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COSTS OF PRODUCING SELECTED CROPS IN THE UNITED STATES—1975, 1976, AND PROJECTIONS FOR 1977

PREPARED BY THE

ECONOMIC RESEARCH SERVICE
U.S. DEPARTMENT OF AGRICULTURE

FOR THE

COMMITTEE ON AGRICULTURE AND FORESTRY
UNITED STATES SENATE

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LETTER OF TRANSMITTAL

DEPARTMENT OF AGRICULTURE,
OFFICE OF THE SECRETARY,
Washington, D.C., December 21, 1976.

Hon. HERMAN E. TALMADGE,
Chairman, Agriculture and Forestry Committee,
U.S. Senate, Washington, D.C.

DEAR SENATOR TALMADGE: The Agriculture and Consumer Protection Act of 1973 directed the Secretary of Agriculture to conduct cost of production studies for certain commodities and the Economic Research Service was delegated the responsibility to carry out these studies. Recognizing the complexity of making cost estimates and the great need of policymakers, farmers, and the general public to understand as much as possible about cost of production, we have designed a program of research that goes well beyond the specific mandate of the Congress. This more comprehensive research effort has been documented in hearings before the appropriations subcommittees for agriculture. The enclosed report, "Costs of Producing Selected Crops in the United States—1975, 1976, and Projections for 1977," is a product of this overall effort.

The report contains detailed summaries of regional and national costs for 10 important agricultural commodities. Final cost estimates for 1975, preliminary estimates for 1976, and projected costs for 1977 are provided. Estimates for the major cost components, including the land resource, are reported.

As you know, there is no one totally satisfactory method of handling land cost that serves all purposes. Because there is lack of agreement among economists, policymakers, and other knowledgeable people as to the appropriate way to handle the cost of land, we have used two methods to compute land costs. These methods represent generally the range in estimates obtained from the various methods often used.

Sincerely,

DON PAARLBERG,
Assistant Secretary.

Enclosure.

FOREWORD

This is the second annual report by the U.S. Department of Agriculture on the cost of producing selected commodities as required by Public Law 93–86, the Agriculture and Consumer Protection Act of 1973.

This report differs from the earlier report in two major respects. First, it includes actual costs for the crops of 1975, preliminary estimates of costs for the crops of 1976, and projected costs for the crops of 1977. Second, land costs are computed in two different ways, both composites. One composite uses current land value combined with share and cash rent, the other uses an average acquisition value combined with share and cash rent.

The projection of costs for the 1977 crops of wheat, cotton and corn were used by the Committee staff in determining the costs of production used in the farm bill introduced on January 18, 1977. However, the most recent 5-year average harvested yields were used in establishing per unit costs rather than the yields used by the Department. This measure, along with other relevant bills, will be used as a basis for hearings on the extension of the 1973 Act.

It is important that we move quickly on an extension because many of the desirable features of the 1973 Act expire with the 1977 crop.

HERMAN E. TALMADGE,
Chairman.

PREFACE

A comprehensive program of research on cost of production is carried out by the Commodity Economics Division of the Economic Research Service. The work is centered in the Agricultural Policy Analysis program area and is coordinated by a cost of production board consisting of program leaders of the commodity groups in the division.

Data for the cost of production estimates come from a variety of sources but the primary source for major crops is the 1974 survey of over 4,000 producers. Many other units in ERS and across USDA contribute data and information. The Firm Enterprise Data System (FEDS) provides the means through which the data and information are processed and evaluated. Numerous people in the land-grant universities contribute to the effort and review enterprise budgets before they are published. The commodity program areas are responsible for the final estimates for their respective commodities.

Cost of production reports which have been issued include:

Costs of Producing Selected Crops in the United States, 1974. Prepared by the Economic Research Service, USDA. Senate Committee on Agriculture and Forestry, Committee Print 63–092, January 1976.

Costs of Producing Selected Crops in the United States, 1974. A Summary.—ERS–620, Economic Research Service, USDA, Dec. 1975.

Krenz, Ronald, et al. "Costs of Producing Major Crops: Easing in 1976," Agricultural Outlook. Economic Research Service, USDA, Apr. 1976.

"Cost of Production Self-calculator Guide," Agricultural Outlook. Economic Research Service, USDA, May 1976.

Walter, Alan S. and Gail D. Garst. "Costs of Production for Soybeans, Peanuts, and Flaxseed for 1974, 1975, and 1976," Fats and Oils Situation, Economic Research Service, USDA, Apr. 1976.

Cost of Producing Milk in the United States, 1974. Prepared by the Economic Research Service, USDA. Senate Committee on Agriculture and Forestry, Committee Print, 72–184 June 1976.

Costs of Producing Food Grains, Feed Grains, Oilseeds, and Cotton, 1974–76. Agricultural Economic Report No. 338, Economic Research Service, USDA, June 1976.

As these estimates are used, an important consideration not explicitly in evidence should be recognized and that is the wide variability in production costs. Costs vary significantly over time, from farm to farm, and across States and regions. This variability among farms is attributable to a large number of factors. Important ones are climate and soil types and varying management skills of individual producers. The size of farm is also an important factor as some operators achieve efficiencies through being able to gain price advantages from purchase of large quantities of inputs, more efficient use of resources especially machinery, and in making advantageous marketing arrangements. Thus, while the costs shown here are "average" estimates, the broad range of costs which they encompass should not be overlooked as an important factor in the cost structure of American agricultural production.

Cost of production for crops can be estimated either on a planted acre or on a harvested acre basis. The cost estimates reported here are estimated on a planted acre basis. Between the time of planting and harvesting various events, such as weather—flood, drought, hail or early frost; disease occurrences such as corn blight or wheat rust; and insect infestations may damage a crop to the extent of a total loss or else to the point that it does not pay to harvest the crops. As a result, harvested crop acreage is often less than the acreage planted.

Yields can also be determined on both a planted acre and harvested acre basis. For a given land area, the harvested acre yield will be equal or greater than the planted acre yield. Harvested acre yields are calculated by dividing total production by the harvested acreage; planted acre yields are equal to total production divided by total planted acres. Planted acre yields are shown in this report.

Planted acre costs reflect the total costs applicable to the use of an acre of cropland. Harvesting costs that are included as part of the total planted acre cost reflect the costs of harvesting the portion of the acreage that is actually harvested. Developing costs in this manner is consistent with the determination of total costs associated with crop operations on a whole farm.

Some users of cost data may want to convert planted acre costs to harvested acre costs. Making this conversion requires a separation of harvesting costs from all other planted acre costs and an estimate of the proportion of the planted acre that is harvested. Planted acre harvesting costs can be divided by the harvested proportion to derive the cost of harvesting one full acre.

There are alternative ways to handle nonharvest planted acre costs. If nonharvest planted acre costs are added directly to the costs of harvesting a full acre, the total will include some costs incurred on land that was not harvested.

Another alternative for handling the nonharvest planted acre costs is to multiply these costs by the harvested proportion and add these costs to the full acre harvest costs to give an estimate of those costs directly associated with the acre of land harvested. If these costs are used to calculate total production costs on a farm, by multiplying the number of acres harvested by the harvested acre cost, the total farm cost will be understated by the costs expended on any acreage abandoned before harvest.

A precise conversion from the planted acre costs shown in this paper to harvested acre costs cannot be made because harvesting costs are not separated out from other production costs, and also because the proportion of total acreage harvested is not given. However, a rough approximation of harvested acre costs suitable for some purposes could be obtained using harvested acreages available from "Crop Production", Cr Pr 2–2, SRS, USDA November and December 1976 and an estimate of harvesting costs supplied by the user.

This report is a product of the Economic Research Service cost of production program. Preparation of the report was under the direction of Ronald Krenz, Commodity Economics Division, stationed at Oklahoma State University. Other staff of the Firm Enterprise Data System assisting in the report preparation were Gail Garst, Charles Micheel, and David Fawcett.

Other ERS staff contributing to the report include:

P. Weisgerber, I. Starbird, W. Grant, T. Mullins, A. Walter, L. Rude, L. Speir, and B. French.

SUMMARY

In 1976, changes in per acre production costs (excluding land) from 1975 levels varied from an 8-percent increase for cotton to a 2-percent decrease for corn (table 1). In general, declining fertilizer prices helped offset cost increases for most other input items. Corn, a heavily fertilized crop, benefited most from the lower fertilizer prices. Other feed grains, such as sorghum, barley, and oats, had very slight declines in per acre costs. Oilseed crops, generally small users of fertilizer, showed slight cost increases. Higher prices for all inputs except seed and fertilizer caused rice production costs to increase 3.4 percent. The cost increase was greatest for cotton because of higher chemical prices and ginning costs.

Yields per planted acre in 1976 were below 1975 levels for all crops except cotton, for which the yield per planted acre was only 1 percent above the 1975 level. Because yields decreased relatively more than costs, unit costs increased for all of the 10 crops examined.

Per planted acre costs are expected to increase for all 10 commodities in 1977. The increase is projected to range from 4 to 7 percent, based on assumptions of no increase in fertilizer prices but increases in practically all other cost items.

Slight reductions in per unit costs could occur for corn, grain sorghum, peanuts, and soybeans, if projected planted acre yields based on normal yield trends are realized. Significant reductions in costs per bushel from 1976 could result for flax and oats since 1976 yields were very discouraging. Per bushel costs of wheat and barley may be about the same. Slight increases in costs per unit for cotton and rice can be expected if projected yields materialize. In all cases, the effect of yield on per unit costs is important and will be a major determinant of the final per unit costs.

80-606—77——2

TABLE 1.—SUMMARY OF U.S. AVERAGE PER PLANTED ACRE AND PER UNIT PRODUCTION COSTS, MAJOR CROPS 1975–77

	All wheat[1]			Corn			Sorghum			Barley		
	1975 (final)	1976 (preliminary)	1977 (projected)	1975 (final)	1976 (preliminary)	1977 (projected)	1975 (final)	1976 (preliminary)	1977 (projected)	1975 (final)	1976 (preliminary)	1977 (projected)
Per planted acre:												
Variable	$39.50	$36.20	$37.00	$91.21	$86.39	$89.25	$53.25	$52.63	$54.62	$39.15	$37.47	$38.94
Machinery ownership	16.83	17.50	18.95	22.77	24.23	25.83	22.62	23.91	25.29	18.47	19.43	20.85
Overhead	5.18	5.58	5.83	8.39	9.04	9.44	5.56	5.99	6.26	5.61	6.04	6.31
Management	6.98	5.21	5.33	14.76	14.82	12.98	7.53	7.24	6.89	6.88	6.51	6.10
Total	68.49	64.49	67.11	137.13	134.48	137.50	88.96	89.77	93.06	70.11	69.45	72.20
Land:												
Current	33.13	33.02	34.12	75.72	84.11	84.50	34.03	37.07	37.81	39.24	43.44	45.98
Acquisition	22.99	22.75	22.97	54.20	59.42	56.74	24.60	26.31	25.89	25.20	28.01	28.35
Per unit:												
Variable	1.36	1.35	1.20–1.39	1.06	1.08	.96–1.07	1.16	1.17	.98–1.14	.96	.96	.90–.99
Machinery ownership	.58	.66	.62–.71	.27	.30	.28–.31	.49	.53	.45–.53	.45	.50	.48–.53
Overhead	.18	.21	.19–.22	.10	.11	.10–.11	.12	.13	.11–.13	.14	.16	.15–.16
Management	.24	.20	.19	.17	.18	.15	.16	.16	.13	.17	.17	.15
Total	2.36	2.42	2.20–2.51	1.60	1.67	1.48–1.64	1.93	1.99	1.67–1.93	1.72	1.79	1.68–1.83
Land:												
Current	1.14	1.24	1.20	.88	1.04	.96	.74	.82	.73	.97	1.11	1.12
Acquisition	.79	.85	.80	.63	.74	.64	.54	.58	.50	.62	.72	.68
Yield	[2]28.5	[2]26.2	[2]26.2–30.2	[2]85.7	[2]80.5	[2]83.3–93.3	[2]45.8	[2]45.0	[2]47.8–55.8	[2]40.6	[2]38.9	[2]39.5–43.5

	Oats			Soybeans			Rice		
	1975 (final)	1976 (preliminary)	1977 (projected)	1975 (final)	1976 (preliminary)	1977 (projected)	1975 (final)	1976 (preliminary)	1977 (projected)
Per planted acre:									
Variable	26.44	25.39	26.81	47.54	46.90	48.85	216.28	211.71	221.80
Machinery ownership	14.05	14.55	16.10	21.16	22.70	24.17	43.87	47.14	49.72
Overhead	4.15	4.47	4.67	5.68	6.12	6.39	17.90	19.09	19.94
Management	4.30	3.73	4.05	9.04	11.90	11.23	25.28	20.60	21.92
Total	48.94	48.14	51.63	83.42	87.62	90.64	303.33	298.54	313.38

Land:									
Current	46.68	53.71	59.93	60.84	73.93	74.21	67.36	70.43	74.51
Acquisition	25.20	29.18	32.04	41.58	53.48	51.24	51.78	52.99	55.24
Per unit:									
Variable	.61	.70	.51–.61	1.70	1.83	1.66–1.85	4.75	4.68	4.63–4.94
Machinery ownership	.32	.40	.31–.36	.75	.89	.82–.92	.96	1.04	1.03–1.11
Overhead	.10	.12	.09–.11	.20	.24	.22–.24	.39	.42	.42–.44
Management	.10	.10	.08	.32	.46	.40	.56	.45	.47
Total	1.13	1.32	.99–1.16	2.97	3.42	3.10–3.41	6.66	6.59	6.55–6.96
Land:									
Current	1.07	1.47	1.24	2.17	2.89	2.66	1.48	1.56	1.61
Acquisition	.58	.80	.66	1.48	2.09	1.84	1.14	1.17	1.19
Yield	[2] 43.6	[2] 36.5	[2] 44.2–52.2	[2] 28.03	[2] 25.6	[2] 26.4–29.4	[3] 45.54	[3] 45.28	[3] 44.9–47.9

	Cotton [4]			Flaxseed			Peanuts		
	1975 (final)	1976 (preliminary)	1977 (projected)	1975 (final)	1976 (preliminary)	1977 (projected)	1975 (final)	1976 (preliminary)	1977 (projected)
Per planted acre:									
Variable	143.99	152.17	161.24	25.79	25.55	26.85	202.29	204.73	214.35
Machinery ownership	46.92	51.93	55.41	15.62	16.78	17.90	30.67	32.29	34.23
Overhead	9.52	10.44	10.91	4.27	4.60	4.80	16.18	17.43	18.20
Management	14.54	18.65	17.83	4.16	3.67	4.37	34.75	35.85	41.58
Total	214.97	233.19	245.39	49.84	50.60	53.92	283.89	290.30	308.36
and:									
Current	43.15	55.62	52.07	20.81	21.02	23.49	73.75	77.65	85.81
Acquisition	31.31	43.51	38.89	15.00	14.43	16.01	56.18	59.88	66.48
Per unit:									
Variable	.302	.307	.289–.338	2.83	3.65	2.53–3.12	.080	.083	.075–.081
Machinery ownership	.098	.105	.100–.117	1.72	2.40	1.69–2.08	.012	.013	.012–.013
Overhead	.020	.021	.020–.023	.47	.65	.45–.56	.006	.007	.007–.007
Management	.030	.038	.034	.46	.52	.46	.014	.014	.015
Total	.450	.471	.443–.512	5.48	7.22	5.13–6.22	.112	.117	.109–.116
Land:									
Current	.090	.112	.102	2.29	3.00	2.45	.029	.031	.031
Acquisition	.062	.084	.072	1.65	2.06	1.67	.022	.024	.024
Yield	[5] 416	[5] 422	[5] 417–477	[2] 9.1	[2] 7.0	[2] 8.6–10.6	[5] 2,533	[5] 2,474	[5] 2,650–2,850

[1] Per bushel cost after value of wheat pasture is subtracted.
[2] Bushels.
[3] Hundredweight.
[4] Per pound cost after value of cottonseed is subtracted.
[5] Pounds.

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COSTS OF PRODUCING SELECTED CROPS IN THE UNITED STATES—1975, 1976, AND PROJECTIONS FOR 1977

INTRODUCTION

The provision of food and fiber to meet the needs of domestic consumers and to supply foreign markets is an increasingly intricate process. At the heart of this process is the production of raw farm products on the Nation's approximately 2.7 million farms. While farm product prices have been relatively favorable in recent years, the cost of producing the Nation's food supply is of continuing importance.

Farm production costs are of interest to producers concerned with adequate returns to their labor and investment. Consumers are concerned with production costs as they affect retail food price levels. Public policymakers, concerned with the welfare of producers and consumers alike, view production costs as important economic indicators. To serve these needs, and for a wide variety of other purposes for which cost information is useful, the Economic Research Service (ERS) of the Department of Agriculture annually prepares estimates of the costs of producing the major agricultural commodities.

This report contains updated estimates of previously published production costs for 10 major crops for the years 1974, 1975, and 1976. Continuing the 3-year focus, estimates in this report for 1975 are considered to be "final estimates." Estimates for 1976 are "preliminary" and those for 1977 are "projected."

