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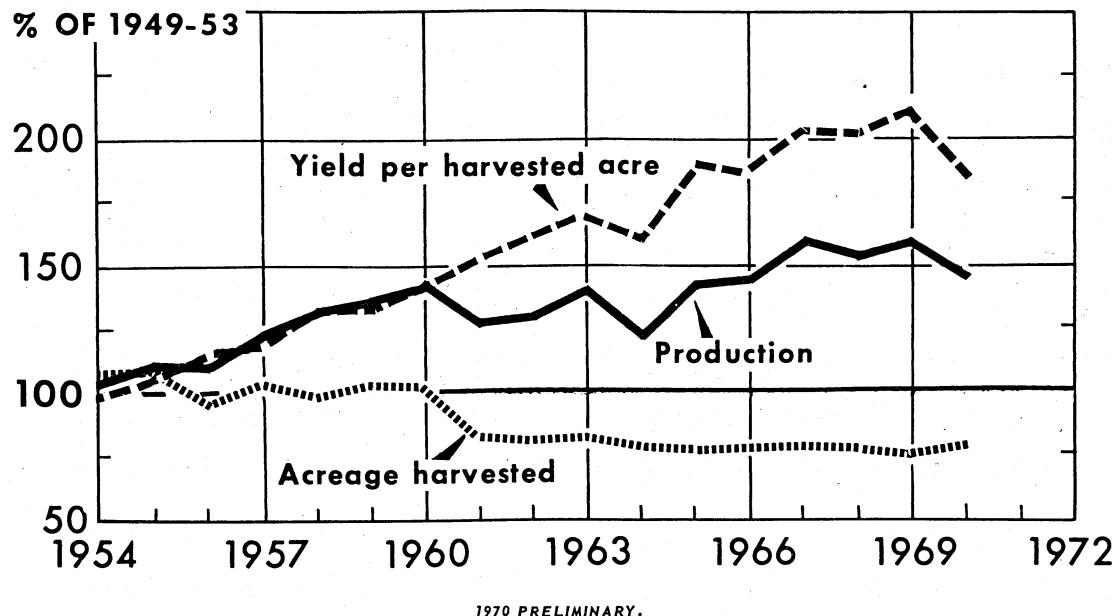
UNITED STATES DEPARTMENT OF AGRICULTURE  
Economic Research Service

OUTLOOK FOR FEED

Talk by Malcolm Clough  
Economic and Statistical Analysis Division  
at the 1971 National Agricultural Outlook Conference  
Washington, D.C., 9:40 A.M., Wednesday, February 24, 1971

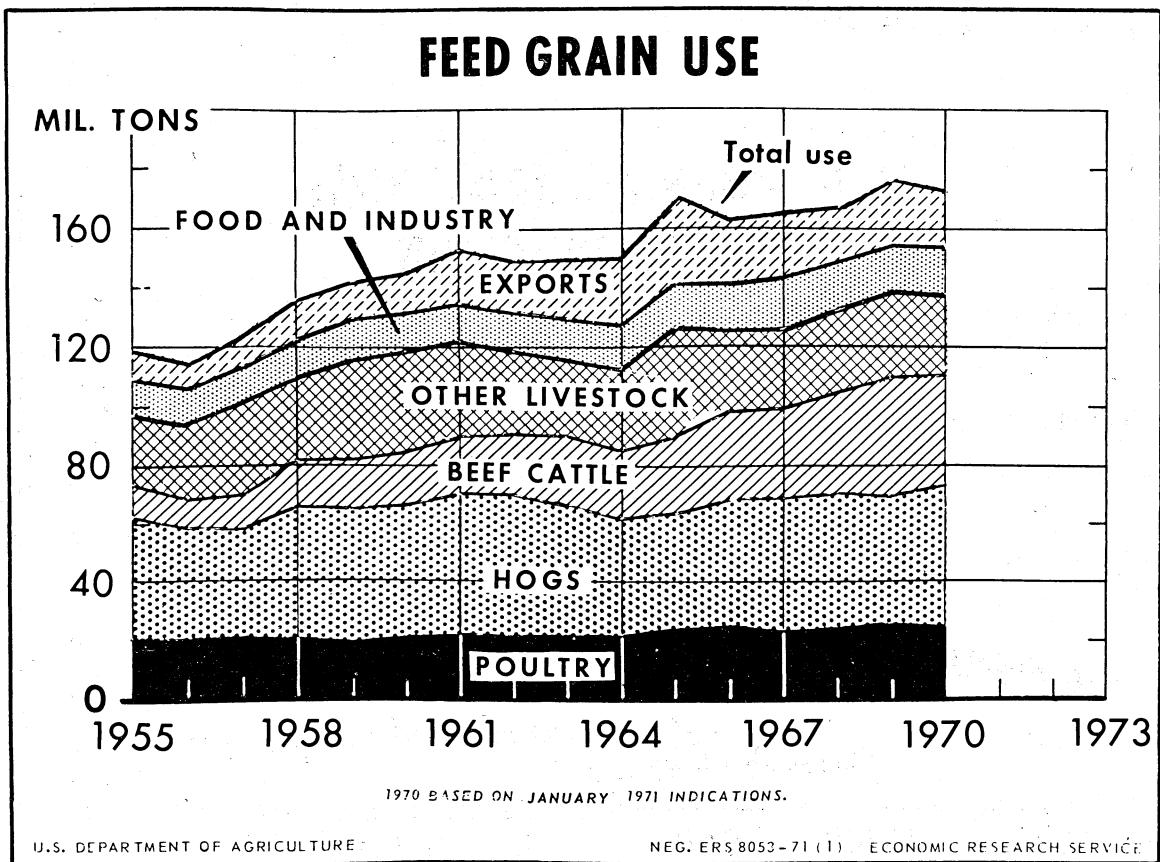
The upward trend in feed grain yields--underway for a number of years--was abruptly halted in 1970. Influenced by Southern corn leaf blight and dry weather, feed grain yield per acre dropped 13%, the sharpest year-to-year drop in 20 years. Production dropped 9% from the near-record crop of 1969. While the 1970 crop exceeded production for any year prior to 1967 it was short in terms of total use, which has been going up at a rapid pace in recent years.

