandon cigarette smoking, then we must do what we can to take the sting out of his habituation by making cigarettes as safe as possible.

If we owe a responsibility to the individual smoker, we also cannot be indifferent to the plight of a besieged industry. Hundreds and thousands of Americans dependent upon the cultivation, manufacture, and distribution of tobacco are faced with the verdict that the product upon which their livelihood depends, through no fault of their own, is a deadly menace to their society.

We know now that cigarette smoking causes and aggravates disease. But we do not know the precise mechanism by which this happens. Nor do we now possess the technology for eliminating the sources of disease in cigarette smoking. But surely an industrial technology which is capable of propelling a human being into orbit is capable, with sufficient Government assistance and stimulation, of eliminating the hazard from cigarette smoking.

I, of course, recognize that this committee's jurisdiction is necessarily limited to the agricultural aspects of cigarette smoking. And I am confident that the authors of the legislation before this committee do not mean to suggest that the Government's responsibility to smokers and potential smokers is limited to agricultural experimentation.

The very fact that you are here today to entertain proposals for a major research effort to develop less hazardous cigarettes is an affirmation of the difficulty of achieving that objective. Until that objective is fully achieved, we cannot stand idly by while hundreds of thousands of Americans suffer premature death and debilitation.

We acknowledge that we have a particular responsibility to make cigarette smoking more nearly safe because smoking is habituating. But the habituating quality of the cigarette habit also makes it imperative that the Government utilize every reasonable resource to intercept the nonsmoker, particularly the adolescent, before he initiates a "trial" of smoking. The choice to smoke, once made during adolescence, is not easily undone. We cannot, therefore, rest contented with a research program directed solely toward the salvation of the confirmed smoker. We also bear a heavy obligation to nonsmokers and, in particular, to the Nation's children.

Other committees and agencies must deal with such specific problems as the promotion and advertising of cigarettes which fails adequately to convey to prospective smokers the hazards inherent in the choice to smoke; or which tends to make cigarette smoking attractive to adolescents; or which confuses consumers as to the relative hazard of competing brands.

And other committees and agencies, too, must stimulate the necessary educational programs to insure that no American chooses to smoke without full knowledge of the risks inherent in that choice.

Nevertheless, the legislation before you is a good start. And if it achieves nothing else, it will at least serve notice on the American people that Congress takes seriously the medical indictment of smoking delivered by the Surgeon General's Committee.

Mr. MATTHEWS. Mr. Chairman, for the record, I would like to state that I am very much in favor of this legislation, as a member of the subcommittee. And, Mr. Chairman, I ask that I be granted permission to make a few remarks. I want just to emphasize my great interest in this resolution that we are discussing. I think that we are approaching the problem in a proper way. I think that there is no question but what more research is essential.

I want to join with all of our colleagues who have given us such a magnificent bit of testimony. I want to emphasize, again, that we in Florida are very much in favor of this type of legislation. You have heard from our Assistant Commissioner of Agriculture. You have heard from Congressman Fuqua, whose district, along with my district, produces Flue-cured tobacco, but let me say that our delegation is very much interested in this legislation for all types, because we know what this problem is. I want the record to be unmistakably clear that the tobacco growers in Florida and our Governor and our State officials are supporting this legislation.

Mr. ABBITT. Thank you very much.

We have with us the administrative assistant to Senator Cooper. I understood that you have a statement to file.

STATEMENT OF BAILEY GUARD, ADMINISTRATIVE ASSISTANT TO SENATOR JOHN SHERMAN COOPER

Mr. GUARD. Mr. Chairman and members of the committee, I am Bailey Guard, administrative assistant to Senator Cooper of Kentucky. Senator Cooper is a member of the Committee on Agriculture in the Senate and, also, the Rules Committee, both of which are meeting at this time. And for that reason he cannot be here today.

I might add that he was in Lexington on Wednesday when the Governor was here. And, of course, he is deeply interested in this matter, as you are aware.

