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Contouring Paid in 1943

Boosted the Yield of Corn, Oats and Soybeans

By G. M. BROWNING
and M. B. RUSSELL

IOWA FARMERS who farmed round their hills — the contour method — in 1943 got more corn, oats and soybeans to the acre than the farmers who farmed up and down their hills. At least this was the conclusion we reached after comparing yields of these crops grown by the two methods side by side in the same fields. We had results from 61 fields of corn, 38 of soybeans and 18 of oats in different parts of Iowa.

The average increase for corn in favor of contouring was 5.6 bushels per acre, for soybeans 2.2 bushels and for oats 5.2 bushels per acre. These values are close to the 6.2 bushel increase for corn and the 3.2 bushel increase for soybeans which we got in our 1942 studies (FARM SCIENCE REPORTER, April, 1943). As a 2-year average contouring increased corn yields 5.7 bushels per acre and soybeans 2.7 bushels.

Our studies in 1943, as in 1942, were conducted in cooperation with farmers in 16 soil conservation districts by the Agricultural Experiment Station, Soil Conservation Service and Extension Service. Fayette, Tama, Haig, Shelby, Marshall, Knox and Carrington soils were represented in the studies.

Areas for the test were selected within each field which had been cropped the same in the past and which were uniform in soil, slope and erosion. A part of each of these uniform test areas was planted and cultivated on the contour.

Results Vary Considerably

We found considerable difference in the results obtained from contouring, depending upon the type of soil, the slope and the type of rainfall. A few hard-driving rains were responsible for most of the damage from washing. In western Iowa, on the Marshall and Knox soils, many of the up-and-down-hill areas were washed out completely, or the stand was severely damaged by heavy rains early in the season. As an example, at the Soil Conservation Experimental Farm at Clarinda it was necessary to replant the corn twice on the up-and-down-hill areas because of washing out during heavy rains.

On the other hand, the contoured areas had a normal stand even though there was some sitting in of the furrows. Under these conditions the average yield was 88.0 bushels per acre on the contoured and 46.6 bushels per acre on the up-and-down-hill areas, or an increase of 41.4 bushels in favor of contouring! It would certainly be unreasonable to expect average increases from contouring to be so large, but that was the result we got in this one test.

There also was a large difference in the amount of soil lost from these plots during three heavy rains — 3.5 tons per acre from contoured and 32.5 tons per acre from the up-and-down-hill areas. Over a period of time this is very important because valuable fertility is lost in the surface soil that is washed away during a few heavy rains.

In a few fields in southeastern Iowa on slowly drained soils the yields on the contoured areas were slightly less than on the up-and-down-hill areas. On these heavy soils there apparently was too much water during the early part of 1943 — a very wet year — and as a result there was some reduction in yield. In most years excessive moisture is not a problem, but for the exceptionally wet season, a small amount of fall in the contour rows will help correct this condition. Good soil management, including legumes and manure regularly in the rotation, will also help overcome damage from too much moisture on poorly drained soils.

7 Million Sloping Acres

Contour farming has increased considerably during the past few years. In 1942, 9,000 farmers contoured about 400,000 acres. In 1943 this was increased to 16,000 farmers and 640,000 acres, or 60 percent. Iowa farmers will plant 6 million acres of sloping land to corn and 1 million acres to soybeans in 1944. How much increase in food and feed production would be obtained by contouring all of this?

If the 7 million acres were contoured and the increase per acre equaled that obtained the last 2 years, the farmers would produce about 30 million more bushels of corn and about 2 million more bushels of soybeans. In addition to saving soil and water and increasing yields, there is a saving of about 10 percent in time and fuel when all operations are carried out on the contour.

There is nothing complicated about contouring. It may require a little more time to begin with, but when you have it started it is just as natural as check-row planting. Anyone with an ordinary level, or other suitable instrument, can lay out a contour line. Bulletins and leaflets are also available which outline in simple fashion the steps to be followed in contour farming.

*You can obtain these from the county extension director, AAA committeemen, or representatives of the Soil Conservation Service.