**FEED GRAIN ACREAGE, YIELD  
AND PRODUCTION**



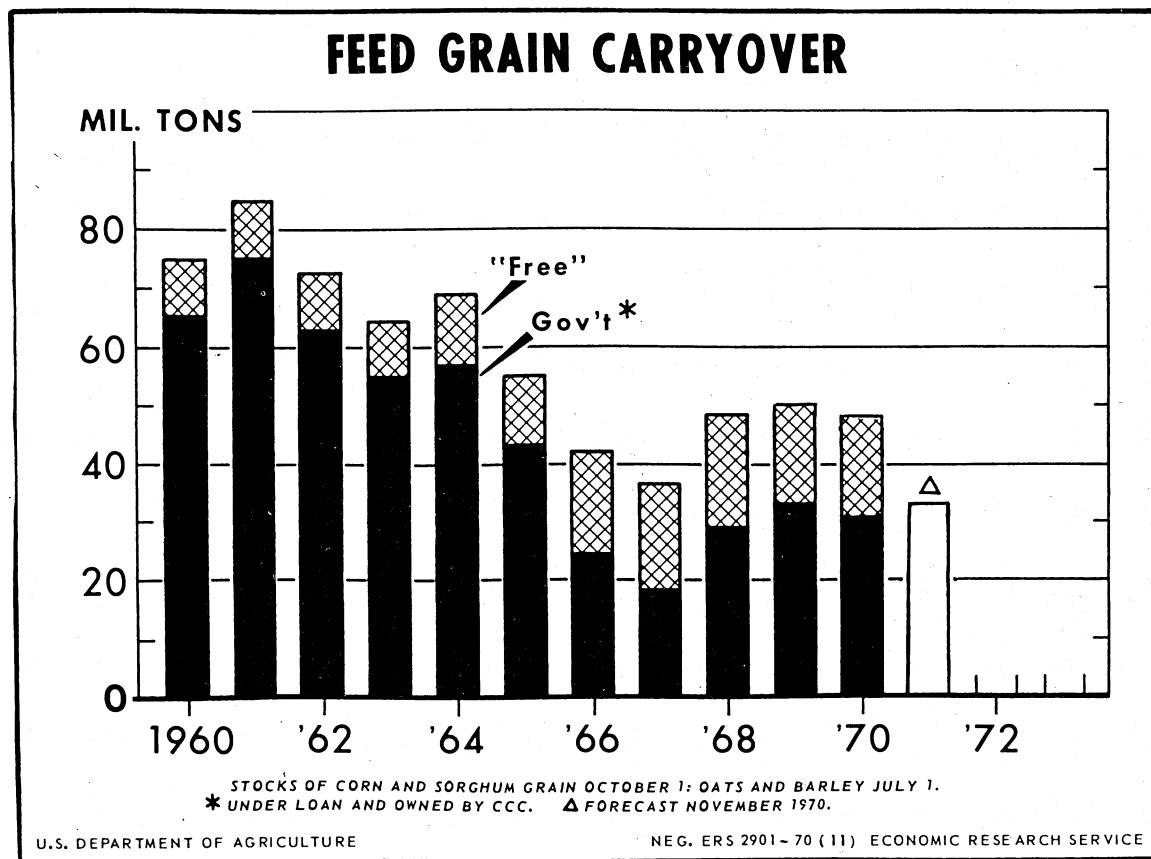
In 1971, farmers plan to increase feed grain plantings by nearly 7 million acres, based on the January 1 special survey of 35 States. The prospective 1971 corn acreage is up 4 million acres, and a 3 million acre increase is planned for sorghums. The outlook for 1971 corn production is clouded by uncertainty over recurrence of blight. Even with blight damage about the same as in 1970, but with more favorable weather in the Western Corn Belt, production on the planned acreage could be around 8 to 10% above the 1970 crop. With a favorable growing season for the other feed grains total feed grain production could increase around 10% above the short crop of 1970.

