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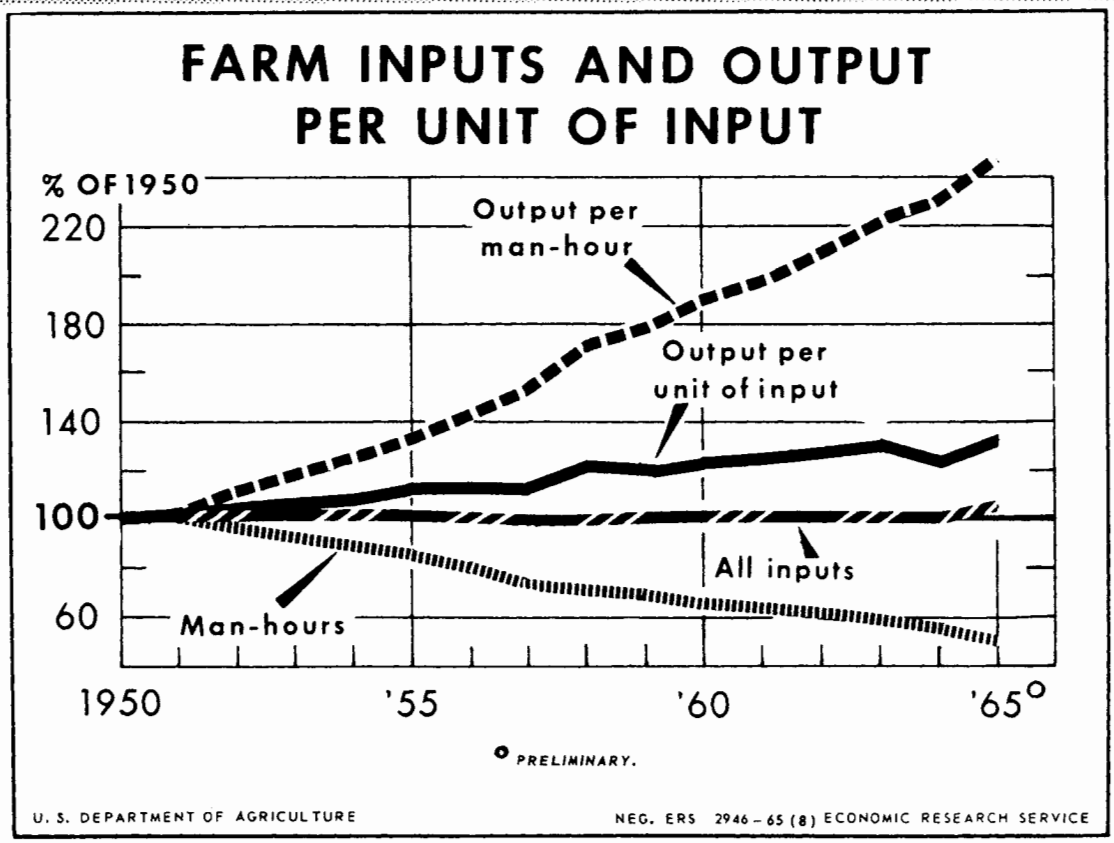
The FARM COST SITUATION



Farmers have rapidly adopted new technology, particularly practices and equipment to replace labor. Using advanced technology that emphasize relatively lower cost inputs, farmers have increased total output substantially, with only small changes in total inputs. Thus the productivity of labor and of total inputs has increased. A marked decrease in the total labor input has been offset by increases in other inputs--particularly in some of the purchased items such as fertilizer.

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Commodities and services used in production: Index numbers of cost rates and prices paid by farmers, United States, 1950-65

(1957-59=100)

Period	Commodities, interest, taxes, and wage rates	Commodities only	Feed	Livestock	Motor supplies	Motor vehicles	Farm machinery	Farm supplies	Building and fencing materials	Fertilizer	Seed	Wage rates
1950	89	94	105	113	86	78	78	94	81	94	109	73
1951	98	104	118	137	90	83	83	100	89	100	111	81
1952	100	104	126	115	91	87	86	106	90	102	125	87
1953	95	97	114	83	93	86	87	104	91	103	114	88
1954	95	97	113	85	94	86	87	100	90	102	107	88
1955	94	96	106	83	95	87	87	99	92	101	112	89
1956	95	95	103	78	97	89	92	99	96	100	99	92
1957	97	98	101	86	100	96	96	100	99	100	103	96
1958	101	100	99	107	100	100	100	100	99	100	101	99
1959	102	102	100	107	100	104	104	100	102	100	96	105
1960	103	101	98	100	101	102	107	100	102	100	100	109
1961	104	101	98	100	102	102	110	101	101	100	100	110
1962	106	103	100	104	101	105	111	101	101	100	103	114
1963	108	104	104	98	101	109	113	101	101	100	110	116
1964	108	103	103	87	101	111	116	102	100	100	109	119
July	108	103	101	82	---	---	---	---	---	---	---	121
Aug.	108	102	101	84	---	---	---	---	---	---	---	---
Sept.	108	103	102	88	100	---	118	102	101	100	107	---
Oct.	108	103	103	87	---	110	---	---	---	---	---	119
Nov.	108	103	102	85	---	111	---	---	---	---	---	---
Dec.	108	103	104	81	101	---	118	103	101	---	---	---
1965												
Jan.	110	104	104	88	---	---	---	---	---	---	---	122
Feb.	110	104	104	87	---	---	---	---	---	---	114	---
Mar.	110	104	104	90	101	---	118	103	101	---	113	---
Apr.	111	105	105	97	---	---	---	---	---	100	113	126
May	112	106	105	99	---	115	---	---	---	---	114	---
June	112	106	105	101	101	---	119	103	101	---	---	---
July	112	106	104	100	---	---	---	---	---	---	---	125
Aug.	111	106	104	98	---	---	---	---	---	---	---	---
Sept.	111	106	104	99	102	111	121	103	101	100	113	---
Oct.	112	105	103	99	---	111	---	---	---	---	---	128

Source: Statistical Reporting Service.

THE FARM COST SITUATION

Approved by The Outlook and Situation Board, November 2, 1965

CONTENTS

GENERAL SITUATION

Farm Costs Show Further Increases

The costs of farming, as measured by farm production expenses, continued their long-term upward trend in 1965, after declining slightly in 1964, and probably will be 3 percent or close to a billion dollars higher than in 1964 (table 1). The increase is due mainly to higher prices for certain production inputs, particularly feeder livestock, and a continued persistent rise in overhead costs. Prices paid by farmers for motor and other supplies, fertilizer, and building and fencing materials moved up slightly. Expenses in 1965 for commodities and services of nonfarm origin are almost 3 percent above 1964, while outlays for farm-produced items--feed, seed, and livestock--are close to 5 percent higher. These higher expenses, however, are being more than offset by sharply increased cash receipts from farming, and realized net farm income for 1965 is estimated to be about $14 billion or 8 percent above the $12.9 billion of 1964.

Farm production expenses probably will rise further in 1966 but likely not as much as the increase expected this year. Expenditures are likely to increase for several important production items, including fertilizer and pesticides. Increases are highly probable in 1966 for depreciation, taxes, interest, and insurance.

HIGHLIGHTS

Farm Labor

The hourly equivalent of all types of cash farm wage rates is expected to average 95 cents per hour nationally for 1965, up 5 percent from 1964, and a more-than-usual increase for the past 10 years. Higher rates are anticipated in 1966 also, but the gain is not expected to exceed the 1964-65 rise. Factors contributing to increased farm wage rates this year include: (1) Higher hourly earnings for nonfarm workers, (2) higher legal minimum rates for certain groups of both farm and nonfarm workers, and (3) the generally stringent supply of farm labor, including foreign workers. These and related factors also contributed to the greater-than-average drop in total farm employment in 1965. Increased adoption of mechanized farming methods and other labor-saving technology reduced the need for workers this year. The trend is expected to continue in 1966 and following years.

Table 1.--Gross farm income, production expenses, net income, and related indexes, specified years, 1950 to 1965 1/

Item	1950-54 average	1955-59 average	1964	1965 2/ First quarter	1965 2/ Second quarter	1965 2/ Third quarter	1965 3/ Year
	Bil. dol.	Bil. dol.	Bil. dol.	Bil. dol.	Bil. dol.	Bil. dol.	Bil. dol.
Cash receipts from farm marketings	31.0	21.4	36.9	36.7	39.5	39.0	38.4
Nonmoney income and Government payments	4.2	4.2	5.3	5.5	5.5	5.5	5.5
Realized gross farm income	35.2	35.6	42.2	42.2	45.0	44.5	43.9
Farm production expenses	21.4	23.9	29.3	29.6	30.0	30.3	30.0
Farmers' realized net income	13.8	11.7	12.9	12.6	15.0	14.2	13.9
Net change in farm inventories	.5	.3	-.8	-.5	-.4	.1	-.3
Farmers' total net income	14.3	12.0	12.1	12.1	14.6	14.3	13.6
	Index numbers (1957-59=100)						
Volume of farm marketings:							
Livestock and livestock products	86	99	117	111	110	119	117
Crops	87	98	119	84	69	128	119
All farm products	86	98	118	99	93	123	118
Volume of purchased inputs	94	99	114	---	---	---	115
Productivity, or output per unit of total input	88	98	108	---	---	---	110
Prices received by farmers:							
Livestock and livestock products	112	96	91	92	89	92	---
Crops	112	102	106	109	106	104	---
All farm products	112	98	98	100	96	98	---
Prices paid by farmers for commodities used in production, interest, taxes and wage rates	95	98	108	110	112	111	---
Ratio of prices received to prices paid for production items (including interest, taxes and wage rates) 4/	118	100	91	91	86	88	---

1/ 48-State data.
2/ Dollar figures are seasonally adjusted at annual rates.
3/ Preliminary. Dollar figures are averages of first three quarters.
4/ Not to be confused with Parity Ratio, which includes prices paid for items used in family living, and has a 1910-14 base.

Farm Power and Machinery

Since 1960 wholesale and retail prices of farm machinery and motor vehicles have increased at an annual rate of about 2 percent. Over this period the average annual increase in farm wage rates was about 4 percent. Thus, the well- managed substitution of mechanical equipment for labor has been a continuing advantage. Prospective higher wages will further encourage such substitution. As the investment in farm machinery rises, depreciation is becoming an increasingly important cost.

Service Buildings

Total expenditures for new construction and repairs of farm service buildings have declined moderately since 1952 are likely to decline further for 1965. In 1966, However, they may rise somewhat as a result of higher farm income this year. Although total expenditures for service buildings have been down in recent years, expenditures per farm reached a new high in 1964 and are expected to continue at a high level in the near future. In the longer run, as more of the older buildings are replaced, expenditures per farm likely will increase faster. These older buildings will be replaced by new buildings that can be constructed from a wide variety of materials, often available in package form. Some old buildings such as silos and grain storage facilities may be replaced with leased buildings.

Fertilizer

Farm consumption of principal plant nutrients in fertilizer increased 9 percent during 1964 over 1963 and a similar increase is estimated for 1965. Nitrogen (N) continues to show the greatest gain -- a 12 percent increase during 1964. Prices paid by farmers per pound of N, down 30 percent from 10 years ago, are expected to decline further because of in - crease supplies of anhydrous ammonia, reduced production and distribution costs, and the further substitution of low cost, for higher cost, materials. Prices of potassium (K) are expected to decline over a period years. Any reduction in average prices of phosphorous (P) would come primarily through use of more concentrated materials and savings in transportation costs.

Pesticides

Agricultural use of pesticides in 1965 was generally above that of 1964. The greatest rate of increase was in the use of herbicides, while insecticides showed a more moderate advance and fungicides held steady. The growth and use of agricultural pesticides, particularly herbicides, is expected to continue. Use of herbicides on corn has increased very markedly. For example, five million more acres were treated in 1962 than 3 years earlier. Most of these additional acres were treated with preemergence sprays.

Feed

The feed concentrate supply for 1965-66 (Oct.-Sept.) is estimated at about 250 million tons, up some 10 million tons from a year earlier. This includes about 217 million tons of feed grains, up 5 percent from a year ago. With grain-consuming animal units about the same as in 1964-65, the supply of feed concentrates per animal unit would be 4 percent above a year earlier. Prices for feed grains may average a little lower than during the 1964-65 season. With more favorable feed-livestock price ratios, feeding rates probably will increase. About 152 million tons of concentrates may be fed in 1965-66, 3 percent more than a year earlier.

Seed

Prices paid by farmers for seed in Sept. 1965 averaged 6 percent higher than a year earlier, reflecting generally lower supplies. Carry-over stocks were somewhat higher for many seeds but not enough to offset relatively low seed production in 1965.

Feeder and Replacement Livestock

Prices paid by farmers for feeder and replacement livestock in mid-October 1965 averaged about 14 percent higher than a year earlier, but were lower than they had been 4 or 5 months before. Prices paid for feeder cattle, after declining for about 2 years, reversed in December, 1964, and have risen more than 25 percent since then. Margins on cattle fed have been higher in recent months than they had been in several years. This has strengthened the demand for feeder cattle. Prices of feeders are likely to remain firm for several months, but prospective returns from feeding livestock bought at present prices appear to be worth the risk.

Taxes

Taxes on farm real estate in 1964 totaled about $1,546 million, up 5.3 percent from 1963. This is generally in line with a longtime rise of about 6 percent per year. Taxes on farm personal property have also been trending upward, but in 1964 were down some 3 percent from 1963, due primarily to lower cattle values. Further increases in farm taxes, both real estate and personal, can be expected in 1966. Local services which are paid chiefly from property taxes continues to increase.

Interest

In 1965 farmers again substantially increased their use of credit. Total debt at the end of the year is expected to be 10 percent higher than a year earlier. Interest charges in 1965 for both short and long-term debt are estimated at $2,161 million -- about $200 million or 10 percent more in 1964 -- and are likely to increase further in 1966. Interest rates on short-term farm loans have increased slightly; farm-mortgage interest rates continued stable through midyear.

Insurance

Farmers paid almost $2.1 billion in 1965 for all types of insurance including social security. The average expenditure per farm increased from $590 in 1964 to $620 in 1965. Only one-third of the total payments were for farm production purposes. The Social Security Amendments of 1965--commonly known as "Medicare" -- established a broad program of health insurance for all U.S. citizens 65 years old and older. In addition, the law also increases the level of benefits, provides benefits to some persons not covered earlier, liberalizes, the disability program, and raises retirement income limits of persons 65-72 years old. The new social security tax rate on covered earnings of operators will be 6.15 percent in 1966 compared to 5.4 percent in 1965. The operator's share of tax for his hired workers will increase from 3.625 percent to 4.20 percent. Additional taxes will also be paid by about 10 percent of the operators and perhaps 2 percent of hired workers who have earnings above the current ceiling of $4,800. Insurance expenditures by farmers are likely to increase in 1966 at about the rate as in the recent past.