80-606—77——3

OBJECTIVES AND PROCEDURES

Beginning in 1973, ERS undertook a program to provide consistently developed cost estimates for the major agricultural commodities across all production regions of the United States. The ERS cost of production survey constitutes one of the major sources of information in this continuing program. However, such surveys are extremely expensive and time consuming, and thus cannot be feasibly conducted for all commodities each year. Also, there is a considerable timelag from the end of the production period until the surveys can be taken, the data processed and analyzed, and estimates reported. For example, the survey to gather cost data for 1974 crops was conducted in early 1975 and estimates reported in January 1976.[1]

Primarily for these reasons a supplemental cost estimating procedure was developed. This procedure, known as the Firm Enterprise Data System (FEDS) and implemented in 1973, consists of a series of computerized crop enterprise budgets serviced by a set of budget generators and aggregation programs.[2] Surveys are now planned on a 4-year rotational schedule that treats different major commodity groupings each year. Producers of major crop commodities will now be surveyed every 4 years to provide data to update and supplement the FEDS cost-estimating procedure.

The primary objectives of the FEDS procedure are to provide a means of annually updating cost estimates between the years when surveys are taken and to provide projections of costs for the upcoming crop year. This should not only enable cost estimates to be prepared more frequently but also less expensively than relying solely on formal surveys. This report is the third in an ongoing series of cost estimates treating a 3-year period. Reports will be issued annually dropping a past year and adding a future one.

Use of the FEDS for this purpose was initiated by developing crop enterprise budgets for 1974 for 10 crops in the major producing States. In general, only one budget per crop for each State was developed. However, in States where different production technologies, such as irrigation and summer fallow, are used, additional budgets were developed. These budgets were constructed using basic data obtained from the ERS cost of production survey for the crop year 1974. Thus, they represent 1974 practices in terms of machinery types and sizes and operations performed.[2]

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[1] Costs of Producing Selected Crops in the United States, 1974, Committee Print No. 63-092, Senate Committee on Agriculture and Forestry, U.S. Government Printing Office, Jan. 1976.

[2] The FEDS system of budgets and cost estimating procedures is operated by ERS research staff stationed at Oklahoma State University. However, the estimates so derived should not be confused with the FEDS research budgets. The research budgets, also updated annually, are developed using similar procedures but are estimates for smaller production areas. These budgets are available upon request in printed form for specific areas of the country.

The crops included in this report and the number of budgets used to estimate costs for each crop are as follows:[3]

Crops:	*Number of budgets*
Cotton	18
Corn	23
Grain sorghum	17
Barley	17
Wheat:	
Durum	6
Spring	7
White	9
Soft Winter	10
Hard Winter	25
Soybeans	22
Peanuts	9
Flaxseed	3
Oats	13
Rice	7

These 186 budgets were developed for, and processed by, a redesigned version of the Oklahoma Budget Generator.[4] Three sets of these budgets were developed to represent costs in 1975, 1976, and 1977.

These budgets include variable, machinery ownership, and general farm overhead costs.[5] Variable costs include expenditures for seed, fertilizer, chemicals, custom operations, labor, fuel and lubricants, repairs, interest, crop drying, and miscellaneous items. Machinery ownership costs include charges for replacement, interest, insurance, and taxes. General farm overhead includes costs for recordkeeping, utilities, general farm maintenance, and similar items that are difficult to allocate to a specific enterprise.

Two additional cost components, management and land, are also reported. The management charge is computed as 7 percent of the value of the crop. Crop value was computed for 1975 using annual average prices received by farmers and State average yields as reported by the Statistical Reporting Service (SRS), USDA. For 1976, the average price received over the crop season to date, and the average planted acre yield estimates were computed from information as reported in the September 10, 1976, SRS Crop Production Report. For the 1977 cost projections, yields and prices estimated by the USDA Interagency Projections Committees were used, with regional prices calculated to reflect the same relationship between the national and regional average as existed in 1976.

The land allocations are composite charges; they are computed with owner-operated, share-rented, and cash-rented land represented in the same proportion planted to each crop as the 1974 survey data reflected. That is, the land charges are a weighted composite of the three primary methods of obtaining services of the land resource for agricultural production purposes.

The owned-land allocation is computed using the average agricultural value of cropland reported in the 1974 survey adjusted to the

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[3] The cost of production survey did not include rice or oats. The FEDS staff developed budgets for oats, and the rice budgets were developed by analysts in the field staff of the Grains and Feeds program area of the Commodity Economics Division. See footnote 2 on p. 4.

[4] The original Oklahoma budget generator was written by Rodney L. Walker and Darrel D. Kletke. For a discussion of the most recent version, see Kletke, Darrel D., Operation Manual for the Oklahoma State University Enterprise Budget Generator, research report P-179, Oklahoma State University, June 1975.

[5] To reflect the costs of crop failure (abandonment), the budgets were developed on the basis of planted acreage.

current year using the State index of land values reported by USDA.[6] The land value thus obtained is multiplied by the annual average interest rate charged for farm loans by the Farm Credit Administration to give the annual allocation.[7] Average farm real estate tax data reported in the 1974 survey were indexed to the current year using annual taxes reported by the Economic Research Service and were added to the owned-land estimate.[8]

Share rent is estimated using the average share rentals paid for each crop in each State less the share of costs for seed, fertilizer, chemicals, and custom work paid by the landlord as reported in the 1974 survey. The same average prices received by farmers and reported average yields used to compute the management cost were used in computing the share rents.

The base for cash rent is the average cash rent reported in the 1974 survey indexed to reflect current values by the index of rents reported by the Economic Research Service.[9]

The average acquisition allocation represents an estimate of the value of land at the time of acquisition. The method of computing this value is detailed in the 1974 cost study report.[10] This average acqusition value was then used as the owned-land component to compute the composite allocation in the same manner as described above.

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[6] Farm Real Estate Market Developments, CD-81, Economic Research Service, USDA, July 1976.

[7] The average annual interest rate charged for farm loans in each State as reported by the Farm Credit Administration was used.

[8] See footnote 6.

[9] See footnote 6.

[10] Approximately three percent of the farmland is sold each year. Theoretically, all land would, therefore, change ownership over a 35-year period. The average of State per acre cropland values over the period 1940 to 1974 was determined by State. This average was then divided by the 1974 State cropland value to obtain an index for each State. To determine the estimated acquisition value of the cropland on each farm, this State index was multiplied by the reported value of agricultural cropland for each farm.

DATA FOR 1975

For machinery costs, the budgets developed for 1975 are based on machinery types, sizes, and operations-performed data obtained from the ERS study of 1974 costs. Quantities of fertilizer used are as reported in the ERS Fertilizer Situation Report for 1975. Prices of fertilizer and seeds used are as reported in Agricultrual Prices published by SRS in June 1976. Base farm machinery prices for 1974 were adjusted upward by 21 percent.[11] Chemical costs were increased by approximately 35 percent by multiplying the expenditures for chemicals in 1974 by the index of agricultural chemicals.

Farm custom rates for 1975 were obtained by adjusting 1974 costs upward by 20 percent. Farm overhead costs for 1975 were increased by 11 percent over 1974. Cotton ginning costs were based on ERS-reported ginning rates for 1975. Crop drying costs were computed based on percentage of crops dried, moisture levels, and fuel prices for 1975.

[11] See table 2.

DATA FOR 1976

Preliminary planted acre yield estimates (as reported in Crop Production, SRS, USDA, on Sept. 10, 1976) were used to develop the unit cost of production estimates for 1976. The yield estimates were the most current estimates available at the time these cost estimates were prepared. Planted acreages in 1975 were used to weight the various State budgets to obtain regional and national average planted acre yields for crops other than cotton, wheat, and rice. Preliminary estimates for 1976 for acreage planted to cotton, wheat, and rice were used to account for significant shifts from 1975 to 1976 in regional acreages of cotton and rice, and for shifts between wheat by class and between fallow and nonfallow acreage.[12] No significant regional shifts in acreage were reported in 1976 for the other seven crops.

Data available at the time these estimates were made indicate that total fertilizer use in the United States increased by approximately 16 percent from 1975 to 1976.[13] A substantial part of this increase was caused by the acreage shift from soybeans (a low fertilizer using crop) to corn (a high fertilizer using crop) and the 23-percent increase in cotton acreage. However, in response to lower fertilizer prices in 1976, application rates likely increased for corn in all regions except the Southeast, and for grain sorghum in all producing regions. The 1976 fertilizer application rates were assumed for 1977.

In computing 1976 costs, seed prices reported by SRS in the fall of 1975 were used for fall-planted crops, and prices reported in the spring of 1976 were used for spring-planted crops. Prices of all other inputs were adjusted as indicated in tables 2 and 3. A national average cottonseed price of $125 per ton was projected for 1976.

[12] Acreage, Crop Reporting Board, Statistical Reporting Service, USDA, June 30, 1976.
[13] Commercial Fertilizers, Crop Reporting Board, Statistical Reporting Service, USDA, Aug. 31, 1976.

PROJECTIONS FOR 1977

The reported 1976 planted acreages of crops were used to determine the weighted regional and national average totals. Yield projections per planted acre for 1977 (with a range specified for each crop) made by the USDA Interagency Yield Projection Committees were used.

Input price indexes and prices used for the projections are shown in tables 2 and 3. Farm chemical costs were estimated by multiplying the dollar expenditures obtained from the 1974 ERS cost survey by the index of chemical costs.[14]

Prices for seed in the 1977 budgets are the same as in the 1976 budgets, except for wheat. Because of declining wheat prices, seed wheat prices for 1977 were projected to decline 8 percent for Soft Red Winter, 28 percent for Durum, 25 percent for other Spring, 12 percent for White, and 17 percent for Hard Red Winter. A national average projected price of $110 per ton for cottonseed was used.

TABLE 2.—PRICE INDEXES FOR SELECTED ITEMS

Item	1974	1975	1976	1977
Items used for production	482	528	567	588
Fertilizer	246	320	274	275
Agricultural, chemical	329	443	481	505
Fuels and energy	281	313	332	350
Farm motor supplies	392	450	442	460
Autos and trucks	793	940	1,032	1,100
Tractor and S.P. machinery	816	990	1,108	1,180
Other machinery	725	895	1,030	1,090
Building and fencing	733	835	868	920
Taxes	1,307	1,375	1,436	1,506
Wage rates	1,506	1,627	1,798	1,900
Autos and auto supplies	530	595	635	670
Household operations	484	533	564	597
All machinery [1]	100	121	136	145
Custom rates [2]	100	120	133	142
Farm overhead costs [3]	100	111	119	124
Cotton ginning costs [4]		100	110	117

[1] Simple average of "autos and trucks", "tractor and S.P. machinery" and "other machinery."
[2] Based on machinery costs (86 percent), fuel (8 percent), and labor (6 percent).
[3] Based on composite of 6 items as follows: Household operation equals 39.4 percent, wages equal 13.6 percent, auto and auto supplies equal 23.6 percent, taxes equal 0.6 percent, items used for production equal 12.3 percent, and building and fencing repair equals 10.5 percent.
[4] Based on composite of labor equals 40.8 percent, fuel equals 8.5 percent, machinery equals 20 percent, and other (household operations) equals 30.7 percent.

[14] Properly, this index should be applied only to the price of the chemical, rather than to the total dollar expenditure (price times quantity). However, this method was used because data on quantities of chemicals applied were not available. As chemical prices rise, farmers would be expected to decrease use of chemicals, while changes in weather and insect infestation could cause an increase in quantities used. Since this method assumes the same physical quantities of chemicals used, it may result in over- or under-estimation of chemical costs.

TABLE 3.—U.S. AVERAGE PRICE PER UNIT OF INPUTS

	Unit	1975	1976	1977 [1]
Gasoline	Gallon	$0.421	$0.438	$0.462
Diesel	do	.376	.397	.419
Liquid petroleum (LP) gas	do	.304	.322	.34
Electricity	Kilowatt-hour	.0308	.0327	.0344
Natural gas	Thousand-cubic feet	.739	.926	1.05
Short-term interest rate [2]	Dollar	.091	.0825	.0825
Long-term interest rate [2]	do	.087	.086	.086
Labor	Dollars per hour	2.43	2.53	2.67
Nitrogen (N)	Pound	.21	.19	.19
Phosphate (P_2O_5)	do	.24	.18	.18
Potash (K_2O)	do	.09	.08	.08
Lime applied	Ton	9.03	8.84	8.84

[1] Projected using indexes from table 2 and 1976 base year data. Fuels and energy index used for all fuels; wages index used for labor rates; and fertilizer index used for all fertilizers.
[2] Interest rates for 1976 were used for 1977.

COMMODITY PRODUCTION COSTS

Cotton

For each of the 3 years, per planted acre cost and yield estimates are consistently highest in the Southwest region (Arizona and California) and lowest in the Southern Plains region (New Mexico, Oklahoma, and Texas) (tables 4–6).[15] Production in the Southwest is predominantly on irrigated land, while production in the Southern Plains is an extensive operation reflecting low levels of inputs and relatively low yields.

Despite the high per acre costs in the Southwest, this region had the lowest costs per pound of lint in all 3 years. The Southeast (Alabama, Georgia, North Carolina, and South Carolina) consistently had the highest costs per pound of lint. Per acre costs are consistently high for this region because of high levels of chemical and fertilizer use.

National total per acre costs increased 8 percent over 1975 levels, with higher chemical and machinery costs offsetting lower fertilizer costs. Thus, despite a slight increase in yields, per unit costs were slightly higher. Note that before the value of cottonseed was included, the costs per pound in 1976 were increased 3.6 cents above the 1975 costs of 51.7 cents, but because of an expected increase in value of cottonseed, the total increase in costs per pound of lint was only 1.5 cents.

TABLE 4.—COTTON: PRODUCTION COSTS PER PLANTED ACRE AND PER POUND OF LINT, BY COST ITEM, SPECIFIED REGIONS, 1975

Cost item	Southeast	Delta	Southern Plains	Southwest	United States
COSTS PER ACRE					
Variable	$189.60	$154.92	$94.16	$290.84	$143.99
Seed	5.14	5.79	5.86	6.68	5.88
Fertilizer	42.02	26.98	4.96	33.67	17.86
Lime	3.21	1.02			.55
Chemicals [1]	57.93	35.86	17.60	47.46	29.83
Custom operations [2]	14.16	9.65	11.36	47.11	15.60
All labor	16.37	17.29	12.67	39.14	17.63
Fuel and lubrication	8.46	8.54	7.66	11.26	8.43
Repairs	16.86	19.20	9.46	21.34	14.34
Ginning	19.92	26.65	21.37	61.66	27.84
Miscellaneous	.06	.47	.36	[3] 15.03	2.21
Interest	5.47	3.47	2.86	7.49	3.82
Machinery ownership cost	51.97	61.30	33.89	63.44	46.92
Replacement	35.13	41.66	21.70	43.48	31.25
Interest	13.63	15.89	9.38	16.08	12.43
Taxes and insurance	3.21	3.75	2.81	3.88	3.24

See footnote at end of table.

[15] The regional definitions may vary from crop to crop. States and areas comprising regional groupings for each crop are thus indicated in the text or footnotes.

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TABLE 4.—COTTON: PRODUCTION COSTS PER PLANTED ACRE AND PER POUND OF LINT, BY COST ITEM, SPECIFIED REGIONS, 1975—Continued

Cost item	Southeast	Delta	Southern Plains	Southwest	United States
COSTS PER ACRE—Continued					
General farm overhead	$7.70	$9.26	$7.06	$21.16	$9.52
Management	14.01	15.77	8.12	38.08	14.54
Total, excluding land	263.28	241.25	143.23	413.52	214.97
Land allocation:					
Composite with—					
Current value [4]	38.30	43.74	29.55	100.98	43.15
Average acquisition value [5]	23.05	31.06	22.22	76.39	31.31
COSTS PER POUND OF LINT [6]					
Variable	.461	.312	.320	.234	.302
Mach.nery ownership	.127	.123	.115	.051	.098
Farm overhead	.019	.019	.024	.017	.020
Management	.034	.032	.028	.031	.030
Total, excluding land	.641	.486	.487	.333	.450
Land allocation:					
Composite with—					
Current value	.093	.088	.100	.081	.090
Average acquisition value	.053	.059	.072	.051	.062
Yield of lint per acre (pounds)	375	438	262	3,016	416
Percent of U.S. production	7.2	29.9	31.7	30.5	99.3

[1] Includes herbicides, insecticides, and rodenticide materials not otherwise included under custom operations.
[2] Includes custom application of crop chemicals, and custom harvesting and hauling.
[3] Irrigation water.
[4] Based on prevailing tenure arrangements in 1974, reflecting actual combinations of cash rent, net share rent, and owner-operator land allocations. Current 1975, preliminary 1976, and projected 1977 values of owned cropland are used.
[5] The details in footnote 4 above apply, with the exception that for owned land, the average value of cropland at time of of acquisition is used.
[6] Value of seed removed from per pound figures. Composite land allocation with current value of land used to allocate value of seed.

