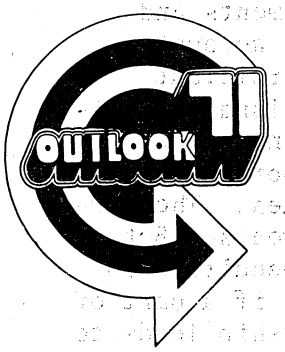

UNITED STATES DEPARTMENT OF AGRICULTURE
Economic Research Service

OUTLOOK FOR FARM COSTS

Talk by Richard D. Duvick 1/
Farm Production Economics Division
at the 1971 National Agricultural Outlook Conference
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Introduction

The situation and outlook for farm costs can be easily presented; farm production expenses have been rising almost continuously since World War II, they continued to rise in 1970, and are expected to rise further in 1971. Of course, it might also be helpful to know the factors responsible for this increase over time and what leads us to expect a further increase in 1971.

The focus of this morning's discussion will be on the national level, beginning with an examination of the total cost picture for U.S. agriculture and the relative importance of various categories of purchased inputs. This will be followed by an examination of recent trends in farm costs and the influence of price and quantity changes on total costs. Then the current situation for the major inputs and factors affecting their price and use in 1971 will be discussed.

The Total Picture

Continuing increases in farm production expenses brought the total to $40.4 billion in 1970, an increase of $2.0 billion over 1969 (table 1). Production expenses increased faster than farm income and realized net income of farmers declined from $16.2 billion in 1969 to $15.8 billion in 1970.

This $40.4 billion for farm production expenses includes both current and overhead items. But for this morning's discussion, I feel it is appropriate to concentrate on items that affect the cash flow of the farm operation. As one part of this, I will separate the current expense items from others. Current expenses are generally annual purchases for inputs such as feed and fertilizer which are used up in the course of a year. Many of these expenditures must be incurred if any production is to take place, but some substitution is possible between inputs or in the amounts of each input used.

1/ Thanks are extended to a number of persons in ERS who furnished data and material for the various input categories.

On the other hand, overhead expenses revolve around investments and expenditures related to investments. For example, depreciation accounts allow certain investments to be charged off annually. But the relevant concern for future cash flows is whether to make or defer additional investment. Thus, our concern is on current and expected prices of investment items, not depreciation charges on past investments. Other important items associated with investments are long-term debt and property taxes. The purchase of an investment item can often be deferred one or more years. But once the investment is made, it not only represents a large expenditure in that year, but will also lead to recurring costs in later years if a part of the cost is financed through debt. In addition, property ownership leads to an unavoidable expense, property taxes. And both tax rates and the taxable base change over time. Thus, these other items might be termed investment, recurring and unavoidable expenses.

A breakdown of the major inputs classified as current expenses, shows that total expenditures for all individual categories have increased since 1960 (table 2). In terms of dollars, the major increases were for purchased feed and purchased livestock. But the rates of change vary between inputs. The sharpest increases have been for expenditures on pesticides and interest charges, as both more than doubled between 1960 and 1969. In contrast, expenditures for hired labor and building repairs and maintenance have increased only slightly.

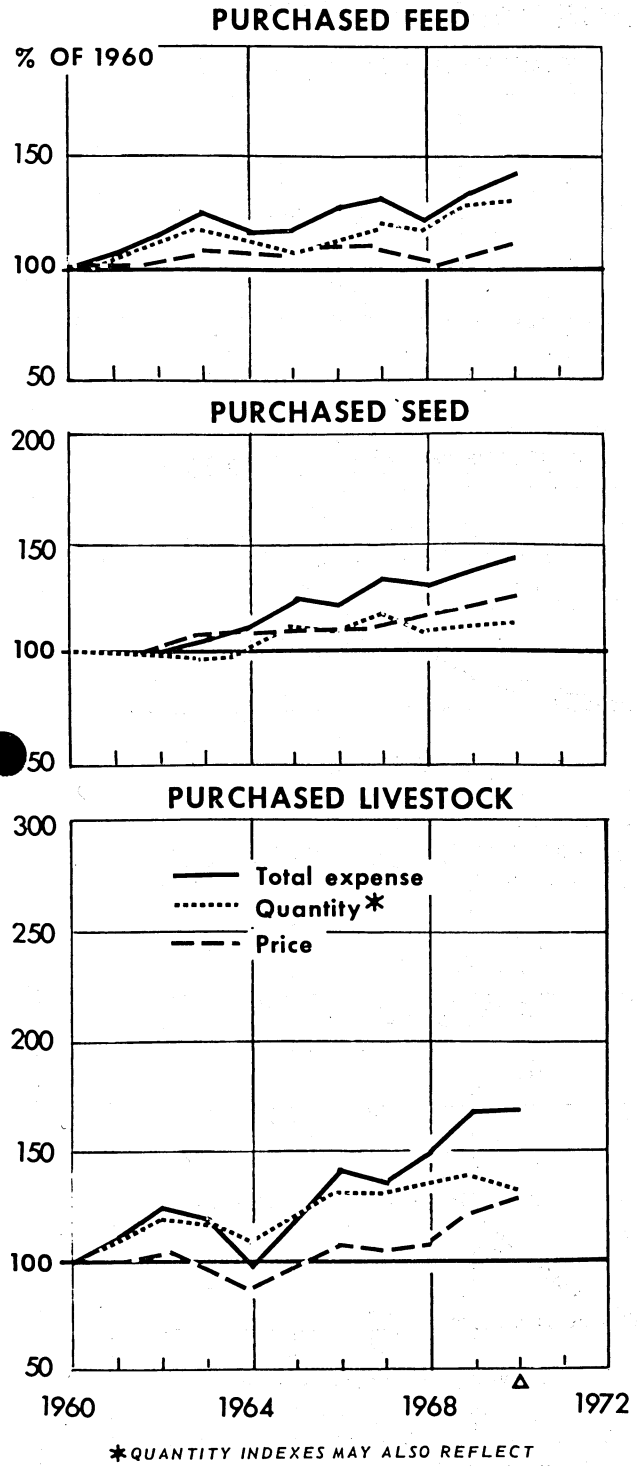
Each input's share of total current expense underwent little change in the 1960's. The greatest shifts were the increased importance of interest on non-real estate debt and of purchased livestock, each up nearly 3 percent, and the decreased importance of wages for hired labor, down about 3 percent. It is also interesting that inputs of farm origin continue to account for over 40 percent of all current expenses, and feed alone accounts for about 25 percent. Of course, these percentages vary greatly by type of farm.