Farm Real Estate

Farm real estate prices continued to advance over the past year with the average price per acre reaching $146 in March 1965, about 6 percent above a year earlier. This price increase plus the increasing average size of farm has more than doubled per farm values since 1955. Basic supply and demand indicators showed little change this year, although the rate of voluntary transfers dropped 4 percent below the previous year. In 1966 demand for farm real estate likely will continue strong and prices probably will show a further advance. Rental rates of farm real estate have continued to advance at about the same rate as market values; however, the ratio of rent to market value varies considerably among regions. Sellers of farm real estate are still the major source of credit, financing 38 percent of all sales reported in 1964-65.

Costs by Type of Farm

Preliminary estimates for 1965 on 8 selected types of farms and ranches indicate that the general upward trend in prices paid for items and services used in production continued on 5 types of farms and that prices remained about the same or slightly lower on 3. Operating expenses per unit of production probably will be about the same or lower than in 1964 on 4 types of farms, considerably lower on 2 (wheat farms), slightly higher on beef-fattening farms and considerably higher on tobacco farms. Prices received averaged lower for egg-producing farms, New Jersey, and large-scale cotton farms, Mississippi. They were higher ranging from 3 to nearly 16 percent on the other 6 types of farms.

FARM LABOR

The 1965 farm labor situation can be characterized by (1) a greater-than-average decrease in employment from a year earlier, and (2) greater-than-average increase in wage rates. Employment is expected to average about 5.6 million this year -- a decrease of 9 percent from 1964 (table 2). During the past decade, the annual drop has been 3.4 percent. The hourly equivalent cash wage rate this year likely will be above 1964 in all regions and will average 95 cents per hour, nationally (figure 1). This would be an increase of 5 percent from a year ago -- as compared with an annual percentage gain of 3.2 percent during the past 10 years. Many reasons can be cited as contributing to these greater-than-average changes.

The shift in public policy regarding the filling of seasonal farm jobs in 1965 was a significant factor. For many years, great numbers of alien workers, chiefly from Mexico, were brought into this country for temporary work on farms. A further extension of the "Mexican bracero program" was not authorized by the Congress. The new policy for 1965 indicated "that foreign workers will not be admitted where unemployed domestic workers are available, or under circumstances which would have an adverse effect upon domestic wage levels".1/

"Adverse-effect" wage rates were set for 28 States that has been users of foreign workers. The rates were $1.15 per hour for 6 States, $1.25 for 5, $1.30 for 9, and $1.40 per hour in the 8 other States. In 7 of the States, however, transitional rates varying from 90 cents to $1.25 per hour

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1/ Statement of the Secretary of Labor W. Willard Wirtz on the Termination of Public Law No. 78. (Dec. 19, 1964).

Table 2.--Labor used on farms, wage rates, and related data, United States, 1940-65 1/

Year	Farm employment			Man-hours of farm-work	Farm output index (1957-59=100)		Average hourly wage rates	
	Total 2/	Family 2/	Hired		Total 3/	Per man-hour	Farm workers 4/	Industrial workers 5/
	Thousands	Thousands	Thousands	Millions			Dollars	Dollars
1940	10,979	8,300	2,679	20,472	70	36	0.17	0.66
1945	10,000	7,881	2,119	18,838	81	46	.48	1.02
1950	9,926	7,597	2,329	15,137	86	61	.56	1.44
1951	9,546	7,310	2,236	15,222	89	62	.62	1.56
1952	9,149	7,005	2,144	14,504	92	68	.66	1.65
1953	8,864	6,775	2,089	13,966	93	71	.67	1.74
1954	8,651	6,570	2,081	13,310	93	74	.66	1.78
1955	8,381	6,345	2,036	12,808	96	80	.68	1.86
1956	7.852	5,900	1,952	12,028	97	86	.70	1.95
1957	7,600	5,660	1,940	11,059	95	91	.73	2.05
1958	7,503	5,521	1,982	10,548	102	103	.76	2.11
1959	7,342	5,390	1,952	10,301	103	106	.80	2.19
1960	7,057	5,172	1,885	9,825	106	115	.82	2.26
1961	6,919	5,029	1,890	9,473	107	120	.83	2.32
1962	6,700	4,873	1,827	9,060	108	127	.86	2.39
1963	6,518	4,738	1,780	8,820	112	135	.88	2.46
1964	6,110	4,506	1,604	8,426	111	141	.90	2.53
1965 6/	5,564	4,087	1,477	8,273	116	149	.95	2.60

1/ Data on farm employment and farm wage rates are from the Statistic Reporting Service, USDA.

2/ Includes farm operators and members of their families.

3/ Net calendar-year production for eventual human use.

4/ Composite or hourly equivalent of all types of rates, excluding requisites.

5/ Average hourly earnings of production workers in manufacturing. From the Bureau of Labor Statistics, U.S. Dept. of Labor. Figure for 1965 is average of first 8 months.

6/ Preliminary. Estimates of farm output and man-hours based on October 1965 "Crop Production" report and other releases of the Statistical Reporting Service, USDA.

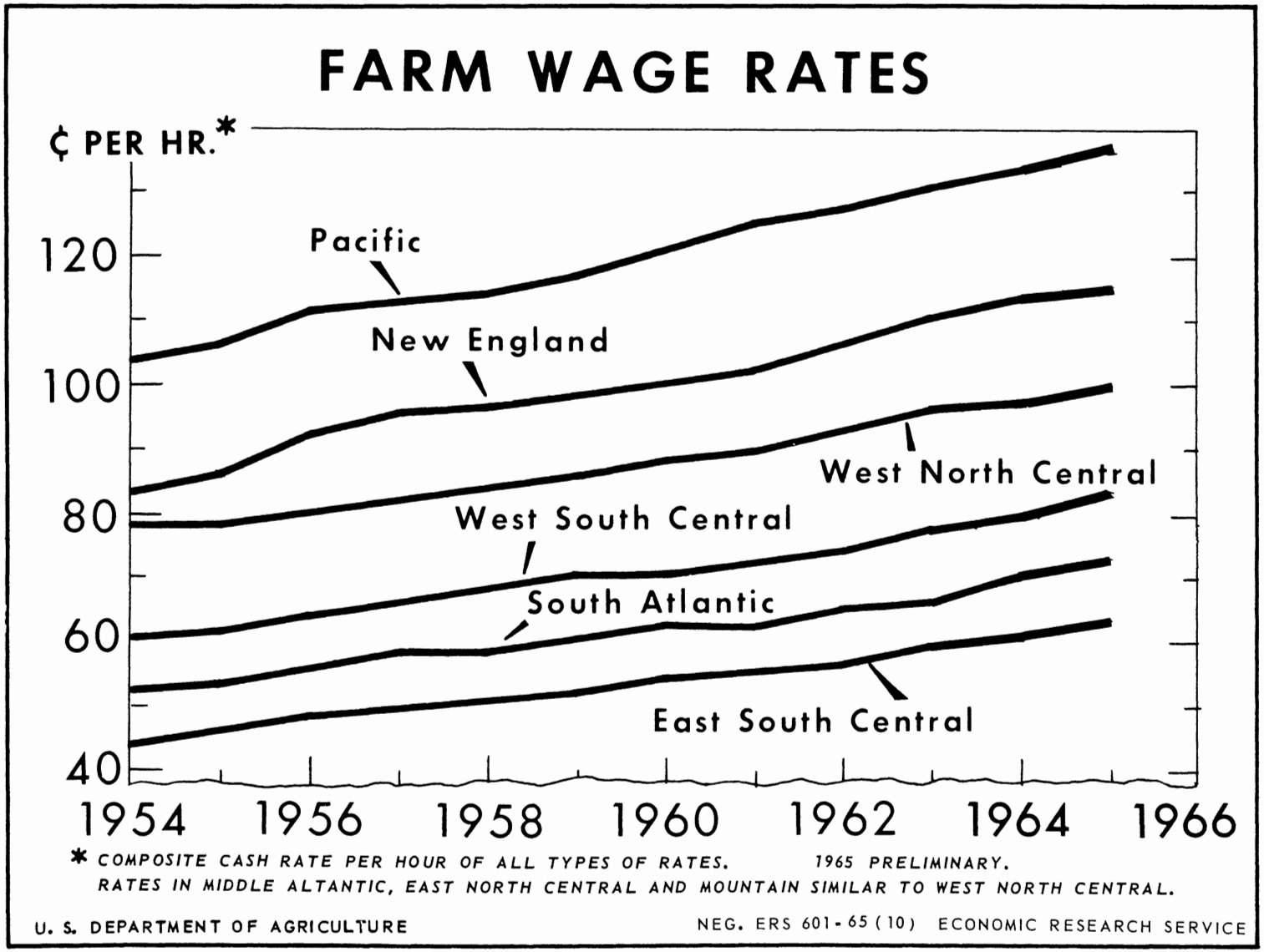
FARM WAGE RATES
¢ PER HR.*
120
100
80
60
40
Pacific
New England
West North Central
West South Central
South Atlantic
East South Central
1954
1956
1958
1960
1962
1964
1966
* COMPOSITE CASH RATE PER HOUR OF ALL TYPES OF RATES. 1965 PRELIMINARY.
RATES IN MIDDLE ALTANTIC, EAST NORTH CENTRAL AND MOUNTAIN SIMILAR TO WEST NORTH CENTRAL.
U. S. DEPARTMENT OF AGRICULTURE
NEG. ERS 601-65 (10) ECONOMIC RESEARCH SERVICE

Figure 1

applied for the first quarter of 1965. In most of the 28 States, the adverse-effect rates were higher than the 1964 average rate per hour without board or room as reported by the Department of Agriculture; in Arkansas, Florida, Minnesota, New Mexico, South Dakota, Texas, Virginia, and West Virginia, they were more than 20 cents higher than the 1964 rate. The adverse-effect rates are not minimum rates in the usual sense. They are the rates that a grower must have offered to domestic workers before he was permitted to import foreign workers. Other employment conditions for domestic workers required of employers before certification of foreign workers would be considered include employers paying reasonable cost of transportation to and from the place of employment and provision for family housing.

In the States where foreign workers were used this year or where their possible need was anticipated, the adverse-effect wage rates contributed to the increase in actual rates paid.

In 1964, the peak employment of foreign workers, excluding Basque sheepherders, occurred in September when almost 93,000, chiefly Mexicans, worked on farms. This year also, the peak appears to have occured near the end of September when 17,200 Mexicans, 2,400 British West Indians, 4,200 Canadians, and about 500 Japanese and Filipinos were employed on farms. The total represents a drop of 69,000 workers or almost 75 percent from the 1964 peak. Domestic workers, including school youth, obtained through intensive recruitment campaigns, filled part of the 1965 worker requirements to replace foreign workers. Another part was filled by the adoption of more labor-saving technology such as planting to a stand to save thinning and use of more herbicides. The tighter supply of labor along with higher wage levels brought additional mechanization such as greater use of tomato harvesters and cotton harvesting machines.

In the areas where sugarcane and sugarbeets are grown, another factor in the higher wage rates in 1965 was the "fair and reasonable" minimum rates for workers on these crops. The rates are set by the Secretary of Agriculture under provisions of the Sugar Act. They were higher this year; the time rate for sugarbeet workers, for example, rose 10 cents per hour to $1.25 and piece-work rates rose about 5 percent on a national average basis.

An additional factor affecting farm wage rates are those paid workers in nonfarm jobs. While wage rates in some nonfarm jobs are not much above farm wages (for example, laundry workers averaged $1.44 per hour in 1964) the earnings of production workers in manufacturing averaged $2.60 per hour during the first 8 months of 1965, up 8 cents or 3 percent over the same period in 1964. About 800,000 workers in large retail, construction and service establishments received a wage increase in September 1965 as a result of the higher legal minimum. These workers were newly covered under the 1961 amendment to the Fair Labor Standards Act. The September increase was the last step in raising the wage floor for these workers to $1.25 per hour, the same minimum level as for other workers previously covered. Provisions of the original act and amendments do not apply to farmworkers, but the legislation affects farm wage rates indirectly. In some States, however, there are legal minimum rates under certain conditions for some farmworkers, such as women and youth of specified ages.

Wage rates and costs of hired farm labor will be higher in 1966. A contributing factor will be the increased Social Security taxes on wages earned after December 31, 1965. The employer-employee contribution rate for old-age, survivors, and disability insurance will increase to 3.85 percent in 1966 compared with 3.625 percent for 1965. Another .35 percent will be added for the hospital insurance feature of "Medicare". The new rate including both old-age, survivors and disability insurance and "Medicare" is

4.20 percent for employers and the same for employees. In addition to the higher tax rate, the maximum earnings base on which the payments must be made was raised from $4,800 to $6,600 for 1966 and later. However, less than 5 percent of the farm wage workers earn as much as $4,800 annually.

The supply of farm labor is not expected to increase in 1966. In general, it will continue to pay farmers to substitute machinery and other inputs for labor. The structural change to fewer and larger farms will continue to contribute to the lessening need of labor on farms.

NONFARM INPUTS

Farm Power and Machinery

Since 1960 wholesale and retail prices of farm machinery and motor vehicles have increased at an annual rate of about 2 percent. Over this period the average annual increase in farm wage rates was about 4 percent. Thus, there has been a continuing advantage in well-managed substitution of mechanical equipment for hired labor. Prospective higher wages in the near future will further encourage the substitution of machinery for labor.

Higher machinery prices may represent additions in quality, such as improved power units, attachments, and controls. Greater choice in machine speeds, for example, enables synchronized power flow under heavy operating conditions imposed by record-yielding crops and adverse field conditions. Comfort features which add to the efficiency of machine operation include padded seats, power steering and air-conditioned cabs.

A major cost of owning farm machinery is depreciation. Yet depreciation is an elusive cost in the sense that on an annual basis it may not be obvious and can only be estimated based on assumptions as to such factors as useful life and salvage value. It becomes real and definite, however, when a substantial capital outlay is required to replace a worn-out or obsolete machine. Thus, many farmers may be more concerned with the capital expenditure required for replacement machinery than they are with depreciation as such. In the long run, of course, depreciation and capital outlays offset each other to a considerable degree, the difference representing net investment in machinery. Since 1940, net investment in farm machinery has been relatively small in all years except 1947-53 when a substantial buildup occurred following curtailed production of machinery during World War II (table 3).