TABLE 5.—COTTON: PRELIMINARY PRODUCTION COSTS PER PLANTED ACRE AND PER POUND OF LINT, BY COST ITEM, SPECIFIED REGIONS, 1976

Cost item	Southeast	Delta	Southern Plains	Southwest	United States
COSTS PER ACRE					
Variable	$193.25	$153.53	$103.38	$305.78	$152.17
Seed	5.64	5.01	4.58	6.22	5.01
Fertilizer	33.48	20.66	3.78	25.97	14.64
Lime	3.22	.97			.60
Chemicals [1]	62.99	39.07	19.11	51.40	33.42
Custom operations [2]	16.40	10.51	12.76	52.53	17.09
All labor	16.75	18.36	13.93	40.91	18.90
Fuel and lubrication	8.92	9.34	8.08	11.50	8.98
Repairs	19.57	21.38	10.72	24.07	16.66
Ginning	21.50	24.64	27.38	71.48	31.26
Miscellaneous	.05	.50	.36	[3] 15.01	2.14
Interest	4.73	3.09	2.68	6.69	3.47
Machinery ownership cost	58.23	65.35	36.60	68.32	51.93
Replacement	41.30	46.24	24.46	49.10	36.18
Interest	13.38	15.22	9.20	15.12	12.29
Taxes and insurance	3.55	3.89	2.94	4.10	3.46
General farm overhead	8.29	9.97	7.60	22.80	10.44
Management	17.18	16.80	11.87	50.71	18.65
Total, excluding land	276.95	245.65	159.45	447.61	233.19
Land allocation:					
Composite with—					
Current value [4]	43.91	46.92	38.35	113.58	55.62
Average acquisition value [5]	28.55	34.03	30.67	89.90	43.51
COSTS PER POUND OF LINT [6]					
Variable	.475	.364	.293	.223	.361
Machinery ownership	.143	.155	.104	.050	.123
Farm overhead	.020	.024	.022	.017	.025
Management	.042	.040	.034	.037	.044
Total, excluding land	.680	.583	.453	.327	.553

TABLE 5.—COTTON: PRELIMINARY PRODUCTION COSTS PER PLANTED ACRE AND PER POUND OF LINT, BY COST ITEM, SPECIFIED REGIONS, 1976—Continued

Cost item	Southeast	Delta	Southern Plains	Southwest	United States
COSTS PER POUND OF LIMIT—Continued					
Land allocation:					
Composite with—					
Current value	$0.108	$0.111	$0.109	$0.083	$0.112
Average acquisition value	.066	.076	.084	.061	.084
Yield of lint per acre (pounds)	364	369	302	1,068	422

[1] Includes herbicides, insecticides, and rodenticide materials not otherwise included under custom operations.
[2] Includes custom application of crop chemicals, and custom harvesting and hauling.
[3] Irrigation water.
[4] Based on prevailing tenure arrangements in 1974, reflecting actual combinations of cash rent, net share rent, and owner-operator land allocations. Current 1975, preliminary 1976, and projected 1977 values of owned cropland are used.
[5] The details in footnote 4 above apply, with the exception that for owned land, the average value of cropland at time of acquisition is used.
[6] Value of seed removed from per pound costs. Composite land allocation with current value of land used to allocate value fo seed.

TABLE 6.—COTTON: PROJECTED PRODUCTION COSTS PER PLANTED ACRE AND PER POUND OF LINT, BY COST ITEM, SPECIFIED REGIONS, 1977

Cost item	Southeast	Delta	Southern Plains	Southwest	United States
COSTS PER ACRE					
Variable	$202.86	$167.17	$109.29	$313.80	$161.24
Seed	5.64	5.01	4.58	6.22	5.01
Fertilizer	33.48	20.66	3.78	25.97	14.64
Lime	3.22	.97	----	----	.60
Chemicals [1]	66.01	40.94	20.03	53.86	35.02
Custom operations [2]	17.50	11.18	13.57	55.88	18.18
All labor	17.72	19.42	14.74	43.18	19.98
Fuel and lubrication	9.40	9.85	8.39	12.12	9.41
Repairs	20.25	23.10	11.40	25.42	17.77
Ginning	24.75	32.34	29.64	69.19	34.88
Miscellaneous	.05	.50	.36	[3] 15.01	2.14
Interest	4.84	3.20	2.80	6.95	3.61
Machinery ownership cost	59.71	71.05	38.79	72.00	55.41
Replacement	42.36	50.19	25.94	51.71	38.59
Interest	13.71	16.61	9.76	15.96	13.14
Taxes and insurance	3.64	4.25	3.09	4.33	3.68
General farm overhead	8.66	10.42	7.94	23.81	10.91
Management	17.05	18.78	11.00	41.83	17.83
Total, excluding land	288.28	267.42	167.02	451.44	245.39
Land allocation:					
Composite with—					
Current value [4]	46.33	51.47	37.74	114.36	52.07
Average acquisition value [5]	28.57	37.56	29.33	88.22	38.89
COSTS PER POUND OF LINT AND ASSOCIATED SEED					
Variable	.423–.499	.298–.345	.277–.347	.255–.275	.289–.338
Machinery ownership	.124–.147	.126–.147	.099–.123	.059–.063	.100–.117
Farm overhead	.018–.021	.019–.022	.020–.025	.019–.021	.020–.023
Management [6]	.038	.036	.031	.036	.034
Total, excluding land	.603–.705	.479–.550	.427–.526	.369–.395	.443–.512
Land allocation: [7]					
Composite with—					
Current value	.105	.098	.109	.096	.102
Average acquisition value	.060	.068	.080	.010	.072
Yield of lint per acre (pounds)	370–430	447–487	280–340	948–1,008	417–477

[1] Includes herbicides, insecticides, and rodenticide materials not otherwise included under custom operations.
[2] Includes custom application of crop chemicals, and custom harvesting and hauling.
[3] Irrigation water.
[4] Based on prevailing tenure arrangements in 1974, reflecting actual combinations of cash rent, net share rent, and owner-operator land allocations. Current 1975, preliminary 1976, and projected 1977 values of owned cropland are used.
[5] The details in footnote 4 above apply, with the exception that for owned land, the average value of cropland at time of acquisition is used.
[6] Value of seed removed from per pound figures. Composite land allocation with current value of land used to allocate seed.
[7] Midpoint of the range of planted acre yields was used to compute per unit costs.

Yields in 1976 were discouraging in the Delta (Arkansas, Louisiana, Mississippi, and bordering areas in Missouri and Tennessee). The 16-percent drop in yields resulted in a 9.4-cent increase in costs per pound of lint. Yields in the Southern Plains in 1976 were considerably improved, reducing costs by 4.1 cents per pound.

Per acre costs in 1977 are expected to be approximately 5-percent higher than in 1976. Costs per pound in 1977 will depend largely on yields and if the projected yields are realized, expected costs per pound will be greater in 1977 than in the preceding 2 years.

Corn

Cost estimates for corn in 1975, 1976, and projections for 1977 are shown in tables 7–9. Per acre cost and yield estimates are consistently higher for each of the 3 years in the Southwest region than in the other regions because most of the acreage in this region is irrigated.[16]

Per planted acre cost estimates are consistently lowest for the Northern Plains, but per bushel cost estimates are consistently lowest for the Lake States and Corn Belt. The consistently higher per bushel costs in the Southeast are due to the lower yields and higher chemical and fertilizer costs in that area.

Total per planted acre costs in the United States declined almost $3 from 1975 to 1976, primarily because of a 25-percent decline in fertilizer costs. This was partially offset by increasing costs of practically all other production items and increased fertilizer use. A 5.2-bushel decline in the average yield per planted acre thus resulted in total cost per bushel actually increasing from $1.60 to $1.67.

TABLE 7.—CORN: PRODUCTION COSTS PER PLANTED ACRE AND PER BUSHEL, BY COST ITEM, SPECIFIED REGIONS, 1975

Cost item	Northeast	Lake States and Corn Belt	Northern Plains	Southeast	Southwest	United States
COSTS PER ACRE						
Variable	$99.75	$90.93	$77.73	$110.93	$138.11	$91.21
Seed	8.22	9.51	9.13	8.22	13.04	9.30
Fertilizer	43.06	39.16	25.81	49.90	42.35	38.17
Lime		.85	.02	1.99		.80
Chemicals [1]	6.65	12.13	9.22	13.22	17.79	11.65
Custom operations [2]	9.07	4.15	4.75	7.44	6.22	4.72
All labor	12.40	7.81	9.34	10.83	28.40	8.57
Fuel and lubrication	6.19	4.65	9.70	6.53	9.09	5.72
Repairs	7.01	5.22	6.09	6.55	8.65	5.56
Drying	4.18	4.01	.99	2.36	2.69	3.35
Miscellaneous					[3] 5.11	.02
Interest	2.97	3.44	2.68	3.89	4.77	3.35
Machinery ownership cost	24.62	21.30	28.51	22.88	29.99	22.77
Replacement	15.75	13.51	17.21	14.32	19.15	14.28
Interest	7.11	6.22	8.26	6.86	8.65	6.65
Taxes and insurance	1.76	1.57	3.04	1.70	2.19	1.84
General farm overhead	8.85	8.54	8.15	7.36	14.58	8.39
Management	14.18	15.68	12.54	11.42	24.03	14.76
Total, excluding land	147.40	136.45	126.93	152.59	206.71	137.13

See footnote at end of table.

[16] Regions identified for corn are defined as follows: Northeast—New York, Pennsylvania; Lake States-Corn Belt—Illinois, Indiana, Iowa, Michigan, Minnesota, Missouri, Ohio, and Wisconsin; Northern Plains—Kansas, Nebraska, South Dakota, and Colorado; Southeast—Alabama, Georgia, South Carolina, Kentucky, North Carolina, and Tennessee; and Southwest—California.

TABLE 7.—CORN: PRODUCTION COSTS PER PLANTED ACRE AND PER BUSHEL, BY COST ITEM, SPECIFIED REGIONS, 1975—Continued

Cost item	Northeast	Lake States and Corn Belt	Northern Plains	Southeast	Southwest	United States
COSTS PER ACRE—Continued						
Land allocation:						
Composite with—						
Current value [4]	$32.97	$86.13	$58.74	$41.08	$91.73	$75.72
Average acquisition value [5]	23.72	61.65	43.87	26.09	78.57	54.20
COST PER BUSHEL						
Variable	1.22	.99	1.05	1.80	1.27	$1.06
Machinery ownership	.30	.23	.38	.37	.28	.27
Farm overhead	.11	.09	.11	.12	.13	.10
Management	.17	.17	.17	.18	.22	.17
Total, excluding land	1.80	1.48	1.71	2.47	1.90	1.60
Land allocation:						
Composite with—						
Current value	.40	.94	.79	.66	.84	.88
Average acquisition value	.29	.67	.59	.42	.72	.63
Yield per acre (bushels)	81.7	91.8	74.0	61.8	109.0	85.7
Percent of U.S. production	2.2	71.7	13.4	7.0	.5	94.8

[1] Includes herbicides, insecticides, and rodenticide materials not otherwise included under custom operations.
[2] Includes custom application of crop chemicals, custom harvesting and hauling, and corn shelling.
[3] Irrigation water.
[4] Based on prevailing tenure arrangements in 1974, reflecting actual combinations of cash rent, net share rent, and owner-operator land allocations. Current 1975, preliminary 1976, and projected 1977 values of owned cropland are used.
[5] The details in footnote 4 above apply, with the exception that for owned land, the average value of cropland at time of acquisition is used.

TABLE 8.—CORN: PRELIMINARY PRODUCTION COSTS PER PLANTED ACRE AND PER BUSHEL, BY COST ITEM, SPECIFIED REGIONS, 1976

Cost item	Northeast	Lake States and Corn Belt	Northern Plains	Southeast	Southwest	United States
COSTS PER ACRE						
Variable	$98.34	$85.68	$75.94	$103.67	$138.00	$86.39
Seed	8.86	9.52	9.36	8.19	15.54	9.36
Fertilizer	38.15	30.90	19.90	39.27	34.97	30.12
Lime		.85	.02	1.99		.80
Chemicals [1]	7.20	13.11	9.98	14.30	19.24	12.60
Custom operations [2]	10.10	4.52	4.90	8.30	6.93	5.11
All labor	12.56	8.19	9.80	11.52	30.06	8.96
Fuel and lubrication	6.51	4.93	9.97	6.82	9.10	6.00
Repairs	7.88	5.86	6.63	7.36	9.72	6.20
Drying	4.52	4.93	3.09	2.83	3.14	4.40
Miscellaneous					[3] 5.11	.05
Interest	2.56	2.87	2.29	3.09	4.19	2.79
Machinery ownership cost	26.32	22.86	29.61	24.23	31.91	24.23
Replacement	17.70	15.15	18.55	16.09	21.51	15.89
Interest	6.78	6.06	7.98	6.34	8.09	6.43
Taxes and insurance	1.84	1.65	3.08	1.80	2.31	1.91
General farm overhead	9.53	9.20	8.78	7.92	15.71	9.04
Management	16.72	15.57	12.42	12.49	23.02	14.82
Total, excluding land	150.91	133.31	126.75	148.31	208.64	134.48
Land allocation:						
Composite with—						
Current value [4]	36.02	96.89	64.77	44.40	97.72	84.11
Average acquisition value [5]	26.50	68.31	47.52	29.10	85.04	59.42
COST PER BUSHEL						
Variable	1.18	1.01	1.11	1.49	1.26	1.08
Machinery ownership	.32	.27	.43	.35	.29	.30
Farm overhead	.11	.11	.13	.11	.14	.11
Management	.20	.18	.18	.18	.21	.18
Total, excluding land	1.81	1.57	1.85	2.13	1.90	1.67

See footnote at end of table.

TABLE 8.– CORN: PRELIMINARY PRODUCTION COSTS PER PLANTED ACRE AND PER BUSHEL, BY COST ITEM, SPECIFIED REGIONS, 1976—Continued

Cost item	Northeast	Lake States and Corn Belt	Northern Plains	Southeast	Southwest	United States
COSTS PER BUSHEL– Continued						
Land allocation:						
Composite with—						
Current value	$0.43	$1.15	$0.95	$0.64	$0.89	$1.04
Average acquisition value	.32	.81	.69	.42	.77	.74
Yield per acre (bushels)	83.5	84.6	68.5	69.4	110.0	80.5

[1] Includes herbicide, insecticide, and rodenticide materials not otherwise included under custom operations.
[2] Includes custom application of crop chemicals, custom harvesting and hauling, and corn shelling.
[3] Irrigation water.
[4] Based on prevailing tenure arrangements, in 1974, reflecting actual combinations of cash rent, net share rent, and owner-operator land allocations. Current 1975, preliminary 1976, and projected 1977 values of owned cropland are used.
[5] The details in footnote 4 above apply, with the exception that for owned land, the average value of cropland at time of acquisition is used.

TABLE 9.—CORN: PROJECTED PRODUCTION COSTS PER PLANTED ACRE AND PER BUSHEL, BY COST ITEM, SPECIFIED REGIONS, 1977

Cost item	Northeast	Lake States and Corn Belt	Northern Plains	Southeast	Southwest	United States
COSTS PER ACRE						
Variable	$100.94	$88.49	$79.06	$106.40	$142.31	$89.25
Seed	8.86	9.52	9.36	8.19	15.54	9.36
Fertilizer	38.15	30.90	19.90	39.27	34.97	30.12
Lime		.85	.02	1.99		.80
Chemicals[1]	7.54	13.74	10.46	14.98	20.16	13.20
Custom operations[2]	10.73	4.91	5.61	8.82	7.38	5.58
All labor	13.26	8.66	10.46	12.19	31.71	9.52
Fuel and lubrication	6.86	5.19	10.32	7.19	9.60	6.29
Repairs	8.38	6.24	7.11	7.83	10.34	6.61
Drying	4.54	5.54	3.47	2.79	3.19	4.89
Miscellaneous					[3] 5.11	.02
Interest	2.62	2.94	2.35	3.15	4.31	2.86
Machinery ownership cost	28.04	24.39	31.45	25.79	33.97	25.83
Replacement	18.83	16.15	19.73	17.11	22.88	16.93
Interest	7.24	6.48	8.49	6.76	8.63	6.87
Taxes and insurance	1.97	1.76	3.23	1.92	2.46	2.03
General farm overhead	9.95	9.61	9.17	8.28	16.40	9.44
Management	12.77	13.74	11.66	9.47	18.24	12.98
Total, excluding land	151.70	136.23	131.34	149.94	210.92	137.50
Land allocation:						
Composite with—						
Current value[4]	37.75	97.38	65.94	44.26	96.93	84.50
Average acquisition value[5]	27.14	65.24	46.56	27.18	82.31	56.74
COST PER BUSHEL						
Variable	1.19–1.35	.90–1.00	.92–1.05	1.50–1.74	1.25–1.37	.96–1.07
Machinery ownership	.33–.37	.25–.28	.37–.42	.36–.42	.30–.33	.28–.31
Farm overhead	.12–.13	.10–.11	.11–.12	.12–.14	.14–.16	.10–.11
Management[6]	.16	.15	.14	.14	.17	.15
Total, excluding land	1.80–2.01	1.40–1.54	1.54–1.72	2.12–2.44	1.86–2.02	1.48–1.64
Land allocation:[6]						
Composite with—						
Current value	.47	1.04	.82	.67	.89	.96
Average acquisition value	.34	.70	.58	.41	.76	.64
Yield per acre (bushels)	75.0–85.0	88.5–98.5	75.5–85.5	61.0–71.0	104.0–114.0	83.3–93.3

[1] Includes herbicide, insecticide, and rodenticide materials not otherwise included under custom operations.
[2] Includes custom application of crop chemicals, custom harvesting and hauling, and corn shelling.
[3] Irrigation water.
[4] Based on prevailing tenure arrangements in 1974, reflecting actual combinations of cash rent, net share rent, and owner-operator land allocations. Current 1975, preliminary 1976, and projected 1977 values of owned cropland are used.
[5] The details in footnote 4 above apply, with the exception that for owned land, the average value of cropland at time of acquisition is used.
[6] Midpoint of the range of planted acre yields was used to compute per unit costs.