Total expenditures are a function of prices and quantities. To illustrate trends in prices, quantities, and total expenditures for various inputs, index numbers of each have been plotted on a series of graphs (figs. 1 and 2). Price and expenditure indexes are from USDA data, while the quantity indexes are derived by dividing each index of total expenditures by the relevant price index.

Index numbers for the 1960 to 1970 period indicate the increased expenditures for each category. During the early years of this period, increases in expenditures appeared to result more from increasing quantities than from increasing prices. However, price increases subseqnetly became more dominant for many inputs.

Prices of inputs of farm origin also exhibited greater volatility than prices of inputs of nonfarm origin. Farm origin input prices underwent several swings during this period, while inputs of nonfarm origin generally trended upward. Fertilizer was a major exception, of course, and interest rates are

PRICES PAID, QUANTITIES USED, AND TOTAL EXPENDITURES FOR INPUTS OF FARM ORIGIN*



*QUANTITY INDEXES MAY ALSO REFLECT CHANGES IN PRODUCT MIX AND QUALITY.
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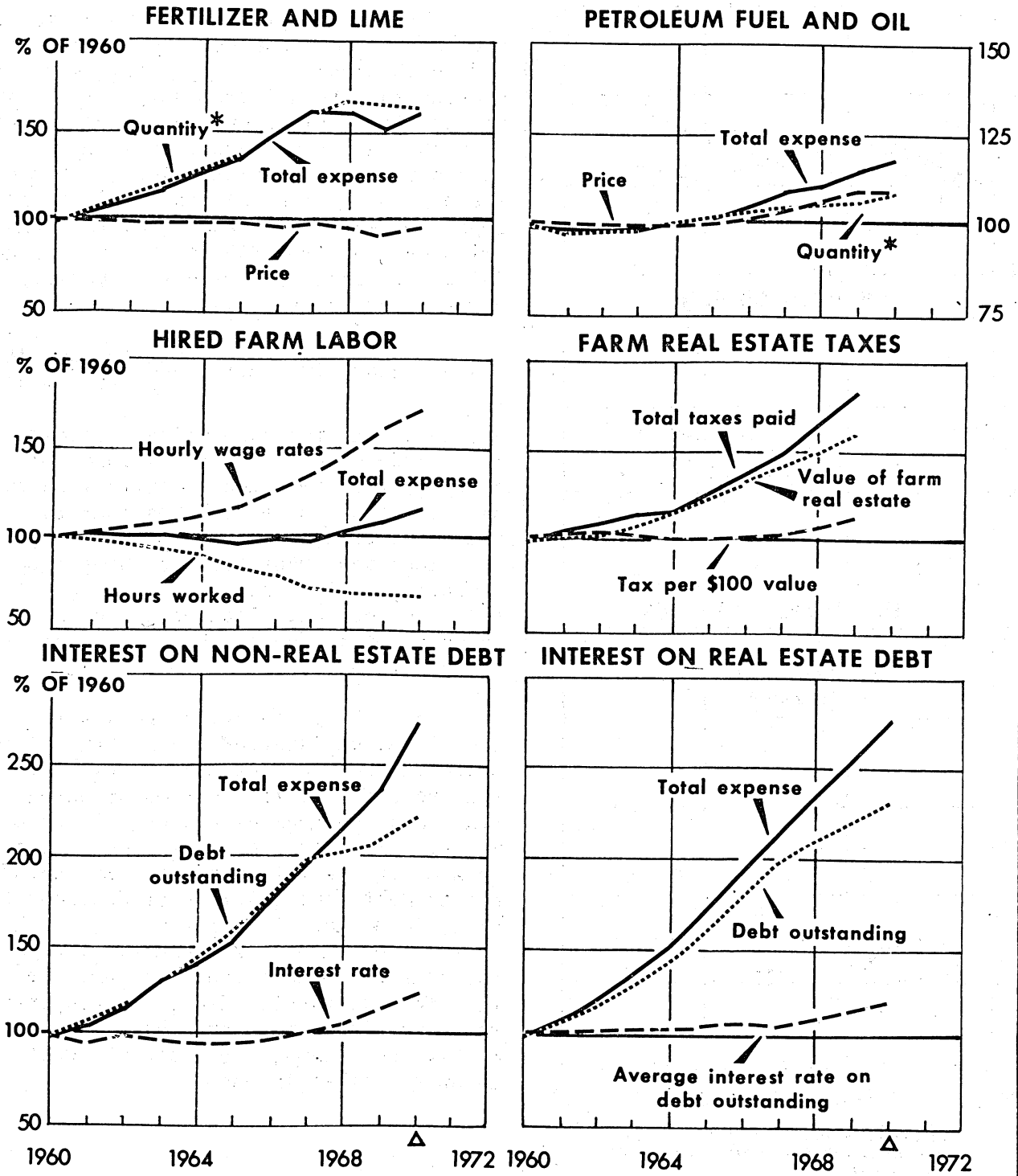
Changes in total expenditures for any item depends on changes in price per unit and in the quantity of the item used. To present the overall trends in prices, quantities and total expense by input categories over the last few years, index numbers of each have been calculated and plotted on these graphs. The data on total expense is from USDA estimates, as in tables 1 and 2. Price data is from SRS and ERS price indexes. These were used to derive the quantity indexes using the formula:

