

BARLEY AND WHEAT COMPARISONS FOR ALABAMA

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INTEREST IN BARLEY as livestock and poultry feed has increased recently in Alabama. The objective of this report is to examine the potential of barley in northern, central, and southern Alabama. Comparisons were made between barley and wheat yields from 1970 to 1983 using data from the Small Grain Variety Reports for Alabama.

Both barley and wheat were tested for grain production in northern Alabama at three locations from 1971 to 1983; central Alabama at four locations from 1970 to 1981; and in southern Alabama at five locations from 1970 to 1974. Yields are reported as regional averages for unclipped and clipped plots. Clipped plots were harvested for forage yield until late February to simulate grazing and then allowed to make a grain crop.

In northern Alabama, barley grain yields on unclipped plots ranged from 432 pounds per acre to 3,360 pounds per acre, while wheat grain yields ranged from 660 pounds to 3,840 pounds per acre, figure 1. Barley grain yields on the clipped plots ranged from 432 pounds per acre to 3,312 pounds per acre and wheat grain yields from 600 pounds to 3,780 pounds per acre, figure 2. Weight per bushel for wheat and barley averages 60 and 48 pounds, respectively.

Barsoy barley, Arthur wheat, Ga. 1123 wheat, and Wakeland wheat were the only varieties grown from 1971 to 1983. On the unclipped plots during this period, Barsoy barley average grain yield was 1,972 pounds per acre, while the Arthur wheat, Ga. 1123 wheat, and Wakeland wheat were 1,837, 1,874, and 1,805 pounds per acre, respectively, figure 3. The clipped plots had grain yields of 1,802 pounds per acre for Barsoy barley, 1,950, 1,597, and 1,463 pounds per acre for Arthur wheat, Ga. 1123 wheat, and Wakeland wheat, respectively, figure 3. However,

these wheat varieties are full season which mature later than the barley varieties. A better comparison would be Coker 916 wheat, Coker 762 wheat, and McNair 1003 wheat, which mature about the same time as barley. Volbar barley and Keowee barley are newer varieties which have more consistent yields.

In a 4-year (1980-83) comparison of barley and wheat varieties on unclipped plots, Volbar barley grain yield averaged 2,628 pounds per acre, Barsoy barley grain 2,377 pounds, and Keowee barley grain yield was 2,112 pounds per acre, while Coker 762 wheat grain yield averaged 2,550 pounds, Coker 916 wheat 2,520 pounds, and McNair 1003 wheat grain averaged 2,220 pounds per acre, figure 4. On the clipped plots, grain yields ranged from 2,292 to 2,892 pounds per acre for the barley, while the wheats ranged from 2,055 to 2,520 pounds, figure 4.

In central Alabama, barley yields for unclipped plots ranged from 336 pounds per acre to 3,600 pounds per acre, while wheat yields ranged from 480 to 4,380 pounds per acre, figure 5. Clipped plots ranged from 240 to 3,456 pounds per acre for barley and 420 pounds per acre to 3,600 pounds for wheat during the 12-year period, figure 6. Barsoy barley and Coker 68-15 wheat and Wakeland wheat were the only varieties planted each year from 1970 to 1981. For this period on unclipped plots, Barsoy had an average grain yield of 1,676 pounds per acre, while the grain yield for Coker 68-15 was 1,870 pounds and that for Wakeland was 1,495 pounds per acre, figure 7. Grain yields per acre during the same period on clipped plots were: Barsoy, 1,504 pounds; Coker 68-15, 1,475 pounds; and Wakeland, 1,225 pounds. Coker 916 is an early recommended variety of wheat and matures about the same time as the barley varieties tested. Wakeland has been discontinued in the small grain variety trails in central and southern Alabama for grain production. Coker 68-15 wheat matures approximately 2-3 weeks later than Barsoy barley. Although not shown on the graph, in 1981 Coker 916 produced 4,560 and 3,900 pounds per acre of grain, while Barsoy yielded 3,600 and 3,024

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pounds per acre on unclipped and clipped plots, respectively.