Total feed grain disappearance in 1970/71 is expected to fall a little below last year's record tonnage. During October-December both domestic use and exports were slightly above the record high in that quarter of 1969. But feed grain use is expected to fall a little below a year earlier this spring and summer. For the marketing year, total use probably will be well above the small crop, leaving a smaller carryover at the close of the 1970/71 season.

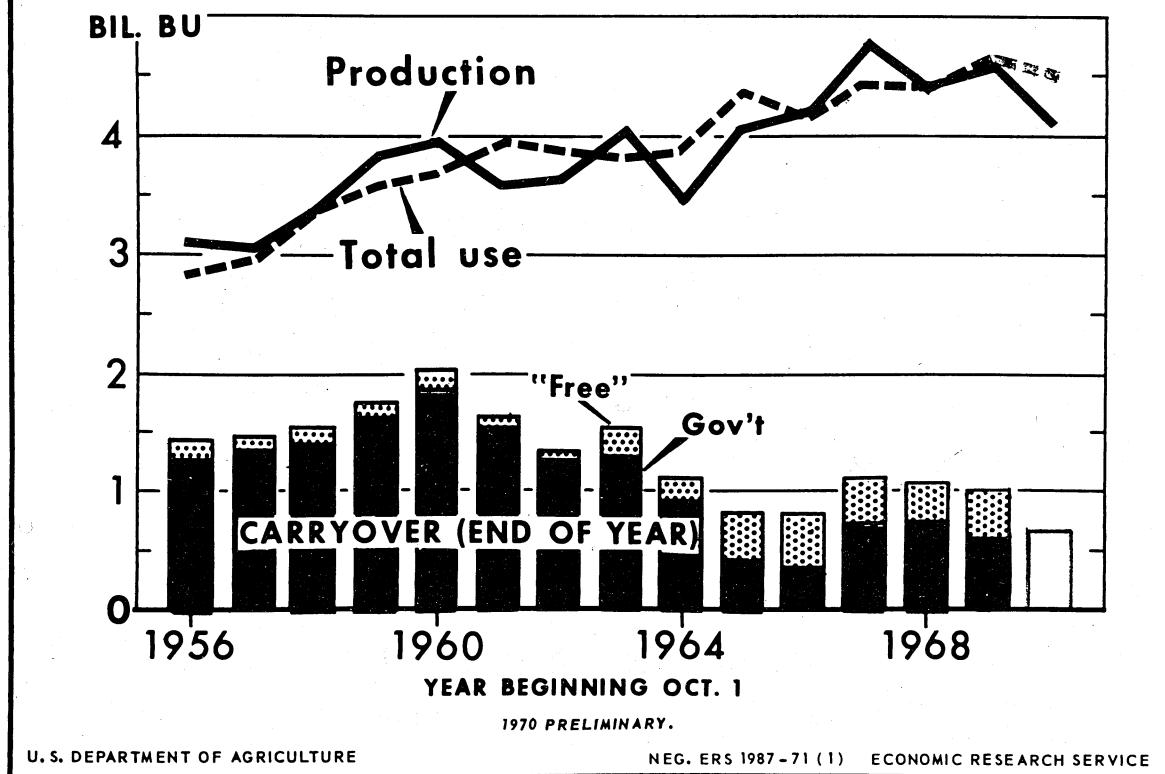


Total feed grain use has moved steadily upward since the mid-1950's, rising nearly 50% from 1955 to 1969. There has been a substantial increase in both domestic use and exports. Livestock feeding accounts for around 75 to 80% of total use. Hogs are the main consumer of feed grain, but since hog production has not shown any marked trend there has been little expansion in the tonnage fed to hogs during the past 15 years. Beef cattle were rather unimportant as consumers of feed grains 15 years ago but the marked increase of cattle feeding during the 1960's made them second only to hogs in 1969/70. The consumption by poultry has shown a fairly steady upward trend increasing about 25% during the past 10 years.

The feed grain supply for 1970/71 totaled 208 million tons, 17 million less than in 1969/70. The crop was down 15 million and carryover was 2 million smaller. Feed grain carryover reached a record 85 million tons in 1961 then dropped to a range of around 35 to 50 million tons in the past 5 years. Because of the short crop this year we will have to draw on the carryover of 48 million tons at the beginning of 1970/71--probably bringing it down to around 34 million tons--the lowest since the mid-1950's.