Three major factors cause depreciation: Wear, time, and obsolescence. It may appear that little can be done about any of these; however, regular maintenance programs will reduce the effects of wear and aging. Recent figures show that a 10-year old, 50-horsepower tractor in good condition sells for an average of about $200 more than one in poor condition. Many farmers can do their own maintenance work in slack seasons. Well-managed maintenance should mean improved performance and uninterrupted operation during rush seasons. Furthermore, the result may be higher returns for used equipment or a longer useful life, thus decreasing annual depreciation if obsolescence is not an overriding factor.

Table 3.--Factors related to costs of farm power and equipment, United States, selected years, 1940-1964 1/

Year	Index of wholesale prices of machinery and equipment 1957-59 = 100 2/	Operating expenditures 3/		Gross capital expenditures for motor vehicles and other farm machinery 3/	Depreciation and other consumption of vehicles and machinery 3/	Net investment in motor vehicles and other machinery 3/
		Petroleum fuel and oil	Repairs and operation of motor vehicles and machinery 4/			
	Mil. Dols.	Mil. Dols.	Mil. Dols.	Mil. Dols.	Mil. Dols.	Mil. Dols.
1940----	49.7	350	306	625	517	108
1945----	52.6	544	760	1,198	831	367
1950----	79.8	1,192	1,143	3,152	1,883	1,269
1951----	86.6	1,250	1,327	3,321	2,203	1,118
1952----	87.7	1,288	1,472	2,966	2,421	545
1953----	88.2	1,338	1,463	3,201	2,517	684
1954----	88.1	1,366	1,416	2,739	2,575	164
1955----	88.8	1,403	1,458	2,760	2,625	135
1956----	92.0	1,434	1,608	2,406	2,710	-304
1957----	96.3	1,464	1,699	2,512	2,825	-313
1958----	100.3	1,447	1,750	3,156	2,928	222
1959----	103.4	1,467	1,860	3,184	3,093	91
1960----	105.3	1,481	1,775	2,707	3,086	-379
1961----	107.4	1,471	1,687	2,928	3,049	-121
1962----	109.5	1,470	1,779	3,054	3,098	-44
1963----	111.1	1,464	1,805	3,435	3,159	276
1964----	112.9	1,454	1,832	3,675	3,263	412

1/ Alaska and Hawaii not included.
2/ Bureau of Labor Statistics, U.S. Department of Labor.
3/ Farm Income Situation, FIS 199, ERS, USDA, July 1965. Revised.
4/ Operating costs exclusive of motor fuel and oil (for automobiles, 50 percent of costs in period 1942-1945, 40 percent for other years).

Obsolescense is an increasingly important factor in machinery replacement. The shift to larger and more efficient planting, tillage, and harvesting machines, along with the increasing size of tractors, has caused many machines to become obsolete. The average horsepower rating of tractors produced in 1965, for example, is more than double that of 1950. Thus adoption of new technology may cause the older equipment to become obsolete or uneconomical. These machines, however, may not be obsolete for some neighboring farms where older practices are still being used. On the other hand, the decline in numbers of small farms reduces the demand for both use and new equipment that is approaching obsolescence.

A new technology -- production of corn, soybeans, and sorghum in narrow rows to increase yields -- is now appearing on the equipment horizon. This practice of growing row crops in narrow rows -- 20 to 30 inches versus 38 to 42 inches -- requires new tillage, planting, and harvesting equipment. At present the shift to narrow row cropping practices appears to be economical primarily for the larger farms. Large tractors will be needed in the tillage and planting operations. New narrow-row harvesting machines will be required for corn. Tire width on the larger tractors may limit or retard the adoption of the planned widths of row.

Petroleum fuels used for farm production represent only about 15 percent of the power and equipment expense. These expenditures may tend to remain stable for several years because of changes in technology that contribu to greater economy in fuel use. This includes larger and more efficient power units used on more extensive operations. It also includes self-propelled machines, reduced tillage, and combined machine operations. Relatively stable prices for fuel, along with increasing use of diesel fuel and LP-gas, have all contributed to economy in fuel use. Through July, diesel type wheel tractors represented 57 percent of the wheel tractor shipments in 1965.

In the years ahead improved machinery management will be needed to reduce costs. This will include machine systems which operate together with a minimum of time loss. It may also mean more custom work and machine rental for special jobs and for performing the operations at the desired time.

Service Buildings

Expenditures for new construction and repairs of service buildings continue to be an important part of farming outlays. Expenditures for building materials and related non-farm labor were about $1.2 billion in 1964, and have varied between $1.2 billion and $1.4 billion in each of the past 15 years (table 4). The general decline in total expenditures for farm buildings since 1952 reflects in large part the reduction in the number of farms. A further decline is likely in 1965, followed by a probable increase in 1966 resulting from the improved farm incomes of 1965.

Such expenditures per farm, however, have been rising rather steadily in the past 15 years and in 1964 reached a new high. As farm consolidations take place many of the newly acquired buildings are used at first, depending on the type of farming, even though they may not be ideally located or fit in with modern concepts of efficient farmstead layout. Later,

Table 4.--Expenditures, depreciation, and net investment for farm service buildings, other structures and land improvements, and prices paid for building materials, United States, selected years, 1940-63 1/

Year	Repairs and capital expenditures 2/				Depreciation and accidental damage per farm 4/	Net investment per farm	Index of prices paid for building and fencing materials
	All farms 3/	Per farm					
		Total	Repairs	Capital expenditure 3/			
	Mil. dols.	Dollars	Dollars	Dollars	Dollars	Dollars	1957-59 = 100
1940	413	65	39	26	23	3	38
1945	559	94	33	61	44	17	51
1950	1,325	235	79	156	74	82	81
1951	1,409	260	88	172	94	78	89
1952	1,436	276	94	182	95	87	90
1953	1,377	276	94	182	103	79	91
1954	1,298	271	93	178	115	63	90
1955	1,303	280	97	183	127	56	92
1956	1,318	292	101	191	124	67	96
1957	1,336	306	106	200	138	62	99
1958	1,286	304	105	199	142	57	99
1959	1,315	321	111	210	154	56	102
1960	1,248	316	109	207	162	45	102
1961	1,235	324	112	212	169	43	101
1962	1,221	331	115	216	191	25	101
1963	1,191	333	115	218	212	6	101
1964	1,169	336	116	220	233	-13	100

1/ Data on expenditures, depreciation and accidental damage, and net investments calculated from information in the Farm Income Situation, FIS-199, ERS, USDA, July 1965. In this latest report expenditures for farm service buildings are revised back to 1933. Depreciation is revised back to 1951. Accidental damage is also revised in recent years. Index of prices paid from the Statistical Reporting Service.

2/ Includes service buildings, other structures, fences, windmills, wells, dams and ponds, terraces, drainage ditches and tile lines, and other soil conservation facilities, and dwellings not occupied by the farm operator.

3/ Includes new construction, additions and major improvements.

4/ Includes depreciation on service buildings and other structures, fences, windmills, wells, and dwellings not occupied by the farm operator. This does not include any depreciation on dams and ponds, terraces, drainage ditches and tile lines and other soil conservation facilities. Accidental damage is estimated here for fire, wind, hail, or flood on service buildings only.

as these buildings deteriorate they are not likely to be maintained or rebuilt, and for most types of farming are likely to be replaced by more functional buildings that are generally relocated around the homestead. More and more of these new buildings will be integral parts of completely mechanized and integrated farmsteads.

In the next 3-5 years, expenditures per farm for building materials and related non-farm labor are expected to continue at a high level. In the longer-run, as more of the older buildings are replaced expenditures per farm likely will increase first, because of the consolidation of farm buildings to one central location and second, because of the construction of more functional buildings in package form.

The annual costs of buildings are represented by depreciation, interest on investment, repairs, taxes, and insurance. The depreciation allowance on farm service buildings has increased in recent years. Only 10 years ago it averaged about $115 per farm. In 1964 it was about $233 per farm. The annual cost of depreciation is usually based on the useful life of a building. Earlier, this meant the number of years until the building was worn out. Today, obsolescence more frequently limits the useful life of buildings.

Capital expenditures for new construction, additions, and major improvements account for about 65 percent of the total expenditure for farm buildings in recent years. Repairs account for the other 35 percent. Repairs generally are higher during extended periods of low capital expenditure as during World War II and lower during extended periods of high capital expenditures as during the years following World War II. For example, during the war years, repairs were 45 percent of the total expenditures for building materials and related non-farm labor and in the 5 years following the war, repairs were 32 percent of these expenditures.

Capital expenditures in excess of depreciation and accidental damage represent the net investment in service buildings. The high net investment immediately following World War II represented new building and additions to buildings that farmers had unavoidably neglected during the war and normally would have replaced earlier. In the late 1950's many additions and new buildings were added. Since then net investment has been declining. By 1964 depreciation and accidental damage had actually exceeded capital expenditures, resulting in a net disenvestment.

New buildings can now be bought in package form. Small differences exist in overall building costs for a wide variety of materials. This is illustrated in a recent report by E. L. Hansen of the University of Illinois. Several variations of utility building shells, which could be used for machinery storage, cost about $1.00 per square foot of ground space.

2/ Hansen, E. L., Building Appraisal. A Guide to Obsolescence, Agr.Engin. pp. 448-50, 1965.

These structures include pole barns, steel arches on concrete foundations, steel posts with clear span roofs, and rigid lumber structures. Higher costs ($1.25 to $2.50 per square foot) were associated with lumber panels and laminated wood arches, tiltup concrete, and rigid frame steel or concrete buildings.

The leasing of buildings now offers a new alternative to the large outlays for certain types of structures in selected areas of the country. Silos and grain storage facilities are typically available in the areas where leases are offered. Leasing of buildings, rather than buying, releases working capital for other purposes but interest included in the leasing charges may be higher than that available from conventional sources of financing.

Prices of individual building materials are no longer good indicators of the costs of new buildings. However, these prices or changes in prices do reflect comparative costs and changes in costs of repairing existing buildings and fences. For example, the price of common brick has increased almost 10 percent in the past 5 years while the price of concrete blocks, a competing building material, has increased only about 2 percent. The price of composition roofing has decreased almost 5 percent in the past 5 years while galvanized roofing decreased only 2 percent. Wooden line posts for fences have increased 4 percent while steel line posts have decreased 3 percent during the past 5 years.

Fertilizer

Farm consumption of principal plant nutrient elements (Nitrogen-N; Phosphorous-P; and Potassium-K) in 1964 totaled about 8 million tons.3/ This is 60 percent greater than the 1957-59 average and 9 percent greater than in 1963. For Nitrogen (N), the 1964 tonnage used was 85 percent above the 1957-59 average and about 12 percent above 1963. Preliminary estimates indicate a smaller increase for 1965 over 1964.

Industry growth in the years ahead will be greater than the rate of increase in fertilizer consumption the past few years. Capacity to produce nitrogen in the form of anhydrous ammonia is expected to increase from an estimated 7 million tons on January 1, 1965 to 13 1/2 million tons at the beginning of 1968.

Phosphorous capacity for fertilizer use is expected to grow from an estimated 2.6 million tons of P January 1, 1965 to 3.3 million tons in about 18 months when currently announced plants are completed.

Facilities of domestic producers for the production of potassium are expected to increase about 40 percent over the present level within a year to a year and a half. Interest is centered on newly discovered deposits in Canada. Five of the 7 active companies in Canada are wholly or partially owned U.S. companies. Three of them also operate domestic potash facilities. Capacity of plants proposed by the 7 companies is expected to exceed 4.6 million tons of K by 1969 or 1970. This expected production from Canadian deposits will represent a net addition to supplies

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3/ When P and K are expressed as oxides (P_2O_5 and K_2O) this figure becomes about 10.5 million tons. To convert P to P_2O_5 multiply by 2.137; K to K_2O by 1.20459.

since mid-1962, when substantial production from these sources become available.

Changes in fertilizer prices in recent years reflect the expansion in facilities for producing nitrogen, principally in the form of anhydrous ammonia. Use of this material for direct application has increased rapidly. It is also used in the manufacture of the nitrogen component of mixed fertilizers. Reduction in prices paid by farmers for N reflect both lower production costs of nitrogen materials and reduced distribution costs resulting from more direct sales and increased use of higher analysis materials. The U.S. average cost per pound of N to farmers is estimated to be about 30 percent below the cost in 1954. Based on current trends and prospects and assuming a fairly stable price level, a 50 percent reduction from current costs per pound of N may be a reasonable outlook within 15 or 20 years. The current U.S. average prices to farmers is estimated at about $0.115 per pound but some farmers are reportedly obtaining substantial discounts, based on volume and bulk handling.

Costs per pound of phosphorous (P) will probably remain at about current levels for any particular material, but substitution of lower cost materials, principally ammonium phosphates for ordinary superphosphate, over a period of years will probably result in some reduction in prices paid by farmers. Current costs are estimated at about $0.23 per pound of the element, P. This is equivalent to about $0.10 per pound of P_2O_5. Shifts to lower cost forms may eventually bring about a reduction of about 15 percent, assuming a reasonably stable price level.

The cost of potassium (K) to farmers has changed little, if any, in recent years, but the long range forecast is for about a 15 percent reduction in price per pound. If this occurs, it will be because of development of the large Canadian deposits. The current average cost per pound of K is estimated at $0.07. This is equivalent to $0.058 per pound of K_2O.

Fertilizer is a flexible farm input -- the intensity of its use per acre can be markedly changed according to decisions made at the time of application. This is in contrast to some other farm inputs, which are variable from year to year, but which are fairly well defined for any one season. Examples of less flexible variable items are fuel, power and machinery costs, and at least part of the labor input. But there is a considerable range of choice in the rates of application of fertilizer. This is particularly true for nitrogen which is applied both at or before planting and during the season, depending on weather and growth conditions.

Farmers' decisions on fertilizer use for a crop depend on the yield response and on expected prices. Usually, if the general rate of response is known, farmers profit most who fertilize for maximum profit per acre based on crop prices and fertilizer costs at the time of application. The risk due to price decline after application has generally been less than the risk due to other causes (for example, unfavorable weather). However, experience under modern technology in more recent years indicates that yields do not decline in seasons of less favorable weather to the extent they formerly did. Better weed, disease and insect control, improved methods of utilizing soil moisture, improved fertilizers and better placement of them, and improved crop varieties all help to maintain yields under good fertilizer practice, even when weather conditions are below average.

Some farmers apply fertilizer at higher rates than would be most profitable when considered in terms of alternative uses for their money.

