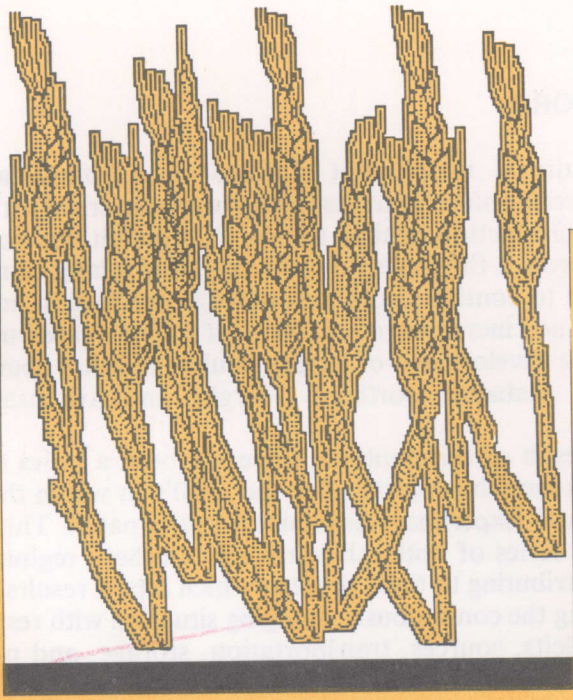
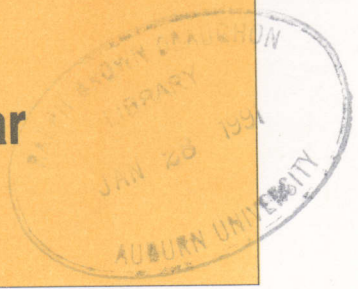


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**Feed Grain  
Production and  
Utilization  
Estimates for  
Alabama  
by the Year  
2000**



Circular 303 June 1990  
Alabama Agricultural Experiment Station Auburn University  
Lowell T. Frobish, Director Auburn University, Alabama

## **FOREWORD**

Agricultural experiment stations in Alabama and in the Southeastern United States have long been concerned with the deficit in grain production relative to use. This deficit has not only continued through the years, but has exhibited a long term trend upward due to continued declines in local production accompanied by continued increases in use. Most of this increased use has been due to the development of a large poultry industry, particularly in northern Alabama, northern Georgia, and Arkansas since the 1950's.

As a result of this concern, there has been a series of southern regional research projects since the 1950's in which the Alabama Agricultural Experiment Station has participated. This circular is part of a series of both Alabama and southern regional publications contributing to these projects which report results of research concerning the continuously changing situation with respect to feed grain deficits, sources, transportation, storage, and policy.

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*Information contained herein is available to all persons without regard to race, color, sex, or national origin.*

# Feed Grain Production and Utilization Estimates for Alabama by the Year 2000

Rupert Hopkinson and J.L. Stallings<sup>1</sup>

## INTRODUCTION

**C**ONSUMPTION of feed grains in Alabama has increased rapidly since the 1970's. Further increases are likely to occur if present trends continue. Though there has been a decline in the production of some classes of livestock in Alabama in recent years, consumption of feed grains has increased overall due primarily to the increase in broiler production since 1960.

Poultry numbers in Alabama have increased by over 265 percent, from 187 million head in 1960 to 683 million in 1987. At the same time, production of corn, which comprises a large portion of poultry feed, fell by 59 percent. The production of some minor feed grains has increased, but the general situation in the State shows a decline in total production of all feed grains. Alabama, as it has been for some time, remains a net importer of feed grains. Imports from other states have been increasing since the 1960's. Also, conditions affecting production and utilization of feed grains in Alabama have changed dramatically over time, making earlier projections obsolete. New projections are, therefore, needed to reflect these changing conditions.

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<sup>1</sup>Former Graduate Research Assistant and Associate Professor, respectively, of Agricultural Economics and Rural Sociology.

## Objectives

The objectives of this study were to:

1. Estimate the present feed grain production and utilization by livestock and other users in Alabama.
2. Project production of feed grains and their utilization by 11 classes of livestock and by other users in Alabama to the year 2000.
3. Compute production and utilization balances of feed grains in Alabama for 1987 and project the balance for the year 2000.

## Method of Study

For feed grains, projections were made of acres harvested, yield, production, and percent of U.S. production to 1999. In the case of livestock and poultry, projections were made of Alabama's production or numbers and percent of U.S. production to the year 2000. Time series data used in the projection were generally for the period 1960 to 1988, except for some classes of livestock for which data were only available from 1965.

Estimates were made using graphic projections of acres harvested, yield, production, and percent of U.S. production, each regressed on time. The projections were aided by five functional forms of equations<sup>2</sup>.

Feed grain consumption per animal, which was used to determine feed grain use, was estimated for Alabama by modification of U.S. disappearance per animal in each livestock class as published by the USDA and other secondary data. The data were modified for Alabama through consultation with Cooperative Extension Service and Agricultural Experiment Station experts in the fields of their various subject matter. An estimated average annual grain consumption for each unit of each class of livestock was then multiplied by the 1987 and the projected year 2000 numbers of the particular class of livestock to compute an estimate of the quantities of the seven feed grains needed for livestock in 1987 and by the year 2000. Similar estimates and projections for 1987 and for the year 2000 for human food, pet food, and other uses of grains were included using data obtained from secondary sources. Estimates of the surplus or deficit for Alabama for 1987 and in the year 2000 were determined by subtracting the quantities of each feed grain consumed or used in the State from the quantity of each feed grain produced.

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<sup>2</sup>For more details on the functional forms and statistical estimation, see "Feed-Grain Production and Utilization Estimates for Alabama by the Year 2000," an unpublished Auburn University M.S. thesis by Rupert Hopkinson.

# PAST TRENDS AND PROJECTIONS FOR ALABAMA FEED GRAINS AND LIVESTOCK

## Feed Grains

To compare present and future use of feed grains, acres harvested, yield, and production were projected to the year 1999. This is because feed grain production in this year is most of what will be consumed or used in the year 2000. These data are reported in appendix tables 1-5.

## Corn

Even though increasingly erratic, yield per harvested acre of corn in Alabama has approximately doubled from an average of 31.5 bushels for the first 5 years of the 1960's to an average of 62.5 bushels for the last 5 years of the data in the 1980's, figure 1. The record average yield of 75 bushels was in 1985. This is far below average state yields of over 100 bushels in recent years in some Corn Belt States.

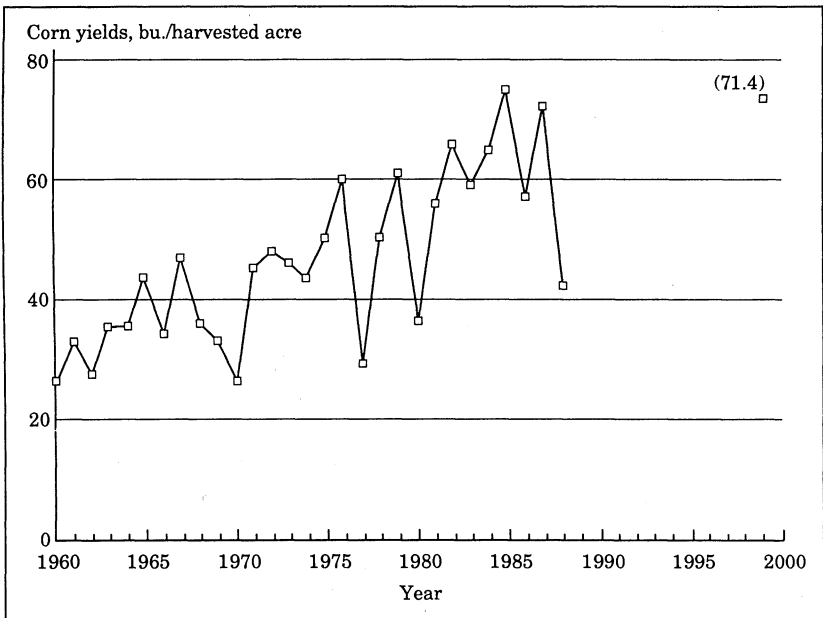


FIG. 1. Corn: yields, Alabama, 1960-88, with projection to 1999.

While yields have been increasing, there has been a dramatic decline in harvested acres in Alabama, figure 2. In 1960, 1.7 million acres were harvested, but that amount fell to 170,000 by 1988. Projections for further decline are highly reliable. Estimates in this study indicate only 140,000 acres harvested by the year 1999.

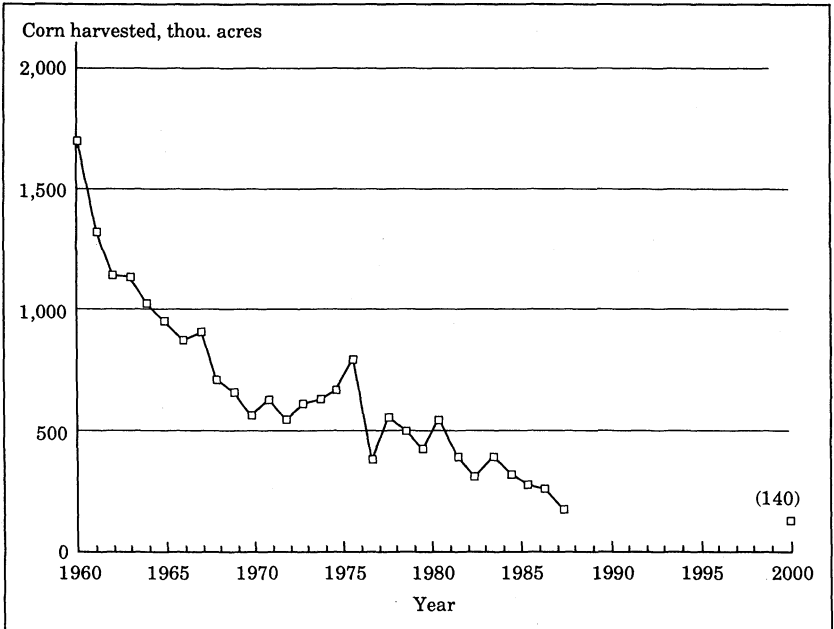


FIG. 2. Corn: acres harvested, Alabama, 1960-88, with projection to 1999.

As a result of declining acreage, corn production in Alabama has generally been declining since the late 1960's in spite of increasing yields, figure 3. In 1988, production was at a low of 7,480,000 bushels. This has made it necessary to import an increasing amount of corn if current livestock and other uses are to be sustained. While the general level of Alabama corn prices is important to corn and livestock producers, the geographical price differentials between Alabama and the Corn Belt are even more important since corn can be moved from lower priced surplus areas to higher priced deficit areas. Alabama is a deficit area and the local price per bushel of corn has often been as much as \$0.30 more than in some Corn Belt States in the past (23). In 1983, the average price of corn was \$3.55 in Alabama, while it was \$0.29, \$0.25, and \$0.44 less in Indiana, Illinois, and Iowa, respectively. This differential is usually enough to cover the transportation costs to Alabama.



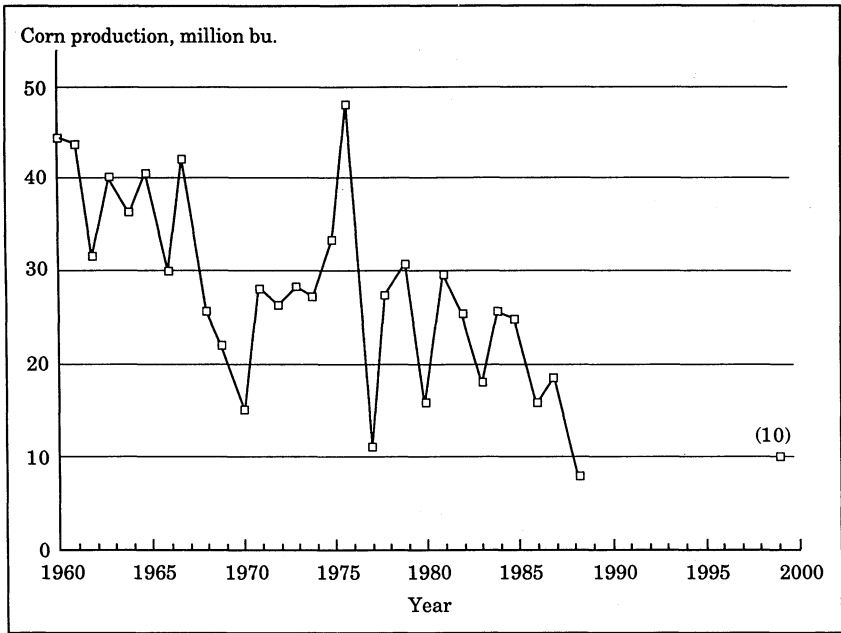


FIG. 3. Corn: production, Alabama, 1960-88, with projection to 1999.

In this study, Alabama was projected to produce only 10 million bushels of corn by 1999. This is far less than projected needs if present trends in use continue. Also, Alabama's percentage of U.S. production, always small, is getting even smaller, and is expected to decrease further as the Corn Belt States remain productive in corn and Alabama's production declines.

### Soybeans

Alabama soybean yields from 1960 to 1988 have indicated no significant trend, figure 4. Yields averaged 23 bushels per harvested acre during the whole period, and the same is projected for 1999. Research is underway at the Alabama Agricultural Experiment Station and elsewhere which may hold promise for a breakthrough in yields but, at the moment, nothing but a horizontal trend can be projected. Future soybean production, then, is dependent primarily on acres harvested.

Acres harvested increased dramatically from 135,000 acres in 1960 to a peak of 2.15 million acres in 1979, after which the decline was

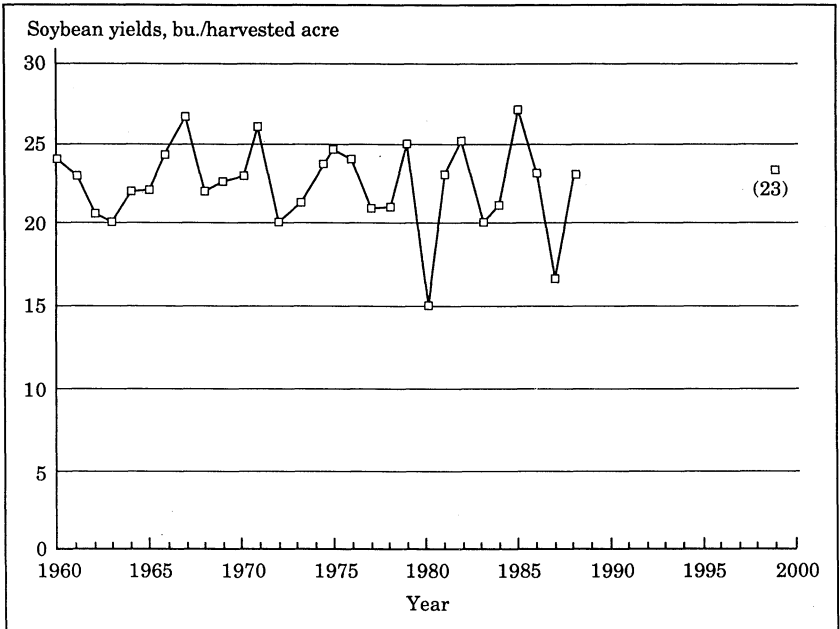


FIG. 4. Soybeans: yields, Alabama, 1960-88, with projection to 1999.