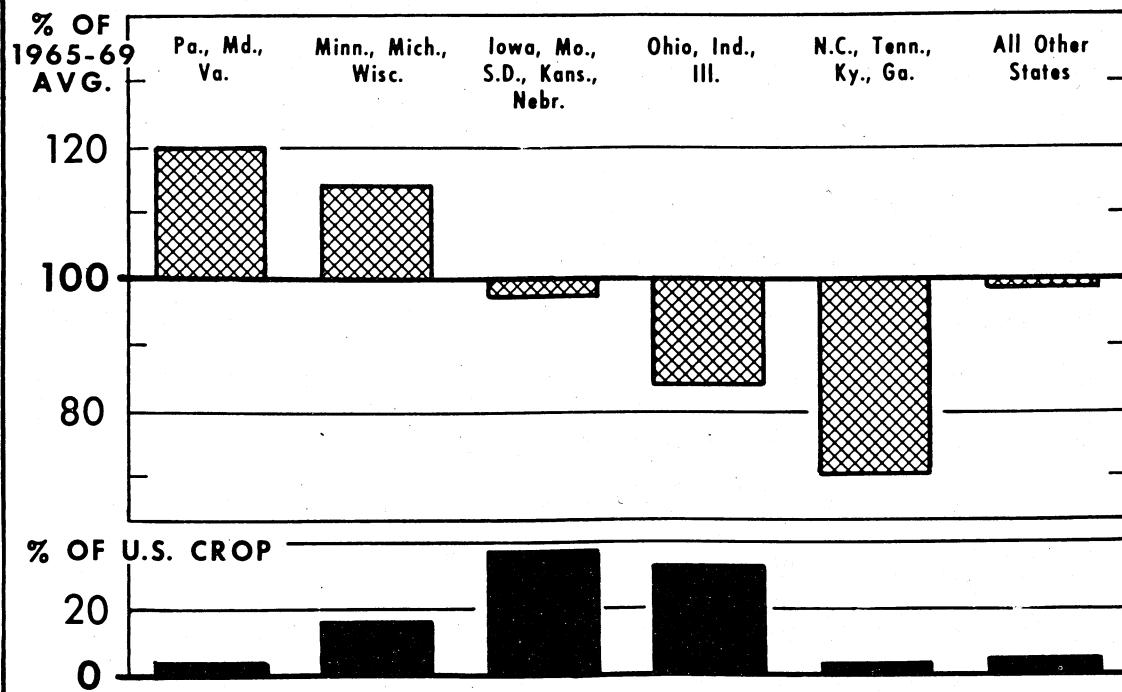
# CORN PRODUCTION, USE, AND CARRYOVER



Corn accounts for much of the reduction in the 1970/71 feed grain supply. The corn supply of 5.1 billion bushels was 10% less than in 1969/70 and 3% below the 5 year average. Corn yields, which reached a record high of 84 bushels per acre in 1969, dropped to 72 bushels in 1970. The 1970 crop of 4.1 billion bushels was nearly 500 million below a year earlier and 650 million below the record crop of 1967.

Relatively high corn prices and less favorable livestock--feed price ratios this year are expected to bring reduced usage this spring and summer. Domestic use may be around 100 million bushels below the 4,082 million bushels used in 1969/70. Exports may be down by 100-125 million bushels from the 616 million last year. This would bring total usage down to around 4.5 billion bushels compared with a record 4.7 billion in 1969/70. With the 1970/71 corn supply off 10%, the expected total use would reduce the carryover next October 1 to around 600 to 700 million bushels from the 1 billion of last fall.

## REGIONAL CORN PRODUCTION - 1970



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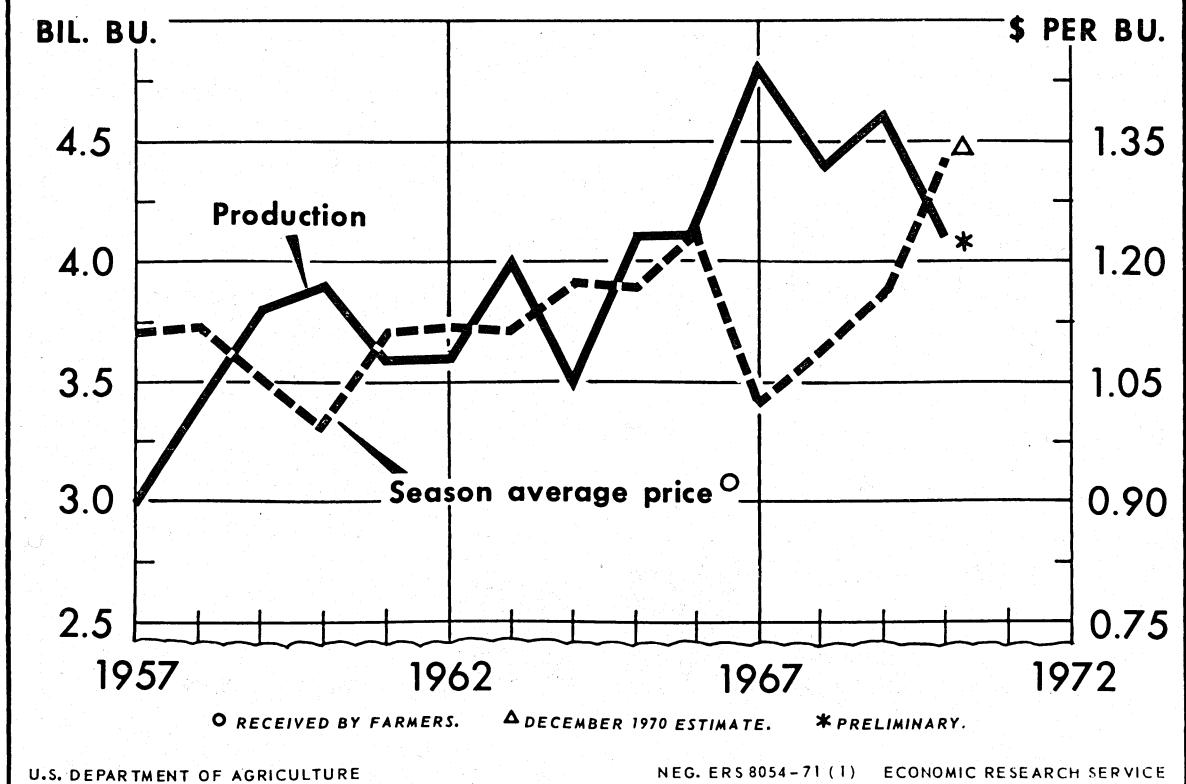
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There are wide differences in corn production by areas. The 1970 crop was well above average in the northern and western sections of the Corn Belt, and in the mid-Atlantic States. But it was sharply reduced by blight in the Eastern Corn Belt and in the South. In Pennsylvania, Maryland and Virginia the crop was 20% above the 1965-69 average, but these States produce only 4 or 5% of the U.S. total. Output was 14% above average in the Lake States which produce about 15% of the U.S. crop.