As higher rates are applied, even when returns per additional unit are still profitable, the added return per dollar of added cost may be less than could be earned from other investments on the farm. These alternatives, and perhaps opportunities from non-farm investments, might well be considered by farmers who have pushed rates of application to the point where the return per dollar of additional cost closely approaches only $1. This point would be the maximum economic rate.

If the need is to get the most profit from limited funds rather than the most profit per acre, then a lower rate of fertilizer application will be the best choice. This "minimum economic rate" will be different for each farmer and each situation. The problem is to find the economic balance between use of fertilizer, land, and other resources. Finding the minimum economic rate requires information on the level of other costs per acre as well as the yield response to varying rates of fertilizer application. Both of these factors influence the outlook for use of fertilizer.

Pesticides

Agricultural usage of pesticides in 1965 was generally above that of 1964. The greatest rate of increase was in the use of herbicides, while insecticides showed a more moderate advance and fungicides held steady. The growth and the use of agricultural pesticides is expected to continue as more farmers adopt pest control as one of the necessary practices for efficient crop and livestock production. Changing weather and pest infestations will affect demand for pesticides in some areas but these factors are not likely to change greatly the growth trend of chemical pest control. In addition to greater acceptance by farmers, the development of new control methods, especially the systemic pesticides, is likely to strengthen the demand for pest control materials.

The value of shipments of pesticides for domestic use and export increased 54 percent between 1958 and 1963 for an average of about 8 percent a year. At this rate, and allowing for exports valued at about $135 million (same as in 1964), the wholesale value of domestic shipments in 1965 is likely to be about $1 billion.

Use of insecticide materials will continue to grow in total volume, but expansion probably will be at a moderate rate of about 2 percent per year. Shipments of insecticides, which currently account for 53 percent of all agricultural pesticides, rose only 4 percent between 1958 and 1963 while shipments of herbicides nearly doubled. In 1965, record quantities of insecticides were applied to control the heavy boll weevil activity, area infestations of spider mites on fruit trees and cotton, and high populations of armyworms.

Slackening growth in the use of insecticides and little change in the use of fungicides, however, will be accompanied by substantial increases in the use of herbicides. In 1964, producers sold about $163 million worth of basic herbicidal materials -- a 41-percent increase over 1963 and a 77-percent increase over 1962. Barring some unforeseen development, herbicide usage probably will climb as much as 15 percent annually for the next few years. Shortages of farm labor and high costs of hand cultivation have contributed importantly to the strong demand for herbicide, and usage has been stimulated also by prospects of improved yields.

The market for herbicides has grown so rapidly in recent years that the value of production and use of these chemicals, which barely exceeded the use of fungicides in 1958, may surpass the use of insecticides in the near future. The dollar value of weedkiller sales by the chemical industry rose from 27 percent of all sales of pesticidal chemicals in 1962 to 38 percent in 1964. The acreage treated with herbicides in the United States rose a third between 1959 and 1962 and reached a record of 70 million acres. Data for more recent years are expected to show even greater growth with the largest percentage increases in fruit and nut orchards. The acreage of peanuts treated with herbicides has also increased sharply and the acreage of vegetables and sugarbeets treated have increased 3-fold in 3 years.

The use of herbicides on corn, one of the most important crops in terms of acres, increased 25 percent between 1959 and 1962. This was an increase of almost 5 million acres, most of which was treated with pre-emergency sprays. During this same period there was little change in the acreage of small grains treated.

Wholesale prices of most pesticides were steady in 1964 and 1965. Some prices rose moderately, however, during the 1965 season. Copper Sulfate was quoted slightly higher; cube root (source of rotenone) and DDT went up 2.5 cents and 2 cents, respectively, from 16 cents a pound; the price of lead arsenate rose 2 cents from 27 cents; and pyrethrum flowers went up to 78 cents from 71 cents a pound. Prices of important chemicals such as aldrin, chlordane, dieldrin, 2,4-D and parathion continued the same as quoted in 1961 or before.

FARM PRODUCED INPUTS

Feed

The feed concentrate supply for 1965-66, October-September feeding year, is estimated at about 250 million tons, some 10 million tons more than a year earlier, and 3 million tons more than the 1962-65 average (table 5). This includes about 217 million tons of feed grains, 5 percent more than a year ago. Wheat and rye used for feed is expected to total around 3.2 million tons, down a little from the heavy feeding in 1964-65. By-product feed supplies may total 30.3 million tons, up slightly from last year. With grain-consuming animal units about the same as in 1964-65, the supply of feed concentrates per animal unit would be 4 percent above a year earlier.

Prices for feed grains may average a little lower than during the 1964-65 season. With more favorable feed-livestock price ratios, feeding rates will probably increase. About 152 million tons of concentrate may be fed in 1965-66, 3 percent more than last year. Carryover of feed grains into 1966-67 is expected to be approximately 60 million tons, nearly 5 million more than a year earlier, but the second smallest carryover since 1958.

Current production of the 4 feed grains, based on October 1 indications is expected to be about 161 million tons, 24 million tons more than last year. Production of each of the 4 feed grains increased from last year as follows: Corn 18 percent, oats 13 percent, barley 1 percent, and sorghum grains 34 percent.

Corn supply for 1965-66 is estimated at about 150 million tons, 5 percent more than a year earlier. The sorghum grain supply is estimated at 34.2 million tons, 7 percent above a year earlier. The oat supply,

Table 5.--Supply and utilization of feed concentrates, and livestock fed, United States, 1937-65 1/

Year beginning Oct. 1	Supply				Utilization		Stocks of feed grains, end of year 4/	Number of grain-consuming animal units	Per grain-consuming animal unit		
	Stocks of feed grains beginning of year	Production of feed grains 2/	Other feed concentrates 3/	Total supply	Seed, human food, industry, and export	Concentrates fed to livestock 2/			Production of feed grains	Supply of concentrates	Concentrates fed
	Mil. tons	Mil. tons	Mil. tons	Mil. tons	Mil. tons	Mil. tons	Mil. tons	Millions	Tons	Tons	Tons
Average:											
1937-41	16.9	92.2	19.9	129.0	12.1	97.9	19.9	153.1	0.60	0.84	0.64
1942-46	14.7	109.2	29.4	153.3	14.8	124.9	13.5	176.9	.62	.89	.71
1947-51	22.2	108.8	25.5	156.5	17.1	115.9	23.5	162.2	.67	.96	.71
1952-56	32.2	114.7	27.1	174.0	18.4	117.7	38.0	160.7	.71	1.08	.73
1957-61	66.9	144.5	29.7	241.0	26.1	143.3	71.5	166.0	.87	1.45	.86
1962-65	65.1	149.3	32.9	247.3	34.2	150.8	62.1	169.8	.88	1.46	.89
1952	20.1	111.0	27.9	159.0	16.9	114.0	27.0	158.9	.70	1.00	.72
1953	27.0	108.3	27.8	163.1	16.0	116.6	31.7	156.9	.69	1.04	.74
1954	31.7	114.1	26.0	171.8	18.5	116.2	39.1	161.6	.71	1.06	.72
1955	39.1	120.8	26.9	186.8	20.6	121.9	43.2	165.3	.73	1.13	.74
1956	43.2	119.3	27.0	189.5	19.9	119.7	48.8	160.9	.74	1.18	.74
1957	48.8	132.4	28.4	209.6	22.9	129.0	59.0	159.9	.83	1.31	.81
1958	59.0	144.1	29.2	232.3	25.8	139.5	67.5	167.7	.86	1.39	.83
1959	67.5	149.6	29.4	246.5	25.2	144.7	74.6	165.7	.90	1.49	.87
1960	74.6	155.6	30.2	260.4	25.4	150.3	84.7	167.6	.93	1.55	.90
1961	84.7	140.6	31.1	256.4	31.1	152.9	71.8	169.0	.83	1.52	.90
1962	71.8	142.9	31.4	246.1	30.3	152.0	63.9	172.8	.83	1.42	.88
1963	63.9	156.4	32.3	252.6	32.8	151.2	69.2	172.3	.91	1.47	.88
1964 5/	69.2	136.9	34.1	240.2	36.0	148.1	55.3	167.3	.82	1.44	.88
1965 6/	55.3	161.0	33.9	250.2	37.6	152.0	60.0	167.0	.96	1.50	.91

1/ Grain and Feed Statistics, U.S. Department of Agriculture, Economic Research Service.
2/ Includes corn for grain. Omits seeds and corn for silage and other forage purposes.
3/ Includes byproduct feeds, imported grains, and domestic wheat and rye fed.
4/ Stocks do not necessarily equal supply less feed and other utilization because of a difference in the crop year for different feed grains.
5/ Preliminary.
6/ Preliminary estimates based on indications in October 1965.

20.5 million tons, is about 7 percent more than last year. The barley supply, 12.6 million tons, is about 4 percent less than last year.

About 16 1/2 million tons of high protein feed (in terms of 44 percent soybean meal equivalent) were fed to livestock and poultry in the feeding year 1964-65, slightly less than that fed in the 2 preceding years. With the harvesting of the large soybean crop now predicted, the amount of soybean meal available for livestock likely will be somewhat greater than a year earlier. About 17 million tons of high protein feed is estimated to be available for the 1965-66 feeding year.

Use of urea as a feed supplement to replace high protein feeds, and thus reduce costs in cattle and sheep feeds, has attracted attention during the past few years. Data are not available to indicate how much substitution of urea for natural high protein feeds has taken place and how much more can be expected. Several of the State agricultural experiment stations in the past year or so have recommended the use of urea to replace all or some of the natural high proteins in cattle and sheep feeds. Rate of adoption of this practice and its impact on demand for high protein feeds apparently is a significant factor influencing the cost of feeds. A USDA study is underway to determine how much urea is being used in the feeding of beef cattle and dairy cattle. The results will not be known for some months.

Hay supplies in 1965 are above the 5-year average in most areas except the Eastern Corn Belt and the North Atlantic Region. Supplies are about 15 percent above the 5-year average in the South and about 7 percent above in the Western States.

Pasture feed conditions October 1, 1965 were reported unusually good over most of the country, except the Northeastern States. Abundant range feed was available in most western areas. Wheat pasture is expected to be good.

Prices received by farmers for feed grains in 1965-66 probably will average a little below a year earlier. On October 15, 1965, sorghum grain prices averaged $1.74 per cwt., 6 percent below a year earlier, while corn was $1.06 per bushel, about 4 percent less than last year (table 6). Price of oats was the same as last year while that of barley was 5 cents per bushel above a year earlier.

Farmers paid $5.01 per cwt. for soybean meal on October 15, 1965, compared with $4.86 a year ago and $5.04 2 years ago. On October 15, 1965, prices paid by farmers for commercial formula feeds were from 1 to 2 percent above a year earlier. Price of cottonseed meal was the same as a year ago. Bran was 4 percent over a year earlier and middlings about 3 percent. Price of alfalfa hay, baled, was down 1 percent.

The number of high protein animal units -- animal units weighted by consumption of high protein feeds -- in 1965-66 is currently estimated to be 146.3 million, slightly more than a year ago. Based on these early prospects, the quantity of protein feeds available per animal unit would total about 232 lbs., 3 percent above the amount available (and apparently fed) in 1964-65.

Feed inputs per unit of livestock production for the period 1940-64 are shown in fig. 2. These estimates show decreases from 1963-64 to 1964-65 in feed inputs for broilers, eggs, turkeys, and "other" cattle (cattle not

Table 6.--Average prices of selected feeds, United States, Oct. 15, 1963-65

Item	Unit	1963	1964	1965 1/	Percentage change from 1964 to 1965
		Dollars	Dollars	Dollars	Percent
Prices received by farmers:					
Corn	Bushel	1.08	1.10	1.06	1-4
Oats	do.	.68	.62	.62	0
Barley	do.	.91	.94	.99	5
Sorghum grain	Cwt.	1.73	1.86	1.74	-6
Hay, baled	Ton	23.00	22.90	22.80	0
Prices paid by farmers:					
Mixed dairy feed, 16 percent protein	Cwt.	3.78	3.70	3.76	2
Laying feed	do.	4.53	4.37	4.40	1
Broiler grower feed	do.	4.85	4.79	4.83	1
Cottonseed meal, 41 percent protein	do.	4.72	4.41	4.41	0
Soybean meal, 44 percent protein	do.	5.04	4.86	5.01	3
Bran	do.	3.11	3.08	3.19	4
Middlings	do.	3.22	3.16	3.27	3
Alfalfa hay, baled	Ton	32.70	32.20	31.80	-1
Average value of concentrate ration fed to poultry and milk cows: 2/					
Fed to poultry	Cwt.	3.55	3.43	3.39	-1
Fed to milk cows, in milk-selling areas	do.	3.05	3.01	3.00	0
Fed to milk cows, cream-selling areas	do.	2.53	2.52	2.57	2

Source: Statistical Reporting Service.

1/ Preliminary.
2/ Value of corn, oats, oilmeal, millfeed, commercial mixed feed, and so on, which makes up 100 pounds of "grain" ration.

grain-fattened). The feed input per unit remained about the same for sheep and chickens, increased slightly for milk cows and hogs, and was up substantially for grain-fed cattle. Although feed conversion ratios are sometimes used as measures of efficiency in livestock enterprises, the costs of many other inputs are also important in determining the most profitable combination of resources in each feeding operation.