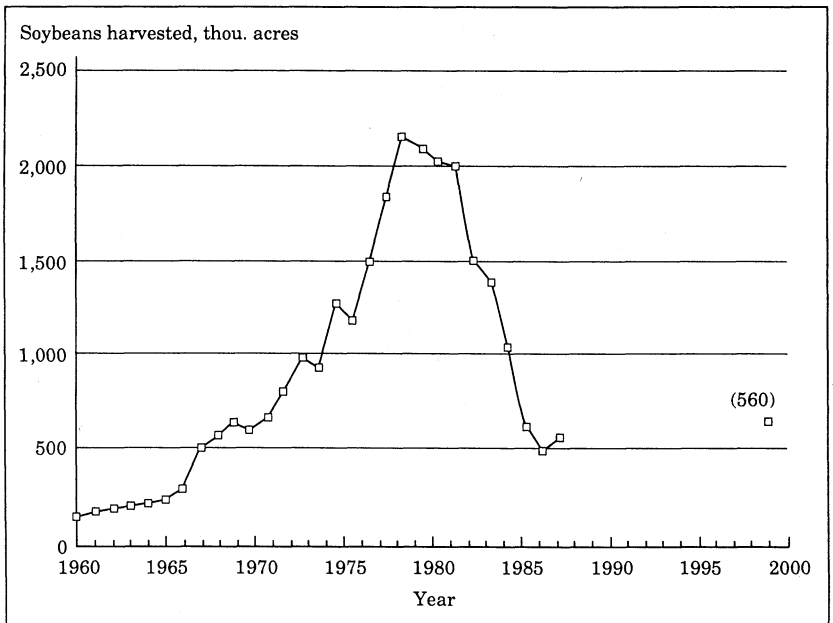


FIG. 5. Soybeans: acres harvested, Alabama, 1960-88, with projection to 1999.

just as dramatic, falling to 480,000 in 1987, figure 5. Acres harvested increased again in 1988 and, although predictions are difficult and highly uncertain, indications are that there will continue to be a small increase to about 560,000 acres by 1999.

Soybean production, although more erratic due to year to year yield fluctuations, generally follows the pattern of acres harvested in spite of an unusual year in 1980, figure 6. Unlike corn production, which has been in general decline with an increasing deficit over many years, there was a surplus of soybean production versus use in some years in the late 1970's and early 1980's. However, with the recent decline in acreage and production, soybeans also are a deficit grain in Alabama, and this deficit is increasing due to continued increase in use by an expanding poultry industry and declining production. This deficit is expected to continue to the turn of the century unless dramatic increases in yields and/or increases in acreage planted occurs, and this is not indicated by these projections.

Much of the increase in soybean acreage in the late 1970's and the early 1980's was at the expense of corn acreage, although some was the result of conversion of pasture acreage. Compared with

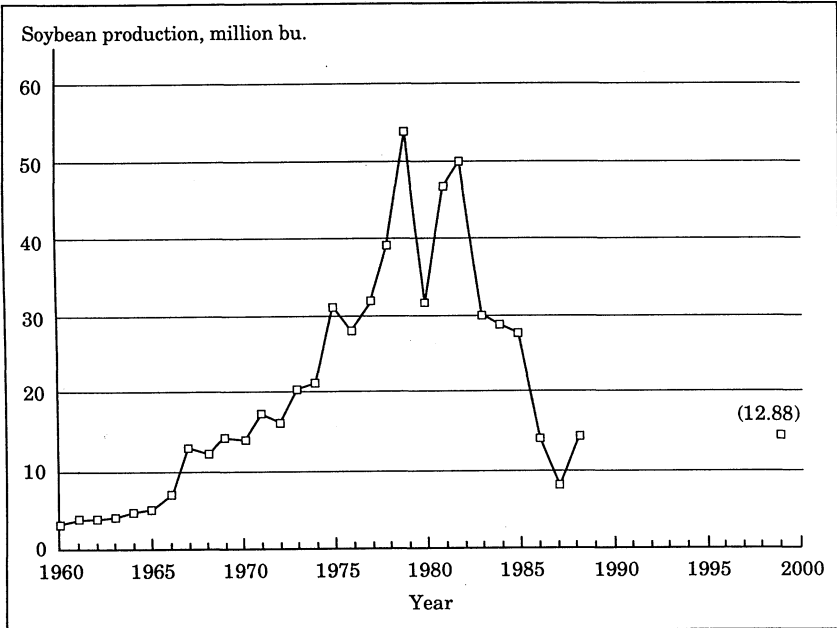


FIG. 6. Soybeans: production, Alabama, 1960-88, with projection to 1999.

corn, Alabama has some advantages over the Corn Belt in producing soybeans. These include a long growing season, greater adaptability to poor soils, relatively low land values, and convenient and favorable markets, with prices higher than the U.S. average.

In spite of this, soybean production has been declining from its last peak in 1982 when it was 50 million bushels to only 7.92 million bushels in 1987. This is partly because the number of farms and land devoted to row crops are, in general, declining. Projections indicate that soybean production will level off and average about its 1986-88 level for the rest of the 1990's, with a possible slight increase to 12.88 million bushels by 1999. However, because of the potential for dramatic increases, as witnessed in the past, this projection is not considered highly reliable. However, it is likely that Alabama will produce far less than the needs for crushing in the State by 1999, making continued imports of soybeans almost inevitable.

### Grain Sorghum

Throughout the period since 1960, yields of grain sorghum have generally been increasing, from 24 bushels per harvested acre in 1960

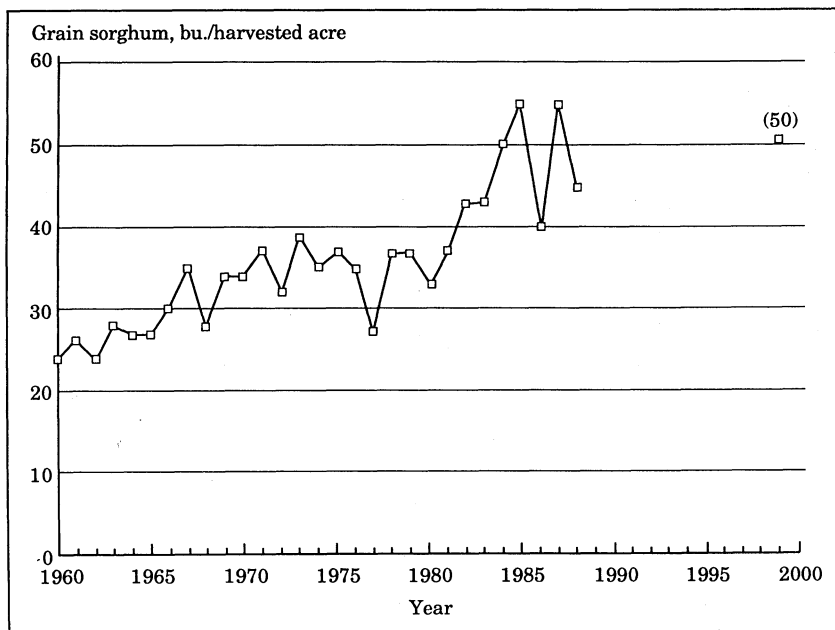


FIG. 7. Grain sorghum: yields, Alabama, 1960-88, with projection to 1999.

to 55 bushels in 1985, figure 7. While yields have been erratic in the past 3 years, they are still projected to continue a long term trend to about 50 bushels by 1999.

Harvested acres of grain sorghum fell as low as 7,000 acres in the mid-1960's, but have had two dramatic peaks since then, one small peak in 1971 and a large one in 1985, figure 8. The existence

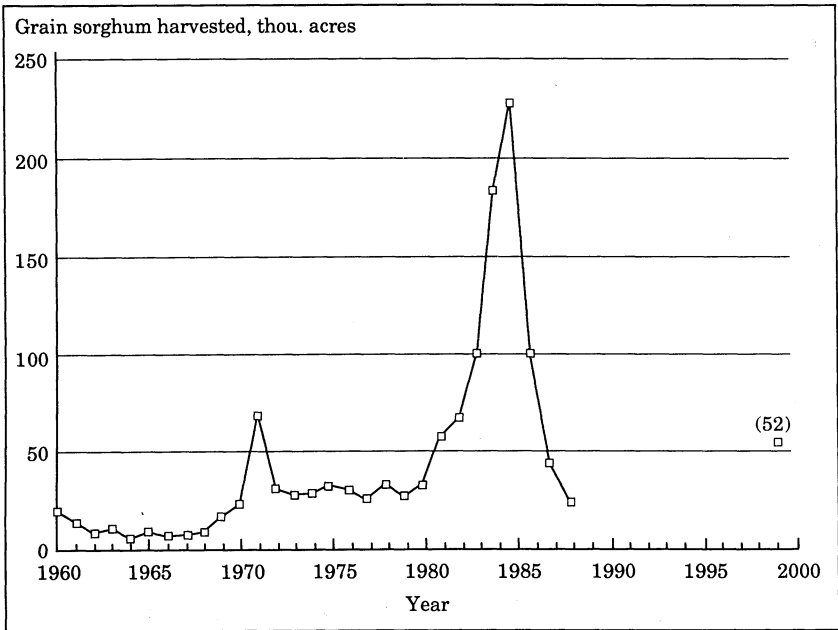


FIG. 8. Grain sorghum: acres harvested, Alabama, 1960-88, with projection to 1999.

of these peaks greatly complicates projections. Harvested acreage has declined since 1985 but, in spite of the potential for erratic increases, it is projected to be only 52,000 acres by 1999. In making such a projection, it was assumed that the two peaks were aberrations and projections were made excluding some of these years.

Grain sorghum production generally follows the erratic pattern of acreage harvested with some increase over time due to increased yields, figure 9. Projections were made with the same assumptions as for acres.

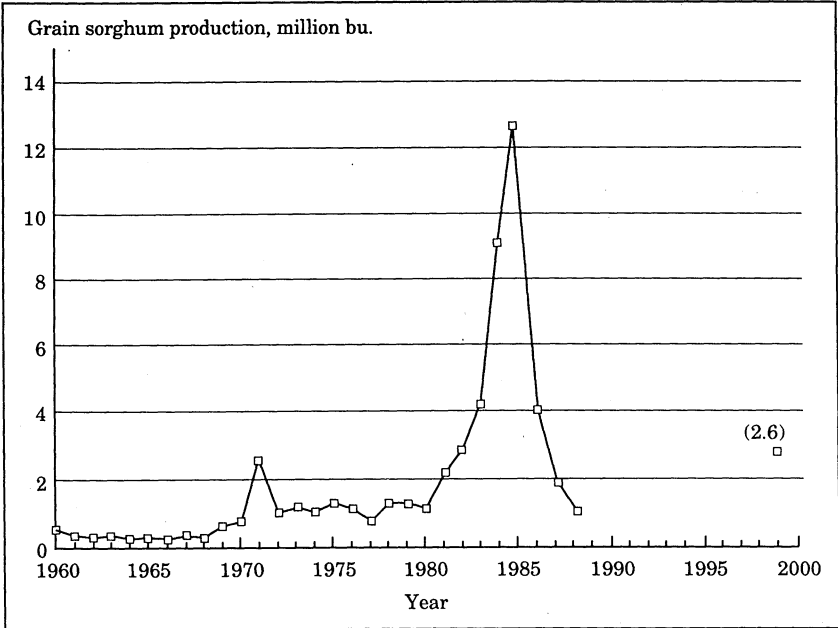


FIG. 9. Grain sorghum: production, Alabama, 1960-88, with projection to 1999.

### Wheat

Wheat yields have fluctuated between 23 and 30 bushels per harvested acre during the period from 1960 to 1980, after which yields generally increased but were more erratic, figure 10. Overall, yields have averaged just over 28 bushels per harvested acre for the period since 1960. Yields fell from a 1981 high of 44 bushels to 31 bushels in 1987 but peaked again at 43 bushels in 1988. Projections indicate a generally increasing trend in yields to 37 bushels by 1999.

After many years of relatively stable acreage, wheat acreage jumped to a high of 725,000 in 1982 from 90,000 in 1978, with similar accompanying changes in production, figures 11 and 12. From 1960 to 1978, wheat acreage varied only slightly, fluctuating around 100,000 acres with a slight upward trend.

There was an equally dramatic drop in acreage over a 5-year period from the 1982 peak year to 170,000 acres in 1987. Part of the reason for these peak years in wheat was the significant increase in soybean acreage harvested in these years with wheat serving as a double crop with soybeans. The years 1978 through 1987 were

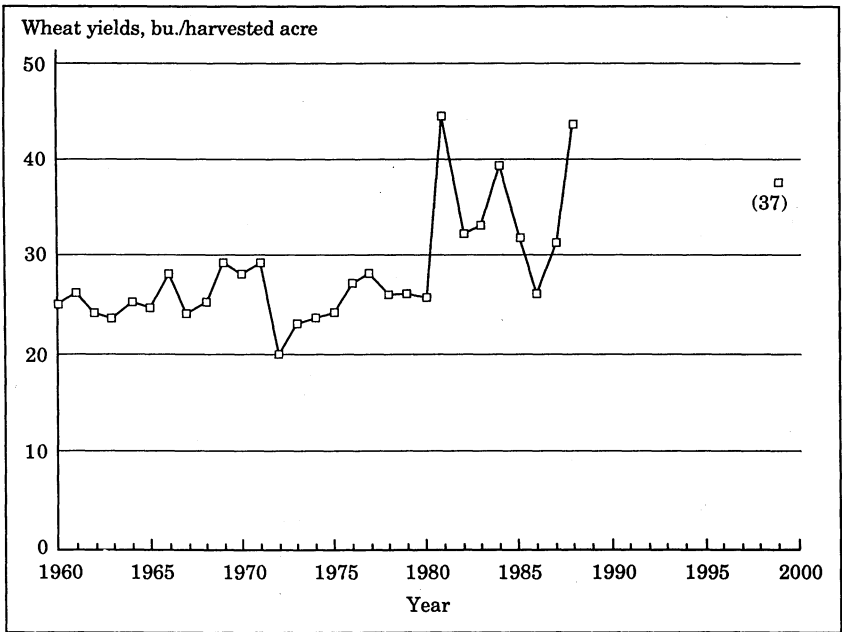


FIG. 10. Wheat: yields, Alabama, 1960-88, with projection to 1999.

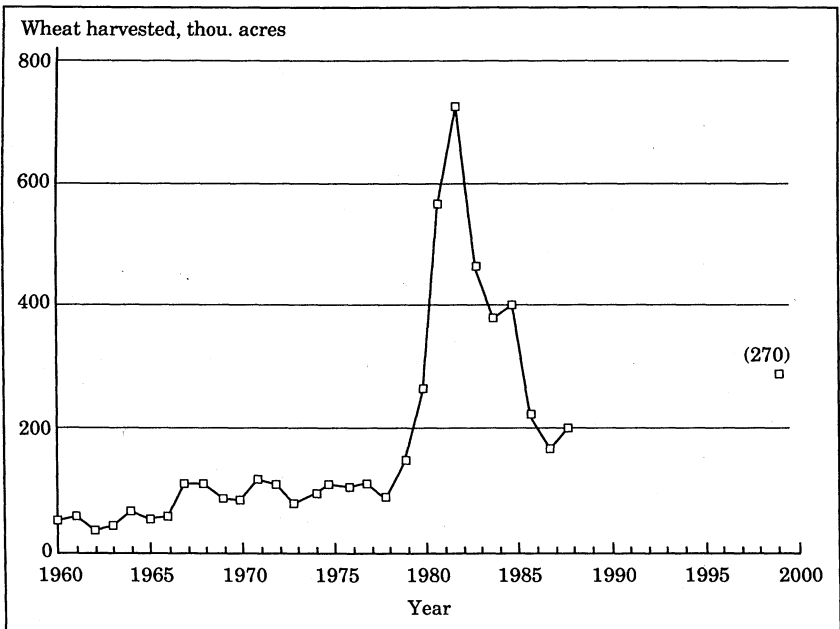


FIG. 11. Wheat: acres harvested, Alabama, 1960-88, with projection to 1999.