Volbar is a newer barley variety that is more disease resistant than Barsoy and appears to have more consistent yields, figures 5 and 6. However, overall barley grain yields appear to be about 200 pounds per acre below wheat yields.

In southern Alabama, five barley varieties were planted during the 1970 to 1974 period, figures 8 and 9. The performance of Florida 102, which was planted in all years except 1971, illustrates the inconsistency of barley with yields ranging from 240 pounds to 1,344 pounds per acre on the unclipped and 240 pounds to 1,248 pounds per acre on the clipped plots, figures 8 and 9. Yields from wheat varieties were 100 to 200 pounds per acre higher than the barleys in 1970 and as much as 700 pounds per acre higher in 1972.

In conclusion, the data indicate that currently available barley varieties probably should not be grown in southern Alabama, but can be grown in northern Alabama and may have some potential for central Alabama. Barley has the advantage of maturing earlier than many of the wheat varieties, thus allowing earlier planting of following summer crops. However, the newer wheat varieties, Hunter, Florida 301, Florida 302, Coker 797, and Coker 916 mature about the same time as barley and have higher and more consistent yields. Only Florida 301 and Coker 916 have been tested adequately in Alabama to be on the recommended list of varieties.

ACKNOWLEDGMENT

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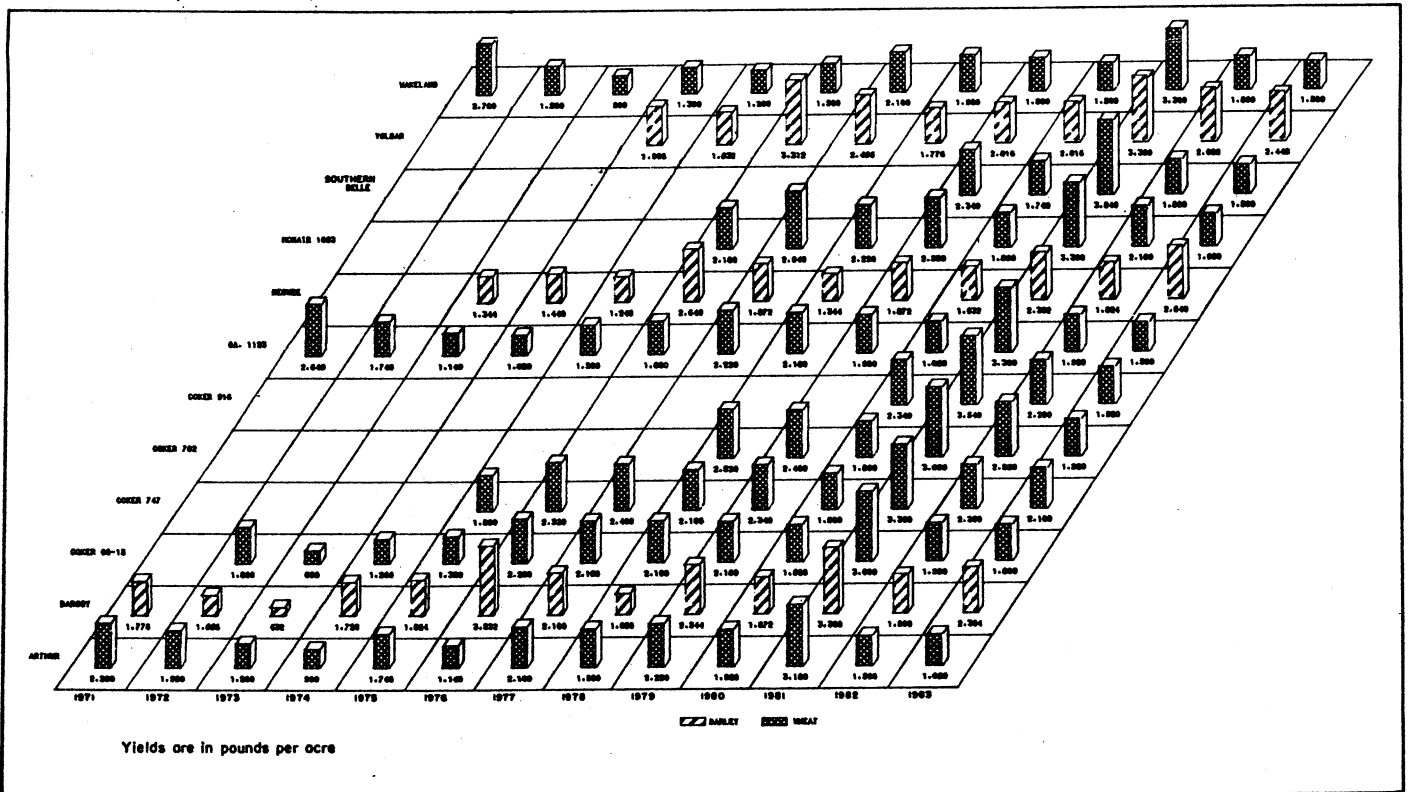