$$\text{quantity index} = \frac{\text{total expense index}}{\text{price index}}$$

To the extent the base weights used for the price indexes do not reflect input mix changes over time, the quantity indexes will be incorrect. However, these charts can demonstrate the relative impact of changes in prices and quantities to changes in total expenditures for each input. In addition, they provide an indication of the difference in rates of change of these items for the various inputs.

Several of the price indexes require additional explanation. For example, the price indexes for interest rates reflect the average rate for debt outstanding. Since most nonreal estate debt is on an annual basis, this index reflects recent sharp increases in short term rates. But on real estate debt, the majority of debt outstanding is on loans made in prior years, so the average moves up less rapidly. The interest rates used for this index reflect the annual rate for outstanding debt. On property taxes, the price index reflects the tax rate per $100 value. Thus, these are per unit costs, as on the other inputs.

PRICES PAID, QUANTITIES USED, AND TOTAL EXPENDITURES FOR SELECTED INPUTS OF NONFARM ORIGIN*



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expected to work back down some from their present levels. But differences in the production and marketing systems of farm versus nonfarm inputs will probably cause inputs of farm origin to continue to exhibit greater volatility in the years ahead.

Situation and Outlook by Input Categories

With that as background material, let us turn to the situation for individual inputs. The current expense and overhead items previously mentioned will be discussed. Some inputs such as feed and livestock have been covered in previous sessions devoted entirely to each and I shall discuss them only briefly here. And the limits of time necessitate that each input be treated in a rather brief, general fashion. Primary emphasis will be placed on the current situation for the input, factors affecting future prices and quantities, and expectations for the coming year.

CURRENT EXPENSE INPUTS

Purchased Feed

Expenditures for purchased feed increased sharply in 1970 as both feed grains and high-protein feeds had contraseasonal price rises after mid-year--feed grains because of the short supply; high-protein feeds becasue of sharply increased demand (fig. 1). Feed grain prices are expected to remain near current levels for the first half of 1971, while prices in the latter half will be largely determined by the prospects for the 1971 production of feed grains. For the year feed grain prices will probably be up around 15 percent over the 1969/70 average price. However, high-protein feed prices are expected to average near last year's. The higher prices will lead to increased expenditures for feed in 1971 since the amount of grain fed to livestock is expected to remain nearly the same as in 1970.

Feeder Livestock

Feeder pig prices have fallen sharply and little change is expected through the winter or early spring. Their prices should rise this fall if total hog numbers decline as expected.

Feeder cattle prices declined seasonally last fall, but generally remained above a year earlier. Prices of feeder cattle should rise seasonally this spring, but a greater supply, increased feed costs, and recent lower returns to cattle feeders will probably dampen this price rise. Total expenditures for purchased livestock were nearly the same in 1970 as in 1969 (fig. 1). And the expected lower prices for feeder pigs and feeder cattle will probably mean no change or slightly lower expenditures for purchased livestock for 1971.