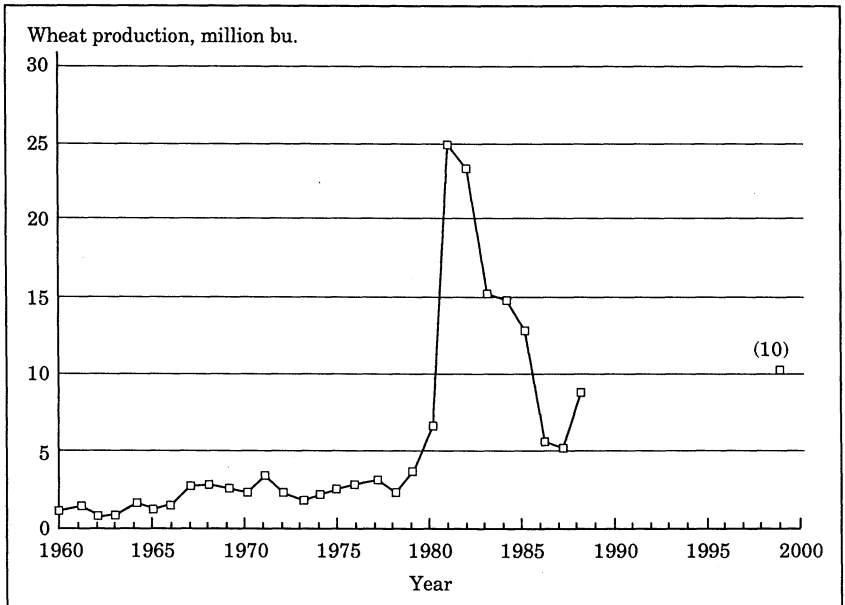


FIG. 12. Wheat: production, Alabama, 1960-88, with projection to 1999.

considered aberrations and were excluded in projecting to 1999. With this assumption, the long-run trend indicates a modest rise in projected acreage and production from the recent years of 1987-88 to 270,000 acres harvested by 1999. Production should follow the same general pattern as acreage harvested with the years 1978-87 considered unusual, figure 12. With this assumption, production of wheat is projected at 10 million bushels in Alabama by 1999.

## Oats

As with wheat, oat yields have also been erratic since 1980, but with a gradual long-term increase, figure 13. It is projected that by 1999 yield per harvested acre will be 50 bushels.

There was a steep drop of acreage of oats, from 85,000 acres in 1960 to 40,000 in 1963, figure 14. Since 1963, the long-run trend has been slightly downward with a sharp drop since 1985. In spite of the recent drop, oat acreage is projected at 30,000 by 1999. This decline in recent years has resulted in more oats being imported from the Midwest, especially to supply an increasing population of equines in Alabama. Production, as with acreage harvested, has followed



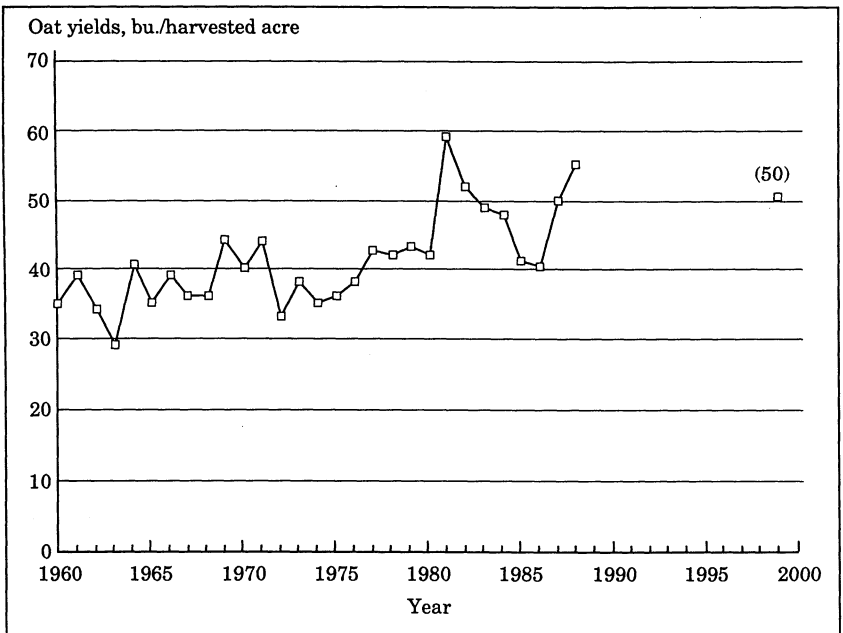


FIG. 13. Oats: yields, Alabama, 1960-88, with projection to 1999.

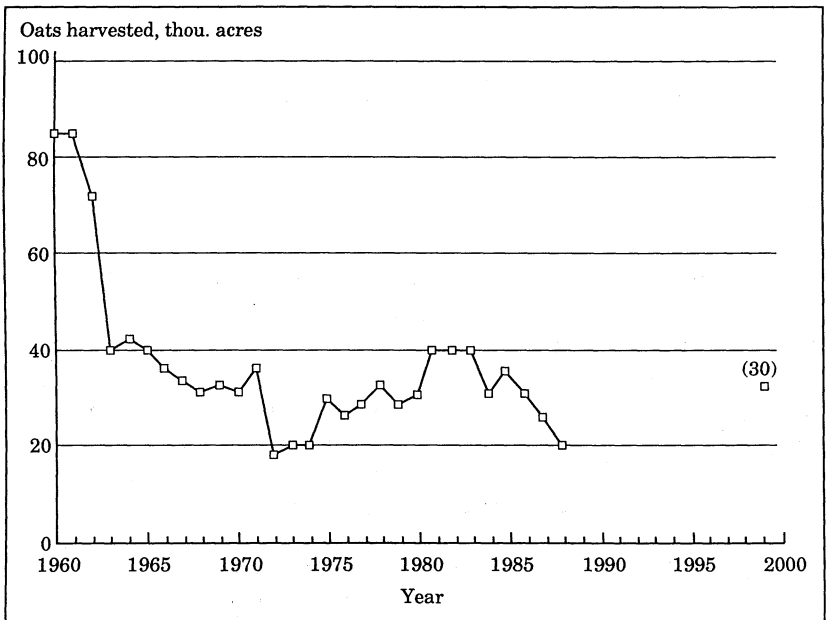


FIG. 14. Oats: acres harvested, Alabama, 1960-88, with projection to 1999.

a similar but more erratic pattern due to a compounding of yield and acreage fluctuation, figure 15. As with acreage, in spite of recent drops since 1986, production is projected at 1.5 million bushels by 1999.

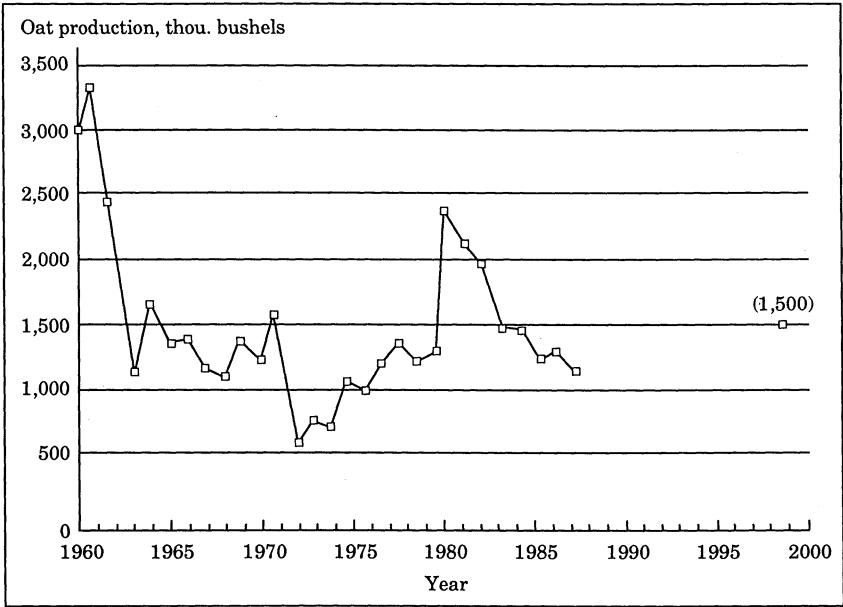


FIG. 15. Oats: production, Alabama, 1960-88, with projection to 1999.

**Rye**

Rye is relatively unimportant as a feed grain in Alabama and data are not reported by the Alabama Agricultural Statistics Service. This makes projection difficult.

However, every 5 years the Census of Agriculture reports acres harvested, yield, and production for Alabama. The latest figures for 1987 put acres harvested at 3,816 and yield at 22.4 bushels per acre, for a total State production of only 85,659 bushels.

While no tables and figures are presented for rye, projections of 5,000 acres harvested, a yield of 22 bushels per acre, and a production of 110,000 bushels were made for 1999 from limited data. Rye production will be combined with other minor feed grains, such as barley, in the estimates of production-utilization balances. It is

relatively unimportant as a feed grain in Alabama and will not affect these balances significantly.

## **Barley**

Barley, like rye, is insignificant as a feed grain in Alabama. Data are reported by the Census of Agriculture every 5 years as with rye. According to the last Census report for barley in 1987, acres harvested were 665, yield 46.4 bushels per harvested acre, and production 30,823 bushels. Tables and figures are not presented for this crop, but the projections made to 1999 from limited data place acres harvested at 800, yield at 43.3 bushels, and production at 34,640 bushels. As with rye, barley is combined with other minor feed grains in later analyses, and is relatively unimportant.

## **Livestock and Poultry**

To facilitate the calculation of feed grain production-utilization balances by the year 2000 numbers or production of 11 classes of grain-consuming livestock were projected to that year. These data are reported in appendix tables 6-8.

Livestock and poultry are the main users of feed grains. In some cases, production is given in terms of numbers raised. In other cases, numbers on hand January 1 were used because of the way data for some classes of livestock are recorded. For example, broilers, for which several batches per year are raised, are more reasonably reported as numbers raised. Dairy cow numbers, which remain relatively constant throughout the year, are reported as numbers on hand January 1. 'Rations,' used later to determine consumption of feed grains from these data, take into account these differences in methods of reporting. Therefore, while they may be called 'rations' for discussion purposes, the figures really represent 'disappearance' per animal per unit reported for calculation purposes and do not necessarily correspond to an actual ration fed.

## **Broilers**

In the poultry class, broilers are the biggest users of feed grains in Alabama. Over a 27-year period, production of broilers rose 277 percent, from 176.7 million head in 1960 to 666.5 million in 1987,

figure 16. Production has increased in all but 4 years, when the decreases were quite small. The upward trend of the past 5 years has been continuing. Further increases are expected, with projections of 780 million head by the year 2000. This increased production of broilers in Alabama has improved the State's percentage of U.S. production, which has risen steadily from 9.8 percent in 1960 to 13.3 percent in 1987. Broilers, it will be shown later, are the main cause of a projected increased deficit in feed grains, especially corn and soybeans, by the year 2000.

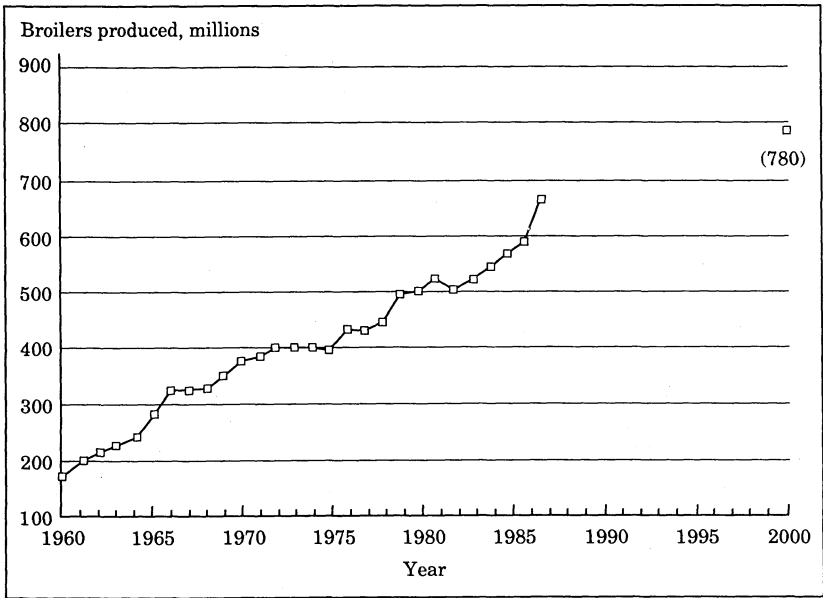


FIG. 16. Broilers: production, Alabama, 1960-88, with projection to 2000.

### Hens and Pullets

These are birds of laying age and egg-producing birds. They were put into a separate category to facilitate computation of feed consumption, as the ration per bird is different from that of broilers. The broiler is sold after a few weeks, while the hen or pullet is kept all year and will have higher feed disappearance per unit over a year. Hens and pullets will appear in the category 'other chickens,' along with roosters and farm flocks, until they reach laying age.

Hens and pullets steadily increased in numbers from 1960 to 1970, after which there was a general leveling off until 1980, figure 17. The decline since 1980 is not confined to Alabama, but has been general throughout the United States. Therefore, in spite of the decline in numbers in the 1980's, Alabama's share of U.S. production has remained relatively stable.

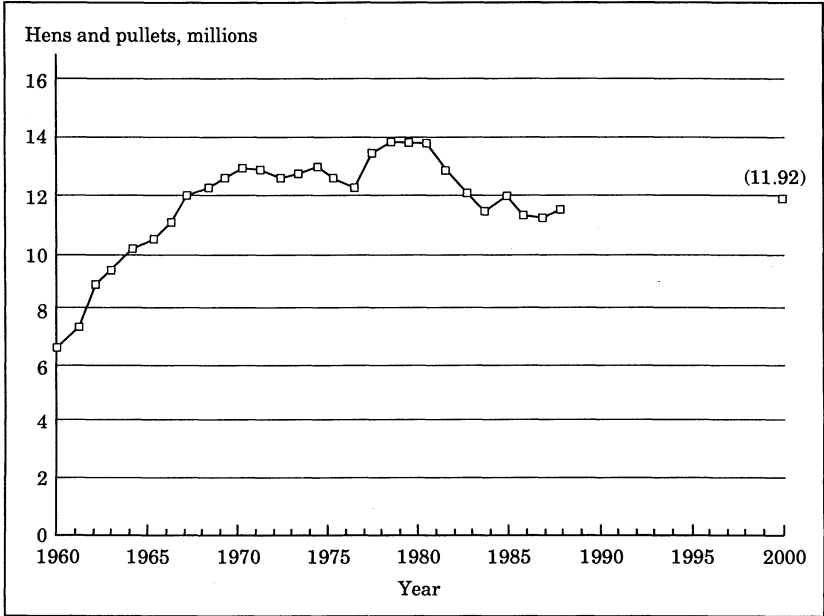


FIG. 17. Hens and pullets: on hand Jan. 1, Alabama, 1960-88, with projection to 2000.