I have a statement of his which I can read or offer it for the record.

Mr. ABBITT. We will put it in the record as though read. We thank you so much for your being here. You have been most helpful and cooperative with this committee.

Mr. GUARD. Thank you very much.

(The statement of Senator John Sherman Cooper follows:)

STATEMENT OF HON. JOHN SHERMAN COOPER, A U.S. SENATOR FROM THE
STATE OF KENTUCKY

I appreciate the opportunity to support the proposals to increase efforts in tobacco research.

I have carefully studied the recent report of the Surgeon General's Advisory Committee, and it must be given serious consideration because it concerns the health of our citizens. Coming from a State which is the largest producer of burley tobacco, and in which tobacco production accounts for 40 percent of the State's agricultural income, I am, of course, also concerned about the effect which the report might have on the tobacco industry.

Immediately after the report was released, I read articles and heard news reports stating that the report concluded that filters were not effective in lessening the dangers to cigarette smokers. I wrote to Surgeon General Terry to inquire about this because it was my conclusion from reading the report that the Committee did not make a judgment on this matter.

I would like to insert into the record today the exchange of correspondence between Mr. Terry and myself in which he states in part, "The Committee felt that the development of better filters or more selective filters is a promising avenue for further development." I notice that in Mr. Terry's statement before your committee earlier this week he again stressed this point by stating, "We must also develop better methods of preventing the formation of these substances during the burning of tobacco, as well as of removing by filtration or other means the hazardous substances that are formed. Both of these areas are promising avenues for further development—and have the potential of making smoking safer."

It is the opinion of the Surgeon General, the American Medical Association, and numerous other groups which have studied this question, that there is a great need for further research on the question of smoking and health. The report left many unanswered questions.

You heard the excellent statement of Governor Breathitt of Kentucky on Wednesday of this week, and today that of Congressman Natcher, whose constructive work for expanded research you know. I would like to call to your attention again briefly the facilities which are located in Kentucky which are already able to undertake new research. The University of Kentucky recently completed its new agricultural research center, which includes the National Tobacco Research Laboratory. Next to this is located the new University Medical Center, and nearby is the Spindletop Research Center—all of which have the capability and the desire to be a part of an expanding tobacco research program. It is the aim of Dr. Oswald, the new president of the university, to coordinate the university's resources in areas which would benefit from such combined contributions, and it seems to me that this is one area of study which could benefit greatly from the combined research efforts of the National Tobacco Research Laboratory, the University of Kentucky Medical Center, and the Spindletop Research Laboratory.

I would like to speak upon one other matter briefly, although it is not specifically before you today, and this is with regard to the tobacco price support program. I believe most of us recognize that the program has been sound economically. It has brought fair prices to growers, the quality of tobacco has been emphasized, and the program has operated without any substantial loss to the taxpayer. Although it has not been mentioned widely, I know there have been proposals made to end the price support program because of the recent report. To do so would result in unrestricted production of cheap tobacco, disastrous prices for farmers, loss of marketing controls, and the end of Government

supervision of tobacco quality through official grading of tobacco, and be of no help either to the economy of the tobacco States or in relation to the health report.

I mention this in relation to the proposals to increase research on the issue of smoking and health, because increased research is important for the continued well-being of one of our most successful farm programs, as well as in the interest of the health of our people and in the economy of many of our States.

Mr. ABBITT. We will now hear from our colleague, Mr. Fountain.