In the Western Corn Belt where nearly 40% of the U.S. crop is produced, output was a little below average due largely to dry weather along with some blight damage. In Ohio, Indiana, and Illinois blight damage cut the crop by about 15% below the 5-year average. These States usually produce about a third of the U.S. total.

The Southern States were hit hard by the blight. The four leading corn producing States of the South--North Carolina, Tennessee, Kentucky, and Georgia--had only 70% of an average crop. Production in these States, however, accounts for only 5% of the U.S. total.

# CORN PRODUCTION AND PRICES

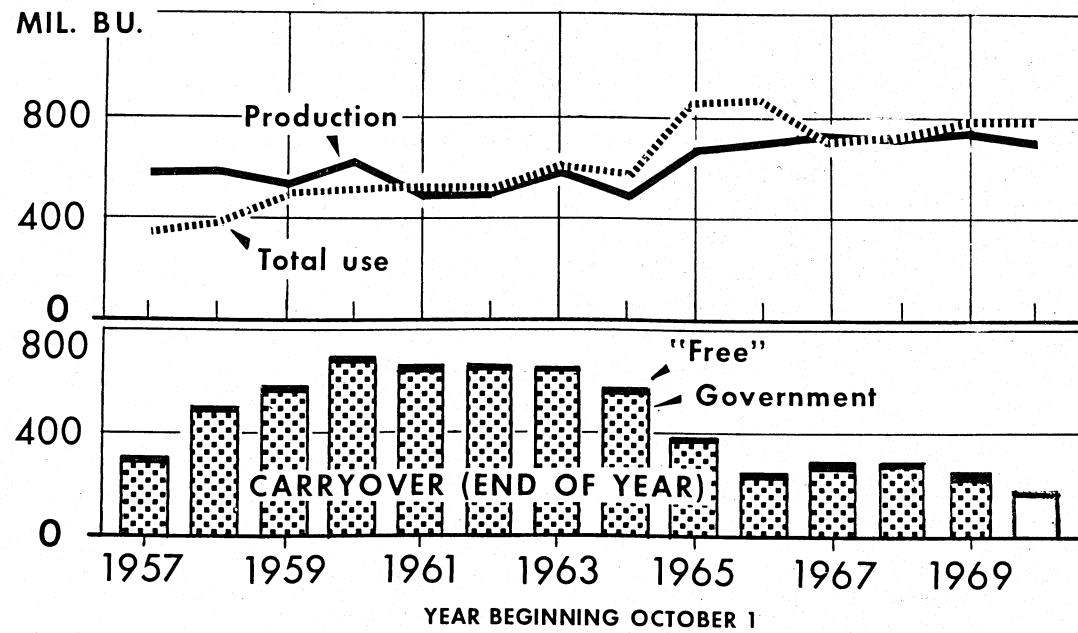


Smaller corn crops and expanding demand have resulted in a substantial rise in corn prices since 1967/68. In 1967 the bumper crop held corn prices close to the loan rate during the entire marketing year. The 1970 crop was about 650 million bushels below the record crop that year and prices are 30 to 35 cents per bushel higher.

Prices rose sharply from June to September of 1970 reflecting adverse conditions for development of the corn crop. During October-January prices received by farmers averaged \$1.35 per bushel, 25 cents higher than in that period of last season. They are expected to continue considerably higher through the first half of 1971.

Prices this spring and summer and in 1971/72 will be influenced by 1971 crop developments. Another small crop along with the reduced carry-over into 1971/72 would hold prices at a relatively high level. However, farmers will have time to adjust their livestock feeding operations during 1971 to the less favorable livestock-feed price ratios which could mean some weakening in demand for feed in 1971/72.

## SORGHUM GRAIN PRODUCTION, USE AND CARRYOVER



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1970/71 BASED ON JANUARY INDICATIONS.