FIGURE 1. Barley and wheat grain yields on unclipped plots in northern Alabama, 1971-83.

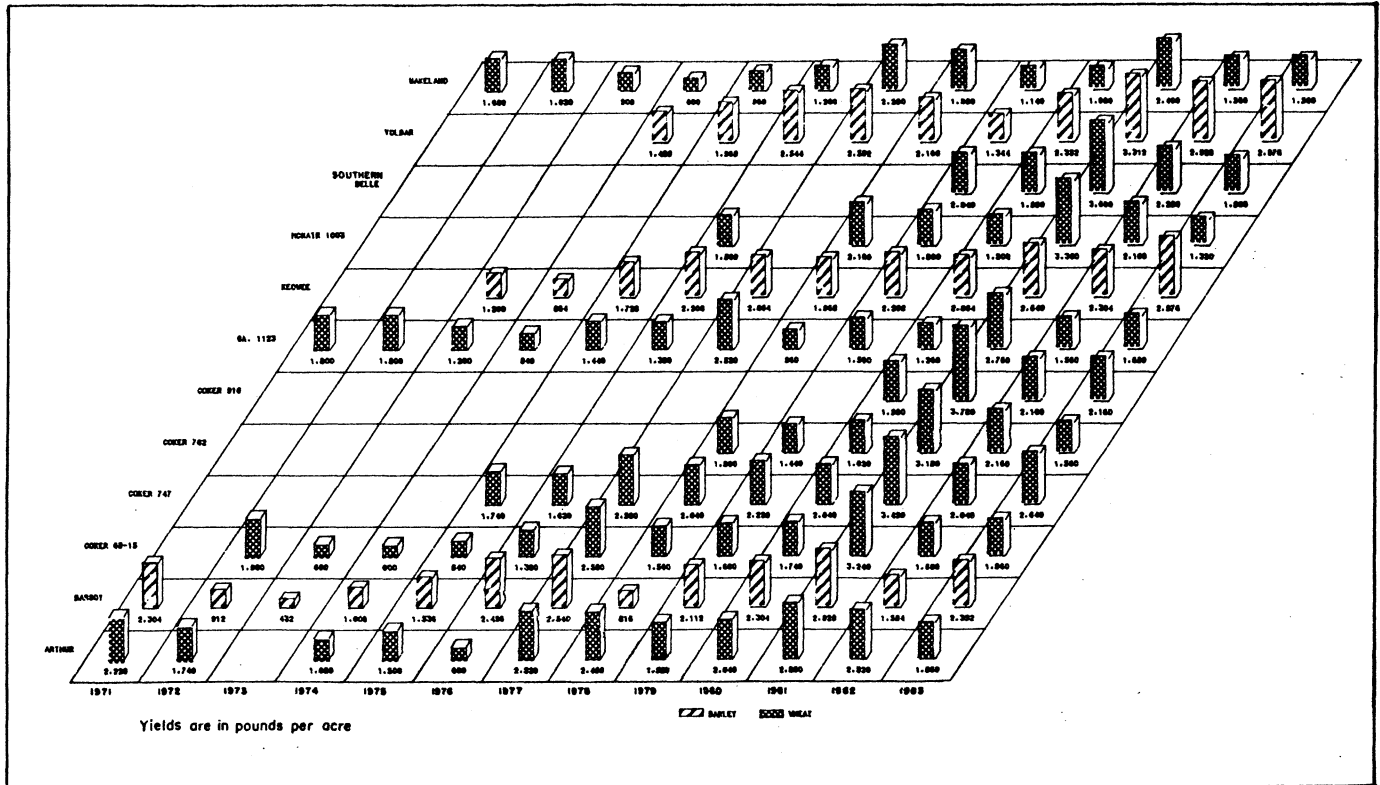


FIGURE 2. Barley and wheat grain yields