**STATEMENT OF HON. L. H. FOUNTAIN, A REPRESENTATIVE IN
CONGRESS FROM THE STATE OF NORTH CAROLINA**

Mr. FOUNTAIN. Mr. Chairman and members of the committee, I doubt that I can add anything to what has already been said, although I do want to make a brief statement. This committee and this Congress has an extremely important responsibility as the result of this report on smoking and tobacco. However inconclusive as the findings may be, we have an obligation to do everything we can to protect the health of our people and to determine what the causal relationship, if any, may be between the use of tobacco and health. At the same time, as the gentleman from Florida, Mr. Fuqua, the gentleman from North Carolina, Mr. Lennon, and others, have so well pointed out, we have an obligation to this tremendous industry, to the tobacco industry which Congressman Natcher so thoroughly depicted in his very eloquent discussion of this problem. And that includes the producer of the seed—it covers tobacco right on through to all who participate in processing, manufacturing, and the selling of tobacco.

I am in support of the purposes behind the resolutions which have been offered. As Mr. Henderson, my colleague from North Carolina said, whether it is \$5 or \$50 million, I think the economics of this industry are such, the importance of it to our Nation, and the importance of it to our taxpayers are such, that we must spend the funds necessary to find the answers to the problems, to reduce, insofar as possible, the health hazards, and at the same time to protect this tremendous industry for itself and because of what it means to our economy.

The President has enunciated a program against poverty in this country. One of the best ways to increase poverty substantially would be to permit the destruction of this industry. I believe that, in my own congressional district, and I suspect it is true in many sections of the country, if overnight the tobacco industry were to be destroyed, there would be breadlines within weeks, whether served by the Government or by private organizations, because the lending institutions, banks, and others, would not and could not provide farmers, processors, manufacturers, and others affected, if they knew the means of repayment no longer existed.

Mr. McMILLAN. Will you yield?

Mr. FOUNTAIN. Yes.

Mr. McMILLAN. Would you explain the amount of revenue that would be lost on account of the loss of taxes to the State and Federal Government?

Mr. FOUNTAIN. The total take in taxes is in the neighborhood of \$3 billion, but there would be great losses in other areas. Also, we cannot continue to increase expenditures and reduce taxes. I think that is pretty obvious.

Mr. MATTHEWS. Will you yield there?

Mr. FOUNTAIN. Yes.

Mr. MATTHEWS. I think that it might be interesting to point out that the \$3 billion that is produced from taxes on tobacco represents just about the total cost of all of the price support programs. I think you could say that tobacco is underwriting the cost of all of the cost of American agriculture in those programs.

Chairman COOLEY. You mean—

Mr. MATTHEWS. I mean that the taxes on tobacco as I understand, produce about \$3 billion a year. It is my understanding that if you take all of the costs of the price support programs every year—they are about \$3 billion—the American tobacco farmer is just about underwriting the cost, you might say, of the price support programs of American agriculture.

Mr. FOUNTAIN. If I may, Mr. Chairman, I have some statistical information relating to Federal expenditures for medical and health related research which may be of interest to the committee. For the fiscal year 1964 will total \$1.2 billion, of which \$826 million will be spent by the Public Health Service. And for 1965, the budget estimates a total Federal expenditure for medical and health related research of \$1.3 billion, of which \$906 million will be spent by the Public Health Service.

In view of these very large amounts devoted to health research, it is surprising to find how very little the Federal Government has been spending for research directed toward understanding and controlling such elements in smoking as may be injurious to health. The Public Health Service informs me that the agency, through all of its components, including the National Institutes of Health, is presently spending only \$1.2 million for this purpose. Of the \$1.2 million, only \$347,000 represents research being conducted in the Public Health Service's own laboratories and other facilities. This strikes me as a pitifully small expenditure for the important problem we are considering here this morning, especially in view of the fact that the Public Health Service has complete control of the use of its facilities for the types of research it chooses to undertake.

I would like to say, in calling for a much greater effort by the Public Health Service in this area, I do not wish to leave the impression that I am advocating larger overall Federal expenditures for health research. It is well known that the Intergovernmental Relations Subcommittee, of which I am chairman, has given intensive study over the past 4 years to the management of research grants by the National Institutes of Health.