Per acre costs in 1977 are expected to increase by 4.5 percent for corn; but with expected normal yields, costs per bushel should drop to approximately $1.53.

Sorghum

Costs per acre, yields, and costs per bushel were consistently highest in the Southwest region and consistently lowest in the Central Plains (tables 10–12).[17] The Southern Plains, the major producing area, had costs and yields in the intermediate range.

Comparing 1976 with 1975, costs per bushel remained the same in the Southern Plains, increased by 12 cents in the Central Plains, and declined by 11 cents in the Southwest. These shifts were primarily a result of changes in yield levels, as per acre costs remained relatively unchanged. Reductions in fertilizer costs were offset by increased costs of most other production items.

Costs per acre are projected to increase by about 4 percent from 1976 to 1977, but if projected yields materialize, costs per bushel may actually decline in 1977.

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[17] Regions for the production of grain sorghum are defined as follows: Central Plains—Kansas, Nebraska, Colorado, and Missouri; Southern Plains—Oklahoma, Texas, Arkansas, and New Mexico; Southwest—Arizona and California.

TABLE 10.—GRAIN SORGHUM: PRODUCTION COSTS PER PLANTED ACRE AND PER BUSHEL, BY COST ITEM, SPECIFIED REGIONS, 1975

Cost item	Central Plains	Southern Plains	Southwest	United States
COSTS PER ACRE				
Variable	$46.14	$55.49	$121.48	$53.25
Seed	2.74	3.20	6.86	3.10
Fertilizer	16.40	16.51	39.14	17.00
Lime	.03	----------	----------	.01
Chemicals [1]	4.67	3.16	11.65	3.97
Custom operations [2]	3.78	5.98	10.76	5.20
All labor	7.05	10.34	27.27	9.41
Fuel and lubrication	5.20	7.84	8.38	6.78
Repairs	4.28	6.65	7.68	5.72
Drying	.58	----------	----------	.23
Miscellaneous	.02	----------	[3] 5.71	.14
Interest	1.39	1.81	4.03	1.69
Machinery ownership cost	18.16	25.76	22.75	22.62
Replacement	11.23	16.08	14.72	14.09
Interest	5.39	7.35	6.42	6.54
Taxes and insurance	1.54	2.33	1.61	1.99
General farm overhead	5.51	5.42	9.61	5.56
Management	7.04	7.66	13.78	7.53
Total, excluding land	76.85	94.33	167.62	88.96
Land allocation:				
Composite with—				
Current value [4]	36.08	30.94	69.49	34.03
Average acquisition value [5]	24.74	23.60	47.85	24.60
COST PER BUSHEL				
Variable	1.04	1.21	1.77	1.16
Machinery ownership	.41	.56	.33	.49
Farm overhead	.12	.12	.14	.12
Management	.16	.17	.20	.16
Total, excluding land	1.73	2.06	2.44	1.93
Land allocation:				
Composite with—				
Current value	.81	.67	1.01	.74
Average acquisition value	.56	.51	.70	.54
Yield per acre (bushels)	44.3	46.0	68.8	45.8
Percent of U.S. production	37.9	56.1	3.4	97.4

[1] Includes herbicides, insecticides, and rodenticide materials not otherwise included under custom operations.
[2] Includes custom application of crop chemicals, and custom harvesting and hauling.
[3] Irrigation water.
[4] Based on prevailing tenure arrangements in 1974, reflecting actual combinations of cash rent, net share rent, and owner-operator land allocations. Current 1975, preliminary 1976, and projected 1977 values of owned cropland are used.
[5] The details in footnote 4 above apply, with the exception that for owned land, the average value of cropland at time of acquisition is used.

TABLE 11.—GRAIN SORGHUM: PRELIMINARY PRODUCTION COSTS PER PLANTED ACRE AND PER BUSHEL, BY COST ITEM, SPECIFIED REGIONS, 1976

Cost item	Central Plains	Southern Plains	Southwest	United States
COSTS PER ACRE				
Variable	$44.93	$55.35	$118.49	$52.63
Seed	2.97	3.23	6.92	3.21
Fertilizer	12.69	13.30	32.56	13.52
Lime	.03	----------	----------	.01
Chemicals [1]	5.05	3.42	12.60	4.29
Custom operations [2]	4.21	6.67	11.97	5.80
All labor	7.50	11.38	28.19	10.21
Fuel and lubrication	5.46	8.36	8.51	7.19
Repairs	4.77	7.40	8.63	6.37
Drying	1.04	----------	----------	.42
Miscellaneous	.02	----------	[3] 5.71	.14
Interest	1.19	1.59	3.40	1.47
Machinery ownership cost	19.18	27.22	24.24	23.91
Replacement	12.42	17.72	16.53	15.55
Interest	5.16	7.10	6.01	6.30
Taxes and insurance	1.60	2.40	1.70	2.06
General farm overhead	5.93	5.84	10.36	5.99
Management	6.45	7.54	14.21	7.24
Total, excluding land	76.49	95.95	167.30	89.77
Land allocation:				
Composite with—				
Current value [4]	39.31	33.42	71.06	37.07
Average acquisition value [5]	25.70	25.48	50.58	26.31
COST PER BUSHEL				
Variable	1.09	1.19	1.65	1.17
Machinery ownership	.46	.59	.34	.53
Farm overhead	.14	.12	.14	.13
Management	.16	.16	.20	.16
Total, excluding land	1.85	2.06	2.33	1.99
Land allocation:				
Composite with—				
Current value	.95	.72	.99	.82
Average acquisition value	.62	.55	.70	.58
Yield per acre (bushels)	41.5	46.4	72.0	45.0

[1] Includes herbicides, insecticides, and rodenticide materials not otherwise included under custom operations.
[2] Includes custom application of crop chemicals, and custom harvesting and hauling.
[3] Irrigation water.
[4] Based on prevailing tenure arrangements in 1974, reflecting actual combinations of cash rent, net share rent, and owner-operator land allocations. Current 1975, preliminary 1976, and projected 1977 values of owned cropland are used.
[5] The details in footnote 4 above apply, with the exception that for owned land, the average value of cropland at time of acquisition is used.

TABLE 12.—GRAIN SORGHUM: PROJECTED PRODUCTION COSTS PER PLANTED ACRE AND PER BUSHEL, BY COST ITEM, SPECIFIED REGIONS, 1977

Cost item	Central Plains	Southern Plains	Southwest	United States
COSTS PER ACRE				
Variable	$46.70	$57.42	$122.53	$54.62
Seed	2.97	3.23	6.92	3.21
Fertilizer	12.69	13.30	32.56	13.52
Lime	.03	----------	----------	.01
Chemicals [1]	5.29	3.59	13.20	4.50
Custom operations [2]	4.48	7.09	12.73	6.17
All labor	7.94	12.04	29.76	10.81
Fuel and lubrication	5.73	8.69	8.97	7.49
Repairs	5.09	7.84	9.18	6.76
Drying	1.23	----------	----------	.49
Miscellaneous	.02	----------	[3] 5.71	.14
Interest	1.23	1.64	3.50	1.52
Machinery ownership cost	20.48	28.67	25.81	25.29
Replacement	13.26	18.67	17.59	16.46
Interest	5.52	7.50	6.41	6.67
Taxes and insurance	1.70	2.50	1.81	2.16
General farm overhead	6.20	6.10	10.82	6.26
Management	6.28	7.12	11.66	6.89
Total, excluding land	79.66	99.31	170.82	93.06
Land allocation:				
Composite with—				
Current value [4]	40.89	33.13	73.19	37.81
Average acquisition value [5]	25.81	24.67	50.21	25.89
COST PER BUSHEL				
Variable	.88–1.04	1.01–1.17	1.62–1.82	.98–1.14
Machinery ownership	.39–.46	.50–.59	.34–.38	.45–.53
Farm overhead	.12–.14	.11–.12	.14–.16	.11–.13
Management [6]	.13	.13	.16	.13
Total, excluding land	1.52–1.77	1.75–2.01	2.26–2.52	1.67–1.93
Land allocation: [6]				
Composite with—				
Current value	.83	.63	1.02	.73
Average acquisition value	.53	.47	.70	.50
Yield per acre (bushels)	45.0–53.0	49.0–57.0	67.5–75.5	47.8–55.8

[1] Includes herbicides, insecticides, and rodenticide materials not otherwise included under custom operations.
[2] Includes custom application of crop chemicals and custom harvesting and hauling.
[3] Irrigation water.
[4] Based on prevailing tenure arrangements in 1974, reflecting actual combinations of cash rent, net share rent, and owner-operator land allocations. Current 1975, preliminary 1976, and projected 1977 values of owned cropland are used.
[5] The details in footnote 4 above apply, with the exception that for owned land, the average value of cropland at time of acquisition is used.
[6] Midpoint of the range of planted acre yields was used to compute per unit costs.

Barley

Per bushel costs of barley production in 1975 and 1976 were lowest in the Southern Plains relative to the other regions (tables 13–15).[18]

TABLE 13.—BARLEY: PRODUCTION COSTS PER PLANTED ACRE AND PER BUSHEL, BY COST ITEM, SPECIFIED REGIONS, 1975

Cost item	Northeast	Northern Plains	Southern Plains	Southwest	Northwest	United States
COSTS PER ACRE						
Variable	$52.72	$31.62	$38.44	$58.93	$46.94	$39.15
Seed	7.29	5.27	4.09	9.78	7.83	6.38
Fertilizer	21.94	8.13	8.53	12.07	14.52	10.04
Chemicals [1]	.12	1.75	1.39	1.49	1.50	1.62
Custom operations [2]	2.14	1.46	4.08	8.76	2.37	2.92
All labor	8.85	5.74	8.93	12.81	8.14	7.46
Fuel and lubrication	4.49	4.34	6.09	5.39	5.68	4.82
Repairs	4.99	4.04	4.21	5.35	5.74	4.54
Miscellaneous	----------	.11	----------	[3] 1.00	----------	.23
Interest	2.90	.78	1.12	2.28	1.16	1.14
Machinery ownership cost	16.40	18.16	17.75	16.61	22.25	18.47
Replacement	10.57	11.26	10.19	10.61	12.90	11.34
Interest	4.67	5.51	6.11	4.78	7.55	5.71
Taxes and insurance	1.16	1.39	1.45	1.22	1.80	1.42
General farm overhead	6.95	4.61	4.66	9.27	5.86	5.61
Management	5.43	5.96	7.80	9.03	8.32	6.88
Total, excluding land	81.50	60.35	68.65	93.84	83.37	70.11
Land allocation:						
Composite with—						
Current value [4]	35.05	29.11	30.37	67.73	55.16	39.24
Average acquisition value [5]	19.22	18.46	22.76	47.13	31.21	25.20
COST PER BUSHEL						
Variable	1.16	.89	.89	1.16	.96	.96
Machinery ownership	.36	.51	.41	.32	.46	.45
Farm overhead	.15	.13	.11	.18	.12	.14
Management	.12	.17	.18	.18	.17	.17
Total, excluding land	1.79	1.70	1.59	1.84	1.71	1.72
Land allocation:						
Composite with—						
Current value	.77	.82	.70	1.32	1.13	.97
Average acquisition value	.42	.52	.53	.92	.64	.62
Yield per acre (bushels)	45.6	35.5	43.2	51.2	48.7	40.6
Percent of U.S. production	2.0	47.8	4.4	18.0	16.2	88.4

[1] Includes herbicides, insecticides, and rodenticide materials not otherwise included under custom operations.
[2] Includes custom application of crop chemicals, and custom harvesting and hauling.
[3] Irrigation water.
[4] Based on prevailing tenure arrangements in 1974, reflecting actual combinations of cash rent, net share rent, and owner-operator land allocations. Current 1975, preliminary 1976, and projected 1977 values of owned cropland are used.
[5] The details in footnote 4 above apply, with the exception that for owned land, the average value of cropland at time of acquisition is used.

[18] States included in the regions are: Northeast—Pennsylvania; Northern Plains—Montana, Minnesota, North Dakota, South Dakota, and Wyoming; Southern Plains—Colorado and Oklahoma; Southwest—Arizona and California; and Northwest—Idaho, Oregon, and Washington.

TABLE 14.—BARLEY: PRELIMINARY PRODUCTION COSTS PER PLANTED ACRE AND PER BUSHEL, BY COST ITEM, SPECIFIED REGIONS, 1976

Cost item	Northeast	Northern Plains	Southern Plains	Southwest	Northwest	United States
COSTS PER ACRE						
Variable	$49.83	$29.99	$37.08	$57.98	$44.48	$37.47
Seed	6.86	4.82	3.68	9.55	7.55	5.99
Fertilizer	19.41	5.92	6.25	9.33	10.84	7.51
Chemicals [1]	.13	1.89	1.50	1.62	1.63	1.75
Custom operations [2]	2.38	1.56	4.54	9.73	2.64	3.20
All labor	8.70	6.03	9.18	13.44	8.71	7.84
Fuel and lubrication	4.53	4.50	6.27	5.35	5.89	4.95
Repairs	5.32	4.47	4.69	6.01	6.25	5.02
Miscellaneous	---	.11	---	[3] 1.00	---	.23
Interest	2.50	.69	.97	1.95	.97	.98
Machinery ownership cost	17.10	19.05	18.73	17.68	23.38	19.43
Replacement	11.55	12.36	11.34	11.92	14.29	12.52
Interest	4.36	5.26	5.87	4.47	7.21	5.44
Taxes and insurance	1.19	1.43	1.52	1.29	1.88	1.47
General farm overhead	7.48	4.97	5.02	9.99	6.32	6.04
Management	5.39	5.91	6.83	7.88	7.38	6.51
Total, excluding land	79.80	59.92	67.66	93.53	81.56	69.45
Land allocation:						
Composite with—						
Current value [4]	37.92	33.15	30.32	68.66	58.26	43.44
Average acquisition value [5]	21.64	21.26	22.32	48.82	33.28	28.01
COST PER BUSHEL						
Variable	1.30	.86	.86	1.32	.91	.96
Machinery ownership	.45	.55	.43	.40	.48	.50
Farm overhead	.19	.14	.12	.23	.13	.16
Management	.14	.17	.16	.18	.15	.17
Total, excluding land	2.08	1.72	1.57	2.13	1.67	1.79
Land allocation:						
Composite with—						
Current value	.99	.95	.70	1.57	1.19	1.12
Average acquisition value	.56	.61	.52	1.11	.68	.72
Yield per acre (bushels)	38.3	34.9	43.2	43.8	48.8	38.9

[1] Includes herbicides, insecticides, and rodenticide materials not otherwise included under custom operations.
[2] Includes custom application of crop chemicals, and custom harvesting and hauling.
[3] Irrigation water.
[4] Based on prevailing tenure arrangements in 1974, reflecting actual combinations of cash rent, net share rent, and owner-operator land allocations. Current 1975, preliminary 1976, and projected 1977 values of owned cropland are used.
[5] The details in footnote 4 above apply, with the exception that for owned land, the average value of cropland at time of acquisition is used.

TABLE 15.—BARLEY: PROJECTED PRODUCTION COSTS PER PLANTED ACRE AND PER BUSHEL, BY COST ITEM, SPECIFIED REGIONS, 1977

Cost item	Northeast	Northern Plains	Southern Plains	Southwest	Northwest	United States
COSTS PER ACRE						
Variable	$51.82	$31.31	$38.45	$60.13	$45.85	$38.94
Seed	6.86	4.82	3.68	9.55	7.55	5.99
Fertilizer	19.41	5.92	6.25	9.33	10.84	7.51
Chemicals [1]	.14	1.98	1.58	1.69	1.70	1.84
Custom operations [2]	2.53	1.73	4.83	10.33	2.81	3.45
All labor	9.42	6.44	9.70	14.19	9.21	8.33
Fuel and lubrication	4.95	4.78	6.44	5.65	6.20	5.21
Repairs	5.96	4.82	4.97	6.39	6.55	5.36
Miscellaneous		.11		[3] 1.00		.23
Interest	2.55	.71	1.00	2.00	.99	1.02
Machinery ownership cost	18.71	20.60	19.77	18.82	24.64	20.85
Replacement	12.64	13.36	12.01	12.68	15.11	13.44
Interest	4.77	5.69	6.16	4.77	7.56	5.83
Taxes and insurance	1.30	1.55	1.60	1.37	1.97	1.58
General farm overhead	7.82	5.19	5.24	10.43	6.60	6.31
Management	6.07	5.46	5.43	8.23	6.65	6.10
Total, excluding land	84.42	62.56	68.89	97.61	83.74	72.20
Land allocation:						
Composite with—						
Current value [4]	41.45	34.98	28.65	74.72	61.98	45.98
Average acquisition value [5]	23.03	21.47	19.66	51.60	33.52	28.35
COST PER BUSHEL						
Variable	1.02–1.10	.81–.90	.94–1.04	1.11–1.20	.88–.96	.90–.99
Machinery ownership	.37–.40	.53–.60	.48–.53	.35–.38	.47–.51	.48–.53
Farm overhead	.15–.17	.13–.15	.13–.14	.19–.21	.13–.14	.15–.16
Management [6]	.12	.15	.14	.16	.13	.15
Total, excluding land	1.66–1.79	1.62–1.80	1.69–1.85	1.81–1.95	1.61–1.74	1.68–1.83
Land allocation: [6]						
Composite with—						
Current value	.85	.96	.73	1.44	1.24	1.11
Average acquisition value	.47	.59	.50	.99	.67	.68
Yield per acre (bushels)	47.0–51.0	34.6–38.6	37.0–41.0	50.0–54.0	48.0–52.0	39.5–43.5

[1] Includes herbicides, insecticides, and rodenticide materials not otherwise included under custom operations.
[2] Includes custom application of crop chemicals, and custom harvesting and hauling.
[3] Irrigation water.
[4] Based on prevailing tenure arrangements in 1974, reflecting actual combinations of cash rent, net share rent, and owner-operator land allocations. Current 1975, preliminary 1976, and projected 1977 values of owned cropland are used.
[5] The details in footnote 4 above apply, with the exception that for owned land, the average value of cropland at time of acquisition is used.
[6] Midpoint of the range of planted acre yields was used to compute per unit costs.