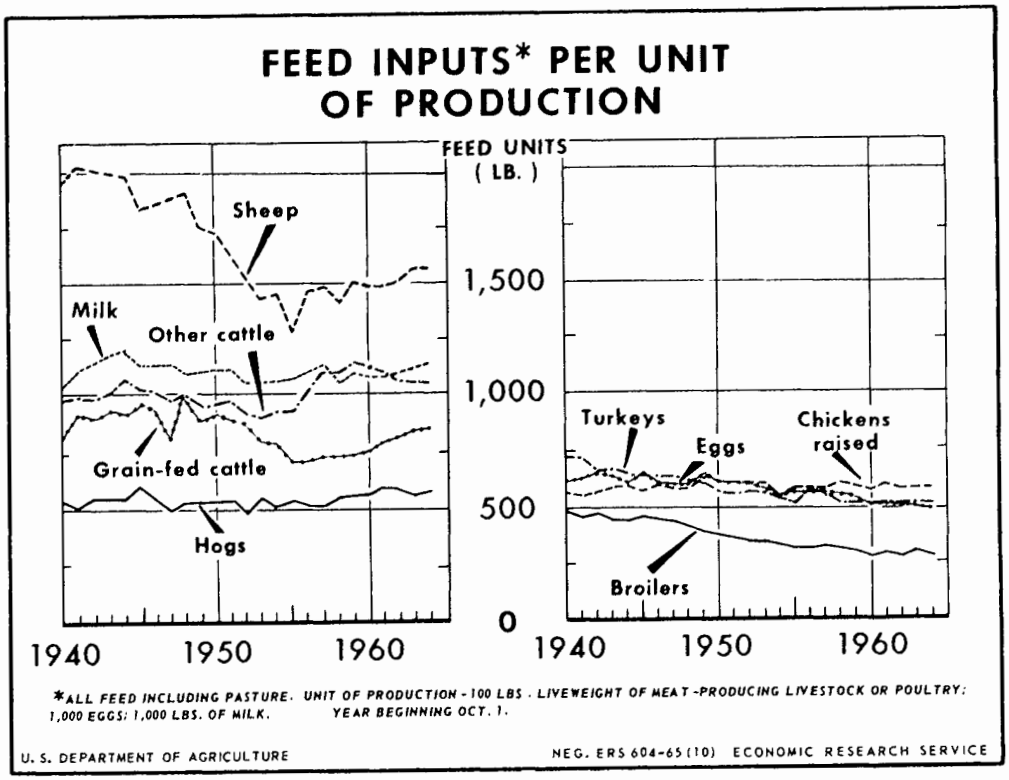

Figure 2

Gross returns from livestock enterprises per dollar of feed costs, based on October 15 prices, show that returns from eggs, turkeys, and sheep raising increased 6 or 7 percent from 1964 to 1965 (table 7). Sharply higher prices received for hogs and beef raised returns by 56 and 15 percent respectively. For broilers, butterfat, and milk, there was no significant change.

Gross returns of various livestock enterprises per dollar of feed costs from 1950 to 1964, based on October 15 prices, indicate considerable variation in returns for most of these enterprises (fig. 3). In general, downward trends were experienced in broilers, turkeys, eggs, and sheep raising. Returns for milk, butterfat, and hogs remained about level. Returns for beef raising showed the greatest upward trend.

Table 7.--Gross returns from livestock enterprises per $1.00 of feed costs, United States, based on Oct. 15 prices, 1957-59 average and 1963-65 1/

Livestock enterprise or product	Gross return per $1.00 of feed cost				Percentage change from 1964 to 1965
	Average 1957-59	1963	1964	1965	
	Dollars	Dollars	Dollars	Dollars	Percent
Eggs	1.64	1.44	1.45	1.55	7
Broilers	1.18	1.17	1.20	1.19	-1
Turkeys	1.43	1.40	1.32	1.40	6
Milk	2.34	2.00	2.05	2.09	2
Butterfat	1.55	1.32	1.28	1.25	-2
Hogs	1.87	1.67	1.64	2.56	56
Sheep raising	1.54	1.23	1.39	1.47	6
Beef raising	2.33	1.93	1.75	2.01	15
	Index numbers (1957-59=100)				
Eggs	100	88	88	95	---
Broilers	100	99	102	101	---
Turkeys	100	98	92	98	---
Milk	100	85	88	89	---
Butterfat	100	85	83	81	---
Hogs	100	89	88	137	---
Sheep raising	100	80	90	95	---
Beef raising	100	83	75	86	---

1/ The following quantities of feed were used to calculate the cost of feed:

Eggs (per dozen)	7 lbs. poultry ration
Broilers (per lb.)	2.5 lbs. broiler mash
Turkeys (per lb.)	4.5 lbs. poultry ration
Milk (per cwt.)	31 lbs. concentrates and 110 lbs. hay
Butterfat (per lb.)	7.75 lbs. concentrates and 27 lbs. hay
Hogs (per cwt.)	7.5 bu. corn and 20 lbs. soybean meal
Sheep raising (per cwt.)	2 bu. corn and 1,500 lbs. hay
Beef raising (per cwt.)	3 bu. corn and 600 lbs. hay

To estimate costs of all harvested forages and pasture in the above quantities of feed, feeds from these sources were converted into hay equivalent and the price received by farmers for "all hay" was applied. Feed nutrients from pasture were assumed to cost one-fourth as much as the nutrients in hay. About one-third of the feed consumed by sheep is used in the production of wool. During the period 1957-64, the quantities of broiler mash used to calculate the broiler feed costs were: 1957-60, 2.8 pounds; 1961, 2.6 pounds; 1962-64, 2.5 pounds. During the same period, the quantities of poultry ration used to calculate turkey feed costs were: 1957-61, 4.75 pounds; 1962-64, 4.5 pounds.

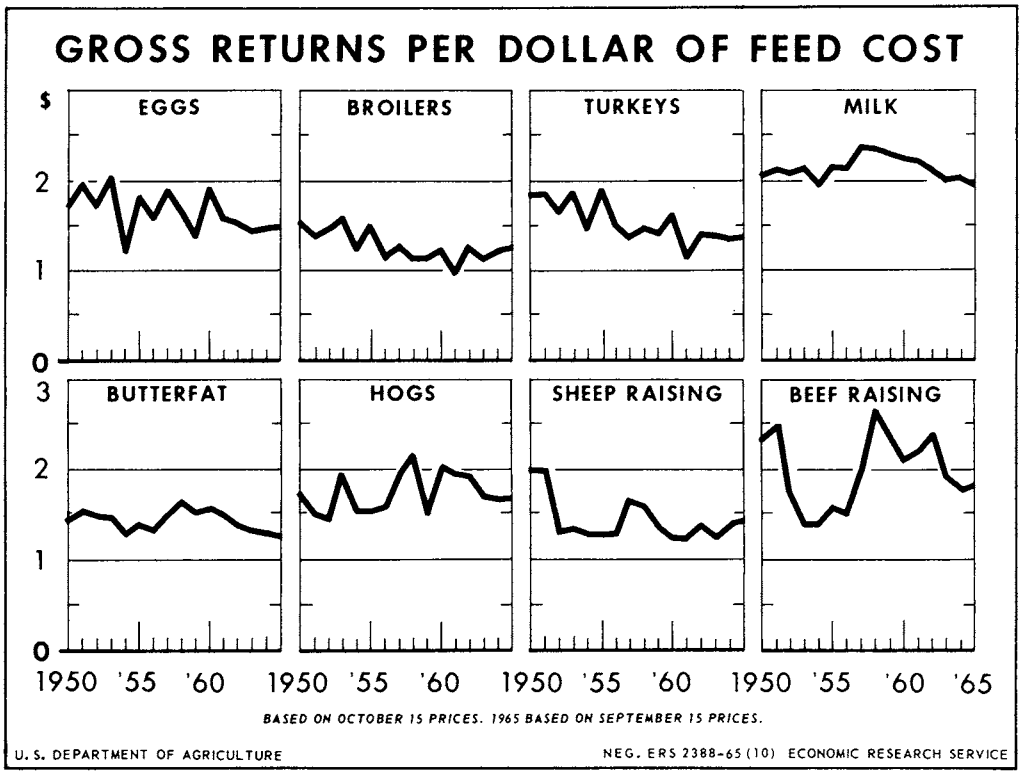

Figure 3

Seed

Farm expenditures for seed have been relatively stable during the past 10 years and have averaged slightly less than 3 percent of total farm operating expenses during the period. In 1963 and 1964 seed expenditures in relation to total operating expenses were slightly below the 10-year average. This slight downward trend may continue as certain other production items claim an increasingly greater share of the farm operating dollar.

Current supplies (July 1 carryover plus 1965 production) of several winter cover crop seeds are considerably below 1964 levels. Although carryover stocks were slightly higher for many field seeds, July 1 stocks were not sufficient to offset this year's lower production for several seeds. Field crop seeds with supplies below 1964 levels include the following: Hairy vetch seed, down 47 percent; crimson clover, down 22 percent; sweet clover, down 13 percent; ladino clover, down 2 percent; chewing and red fescue, down 13 and 25 percent, respectively; and, bentgrass, down 15 percent.

Seeds exceeding last year's available supplies include white clover, up 7 percent; timothy, up 12 percent, tall fescue, up 3 percent, and orchard grass, up 11 percent.

Prices paid by farmers for seed for 1965 fall planting averaged 6 percent above 1964 levels, with the seed price index for September at 237 (1910-14=100) compared to 224 of a year ago. Some prices were materially higher than a year ago--notably crimson clover, up 25 percent; wild winter peas, up 25 percent; and hairy vetch, up 30 percent. Other prices were down from last September, particularly red clover, down 18 percent; smooth bromegrass, down 18 percent; and sweet lupine, down 41 percent. Small grain seed prices this fall were practically unchanged from September prices of a year ago.

No reliable information is currently available to accurately measure the quality of seed supplies now on hand. Since the percentage of carryover to total supply for many seeds is considerably greater than in 1964, checking germination percentages of seeds for use this fall and next spring may be particularly important.

Feeder and Replacement Livestock

Prices paid by farmers for feeder and replacement livestock in mid-October averaged about 14 percent higher than a year earlier. Prices, however, were lower than they had been 4 or 5 months earlier (table 8).

Prices paid for feeder cattle, after declining for about 2 years, reversed in December 1964 and have since risen more than 25 percent. At the high point in June prices paid for feeder steers in Kansas City averaged $23.88 a hundredweight. By September these prices had declined to an average of $22.92 (fig. 4).

Margins on cattle fed have been higher this year than in several years. One measure of these margins is the difference between prices received for choice steers in Chicago and those paid for feeder steers in Kansas City 7 months earlier. On this basis, margins in recent months ranged from $7 to $8 per hundredweight of live steers.

Although prices paid for feeders have been rising relative to prices received for fat cattle, recent favorable margins likely will result in continued strong demand for feeder cattle (fig. 4).

Both native pastures and volunteer wheat pasture in the Western States were well above average condition this fall. This plentiful feed supply will keep many potential feeder cattle out of feedlots until later in the season.

On balance the supply of feeder cattle this fall likely will be about the same to slightly larger than a year ago, due mainly to a decline in the slaughter of nonfed cattle. An increase in steers and calves will be mostly offset by a decline in heifers.

Prices of feeder cattle probably will rise more than seasonally this winter in response to favorable price margins and little increase in the number of feeders available.

Feeder pig prices are likely to remain high for the next new months and are not likely to fall much below the $33.80 paid in mid-October because of the fewer feeder pigs available compared with a year earlier and because of the favorable hog and feed prices. The number of pigs farrowed in 10 Corn Belt States in June, July, and August was down 10

Table 8.--Feeder and replacement livestock: Prices paid by farmers, United States, high and low months in year ending October 1965

Commodity and unit	High month		Low month		October 1965
	Month	Price	Month	Price	
		Dollars		Dollars	Dollars
Cattle and calves, per cwt.	June-July '65	23.20	December '64	18.10	23.10
Lambs, per cwt.	May '65	23.20	November '64	17.40	20.90
Pigs, per cwt.	August '65	1/34.10	November '64	16.10	1/33.80
Baby chicks, per 100	April '65	14.50	October '65	11.60	11.60
Turkey poults, per 100	June '65	62.60	October '64	49.20	49.80
Milk cows, per head	Oct. '65	214.00	December '64	203.00	214.00
All livestock, index (1910-14=100)	June '65	360	December '64	289	352

Source: Statistical Reporting Service.

1/ New series, not comparable with earlier data.

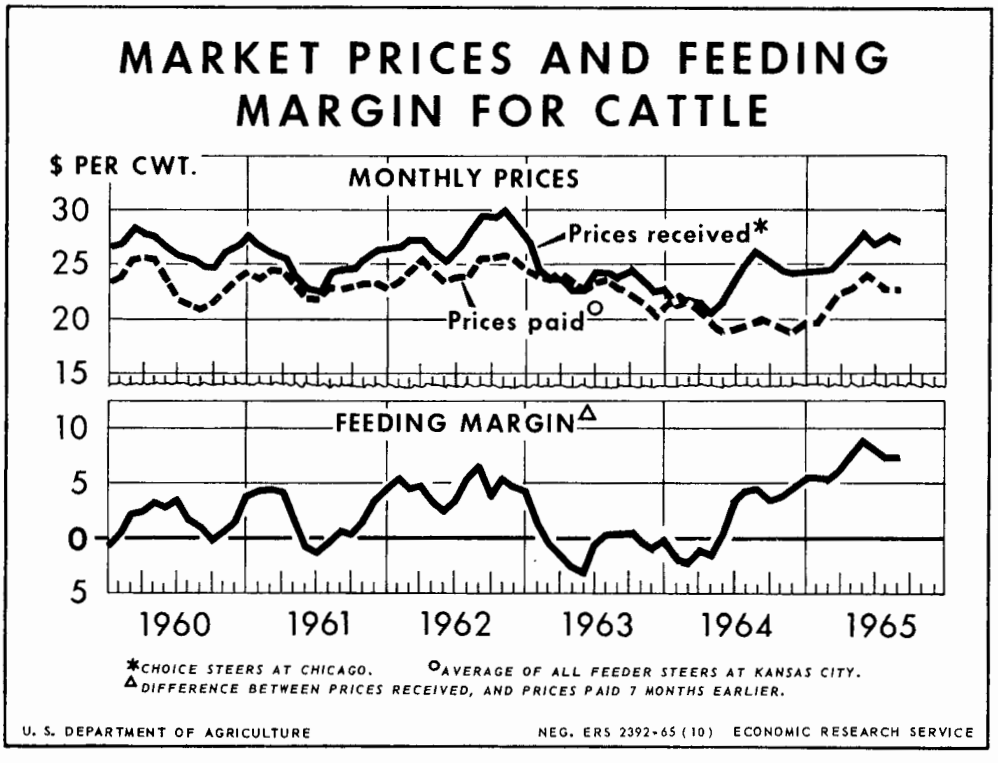

Figure 4

percent from a year earlier, and the number expected in the September-November period is 5 percent below a year earlier. With fewer pigs on farms, and a big corn crop this year, the hog-corn price ratio, at 21.6 in mid-October, probably will remain favorable for feeding. Hog slaughter this fall and winter will average about 10 percent below a year earlier, and prices of market hogs are expected to hold up well. This favorable outlook for market hogs will lead to stronger prices of feeder pigs.

Prices of feeder lambs in mid-October averaged $20.90 per hundredweight compared with $18.80 a year earlier. Fat lamb prices averaged $22.10 compared with $19.50 in October 1964. Thus the difference between prices paid and those received was $1.20 in October compared with $0.80 a year earlier.

The 1965 lamb crop was about 2 percent smaller than the 1964 crop. All of the decline was in the 35 Native States while the 13 Western States had about the same number of lambs as in 1964. Sheep and lamb slaughter this year probably will be down about 10 percent as sheep producers hold back a larger number of ewe lambs. Shipments of feeder sheep and lambs into 8 Corn Belt States during the first 8 months of this year were 26 percent below shipments in the comparable 1964 period. Withholding of lambs to build up flocks will reduce the number available to feeders, and prices of feeder lambs will tend to rise.