It has been the conclusion of our subcommittee and of our full Committee on Government Operations that the National Institutes of Health great program can be administered much more efficiently and economically than in the past. And, consequently there is every reason to expect that the National Institutes of Health and the Public Health Service can enlarge their research activities in the important areas of our health research related to tobacco and in cooperation with any institutions set up from funds appropriated by the Congress pursuant to resolutions which we have here before us. And it is my conviction in this connection, that the National Institutes of Health and other Public Health Service units, are presently supporting many

projects which, however deserving, have much less importance and even relevance to the health of the American people than an understanding of the mechanisms by which tobacco has an effect on human health.

While I agree that it is proper for the Government to inform the American people of the hazards found to be associated with any product, I would maintain that the Government has an equal responsibility to concern itself with the effects of its actions upon the economic health of the American people. We must not lose sight of the fact that the tobacco industry involves the full- or part-time employment of some 17 million people and, approximately, \$8 billion in annual business. And all of these statistics have been given here before.

I simply want to say, Mr. Chairman, that I endorse wholeheartedly the purpose and substance of the resolutions which have been referred to this subcommittee. As Mr. Lennon said, I think we should spend whatever amount may be necessary to do this job, and it cannot all be done in one place or program. At least we know that a vast research program concerning the effects of tobacco upon human beings is necessary. We must reduce such health hazards as may be present in the use of tobacco, and at the same time, protect this great American industry and the means of livelihood of countless thousands who depend upon it and who, without the income that comes from it, will be worse off than if they actually had cancer.

Thank you, Mr. Chairman.

Mr. CHELF. Amen.

Mr. ABBITT. I thank you for that splendid statement.

Chairman COOLEY. I want to put one statement in the record at this point. This report which was released and published on January 11, was delivered to my office that day; the very next legislative day, Monday, January 13, I introduced this resolution, House Joint Resolution 885.

Mr. MATTHEWS. Will you yield? It was that day that you asked me to try to get my Governor for this meeting today.

Chairman COOLEY. Yes, and I do not think that we waited very long in delaying from Saturday to Monday to get the show on the road, so to speak. This report is the thing that caused these resolutions.

Mr. ABBITT. Congressman Stubblefield asks unanimous consent to have a statement inserted in the record immediately following the statement from the gentleman from Kentucky. And without objection, that permission is granted.

(The statement follows:)

STATEMENT OF HON. FRANK A. STUBBLEFIELD, A REPRESENTATIVE IN CONGRESS
FROM THE STATE OF KENTUCKY

Mr. Chairman, in the report issued by the Surgeon General on January 11, 1964 entitled "Smoking and Health," the following statement appears on page 33:

"On the basis of prolonged study and evaluation of many lines of converging evidence, the committee makes the following judgment: Cigarette smoking is a health hazard of sufficient importance in the United States to warrant appropriate remedial action."

To me, the remedial action needed is needed now and that is research into the plant breeding, culture, production, and handling of tobacco. I feel this matter is one of the utmost urgency and that action should take the form of a

crash program. Research in tobacco is necessary in order that the true facts may be brought to light and the tobacco industry either exonerated or the necessary corrections made to eliminate any health hazards that are involved.

The tobacco industry today is a \$8 billion business which pours \$3.3 billion into State, local and Federal Government each year. Almost 5 million of our citizens are provided employment by this industry. It is the fifth largest cash crop in the Nation. Yet, in spite of its obvious importance to our economy, only 0.073 percent of the revenue collected from tobacco is spent on research at this time.

Farmers throughout the United States received \$1.3 billion for the sales of tobacco crops representing 8 percent of the total for all crops in the country. Of the sales and gross receipts taxes collected by the States during 1963, taxes on tobacco products accounted for more revenue than like taxes on insurance, amusements, public utilities, alcoholic beverages and were second only to revenues from the sale of motor fuels.

Not only is tobacco important as a domestic product, but also aids our international payments deficit. Tobacco sales overseas now bring our country almost half a billion dollars a year in vital foreign exchange.