Per acre costs decreased in all regions in 1976. Yields in 1976 declined considerably in the Northeast and Southwest regions, and to a lesser extent in the Northern Plains, pushing per unit costs to higher levels. National average yields per planted acre were down by 1.7 bushels resulting in an increase in costs per bushel from $1.72 to $1.79.

The 1977 per acre costs for the United States are expected to increase by approximately 4 percent, but with projected higher yields, costs per bushel are expected to remain about the same as in 1976.

Oats

Per bushel costs of raising oats increased considerably in 1976 because of a sharp reduction in yields (tables 16–18).[19] In the Lake

[19] Regions identified for production of oats are as follows: Northeast—New York and Pennsylvania; Lake States-Corn Belt—Illinois, Indiana, Iowa, Michigan, Minnesota, Ohio, and Wisconsin; and Northern Plains—Montana, Nebraska, North Dakota, and South Dakota.

States–Corn Belt region, where costs were consistently lower than in the other regions, per bushel costs rose from $1.05 in 1975 to $1.14 in 1976. The increase was due to a drop in yields of approximately 3.5 bushels per planted acre. Per acre costs were less than 1 percent higher than a year earlier.

Since generally only small amounts of fertilizer are used on oats, the reduction in fertilizer prices changed costs very little. Per acre costs would have been higher in 1976 except that only 63 percent of the planted acreage of oats in South Dakota were harvested. (This reduction in harvesting costs is reflected in the estimates shown here.)

The biggest change from 1975 to 1976 was the increase in per bushel costs in the Northern Plains: costs rose from $1.16 to $1.64 because of a yield reduction of 12.8 bushels per planted acre. This, along with lower yields in other areas, substantially increased costs in 1976.

TABLE 16.—OATS: PRODUCTION COSTS PER PLANTED ACRE AND PER BUSHEL, BY COST ITEM, SPECIFIED REGIONS, 1975

Cost item	Northeast	Lake States and Corn Belt	Northern Plains	United States
COSTS PER ACRE				
Variable	$51.95	$26.39	$22.48	$26.44
Seed	3.86	3.10	3.41	3.28
Fertilizer	21.29	6.62	6.38	7.42
Lime		1.07		.59
Chemicals [1]	.43	.23	.39	.31
Custom operations [2]	8.25	2.48	.69	2.14
All labor	8.71	5.50	4.37	5.26
Fuel and lubrication	4.12	3.25	3.07	3.23
Repairs	4.06	3.56	3.44	3.54
Miscellaneous			.24	.09
Interest	1.23	.58	.49	.58
Machinery ownership cost	14.49	13.69	14.50	14.05
Replacement	9.31	8.69	9.15	8.91
Interest	4.15	3.98	4.25	4.10
Taxes and insurance	1.03	1.02	1.10	1.04
General farm overhead	5.55	4.92	2.84	4.15
Management	4.89	4.70	3.64	4.30
Total, excluding land	76.88	49.70	43.46	48.94
Land allocation:				
Composite with—				
Current value [3]	34.18	65.38	22.84	46.68
Average acquisition value [4]	20.17	34.06	14.18	25.20
COST PER BUSHEL				
Variable	1.07	.56	.60	.61
Machinery ownership	.30	.29	.38	.32
Farm overhead	.12	.10	.08	.10
Management	.10	.10	.10	.10
Total, excluding land	1.59	1.05	1.16	1.13
Land allocation:				
Composite with—				
Current value	.71	1.38	.61	1.07
Average acquisition value	.42	.72	.38	.58
Yield per acre (bushels)	48.2	47.3	37.7	43.6
Percent of U.S. production	5.9	52.5	29.4	87.8

[1] Includes herbicides, insecticides, and rodenticide materials not otherwise included under custom operations.
[2] Includes custom application of crop chemicals, and custom harvesting and hauling.
[3] Based on prevailing tenure arrangements in 1974, reflecting actual combinations of cash rent, net share rent, and owner-operator land allocations. Current 1975, preliminary 1976, and projected 1977 values of owned cropland are used.
[4] The details in footnote 3 above apply, with the exception that for owned land, the average value of cropland at time of acquisition is used.

TABLE 17.—OATS: PRELIMINARY PRODUCTION COSTS PER PLANTED ACRE AND PER BUSHEL, BY COST ITEM, SPECIFIED REGIONS, 1976

Cost Item	Northeast	Lake States and Corn Belt	Northern Plains	United States
COSTS PER ACRE				
Variable	$50.77	$25.67	$21.01	$25.39
Seed	3.61	3.00	3.42	3.20
Fertilizer	18.71	5.16	4.68	5.80
Lime		1.07		.59
Chemicals [1]	.46	.25	.42	.33
Custom operations [2]	9.19	2.67	.66	2.29
All labor	8.84	5.73	4.41	5.41
Fuel and lubrication	4.32	3.35	3.08	3.30
Repairs	4.56	3.91	3.67	3.85
Miscellaneous			.24	.09
Interest	1.08	.53	.43	.53
Machinery ownership cost	15.50	14.48	14.49	14.55
Replacement	10.46	9.62	9.57	9.65
Interest	3.96	3.82	3.85	3.84
Taxes and insurance	1.08	1.04	1.07	1.06
General farm overhead	5.98	5.30	3.06	4.47
Management	4.67	4.51	2.49	3.73
Total, excluding land	76.92	49.96	41.05	48.14
Land allocation:				
Composite with—				
Current value [3]	37.73	77.42	23.53	53.71
Average acquisition value [4]	22.97	41.88	13.62	29.18
COST PER BUSHEL				
Variable	1.14	.59	.84	.70
Machinery ownership	.35	.33	.58	.40
General farm overhead	.13	.12	.12	.12
Management	.10	.10	.10	.10
Total, excluding land	1.72	1.14	1.64	1.32
Land allocation:				
Composite with—				
Current value	.85	1.77	.94	1.47
Average acquisition value	.52	.96	.55	.80
Yield per acre (bushels)	44.5	43.8	24.9	36.5

[1] Includes herbicides, insecticides, and rodenticide materials not otherwise included under custom operations.
[2] Includes custom application of crop chemicals, and custom harvesting and hauling.
[3] Based on prevailing tenure arrangements in 1974, reflecting actual combinations of cash rent, net share rent, and owner-operator land allocations. Current 1975, preliminary 1976, and projected 1977 values of owned cropland are used.
[4] The details in footnote 3 above apply, with the exception that for owned land, the average value of cropland at time of acquisition is used.

TABLE 18.—OATS: PROJECTED PRODUCTION COSTS PER PLANTED ACRE AND PER BUSHEL, BY COST ITEM, SPECIFIED REGIONS, 1977

Cost item	Northeast	Lake States and Corn Belt	Northern Plains	United States
COSTS PER ACRE				
Variable	$52.42	$27.02	$22.49	$26.81
Seed	3.61	3.00	3.42	3.20
Fertilizer	18.71	5.16	4.68	5.80
Lime		1.07		.59
Chemicals [1]	.48	.27	.45	.35
Custom operations [2]	9.77	2.94	.82	2.54
All labor	9.33	6.17	4.88	5.86
Fuel and lubrication	4.55	3.61	3.44	3.60
Repairs	4.85	4.25	4.11	4.23
Miscellaneous			.24	.09
Interest	1.12	.55	.45	.55
Machinery ownership cost	16.49	15.69	16.61	16.10
Replacement	11.12	10.39	10.94	10.65
Interest	4.22	4.16	4.44	4.27
Taxes and insurance	1.15	1.14	1.23	1.18
General farm overhead	6.25	5.54	3.20	4.67
Management	4.48	4.38	3.52	4.05
Total, excluding land	79.64	52.63	45.82	51.63
Land allocation:				
Composite with—				
Current value [3]	41.49	84.78	27.39	59.93
Average acquisition value [4]	24.87	44.32	16.14	32.04
COST PER BUSHEL				
Variable	.94–1.09	.49– .56	.48 –.58	.51– .61
Machinery ownership	.29– .34	.28– .33	.36 –.43	.31– .36
Farm overhead	.11– .13	.10– .12	.07 –.08	.09– .11
Management [5]	.09	.08	.08	.08
Total, excluding land	1.43–1.65	.95–1.09	.99–1.17	.99–1.16
Land allocation: [5]				
Composite with—				
Current value	.80	1.64	.64	1.24
Average acquisition value	.48	.86	.38	.66
Yield per acre (bushels)	48.0–56.0	47.7–55.7	38.6–46.6	44.2–52.2

[1] Includes herbicides, insecticides, and rodenticide materials not otherwise included under custom operations.
[2] Includes custom application of crop chemicals, and custom harvesting and hauling.
[3] Based on prevailing tenure arrangements in 1974, reflecting actual combinations of cash rent, net share rent, and owner-operator land allocations. Current 1975, preliminary 1976, and projected 1977 values of owned cropland are used.
[4] The details in footnote 3 above apply, with the exception that for owned land, the average value of cropland at time of acquisition is used.
[5] Midpoint of the range of planted acre yields was used to compute per unit costs.

Per acre costs of producing oats in 1977 are projected to increase by 7 percent, but with projected increases in yields, per bushel costs are expected to decline to near 1975 levels.

Wheat

Costs of producing Durum, Spring, and White wheats are shown in tables 19–21. Durum wheat is raised primarily in North Dakota, South Dakota, Minnesota, and Montana.[20] Yields of Durum in 1976 were particularly discouraging in South Dakota, decreasing the national yield by 0.3 of a bushel. Production costs decreased by approximately $2.10 per acre. Reductions in costs of seed and fertilizers

[20] Recent acreage increases of Durum in Arizona and California are not reflected in these estimates.

were nearly offset by increases in costs of other production items. Machinery ownership costs increased approximately $1.30 per acre.

Because of an expected 28-percent decline in the price of seed, per acre production costs for the United States in 1977 will be only 2 percent higher than in 1976. Per bushel costs are expected to be about the same as in 1975 and 1976.

Other Spring wheat is raised in the same general areas as is Durum wheat. Despite lower yields in South Dakota, the national average yields of Spring wheat were actually higher in 1976 because of very good yields in North Dakota and Minnesota. Lower per acre costs and slightly higher yields resulted in a 16-cents-per-bushel decline in total costs per bushel.

TABLE 19.—DURUM, SPRING, AND WHITE WHEATS: PRODUCTION COSTS PER PLANTED ACRE AND PER BUSHEL, BY COST ITEM, SPECIFIED REGIONS, 1975

Cost item	All regions		
	Durum	Spring wheat	White wheats Pacific Northwest
COSTS PER ACRE			
Variable	$35.65	$35.61	$61.13
Seed	9.03	7.66	6.55
Fertilizer	5.75	8.26	22.71
Lime			.36
Chemicals [1]	2.24	2.04	4.24
Custom operations [2]	1.96	2.30	2.61
All labor	6.70	6.04	8.17
Fuel and lubrication	4.33	4.04	5.02
Repairs	4.37	4.24	5.57
Miscellaneous expense	.09		2.65
Interest	1.18	1.03	3.25
Machinery ownership cost	18.23	17.33	22.55
Replacement	11.32	10.84	13.71
Interest	5.50	5.17	7.22
Taxes and insurance	1.41	1.32	1.62
General farm overhead	5.28	4.99	6.28
Management	8.45	6.64	12.06
Total, excluding land	67.61	64.57	102.02
Land allocation:			
Composite with—			
Current value [3]	31.47	28.04	44.22
Average acquisition value [4]	22.14	18.35	32.70
COST PER BUSHEL			
Variable	1.40	1.47	1.32
Machinery ownership	.72	.72	.49
General farm overhead	.21	.21	.14
Management	.33	.27	.26
Total, excluding land	2.66	2.67	2.21
Land allocation:			
Composite with—			
Current value	1.24	1.16	.96
Average acquisition value	.87	.76	.71
Yield per acre (bushels)	25.4	24.2	46.2
Percent of U.S. production	99.0	87.3	84.9

[1] Includes herbicides, insecticides, and rodenticide materials not otherwise included under custom operations.
[2] Includes custom application of crop chemicals and custom harvesting and hauling.
[3] Based on prevailing tenure arrangements in 1974, reflecting actual combinations of cash rent, net share rent, and owner-operator land allocations. Current 1975, preliminary 1976, and projected 1977 values of owned cropland are used.
[4] The details in footnote 3 above apply, with the exception that for owned land, the average value of cropland at time of acquisition is used.

TABLE 20.—DURUM, SPRING, AND WHITE WHEATS: PRELIMINARY PRODUCTION COSTS PER PLANTED ACRE AND PER BUSHEL, BY COST ITEM, SPECIFIED REGIONS, 1976

Cost item	All regions		
	Durum	Spring wheat	White wheats Pacific Northwest
COSTS PER ACRE			
Variable	$33.53	$33.42	$55.78
Seed	6.73	6.86	5.73
Fertilizer	4.12	6.27	17.17
Lime			.37
Chemicals [1]	2.43	2.19	4.62
Custom operations [2]	2.20	2.29	2.89
All labor	7.38	6.25	8.40
Fuel and lubrication	4.61	4.09	5.22
Repairs	4.91	4.58	6.14
Miscellaneous expense	.09		2.72
Interest	1.06	.89	2.52
Machinery ownership cost	19.52	18.02	23.76
Replacement	12.67	11.81	15.25
Interest	5.36	4.87	6.82
Taxes and insurance	1.49	1.34	1.69
General farm overhead	5.68	5.37	6.77
Management	4.88	5.29	9.09
Total, excluding land	63.61	62.10	95.40
Land allocation:			
Composite with—			
Current value [3]	29.28	30.33	40.80
Average acquisition value [4]	19.50	20.01	29.15
COST PER BUSHEL			
Variable	1.33	1.35	1.29
Machinery ownership	.78	.73	.55
General farm overhead	.23	.22	.15
Management	.19	.21	.21
Total, excluding land	2.53	2.51	2.20
Land allocation:			
Composite with—			
Current value	1.17	1.22	.94
Average acquisition value	.78	.81	.67
Yield per acre (bushels)	25.1	24.8	43.3

[1] Includes herbicides, insecticides, and rodenticide materials not otherwise included under custom operations.
[2] Includes custom application of crop chemicals and custom harvesting and hauling.
[3] Based on prevailing tenure arrangements in 1974, reflecting actual combinations of cash rent, net share rent, and owner-operator land allocations. Current 1975, preliminary 1976, and projected 1977 values of owned cropland are used.
[4] The details in footnote 3 above apply, with the exception that for owned land, the average value of cropland at time of acquisition is used.

TABLE 21.—DURUM, SPRING, AND WHITE WHEATS: PROJECTED PRODUCTION COSTS PER PLANTED ACRE AND PER BUSHEL, BY COST ITEM, SPECIFIED REGIONS, 1977

Cost item	All regions		
	Durum	Spring wheat	White wheats Pacific Northwest
COSTS PER ACRE			
Variable	$32.98	$33.25	$56.58
Seed	4.84	5.15	5.04
Fertilizer	4.12	6.28	17.17
Lime			.37
Chemicals [1]	2.55	2.29	4.83
Custom operations [2]	2.34	2.69	3.07
All labor	7.82	6.65	8.88
Fuel and lubrication	4.88	4.35	5.45
Repairs	5.24	4.92	6.48
Miscellaneous	.09		2.72
Interest	1.10	.92	2.57
Machinery ownership cost	20.89	19.39	25.15
Replacement	13.56	12.68	16.16
Interest	5.75	5.26	7.19
Taxes and insurance	1.58	1.45	1.80
General farm overhead	5.94	5.61	7.07
Management	4.73	5.38	8.98
Total, excluding land	64.54	63.63	97.78
Land allocation:			
Composite with—			
Current value [3]	30.55	32.04	42.09
Average acquisition value [4]	19.94	20.85	29.44
COST PER BUSHEL			
Variable	1.19–1.40	1.18–1.37	1.20–1.32
Machinery ownership	.76– .89	.69– .80	.54– .59
General farm overhead	.22– .25	.20– .23	.15– .16
Management [5]	.18	.21	.20
Total, excluding land	2.35–2.72	2.28–2.61	2.09–2.27
Land allocation: [5]			
Composite with—			
Current value	1.19	1.22	.94
Average acquisition value	.78	.80	.65
Yield per acre (bushels)	23.6–27.6	24.2–28.2	43.0–47.0

[1] Includes herbicides, insecticides, and rodenticide materials not otherwise included under custom operations.
[2] Includes custom application of crop chemicals and custom harvesting and hauling.
[3] Based on prevailing tenure arrangements in 1974, reflecting actual combinations of cash rent, net share rent, and owner-operator land allocations. Current 1975, preliminary 1976, and projected 1977 values of owned cropland are used.
[4] The details in footnote 3 above apply, with the exception that for owned land, the average value of cropland at time of acquisition is used.
[5] Midpoint of the range of planted acre yields was used to compute per unit costs.