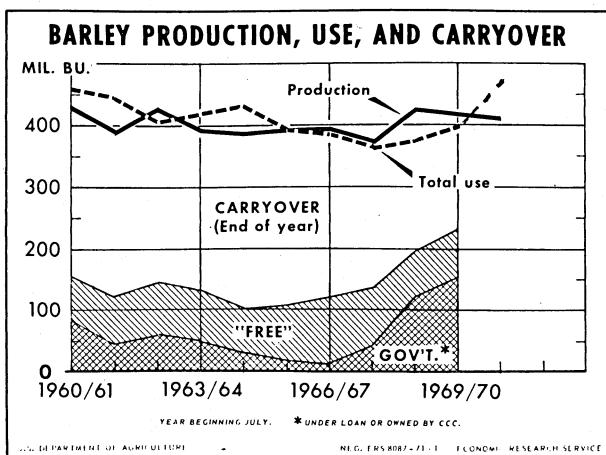
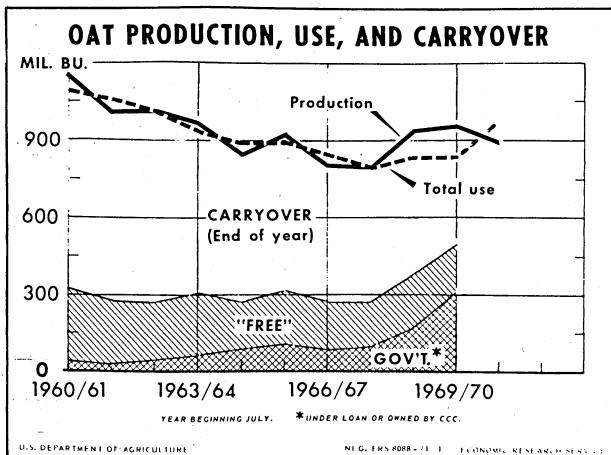
Grain sorghum production in 1970 was 7% below the 1969 crop as dry weather cut yields in the Great Plains. Strong demand is expected to push 1970/71 usage above production reducing the carryover next October 1-- probably a third below the 246 million last fall. Total usage, however, may slip a little below last year's high level since less favorable cattle-feed price ratios may bring lower feeding rates this spring and summer. Foreign demand for U.S. grain sorghum is strong this season and total exports may exceed the 125 million bushels shipped in 1969/70.

On the strength of good demand and the smaller sorghum and corn crops, the average price received by farmers during October-January was \$2.04 per cwt., 12¢ higher than a year earlier. Sorghum prices, however, are low this year in relation to corn, encouraging continued heavy usage.

Farmers in a special intentions survey of January 1 indicated that they will plant about 20 million acres to sorghums in 1971, almost 3 million more than in 1970. This acreage with a normal growing season would boost 1971 production.

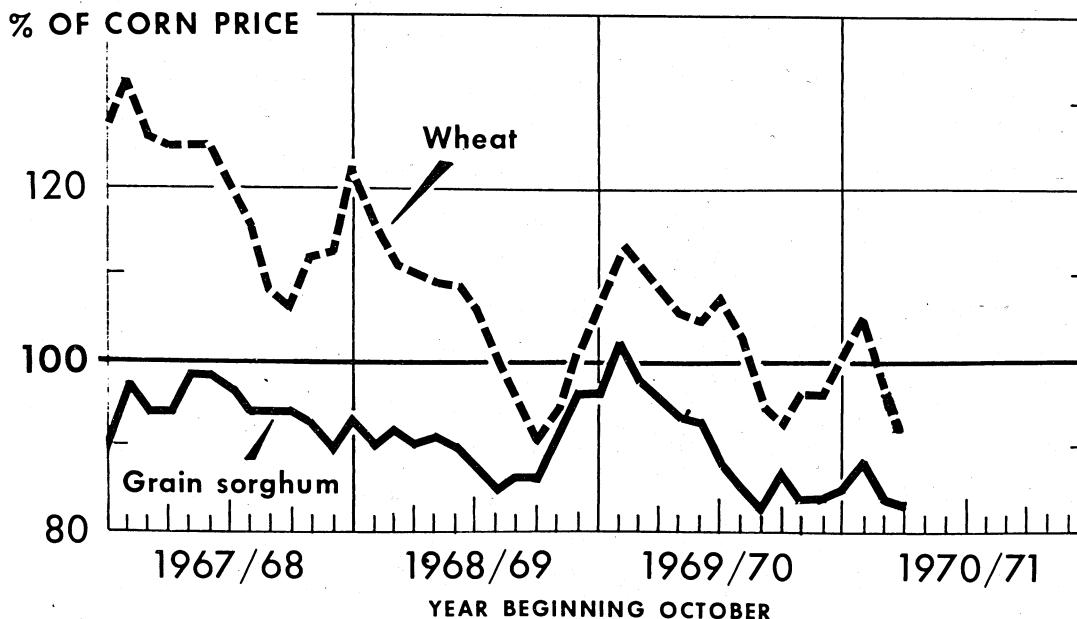
Oat production, which has been going down for a number of years, reversed this trend increasing to over 900 million bushels in 1968 and 1969. Total use did not keep pace with the larger crops and carryover rose sharply to a record 490 million bushels last summer. With oat prices relatively low this year heavy domestic use and larger exports will bring a better balance between production and use. Total use is now expected to be a little above 1970 production giving some reduction in carryover next July 1.