In my State of Kentucky, in excess of \$300 million was received for the 1963 tobacco crop. In fact, tobacco is the No. 1 business in Kentucky today and represents about 45 percent of the value of Kentucky's cash farm marketing income. Further, we have some 175,000 tobacco farm families in the State.

In view of the tremendous importance of tobacco to Kentucky, we have long realized the necessity for research in this field. In this regard, the National Tobacco Research Laboratory was established at the University of Kentucky in 1960. As my good friend and colleague, Congressman William Natcher, explained in his testimony before this committee, "one of the reasons for setting up the National Laboratory in Kentucky, aside from the fact that Kentucky was one of the States which has taken a predominant role in tobacco research previously, was the fact that the State had just approved plans for construction of a new Agricultural Science Center and offered to provide housing for the National Tobacco Research Laboratory. The Legislature of the Commonwealth of Kentucky first appropriated \$1 million for this agricultural research building, and later this amount was increased until the total cost of the building and equipment at the present time amounts to approximately \$5 million."

With these facilities already in being, we now need more staff and more equipment in order to immediately expand the research program.

After 3 days of hearings on this subject with witnesses from Federal agencies, State governments, and Members of the House and Senate, all are agreed that an expanded program of tobacco research is needed at once. Those appearing before the committee have been unanimous in this opinion.

Therefore, I would respectfully urge that the necessary steps be taken immediately to expand the tobacco research program.

Thank you.

Mr. ABBITT. We will now hear from a member of our subcommittee, Mr. McMillan of South Carolina.

STATEMENT OF HON. JOHN L. McMILLAN, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF SOUTH CAROLINA

Mr. McMILLAN. Mr. Chairman and members of the Tobacco Subcommittee, the 70 million Americans who enjoy smoking and the 17 million people who depend on tobacco for a livelihood here in this country of course were disturbed to read the Surgeon General's recent report connecting smoking with cancer. I am certain that every Member of Congress agrees with me that it is time for the Congress to take some immediate action on this subject.

We, of course, would be foolish if we did something that would take the bread out of the mouths of 17 million people who are depending on the production and manufacture of tobacco for a livelihood,

and we would be equally foolish to try to deprive 70 million people of this country of the pleasure they receive from smoking tobacco, a habit that has been here in America since it was discovered. And, long before, as we all know, the Indians were great smokers. We certainly cannot expect people of this country to deprive themselves of all the pleasures of life and there is nothing and no one item more commonly considered a genuine pleasure than smoking.

It would seem that the sensible solution at this time would be found in research to determine if it is the cigarette smoke, the tobacco, the paper, insecticides or something else in connection with the production or manufacture of tobacco that causes cancer. We could not conscientiously expect the people of this country to discontinue smoking simply because a few figures prove that more smokers die with cancer than nonsmokers.

The Federal Government, State governments and municipalities collect between \$4 and \$7 billion annually in taxes from the sale of tobacco. We are wondering just how the Federal Government, the State governments and municipalities would find a substitute for these taxes that so greatly enrich the treasuries of our governments. We, of course, agree that everyone should place the health of the American people ahead of anything, including pleasure or financial gain. However, there have been no scientific facts proving that the smoking of cigarettes and other types of tobacco actually causes cancer. All that we have is a few facts and figures.

With the great amount of income derived from the source of tobacco, we should not hesitate to appropriate \$10 or \$25 million for research. We are certain that if the scientists in this country are capable of finding out that the use of tobacco causes cancer they certainly should be able to find a cure for cancer, and possibly this whole research would be of great assistance to them in coming up with a cure for this terrible disease. We don't think that the 70 million people who use tobacco should be called on to discontinue smoking as the tobacco industry and the Federal Government is fully financially able to conduct a research program until a cigarette can be produced that would not cause cancer.