on clipped plots in northern Alabama, 1971-83.

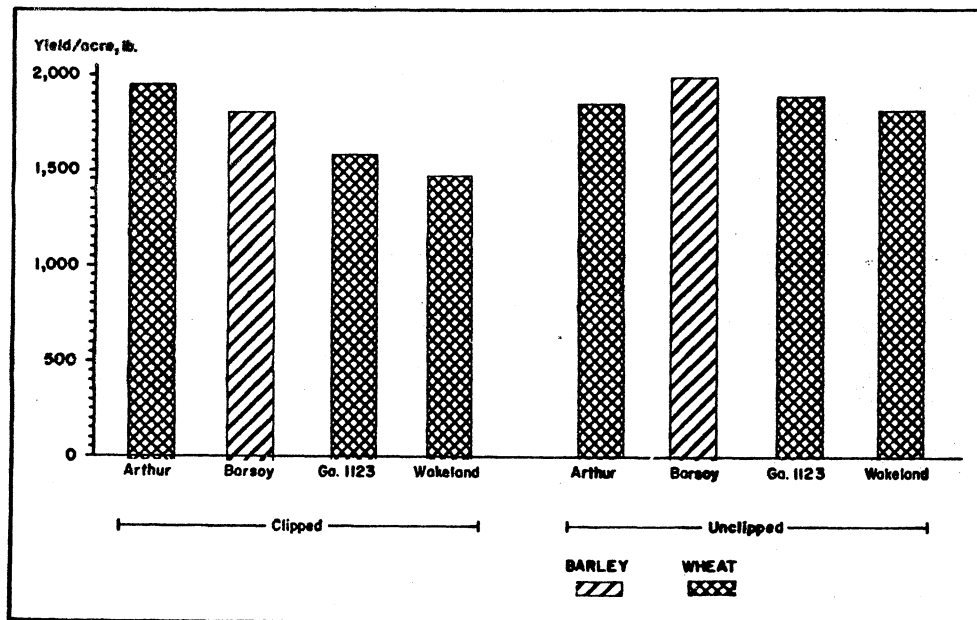


FIGURE 3. Barley and wheat grain yields for 13 years in northern Alabama, 1971-83.