**Other Chickens**

These are mostly the replacement birds for the laying flock, but they also include farm flocks for home consumption which are of decreasing importance. Although erratic from year to year, their numbers have had a relatively constant trend over the years, figure 18. Only 986,000 more were on hand in 1987 than the 3.9 million in 1960. While there were decreases in numbers in recent years, the long-run trend indicates a projection of about 6 million birds by the year 2000.

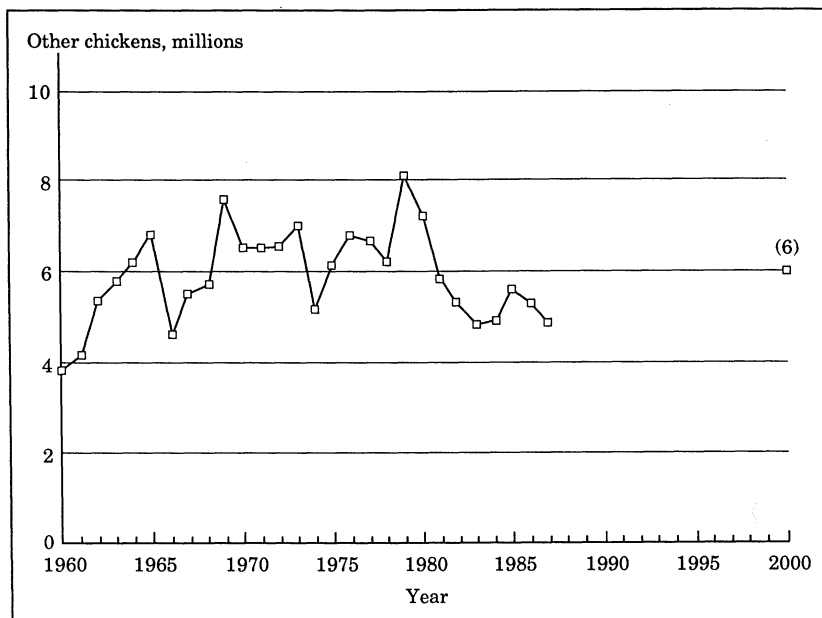


FIG. 18. Other chickens: on hand Jan. 1, Alabama, 1960-87, with projection to 2000.

## Turkeys

Data on turkey numbers in Alabama have been reported only at sporadic intervals. These enterprises are relatively unimportant as far as feed grain use is concerned. Their numbers in Alabama have decreased over the years from about 39,000 in 1969 to 23,000 in 1987. Turkeys as an industry in Alabama has clearly declined, and production is estimated at only 23,000 by the year 2000.

## Hogs and Pigs

The 'pig crop' is defined as a fall and winter crop. In this publication, 'pig crop' refers to total numbers sold from these two periods and will include the previous year's fall crop plus the present year's spring crop. The long-run trend for the pig crop in Alabama has been a decline, with upward and downward swings in the 'hog cycle' about every 5 years since 1960, figure 19. Numbers are projected as downward at 400,000 head by the year 2000 on a long-run trend basis. It is particularly important to note that specific

numbers of hogs by the year 2000 will depend on the stage of the hog cycle, which is difficult to predict precisely.

Alabama's share of the U.S. pig crop is also falling. It has fallen below 1 percent since 1983 and is expected to continue to decline.

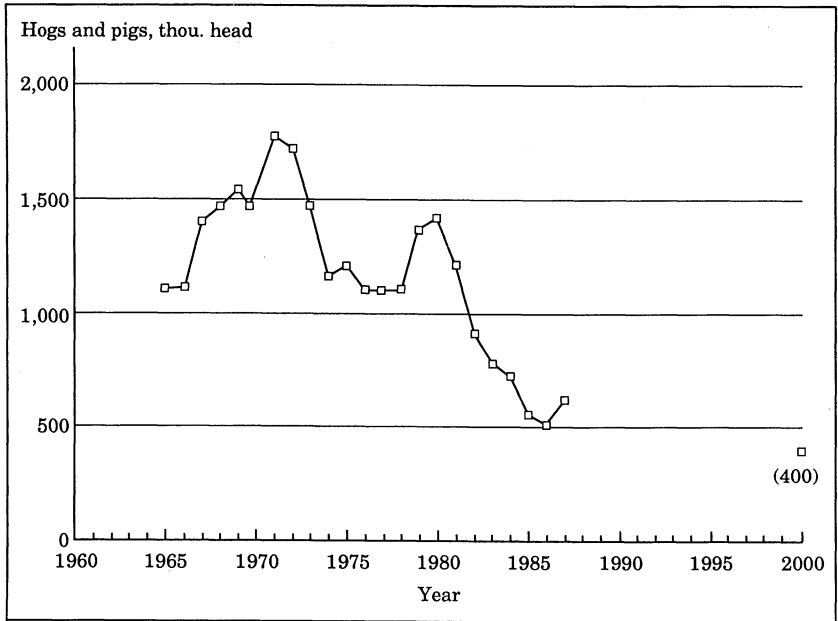


FIG. 19. Hogs and pigs: pig crop, Alabama, 1965-87, with projection to 2000.

### Beef Cows

For beef cows, as for dairy cows and other cattle, comparable data for this study were available only from 1965 because of a definition change at that time. Since 1970, beef cow numbers in Alabama have rapidly increased, reaching an all time high in 1976, figure 20. Numbers at that time were 1.3 million head, but have since fallen, reflecting the traditional 16- to 17-year cycle. Numbers reached a low in 1980, but now appear to have stabilized somewhat, fluctuating just under 1 million head. This trend has continued for the past 9 years, with the lowest level being 862,000 head. As with hogs, it is not possible to specifically project the stage of the long run 'cattle cycle' by the year 2000; however, long-term projections are set at 1 million head by then, even though the short-run figure will depend on the stage of the cycle which is difficult to project.

Alabama's share of U.S. production has been fairly steady throughout the 1965-88 period, between 2.4 and 3 percent. This is expected to continue.

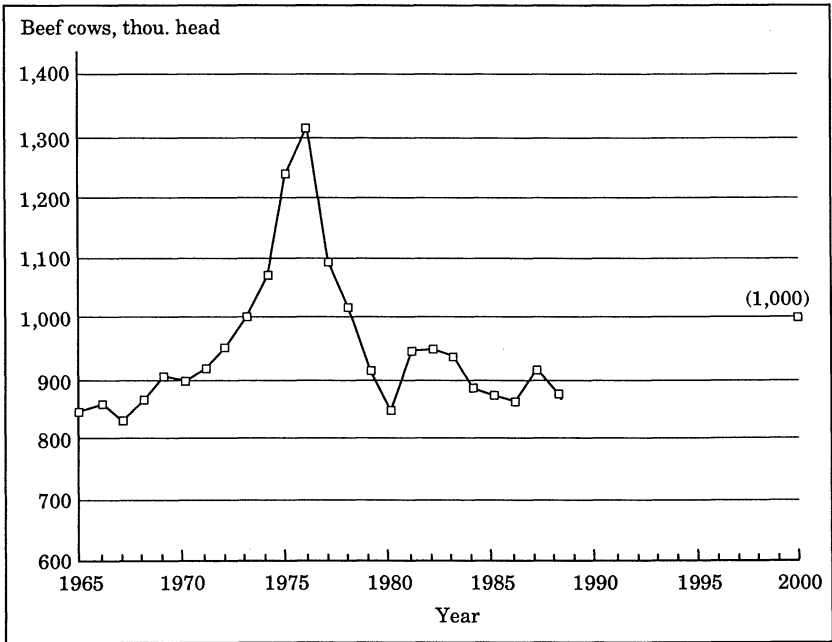


FIG. 20. Beef cows: on hand Jan. 1, Alabama, 1965-87, with projection to 2000.

### Dairy Cows

The decline in number of dairy cows in Alabama has been more dramatic than for any other class of livestock, and the trend is highly significant statistically. Over the period since 1965, production has decreased every year except 1972, when it remained at its 1971 level, figure 21. Predictions are that numbers will continue to decline, falling to 20,000 head by the year 2000.

Alabama's percent of U.S. production was 1.13 percent in 1965, its highest for all years in the range of the data. As is the case with dairy cow numbers, this share is expected to continue to decline.



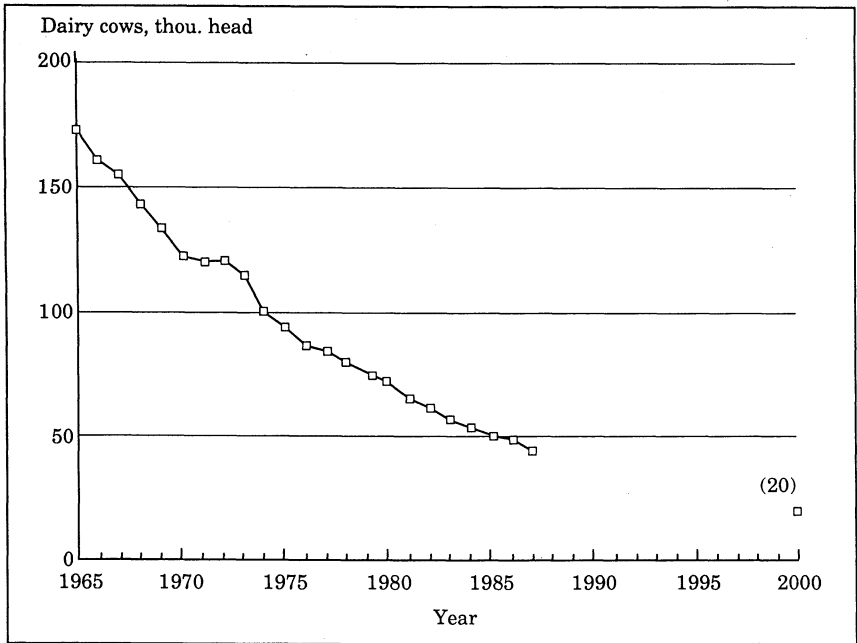


FIG. 21. Dairy cows: on hand Jan. 1, Alabama, 1965-87, with projection to 2000.

## Cattle on Feed

Except for year-to-year fluctuations, numbers of cattle on feed in Alabama have shown no significant statistical trend either upward or downward, figure 22. A simple linear regression projected numbers at 35,000 head by the year 2000. Numbers reached 50,000 in 1987, but for most of the other years, they fluctuated between 33,000 and 40,000. Alabama's share of U.S. cattle on feed production has fluctuated, but has been generally between 3 and 5 percent.

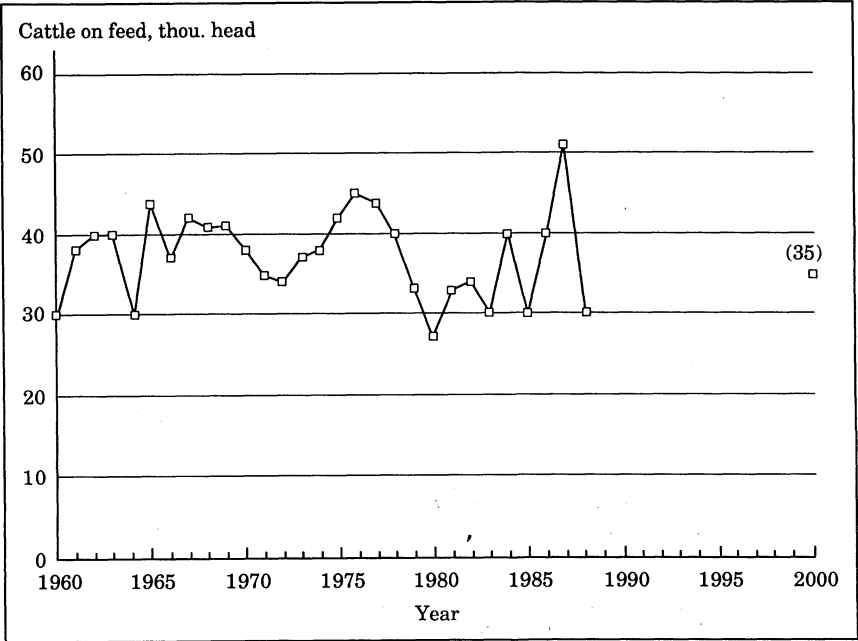


FIG. 22. Cattle on feed: on hand Jan. 1, Alabama, 1960-87, with projection to 2000.

## Other Cattle

'Other cattle' is defined as the total number of cattle on hand January 1, less dairy cows, cattle on feed, and beef cows. These will include the calf crop and bulls. Number of head in this category in 1988 fell to 805,000 from 889,000 in 1965, figure 23. There was a peak period during the 1970's, however, when numbers reached over 1.4 million, but this appears to have been an aberration. In later years, numbers leveled off to the pre-1970 level, with the year 2000 estimate placed at 1.02 million head.

Other cattle have maintained a steady share of U.S. production, except in 1975 and 1976 when Alabama produced its highest numbers in this category during the 27-year period. The percentage of the U.S. total has generally been between 1.7 percent and 2 percent.

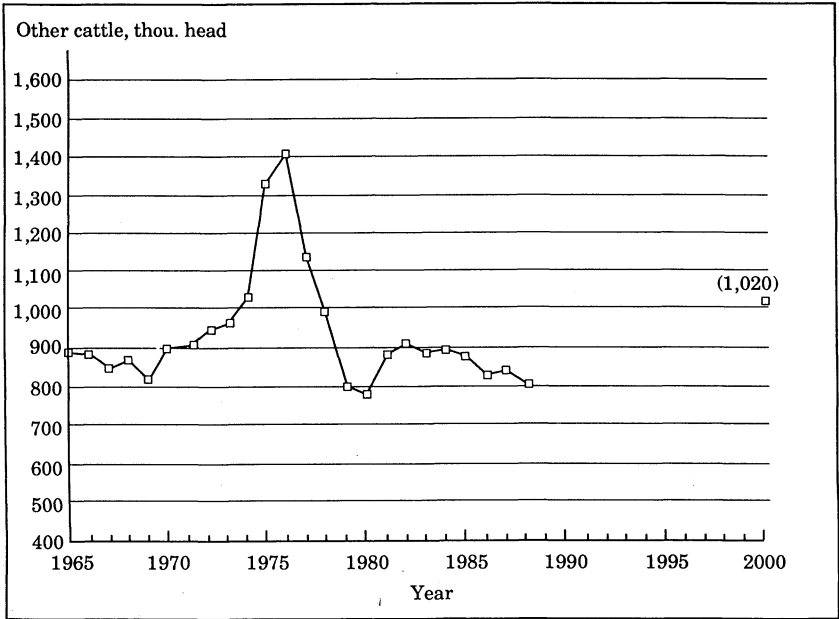


FIG. 23. Other cattle: on hand Jan.-1, Alabama, 1965-87, with projection to 2000.

## Sheep and Lambs

Sheep and lambs have declined from their 1960 high of 36,000 head, figure 24, The decline has been steady, but has leveled off at 4,000 head in 1978 and later years. Current estimates put the numbers for 1988 at 3,000 head. However, they are projected to be 4,000 by the year 2000. Sheep and lambs are relatively unimportant in determining feed grain use by the year 2000.