As I previously stated, health is more valuable than any industry and in order to prove definitely that there is something connected with smoking that causes cancer we should lose no time in setting up proper research facilities to get an answer to this question. I believe that the members of our committee should take immediate action to report a bill to the floor of the House requesting that at least \$10 million be appropriated to expand the present research program on tobacco. Our Nation cannot afford ill effects on the physical health of its citizens or ill effects on the economic health of our people. Whether this work should be done in one or two laboratories is not the question before us today. We should make the necessary money available for a thorough research program and place the laboratories where we have available scientists who can begin work immediately on this subject. We are unable to tell the American people where this research will lead, as this will be determined by the scientists who will make the research. We do know that there should be a thorough study made of each item that makes up a cigarette: insecticides, fertilizers, curing system, and every other item connected with the production and manufacture of tobacco.

I have listened intensely to the Surgeon General, the Governors and Representatives of 7 tobacco-growing States, and tobacco industry officials during the past 3 days and I believe there is a complete unanimity among all phases of the tobacco industry and among the people in general as to the necessity of an immediate research program of this nature.

Mr. ABBITT. We will next hear from our colleague, Mr. Henderson.

**STATEMENT OF HON. DAVID N. HENDERSON, A REPRESENTATIVE
IN CONGRESS FROM THE STATE OF NORTH CAROLINA**

Mr. HENDERSON. Mr. Chairman and members of the committee, you have been very patient with all of us. I would like to say that I wish that I had the ability to tell the American people—the people of my district and, mostly, the people of Congressman Cooley's district of the very fine service, not only in this instance, but throughout the history of the Committee on Agriculture of the great service he has rendered to the American people. We in North Carolina are mighty proud of him. I do not think there is anybody who would disagree with that. He has done a fine job through the years, not only for tobacco, but for all of agriculture, and, certainly, has played a great part in the way of the life of our people.

Just one final thing. I support the resolutions as wholeheartedly as I can. We talk about 70 million Americans who smoke cigarettes. I think that if any one or us, individually or collectively could offer to the American people a solution to cancer and other dread diseases there would be no price tag that could be put on it that we would not accept. And to find a solution to this, would be more than the salvation of my farmers, your farmers, the industry, and the Treasury of our Government. We may be able to discover in cigarettes that which causes the difficulty and that may lead to valuable information on other substances that we take into our body. And if we can discover this, by spending a little more money, I say very fine.

Mr. CHELF. It would be a small amount.

Mr. HENDERSON. If we can give the American people a solution to this one great disease, we will have rendered a service comparable to anything that could possibly be accomplished.

Mr. ABBITT. Thank you very much. We join you in your statement regarding the distinguished chairman of this Committee on Agriculture. He is particularly esteemed by the members of this committee and particularly by myself.

Mr. McMILLAN. I would like to associate myself with those statements, and to compliment my chairman. I do not think there is anyone on this committee who did not realize the contribution that Mr. Cooley has made through legislation on agriculture, and to the work of this great committee. I sometimes marvel at his patience.

Mr. ABBITT. We have only one other witness, Mr. Frank B. Snodgrass, vice president and managing director, Burley & Dark Leaf Tobacco Export Association, Inc. We shall be very glad to hear from you now. We appreciate your being here.

STATEMENT OF FRANK B. SNODGRASS, VICE PRESIDENT AND MANAGING DIRECTOR, BURLEY & DARK LEAF TOBACCO EXPORT ASSOCIATION, INC.

Mr. SNODGRASS. Thank you, Mr. Chairman. I will file a brief statement for the record and I will not read it in its entirety, because after having heard the testimony I found only one point that I thought that, possibly, should be made.

Since our organization is engaged in the promotion of exports and the domestic use of burley and the dark-fired and the dark-area cured types and Maryland types of tobacco, we, of course, have been doing a good many promotional activities. And with that in view I want to make this one statement.