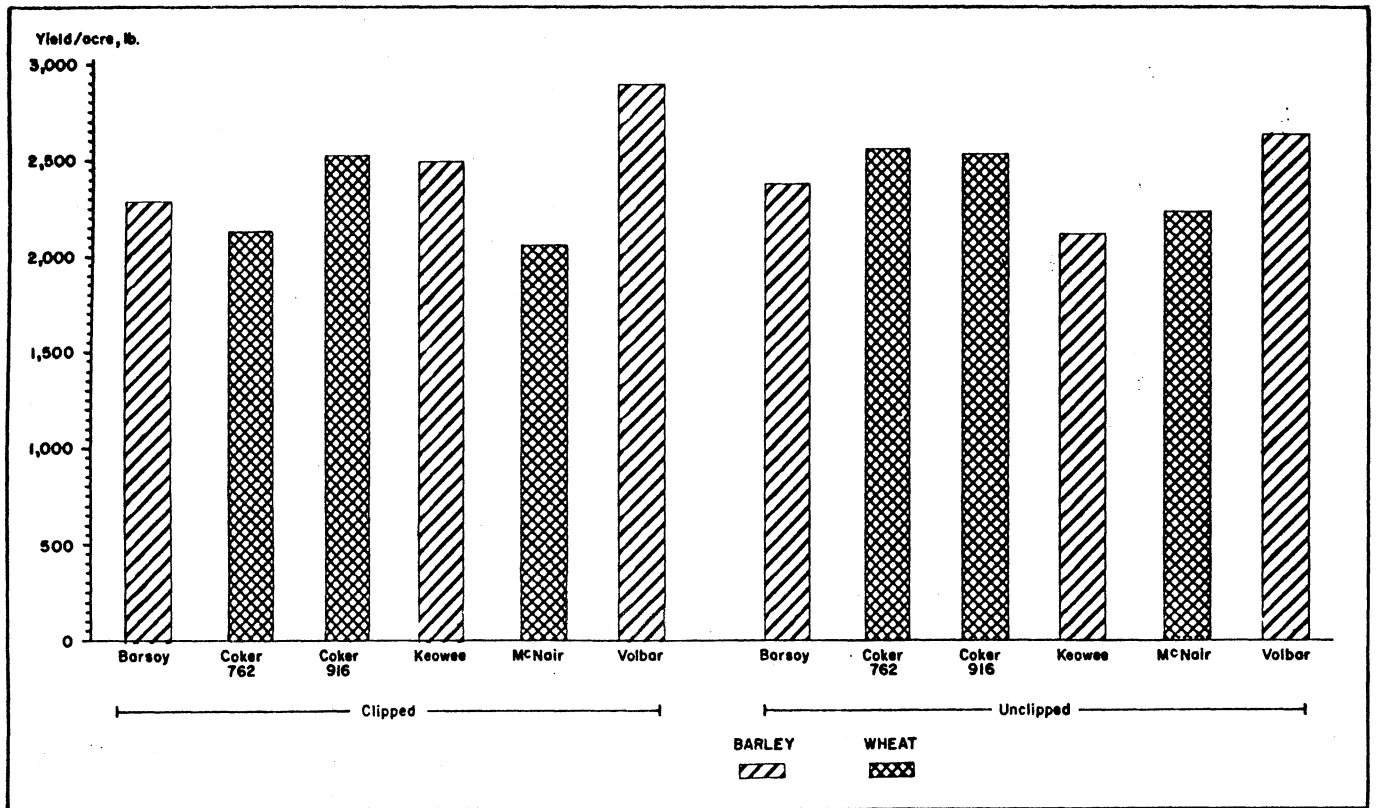


FIGURE 4. Barley and wheat grain yields for 4 years in northern Alabama, 1980-83.