Seed

Seed is a relatively minor input, expense-wise, but it has received a great deal of concern and coverage in the past 6 months. Unfortunately, despite all the activity, there are still numerous unknowns about the 1971 seed corn supply and the corn crop that it will produce. Seed corn prices are definitely higher this year; any farmer can probably tell us to the penny how his seed corn costs have changed. But of even greater importance is the supply of blight-resistant seed.

The seed in greatest demand for 1971 is the normal or N-cytoplasm seed, which is resistant to the blight. This seed is produced in the traditional manner, with fields of corn for seed production detasseled by hand. In contrast is the Texas or T-cytoplasm seed, produced from plants containing Texas male sterile-cytoplasm which eliminates hand detasselling. However, the T-cytoplasm corn is highly susceptible to the new strain of Southern corn leaf blight. The third type, blend seed, is merely a blend of N and T-cytoplasm seed, and is generally tolerant to the blight. Blends are one way of accomplishing the fertilization process of corn produced with the male sterile procedure.

The supply of N-cytoplasm or blends of N and T-cytoplasm seed is sufficient to plant about 60 percent of last year's acreage, without allowing for any carryover (table 3). Including all known and assumed supplies of T-cytoplasm seed, there should be sufficient seed to plant an acreage equal to or greater than last year's.

In addition to higher prices, low germination rates on some T-cytoplasm seed may require higher seeding rates for any given plant population, thus increasing per acre costs. Offsetting this may be a tendency to aim for fewer plants per acre, (1) to stretch resistant seed, and (2) to get better air circulation to try and prevent blight damage.

Based on preliminary indications of planting intentions there should be adequate supplies of most other seed stocks for 1971. By 1972, nearly all hybrid seed corn should be N-cytoplasm and be blight-resistant. However, the higher labor cost required to hand-detassel all seed production would point to even higher seed prices in 1972.

Total expenditures for seed have been increasing slowly, about 2.5 percent a year from 1965 to 1969 (fig. 1). The increase accelerated to about 4.5 percent for 1969-70 and the increase will likely be greater in 1971.

An item which may raise seed prices in the future is the new Plant Variety Protection Act. This allows the USDA to issue patent-type certificates to protect for 17 years the rights of those who develop new varieties of crops such as soybeans, cotton, small grains, some vegetables, and other crops produced from seed. This legislation is expected to provide greater

incentives for private plant breeders to develop new varieties. The law does not apply to any existing varieties nor does it prevent a farmer from saving seed for his own use or selling small amounts to neighboring farmers.

Hired Farm Labor

Total expenditures for hired farm labor increased about 7.5 percent in 1970, continuing the trend since 1968 (fig. 2). Farm wage rates have been increasing, while the use of hired labor has been declining. The average composite wage rate of farmworkers employed on a time basis (hourly, weekly, etc., but excluding piece rates and perquisites) averaged $1.42 per hour in 1970, an increase of 9 cents per hour over 1969. However, this was smaller than the 12-cent increase the previous year and was related to (1) increased unemployment, (2) continued mechanization of farm practices, and (3) the fact that no increase occurred in the minimum wage in 1970 under the Fair Labor Standards Act.

Wage rates are expected to continue to rise in 1971, especially if we have continuing inflation, increasing competition for skilled workers, and further unionization of farmworkers. There are also built-in wage rate increases for some farmworkers in Federal and State regulations.

Farm employment of hired workers will likely decline further in 1971, but the rate of decline is expected to be rather low, as in the past 3 years. Adoption of mechanization that would replace additional farmworkers is being slowed by current economic conditions. Consequently, total expenditures for farm labor will be determined largely by changes in the wage rate.

In the long run, several factors are important to the future expense of hired farm labor. Unionization of farmworkers is increasing, with the highly visible effect being higher wage rates. These contracts generally provide for specified wage increases during the duration of the contract, employer contributions to a worker health fund, use of the hiring hall for employing workers, seniority rights of workers, and restrictions on farmers' usage of pesticides. Thus far, unionization has occurred chiefly in California, but it is expected to spread elsewhere.

Regulations governing unemployment insurance and workmen's compensation were both considered by Congress in 1970, but neither passed. However, both are expected to receive attention again in 1971.

Fertilizer

Prices for most fertilizers leveled off early in 1970 and then moved up through the rest of the year (table 4). "Cost-push" inflationary forces, plus output quotas for potash established by the Saskatchewan Potash Conservation Board, were major factors in the general advance.

Prices of fertilizer are expected to increase further in 1971. Costs common to all segments of the fertilizer industry are up. Rail freight rates have undergone general increases 4 times in the past 2 years. Overland truck

rates are higher. Labor costs generally are rising. In addition, there are factors unique to the major fertilizer elements that are pushing production costs up. For example, synthetic ammonia is the basic source of about 90 percent of all fertilizer nitrogen, so factors affecting its cost affect the cost of all nitrogen fertilizers. And the price of natural gas--which accounts for about 40 percent of the manufacturing cost of ammonia--is rising.