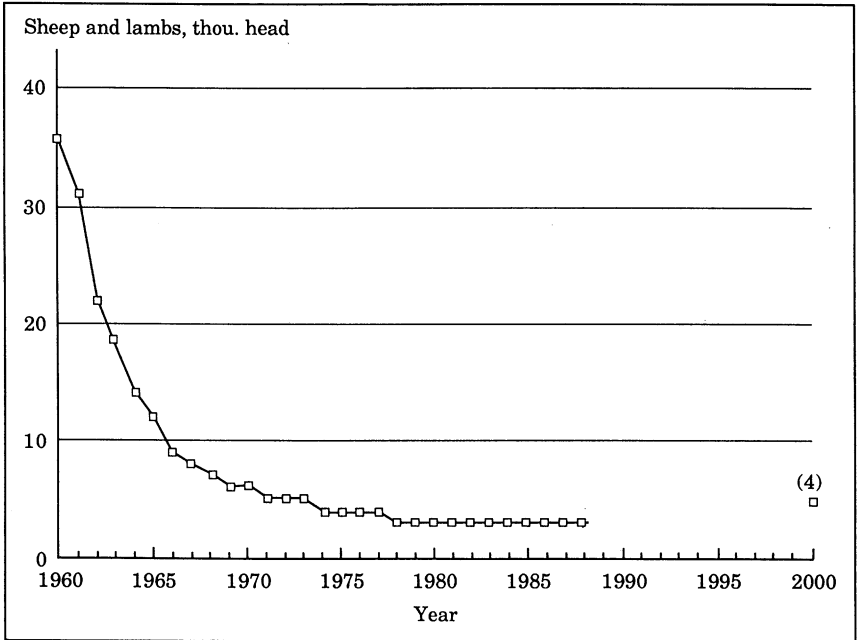


FIG. 24. Sheep and lambs: on hand Jan. 1, 1960-87, with projection to 2000.

## Horses, Ponies, and Mules

Recent data for horses, ponies, and mules are not readily available. However, estimated data through 1983 indicate that their numbers have been rising. This has been so since 1960 even though moderate decreases were estimated from 1968 to 1972. The popularity of horses, ponies, and mules as hobby animals and pets has not waned and the actual numbers, though difficult to estimate, are

expected to increase even further. Best estimates from sketchy data indicate about 200,000 head by the year 2000. They are important in any study of feed grain use because of the high percentage of oats in their rations which are mostly imported from out of state (25), and must be accounted for in any study of this nature.

## **GRAIN DISAPPEARANCE AND UTILIZATION IN ALABAMA**

There are some terms which should be defined in this section. Grain 'disappearance' for Alabama means not only all livestock and nonlivestock uses within the State, but disappearance of grains shipped to other states and overseas. Grain 'utilization' for Alabama includes consumption by livestock plus grains processed for human food, pet food, and for other nonlivestock uses within Alabama. Grain 'consumption by livestock' is the main sub-category of grain utilization for Alabama and is the main focus of this publication. The term 'livestock' always includes poultry. Data on grain disappearance and utilization are recorded in appendix tables 9-16.

### **Grain Disappearance in Alabama**

Total disappearance of all grains in Alabama, including livestock and nonlivestock uses and exports out of state and overseas, amounted to 227.8 million bushels in 1987. It is estimated that this figure will increase to 249.9 million bushels by the year 2000, about 10 percent or 22 million bushels over 1987. Corn accounted for 59 percent of total feed grain disappearance in 1987 and will account for an estimated 54.3 percent by the year 2000.

### **Corn**

Corn is the most important feed grain in Alabama. Total disappearance for 1987 was 134.44 million bushels with an estimated 135.757 million bushels projected by the year 2000.

Livestock consumption accounted for an estimated 119.6 million bushels, or 89 percent, of all corn disappearance in 1987. This amount is estimated to increase to 127.5 million by the year 2000. The poultry industry alone accounted for 96.2 million bushels in 1987, or over 80 percent of corn consumed by livestock. This share is projected to increase to 109.9 million bushels, or 86.2 percent, of the 127.5 million bushels of corn consumption by livestock by the year 2000.

Other grain-consuming livestock, except hogs, are relatively unimportant in terms of disappearance when compared with poultry. Other livestock accounted for only 15.7 million bushels, or 13 percent, of all livestock consumption in 1987. However, their future consumption of corn is expected to make up an even smaller percentage by the year 2000 as their numbers decline.

Cattle on feed have the highest per head consumption of feed annually, 102 bushels. However, the numbers are low and it was estimated that they consumed only 2.8 percent of the corn used in Alabama by livestock in 1987. The remaining classes of livestock also consumed below 2.5 percent, a trend that is expected to continue to the year 2000.

Other uses of corn (seed, processing, shipment to ports and to other states) accounted for 14.887 million bushels in 1987. The amount is expected to fall to 8.228 million bushels as the State continues to produce less corn locally. Local corn is an important source shipped out of Port of Mobile from the southern half of the State.

## **Soybeans**

The total disappearance of soybeans crushed was 60.418 million bushels-equivalent in 1987 and is estimated to increase to 75.646 million bushels by the year 2000. Of these amounts, 44.090 million bushels of all soybeans were consumed by livestock in 1987, with 49.165 million bushels expected to be needed by the year 2000. As with corn, the poultry industry was the largest user, with 39.461 million bushels, or 89.5 percent, of the soybeans consumed by livestock in 1987. This is 65.3 percent of total disappearance.

The poultry industry is expected to account for an even larger share of soybeans consumed by livestock in the year 2000. The industry is expected to consume 92.23 percent, or 45.389 million of a total of a 49.165 million-bushel disappearance by livestock. Aside from poultry, consumption of soybeans by other livestock is relatively unimportant, as the remaining seven classes consume less than 7 percent of that consumed by livestock.

Other nonlivestock disappearance of soybeans accounted for 16.3 million bushels, or 27 percent, of total disappearance in 1987, but is expected to increase to 26.481 million bushels, or 35 percent, of total disappearance by the year 2000. Expectations are for a modest increase in soybean production in Alabama, along with more shipments from other states for processing and more meal shipped to other surrounding states.

## **Grain Sorghum**

In 1987, total disappearance of grain sorghum was 5.543 million bushels, and it is expected to increase to about 5.730 million bushels by the year 2000. A total of 5.396 million bushels was consumed by livestock in 1987 for 97 percent of total disappearance. Unlike corn and soybeans, little grain sorghum is shipped to ports and to other states. Also, there is virtually no nonfeed use for grain sorghum as there is for corn.

Consumption by poultry accounted for 49 percent, or 2.643 million bushels of grain sorghum consumption by livestock. Broilers were the primary users, with 2.5 million bushels, or 95 percent, of poultry consumption.

Cattle on feed accounted for the highest annual per head consumption in a ration. Total consumption of grain sorghum was about 21 percent of the amount consumed by livestock. The remaining livestock classes accounted for less than 7 percent of the total consumption.

## **Wheat**

Total disappearance of wheat for 1987 amounted to 10.502 million bushels and is estimated at 15.729 million for the year 2000.

The trend remains similar to that for other feed grains in that the poultry category continues to dominate wheat consumption by livestock. In 1987, poultry enterprises used 4.473 million bushels, or 82 percent, of the wheat used by livestock in Alabama. However, this is only 43 percent of total disappearance. This is because wheat is not primarily a feed grain, as is corn, and other nonfeed uses play a greater role. More wheat is expected to be utilized by the year 2000, but the general pattern of use is expected to be similar to 1987.

## **Oats**

Disappearance for 1987 was 15.874 million bushels and is estimated to be 16.082 million bushels by the year 2000. Horses and mules, with the highest per head consumption of this feed grain, are the main consumers. In 1987, they utilized 12.187 million bushels, or 81 percent, of all oats consumed by livestock. Hens and pullets were next with 1.726 million bushels, or 11 percent. Total livestock consumption in 1987 was 15.114 million, or 95 percent, of total disappearance. There is relatively little nonfeed use for oats

in Alabama. Consumption by livestock is expected to increase slightly to 15.147 million by the year 2000, but livestock's share in total disappearance is expected to remain about the same.

### ***Other Crops***

Barley and rye are relatively unimportant as feed grains in Alabama and are not treated separately by use. Figures regarding their disappearance for 1987 and 2000 are estimated and included under other crops in appendix tables 15 and 16. In actual practice, minor amounts of such grain products as screenings and corn gluten are also used for food. Also, protein used in animal feed may come from such diverse sources as cottonseed meal, fish meal, and meat scraps, among other sources, which complicates analysis because these sources can be substitutes for soybean meal and for the major grains studied.

## **Grain Consumption by Livestock**

### ***Broilers***

Consumption of feed grains by broilers is determined by one growout period, instead of annually as with most other grain-consuming livestock. Broilers in Alabama were estimated to have consumed about 0.19 bushel of feed grains per head in 1987, with corn comprising about two-thirds of the ration or 0.12 bushel. In 1987, consumption of feed grains by broilers accounted for an estimated 123.548 million bushels of grains, or about 65 percent of the total grain consumption by livestock in Alabama. With the number of broilers rising, it is estimated that consumption will increase to 144.548 million bushels of all grains by the year 2000. This amount increases broilers' role in livestock feed grain consumption by about 6 percent, from 64.8 percent in 1987 to 70.75 by the year 2000.

### ***Hens and Pullets***

Hens and pullets consumed a total of 1.73 bushels of feed grains per head annually in 1987. Corn (1.12 bushels) and soybeans (0.34 bushel) make up 85 percent of the ration. The consumption rate for the year 2000 remains unchanged, but their numbers will give them a slightly greater share of total feed consumption in Alabama.



## **Other Livestock**

All other classes of livestock consumption made up only 25 percent of total feed grain consumption in Alabama in 1987, with none of the remaining nine classes rated as important. Horses and mules consumed an estimated 8.26 percent of all feed grains in 1987, largely because of the high use of oats in their diet. Percentages of the total feed consumed by other livestock in 1987 were: other chickens, 0.9 percent; turkeys, 0.01 percent; hogs and pigs, 6.87 percent; beef cows, 2.06 percent; dairy cows, 1.87 percent; cattle on feed, 2.72 percent; other cattle, 2.14 percent; and sheep and lambs, 0.01 percent. For the year 2000, the various classes of livestock show similar shares of total consumption in Alabama.

## **PRODUCTION-UTILIZATION BALANCES**

### **Ratio of Production to Disappearance**

Also important is Alabama's total surplus or deficit of feed grains. Alabama produced only 15.09 percent of its total feed grain disappearance in 1987. Production as a percentage of total disappearance is estimated to decrease only slightly to 14.81 percent in 2000. This is a deficit of 212.5 million bushels of feed grains by the year 2000, compared with 193.5 million bushels in 1987 to make up the shortfall in Alabama production. Detailed data are recorded in appendix tables 17 and 18.

### **Corn**

In 1987, Alabama needed 116.4 million bushels of corn more than it produced to satisfy all disappearance of corn in the State. Alabama corn production represented only 13.39 percent of this figure in 1987. The deficit is estimated to be even higher by the year 2000, when about 125.8 million bushels will be needed. For the year 2000, production is expected to be only 7.37 percent of corn disappearance. In Alabama, the poultry industry is expected to continue to expand while local production of its main feed ingredient, corn, is expected to decline.

### **Soybeans**

Disappearance of soybeans in 1987 was 60.4 million bushels, while only 7.9 million bushels were produced. This represented a deficit

of 52.5 million bushels, which makes production only about 13 percent of total disappearance for 1987. Disappearance is expected to increase by the year 2000, but the projected rise in soybean production will improve the production-disappearance balance to 17 percent.

### ***Grain Sorghum***

The 1987 deficit for grain sorghum is not as large as the deficit for other grains. Grain sorghum recorded a deficit of 3.6 million bushels in 1987 when production was 34.64 percent of all disappearance. Production as a percentage of disappearance is expected to increase by the year 2000 to 45.37 percent, when the deficit is expected to be down slightly to 3.1 million bushels.

### ***Wheat***

Wheat is the only feed grain for which production was more than 50 percent of all disappearance in 1987. This percentage is expected to improve to 63.58 percent by the year 2000. While production as a percentage of utilization by livestock has increased, it has not kept pace with the total disappearance. The deficit of 5.2 million bushels in 1987 is expected to increase slightly to 5.7 million bushels by the year 2000.

### ***Oats***

The total deficit of oats for 1987 was 14.623 million bushels and is estimated to be about the same, 14.582 million bushels, in the year 2000. Total usage is projected to be more in 2000 than in 1987, but the projected increase in production will raise local production as a share of disappearance from 7.87 percent in 1987 to 9.32 percent by 2000. In any case, oats will remain a minor grain in the total feed grain picture.

### ***Other Grains***

Other grains, mainly barley and rye, do not play important roles in the production-utilization balance when compared with the other feed grains. They do, however, contribute in a minor way to the deficit in Alabama. Just over 31,000 bushels of other grain were produced in 1987, which contributed a meager 2.92 percent of total usage. Production is estimated to increase to 35,000 in 2000, but

its share of utilization will be equally low, 3.82 percent. However, these grains will make little difference in the total feed grain picture.

## **Ratio of Production to Consumption by Livestock**

Overall, in 1987, Alabama produced only 18.03 percent of the feed grains needed to satisfy its livestock consumption requirements. This percentage is estimated to remain virtually unchanged at 18.1 percent for the year 2000.

By specific crops, wheat production was 96 percent of consumption in 1987. By the year 2000, production is expected to exceed consumption. Grain sorghum production, as a percentage of consumption, was 36 percent in 1987. For the other grains, less than 20 percent of what was needed for consumption in 1987 was produced. The production-utilization balance for all grains except corn is generally expected to improve by the year 2000. However, the corn production-utilization balance is projected to fall from its 1987 percentage of 15.06 percent to 7.84 percent by the year 2000. This major feed grain outweighs all others in importance. Production as a percent of utilization for oats will increase by about 1 percent by the year 2000, but it will make little difference overall. Barley and rye were excluded from this analysis and are included as 'other grains' because of their minor importance.

## **SUMMARY AND CONCLUSIONS**

Total disappearance of all feed grains in Alabama in 1987 was 227.8 million bushels and is expected to increase to 249.9 million bushels by the year 2000.

Corn, which comprised 134.4 million bushels, or 59 percent, of all feed grain use in Alabama in 1987, is declining in acreage harvested and production, while use is expected to increase to 135.8 million bushels by the year 2000.

At the same time that Alabama corn production is decreasing, an increasing poultry industry is demanding more and more corn, which is the principal ingredient in poultry feed. Consumption of corn by livestock and poultry accounted for 119.6 million bushels, or 89 percent, of the total disappearance of corn in 1987 and is expected to rise to 127.5 million bushels by the year 2000. The poultry industry accounted for 72 percent of all corn used in 1987 and is expected to account for 81 percent by the year 2000.

Imports of corn from Corn Belt States, primarily Illinois, Indiana,

and Iowa, have been increasing recently due to the increasing needs along with more favorable yields in these states and a favorable differential in prices.

While soybean production exceeded crushing in Alabama in the late 1970's and early 1980's, crushing since then has increasingly been exceeding production. This has resulted in increased imports from other states, a trend which is expected to continue. By 1987, production in the State had fallen to 7.920 million bushels, while total disappearance was 60.418 million bushels. By the year 2000, production is estimated at 12.880 million bushels, with a total disappearance of 75.646 million bushels. Some of this disappearance will continue to be exported to other states and overseas, but 49.165 million bushels are expected to be needed by Alabama's livestock and poultry, almost four times the expected production.

Broilers, which consumed 69.2 percent of all feed grains used by livestock and poultry in Alabama in 1978 (mostly corn), have been increasing steadily since 1960 and are projected to consume about 70 percent by the year 2000. The second largest users of feed grains, hens and pullets, declined in the early 1980's, but have now leveled off and will continue to be large users of feed grains. Use of feed grains by beef cows will continue at about present levels. Hogs, pigs, and dairy cows were important users of feed grains in the past, but this use has been declining and will continue to decline. All other grain-consuming poultry and livestock are relatively unimportant as present and future consumers of feed grains.

