

SOME DEVELOPMENTS IN WARTIME AGRICULTURAL PRODUCTION IN ILLINOIS

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There are always important changes in agricultural production during wartime, but they do not always follow the same pattern. Labor and machinery shortages have become major farm problems in this war. Feed and food supplies were much more plentiful at the beginning of the present war than they were in World War I. There is greater recognition now of the importance of conserving natural resources. Greater strides have also been made in producing increased and more effective returns than in the last war.

Agricultural production in Illinois falls into two important divisions, crops and livestock. Important changes in Illinois crops during the present war period include marked increases in the total acreage devoted to major crops, particularly in the combined acreage of soybeans and corn, with decreases in small grain and tame hay (Table 1).

During World War I a larger acreage was devoted to important crops at the beginning of the war than was the case in the present war, 19,721,300 acres in 1915 compared with 17,880,000 acres in 1940. The 20,425,000 acres included in the goals of the listed crops for 1944 is practically the same as the 20,410,000 utilized in 1919. This fact may indicate that this figure is close to the desirable maximum.

The important difference between the two war periods, so far as agriculture is concerned, is the reversed emphasis on small grains and corn

and soybeans. Small grains increased from 37.2 per cent of the total of important crops in 1915 to 43.1 per cent in 1919; in 1940 they represented 28 per cent of the total, and the 1944 goals call for 23.6 per cent, or only about 55 per cent of the 1919 acreage. Wheat is the small grain crop which is chiefly concerned. The supply of wheat, both in the United States and in the entire world, was small at the beginning of World War I and was exceedingly large at the beginning of the present world war. Total feed supplies in the United States were also large at the beginning of this war.

With the development of soybeans as an important crop in Illinois, both oats and corn decreased in acreage to make room for them. The soybean acreage of 1944 is expected to almost double the 1940 acreage. This situation is partly the result of a demand stimulated by the loss of Far East vegetable oils and partly of an increased demand for protein meal. Corn is also increasing in acreage as the war continues and feed supplies become shorter, and the 1944 acreage may approach that of 1915.

Another important change in crop production has been the marked increase in yields of certain major crops. Corn yields increased 25 per cent during the nine-year period 1935-43 over the 1915-23 period. The year 1917 was the first year for which Illinois soybean yields as grain were determined. The soybean yield for the 1935-43 period increased 75 per cent over the 1917-23 period. For

TABLE 1.—IMPORTANT ILLINOIS CROP ACREAGES HARVESTED, 1916, 1918 1919, 1940, 1943 AND 1944 GOALS.*

Crop	1915	1918	1919	1940	1943	1944 goal
All corn.....	9,500,000	9,650,000	8,650,000	7,645,000	8,532,000	9,000,000
Soybean grain....	300	2,400	3,000	1,995,000	3,444,000	4,000,000
Oats.....	4,340,000	4,600,000	4,291,000	3,090,000	3,427,000	3,125,000
All wheat.....	2,850,000	2,900,000	4,103,000	1,745,000	1,018,000	1,500,000
Rye.....	90,000	237,000	235,000	49,000	62,000	50,000
Barley.....	66,000	250,000	177,000	117,000	91,000	150,000
Tame hay.....	2,875,000	3,200,000	2,951,000	3,239,000	2,607,000	2,600,000
Total.....	19,721,300	20,839,400	20,410,000	17,880,000	19,181,000	20,425,000
Corn and soybeans	9,500,300	9,652,400	8,653,000	9,640,000	11,976,000	13,000,000
Small grain.....	7,346,000	7,987,000	8,806,000	5,001,000	4,598,000	4,825,000

* Federal and state crop and livestock reporting service.

the two nine-year periods, wheat and hay showed seven and fifteen per cent increases respectively for 1935-43 over 1915-23. The increase in yields being obtained during the present war period is due to the development of higher yielding varieties, to the improvement of soil fertility and cultural practices, and to favorable weather.

Hybrid seed corn has probably added as much as eight bushels to the yield of corn in Illinois. The AAA figures for the state on farms growing both open-pollinated and hybrid corn showed 6.8, 10.2 and 27.7 bushels increase respectively for all farms reporting for 1939, 1940, and 1941. It should be mentioned that as hybrid seed use increased, a larger proportion of the open-pollinated acreage was found in southern Illinois, and part of the difference in yield in 1941 was due to difference in soils. Corresponding data for crop reporting district 6 (east central Illinois) showed 8.0, 8.6 and 13.7 bushels increase respectively.