The farm price for phosphatic fertilizers is firm and rising, despite softness in the world market for phosphate rock and extremely low sulfur prices. All producers, but especially sulfuric acid producers, are faced with the growing expense of controlling pollution. One producer estimates these costs at $2 per ton, which is equivalent to a 7-percent increase from the $27 per ton price of acid quoted late in 1970.

Potash output and price levels have stabilized following the limitations imposed by the Saskatchewan Potash Conservation Board. Although there was uncertainty about the ability of the board to limit potash supplies, the 1970 experience indicates it can, and farmers will have to pay the current higher prices for potash.

Some uncertainty exists about 1971 fertilizer use. But the same or greater fertilizer purchases, coupled with higher prices, should lead to increased expenditures.

Pesticides

Pesticide expenditures increased 4 percent in 1970 over the 1969 total of $729 million. Prices of individual pesticides have remained fairly constant, but the increasing use of more specialized, higher priced pesticides continues to push the total cost upward. Production of the older, low-priced, broad-spectrum products such as DDT and other organochlorine insecticides is declining. The rate of increase in pesticide expenditures has been slowing down, after rising an average of about 10 percent per year in earlier years.

Herbicides account for over half of all pesticide expenditures and are experiencing the greatest rate of increase. Use of insecticides is increasing only moderately and fungicides will again show only a small increase.

Petroleum, Fuel and Oils

Expenditures for petroleum, fuel and oils have been rising only slightly for a number of years (fig. 2). Slight increases in both price and quantity have resulted in average increases in expenditures of about 2.5 percent per year since 1965. Further price increases are expected for 1971, and increased acreage of cropland planted could lead to increased use of petroleum fuels.

Insurance

Expenditures for insurance related to farm production, or to farm property used in production, reached $914 million in 1970, 5 percent higher than in 1969 (table 5). These are total outlays for insurance premiums, workmen's

compensation, and social security taxes paid. 2/ Total expenditures are expected to increase another 9 percent in 1971, to a total of $992 million.

About 58 percent--$528 million of the 1970 cost--was for property and liability insurance. Crop insurance accounted for 19 percent, social security payments for employees, 17 percent, and workmen's compensation payments, about 6 percent of the total outlay.

A major share of the increase expected for 1971 will be in increased expenditures for property and liability insurance on buildings, contents, equipment, motor vehicles, and livestock. Farmers are buying a greater amount and variety of coverage to protect higher values and to protect against more risks such as personal liability. Premium rates are also rising--a 12-percent increase is expected for automobile and truck insurance premiums in 1971. And social security taxes paid for hired workers are expected to rise 11 percent in 1971, because of increased total wages and higher tax rates. Effective January 1, 1971, the withholding tax rate for farm employers was increased from 4.8 to 5.2 percent.

Interest on Non-real Estate Debt

One of the few bright spots in the farm cost picture is what's happening to interest rates. And this is mainly because interest rates increased so sharply during the past year or so (fig. 2). Total expenditures for interest on non-real estate debt have been climbing for many years, but the pace has quickened recently. In 1970 expenditures were estimated at just over $2 billion. This was an increase of 18 percent over 1969, and the 1969 charges were 15 percent above 1968.

Both interest rates and the amount of credit used have been increasing since 1965, but the sharply higher rates of 1970 were the primary factor responsible for this 18 percent larger expenditure. Rates on short and intermediate term loans to farmers increased at least 1 point in most areas in 1969. These higher rates carried into 1970. While the increase in rates varied by type of lending institution, all were affected. The movement to higher short-term rates over this period is illustrated by the shift in rates charged by PCA's in 1969 and 1970 (table 6). Whereas nearly all PCA's were charging 8 percent or less in January and July of 1969, more than half were charging 9 percent and over by January 1970.

Farmers can expect somewhat lower interest rates on operating loans in 1971. Interest rates in the wholesale money markets and large city banks have dropped sharply the past few months. But it may take several months for the softening of wholesale rates to show in rates charged to farmers. Rates should drop by as much as 1 percentage point in many areas by mid-1971, but are not likely to drop to the pre-1968 levels. The amount of non-real estate credit used is expected to increase again in 1971, but the lower rates should make total expenditures rise much less rapidly than in the last 2 years.

2/ The aggregate net cost of insurance is substantially less because of indemnities and other benefit payments received by farmers.

INVESTMENT, RECURRING AND UNAVOIDABLE EXPENSES

Now for a look at expenditures for investment, recurring, and unavoidable expenses. Since the last item covered was short-term interest rates, let's continue by looking at long-term rates.

Interest on Real Estate Debt

Interest rates on new loans on real estate debt have also increased sharply in the past few years. For example, average rates of farm mortgage loans of the Federal land banks went from 7.5 percent during the first quarter of 1969 to 9.0 percent during the third quarter of 1970 (table 7). Similar increases occurred for loans by life insurance companies. Interest rates charged by banks in 1970 were not quite as high as those of life insurance companies or the Federal land banks.