Taxes

Taxes levied on farm real estate in 1963 totaled $1,468 million. Advance reports on 1964 levies indicate a 5.3 percent increase to about $1,546 million. Average taxes per acre in 1964 were $1.51 as compared to $1.43 a year earlier. This is the 22nd consecutive annual increase in farm real estate taxes. The 1964 level is more than double that of 1950.

Taxes on farm personal property have also trended upwards. They were estimated at about $287 million in 1964, down from $295 million in 1963 (because of lower value of cattle) but more than 62 percent greater than in 1950.

The uptrend in farm property taxes is a direct outgrowth of the steadil expanding revenue requirements of State and local governments. Rising salary levels for public employees, higher costs of materials, expanded requirements and rising standards for schools, roads, welfare and other governmental services are largely responsible for the growing revenue needs. Nationally, the property tax (farm and nonfarm) contributes about 88 percent of all local tax revenue.

While farm real estate taxes have been rising throughout the Nation, geographic differences in market values of farm real estate have been an important determinant of the amounts levied. Effective tax rates (taxes per $100 of full value) on farm real estate are highest in the Northeast Region, the Lake States Region, the Corn Belt, and the Northern Plains. The Delta, Appalachian, Southeast, and Southern Plains Regions show the lowest effective rates. States that employ decentralized patterns of State-local government, with heavy reliance on local financing tend to have the highest effective rates while those States and regions in which a high proportion of the State-local government functions are administered and financed at the State level tend to have low effective property tax rates.

Taxes are also higher if a farm is located near a city. In 1963, for example, levies on farm real estate in standard metropolitan statistical areas averaged more than 2 1/2 times the taxes on farms in counties immediately adjacent to such areas, and were more than 5 times as high as in rural counties -- those at some distance from metropolitan centers. It is estimated that about one-fourth of the total farm real estate levies in 1963 originated in metropolitan areas.

Concern over the problems involved in assessing and taxing farmland in rural-urban fringes is apparent in recent actions by a number of States to provide preferential tax treatment for this category of property. These actions are generally patterned after legislation first enacted in Maryland in 1956, providing for the assessment of farmland exclusively on the basis of agricultural use, without regard to land value for potential nonfarm use.

The average increase in farm real estate taxes over the past 22 years has been slightly over 6 percent per year. The rate of change in future years will be affected by changing costs and levels of service and by the extent to which local governments are able to utilize alternative sources of revenue instead of the property tax. There is as yet no evidence to suggest any significant slackening in the rate of increase.

Interest

Higher livestock prices and record crop prospects are contributing to improved 1965 farm incomes in many areas. Reflecting these more optimistic conditions, farmers are stepping up their use of non-real-estate credit this year and are continuing to borrow large amounts using real estate as security. Farmers' purchases of machinery in 1965 have increased further from already record levels, and larger numbers of cattle are on feed at higher prices than last year. Rising farmland values indicate the strength of farmers' demand for available land. The condition of farm loans -- as indicated by the rates of repayment on loans, the scarcity of delinquencies, and the few foreclosures -- has been an important factor in the willingness of lenders to provide large amounts of loan funds to farm borrowers.

Outstanding farm debt (excluding Commodity Credit Corporation loans) is expected to increase about $3.4 billion during 1965, reaching $39.4 billion by year end. Real estate debt is expected to increase about 12 percent and non-real-estate debt 7 percent. Interest payable on farm debt increased again during 1965, largely because of the increase in debt.

Interest charges on the farm debt are estimated at $2,161 million for 1965 (table 9). This would be about $200 million or 10 percent more than interest charges in 1964 -- about the same percentage increase as occurred from 1963 to 1964. These figures exclude interest charges on loans for family living expenses.

Interest charges on the farm debt in 1965 were about one-half higher than 5 years earlier, whereas outstanding debt increased about 60 percent during the period. Interest charges have increased more rapidly than total farm expenses. In 1965 interest made up 7 percent of total farm expenses compared with 5 percent in 1961.

Farm-mortgage interest rates remained generally stable during the first half of 1965. On July 1, 10 of the 12 Federal land banks were charging 5.50 percent on their farm-mortgage loans, 1 was charging 5.20 percent and 1 5.00 percent. Eight of the banks have not changed rates since early in 1961. Rates charged by life insurance companies on their farm-mortgage loan commitments averaged 5.7 percent in the second quarter of 1965, very little changed from the first quarter of 1965, and from a year earlier. Federal land banks and life insurance companies are the largest institutional sources of farm-mortgage credit.

Looking to the future, yields on some long-term securities have risen a little since midyear. Thus, firm to slightly rising rates on farm-mortgage loans seem probable next year unless demands for long-term funds should ease.

Interest rates on non-real-estate loans of the production credit associations had increased a little further by mid-1965 as shown in the following tabulation.

Table 9.--Annual interest charges on the farm debt, selected years, 1950-1964

Year	Total	Charges on mortgage debt	Charges on short-term debt owed to--1/				
			All lenders	Commercial banks	Production credit associations 2/	Farmers Home Administration	Merchants, dealers and miscellaneous creditors
	Million dollars	Million dollars	Million dollars	Million dollars	Million dollars	Million dollars	Million dollars
1950---	585	264	321	134	32	17	138
1955---	838	402	436	186	47	21	182
1959---	1,217	572	645	277	98	21	249
1960---	1,342	627	715	307	120	20	268
1961---	1,431	685	746	324	117	24	281
1962---	1,582	758	824	363	125	27	309
1963---	1,771	845	926	407	142	31	346
1964---	1,964	951	1,013	440	161	33	379
1965 3/	1,161	1,074	1,087	464	179	36	408

1/ Includes service fees. Excludes interest charges on Commodity Credit Corporation price support loans and interest charges on debt for family living purposes.

2/ In addition to production credit associations, includes Federal intermediate credit bank loans to and discounts for livestock loan companies and agricultural credit corporations.

3/ Preliminary.

interest rate charged 1/	Percentage of associations charging specified rates on July 1:			
	1962	1963	1964	1965
	Percent	Percent	Percent	Percent
Less than 6 percent	11	14	7	5
6 percent	59	60	46	42
6-1/8 percent to 6-7/8	24	23	40	43
7 percent and over	6	3	7	10
All rates	100	100	100	100

1/ Rates shown exclude loan fees.

Sales of Federal Intermediate Credit Bank debentures in July-September 1965 were at rates about 0.3 percentage points above both those of a year earlier and the 1964 average. These higher money costs have been reflected in higher rates charged to associations by the credit banks, and by higher rates charged to borrowers by some associations. Rates charged to borrowers have increased less than the increase in money costs.

Rates charged borrowers by production credit associations will probably continue to edge upward unless rates in central money markets should decline. Scattered information indicates little change in interest rates charged on farm loans by commercial banks. Commercial banks are the largest source of institutional non-real-estate credit used by farmers; production credit associations are the next largest lenders.

Studies indicate that much of the mortgage and non-real-estate credit obtained by farmers is used to purchase machinery, livestock, land, and other productive facilities. Often these purchases are part of the process of enlarging and improving farming operations. The continued favorable condition of farm loans is evidence of a constructive use of credit by farm operators, and also indicates that, even with the large increase in the use of credit, relatively few farmers have been unable to manage their debts.

Insurance

Business and personal insurance premiums and Social Security payments of farmers will total almost $2.1 billion in 1965, an increase of almost $50 million from the revised 1964 figure. The average total insurance bill increased from $590 per farm in 1964 (revised) to $620 per farm in 1965. Approximately one-half of the per-farm increase was caused by the estimated decline in the number of farms between the 2 years. About one-third of the total payments was related to farm production; the remainder was personal or family expenditures.

Life, health and accident insurance premiums accounted for almost 45 percent of the total insurance payments. Another 35 percent of the total was evenly split between motor vehicle insurance and Social Security payments, including self-employment taxes and taxes paid for hired farm labor. The remaining 20 percent was for insurance on crops, farm machinery, livestock, and for fire and windstorm insurance on buildings.

Facing many natural and man-made hazards farmers in 1964 purchased approximately $2.9 billion of crop-hail insurance at an estimated cost of $110 million and received payments of close to $70 million for hail damage. Almost one-half of the total coverage was concentrated in the Corn Belt. Farm fire losses totaled $193 million in 1964. Probably less than one-half of this loss was insured.

A farmer may be involved in an accident or he may be sued because of an accident to an employee. In either case the income of the family, as well as the income of the business, may be jeopardized. The accidental death rate on farms increased 66 percent from 1949 to 1963.

To offset some of these hazards more fully, insurance expenditures can be expected to increase in 1966 at about the same rate as in the past. Although premium rates are likely to be higher, the main reason for the increase will be because more people purchase various types of insurance and obtain higher coverage on existing insurance.

Social Security Amendments--1965

The Social Security Amendments of 1965 established a broad program of health insurance for all U.S. citizens 65 and older. This program widely known as "Medicare" will provide benefits for farm people beginning July 1, 1966. The law establishes 2 coordinated health insurance plans:

> (1) A basic plan providing financial help in meeting costs hospital and related care; and (2) a voluntary supplemental plan providing financing for physician's services and other medical and health services.

Coverage for those 65 and over under the basic plan includes hospitalization, post-hospital extended care, out-patient hospital diagnostic services, and post-hospital home health care services.

The voluntary supplementary medical insurance plan pays part of the cost of physician services, limited treatment of mental disorders, home health services and other medical and health services.

In addition to the Medicare provisions, the 1965 amendments increase the level of benefits under the existing social security program, provide benefits to some persons not covered earlier, liberalize the disability program, and raise retirement income limits of persons 65-72 years old. Under the amendments farmers and others will report more income and pay more taxes, but will also receive increased benefits in the future.

Benefits of retired workers are increased 7 percent payable retroactively from January 1965. As a minimum, benefits are increased $4 monthly for workers who were 65 years old or older when they retired.

Some persons over 72 years of age who have not been eligible in the past, can receive a basic benefit of $35 monthly. Widows can receive reduced benefits starting at ago 60. It is easier for a person to qualify for disability benefits under the new law.

The 1965 amendments permit annual earnings up to $1,500 after 1965 without any loss in benefits. Benefits will be reduced $1 for each $2 of earnings between $1,500 and $2,700. For each $1 of earning over $2,700, benefits will be reduced $1.

The Social Security Amendments of 1965 increase the amount of income that is subject to social security taxes from $4,800 to $6,600 beginning January 1, 1966. Under the amendments, the tax rate schedule is unchanged for 1965, but will be changed for later years (table 10).

FARM REAL ESTATE

During the year ended March 1965 farm real estate market values showed about the same rate of increase as in the previous year, with the National Index of farm land values per acre advancing to 139 (1957-59=100), 6 percent above a year earlier. The market value of all farm real estate increased $8.6 billion during the year with the total value reaching $159 billion. This total is equivalent to $52,200 per farm and $146 per acre. The average value per farm ranged from $15,000 in West Virginia to $445,000 in Arizona. Values in the Southeast and South Central States ranged from $20,000 to $30,000 per farm. Typical Corn Belt values per farm ranged from $50,000 to $60,000. Nationally the average value per farm has more than doubled (143 percent) in the 1955-65 period. However, in a few States such as Florida, Mississippi, Louisiana, and California where per-acre value and farm size have increased most rapidly, per-farm values have increased more than 3-fold (fig. 5).

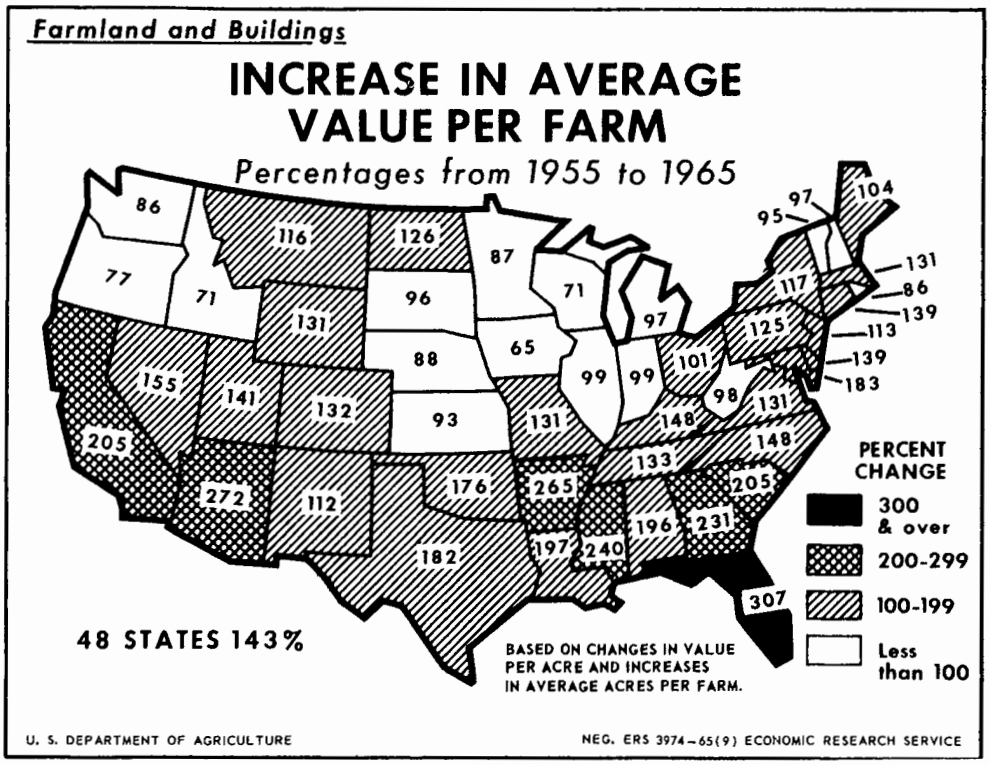

Figure 5

Table 10.--Social Security tax rates for self-employed farmers, employers and farm wage workers before and after the 1965 amendments

Calendar year	Self-employed farmers				Farm wage workers (employer-employee)1/			
	Before 1965 amendments	Under 1965 amendments			Before 1965 amendments	Under 1965 amendments		
	OASDI only	OASDI 2/	Basic hospital	Total	OASDI only	OASDI 2/	Basic hospital	Total
	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent
1965	5.4	5.4	---	5.4	3.625	3.625	---	3.625
1966	6.2	5.8	.35	6.15	4.125	3.85	.35	4.20
1967	6.2	5.9	.50	6.40	4.125	3.9	.50	4.40
1968	6.9	5.9	.50	6.40	4.625	3.9	.50	4.40
1969-72	6.9	6.6	.50	7.10	4.625	4.4	.50	4.90
1973-75	6.9	7.0	.55	7.55	4.625	4.85	.55	5.40
1976-79	6.9	7.0	.60	7.60	4.625	4.85	.60	5.45
1980-86	6.9	7.0	.70	7.70	4.625	4.85	.70	5.55
1987 and later	6.9	7.0	.80	7.80	4.625	4.85	.80	5.65

Source: Jones, L. A., and Reinsel, E. J. Social Security Amendments of 1965 of Importance to Farm and Rural People, ERS-257, ERS-USDA, Oct. 1965.