Improved varieties of other crops, such as Illini, Dunfield, and Richland soybeans and Tama, Vickland,

and Marion oats, have increased the yields.

Improved machinery and power have added to better cultural practices and have contributed to performing them on schedule. Records of the Farm Bureau Farm Management Service over an eight-year period in north central Illinois showed an increase of 9.5 bushels for corn and 8.5 bushels for oats due to improved cultural practices used.

Soil fertility has been improved during the last ten years through the planting of increased acreages to legume and grass crops. There has also been a large increase in the use of limestone, phosphate, and mixed fertilizers. A total of only 350,000 tons of limestone was used in Illinois in 1919 compared to about 3,500,000 tons in 1943, a tenfold increase. More than 150,000 tons of phosphate were applied by Illinois farmers in 1943 compared with less than 4,000 tons in 1919 and earlier years. The use of mixed fertilizers has also increased markedly in recent years.

Large United States and world reserves of wheat and large national feed supplies at the beginning of the

TABLE 2.—IMPORTANT LIVESTOCK NUMBERS IN ILLINOIS, 1915, 1918, 1919, 1940, 1943 AND 1944.*

Livestock	1915	1918	1919	1940	1943	1944
Horses and Mules.	1,612,000	1,617,000	1,614,000	650,000	515,000	471,000
All Cattle.....	2,187,000	2,371,000	2,400,000	2,884,000	3,212,000	3,244,000
Milk Cows.....	1,007,000	1,057,000	1,060,000	1,100,000	1,168,000	1,180,000
Hogs.....	4,358,000	5,111,000	5,724,000	5,750,000	6,858,000	7,750,000
Sheep.....	935,000	988,000	1,000,000	883,000	874,000	807,000
Laying Flock.....			22,081,902	22,953,000	26,832,000	28,128,000
Chickens raised....			29,893,565	28,619,000	48,538,000	46,000,000*
Eggs produced....			105,757,907	161,000,000	223,417,000	232,000,000*
Horses, Mules and All Cattle..	3,799,000	3,988,000	4,014,000	3,534,000	3,727,000	3,715,000
Hogs and Sheep..	5,293,000	6,099,000	6,724,000	6,633,000	7,732,000	8,557,000

* Federal and state crop and livestock reporting service.
a 1944 goals.

present war have added to the emphasis placed on livestock production. All livestock numbers in Illinois except horses, mules and sheep were up at the beginning of the present war and have continued to increase (Table 2). The decrease in horses and mules has been offset fairly well by the increase in all cattle. Numbers of horses and mules decreased 1,151,000 between January 1, 1915, and January 1, 1944, while all cattle increased 1,057,000. The increase in dairy cattle numbers has been moderate during both war periods, however, sheep numbers actually increased during the last war but they have decreased during the present war. Not only were numbers of hogs on Illinois farms nearly a third larger on January 1, 1940, than on January 1, 1915, but they increased another 34.8 per cent between January 1, 1940, and January 1, 1944, compared with a 31.3 per cent increase between January 1, 1915, and January 1, 1919. The poultry industry did not undergo any major changes during the other war period. Numbers in laying flocks and numbers raised were not greatly different on January 1, 1940, from January 1,

1919, but egg production in 1940 was nearly 50 per cent greater than in 1919. The increase of hens in laying flocks from 1940 to 1944 was 22.5 per cent and the increase asked for in egg production for 1944 is 44.1 per cent above that of 1940. A 60 per cent increase is being asked in chickens raised during 1944 over 1940.

Some of the crop and livestock changes of the present war period will become permanent, but more of them are apt to call for readjustment during the postwar period as part of the present markets disappear. A number of recent developments, such as egg drying, milk evaporation, dehydration, use of meat stretchers for export products and more general use of protein concentrates in balancing feeding rations, will contribute to a permanently expanded market for some of the products of agriculture. The longer war and greater depletion of most consumer goods should extend the period of adjustment to normal peacetime demands. A further tool for making satisfactory individual adjustments in the postwar period is the present machinery for establishing yearly production goals.