However, total interest charges for real estate debt in 1970 were only 7 percent above the 1969 charges. Two factors largely account for this slower rate of increase in comparison with non-real estate debt charges: (1) The number and volume of new farm real estate loans made in 1970 were relatively low compared to recent years, (2) The bulk of the 1970 charges relate to loans made in prior years, and the average rate of outstanding debt increased only slightly.

Demand for farm real estate credit was noticeably less in 1970 than other recent years. Potential borrowers were reluctant to use long-term financing at the high rates of interest. Although evidence indicates there were funds available, there were considerably fewer takers than a year earlier. In the first three quarters of 1970, the dollar volume of life insurance farm mortgage loans was 52 percent below the like period of 1969. The number of loans made by banks was down 20 percent for the same period.

Interest rates on long-term farm real estate loans have been about the same or higher than rates on most short-term farm loans since late 1969. This unusual situation prompted some farm operators to borrow on short term at relatively cheaper rates, anticipating refinancing into long-term loans when interest rates dropped.

Indications are that money for farm mortgages will be more available in 1971 than in 1970. Interest rates are expected to be lower--perhaps by 1/2 to 1 percentage point--by midsummer. If farmers do shift more of their financing from short-term to long-term loans, expenditures on interest for real estate debt will increase, but the total for both non-real estate and real estate interest charges should not increase as much as in the last 2 years.

Farm Real Estate

Much of the activity in long-term debt is due to purchases of farm real estate. In 1970 the farm real estate market was characterized by reduced activity and a slowing in the rate of increase of farmland values. The national average market price of farm real estate reached $195 per acre, an increase of only 3 percent from 1969, and the slowest rate of increase since 1960.

Last year's tight money market, high interest rates, and a pessimistic attitude toward economic conditions apparently dampened the rise in land prices.

The number of persons looking for farms and the number of farms offered for sale did not change much from 1969 to 1970. But the number of voluntary transfers of farms declined 9 percent during this period.

And increasing reliance is being placed on seller financing on farms requiring credit arrangements. Sellers provided funds for 53 percent of all credit transfers in 1970.

Installment land contracts were used to finance 46 percent of these credit transfers, up from 37 percent a year earlier. In fact, between 1967 and 1970, transfers financed through land contracts increased on an average of 14.5 percent annually.

Cash and cropland rental rates have also been rising, although not as rapidly as the market value of farm real estate. In 1969, rental rates paid for whole farms averaged about 5.5 percent of the farmland market value, ranging from 4.2 percent in the Pacific and Northeast regions to 9.1 percent in North Dakota. In terms of dollar values, State average rates ranged from $4.25 per acre in South Dakota to $38.95 per acre in Illinois.

The outlook for 1971 is for stable to declining prices. Easing of the money market and lower interest rates may stimulate demand for long-term capital expenditures. But a large number of transfers will continue to be dependent on seller financing.

Property Taxes

As farmland values rise, so do property taxes. Farm real estate and personal property taxes are increasing at about a 9-percent annual rate. Total property tax levels of farmers were about $2.7 billion in 1969 and are expected to be $3.0 billion in 1970.

The major portion of this bill was for State and local taxes on farm real estate (fig. 2). These levies amounted to $2.3 billion in 1969, or $228 million above 1968. This was the 27th consecutive annual increase and the second in a row of more than 11 percent.

The effective rate of farm real estate taxes was $1.12 per $100 of full value in 1969, up 5.7 percent from the previous year. This increase, and the 4 percent rise in 1968, represents a significant change in this measure. From 1961 to 1967 the effective tax rate had remained nearly constant. Taxes increased markedly during this period, at about the same rate as farm real estate values. But during the past 2 years, the demand for tax funds exceeded real estate appreciation.

Taxes on farm personal property have been increasing less rapidly, slightly over 5 percent in 1969. A major reason for the less rapid rise is the growing list of States that exempt part or all of farm personal property.

Both State and local governments are facing sharply increased demands for revenue, and property taxes constitute about 40 percent of all State and local revenue. So unless new sources of revenue are found for these governmental units, continuing increases in property taxes are highly likely.

Farm Power and Machinery

Farm power and machinery equipment also continue to show higher price tags. The prices paid index for farm machinery and motor vehicles rose 6 percent from 1969 to 1970. And the results of wage negotiations in the farm equipment and steel industries will exert added pressure on farm machinery prices in 1971.

Another factor associated with the increased investment costs of farm machinery is the movement to larger equipment. The increasing percent of tractors sold of 100 horsepower and over indicated that associated new equipment complements must be of a greater capacity than previously (table 8). The trend toward the 100-plus horsepower sales varies by regions of the country, but it is upward in all regions.

Summary

That is the situation and outlook for the various farm inputs for 1971. When all the pieces are added back together, it appears that total farm production expenses may increase another 3 1/2 to 4 percent. This would be an increase of $1.5 billion.