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## APPENDIX TABLES

TABLE 1. CORN: ACRES HARVESTED, YIELD, AND PRODUCTION FOR ALABAMA, 1960-88 AND PROJECTIONS TO 1999, WITH U.S. PRODUCTION AND ALABAMA'S PERCENT OF U.S. PRODUCTION, 1960-88

Year	Acres harvested	Yield/ acre	Production		
			U.S.	Ala.	% Ala. of U.S.
	<i>Thou.</i>	<i>Bu.</i>	<i>Thou. bu.</i>	<i>Thou. bu.</i>	<i>Pct.</i>
1960 . . . . .	1,705	26.0	3,906,949	44,330	1.1346
1961 . . . . .	1,330	33.0	3,597,803	43,890	1.2199
1962 . . . . .	1,144	27.5	3,606,311	31,460	.8724
1963 . . . . .	1,133	35.5	4,019,238	40,222	1.0007
1964 . . . . .	1,020	35.5	3,484,263	36,210	1.0390
1965 . . . . .	945	43.0	4,102,867	40,635	.9904
1966 . . . . .	872	34.0	4,167,608	29,648	.7114
1967 . . . . .	899	47.0	4,860,372	42,253	.8693
1968 . . . . .	711	36.0	4,449,542	25,596	.5753
1969 . . . . .	654	33.0	4,687,057	21,582	.4685
1970 . . . . .	555	26.5	4,152,243	14,708	.3542
1971 . . . . .	626	45.0	5,646,260	28,170	.4989
1972 . . . . .	545	48.0	5,579,832	26,160	.4688
1973 . . . . .	610	46.0	5,670,712	28,060	.4948
1974 . . . . .	630	43.0	4,701,402	27,090	.5762
1975 . . . . .	660	50.0	5,840,757	33,000	.5650
1976 . . . . .	800	60.0	6,289,169	48,000	.7632
1977 . . . . .	375	29.0	6,505,041	10,875	.1672
1978 . . . . .	544	50.0	7,267,927	27,200	.3742
1979 . . . . .	502	61.0	7,938,819	30,622	.3857
1980 . . . . .	423	36.0	6,647,534	15,228	.2291
1981 . . . . .	530	55.0	8,097,000	29,150	.3600
1982 . . . . .	380	66.0	8,359,364	25,080	.3000
1983 . . . . .	305	59.0	4,166,108	17,995	.4319
1984 . . . . .	385	65.0	7,667,721	25,025	.3264
1985 . . . . .	325	75.0	8,876,706	24,375	.2746
1986 . . . . .	270	57.0	8,249,864	15,390	.1865
1987 . . . . .	250	72.0	7,072,073	18,000	.2545
1988 . . . . .	170	44.0	4,921,191	7,480	.1520
1999 . . . . .	140	71.4	-	10,000	-

Data Source: Alabama Agricultural Statistics Service, various issues.

TABLE 2. SOYBEANS: ACRES HARVESTED, YIELD, AND PRODUCTION FOR ALABAMA, 1960-88 AND PROJECTIONS TO 1999, WITH U.S. PRODUCTION AND ALABAMA'S PERCENT OF U.S. PRODUCTION, 1960-88

Year	Acres harvested	Yield acre	Production		
			U.S.	Ala.	% Ala. of U.S.
	<i>Thou.</i>	<i>Bu.</i>	<i>Thou. bu.</i>	<i>Thou. bu.</i>	<i>Pct.</i>
1960 .....	135	24.0	555,085	3,240	0.5837
1961 .....	157	23.0	678,554	3,611	.5322
1962 .....	176	20.5	669,186	3,608	.5392
1963 .....	192	20.0	699,165	3,840	.5492
1964 .....	207	22.0	700,921	4,554	.6497
1965 .....	228	22.0	845,608	5,016	.5932
1966 .....	280	24.5	928,481	6,860	.7388
1967 .....	484	26.5	976,439	12,826	1.3135
1968 .....	550	22.0	1,106,958	12,100	1.0931
1969 .....	630	22.5	1,133,120	14,175	1,2510
1970 .....	600	23.0	1,127,100	13,800	1.2244
1971 .....	655	26.0	1,175,989	17,030	1.4481
1972 .....	800	20.0	1,270,630	16,000	1.2592
1973 .....	970	21.0	1,547,165	20,370	1.3166
1974 .....	920	23.0	1,216,287	21,160	1.7397
1975 .....	1,260	24.5	1,548,344	30,870	1.9937
1976 .....	1,170	24.0	1,288,608	28,080	2.1791
1977 .....	1,500	21.0	1,767,267	31,500	1.7824
1978 .....	1,850	21.0	1,868,754	38,850	2.0790
1979 .....	2,150	25.0	2,267,901	53,750	2.3700
1980 .....	2,100	15.0	1,792,700	31,500	1.7577
1981 .....	2,020	23.0	2,106,568	46,460	2.2055
1982 .....	2,000	25.0	2,229,486	50,000	2.2427
1983 .....	1,500	20.0	1,566,684	30,000	1.9149
1984 .....	1,370	21.0	2,027,565	28,770	1.4189
1985 .....	1,030	27.0	2,098,531	27,810	1.3252
1986 .....	610	23.0	1,940,101	14,030	.4772
1987 .....	480	16.5	1,922,767	7,920	.4119
1988 .....	570	25.0	1,538,666	14,250	.9261
1999	560	23.0	-	12,880	-

Data Source: Alabama Agricultural Statistics Service, various issues.



TABLE 3. GRAIN SORGHUM: ACRES HARVESTED, YIELD, AND PRODUCTION FOR ALABAMA, 1960-88 AND PROJECTIONS TO 1999, WITH U.S. PRODUCTION AND ALABAMA'S PERCENT OF U.S. PRODUCTION, 1960-88

Year	Acres harvested	Yield/ acre	Production		
			U.S.	Ala.	% Ala. of U.S.
	<i>Thou.</i>	<i>Bu.</i>	<i>Thou. bu.</i>	<i>Thou. bu.</i>	<i>Pct.</i>
1960 . . . . .	20	24.0	619,954	480	0.0774
1961 . . . . .	14	26.0	480,208	364	.0758
1962 . . . . .	10	24.0	510,284	240	.0470
1963 . . . . .	11	28.0	585,394	308	.0526
1964 . . . . .	7	27.0	489,796	189	.0386
1965 . . . . .	10	27.0	672,698	270	.0401
1966 . . . . .	7	30.0	714,992	210	.0294
1967 . . . . .	8	35.0	755,344	280	.0371
1968 . . . . .	10	28.0	731,277	280	.0383
1969 . . . . .	17	34.0	729,919	578	.0792
1970 . . . . .	22	34.0	683,179	748	.1095
1971 . . . . .	70	37.0	867,997	2,590	.2984
1972 . . . . .	31	32.0	801,350	992	.1238
1973 . . . . .	29	39.0	923,224	1,131	.1225
1974 . . . . .	29	35.0	622,711	1,015	.1630
1975 . . . . .	33	37.0	754,354	1,221	.1619
1976 . . . . .	31	35.0	710,797	1,085	.1526
1977 . . . . .	27	27.0	780,944	729	.0933
1978 . . . . .	34	37.0	731,270	1,258	.1720
1979 . . . . .	28	37.0	807,422	1,238	.1533
1980 . . . . .	34	33.0	579,343	1,122	.1937
1981 . . . . .	58	37.0	875,835	2,146	.2450
1982 . . . . .	68	43.0	835,083	2,924	.3501
1983 . . . . .	100	43.0	487,521	4,300	.8820
1984 . . . . .	180	50.0	866,241	9,000	1.0390
1985 . . . . .	230	55.0	1,120,271	12,650	1.1291
1986 . . . . .	100	40.0	938,124	4,000	.4264
1987 . . . . .	40	48.0	739,249	1,920	.2597
1988 . . . . .	25	45.0	577,551	1,025	.1775
1999	52	50.0	-	2,600	-

Data Source: Alabama Agricultural Statistics Service, various issues.

TABLE 4. WHEAT: ACRES HARVESTED, YIELD, AND PRODUCTION FOR ALABAMA, 1960-88 AND PROJECTIONS TO 1999, WITH U.S. PRODUCTION AND ALABAMA'S PERCENT OF U.S. PRODUCTION, 1960-88

Year	Acres harvested	Yield/acre	Production		
			U.S.	Ala.	% Ala. of U.S.
	<i>Thou.</i>	<i>Bu.</i>	<i>Thou. bu.</i>	<i>Thou. bu.</i>	<i>Pct.</i>
1960 .....	48	25.0	1,111,403	1,200	0.1080
1961 .....	56	26.0	1,074,807	1,456	.1355
1962 .....	35	24.0	812,887	840	.1021
1963 .....	42	23.5	914,090	987	.1080
1964 .....	64	25.0	1,020,987	1,600	.1567
1965 .....	55	24.5	1,017,075	1,348	.1325
1966 .....	59	28.0	1,057,371	1,652	.1562
1967 .....	112	24.0	1,194,119	2,688	.2251
1968 .....	111	25.0	1,217,555	2,775	.2279
1969 .....	87	29.0	1,131,439	2,523	.2230
1970 .....	85	28.0	1,091,744	2,380	.2180
1971 .....	120	29.0	1,145,011	3,480	.3039
1972 .....	110	20.0	1,186,498	2,200	.1854
1973 .....	80	23.0	1,278,220	1,840	.1440
1974 .....	95	23.5	1,375,526	2,233	.1623
1975 .....	110	24.0	1,642,900	2,640	.1607
1976 .....	105	27.0	1,564,118	2,835	.1812
1977 .....	110	28.0	1,540,419	3,080	.1999
1978 .....	90	26.0	1,222,446	2,340	.1914
1979 .....	145	26.0	1,601,234	3,770	.2354
1980 .....	260	25.5	1,902,011	6,630	.3486
1981 .....	565	44.0	2,097,057	24,860	1.1855
1982 .....	725	32.0	2,073,560	23,200	1.1188
1983 .....	460	33.0	1,988,304	15,180	.7635
1984 .....	380	39.0	2,060,266	14,820	.7193
1985 .....	400	32.0	1,827,195	12,800	.7005
1986 .....	220	26.0	1,521,498	5,720	.3759
1987 .....	170	31.0	1,565,176	5,270	.3367
1988 .....	200	43.0	1,560,790	8,600	.5510
1999 .....	270	37.0	-	10,000	-

Data Source: Alabama Agricultural Statistics Service, various issues.

TABLE 5. OATS: ACRES HARVESTED, YIELD, AND PRODUCTION, ALABAMA, 1960-88 AND PROJECTIONS TO 1999, WITH U.S. PRODUCTION AND ALABAMA'S PERCENT OF U.S. PRODUCTION, 1960-88

Year	Acres harvested	Yield/ acre	Production		
			U.S.	Ala.	% Ala. of U.S.
	<i>Thou.</i>	<i>Bu.</i>	<i>Thou. bu.</i>	<i>Thou. bu.</i>	<i>Pct.</i>
1960.....	85	35.0	1,153,332	2,975	0.2579
1961.....	85	39.0	1,010,314	3,315	.3281
1962.....	72	34.0	1,012,197	2,448	.2419
1963.....	40	29.0	965,510	1,160	.1201
1964.....	42	40.5	852,257	1,701	.1996
1965.....	40	35.0	929,554	1,400	.1506
1966.....	36	39.0	803,324	1,404	.1748
1967.....	33	36.0	793,800	1,188	.1497
1968.....	31	36.0	950,689	1,116	.1174
1969.....	32	44.0	965,863	1,408	.1458
1970.....	31	40.0	915,236	1,240	.1355
1971.....	36	44.0	878,097	1,584	.1804
1972.....	18	33.0	690,616	594	.0860
1973.....	20	38.0	659,136	760	.1153
1974.....	20	35.0	690,655	700	.1165
1975.....	29	36.0	638,960	1,044	.1634
1976.....	26	38.0	540,411	988	.1712
1977.....	28	42.5	750,774	1,190	.1362
1978.....	32	42.0	581,657	1,344	.2311
1979.....	28	43.0	526,748	1,204	.2286
1980.....	30	42.0	458,192	1,260	.2750
1981.....	40	59.0	509,529	2,360	.4632
1982.....	40	52.0	592,630	2,080	.3510
1983.....	40	49.0	476,961	1,960	.4109
1984.....	30	48.0	473,661	1,440	.3040
1985.....	35	41.0	520,800	1,435	.2755
1986.....	30	40.0	386,356	1,200	.3106
1987.....	25	50.0	374,000	1,250	.3342
1988.....	20	55.0	218,773	1,100	.5028
1999.....	30	50.0	-	1,500	-

Data Source: Alabama Agricultural Statistics Service, various issues.

TABLE 6. LIVESTOCK AND POULTRY: NUMBERS AND PRODUCTION, BY KINDS, ALABAMA, 1960-87, WITH PROJECTIONS TO THE YEAR 2000

Year	Broilers produced <sup>1</sup>	Hens & pullets <sup>2</sup>	Other chickens <sup>2</sup>	Turkeys raised <sup>1</sup>	Pig crop <sup>3</sup>	Beef cows <sup>2</sup>	Dairy cows <sup>2</sup>	Cattle on feed <sup>1</sup>	Other cattle <sup>2</sup>	Sheep & lambs <sup>2</sup>	Horses & mules <sup>2</sup>
	<i>Thou.</i>	<i>Thou.</i>	<i>Thou.</i>	<i>Thou.</i>	<i>Thou.</i>	<i>Thou.</i>	<i>Thou.</i>	<i>Thou.</i>	<i>Thou.</i>	<i>Thou.</i>	<i>Thou.</i>
1960 . . . .	176,654	6,614	3,899	-	1,596	-	-	30	-	36	100
1961 . . . .	198,036	7,310	4,160	-	1,463	-	-	38	-	31	116
1962 . . . .	214,933	8,838	5,384	-	1,448	-	-	40	-	22	132
1963 . . . .	227,989	9,507	5,756	-	1,356	-	-	40	-	18	149
1964 . . . .	242,764	10,143	6,218	-	1,206	-	-	39	-	14	165
1965 . . . .	285,077	10,424	6,834	-	1,108	848	174	44	889	12	158
1966 . . . .	324,124	11,058	4,626	-	1,171	856	161	37	881	10	151
1967 . . . .	324,629	11,993	5,525	-	1,404	830	155	42	850	9	144
1968 . . . .	328,510	12,256	5,694	39	1,476	863	143	41	868	8	138
1969 . . . .	352,745	12,538	7,620	-	1,537	903	133	41	819	7	131
1970 . . . .	376,112	12,905	6,500	-	1,474	897	122	38	896	6	131
1971 . . . .	384,347	12,826	6,508	-	1,770	915	120	35	903	6	136
1972 . . . .	399,274	12,532	6,535	-	1,721	951	120	34	945	5	141
1973 . . . .	399,324	12,743	7,020	-	1,475	1,000	115	37	960	5	146
1974 . . . .	398,303	12,904	5,170	14	1,160	1,007	100	38	1,032	5	150
1975 . . . .	395,769	12,538	6,200	-	1,207	1,238	92	42	1,328	4	154
1976 . . . .	430,225	12,263	6,800	-	1,100	1,314	86	45	1,405	4	157
1977 . . . .	428,099	13,434	6,690	-	1,091	1,096	84	44	1,136	4	160
1978 . . . .	441,699	13,794	6,250	-	1,096	1,021	79	40	990	4	163
1979 . . . .	493,060	13,785	8,100	-	1,364	911	74	33	802	4	168
1980 . . . .	494,709	13,738	7,200	-	1,407	847	72	27	784	4	174
1981 . . . .	519,288	12,869	5,850	-	1,210	946	64	33	882	3	179
1982 . . . .	500,232	12,056	5,250	31	907	950	60	34	906	3	184
1983 . . . .	515,729	11,503	4,840	-	787	935	55	30	890	3	188
1984 . . . .	536,580	11,940	4,925	-	722	883	52	40	895	3	-
1985 . . . .	561,757	11,295	5,580	-	566	871	52	30	880	3	-
1986 . . . .	587,563	11,185	5,330	-	511	862	49	40	830	3	-
1987 . . . .	666,538	11,410	4,895	23	615	917	43	51	839	3	-
2000 . . . .	780,000	11,920	6,000	23	400	1,000	20	35	1,020	4	200

<sup>1</sup>Produced.