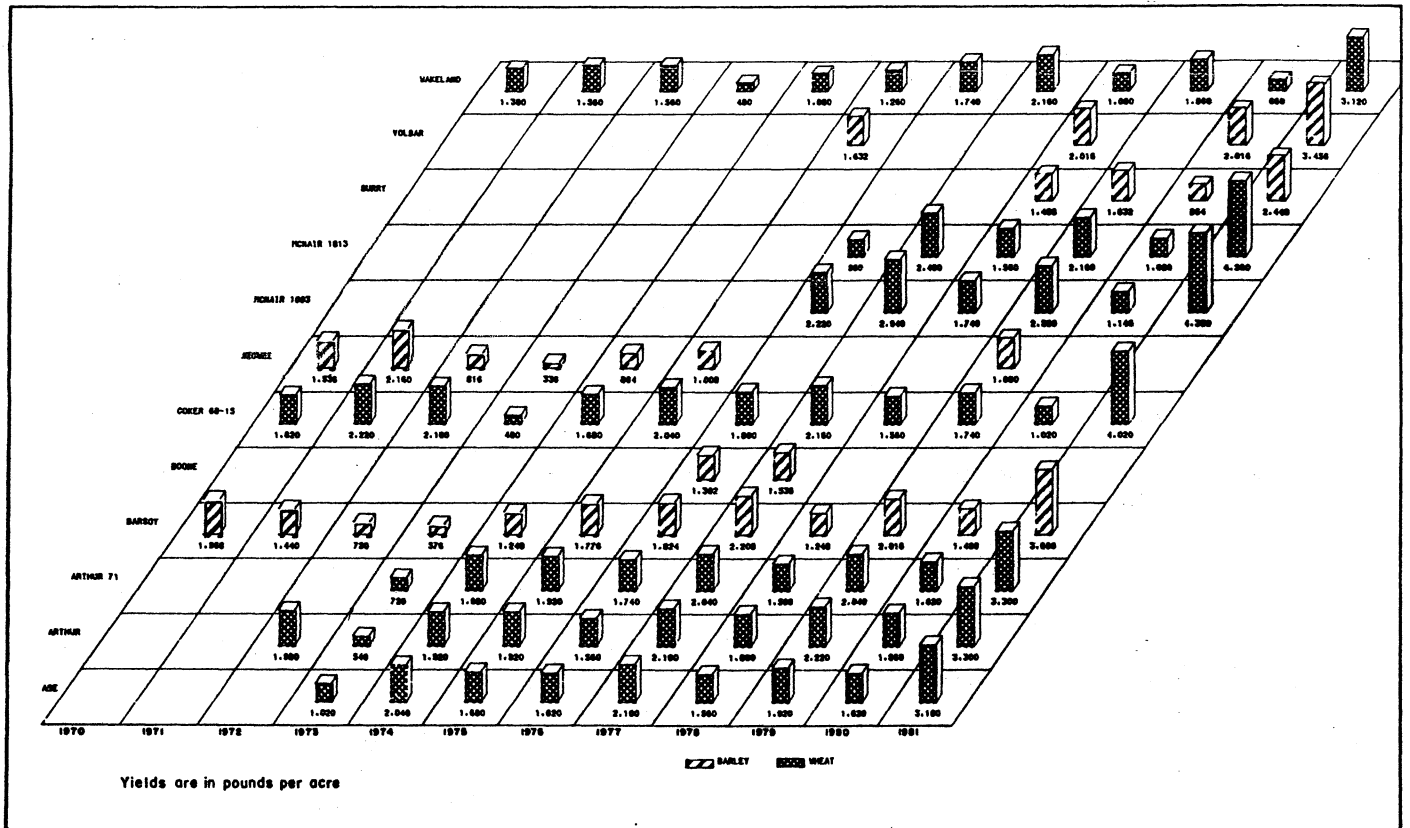


FIGURE 5. Barley and wheat grain yields on unclipped plots in central Alabama, 1970-81.