TABLE 22.—SOFT RED WINTER WHEAT: PRODUCT COSTS PER PLANTED ACRE AND PER BUSHEL, BY COST ITEM, SPECIFIED REGIONS, 1975

Cost item	Northeast	Lake States and Corn Belt	Southeast	United States
COSTS PER ACRE				
Variable	$63.58	$54.95	$66.05	$56.82
Seed	11.03	10.66	9.83	10.58
Fertilizer	26.60	26.61	30.58	27.10
Lime		.62	2.85	.86
Chemicals [1]	.05	.40	.44	.38
Custom operations [2]	5.58	1.67	2.54	2.00
All labor	8.33	5.30	7.04	5.70
Fuel and lubrication	4.36	3.35	4.82	3.59
Repairs	4.58	3.08	4.75	3.37
Miscellaneous				
Interest	3.05	3.26	3.20	3.24
Machinery ownership cost	15.75	14.98	15.84	15.13
Replacement	10.17	9.53	9.78	9.60
Interest	4.47	4.35	4.82	4.42
Taxes and insurance	1.11	1.10	1.24	1.11
General farm overhead	5.71	5.30	4.21	5.19
Management	6.82	8.20	5.18	7.75
Total, excluding land	91.86	83.43	91.28	84.89
Land allocation:				
Composite with—				
Current value [3]	39.76	51.93	43.24	50.15
Average acquisition value [4]	18.44	35.05	22.58	32.41
COST PER BUSHEL				
Variable	1.89	1.47	2.57	1.59
Machinery ownership	.47	.40	.61	.42
General farm overhead	.17	.14	.16	.15
Management	.20	.22	.20	.22
Total, excluding land	2.73	2.23	3.54	2.38
Land allocation:				
Composite with—				
Current value	1.18	1.39	1.68	1.40
Average acquisition value	.55	.94	.88	.91
Yield per acre (bushels)	33.6	37.3	25.8	35.7
Percent of U.S. production	5.4	84.7	8.9	99.0

[1] Includes herbicides, insecticides, and rodenticide materials not otherwise included under custom operations.
[2] Includes custom application of crop chemicals and custom harvesting and hauling.
[3] Based on prevailing tenure arrangements in 1974, reflecting actual combinations of cash rent, net share rent, and owner-operator land allocations. Current 1975, preliminary 1976, and projected 1977 values of owned cropland are used.
[4] The details in footnote 3 above apply, with the exception that for owned land, the average value of cropland at time of acquisition is used.

TABLE 23.—SOFT RED WINTER WHEAT: PRELIMINARY PRODUCTION COSTS PER PLANTED ACRE AND PER BUSHEL, BY COST ITEM, SPECIFIED REGIONS, 1976

Cost item	Northeast	Lake States and Corn Belt	Southeast	United States
COSTS PER ACRE				
Variable	$59.34	$46.75	$59.43	$48.84
Seed	9.45	9.06	8.16	8.97
Fertilizer	22.96	19.82	24.29	20.50
Lime		.61	2.75	.82
Chemicals [1]	.05	.45	.46	.43
Custom operations [2]	6.24	1.86	2.82	2.19
All labor	8.44	5.52	8.13	5.97
Fuel and lubrication	4.55	3.47	4.97	3.70
Repairs	5.15	3.45	5.34	3.75
Miscellaneous				
Interest	2.50	2.51	2.51	2.51
Machinery ownership cost	16.85	16.07	16.85	16.20
Replacement	11.42	10.69	10.98	10.76
Interest	4.26	4.23	4.57	4.27
Taxes and insurance	1.17	1.15	1.30	1.17
General farm overhead	6.15	5.70	4.54	5.60
Management	5.55	6.69	4.67	6.43
Total, excluding land	87.89	75.21	85.49	77.07
Land allocation:				
Composite with—				
Current value [3]	41.53	53.81	49.36	52.56
Average acquisition value [4]	20.44	35.35	25.71	33.37
COST PER BUSHEL				
Variable	1.87	1.34	2.23	1.44
Machinery ownership	.53	.46	.63	.48
General farm overhead	.19	.16	.17	.16
Management	.18	.19	.17	.19
Total, excluding land	2.77	2.15	3.20	2.27
Land allocation:				
Composite with—				
Current value	1.31	1.54	1.85	1.55
Average acquisition value	.64	1.01	.96	.98
Yield per acre (bushels)	31.7	35.0	26.7	34.0

[1] Includes herbicides, insecticides, and rodenticide materials not otherwise included under custom operations.
[2] Includes custom application of crop chemicals and custom harvesting and hauling.
[3] Based on prevailing tenure arrangements in 1974, reflecting actual combinations of cash rent, net share rent, and owner-operator land allocations. Current 1975, preliminary 1976, and projected 1977 values of owned cropland are used.
[4] The details in footnote 3 above apply, with the exception that for owned land, the average value of cropland at time of acquisition is used.

TABLE 24.—SOFT RED WINTER WHEAT: PROJECTED PRODUCTION COSTS PER PLANTED ACRE AND PER BUSHEL, BY COST ITEM, SPECIFIED REGIONS, 1977

Cost item	Northeast	Lake States and Corn Belt	Southeast	United States
COSTS PER ACRE				
Variable	$60.05	$46.91	$60.08	$49.08
Seed	8.69	8.34	7.50	8.25
Fertilizer	22.96	19.82	24.29	20.50
Lime		.61	2.75	.82
Chemicals [1]	.05	.47	.48	.45
Custom operations [2]	6.63	1.97	2.99	2.32
All labor	8.91	5.83	8.60	6.31
Fuel and lubrication	4.79	3.66	5.24	3.90
Repairs	5.48	3.67	5.68	3.99
Miscellaneous				
Interest	2.54	2.54	2.55	2.54
Machinery ownership cost	17.95	17.12	17.94	17.26
Replacement	12.15	11.37	11.68	11.45
Interest	4.55	4.52	4.87	4.56
Taxes and insurance	1.25	1.23	1.39	1.25
General farm overhead	6.42	5.96	4.74	5.84
Management	5.41	6.48	4.56	6.21
Total, excluding land	89.83	76.47	87.32	78.39
Land allocation:				
Composite with—				
Current value [3]	44.02	55.46	51.93	54.36
Average acquisition value [4]	21.31	35.47	26.39	33.59
COST PER BUSHEL				
Variable	1.74–1.97	1.25–1.39	2.04–2.37	1.35–1.51
Machinery ownership	.52–.59	.45–.51	.61–.70	.47–.53
General farm overhead	.19–.21	.16–.18	.16–.19	.16–.18
Management [5]	.17	.18	.17	.18
Total, excluding land	2.62–2.94	2.04–2.26	2.98–3.43	2.16–2.40
Land allocation: [5]				
Composite with—				
Current value	1.35	1.56	1.90	1.58
Average acquisition value	.66	1.00	.96	.97
Yield per acre (bushels)	30.5–34.5	33.6–37.6	25.4–29.4	32.5–36.5

[1] Includes herbicides, insecticides, and rodenticide materials not otherwise included under custom operations.
[2] Includes custom application of crop chemicals and custom harvesting and hauling.
[3] Based on prevailing tenure arrangements in 1974, reflecting actual combinations of cash rent, net share rent, and owner-operator land allocations. Current 1975, preliminary 1976, and projected 1977 values of owned cropland are used.
[4] The details in footnote 3 above apply, with the exception that for owned land, the average value of cropland at time of acquisition is used.
[5] Midpoint of the range of planted acre yields was used to compute per unit costs.

TABLE 25.—HARD RED WINTER WHEAT AND ALL WHEAT: PRODUCTION COSTS PER PLANTED ACRE AND PER BUSHEL, BY COST ITEM, SPECIFIED REGIONS, 1975

Cost item	Central Plains	Southern Plains	Northern Plains	Southwest	United States	All wheat total
COSTS PER ACRE						
Variable	$32.90	$31.92	$27.48	$91.45	$34.12	$39.50
Seed	4.11	4.76	4.59	12.37	4.69	6.44
Fertilizer	6.39	7.68	4.01	32.23	7.57	11.30
Lime	.01					.14
Chemicals [1]	.42	.27	1.44	3.51	.57	1.19
Custom operations [2]	4.51	3.73	3.52	12.01	4.40	3.40
All labor	7.34	6.40	5.27	14.98	7.07	6.76
Fuel and lubrication	4.34	3.88	3.48	5.76	4.14	4.12
Repairs	4.28	3.79	3.85	5.76	4.11	4.16
Miscellaneous expense				[3] 1.65	.06	.23
Interest	1.50	1.41	1.32	3.18	1.51	1.76
Machinery ownership cost	16.71	15.22	15.95	18.17	16.14	16.83
Replacement	10.25	9.60	9.72	11.62	10.01	10.46
Interest	5.11	4.37	4.97	5.22	4.83	5.06
Taxes and insurance	1.35	1.25	1.26	1.33	1.30	1.31
General farm overhead	5.30	4.29	5.11	11.17	5.09	5.18
Management	6.20	4.87	7.08	13.73	6.07	6.98
Total, excluding land	61.11	56.30	55.62	134.52	61.42	68.49
Land allocation:						
Composite with—						
Current value [4]	28.13	26.34	26.59	71.48	28.83	33.13
Average acquisition value [5]	21.39	16.81	17.58	55.19	20.51	22.99
COST PER BUSHEL [6]						
Variable	1.21	1.42	.88	1.49	1.26	1.36
Machinery	.62	.67	.51	.30	.59	.58
General farm overhead	.20	.19	.16	.18	.19	.18
Management	.23	.21	.23	.22	.22	.24
Total, excluding land	2.26	2.49	1.78	2.19	2.26	2.36
Land allocation:						
Composite with—						
Current value	1.04	1.16	.85	1.16	1.06	1.14
Average acquisition value	.78	.71	.56	.90	.74	.79
Yield per acre (bushels)	26.5	21.0	31.3	61.5	26.2	28.5
Percent of U.S. production	49.2	28.6	10.9	8.1	96.8	95.7

[1] Includes herbicides, insecticides, and rodenticide materials not otherwise included under custom operations.
[2] Includes custom application of crop chemicals and custom harvesting and hauling.
[3] Irrigation water.
[4] Based on prevailing tenure arrangements in 1974, reflecting actual combinations of cash rent, net share rent, and owner-operator land allocations. Current 1975, preliminary 1976, and projected 1977 values of owned cropland are used.
[5] The details in footnote 4 above apply, with the exception that for owned land the average value of cropland at time of acquisition is used.
[6] Value of pasture removed. Composite land allocation with current value of land used to allocate pasture.

TABLE 26.—HARD RED WINTER WHEAT AND ALL WHEAT: PRELIMINARY PRODUCTION COSTS PER PLANTED ACRE AND PER BUSHEL, BY COST ITEM, SPECIFIED REGIONS, 1976

Cost item	Central Plains	Southern Plains	Northern Plains	Southwest	United States	All wheat total
COSTS PER ACRE						
Variable	$31.46	$29.69	$27.20	$83.27	$31.92	$36.20
Seed	3.85	4.64	4.44	11.43	4.42	5.75
Fertilizer	4.66	5.88	3.07	24.10	5.53	8.35
Lime	.01					.13
Chemicals [1]	.46	.29	1.56	3.97	.60	1.32
Custom operations [2]	4.36	3.28	3.92	12.13	4.15	3.30
All labor	7.65	6.37	5.15	15.52	7.18	6.92
Fuel and lubrication	4.49	3.93	3.60	5.72	4.24	4.23
Repairs	4.70	4.08	4.32	6.38	4.48	4.55
Miscellaneous expense				[3] 1.45	.04	.22
Interest	1.28	1.22	1.14	2.57	1.28	1.43
Machinery ownership cost	17.28	15.23	16.93	18.73	16.54	17.50
Replacement	11.17	10.08	10.93	12.56	10.79	11.43
Interest	4.74	3.93	4.67	4.79	4.44	4.73
Taxes and insurance	1.37	1.22	1.33	1.38	1.31	1.34
General farm overhead	5.71	4.62	5.51	12.04	5.48	5.58
Management	4.53	3.49	5.30	10.85	4.42	5.21
Total, excluding land	58.98	53.03	54.94	124.89	58.36	64.49
Land allocation:						
Composite with—						
Current value [4]	25.81	25.97	27.32	68.42	27.24	33.02
Average acquisition value [5]	20.05	15.90	17.37	54.68	19.29	22.75
COST PER BUSHEL [6]						
Variable	1.30	1.57	.94	1.69	1.35	1.35
Machinery ownership	.71	.80	.58	.38	.70	.66
General farm overhead	.23	.24	.19	.24	.23	.21
Management	.19	.18	.18	.22	.19	.20
Total, excluding land	2.43	2.79	1.89	2.53	2.47	2.42
Land allocation:						
Composite with—						
Current value	1.06	1.37	.94	1.39	1.15	1.24
Average acquisition value	.82	.79	.60	1.11	.80	.85
Yield per acre (bushels)	23.9	17.5	29.0	49.2	22.8	26.2

[1] Includes herbicides, insecticides, and rodenticide materials not otherwise included under custom operations.
[2] Includes custom application of crop chemicals and custom harvesting and hauling.
[3] Irrigation water.
[4] Based on prevailing tenure arrangements in 1974, reflecting actual combinations of cash rent, net share rent, and owner-operator land allocations. Current 1975, preliminary 1976, and projected 1977 values of owned cropland are used.
[5] The details in footnote 4 above apply, with the exception that for owned land, the average value of cropland at time of acquisition is used.
[6] Value of pasture removed. Composite land allocation with current value of land used to allocate pasture.

TABLE 27.—HARD RED WINTER WHEAT AND ALL WHEAT: PROJECTED PRODUCTION COSTS PER PLANTED ACRE AND PER BUSHEL, BY COST ITEM, SPECIFIED REGIONS, 1977

Cost item	Central Plains	Southern Plains	Northern Plains	Southwest	United States	All wheat total
COSTS PER ACRE						
Variable	$32.89	$31.40	$27.44	$86.50	$33.39	$37.00
Seed	3.08	3.94	3.55	10.74	3.66	4.73
Fertilizer	4.66	5.88	3.07	24.10	5.53	8.35
Lime	.01					.13
Chemicals [1]	.49	.30	1.63	4.16	.63	1.38
Custom operations [2]	5.31	4.46	4.17	13.98	5.15	3.95
All labor	8.16	6.90	5.45	16.46	7.69	7.38
Fuel and lubrication	4.79	4.18	3.79	6.09	4.51	4.49
Repairs	5.06	4.49	4.60	6.88	4.86	4.90
Miscellaneous expense				[3] 1.45	.04	.22
Interest	1.33	1.25	1.18	2.64	1.32	1.47
Machinery ownership cost	18.81	17.02	18.02	21.08	18.14	18.95
Replacement	12.15	11.24	11.63	14.15	11.83	12.37
Interest	5.17	4.42	4.98	5.38	4.88	5.14
Taxes and insurance	1.49	1.36	1.41	1.55	1.43	1.44
General farm overhead	5.96	4.83	5.75	12.57	5.73	5.83
Management	4.79	3.98	4.74	11.76	4.69	5.33
Total, excluding land	62.45	57.23	55.95	131.91	61.95	67.11
Land allocation:						
Composite with—						
Current value [4]	27.37	28.03	27.88	73.07	28.99	34.12
Average acquisition value [5]	21.06	17.17	17.12	57.97	20.34	22.97
COST PER BUSHEL [6]						
Variable	1.13–1.32	1.27–1.54	.97–1.04	1.49–1.60	1.17–1.37	1.20–1.39
Machinery ownership	.65–.75	.69–.83	.64–.68	.36–.39	.64–.75	.62–.71
General farm overhead	.21–.24	.19–.24	.20–.22	.22–.23	.20–.24	.19–.22
Management [7]	.18	.19	.17	.21	.18	.19
Total, excluding land	2.17–2.49	2.23–2.79	1.98–2.11	2.28–2.43	2.18–2.54	2.20–2.51
Land allocation: [6 7]						
Composite with—						
Current value	1.02	1.25	1.02	1.30	1.10	1.20
Average acquisition value	.78	.73	.63	1.03	.76	.80
Yield per acre (bushels)	24.5–28.5	19.0–23.0	26.3–28.3	54.2–58.2	23.5–27.5	26.2–30.2

[1] Includes herbicides, insecticides, and rodenticide materials not otherwise included under custom operations.
[2] Includes custom application of crop chemicals and custom harvesting and hauling.
[3] Irrigation water.
[4] Based on prevailing tenure arrangements in 1974, reflecting actual combinations of cash rent, net share rent, and owner-operator land allocations. Current 1975, preliminary 1976, and projected 1977 values of owned cropland are used.
[5] The details in footnote 4 above apply, with the exception that for owned land, the average value of cropland at time of acquisition is used.
[6] Value of pasture removed. Composite land allocation with current land value used to allocate pasture.
[7] Midpoint of the range acre yields was used to compute per unit costs.