Most of the oat supplies are concentrated in the North Central States, which has had an important bearing on the rate of use and prices by areas. Almost two-thirds of the January 1 stocks of oats were located in Minnesota, Wisconsin, and North and South Dakota. Thus, the location of the oat surplus is fairly isolated from deficit feed areas of the East, South and West which rely heavily on shipped-in feedstuffs. This also tends to hold down grain prices in those areas containing large supplies that cannot readily be moved to areas where feed supplies are tight.



With larger barley production in 1968 and 1969, carryover also increased sharply to a record 237 million bushels last July 1. Another above-average crop in 1970 brought the 1970/71 supply to 659 million bushels, a fourth larger than the 1964-68 average. Relatively low barley prices are bringing increased consumption this year. During July-December domestic use and exports totaled 272 million bushels, 67 million more than last year. Over half of the increase was due to heavy export movement, but domestic feeding also increased significantly. Barley prices have been low in relation to corn, encouraging substitution in livestock rations. Feeding of barley increased more than 20% in the past 4 years. Total domestic use in 1970/71 is expected to be up by around 10% and exports will be much larger than in any of the past 3 years. Carryover of barley next July 1 may be down a fourth from the 1970 record high.

## GRAIN SORGHUM AND WHEAT PRICES RELATIVE TO CORN \*



\* BASED ON PRICES RECEIVED BY FARMERS PER 100 LBS.

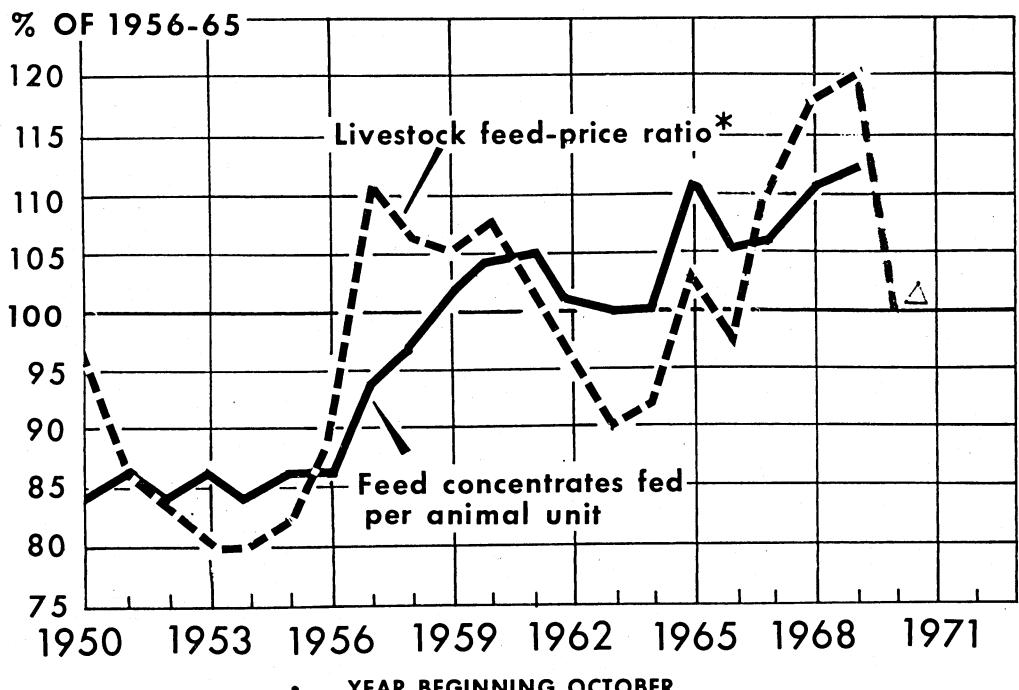
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Relatively high corn prices this year have encouraged livestock and poultry producers to shift to other feeds. Wheat feeding has expanded rather sharply in the past 2 or 3 years as wheat has become more competitive with corn. Wheat prices were 20-30% above corn 3 years ago but dropped sharply in relation to corn in the last 2 years. Wheat prices dropped somewhat below corn in the summer of 1969 and again this last summer and fall. This has encouraged the use of wheat in livestock and poultry feeds with the quantity fed exceeding 200 million bushels a year.

The price of grain sorghum averaged 85% of corn during October-January, a little below the long-term average. Prices of oats and barley have been much lower than average in relation to corn. In January the U.S. average price of oats was \$2.09 a cwt., 45¢ cheaper than corn. Barley averaged \$2.08 a cwt., 46¢ below corn. Prices of oats and barley were only 82% of the corn price, much below the long-term average of over 90%.