<sup>2</sup>On hand Jan. 1.

<sup>3</sup>Sum of previous fall crop of pigs + present year spring crop.

Sources: USDA and U.S. Bureau of Census plus Equine Flu Survey for Horses and Mules with some interpolation.

TABLE 7. LIVESTOCK AND POULTRY: NUMBERS AND PRODUCTION, BY KINDS, U.S., 1960-87

Year	Broilers produced	Hens & pullets	Other chickens	Pig crop	Beef cows	Dairy cows	Cattle on feed	Other cattle	Sheep & lambs	Horses & mules
	<i>Thou.</i>	<i>Thou.</i>	<i>Thou.</i>	<i>Thou.</i>	<i>Thou.</i>	<i>Thou.</i>	<i>Thou.</i>	<i>Thou.</i>	<i>Thou.</i>	<i>Thou.</i>
1960	1,794,933	295,284	-	90,003	-	-	7,574	-	-	-
1961	1,990,906	296,648	-	91,354	-	-	8,048	-	-	-
1962	2,023,373	299,834	-	91,882	-	-	8,520	-	-	-
1963	2,102,023	298,476	-	94,882	-	-	9,702	-	-	-
1964	2,161,173	301,053	-	90,989	-	-	9,845	-	-	-
1965	2,333,633	301,687	-	82,388	33,400	15,380	9,979	50,241	-	-
1966	2,570,516	303,832	-	81,866	33,500	14,490	10,582	50,290	-	-
1967	2,591,850	313,717	-	90,250	33,770	13,725	11,268	50,020	-	-
1968	2,619,855	309,824	-	92,628	34,570	13,115	11,417	50,269	-	-
1969	2,788,732	306,886	108,573	91,599	35,490	12,550	12,534	49,441	-	-
1970	2,986,769	312,759	109,897	94,281	36,689	12,091	13,190	50,399	20,432	-
1971	2,945,348	312,886	103,785	101,506	37,878	11,909	12,770	52,021	19,731	-
1972	3,074,921	304,504	104,037	93,592	38,810	11,776	13,912	53,364	18,739	-
1973	3,003,667	290,588	114,966	89,176	40,932	11,622	14,432	54,553	17,641	-
1974	2,992,820	284,732	98,068	86,790	43,182	11,279	13,643	59,666	16,310	1,596
1975	2,950,099	278,101	100,011	74,482	45,712	11,220	10,170	65,926	14,515	-
1976	3,273,556	274,134	98,583	77,833	43,901	11,071	13,941	60,067	13,311	-
1977	3,393,897	274,871	99,841	85,178	41,443	10,998	12,580	57,789	12,722	-
1978	3,613,647	281,478	103,627	85,683	38,738	10,896	13,472	53,269	12,421	2,209
1979	3,951,291	288,623	105,652	96,602	37,062	10,790	13,274	49,738	12,365	-
1980	3,964,452	287,723	97,887	104,406	37,107	10,758	12,221	51,104	12,699	2,497
1981	4,149,200	286,884	90,711	96,856	38,773	10,849	11,598	53,137	12,947	-
1982	4,151,275	286,299	89,641	87,173	39,230	10,986	10,618	54,654	12,997	-
1983	4,130,000	276,096	86,361	89,760	37,940	11,047	12,051	54,004	12,140	-
1984	4,184,000	277,900	-	86,957	37,494	11,109	11,594	53,631	11,487	-
1985	4,479,000	279,000	-	86,713	35,370	10,805	12,458	48,199	10,443	-
1986	4,646,000	276,900	-	83,876	33,633	11,177	11,497	49,514	9,983	-
1987	5,003,000	285,500	-	85,132	33,779	10,502	10,963	43,814	10,334	-

Source: USDA and U.S. Bureau of Census.

TABLE 8. LIVESTOCK AND POULTRY: ALABAMA'S PERCENT OF U.S. PRODUCTION AND NUMBERS, BY KINDS, 1960-88

Year	Broilers produced	Hens & pullets	Other chickens	Pig crop	Beef cows	Dairy cows	Cattle on feed	Other cattle	Horses & mules
	<i>Pct.</i>	<i>Pct.</i>	<i>Pct.</i>	<i>Pct.</i>	<i>Pct.</i>	<i>Pct.</i>	<i>Pct.</i>	<i>Pct.</i>	<i>Pct.</i>
1960.....	9.8418	2.2399	-	1.7733	-	-	0.3961	-	-
1961.....	9.9470	2.4642	-	1.6015	-	-	.4722	-	-
1962.....	10.6225	2.9476	-	1.5759	-	-	.4695	-	-
1963.....	10.8462	3.1852	-	1.4300	-	-	.4123	-	-
1964.....	11.2330	3.3692	-	1.3254	-	-	.3961	-	-
1965.....	12.2160	3.4552	-	1.3449	2.5389	1.1313	.4409	1.7695	-
1966.....	12.6093	3.6395	-	1.4300	2.5552	1.1111	.3497	1.7518	-
1967.....	12.5250	3.8229	-	1.5557	2.4578	1.1293	.3727	1.6993	-
1968.....	12.5392	3.9558	-	1.5935	2.4964	1.0904	.3591	1.7267	-
1969.....	12.6489	4.0856	7.0183	1.6780	2.5444	1.0598	.3271	1.6565	-
1970.....	12.5926	4.1262	5.9146	1.5634	2.4449	1.0090	.2881	1.7778	-
1971.....	13.0493	4.0993	6.2707	1.7437	2.4157	1.0076	.2741	1.7358	-
1972.....	12.9849	4.1155	6.2814	1.8401	2.4504	1.0190	.2444	1.7709	-
1973.....	13.2725	4.3852	6.1062	1.6540	2.4431	.9895	.2564	1.7598	-
1974.....	13.3086	4.5320	5.2719	1.3366	2.4779	.8852	.2785	1.7296	9.3985
1975.....	13.4154	4.5084	6.1993	1.6205	2.7083	.8200	.4130	2.0454	-
1976.....	13.1424	4.4734	6.8977	1.4133	2.9931	.7768	.3477	2.3391	-
1977.....	12.6138	4.8874	6.7007	1.2808	2.6446	.7638	.3498	1.9658	-
1978.....	12.2231	4.9006	6.0312	1.2791	2.6357	.7250	.2969	1.8585	7.3789
1979.....	12.4785	4.7761	7.6667	1.4120	2.4580	.6858	.2486	1.6124	-
1980.....	12.4786	4.7747	7.3554	1.3476	2.2826	.6693	.2209	1.5341	-
1981.....	12.5154	4.4858	6.4491	1.2493	2.4398	.5899	.2845	1.6599	-
1982.....	12.0501	4.2110	5.8567	1.0405	2.4216	.5461	.3202	1.6577	7.3688
1983.....	12.4873	4.1663	5.6044	.8768	2.4644	.4979	.2489	1.6480	-
1984.....	12.8246	4.2965	-	.8303	2.3550	.4681	.3450	1.6688	-
1985.....	12.5420	4.0484	-	.6527	2.4625	.4535	.2408	1.8258	-
1986.....	12.6466	4.0394	-	.6092	2.5630	.4294	.3479	1.6763	-
1987.....	13.3228	3.9965	-	.7224	2.7147	.4094	.4652	1.9149	-
1988.....	-	-	-	-	2.5804	.3881	.2602	1.8266	-

Source: USDA and U.S. Bureau of Census.

TABLE 9. FEED GRAINS: TOTAL DISAPPEARANCE AND PERCENT OF TOTAL, BY KIND OF GRAIN, ALABAMA, 1987, WITH PROJECTIONS TO THE YEAR 2000

Feed grain	Total disappearance		Pct. of total	
	1987	2000	1987	2000
	<i>Thou. bu.</i>	<i>Thou. bu.</i>	<i>Pct.</i>	<i>Pct.</i>
Corn.....	134,440.09	135,757.09	59.0	54.3
Soybeans.....	60,418.21	75,646.20	26.5	30.3
Sorghum.....	5,543.39	5,730.10	2.4	2.3
Wheat.....	10,502.23	15,729.44	4.6	6.3
Oats.....	15,873.56	16,082.19	7.0	6.4
Other*.....	1,061.00	917.37	0.5	0.4
Total.....	227,838.48	249,862.39	100.0	100.0

\*Includes barley and rye.

TABLE 10. CORN: TOTAL DISAPPEARANCE, BY DIFFERENT USES AND OUTLETS, ALABAMA, 1987, WITH PROJECTIONS TO THE YEAR 2000

Use or outlet	Unit	Livestock numbers		Use per head		Disappearance of corn	
		1987	2000	1987	2000	1987	2000
		<i>Thou.</i>	<i>Thou.</i>	<i>Lb.</i>	<i>Lb.</i>	<i>Thou. bu.</i>	<i>Thou. bu.</i>
<b>Livestock feed<sup>1</sup>:</b>							
Broilers produced	Raised	666,538	780,000	6.95	6.95	82,722.13	96,803.57
Hens & pullets	On hand Jan. 1	11,410	10,920	62.44	62.44	12,722.15	12,175.80
Other chickens	On hand Jan. 1	4,895	6,000	8.31	8.31	726.38	890.36
Turkeys	Raised	23	23	32.40	32.40	13.31	13.31
Pig crop	No. fall & winter	615	400	900.00	300.00	9,883.93	5,714.29
Beef cows	On hand Jan. 1	917	1,000	132.94	130.00	2,176.89	2,321.43
Dairy cows	On hand Jan. 1	43	20	3,300.00	3,500.00	2,533.93	1,250.00
Cattle on feed	On hand Jan. 1	51	35	3,721.67	3,721.67	3,389.38	2,326.04
Other cattle	Oh hand Jan. 1	839	1,020	161.50	161.50	2,419.62	2,941.61
Sheep & lambs	On hand Jan. 1	3	4	103.73	103.73	5.56	7.41
Horses & mules	On hand Jan. 1	195	200	850.00	350.00	2,959.82	3,035.71
Subtotal		685,529	799,622	9,279.94	9,377.00	119,553.09	127,479.52
<b>Other uses:</b>							
Seed <sup>2</sup>						68.10	44.87
Processing <sup>3</sup>						10,074.10	5,596.70
Shipments to ports <sup>4</sup>						2,296.80	1,276.00
Shipments to other states <sup>4</sup>						2,448.00	1,360.00
Subtotal						14,887.00	8,277.57
<b>Total disappearance</b>						<b>134,440.09</b>	<b>135,757.09</b>

<sup>1</sup>Raw grain or equivalent necessary for manufactured feed.

<sup>2</sup>Estimated from USDA figures.

<sup>3</sup>Processed for nonlivestock uses such as human food, sweeteners, etc.

<sup>4</sup>Estimated from Auburn University survey and USDA figures.



TABLE 11. SOYBEANS: TOTAL DISAPPEARANCE, BY DIFFERENT USES AND OUTLETS, ALABAMA, 1987, WITH PROJECTIONS TO THE YEAR 2000

Use or outlet	Unit	Livestock numbers		Use per head		Disappearance of soybeans	
		1987	2000	1987	2000	1987	2000
		<i>Thou.</i>	<i>Thou.</i>	<i>Lb.</i>	<i>Lb.</i>	<i>Thou. bu.</i>	<i>Thou. bu.</i>
<b>Livestock feed<sup>1</sup>:</b>							
Broilers produced	Raised	666,538	780,000	3.13	3.13	34,771.07	40,690.00
Hens & pullets	On hand Jan. 1	11,410	10,920	20.50	20.50	3,898.42	3,731.00
Other chickens	On hand Jan. 1	4,895	6,000	9.57	9.57	780.75	957.00
Turkeys	Raised	23	23	29.26	29.26	11.22	11.22
Pig crop	No. fall & winter	615	400	206.83	193.04	2,120.01	1,286.93
Beef cows	On hand Jan. 1	917	1,000	58.27	58.27	890.56	971.17
Dairy cows	On hand Jan. 1	43	20	542.49	557.47	388.78	185.82
Cattle on feed	On hand Jan. 1	51	35	272.56	272.56	231.68	158.99
Other cattle	On hand Jan. 1	839	1,020	55.72	55.72	779.15	947.24
Sheep & lambs	On hand Jan. 1	3	4	79.97	79.97	4.00	5.33
Horses & mules		195	200	66.05	66.05	214.66	220.17
Subtotal		685,529	799,622	1,344.35	1,345.54	44,090.29	49,164.87
<b>Other uses:</b>							
Seed <sup>2</sup>						504.63	683.35
Processing <sup>3</sup>						11,627.22	18,956.78
Shipments to ports <sup>4</sup>						2,892.19	4,715.37
Shipments to other states <sup>4</sup>						1,303.89	2,125.83
Subtotal						16,327.92	26,481.33
<b>Total disappearance</b>						<b>60,418.21</b>	<b>75,646.20</b>

<sup>1</sup>Raw grain or equivalent necessary for manufactured feed.

<sup>2</sup>Estimated from USDA figures.

<sup>3</sup>Processed for nonlivestock uses such as human food, sweeteners, etc.

<sup>4</sup>Estimated from Auburn University survey and USDA figures.

TABLE 12. GRAIN SORGHUM: TOTAL DISAPPEARANCE, BY DIFFERENT USES AND OUTLETS, ALABAMA, 1987, WITH PROJECTIONS TO THE YEAR 2000

	Use or outlet	Unit	Livestock numbers		Use per head		Disappearance of sorghum	
			1987	2000	1987	2000	1987	2000
			<i>Thou.</i>	<i>Thou.</i>	<i>Lb.</i>	<i>Lb.</i>	<i>Thou. bu.</i>	<i>Thou. bu.</i>
	Livestock feed <sup>1</sup> :							
	Broilers produced	Raised	666,538	780,000	0.21	0.21	2,499.52	2,925.00
	Hens & pullets	On hand Jan. 1	11,410	10,920	.45	.45	91.69	91.69
	Other chickens	On hand Jan. 1	4,895	6,000	.63	.63	55.07	67.50
	Turkeys	Raised	23	23	.27	.27	.11	.11
	Pig crop	No. fall & winter	615	400	50.00	60.00	549.11	428.57
	Beef cows	On hand Jan. 1	917	1,000	26.00	30.00	425.75	535.71
	Dairy cows	On hand Jan. 1	43	20	125.00	125.00	95.98	44.64
	Cattle on feed	On hand Jan. 1	51	35	1,229.48	1,229.48	1,119.71	768.43
	Other cattle	On hand Jan. 1	839	1,020	25.70	25.70	385.04	468.11
	Sheep & lambs	On hand Jan. 1	3	4	.68	.68	.04	.05
	Horses & mules	On hand Jan. 1	195	200	50.00	50.00	174.11	178.57
	Subtotal		685,529	799,622	1,508.42	1,522.42	5,396.11	5,508.38
	Other uses:							
	Seed <sup>2</sup>						22.55	56.06
	Processing <sup>3</sup>						21.40	29.80
	Shipments to ports <sup>4</sup>						76.61	99.68
	Shipments to other states <sup>4</sup>						26.71	36.17
	Subtotal						147.28	221.72
	Total disappearance						5,543.39	5,730.10

<sup>1</sup>Raw grain or equivalent necessary for manufactured feed.