Production costs per acre for other Spring wheat are expected to increase slightly in 1977. Per bushel costs, depending upon yields obtained, could be less than in 1976.

White wheat is raised primarily in Idaho, Oregon, and Washington. Yields of White wheat are consistently higher than for other types of wheat. In 1976, this region had lower production costs and also lower yields, causing the cost per bushel to remain about the same as in 1975. In 1977, per acre costs are expected to increase, but with the projected slightly higher yields, costs per bushel should remain about the same as in 1976.

Soft Red Winter wheat is raised primarily in the eastern half of the United States (tables 22–24).[21] The Lake States-Corn Belt region, the predominant area of production of Soft Red Winter wheat, had the lowest per acre costs, highest yields, and hence, lowest per bushel costs of all the regions.[22] Per acre costs in the Northeast and Southeast regions are about the same and tend to run approximately $10 to $15 per acre higher than in the Lake States-Corn Belt. The Northeast, having yields slightly lower than the Lake States, shows medium level per bushel costs, whereas the Southeast, because of lower yields, has consistently the highest per bushel costs.

From 1975 to 1976, the national per acre cost of raising Soft Red Winter wheat decreased by nearly $8. Some of this reduction was due to the drop in prices of seed, but most was due to lower fertilizer prices. These cost decreases were partially offset by cost increases for other production items. Thus, even though U.S. yields dropped by 1.7 bushels per planted acre, the costs per bushel were 9 cents lower in 1976.

The U.S. per acre cost of producing Soft Red Winter wheat is expected to increase by approximately 2 percent in 1977. Yields in 1977 are not expected to be as high as in 1975 and only slightly above 1976 levels. Hence, the per bushel cost in 1977 is expected to be about the same as in 1976.

Hard Red Winter wheat is raised throughout the Great Plains from Montana to Texas and in Arizona and California (tables 25–27).[23] Pasturing of Winter wheat is a common practice in parts of Texas and Oklahoma, and some acreage is also pastured in Kansas and Colorado. The value of this pasture has been estimated at $10 per animal unit month (AUM).

Per acre production costs are comparable in the three plains regions. The bulk of the production in all three regions is under dry land conditions. Yields, however, tend to be slightly higher in the Northern Plains, resulting in lower average per bushel costs. In contrast, much of the production in the Southwest tends to be under irrigation; hence yields are consistently higher but, of course, so are production costs.

In all production regions, the yield of Hard Red Winter wheat per planted acre was considerably lower in 1976 than in 1975. Even though production costs per acre were slightly lower, costs per bushel were thus higher in 1976. The national average cost increased from $2.22 per bushel in 1975 to $2.42 in 1976 (after the value of Winter wheat pasture is deducted).

The U.S. per acre cost of producing Hard Red Winter wheat is expected to increase by about 6 percent in 1977, but the per bushel cost will be less than in 1976 if the projected yield materializes.

For all wheat, per acre costs declined by $4 in 1976 because of lower costs of seed and fertilizer. However, the lower yields caused

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[21] States included in the regional identification of Soft Red Winter wheat are: Northeast—New York and Pennsylvania; Lake States-Corn Belt—Illinois, Indiana, Michigan, Missouri, and Ohio; and Southeast—Kentucky, North Carolina, and Tennessee.

[22] A significant proportion of the wheat raised in Michigan and New York is White wheat. However, data are not available to estimate production costs separately for these two types of wheat. It is reasonable to assume that costs of production of the two types of wheat are similar.

[23] Regional estimates for Hard Red Winter wheat costs are presented for the Central Plains—Colorado, Kansas, Nebraska, and South Dakota; Southern Plains—New Mexico, Oklahoma, and Texas; Northern Plains—Idaho, Montana, and Wyoming; and the Southwest—Arizona and California.

costs per bushel to increase from $2.34 to $2.40. The 1977 per acre costs are expected to increase about 4 percent over 1976; but with projected increases in yields, per bushel costs should decline.

Soybeans

The Lake States-Corn Belt region has the highest yields and the lowest per bushel costs of any production region (tables 28–30).[24] Per acre and per bushel costs are highest in the Southeast. In 1976, farmers in the Southeast region spent more for fertilizer ($6.41) and crop chemicals ($6.34) per acre than did farmers in the Corn Belt-Lake States, but yields still averaged 7.8 bushels lower.

TABLE 28.—SOYBEANS: PRODUCTION COSTS PER PLANTED ACRE AND PER BUSHEL, BY COST ITEM, SPECIFIED REGIONS, 1975

Cost item	Lake States and Corn Belt	Northern Plains	Southeast	Delta	United States
COSTS PER ACRE					
Variable	$41.55	$35.35	$66.00	$52.52	$47.54
Seed	8.09	7.04	7.81	9.88	8.32
Fertilizer	3.41	1.25	11.10	5.08	4.95
Lime	.47	.33	1.78	.59	.71
Chemicals [1]	8.68	6.72	14.55	11.82	10.19
Custom operations [2]	2.06	2.87	4.80	1.03	2.39
All labor	7.83	6.89	10.77	9.81	8.66
Fuel and lubrication	4.89	4.49	6.75	6.23	5.45
Repairs	4.75	4.49	6.37	6.21	5.30
Miscellaneous expense	.05	.33	----	----	.04
Interest	1.32	.94	2.07	1.87	1.53
Machinery ownership cost	19.94	18.45	21.97	24.99	21.16
Replacement	12.62	11.53	13.72	16.16	13.42
Interest	5.85	5.45	6.60	7.10	6.19
Taxes and insurance	1.47	1.47	1.65	1.73	1.55
General farm overhead	5.77	7.00	5.15	5.52	5.68
Management	10.21	7.45	7.42	7.31	9.04
Total, excluding land	77.47	68.25	100.54	90.34	83.42
Land allocation:					
Composite with—					
Current value [3]	74.97	44.63	38.33	36.72	60.84
Average acquisition value [4]	53.71	33.80	24.28	22.76	41.58
COST PER BUSHEL					
Variable	1.32	1.49	2.84	2.30	1.70
Machinery ownership	.63	.78	.95	1.10	.75
Farm overhead	.18	.30	.22	.24	.20
Management	.32	.31	.32	32	.32
Total, excluding land	2.45	2.88	4.33	3.96	2.97
Land allocation:					
Composite with—					
Current value	2.38	1.88	1.65	1.61	2.17
Average acquisition value	1.70	1.43	1.05	1.00	1.48
Yield per acre (bushels)	31.52	23.7	23.2	22.8	28.03
Percent of U.S. production	64.1	4.2	14.1	14.8	97.2

[1] Includes herbicides, insecticides, and rodenticide materials not otherwise included under custom operations.
[2] Includes custom application of crop chemicals, and custom harvesting and hauling.
[3] Based on prevailing tenure arrangements in 1974, reflecting actual combinations of cash rent, net share rent, and owner-operator land allocations. Current 1975, preliminary 1976, and projected 1977 values of owned cropland are used.
[4] The details in footnote 3 above apply, with the exception that for owned land, the average value of cropland at time of acquisition is used.

[24] States included in the regional definitions are: Lake States-Corn Belt—Illinois, Indiana, Iowa, Michigan, Minnesota, Missouri, Ohio, and Wisconsin; Northern Plains—Kansas, Nebraska, and South Dakota; Southeast—Alabama, Georgia, Kentucky, North Carolina, South Carolina, Virginia, and Tennessee; Delta—Arkansas, Louisiana, and Mississippi.

TABLE 29.—SOYBEANS: PRELIMINARY PRODUCTION COSTS PER PLANTED ACRE AND PER BUSHEL, BY COST ITEM, SPECIFIED REGIONS, 1976

Cost item	Lake States and Corn Belt	Northern Plains	Southeast	Delta	United States
COSTS PER ACRE					
Variable	$41.21	$35.81	$65.61	$50.35	$46.90
Seed	6.40	5.74	6.12	6.04	6.25
Fertilizer	2.67	.92	9.08	4.12	3.97
Lime	.47	.33	1.78	.59	.71
Chemicals [1]	9.39	7.27	15.73	12.78	11.02
Custom operations [2]	2.30	3.19	5.35	1.15	2.66
All labor	8.22	7.34	11.59	10.40	9.17
Fuel and lubrication	5.17	4.78	7.00	6.66	5.75
Repairs	5.34	5.04	7.16	6.98	5.95
Miscellaneous expense	.05	.33	----------		.05
Interest	1.20	.87	1.80	1.63	1.37
Machinery ownership cost	21.43	19.72	23.32	26.89	22.70
Replacement	14.18	12.91	15.42	18.16	15.08
Interest	5.70	5.27	6.17	6.91	5.99
Taxes and insurance	1.55	1.54	1.73	1.82	1.63
General farm overhead	6.22	7.54	5.55	5.95	6.12
Management	13.44	9.49	9.87	9.47	11.90
Total, excluding land	82.30	72.56	104.35	92.66	87.62
Land allocation:					
Composite with—					
Current value [3]	94.84	55.46	45.74	40.72	73.93
Average acquisition value [4]	70.65	43.43	29.96	26.33	53.48
COST PER BUSHEL					
Variable	1.42	1.72	3.09	2.50	1.83
Machinery ownership	.74	.95	1.10	1.34	.89
Farm overhead	.21	.36	.26	.30	.24
Management	.46	.46	47	.47	.46
Total, excluding land	2.83	3.49	4.92	4.61	3.42
Land allocation:					
Composite with—					
Current value	3.27	2.67	2.16	2.03	2.89
Average acquisition value	2.44	2.09	1.41	1.31	2.09
Yield per acre (bushels)	29.0	20.8	21.2	20.1	25.6

[1] Includes herbicides, insecticides, and rodenticide materials not otherwise included under custom operations.
[2] Includes custom application of crop chemicals, and custom harvesting and hauling.
[3] Based on prevailing tenure arrangements in 1974, reflecting actual combinations of cash rent, net share rent, and owner-operator land allocations. Current 1975, preliminary 1976, and projected 1977 values of owned cropland are used.
[4] The details in footnote 3 above apply, with the exception that for owned land, the average value of cropland at time of acquisition is used.

TABLE 30.—SOYBEANS: PROJECTED PRODUCTION COSTS PER PLANTED ACRE AND PER BUSHEL, BY COST ITEM, SPECIFIED REGIONS, 1977

Cost item	Lake States and Corn Belt	Northern Plains	Southeast	Delta	United States
COSTS PER ACRE					
Variable	$42.93	$37.37	$68.27	$52.52	$48.85
Seed	6.40	5.74	6.12	6.04	6.25
Fertilizer	2.67	.92	9.08	4.12	3.97
Lime	.47	.33	1.78	.59	.71
Chemicals [1]	9.84	7.62	16.48	13.40	11.55
Custom operations [2]	2.44	3.40	5.69	1.23	2.83
All labor	8.68	7.75	12.26	11.00	9.69
Fuel and lubrication	5.45	5.03	7.38	7.02	6.06
Repairs	5.68	5.35	7.61	7.43	6.33
Miscellaneous expense	.05	.33	----	----	.04
Interest	1.25	.90	1.87	1.69	1.42
Machinery ownership cost	22.82	20.98	24.84	28.63	24.17
Replacement	15.09	13.72	16.40	19.31	16.04
Interest	6.08	5.62	6.59	7.37	6.39
Taxes and insurance	1.65	1.64	1.85	1.95	1.74
General farm overhead	6.50	7.88	5.80	6.21	6.39
Management	12.56	10.20	9.35	9.35	11.23
Total, excluding land	84.81	76.43	108.26	96.71	90.64
Land allocation:					
Composite with—					
Current value [3]	96.39	60.08	49.26	43.67	74.21
Average acquisition value [4]	69.18	46.57	31.62	27.55	51.24
COST PER BUSHEL					
Variable	1.32–1.45	1.36–1.54	2.76–3.15	2.15–2.45	1.66–1.85
Machinery ownership	.70– .77	.77– .86	1.01–1.14	1.17–1.34	.82– .92
Farm overhead	.20– .22	.29– .32	.23– .27	.25– .29	.22– .24
Management [5]	.40	.40	.40	.41	.40
Total, excluding land	2.62–2.84	2.82–3.12	4.40–4.96	3.98–4.49	3.10–3.41
Land allocation: [5]					
Composite with—					
Current value	3.10	2.33	2.12	1.91	2.66
Average acquisition value	2.22	1.81	1.36	1.20	1.84
Yield per acre (bushels)	29.6–32.6	24.3–27.3	21.7–24.7	21.4–24.4	26.4–29.4

[1] Includes herbicides, insecticides, and rodenticide materials not otherwise included under custom operations.
[2] Includes custom application of crop chemicals, and custom harvesting and hauling.
[3] Based on prevailing tenure arrangements in 1974, reflecting actual combinations of cash rent, net share rent, an owner-operator land allocations. Current 1975, preliminary 1976, and projected 1977 values of owned cropland are used.
[4] The details in footnote 3 above apply, with the exception that for owned land, the average value of cropland at time of acquisition is used.
[5] Midpoint of the range of planted acre yields was used to compute per unit costs.

Since generally very little fertilizer is used on soybeans, the reduction in fertilizer prices had very little effect on per acre costs—not enough to offset the rising costs of other inputs. Thus, national per acre costs increased by about $4.20 in 1976 and, with yields down in all regions compared to 1975, per bushel costs increased by 45 cents.

Although per acre costs are expected to increase in 1977 by $3.02, the expected higher yields will offset this, resulting in per bushel costs below 1976 levels.

Flaxseed

Most U.S. flaxseed is produced in the Northern Plains States of North Dakota, South Dakota, and Minnesota (table 31). Yields of flaxseed are typically much lower than those of other grain crops and are highly variable. Yields in 1976 were considerably below 1975 levels. Although seed prices dropped, there was very little savings in fertilizer and per acre costs increased by 76 cents per acre. The higher per acre costs and lower yields caused per bushel costs to increase dramatically—from $5.48 in 1975 to $7.22 in 1976.

Per acre costs are expected to increase by 6 to 7 percent in 1977, but if yields again reach 1975 levels, per bushel costs should be considerably below 1976 costs.

TABLE 31.—FLAXSEED: PRODUCTION COSTS PER PLANTED ACRE AND PER BUSHEL, BY COST ITEM, 1975–77

Cost item	1975	1976 (preliminary)	1977 (projected)
COSTS PER ACRE			
Variable	$25.79	$25.55	$26.85
Seed	7.50	6.46	6.46
Fertilizer	1.43	1.02	1.02
Chemicals [1]	1.73	1.88	1.96
Custom operations [2]	1.51	1.45	1.79
All labor	5.40	5.87	6.21
Fuel and lubrication	3.59	3.82	4.04
Repairs	3.86	4.33	4.62
Miscellaneous expense	.05	.05	.05
Interest	.72	.67	.70
Machinery ownership cost	15.62	16.78	17.90
Replacement	9.82	11.01	11.73
Interest	4.62	4.52	4.84
Taxes and insurance	1.18	1.25	1.33
General farm overhead	4.27	4.60	4.80
Management	4.16	3.67	4.37
Total, excluding land	49.84	50.60	53.92
Land allocation:			
Composite with—			
Current value [3]	20.81	21.02	23.49
Average acquisition value [4]	15.00	14.43	16.01
COST PER BUSHEL			
Variable	2.83	3.65	2.53–3.12
Machinery ownership	1.72	2.40	1.69–2.08
Farm overhead	.47	.65	.45– .56
Management [5]	.46	.52	.46
Total, excluding land	5.48	7.22	5.13–6.22
Land allocation: [5]			
Composite with—			
Current value	2.29	3.00	2.45
Average acquisition value	1.65	2.06	1.67
Yield per acre (bushels)	9.1	7.0	8.6–10.6
Percent of U.S. production	95.9	----	----

[1] Includes herbicides, insecticides, and rodenticide materials not otherwise included under custom operations.
[2] Includes custom application of crop chemicals, and custom harvesting and hauling.
[3] Based on prevailing tenure arrangements in 1974, reflecting actual combinations of cash rent, net share rent, and owner-operator land allocations. Current 1975, preliminary 1976, and projected 1977 values of owned cropland are used.
[4] The details in footnote 3 above apply, with the exception that for owned land, the average value of cropland at time of acquisition is used.
[5] Midpoint of the range of planted acre yields was used to compute per unit costs.

Peanuts

Per acre costs and yields of peanuts are consistently highest in the Southeast and per unit costs are consistently lowest (tables 32–34). The Southern Plains consistently has lower per acre costs, but with the lower yields, the highest per unit costs.[25]

Per acre costs were generally higher and yields slightly lower in 1976, thus costs per pound were slightly higher in 1976.