1/ Employer and employee contributions are the same.
2/ Old-age and Survivors and Disability Insurance.

Basic supply and demand indicators in 1965 showed little change from a year earlier. Demand for farm real estate remained strong while the number of tracts available for transfer continued to be limited in supply. Farm real estate market reporters were generally confident that the upward trend in land prices would continue through late 1965.

Voluntary transfers of farm real estate were estimated to be occurring at the rate of 28.4 per 1,000 farms, 4 percent below the previous year. Slight declines occurred in all regions except the Delta and Pacific States. Allowing for a continuing decline in the number of farms, the total volume of transfers dropped 7 percent below the previous year. This represents the continuation of a nearly steady decline in the number of sales over the past decade, which, in combination with the strong demand, has undoubtedly contributed to the upward trend in land prices.

The percent of transfers for farm enlargement continued to increase in 1965 and accounted for about 54 percent of all transfers for farming purposes, 4 percent above a year earlier. Although the percentage rate of transfer for farm enlargement has more than doubled in the last 10 years, the total number of transfers has declined. Thus, the number of transfers for farm enlargement has increased only slightly.

Farm operators continue as the major buyers of farm real estate in 1965, with owner operators and tenant farmers together accounting for nearly two-thirds of all buyers. Regionally the percent of owner-operator buyers ranged from 47 percent in the Corn Belt to 62 percent in the Northern Plains. Significantly, 24 percent of all buyers in the Corn Belt had been tenants prior to the purchase.

Active and retired farmers were the sellers in about 60 percent of all transfers of farm real estate in 1965. Estate sales accounted for about 13 percent of all transactions.

Sellers of farm real estate continue to be the major source of credit, financing 38 percent of all sales reported in 1965. More than 50 percent of all seller-financed sales were by land contract in nine of the ten farming regions. Commercial banks provided credit for about 18 percent of all credit purchases in 1965, more than any other source except th sellers.

Rental rates for farms in 1965 advanced at about the same rate as the market value, as indicated by a nearly constant gross rent-to-value ratio. Rental rates range from $5.70 per acre in North Dakota to $24.35 per acre in Illinois. However, the ratio of rent to market value was 8.5 percent in North Dakota and 5.5 percent in Illinois.

The outlook for 1966 is a continuation of the strong demand for farm real estate and little change in the quantity of land available for transfers Thus, land prices probably will continue to advance.

COSTS BY TYPE OF FARM

The relative quantities of individual production inputs used vary greatly by enterprises and therefore by type of farm. Consequently changes in prices paid for production inputs affect operating expenses differently on different types of farms. The annual estimates, or series, on farm costs and returns, representative of important segments of commercial agriculture, provide an illustration of these differences (fig.6). The net effect of changes in prices paid and production efficiency on operating expenses per unit of production is shown in table 11.

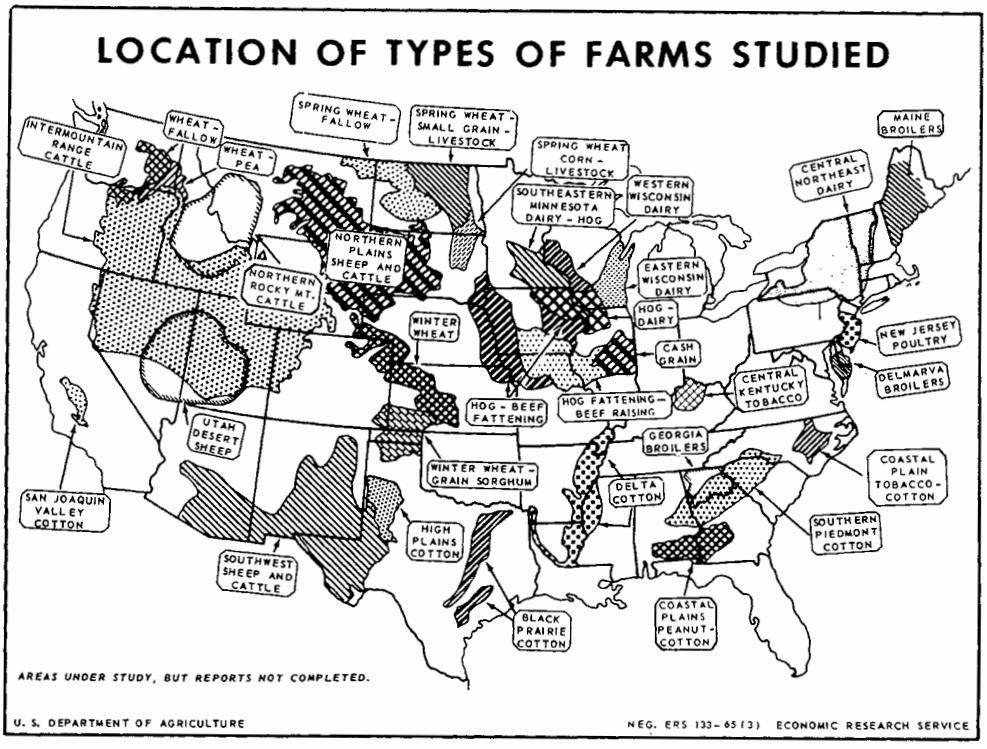

Figure 6

On some types of farms, farm expenses relative to production were at, or near, record-high levels again in 1964. This was true of the dairy farms, broiler farms, Texas High Plains cotton farms, Kentucky Bluegrass tobacco farms, Northern Plains wheat-corn-livestock farms, and Southwest cattle and sheep ranches. In contrast, expenses per unit of production were lower than in 1963 on egg-producing farms in New Jersey, cotton farms in the Southern Piedmont, Mississippi Delta and Black Prairie of Texas, peanut-cotton farms in the Southern Coastal Plains, tobacco farms in the North Carolina Coastal Plain, and wheat farms and ranches in the Northern Plains.

Although prices paid for items used in production were generally higher, inputs per unit of production were lower in 1964 than in 1963 on

Table 11.--Operating expense per unit of production: Index numbers, selected types of farms, 1964, with comparisons 1/

(1957-59 = 100)

Type of farm and location	Average			1962	1963	1964 2/
	1950-54	1955-59	1960-64			
Dairy farms:						
Central Northeast	95	96	107	110	109	109
Eastern Wisconsin:						
Grade A	104	99	105	104	107	109
Grade B	104	99	99	97	100	101
Western Wisconsin, Grade B	106	100	102	95	96	118
Dairy-hog farms, Southeastern Minnesota	102	97	112	111	112	120
Egg-producing farms, New Jersey	117	102	90	92	91	86
Broiler farms:						
Maine	107	100	108	111	110	108
Delmarva:						
Broilers	3/	3/	93	88	91	97
Broiler-crop	110	100	100	100	108	110
Georgia	85	96	108	111	109	111
Corn Belt farms:						
Hog-dairy	104	99	115	121	117	116
Hog-fattening--beef raising	104	99	116	121	119	116
Hog-beef fattening	108	101	112	111	117	112
Cash grain	99	97	111	111	113	113
Cotton farms:						
Southern Piedmont	106	99	99	101	99	93
Mississippi Delta:						
Small	94	94	98	99	93	97
Large-scale	112	96	86	86	82	81
Texas:						
Black Prairie	109	105	99	103	91	93
High Plains (nonirrigated)	144	116	115	108	100	185
High Plains (irrigated)	110	106	100	99	100	112
San Joaquin Valley, Calif. (irrigated):						
Cotton-specialty crop	93	98	110	109	111	107
Cotton-general crop (medium-sized)	98	99	109	107	110	106
Cotton-general crop (large)	99	100	111	109	113	108
Peanut-cotton farms, Southern Coastal Plains	94	96	94	102	87	90
Tobacco farms:						
North Carolina Coastal Plain:						
Tobacco	87	97	95	96	96	93
Tobacco-cotton	90	97	95	95	95	95
Kentucky Bluegrass:						
Tobacco-livestock, Inner area	88	97	102	104	92	105
Tobacco-dairy, Intermediate areas	84	97	102	98	96	108
Tobacco-dairy, Outer area	89	98	103	99	97	104
Spring wheat farms:						
Northern Plains:						
Wheat-small grain-livestock	101	90	99	60	74	64
Wheat-corn-livestock	111	105	98	102	94	109
Wheat-fallow	89	89	91	61	64	63
Winter wheat farms:						
Southern Plains:						
Wheat	101	108	97	95	108	105
Wheat-grain sorghum	110	109	104	106	130	122
Pacific Northwest:						
Wheat-pea	100	104	109	103	106	96
Wheat-fallow	115	116	116	110	114	109
Cattle ranches:						
Northern Plains	95	99	95	102	95	91
Intermountain Region	109	102	118	111	117	123
Southwest	135	110	111	109	119	132
Sheep ranches:						
Northern Plains	116	109	102	103	90	99
Utah-Nevada	101	98	111	110	111	116
Southwest	146	115	107	102	115	133

1/ Exclusive of charges for capital and unpaid labor. 2/ Preliminary. 3/ Not available.

17 of the 42 types of farms and were lower than in 1960-64 on 26 of these types (table 12). The relatively greater reduction in inputs per unit of production occurred on wheat-small grain-livestock farms in the Northern Plains and on cotton farms in the Southern Piedmont. On both of these types of farms, crop yields in 1964 were relatively high. The value of inputs per unit of production was higher than in 1963 on 20 of the 42 types of farms. The relatively unfavorable input-output ratios in 1964 were generally associated with lower yields or lower prices received for products sold (or both) on these farms. No appreciable change in input-output ratios has occurred since 1955-59 for the Central Northeast dairy farms and the Utah-Nevada sheep ranches.

Prices paid for goods and services on most of the 42 farm types averaged at or near a record-high in 1964. An exception was the egg-producing farms in New Jersey, with the index of prices paid about 9 percent lower in 1964 than in 1955-59. Lower feed prices explain most of this decline in the index of prices paid by egg producers. Lower operating expense per unit of production on the poultry farms reflects both lower feed prices and increased rate of lay. In general, the greatest increases in prices paid since 1955-59 have occurred on Southwest sheep and cattle and on Delmarva specialized broiler farms. Substantial increases in prices paid also have occurred on several other types of farms. Higher prices for inputs contributed to higher operating expenses per unit of production on one-third of the 42 farm types, particularly on dairy, broiler, and Texas High Plains cotton farms, and cattle and sheep ranches in the Southwest. Operating expenses per unit of production were lower in 1964 than in 1955-59 on 14 types of the farms, including many of the cotton and wheat farms and the Northern Plains cattle and sheep ranches.

Preliminary estimates for 1965 on 8 selected types of farms and ranches indicate that the general upward trend in prices paid for items and services used in production continued on 5 types of farms and that prices remained about the same or slightly lower on 3 (table 13). Operating expenses per unit of production probably will be about the same or lower than in 1964 on 4 types of farms, considerably lower on 2 (wheat farms), slightly higher on beef-fattening farms and considerably higher on tobacco farms. Prices received averaged lower for egg-producing farms, New Jersey, and large-scale cotton farms, Mississippi. They were higher ranging from 3 to 16 percent on the other 6 types of farms.

Commercial Dairy Farms, Eastern Wisconsin, Grade A

The upward trend in total operating expenses on representative grade A dairy farms in Eastern Wisconsin probably will continue in 1965. Prices paid for inputs and quantities of inputs purchased are expected to increase moderately, but total output and size of farm are also expected to increase, thus total operating expense per unit of production is likely to be about the same as in 1964.

Gross farm income on these dairy farms is estimated to be about 9 percent higher in 1965--more than enough to offset higher operating expenses. Net farm income, therefore, will be 15 percent higher than in the previous year.

Table 12.--Input per unit of production: Index numbers, selected types of farms, 1964, with comparisons 1/

(1957-59 = 100)

Type of farm and location	Average			1962	1963	1964 2/
	1950-54	1955-59	1960-64			
Dairy farms:						
Central Northeast	105	99	98	100	97	97
Eastern Wisconsin:						
Grade A	115	102	94	93	93	93
Grade B	118	105	96	94	94	95
Western Wisconsin, Grade B	119	103	93	87	86	105
Dairy-hog farms, Southeastern Minnesota	121	102	99	99	96	103
Egg-producing farms, New Jersey	106	102	96	98	95	92
Broiler farms:						
Maine	149	107	95	95	96	97
Delmarva:						
Broilers	3/	3/	3/	93	92	90
Broiler-crop	130	104	92	91	98	97
Georgia	121	103	95	96	93	93
Corn Belt farms:						
Hog-dairy						
Hog fattening--beef raising	117	102	100	106	96	90
Hog-beef fattening	109	104	98	97	96	97
Cash grain	114	100	89	92	88	87
Cotton farms:						
Southern Piedmont	119	101	91	94	88	79
Mississippi Delta:						
Small	107	96	88	90	79	82
Large-scale	109	97	82	82	76	76
Texas:						
Black Prairie	116	109	92	96	83	85
High Plains (nonirrigated)	175	125	111	104	94	188
High Plains (irrigated)	110	106	93	92	93	103
San Joaquin Valley, Calif. (irrigated):						
Cotton-specialty crop	108	101	104	104	105	100
Cotton-general crop (medium-sized)	114	104	103	101	104	98
Cotton-general crop (large)	116	105	105	102	106	100
Peanut-cotton farms, Southern Coastal Plains	118	99	87	94	77	79
Tobacco farms:						
North Carolina Coastal Plain:						
Tobacco	105	100	85	85	84	80
Tobacco-cotton	107	99	83	85	83	81
Kentucky Bluegrass:						
Tobacco-livestock, Inner area	100	99	95	95	84	95
Tobacco-dairy, Intermediate area	104	101	92	91	82	91
Tobacco-dairy, Outer area	107	102	93	90	85	91
Spring wheat farms:						
Northern Plains:						
Wheat-small grain-livestock	113	92	94	55	72	60
Wheat-corn livestock	116	107	92	91	88	99
Wheat-fallow	99	91	88	55	60	59
Winter wheat farms:						
Southern Plains:						
Wheat	105	110	88	86	96	94
Wheat-grain sorghum	138	120	90	89	110	109
Pacific Northwest:						
Wheat-pea	108	105	101	93	94	86
Wheat-fallow	124	117	111	106	110	103
Cattle ranches:						
Northern Plains	100	102	96	102	90	92
Intermountain Region	126	106	105	100	102	108
Southwest	118	111	97	97	104	106
Sheep ranches:						
Northern Plains	121	111	98	99	85	95
Utah-Nevada	109	100	102	100	99	102
Southwest	124	114	99	98	102	115

1/ Includes charges for capital and unpaid labor.
2/ Preliminary.
3/ Not available.