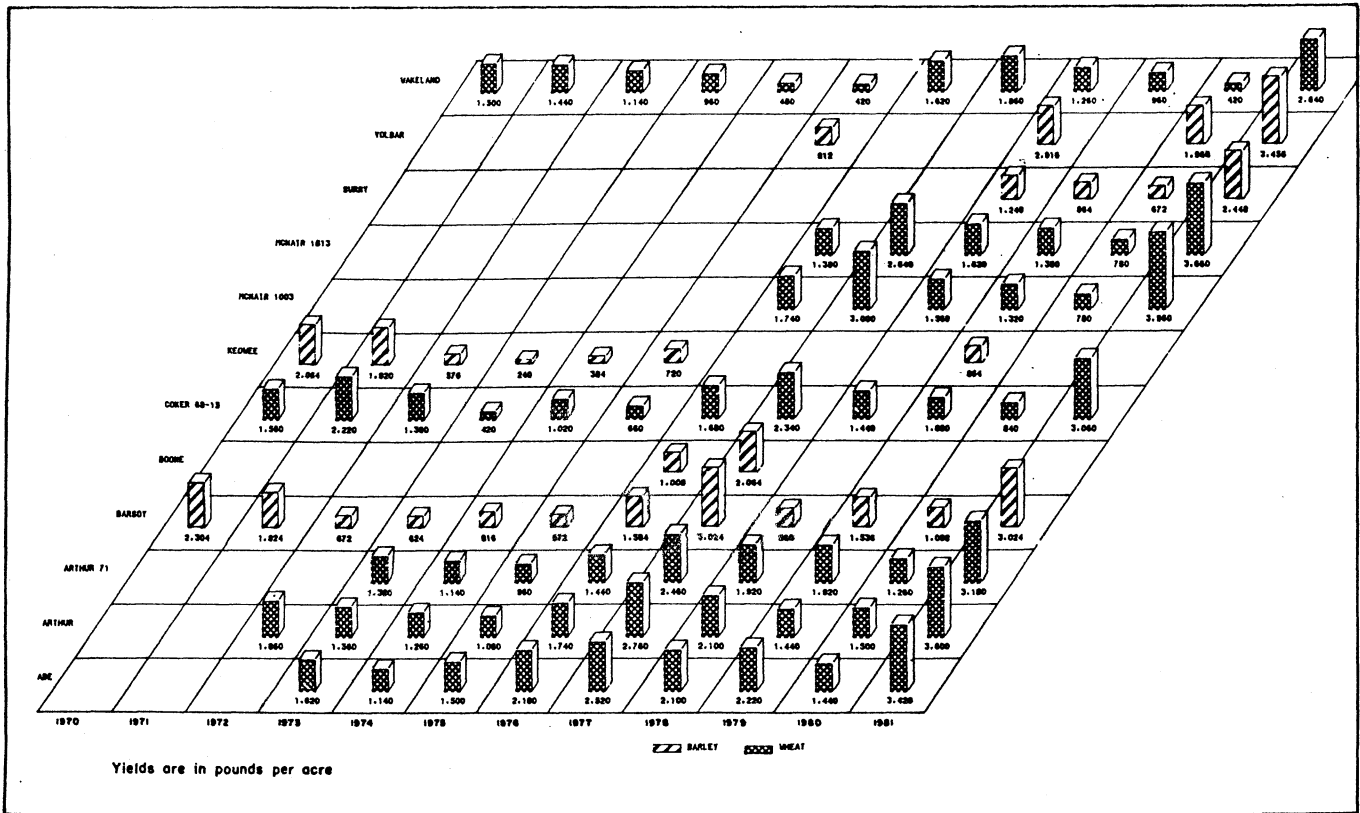


FIGURE 6. Barley and wheat grain yields on clipped plots in central Alabama, 1970-81.