## FEED-PRICE RATIO AND FEEDING RATE

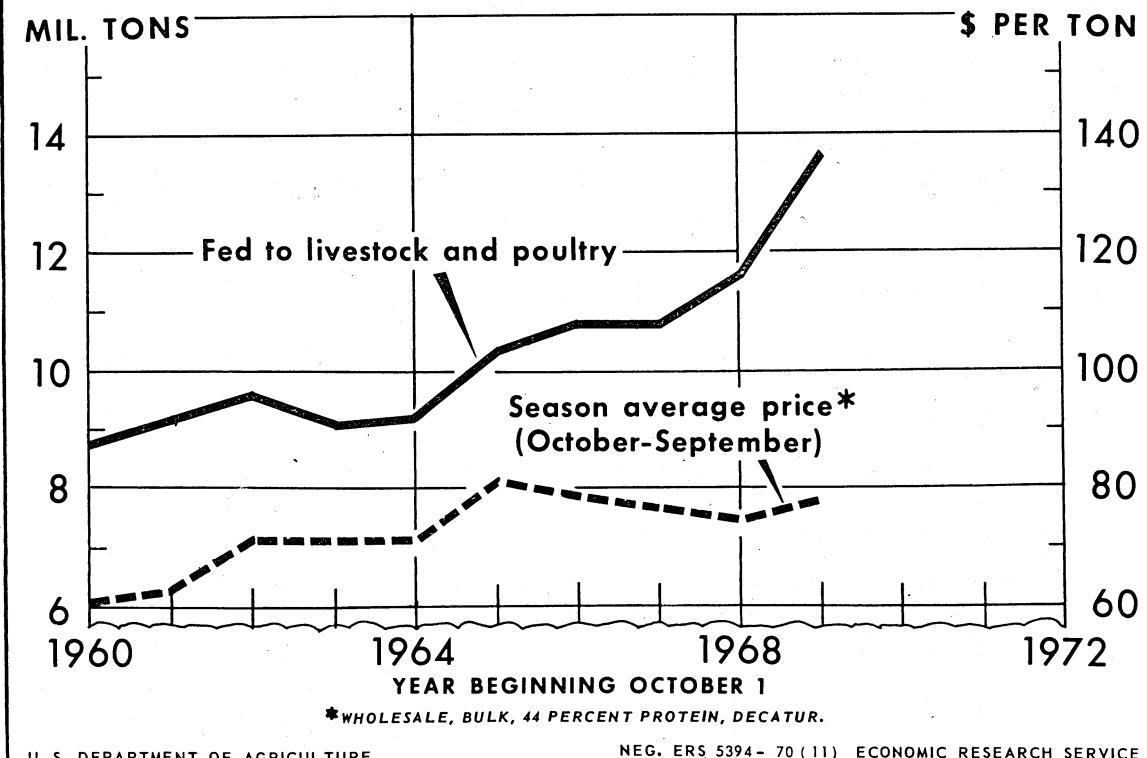


Favorable livestock-feed price ratios of the past 2 years have contributed to the increase in the feeding rate per animal unit. Responding to high livestock prices relative to feed costs farmers fed hogs and cattle liberally in 1969/70, raising the feeding rate per animal unit to 1.54 tons, the highest of record.

The short feed grain crop this year has caused higher feed prices--which, together with lower hog and poultry prices--resulted in much lower livestock-feed price ratios. In October-January, the ratio of livestock prices to feed prices dropped to 100% of the 1956-65 average, much below the 118 to 120% for 1968/69 and 1969/70. The U.S. hog corn price ratio in January was only 10.7, in contrast to the very favorable 23.5 of a year ago. Broiler, egg, and turkey-feed price ratios were off substantially from a year ago. Prices of beef cattle also are off considerably in relation to feed costs. The milk-feed price ratio has been the least affected by higher feed costs.

The number of grain-consuming animal units to feed in 1970/71 is now estimated at 120 million units, about  $2\frac{1}{2}$  million more than in 1969/70. But the concentrate feeding rate per animal unit probably will slide below the record 1.54 tons of 1969/70.

## SOYBEAN MEAL FEEDING AND PRICES



High-protein feed usage, which has been trending generally upward for a number of years, rose sharply in 1969/70. A continuation of favorable livestock-feed price ratios and an increase in high-protein consuming livestock were largely responsible for increasing demand for high protein feeds in recent years. A further gain in high protein feed consumption--probably 3 or 4%--is expected for 1970/71. Soybean meal, which made up most of the increase in protein feeding in 1969/70, will again be the major source of the increase in 1970/71. Strong demand for soybean meal during the past year kept crushing plants operating near capacity, even with soybean meal prices averaging nearly \$80 per ton at Decatur, up 6% from 1969/70. Fishmeal supplies reached the lowest level in 10 years in 1969/70, some recovery is expected in 1970/71. Supplies of animal protein feeds also are expected to be a little larger than last year, but a smaller supply of cottonseed meal is in prospect.

With continued strong demand, soybean meal prices averaged close to last year's levels this fall and winter. Crushers are again operating near capacity. Prices during the feeding year are expected to be more stable than in 1969/70 when monthly prices at Decatur ranged from \$70 to \$88 per ton. Soybean meal prices are low this year in relation to corn and many other feeds, encouraging liberal use.