Table 13.--Cost and returns, selected types of farms, average 1957-61, 1964, and preliminary, 1965

Type of farm	Unit	Average 1957-61	1964	1965
Dairy farms (Grade A) Eastern Wisconsin:				
Gross farm income	Dollar	13,676	16,906	18,498
Operating expenses	do.	7,974	10,365	10,963
Net farm income	do.	5,702	6,541	7,535
Cows, 2 years old and over	Number	28.2	33.3	34.2
Milk production per cow	Pound	9,610	10,540	10,800
Total farm capital, Jan. 1	Dollar	56,030	71,950	75,530
Index numbers (1957-59 = 100):				
Net farm production	do.	105	127	134
Operating expense per unit of production	do.	101	109	109
Total cost per unit of production	do.	100	106	105
Prices paid	do.	102	110	112
Prices received	do.	101	100	103
Hog-beef fattening farms, Corn Belt:				
Gross farm income	Dollar	26,351	34,386	43,626
Operating expenses	do.	17,584	25,743	29,642
Net farm income	do.	8,767	8,643	13,984
Fat cattle sold	Cwt.	611	921	1,087
Hogs sold	do.	519	614	606
Total farm capital, Jan. 1	Dollar	96,970	123,720	132,980
Index numbers (1957-59 = 100):				
Net farm production	do.	102	127	131
Operating expense per unit of production	do.	104	112	113
Total cost per unit of production	do.	102	105	104
Prices paid	do.	102	106	102
Prices received	do.	98	92	102
Tobacco farms, Coastal Plain, North Carolina:				
Gross farm income	Dollar	10,442	12,835	12,209
Operating expenses	do.	5,428	6,406	6,005
Net farm income	do.	5,014	6,429	6,204
Tobacco harvested	Acre	7.9	7.7	7.0
Yield per acre	Pound	1,742	2,276	2,012
Total farm capital, Jan. 1	Dollar	23,240	41,370	43,570
Index numbers (1957-59 = 100):				
Net farm production	do.	111	136	118
Operating expense per unit of production	do.	98	93	101
Total cost per unit of production	do.	97	92	101
Prices paid	do.	102	112	115
Prices received	do.	104	101	111
Cotton farms (large-scale) Mississippi Delta:				
Gross farm income	Dollar	65,940	79,684	74,970
Operating expense	do.	42,815	45,061	44,822
Net farm income	do.	23,125	34,623	30,148
Cotton harvested	Acre	235	240	230
Yield per acre	Pound	514	673	660
Total farm capital, Jan. 1	Dollar	202,100	286,620	316,540
Index numbers (1957-59 = 100):				
Net farm production	do.	106	128	124
Operating expense per unit of production	do.	96	83	85
Total cost per unit of production	do.	96	88	93
Prices paid	do.	101	113	116
Prices received	do.	101	102	99

Table 13.--Cost and returns, selected types of farms, average 1957-61, 1964, and preliminary, 1965--Continued

Type of farm	Unit	Average 1957-61	1964	1965
Egg-producing farms, New Jersey:				
Gross farm income	Dollar	27,234	27,439	28,300
Operating expenses	do.	24,166	24,969	25,577
Net farm income	do.	3,068	2,470	2,723
Layers on hand during year	Number	4,189	4,718	4,836
Egg production	Dozen	67,864	78,240	83,018
Total farm capital, Jan. 1	Dollar	42,870	45,430	46,150
Index numbers (1957-59 = 100):				
Net farm production	do.	106	143	155
Operating expense per unit of production	do.	96	86	84
Total cost per unit of production	do.	97	87	85
Prices paid	do.	97	92	91
Prices received	do.	101	88	85
Cattle ranches, Intermountain Region:				
Gross ranch income	Dollar	17,170	14,200	17,468
Operating expenses	do.	6,582	7,440	7,926
Net ranch income	do.	10,588	6,860	9,542
Cows, 2 years old and over	Number	131.5	143.5	154.6
Total ranch capital, Jan. 1	Dollar	77,790	92,330	90,530
Index numbers (1957-59 = 100):				
Net ranch production	do.	99	98	104
Operating expense per unit of production	do.	108	123	122
Total cost per unit of production	do.	106	122	117
Prices paid	do.	103	111	112
Prices received	do.	98	81	94
Wheat-small grain-livestock farms, Northern Plains:				
Gross farm income	Dollar	9,586	14,673	18,065
Operating expenses	do.	5,876	5,983	6,349
Net farm income	do.	3,710	8,690	11,716
Wheat harvested	Acre	140.2	147.7	159.4
Yield per acre	Bushel	16.7	26.9	28.8
Total farm capital, Jan. 1	Dollar	48,700	60,540	63,630
Index numbers (1957-59 = 100):				
Net farm production	do.	93	158	195
Operating expense per unit of production	do.	119	64	56
Total cost per unit of production	do.	119	68	58
Prices paid	do.	100	105	107
Prices received	do.	103	80	83
Winter wheat farms, Southern Plains:				
Gross farm income	Dollar	15,532	14,627	17,351
Operating expenses	do.	5,732	6,356	6,603
Net farm income	do.	9,800	8,271	10,748
Wheat harvested	Acre	209.2	231.3	243.3
Yield per acre	Bushel	22.3	20.0	22.2
Total farm capital, Jan. 1	Dollar	88,280	113,490	118,770
Index numbers (1957-59 = 100):				
Net farm production	do.	110	108	116
Operating expense per unit of production	do.	95	105	99
Total cost per unit of production	do.	95	109	104
Prices paid	do.	102	112	111
Prices received	do.	99	78	82

The total quantity of milk sold per farm in 1965 will average about 5 percent higher than in 1964 because of an increase in number of cows and a 2.5 percent increase in milk production per cow. Prices received for milk sold by these dairymen are expected to average about 7 cents per hundredweight higher in 1965 than in 1964. Prices received for cattle and particularly hogs are likely to be higher than in 1964, but lower for calves.

Hog-beef Fattening Farms, Corn Belt

Total operating expenses on representative hog-beef fattening farms are estimated to be almost 15 percent higher in 1965 than in 1964. Most of this increase was due to greater feed purchases. Other expenditures were generally higher with power, machinery, and hired labor showing the largest increases. The total quantity of inputs purchased increased almost 20 percent above 1964 levels. Prices paid for inputs averaged 4 percent below the previous year, reflecting a $2.35 decline in feeder calf prices paid in the la fall of 1964 to be fed out in 1965. The 18 percent larger feeder cattle enterprise was responsible for the increased feed purchases.

The increased number of cattle on feed reflects both the decrease in feeder calf prices and a small increase in prices of fed cattle over a year ago. These divergent price movements caused the first positive price spread between feeder calf and fat cattle prices since 1962.

Hog production was reduced about 4 percent following the low prices received in 1964. However, a 33 percent increase in the average price received for hogs in 1965 relative to a year earlier raised hog receipts by 31 percent. Higher prices were also received for fed cattle and soybeans.

Prices received on these farms averaged almost 11 percent above 1964 levels. Total cash receipts increased by one-fourth over a year earlier, thus, overshadowing the increase in expenditures. As a result, net farm incom increased from $8,643 in 1964 to $13,984 in 1965.

Commercial Egg-Producing Farms, New Jersey

Total operating expenses in 1965 on typical commercial egg-producing farms in New Jersey are expected to average about 2 percent more than in 1964. However, cost per unit of production should be less, because of a 3 percent increase in rate of lay. The latter reflects more efficient use of inputs. Thus, despite lower egg prices, net farm income should show a favorable change from 1964.

Costs per 100 pounds of feed have been less than last year, but more layers per flock, and more replacement pullets have increased the total feed bill for the typical farm. Feed represents about 77 percent of the total operating costs. Other expense items, such as fuel, taxes, repairs, building materials, and utilities have all increased slightly.

Egg production per layer was higher during each of the first 9 months of 1965, compared with the corresponding months of 1964. During these months, egg prices have averaged about 1 cent per dozen less than in 1964. For the last quarter of 1965, prices are expected to average a little above a year earlier. An increase in the number of layers plus the higher rate of lay will more than offset the lower yearly average egg price and the increase in operating costs. Net farm incomes on these farms will be up from 1964.

Cattle Ranches, Intermountain Area

Total operating expenses in 1965 on representative commercial cattle ranches in the Intermountain area probably will average around 6 percent higher than in 1964 and 20 percent higher than in 1957-61. The chief reason for the increase from 1964 was an increase of about 5 percent in quantit of inputs purchased coupled with slightly higher prices paid for input items. Grazing fees and hay prices remained near 1964 levels whereas most nonfarm produced items continued slightly upward in price. In 1965, prices paid for items used in production averaged about 1 percent above 1964 and 9 percent above the 1957-61 average.

These ranchers normally buy a little hay each year from the more diversified operators in the irrigated valleys. Last year more than normal purchases reduced supplies on the irrigated farms and because of frosts and poor growing weather, production in 1965 is slightly below 1964. As a consequence ranchers who buy hay late this year or early in 1966 probably will pay considerably higher prices.

This was another mixed production year for ranchers in this large diversified area. A late spring and an early fall was not far different from a year earlier, but rainfall was better during the grazing season and livestock weights and condition of animals were generally improved over 1964. Net ranch production in 1965 was 5-6 percent greater than a year earlier and in 1957-61. Because of this higher production in 1965, operating expense per unit of production averaged slightly lower than in 1964. However, it was much above the 1957-61 average.

Prices received for feeder cattle and calves at the time (Sept.-Nov.) most of these ranchers were selling averaged 16 percent higher than a year earlier. Good and choice feeder calves brought $3 to $4 per hundredweight more in the 1965 season compared with a year earlier. These higher prices together with greater production resulted in an increase of about 22 percent in gross receipts. Net ranch income in 1965 probably will average about $9,540, nearly 40 percent higher than in 1964 but 10 percent below the 1957-61 average.

Tobacco Farms, Coastal Plain, North Carolina

Operating expenses in 1965 are expected to average about 6 percent lower than in 1964 on typical tobacco farms in the Coastal Plain of North Carolina. Net farm income probably will be down 3 to 4 percent despite the decline in costs. Inputs per farm will decline chiefly because of a smaller tobacco acreage in 1965. However, prices paid for production goods and services may average 3 percent higher in 1965, diminishing somewhat the effect of reduced inputs on expenses.

Tobacco production per farm is estimated at nearly 20 percent below the 1964 output due to the smaller acreage and a decline in yield per acre in 1965. Tobacco yields averaged a record high in this area in 1964.

Prices received for flue-cured tobacco in this area as of Oct. 23, 1965 averaged $63.04 per 100 pounds, $7.13 above the 1964 price. If this average holds through the remainder of the marketing season, cash receipts from tobacco will be about 9 percent below the corresponding return for 1964. Prices received for all products sold on these farms are expected to average about 10 percent above a year earlier.

Large-Scale Cotton Farms, Mississippi Delta

Total operating expenses in 1965 on large-scale cotton farms in the Mississippi Delta are expected to be slightly lower than in 1964. Cotton acreage is down slightly but soybean acreage is up about 7 percent. Expenditures are lower for insecticides, fertilizer, and herbicides because of reduced acreages of cotton but they were higher for farm machinery. Insect infestation has been low in 1965 as well as in 1964. Output per worker in cotton chopping was higher in 1965 because increasing use of herbicides made cleaner fields, and workers covered more ground.

Net income probably will be about 13 percent lower than in 1964, assuming the price of cotton remains the same as in mid-October. Reduced cotton acreage plus a slight reduction in yields are partly responsible. Other factors contributing to this reduced income are: (1) Some possibilities of rot or reduction in grade of cotton from new leaf growth, and subsequent staining, due to heavy rains during the harvesting period (2) Hurricane "Betsy" which reduced yields slightly (3) lower prices received for soybeans compared with 1964.

Wheat-Small Grain-Livestock Farms, Northern Plains

Total operating expenses in 1965 on wheat-small grain-livestock farms probably will average about 6 percent higher than in 1964 and 8 percent higher than in 1957-61. These increases result from an increase both in the inputs used for production and in prices paid. The index of prices paid for goods and services in 1965 is estimated as 2 percent higher than in 1964 and 7 percent higher than in 1957-61.

Production on these farms is likely to be at an all time high in 1965. Despite the increase in total expenses, expenses per unit of production are expected to average 12 percent lower than in 1964 and about 50 percent lower than in 1957-59. In addition to increased production, prices received for products sold probably will average about 4 percent higher than in 1964 and payments for participating in Government programs are also estimated to be slightly higher. As a result of these factors, net farm income is expected to average about 35 percent higher in 1965 than 1964 and about 3 times higher than in 1957-61.

Winter Wheat Farms, Southern Plains

Total operating expenses in 1965 on typical winter wheat farms in the Southern Plains are estimated to be about 4 percent higher than in 1964 and 15 percent higher than in 1957-61. Prices paid for goods and services will be about the same in 1965 as in 1964 and about 9 percent higher than in 1957-61.

Net farm production will be about 7 percent higher than in 1964 and about 5 percent higher than in 1957-61. Grain sorghum production will be about 30 percent higher, forage sorghum about 25 percent higher, and wheat production about 17 percent higher than in 1964. However, livestock production is expected to be about 15 percent lower because of reduc numbers of cattle resulting from the shortage of forage in the winter of 1964-65.

Operating expense per unit of production in 1965 is likely to decrease about 6 percent from a year earlier. Much of this is due to increased

production. Prices received for products sold probably will average about 5 percent higher in 1965 due largely to an increase in prices received for beef cattle. Prices received for grain are estimated to average about the same as in 1964. Because of increases in production, in prices received, and in Government payments with only a slight increase in operating expenses, net income is expected to average about $10,750, 30 percent higher than in 1964 and 10 percent above the 1957-61 average.

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