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DECREASED CROP PRODUCTION DEPRESSES FARM OUTPUT

Total U.S. farm output in 1970 fell 1 percent below 1969 output but remained 2 percent above 1967. A substantial decline in crop production due to significant drops in grain crops was partially offset by record livestock production.

Livestock production increased 5 percent over 1969. Major contributors to the increase were beef, up 6 percent; hogs, up 7 percent; and poultry meat, up 8 percent. Slight gains were also noted for milk, eggs, and sheep and lambs. All livestock food groups showed increases—a sharp contrast to the numerous declines among crop groups.

Total crop production declined 4 percent in 1970, following three successive record years. Six of the nine major crop groups declined. The greatest reductions were a 9-percent drop in feed grains and a 6-percent drop in food grains. Much of this decline is attributed to drouth and corn blight as crop acreage was slightly increased. The only crops with increased output were cotton, tobacco, and oil crops.

Factor inputs

Total factor inputs used in agriculture increased 1 percent in 1970. Fewer and larger farms, the substitution of capital for labor, and the use of more purchased inputs are continuing trends that affect the input mix. However, interplay of these trends and the general economic situation are causing moderation and subtle changes in the general trends.

Land is still the base of agriculture, but it is increasingly less important as a determinant of production. Between 1950 and 1970, cropland decreased 11 percent while total crop production increased over 30 percent. However, in 1970 more acres were planted than in 1969, but yield per acre declined 5 percent. This development was due primarily to drouth and corn blight.

Fertilizer, the major factor substituting for land, has allowed continued gains in per-acre yields. Use of fertilizer increased 4 percent in 1970 to nearly 12.7 million tons.

Machinery input remained about the same as in 1969, although absolute numbers of most types of machinery declined. Better economies of scale due to fewer and bigger farms eliminated some of the overcapitalization in machinery noted in the past. Increasing size and efficiency of machinery have also reduced the need in numbers of various types of machinery. For example, tractors averaged 33 horsepower in 1960, but by 1971 the average had increased to 44 horsepower. During the period there was a 38-percent increase in horsepower with only a 2-percent increase in number of tractors.

Feed inputs for the production of livestock products were mixed in 1970. Decreased feed consumption was recorded for the production of milk and broilers, reflecting higher-producing cows, improved feed conversion for broilers, and better management. Feed consumption for the production of beef and

U.S. FARM PRODUCTIVITY

(1967 = 100)

Year	Farm output	Production inputs	Output per unit of input
1960	90	94	96
1961	90	94	97
1962	91	94	97
1963	95	95	100
1964	94	96	98
1965	97	97	101
1966	96	98	98
1967	100	100	100
1968	102	102	100
1969	103	102	101
1970p	102	103	99

p — Preliminary
 SOURCE: U.S. Department of Agriculture

eggs increased in 1970 due to the marketing of more fed cattle and to the replacement of fewer pullets and a higher incidence of forced molting. Feed consumption for hogs per hundredweight of production showed little change.

Labor input declined about 2 percent in 1970. This rate is slower than the average decline over the past 10 years as both off-farm employment and the farm real estate market were depressed.

Labor productivity

The efficiency of factor conversion in 1970 is complicated by several external factors, notably drought and blight. Due to lower yields for corn and other feed grains, labor productivity for all crops declined about 2 percent. This was the first decline in labor productivity for crop production in nearly two decades. However, labor productivity for cotton and tobacco increased 7 percent and 5 percent, respectively, and several other crop groups showed increases of 1 percent to 4 percent.

Labor productivity in livestock operations rose 6 percent for meat animals and 7 percent for milk cows and poultry. Because the productivity increase for labor in livestock production was greater than the decline for crop production, total output per hour of labor continued to climb in 1970—with a rise of nearly 2 percent.

All major factor input groups except labor at least equaled 1969 use levels. Purchased inputs increased 2 percent as nonpurchased inputs declined 1 percent, continuing a long-term trend.

While much of the decline in total output in the face of increased total input can be explained by unique weather and disease problems, a quality factor is also evident. Increasing proportions of higher-grade livestock and crops are being marketed. To achieve this higher quality control, additional inputs are necessary—a fact often overlooked in aggregated data.

1971 EXPORTS SET RECORD: OUTLOOK MIXED

Agricultural exports for fiscal 1971 totaled \$7.8 billion—an all-time high and 15 percent above the 1970 level. The record sales resulted from exceptionally strong world demand and higher prevailing prices. The entire gain was in commercial sales for dollars, contributing to a positive net balance of about \$1 billion for agricultural trade.

Growth in value of shipments was evidenced for most agricultural product groups. Leading the way were cotton, with a 42-percent increase; wheat, with a 27-percent increase; and oilseeds and products, with a 23-percent increase. Of the major export products, only rice declined in 1971 as value of shipments slipped 13 percent from 1970.

The value of 1971 agricultural exports from the Eleventh Federal Reserve District states is estimated at \$920 million—19 percent above 1970. The importance of cotton and wheat in the District states not only offset the decline in rice export value, but enabled the District to make a greater overall gain in 1971 than the nation as a whole.