TABLE 32.—PEANUTS: PRODUCTION COSTS PER PLANTED ACRE AND PER POUND, BY COST ITEM, SPECIFIED REGIONS, 1975

Cost item	Virginia and North Carolina	Southeast	Southern Plains	United States
COSTS PER ACRE				
Variable	$216.86	$220.74	$158.94	$202.29
Seed	38.30	39.11	30.82	36.58
Fertilizer	12.19	18.35	17.60	17.01
Lime and gypsum	20.82	15.81	.60	12.36
Chemicals [1]	80.05	68.44	45.92	64.09
Custom operations [2]	.25	14.69	14.32	11.96
All labor	21.60	19.36	15.15	18.56
Fuel and lubrication	10.57	10.28	10.58	10.42
Repairs	8.96	9.67	9.08	9.37
Drying	18.81	19.54	8.63	16.27
Miscellaneous expense			2.06	.59
Interest	5.31	5.49	4.18	5.08
Machinery ownership cost	26.64	30.36	33.76	30.67
Replacement	16.60	18.61	20.70	18.85
Interest	8.05	9.42	9.93	9.32
Taxes and insurance	1.99	2.33	3.13	2.50
General farm overhead	16.97	19.62	9.36	16.18
Management	33.84	42.37	21.35	34.75
Total, excluding land	294.31	313.09	223.41	283.89
Land allocation: [3]				
Composite with—				
Current value [4]	79.89	88.60	40.43	73.75
Average acquisition value [5]	55.59	73.72	22.18	56.18
COST PER POUND				
Variable	.089	.072	.098	.080
Machinery ownership	.011	.010	.021	.012
Farm overhead	.007	.006	.006	.006
Management	.014	.014	.013	.014
Total, excluding land	.121	.102	.138	.112
Land allocation: [3]				
Composite with—				
Current value	.033	.029	.025	.029
Average acquisition value	.023	.024	.014	.022
Yield per acre (pounds)	2,429	3,057	1,622	2,533
Percent of U.S. production	17.1	63.2	18.2	98.5

[1] Includes herbicides, insecticides, and rodenticide materials not otherwise included under custom operations.
[2] Includes custom application of crop chemicals, and custom harvesting and hauling.
[3] All land allocations include any payments reported in the 1974 survey for allotment rentals.
[4] Based on prevailing tenure arrangements in 1974, reflecting actual combinations of cash rent, net share rent, and owner-operator land allocations. Current 1975, preliminary 1976, and projected 1977 values of owned cropland are used.
[5] The details in footnote 4 above apply, with the exception that for owned land, the average value of cropland at time of acquisition is used.

[25] Regional descriptions for peanuts are: Virginia and North Carolina; Southeast—Alabama, Florida, and Geogia; Southern Plains—Oklahoma and Texas.

TABLE 33.—PEANUTS: PRELIMINARY PRODUCTION COSTS PER PLANTED ACRE AND PER POUND, BY COST ITEM, SPECIFIED REGIONS, 1976

Cost item	Virginia and North Carolina	Southeast	Southern Plains	United States
COSTS PER ACRE				
Variable	$219.85	$221.58	$164.02	$204.73
Seed	38.68	37.45	29.45	35.38
Fertilizer	11.20	14.95	14.29	14.08
Lime and gypsum	14.02	13.20	.48	9.70
Chemicals [1]	86.57	74.02	49.66	69.31
Custom operations [2]	.28	16.38	16.11	13.37
All labor	23.12	19.37	16.06	19.10
Fuel and lubrication	10.87	10.99	11.08	10.99
Repairs	10.07	10.87	10.06	10.49
Drying	20.49	19.66	10.95	17.31
Miscellaneous expense			2.06	.59
Interest	4.55	4.69	3.82	4.41
Machinery ownership cost	28.19	31.98	35.48	32.29
Replacement	18.66	20.91	22.64	21.00
Interest	7.44	8.61	9.61	8.68
Taxes and insurance	2.09	2.46	3.23	2.61
General farm overhead	18.28	21.14	10.08	17.43
Management	36.66	42.34	23.00	35.85
Total, excluding land	302.98	317.04	232.58	290.30
Land allocation: [3]				
Composite with—				
Current value [4]	87.17	91.54	44.15	77.65
Average acquisition value [5]	61.97	77.04	25.00	59.88
COST PER POUND				
Variable	.088	.076	.100	.083
Machinery ownership	.011	.011	.022	.013
Farm overhead	.007	.007	.006	.007
Management	.015	.015	.014	.014
Total, excluding land	.121	.109	.142	.117
Land allocation: [3]				
Composite with—				
Current value	.035	.031	.027	.031
Average acquisition value	.025	.026	.015	.024
Yield per acre (pounds)	2,506	2,908	1,643	2,474

[1] Includes herbicides, insecticides, and rodenticide materials not otherwise included under custom operations.
[2] Includes custom application of crop chemicals, and custom harvesting and hauling.
[3] All land allocations include any payments reported in the 1974 survey for allotment rentals.
[4] Based on prevailing tenure arrangements in 1974, reflecting actual combinations of cash rent, net share rent, and owner-operator land allocations. Current 1975, preliminary 1976, and projected 1977 values of owned cropland are used.
[5] The details in footnote 4 above apply, with the exception that for owned land, the average value of cropland at time of acquisition is used.

TABLE 34.—PEANUTS: PROJECTED PRODUCTION COSTS PER PLANTED ACRE AND PER POUND, BY COST ITEM, SPECIFIED REGIONS, 1977

Cost item	Virginia and North Carolina	Southeast	Southern Plains	United States
COSTS PER ACRE				
Variable	$231.51	$231.73	$171.37	$214.35
Seed	38.68	37.45	29.45	35.38
Fertilizer	11.20	14.95	14.29	14.08
Lime and gypsum	14.02	13.20	.48	9.70
Chemicals [1]	90.72	77.57	52.04	72.63
Custom operations [2]	.30	17.42	16.86	14.14
All labor	24.19	20.50	16.99	20.16
Fuel and lubrication	11.45	11.59	11.41	11.51
Repairs	10.71	11.56	10.63	11.14
Drying	25.56	22.66	13.23	20.48
Miscellaneous expense			2.06	.59
Interest	4.68	4.83	3.93	4.54
Machinery ownership cost	30.03	34.05	37.22	34.23
Replacement	19.85	22.25	23.77	22.25
Interest	7.94	9.18	10.09	9.22
Taxes and insurance	2.24	2.62	3.36	2.76
General farm overhead	19.09	22.08	10.53	18.20
Management	45.02	48.61	25.60	41.58
Total, excluding land	325.65	336.47	244.72	308.36
Land allocation: [3]				
Composite with—				
Current value [4]	100.87	100.48	47.29	85.81
Average acquisition value [5]	73.51	84.73	26.40	66.48
COST PER POUND				
Variable	.076–.081	.070–.075	.093–.104	.075–.081
Machinery ownership	.010–.011	.010–.011	.020–.023	.012–.013
Farm overhead	.006–.007	.007–.007	.005–.006	.007–.007
Management [6]	.015	.015	.015	.015
Total, excluding land	.107–.114	.102–.108	.133–.148	.109–.116
Land allocation: [3 6]				
Composite with—				
Current value	.034	.031	.027	.031
Average acquisition value	.025	.026	.015	.024
Yield per acre (pounds)	2,850–3,050	3,100–3,300	1,650–1,850	2,650–2,850

[1] Includes herbicides, insecticides, and rodenticide materials not otherwise included under custom operations.
[2] Includes custom application of crop chemicals, and custom harvesting and hauling.
[3] All land allocations include any payments reported in the 1974 survey for allotment rentals.
[4] Based on prevailing tenure arrangements in 1974, reflecting actual combinations of cash rent, net share rent, and owner-operator land allocations. Current 1975, preliminary 1976, and projected 1977 values of owned cropland are used.
[5] The details in footnote 4 above apply, with the exception that for owned land, the average value of cropland at time of acquisition is used.
[6] Midpoint of the range of planted acre yields was used to compute per unit costs.

Despite projected increases in costs per arce for 1977, costs per pound will probably decline slightly due to expected higher yields in all peanut producing areas.

Rice

The major rice growing States are Arkansas, Louisiana, Mississippi, California, and Texas. In tables 35–37, production costs are shown for four regional groupings: the non-Delta part of Arkansas; the Mississippi Delta which includes parts of Arkansas, Missouri, Mississippi, and Louisiana; the gulf coast, which includes southwest Louisiana and the gulf coast of Texas; and California.

Per acre costs are similar in all four production regions and differences in costs per hundredweight are largely due to differences in yields. California has the highest yields and lowest unit costs for all 3 of the years reported here. In 1975, the Mississippi Delta region had

the highest per hundredweight costs—$7.57. In 1976 and 1977, the gulf coast is expected to have the highest unit costs.

Most production costs increased in 1976 over 1975 levels. Seed prices dropped because of the decline in the price of rice. Decreases in seed and fertilizer costs offset the increased costs of other items.

Per acre costs declined slightly between 1975 and 1976 but are expected to increase almost 5 percent between 1976 and 1977. Yields dropped slightly in 1976 and are expected to increase slightly in 1977. Per unit costs are estimated to be about 1 percent lower in 1976 than in 1975, and projections for 1977 show an increase of about 2 percent over costs in 1976.

Costs in 1977 are expected to remain the same for seed and fertilizer, but increase for all other production items.

TABLE 35.—RICE: PRODUCTION COSTS PER PLANTED ACRE AND PER HUNDREDWEIGHT, BY COST ITEM, SPECIFIED REGIONS, 1975

Cost item	Arkansas (Non-Delta)	Mississippi Delta	Gulf Coast	California	United States
COSTS PER ACRE					
Variable	$206.44	$213.61	$224.39	$213.49	$216.28
Seed	26.14	32.40	29.00	24.55	28.00
Fertilizer	38.55	32.40	51.41	46.57	44.39
Chemicals[1]	18.45	19.05	20.19	10.23	17.72
Custom operations[2]	13.39	16.10	16.80	12.09	14.97
All labor	38.02	28.49	29.52	34.40	32.35
Fuel and lubrication	24.78	26.99	30.30	30.49	28.47
Repairs	16.21	18.93	12.57	18.35	15.54
Drying	20.80	24.90	22.49	22.26	22.41
Miscellaneous expense[3]	4.28	8.90	5.04	8.45	6.10
Interest	5.82	5.45	7.07	6.10	6.33
Machinery ownership cost	50.14	46.15	40.63	40.96	43.87
Replacement	33.28	30.77	27.13	26.27	29.04
Interest	13.86	12.64	11.62	11.76	12.35
Taxes and insurance	3.00	2.74	1.88	2.93	2.48
General farm overhead	17.13	15.34	16.18	24.61	17.90
Management	26.65	21.07	23.76	30.08	25.28
Total, excluding land	300.36	296.17	304.96	309.14	303.33
Land allocation:					
Composite with—					
Current value[4]	60.08	49.50	57.46	101.30	67.36
Average acquisition value[5]	43.26	31.58	44.74	83.81	51.78
COST PER HUNDREDWEIGHT					
Variable	4.36	5.46	5.39	3.73	4.75
Machinery ownership	1.06	1.18	.98	.71	.96
Farm overhead	.36	.39	.39	.43	.39
Management	.56	.54	.57	.52	.56
Total, excluding land	6.34	7.57	7.33	5.39	6.66
Land allocation:					
Composite with—					
Current value	1.27	1.27	1.38	1.77	1.48
Average acquisition value	.91	.81	1.08	1.46	1.14
Yield per acre (hundredweight)	47.30	39.10	41.60	57.30	45.54
Percent of U.S. production	25.4	13.4	37.7	23.5	100.0

[1] Includes herbicides, insecticides, and rodenticide materials not otherwise included under custom operations.
[2] Includes custom application of crop chemicals, and custom harvesting and hauling.
[3] Includes storage and transportation.
[4] Based on prevailing tenure arrangements in 1974, reflecting actual combinations of cash rent, net share rent, and owner-operator land allocations. Current 1975, preliminary 1976, and projected 1977 values of owned cropland are used.
[5] The details in footnote 4 above apply, with the exception that for owned land, the average value of cropland at time of acquisition is used.

TABLE 36.—RICE: PRELIMINARY PRODUCTION COSTS PER PLANTED ACRE AND PER HUNDREDWEIGHT, BY COST ITEM, SPECIFIED REGIONS, 1976

Cost item	Arkansas (Non-Delta)	Mississippi Delta	Gulf Coast	California	United States
COSTS PER ACRE					
Variable	$200.21	$205.45	$221.34	$209.15	$211.71
Seed	21.00	24.30	22.38	24.55	22.71
Fertilizer	25.88	24.00	39.45	34.46	32.88
Chemicals [1]	27.17	19.05	23.46	10.23	21.51
Custom operations [2]	15.62	16.10	17.85	12.09	16.10
All labor	37.51	32.62	31.89	35.43	33.93
Fuel and lubrication	25.10	27.31	31.22	30.99	29.07
Repairs	17.82	20.27	13.73	20.61	16.88
Drying	20.65	27.53	28.56	27.47	26.32
Miscellaneous expense [3]	4.22	9.60	6.57	8.13	6.74
Interest	5.24	4.67	6.23	5.19	5.57
Machinery ownership cost	54.04	49.60	43.49	44.24	47.14
Replacement	36.74	33.85	29.76	29.50	32.06
Interest	14.06	12.80	11.64	11.51	12.39
Taxes and insurance	3.24	2.95	2.09	3.23	2.69
General farm overhead	18.45	16.53	17.43	26.52	19.09
Management	21.48	18.57	19.79	23.68	20.60
Total, excluding land	294.18	290.15	302.05	303.59	298.54
Land allocation:					
Composite with—					
Current value [4]	63.31	53.56	57.61	108.31	70.43
Average acquisition value [5]	43.32	33.77	43.53	89.56	52.99
COST PER HUNDREDWEIGHT					
Variable	4.30	4.89	5.24	3.80	4.68
Machinery ownership	1.16	1.18	1.03	.80	1.04
Farm overhead	.40	.39	.41	.48	.42
Management	.46	.44	.47	.43	.45
Total, excluding land	6.32	6.90	7.15	5.51	6.59
Land allocation:					
Composite with—					
Current value	1.36	1.27	1.36	1.97	1.56
Average acquisition value	.93	.80	1.03	1.63	1.17
Yield per acre (hundredweight)	46.5	42.04	42.25	55.00	45.28

[1] Includes herbicides, insecticides, and rodenticide materials not otherwise included under custom operations.
[2] Includes custom application of crop chemicals, and custom harvesting and hauling.
[3] Includes storage and transportation.
[4] Based on prevailing tenure arrangements in 1974, reflecting actual combinations of cash rent, net share rent, and owner-operator land allocations. Current 1975, preliminary 1976, and projected 1977 values of owned cropland are used.
[5] The details in footnote 4 above apply, with the exception that for owned land, the average value of cropland at time of acquisition is used.

TABLE 37.—RICE: PROJECTED PRODUCTION COSTS PER PLANTED ACRE AND PER HUNDREDWEIGHT, BY COST ITEM, SPECIFIED REGIONS, 1977

Cost item	Arkansas (Non-Delta)	Mississippi Delta	Gulf Coast	California	United States
COSTS PER ACRE					
Variable	$209.95	$215.42	$231.43	$219.98	$221.80
Seed	21.00	24.30	22.38	24.55	22.71
Fertilizer	25.88	24.00	39.45	34.47	32.88
Chemicals [1]	28.47	19.96	24.59	10.72	22.54
Custom operations [2]	16.62	17.13	18.99	12.86	17.13
All labor	39.60	34.45	33.67	37.41	35.82
Fuel and lubrication	25.72	27.92	31.72	31.75	29.66
Repairs	18.76	21.05	14.47	21.93	17.77
Drying	24.12	31.98	33.09	32.49	30.66
Miscellaneous expense [3]	4.36	9.82	6.64	8.46	6.90
Interest	5.42	4.81	6.43	5.34	5.73
Machinery ownership cost	56.94	52.18	45.76	47.13	49.72
Replacement	38.76	35.65	31.32	31.39	33.82
Interest	14.77	13.43	12.21	12.29	13.04
Taxes and insurance	3.41	3.10	2.23	3.45	2.86
General farm overhead	19.26	17.26	18.20	27.69	19.94
Management	23.16	19.72	21.04	25.65	21.92
Total, excluding land	309.31	304.58	316.43	320.45	313.38
Land allocation:					
Composite with—					
Current value [4]	67.53	56.66	60.81	114.27	74.51
Average acquisition value [5]	46.24	35.46	44.80	94.37	55.24
COST PER HUNDREDWEIGHT					
Variable	4.22–4.49	4.84–5.19	5.16–5.54	3.73–3.93	4.63–4.94
Machinery ownership	1.14–1.22	1.17–1.25	1.02–1.09	.80–.84	1.03–1.11
Farm overhead	.39–.41	.39–.42	.41–.44	.47–.50	.42–.44
Management [6]	.48	.46	.49	.45	.47
Total, excluding land	6.23–6.60	6.86–7.32	7.08–7.56	5.45–5.72	6.55–6.96
Land allocation: [6]					
Composite with—					
Current value	1.40	1.32	1.40	1.99	1.61
Average acquisition value	.96	.82	1.06	1.64	1.19
Yield per acre (hundredweight)	46.8–49.8	41.5–44.5	41.8–44.8	55.9–58.9	44.9–47.9

[1] Includes herbicides, insecticides, and rodenticide materials not otherwise included under custom operations.
[2] Includes custom application of crop chemicals, and custom harvesting and hauling.
[3] Includes storage and transportation.
[4] Based on prevailing tenure arrangements in 1974, reflecting actual combinations of cash rent, net share rent, and owner-operator land allocations. Current 1975, preliminary 1976, and projected 1977 values of owned cropland are used.
[5] The details in footnote 4 above apply, with the exception that for owned land, the average value of cropland at time of acquisition is used.
[6] Midpoint of the range of planted acre yields was used to compute per unit costs.