For most inputs the outlook is for price increases pretty much in line with recent years. But several inputs have undergone definite changes in trends which bear emphasizing.

Fertilizer prices are again increasing, after reaching a recent low level in 1969. Price increases appear to be in store for each of the major fertilizer elements.

On the other hand, interest rates are moving back down. The recent high in interest rates appears to have been reached in 1970. Interest rates will be lower in 1971 and money for loans will be more available.

Finally, feed grain prices are much higher than a year ago, but the direction of price changes later in 1971 is very uncertain. Predictions are always hazardous, but predictions at this time on 1971/72 feed grain prices would be foolhardy.

Table 1.--Gross farm income, production expenses and net income, United States, 1967 to 1970 1/

Item	1967	1968	1969	1970 2/
	--------Billion dollars-------			
Cash receipts from farm marketings----	42.7	44.2	47.2	48.7
Nonmoney income and Government payments----------	6.3	6.8	7.4	7.5
Realized gross farm income----------	49.0	51.0	54.6	56.2
Farm production expenses----------	34.8	36.0	38.4	40.4
Farmers' realized net income--------	14.2	15.0	16.2	15.8
Net change in farm inventories--------	.7	.1	.3	.5
Farmers total net income----------	14.9	15.1	16.5	16.3

1/ Source: Farm Income Situation, FIS 216 and 217, Economic Research Service.
2/ Preliminary.

Table 2.--Farm production expenses, United States, 1960, 1965, 1968, and 1969 1/

Item	Expenses					Percent of current expenses			
	1960	1965	1968	1969	1970 2/	1960	1965	1968	1970
	Million dollars					Percent			
Current Expense									
Feed purchased	4,923	5,749	5,994	6,634		25.9	26.6	24.5	25.4
Livestock purchased	2,502	2,913	3,676	4,174		13.2	13.5	15.0	16.0
Seed purchased	510	637	668	697		2.7	3.0	2.7	2.7
Inputs of farm origin	7,935	9,299	10,338	11,505	12,058	41.8	43.1	42.2	44.1
Hired labor, total wages	2,923	2,849	3,045	3,192		15.4	13.2	12.4	12.2
Fertilizer and lime	1,315	1,754	2,125	2,013		6.9	8.1	8.7	7.7
Pesticides	288	528	675	729		1.5	2.5	2.8	2.8
Petroleum fuel and oil	1,486	1,538	1,645	1,713		7.8	7.1	6.7	6.5
Other operating costs and repairs for motor vehicles and machinery	1,777	1,880	2,306	2,383		9.5	8.7	9.4	9.1
Buildings repairs and maintenance	703	655	693	732		3.7	3.0	2.8	2.8
Insurance 3/	187	181	213	205		1.0	.8	.9	.8
Interest on nonreal estate debt	725	1,099	1,562	1,715		3.8	5.1	6.4	6.6
Other	1,629	1,820	1,892	1,927		8.6	8.4	7.7	7.4
Inputs of nonfarm orgin	11,033	12,304	14,156	14,609	15,390	58.2	56.9	57.8	55.9
Total current	18,968	21,603	24,494	26,114	27,448	100.0	100.0	100.0	100.0
Recurring or Unavoidable Expense									
Taxes on farm property	1,502	1,953	2,526	2,753					
Interest on farm mortage debts	628	1,077	1,477	1,602					

1/ Source: Farm Income Situation, FIS 216, Economic Research Service, USDA, July, 1970, plus unpublished extimates for pesticides and insurance. These figures do not include: (1) depreciation and other consumption of farm capital and (2) net rent to nonfarm landlords. In 1969 these amounted to $6,672 and $1,303 million, respectively.

2/ Preliminary.

3/ Includes net premiums (premium minus payments for losses) for crop, fire, and wind insurance.

Table 3.--1970 corn acreage and acres that can be planted from reported seed corn supply for 1971 1/

Maturity zone	Corn acreage-1970		1971 planted acre equivalents for seed by method of hybridization 2/				
	Planted acreage	Proportion of national production	N-cytoplasm	Blends	Sub-total	T-cytoplasm	Total
	1,000 acres	Percent	1,000 acres				
Deep South (Georgia, Alabama, Lousiana, Mississippi, Florida, Texas)	3,947	6	2,018	465	2,483	509	2,992
Mid South (Missiouri, Kentucky, Tennessee, Virginia, North Carolina, South Carolina)	7,704	11	2,505	4,700	7,205	1,734	8,939
Eastern (Pennsylvania, New York, New England)	2,447	4	382	1,404	1,786	827	2,613
Corn Belt (Illinois, Indiana, Ohio, Iowa, Nebraska, Kansas, South Dakota)	40,247	60	8,343	15,479	23,822	17,457	41,279
Northern States(Michigan, Minnesota, Wisconsin, North Dakota)	10,399	15	2,364	3,161	5,525	5,809	11,334
SUBTOTAL	64,744	96	15,612	25,209	40,821	4/26,336	4/67,157
Other (States not listed above)	2,427	4	3/	3/	3/	3/	3/
TOTAL	67,171	100	3/	3/	3/	3/	3/