Strong world demand has pushed agricultural prices up in the United States, but it has also stimulated expanded production throughout the world. Grain exports will meet stiffer competition in 1972 as most major grain-producing countries expect increased production. This is true for both food and

U.S. EXPORTS OF MAJOR DISTRICT CROPS

Crop	June-July		Percent change
	1970-71 (Million dollars)	1969-70	
Cotton	492	346	42%
Feed grains	1,090	986	11
Rice	281	322	-13
Wheat and products ..	1,226	965	27

SOURCE: U.S. Department of Agriculture

EXPORTS OF U.S. FARM PRODUCT GROUPS

Group	June-July		Percent change
	1970-71 (Million dollars)	1969-70	
Animals and animal products	915	811	13%
Feeds and fodders except oil cake and meal	142	123	15
Grains and preparations	2,693	2,339	15
Oilseeds and products	2,060	1,676	23
All other products	1,942	1,772	10
Total	7,752	6,721	15%

SOURCE: U.S. Department of Agriculture

feed grains but especially for wheat. The expected record grain crop in the United States will also contribute to a larger supply and generally lower world prices.

The world market for oilseeds and products will probably continue strong due to a general shortage. The production response to high prices has not been as great for oilseeds as for grains. The same factors should make 1972 a good market year for cotton.

Short stocks of many major commodities will prevent any abrupt drop in agricultural prices, but generally lower prices and smaller shipments can be expected. Current changes in the value of the dollar in the world market could increase the demand for U.S. agricultural products by making them relatively cheaper. In the long run, this will afford U.S. agriculture additional competitive advantages and should enhance export growth. However, the domestic supplies of importing countries and world supply in general are more important in the short run.

RICE PROGRAM FOR 1972 RELEASED EARLY

The rice crop allotment for 1972 has been set at 1,652,596 acres. The loan rate has been established at 65 percent of parity as of August 1. The acreage allotment marks a 10-percent decrease from the 1,836,461 acres allotted in 1971, while the loan rate

is unchanged. The value factor between long-grain and medium and short-grain varieties will decline from 80 cents per hundredweight to 50 cents per hundredweight. Medium and short-grain varieties are given equal factors. Marketing quotas will be announced by the Department of Agriculture before December 31.

Announcement of the rice program was made five months early to give farmers time to plan other uses for retired rice acreage. The cutback was prompted by increasing world production, sagging exports, lower prices, and slow growth of domestic demand. (See *Farm and Ranch Bulletin*, August 1971.)

The Department of Agriculture plans to increase shipments under Public Law 480 and continue the joint Government-industry rice promotion effort both at home and abroad. However, U.S. carryover has increased from 6.8 million hundredweights in 1968 to an estimated 18 million in 1971 in spite of production declines in the United States and expanded efforts to market rice.

The three-pronged attack of reduced acreage, increased market promotion, and the floating dollar could turn the situation around, making U.S. rice more competitive in the world market. However, a period of adjustment will be needed.

ONE-MAN FARMS OFFER ECONOMIES OF SIZE

The minimum cost per unit of output on U.S. farms is generally characterized by a well-organized, fully mechanized operation run by one or two men. These are not small operations and depend on sizable capital investment to establish efficiency.

Recent Department of Agriculture studies found that the size of operation and amount of capital needed to achieve economies of size varied by enterprise, but that most could be achieved within a one-man operation. For example—

The low-cost hog farm operated by one man included 400 acres and produced 150 litters a year.

The total capital investment of \$200,000 would normally yield a net return of about \$23,000.

The low-cost one-man dairy farm had 235 acres and 40 cows and needed \$150,000 in capital. This operation would normally yield a net income of \$15,000.

The one-man irrigated cotton farm in Texas needed 440 acres—140 acres in cotton—and nearly \$300,000 in capital. The net operation-management income would be about \$20,000.

The low-cost one-man corn farm required 760 acres of cropland and \$450,000 in capital to yield a return of just over \$30,000.

The income levels for each of these examples assumed average prices. Yearly fluctuations could be expected. It was also noted that cattle feeding and many specialty crops had economies of size well beyond the one or two-man operation.

AGRICULTURE OUTLOOK BRIEFS

- Fed cattle marketings this fall and winter should continue above last season, but prices will likely average higher as competing meat supplies decline and consumer demand continues strong.

- Dairy sales for 1971 are projected at \$6.8 billion, about \$300 million more than 1970. Receipts have gone up every year since 1968.

- Higher average hog prices are expected through the 1971 fall and winter slaughter season. Fewer pigs are being slaughtered than in the 1970 and early 1971 season due to the 8-percent decline in the June-November pig crop.

- Lamb slaughter is expected to slow over the next few months with stronger, more stable prices resulting.

TEXAS A&M OFFERS AGRI-BANKING

A new Master of Agriculture degree program at Texas A&M University has been tailored specifically to prepare students for a professional career in agricultural finance. This work-study program is a joint industry-university effort that requires students to spend a minimum period of three months with a financial institution serving the agricultural industry. For additional information, contact the Department of Agricultural Economics, Texas A&M University, College Station, Texas 77843.

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