We who are charged with the promotional activities to maintain and expand our world markets for U.S.-produced leaf feel a great awareness of responsibility to the consumers of tobacco throughout the universe, since they look to the United States as the leading supplier of tobacco. The recent report on smoking and health has received worldwide publicity. Now we have an obligation to find the answers to the unknowns, and, once and for all, allay the fears of those who enjoy the pure pleasure of smoking.

From an economic and moral standpoint we feel that the Congress has an obligation to the tobacco industry and consumer alike to determine conclusively what, if any, substance in the tobacco or smoke might be a health hazard. This can be accomplished only through intensive scientific research. Once the causative is established, if there be one, then necessary research is needed to isolate and eliminate this undesirable characteristic from the tobacco leaf and/or tobacco products, as the case may be.

The eventual solution to problems we face today rests in a sound coordinated research effort involving qualified scientists in various specialized fields throughout this great Nation. This work should be definitely coordinated with all information obtainable from reliable sources throughout the universe. We, therefore, urge the appropriation of more Federal funds to expand the research for all types of tobacco.

Thank you.

Mr. ABBITT. Thank you very much, Mr. Snodgrass, for that statement. We do appreciate your being here.

(The prepared statement of Mr. Snodgrass follows:)

STATEMENT BY FRANK B. SNODGRASS, VICE PRESIDENT AND MANAGING DIRECTOR, BURLEY AND DARK LEAF TOBACCO EXPORT ASSOCIATION, INC.

Mr. Chairman and members of the committee, on behalf of the producers, warehousemen, dealers, and exporters of Burley, Maryland, Kentucky-Tennessee Dark Fire-cured, One Sucker, and Green River types of tobacco we greatly appreciate this opportunity to endorse the enactment of the proposed legislation to expand current research into the quality and health factors of all types of tobacco.

The producers of tobacco which we represent from the States of Kentucky, Tennessee, Maryland, Missouri, West Virginia, Ohio, Indiana, and North Carolina are dependent upon the returns from their toil and sweat from tilling the soil in the laborious activity of growing tobacco for their livelihood. Our dealers and exporters have large investments in the establishment of our domestic and export markets for U.S. leaf tobacco.

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Chairman COOLEY. I have here a telegram from Hon. Stephen Pace, sent from Americus, Ga. "Steve" Pace was a member of the Committee on Agriculture for many years. He retired from Congress several years ago, but his vigor in behalf of agriculture and the people in agriculture is unabated. He is one of the great farm statesmen of our day. He is admired and loved by all of us here who had the privilege of serving with him. Therefore, I am especially pleased to have his vigorous endorsement of this resolution, and to insert his telegram at this place, I feel, it is an appropriate way to terminate these hearings in which all witnesses, without exception, have supported this resolution to bring about a crash program of research into the health factors of tobacco.

(The telegram follows:)

AMERICUS, GA., January 28, 1964.

HON. HAROLD D. COOLEY,
House Office Building,
Washington, D.C.:

House Joint Resolution 885 is certainly the proper, sound, and sensible approach to the present tobacco situation. It should have the most sympathetic consideration and support of all areas, the President, Secretary of Agriculture, and all Members of Congress, including those residing within and without the tobacco-producing areas.

Since 1614, when John Rolfe, the husband of Pocahontas, introduced the culture of tobacco by the colonist at Jamestown—of which one was Richard Pace, my grandfather in the 10th degree—tobacco has contributed in great measure to the comfort, pleasure, economy, and prosperity of the American people and to the revenues of our Government.

For a commodity which has contributed so much to the U.S. Treasury, millions should be appropriated to conduct, with all speed, research in the identification and elimination of those qualities which might be harmful to our people. Push hard and get going. Regards.

STEPHEN PACE.

Mr. ABBITT. Are there any other witnesses that desire to be heard at this time? Unless somebody else wants to be heard at this time, we will adjourn the hearings for the time being.

(Whereupon, at 12 noon, the hearing was adjourned.)