1/ Based on stocks reported by companies who normally handle 80 percent of total seed corn production. 2/ Acres which would exhaust the available supply of N cytoplasm and blend seed with seeding rate of 10 pounds per acre in the deep and mid south, 14 pounds in Eastern, 13 pounds in the Corn Belt, and 12 pounds in Northern States. Estimates only for companies representing 80 percent of total seed production. No allowance made for carryover stock which normally is about 20 percent, but is expected to be lower in 1971 due to the short supply of blight resistant seed. 3/ Not available. 4/ It is assumed that the seed corn from the companies who normally handle the other 20 percent of seed corn production would be largely T-cytoplasm and primarily for the Corn Belt. If this additional 20 percent of seed is available for 1971 and no allowance is made for carryover stock this unreported seed could plant another 15,000,000 acres.

Source: Crop Production, 1970 Annual Summary, Stat. Rpt. Svc., and Seed Corn Supply, Feb. 5, 1971 Stat. Rpt. Svc.

Table 4.--Average prices per ton paid by farmers for selected fertilizers, United States, April 15 prices, 1957-59 average and 1966-70

Period	Anhydrous ammonia	Superphosphate		Ammonium phosphate 16-20-0	Potash 60 percent K_2O	Mixed fertilizer 6-24-24
		46 percent P_2O_5	20 percent P_2O_5			
	Dollars					
Average 1957-59	149.00	82.20	37.00	89.60	1/56.80	91.10
1966	119.00	80.90	41.40	81.10	1/59.90	85.10
1967	113.00	84.10	42.10	80.70	1/58.50	85.70
1968	91.40	78.40	43.20	78.40	49.10	81.80
1969	75.60	74.00	43.80	77.70	47.80	73.20
1970						
Apr. 15	75.00	75.10	45.40	76.90	50.90	75.00
Sep. 15	76.80	76.20	46.90	76.50	54.00	76.70

1/ Based on equivalent price for 55 percent K_2O reported by SRS.

Source: Agricultural Prices, Pr 1 (9-70), Statistical Reporting Service, USDA, September 30, 1970, and earlier issues.

Table 5.--Expenditures for insurance by farmers, United States, 1970-71 1/

Type of insurance	1970 2/	1971 3/
	Million dollars	
Property and liability 4/	528	587
Crop 5/	171	169
Workmen's compensation	62	66
Social security	153	170
Total	914	992

1/ Estimated annual cost of insurance premiums and social security taxes. Not adjusted for indemnities or other payments to insured.
2/ Preliminary.
3/ Estimated.
4/ Fire, wind, personal liability, and other coverage related to buildings and contents, machinery, livestock, and automobiles. About 50 percent and 60 percent of total insurance premiums on buildings and motor vehicles, respectively, are assumed to be production expenditures.
5/ Federal crop insurance and crop-hail insurance.

Table 6.--Percent of production credit associations charging specified rates

Interest rate charged 1/	1969		1970		
	January	July	January	July	October
	Percent				
8 percent or less	99	82	12	8	9
8-1/8 to 8-7/8 percent	1	17	35	23	33
9 to 9-7/8 percent	0	1	47	55	50
10 percent and over	0	0	6	14	8

1/ Rates shown exclude loan fees, which in 1969 averaged 0.46 percent.

Table 7.--Average rates on farm mortage loans of Federal land banks and life insurance companies, by quarters, 1969 and 1970

Lender	1969 Quarter				1970 Quarter			
	1	2	3	4	1	2	3	4
	Percent							
Life insurance companies 1/	7.7	8.2	8.7	9.3	9.0	9.5	9.4	9.2
Federal land banks 2/	7.5	7.5	8.5	8.5	9.0	8.5	9.0	8.5

1/ Average for quarter.
2/ Most common rate at end of quarter.

Table 8.--Sales of wheel tractors 100 horsepower and over for farm use as a percent of sales of all wheel tractors, by farm production regions, United States, 1964-70

Year	Regions										
	North-east	Lake States	Corn Belt	Northern Plains	Appa-lachian	South-east	Delta States	Southern Plains	Moun-tain	Pacific	United States
	Percent of total sales										
1964	2/	1	1	8	2/	2/	2	3	10	2	2
1965	2/	1	1	6	2/	1	3	4	9	3	2
1966	1	4	5	10	1	1	8	8	16	5	6
1967	2	6	7	14	2	2	14	10	18	8	8
1968	3	7	9	15	2	4	18	12	18	9	9
1969	7	15	19	27	5	9	32	21	27	14	17
1970 1/	--	---	---	--	---	---	---	---	---	---	---

1/ For 1970, regional distributions by horsepower are not available. Sales are for first 10 months.
2/ Less than 0.5 percent.

Source: Reports of the Farm and Industrial Equipment Institute.