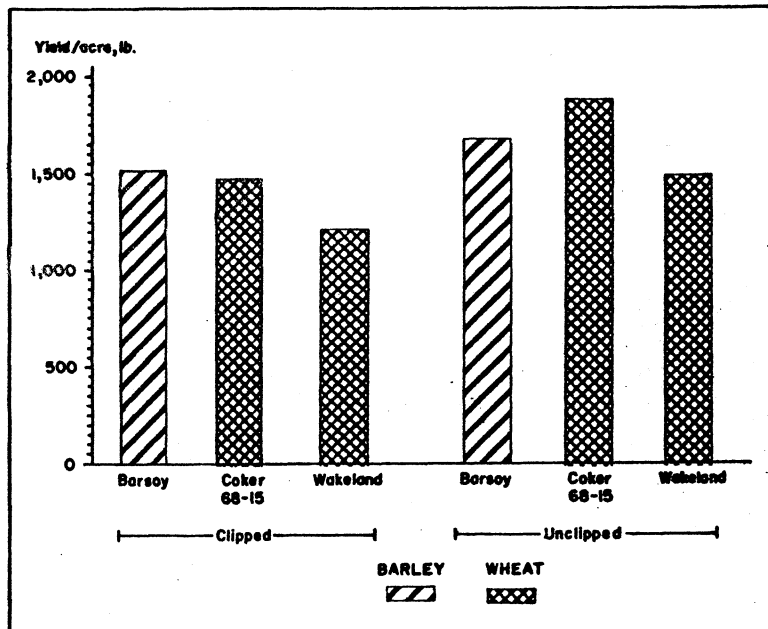


FIGURE 7. Barley and wheat grain yields for 12 years, in central Alabama, 1970-81.

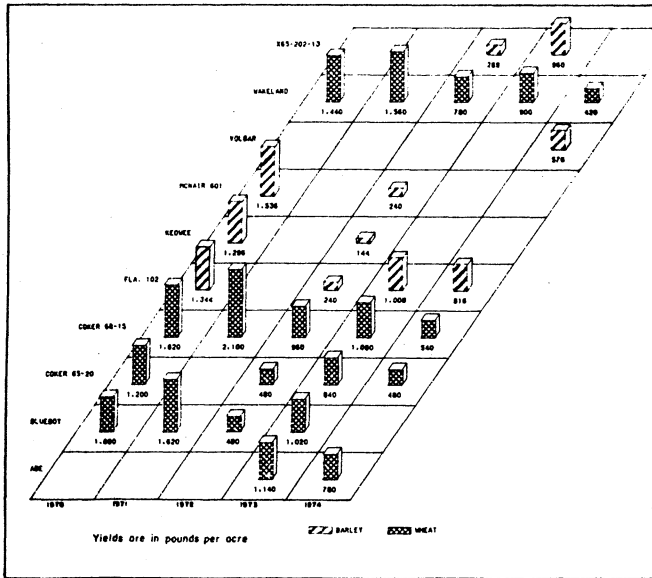


FIGURE 8. Barley and wheat grain yields on unclipped plots in southern Alabama, 1970-74.

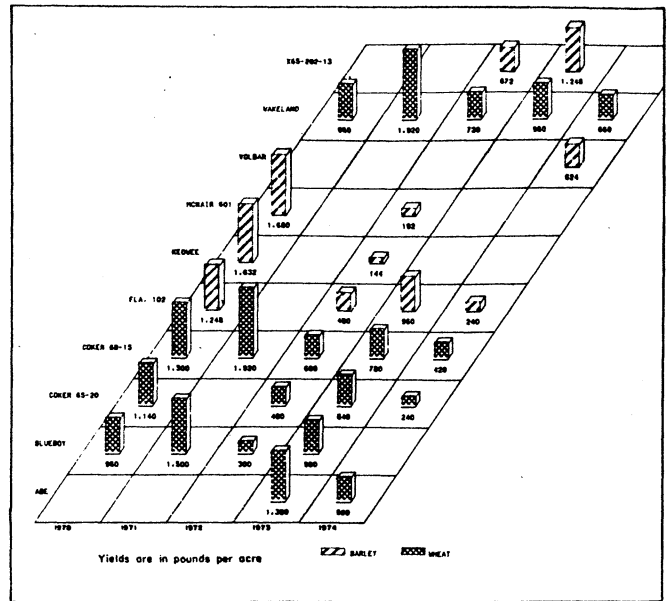


FIGURE 9. Barley and wheat grain yields on clipped plots in southern Alabama, 1970-74.

Information contained herein is available to all persons regardless of race, color, sex, or national origin.