<sup>2</sup>Estimated from USDA figures.

<sup>3</sup>Processed for nonlivestock uses such as human food, sweeteners, etc.

<sup>4</sup>Estimated from Auburn University survey and USDA figures.

TABLE 13. WHEAT: TOTAL DISAPPEARANCE, BY DIFFERENT USES AND OUTLETS, ALABAMA 1987, WITH PROJECTIONS TO THE YEAR 2000

Use or outlet	Unit	Livestock numbers		Use per head		Disappearance of wheat	
		1987	2000	1987	2000	1987	2000
		<i>Thou.</i>	<i>Thou.</i>	<i>Lb.</i>	<i>Lb.</i>	<i>Thou. bu.</i>	<i>Thou. bu.</i>
<b>Livestock feed<sup>1</sup>:</b>							
Broilers produced .....	Raised	666,538	780,000	0.32	0.32	3,554.87	4,160.00
Hens & pullets .....	On hand Jan. 1	11,410	10,920	4.82	4.82	916.60	877.24
Other chickens .....	On hand Jan. 1	4,895	6,000	.00	3.92	.00	392.00
Turkeys .....	Raised	23	23	2.73	2.73	1.05	1.05
Pig crop .....	No. fall & winter	615	400	25.00	25.00	256.25	166.67
Beef cows .....	On hand Jan. 1	917	1,000	14.00	16.00	213.97	266.67
Dairy cows .....	On hand Jan. 1	43	20	168.89	337.76	121.04	112.59
Cattle on feed .....	On hand Jan. 1	51	35	319.48	319.48	271.56	186.36
Other cattle .....	On hand Jan. 1	839	1,020	10.26	10.26	143.47	174.42
Sheep & lambs .....	On hand Jan. 1	3	4	7.00	8.00	.35	.53
Horses & mules .....	On hand Jan. 1	195	200	.00	.00	.00	.00
Subtotal .....		685,529	799,622	552.50	728.29	5,479.15	6,337.52
<b>Other uses:</b>							
Seed <sup>2</sup> .....						317.50	462.92
Processing <sup>3</sup> .....						2,416.30	4,585.00
Shipments to ports <sup>4</sup> .....						1,392.33	2,642.00
Shipments to other states <sup>4</sup> .....						896.95	1,702.00
Subtotal .....						5,023.08	9,391.92
<b>Total disappearance .....</b>						<b>10,502.23</b>	<b>15,729.44</b>

<sup>1</sup>Raw grain or equivalent necessary for manufactured feed.

<sup>2</sup>Estimated from USDA figures.

<sup>3</sup>Processed for nonlivestock uses such as human food, sweeteners, etc.

<sup>4</sup>Estimated from Auburn University survey and USDA figures.

TABLE 14. OATS: TOTAL DISAPPEARANCE, BY DIFFERENT USES AND OUTLETS, ALABAMA, 1987, WITH PROJECTIONS TO THE YEAR 2000

Use or outlet	Unit	Livestock numbers		Use per head		Disappearance of oats	
		1987	2000	1987	2000	1987	2000
		<i>Thou.</i>	<i>Thou.</i>	<i>Lb.</i>	<i>Lb.</i>	<i>Thou. bu.</i>	<i>Thou. bu.</i>
<b>Livestock feed<sup>1</sup>:</b>							
Broilers produced	Raised	666,538	780,000	0.00	0.00	0.00	0.00
Hens & pullets	On hand Jan. 1	11,410	10,920	4.84	4.84	1,725.76	1,651.65
Other chickens	On hand Jan. 1	4,895	6,000	1.14	1.14	174.38	213.75
Turkeys	Raised	23	23	1.36	1.36	.98	.98
Pig crop	No. fall & winter	615	400	10.00	10.00	192.19	125.00
Beef cows	On hand Jan. 1	917	1,000	8.00	8.00	229.25	250.00
Dairy cows	On hand Jan. 1	43	20	223.11	111.56	299.80	69.73
Cattle on feed	On hand Jan. 1	51	35	40.41	40.41	64.40	44.20
Other cattle	On hand Jan. 1	839	1,020	9.12	9.12	239.12	290.70
Sheep & lambs	On hand Jan. 1	3	4	6.67	6.67	.63	.83
Horses & mules	On hand Jan. 1	195	200	2,000.00	2,000.00	12,187.50	12,500.00
Subtotal		685,529	799,622	2,304.65	2,193.10	15,114.01	15,146.83
<b>Other uses:</b>							
Seed <sup>2</sup>						135.00	195.00
Processing <sup>3</sup>						553.13	663.75
Shipments to ports <sup>4</sup>						71.43	76.61
Subtotal						759.55	935.36
<b>Total disappearance</b>						<b>15,873.56</b>	<b>16,082.19</b>

<sup>1</sup>Raw grain or equivalent necessary for manufactured feed.

<sup>2</sup>Estimated from USDA figures.

<sup>3</sup>Processed for nonlivestock uses such as human food, sweeteners, etc.

<sup>4</sup>Estimated from Auburn University survey and USDA figures.

TABLE 15. FEED GRAINS: ESTIMATED DISAPPEARANCE PER HEAD, BY DIFFERENT CLASSES OF LIVESTOCK AND POULTRY, ALABAMA 1987

Livestock	Corn	Grain sorghum	Soybeans	Oats	Wheat	Other	Total	Livestock numbers	Total all grains	Pct. of Ala. grain con.
	<i>Bu./head</i>	<i>Bu./head</i>	<i>Bu./head</i>	<i>Bu./head</i>	<i>Bu./head</i>	<i>Bu./head</i>	<i>Bu./head</i>	<i>Thou.</i>	<i>Thou. bu.</i>	<i>Pct.</i>
Broilers . . . . .	0.1241	0.0038	0.0522	0.0000	0.0053	0.0000	0.1854	666,538	123,547.58	64.81
Hens & pullets . .	1.1150	.0080	.3417	.1513	.0803	.0300	1.7263	11,410	19,696.92	10.33
Other chickens . .	.1484	.0113	.1595	.0356	.0000	.0000	.3548	4,895	1,736.59	.91
Turkeys . . . . .	.5786	.0048	.4877	.0425	.0455	.0077	1.1668	23	26.84	.01
Hog & pigs . . . . .	16.0714	.8929	3.4472	.3125	.4167	.1667	21.3073	615	13,103.98	6.87
Beef cows . . . . .	2.3739	.4643	.9712	.2500	.2333	.0000	4.2927	917	3,936.42	2.06
Dairy cows . . . . .	58.9286	2.2321	9.0415	6.9722	2.8148	3.1088	83.0980	43	3,573.21	1.87
Cattle on feed . . .	66.4584	21.9550	4.5427	1.2628	5.3213	2.1857	101.9044	51	5,197.13	2.73
Other cattle . . . .	2.8839	.4589	.9287	.2850	.1710	.1344	4.8619	839	4,079.13	2.14
Sheep & lambs . .	1.8523	.0121	1.3328	.2084	.1167	.0938	3.6162	3	10.85	.01
Horses & mules . .	15.1786	.8929	1.1008	62.5000	.0000	1.0417	80.71392	195	15,739.22	8.26
Totals . . . . .									190,647.86	100.00

Source: Per head consumption figures obtained from 1983 USDA estimates for Alabama and adjusted for 1987 after consultation with local Cooperative Extension Service and Agricultural Experiment Station personnel.

TABLE 16. FEED GRAINS: ESTIMATED DISAPPEARANCE PER HEAD, BY DIFFERENT CLASSES OF LIVESTOCK AND POULTRY, ALABAMA YEAR 2000

Livestock	Corn	Grain sorghum	Soybeans	Oats	Wheat	Other	Total	Livestock numbers	Total all grains	Pct. of Ala. grain con.
	<i>Bu./head</i>	<i>Bu./head</i>	<i>Bu./head</i>	<i>Bu./head</i>	<i>Bu./head</i>	<i>Bu./head</i>	<i>Bu./head</i>	<i>Thou.</i>	<i>Thou. bu.</i>	<i>Pct.</i>
Broilers.....	0.1241	0.0038	0.0522	0.0000	0.0053	0.0000	0.1854	780,000	144,578.57	70.70
Hens & pullets ..	1.1150	.0080	.3417	.1513	.0803	.0300	1.7263	10,920	18,851.04	9.22
Other chickens ..	.1484	.0113	.1595	.0356	.0653	.0000	.4201	6,000	2,520.61	1.23
Turkeys.....	.5786	.0048	.4877	.0425	.0455	.0077	1.1668	23	26.84	.01
Hog & pigs .....	14.2857	1.0714	3.2173	.3125	.4167	.1667	19.4703	400	7,788.12	3.81
Beef cows.....	2.3214	.5357	.9712	.2500	.2667	.0000	4.3450	1,000	4,344.98	2.12
Dairy cows.....	62.5000	2.2321	9.2912	3.4863	5.6293	1.5544	84.6933	20	1,693.87	.83
Cattle on feed...	66.4584	21.9550	4.5427	1.2628	5.3213	2.1857	101.9045	35	3,566.66	1.74
Other cattle .....	2.8839	.4589	.9287	.2850	.1710	.1344	4.8619	1,020	4,959.14	2.43
Sheep & lambs ..	1.8523	0.0121	1.3328	.2084	.1333	.0833	3.6224	4	14.49	.01
Horses & mules ..	15.1786	.8929	1.1008	62.5000	.0000	1.0417	80.71392	200	16,142.79	7.89
Totals .....									204,487.09	100.00

Source: Per head consumption figures adjusted from 1987 estimates after consultation with local Cooperative Extension Service and Agricultural Experiment Station personnel.

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TABLE 17. FEED GRAINS: PRODUCTION-DISAPPEARANCE BALANCE FOR ALL USES AND SURPLUS AND DEFICIT FOR ALABAMA, 1987, WITH PROJECTIONS TO THE YEAR 2000

Feed grain	Production		Total disappearance		Surplus or deficit		Percent production of disappearance	
	1987	2000	1987	2000	1987	2000	1987	2000
	<i>Thou. bu.</i>	<i>Thou. bu.</i>	<i>Thou. bu.</i>	<i>Thou. bu.</i>	<i>Thou. bu.</i>	<i>Thou. bu.</i>	<i>Pct.</i>	<i>Pct.</i>
Corn.....	18,000	10,000	134,440.09	135,757.09	(116,440.09)	(125,757.09)	13.39	7.37
Soybeans.....	7,900	12,880	60,473.21	75,646.20	(52,518.21)	(62,766.20)	13.08	17.03
Grain sorghum.....	1,920	2,600	5,543.39	5,730.10	(3,623.39)	(3,130.10)	34.64	45.37
Wheat.....	5,270	10,000	10,502.23	15,729.44	(5,232.23)	(5,729.44)	50.18	63.58
Oats.....	1,250	1,500	15,873.56	16,082.19	(14,623.56)	(14,582.19)	7.87	9.33
Other*.....	31	35	1,061.00	917.37	(1030.00)	(882.37)	2.92	3.82
Total.....	34,371	37,015	227,838.48	249,862.39	(193,467.48)	(212,847.39)	15.09	14.81

\*Includes barley and rye.

TABLE 18. FEED GRAINS: PRODUCTION-UTILIZATION BALANCES FOR LIVESTOCK AND SURPLUS AND DEFICIT FOR ALABAMA, 1987,  
WITH PROJECTIONS TO THE YEAR 2000

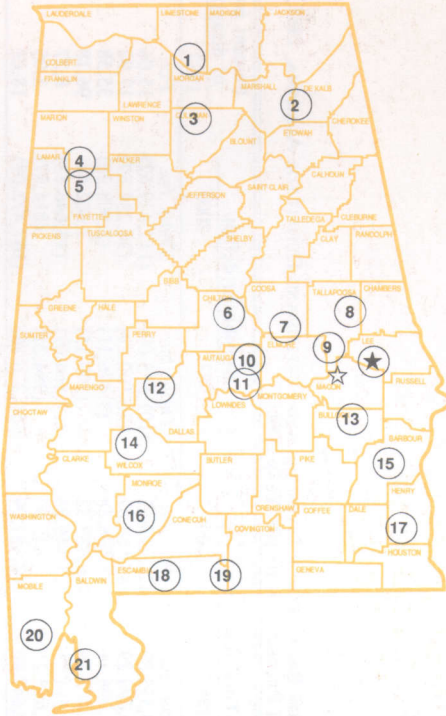
Feed Grain	Production		Total disappearance		Surplus or deficit		Percent production of disappearance	
	1987	2000	1987	2000	1987	2000	1987	2000
	<i>Thou. bu.</i>	<i>Thou. bu.</i>	<i>Thou. bu.</i>	<i>Thou. bu.</i>	<i>Thou. bu.</i>	<i>Thou. bu.</i>	<i>Pct.</i>	<i>Pct.</i>
Corn.....	18,000	10,000	119,553.09	127,479.52	(101,553.09)	(117,479.52)	15.06	7.84
Soybeans.....	7,900	12,880	44,090.29	49,164.87	(36,190.29)	(36,284.87)	17.92	26.20
Grain sorghum.....	1,920	2,600	5,396.11	5,508.38	(3,476.11)	(2,908.38)	35.58	47.20
Wheat.....	5,270	10,000	5,479.15	6,337.52	(209.15)	3,662.48	96.18	157.79
Oats.....	1,250	1,500	15,114.01	15,146.83	(13,864.01)	(13,646.83)	8.27	9.90
Other*.....	31	35	1,015.21	849.97	(984.21)	(814.97)	3.05	4.16
Total.....	34,371	37,015	190,647.86	204,487.09	(156,276.86)	(167,472.09)	18.03	18.10

\*Includes barley and rye.

# Alabama's Agricultural Experiment Station System

## AUBURN UNIVERSITY

With an agricultural research unit in every major soil area, Auburn University serves the needs of field crop, livestock, forestry, and horticultural producers in each region in Alabama. Every citizen of the State has a stake in this research program, since any advantage from new and more economical ways of producing and handling farm products directly benefits the consuming public.



### Research Unit Identification

- ★ Main Agricultural Experiment Station, Auburn.
- ★ E. V. Smith Research Center, Shorter.

1. Tennessee Valley Substation, Belle Mina.
2. Sand Mountain Substation, Crossville.
3. North Alabama Horticulture Substation, Cullman.
4. Upper Coastal Plain Substation, Winfield.
5. Forestry Unit, Fayette County.
6. Chilton Area Horticulture Substation, Clanton.
7. Forestry Unit, Coosa County.
8. Piedmont Substation, Camp Hill.
9. Plant Breeding Unit, Tallassee.
10. Forestry Unit, Autauga County.
11. Prattville Experiment Field, Prattville.
12. Black Belt Substation, Marion Junction.
13. The Turnipseed-Ikenberry Place, Union Springs.
14. Lower Coastal Plain Substation, Camden.
15. Forestry Unit, Barbour County.
16. Monroeville Experiment Field, Monroeville.
17. Wiregrass Substation, Headland.
18. Brewton Experiment Field, Brewton.
19. Solon Dixon Forestry Education Center,  
Covington and Escambia counties.
20. Ornamental Horticulture Substation, Spring Hill.
21. Gulf Coast Substation, Fairhope.