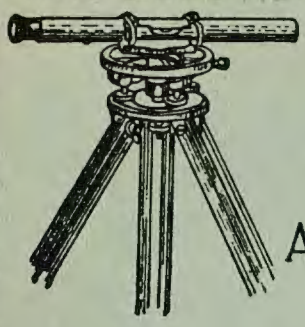

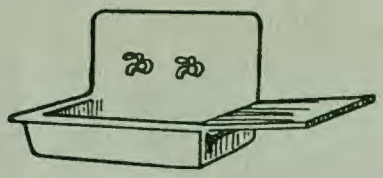

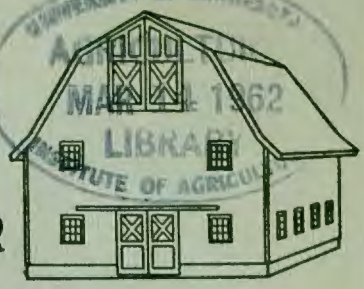

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Contour Farming as an Aid to Soil Erosion Control

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Soil erosion is a natural process, but the actions of man have greatly increased the rate at which our fields are losing their fertility. The annual loss of plant food by soil washing is about 20 times greater than the amount removed by the plants. We cannot completely stop erosion, but we can greatly reduce the loss and damage by changing some of our farming practices. The more intensive and repeated the practice of cultivation without following a well planned and suited crop rotation, the greater will be the degree of soil losses by erosion. The great increase in soil and water losses is very forcefully presented by some experiments carried on at the Missouri Experiment Station. It was found that the soil loss from a plot of blue-grass sod was ¼ ton per acre per year, while on similar slopes the loss from a plot with a corn-wheat-clover rotation was 2¼ tons or 9 times that of the blue-grass sod plot, and the loss from a plot in corn annually was 17¾ tons or 71 times that of the blue-grass sod plot. The water loss was greater for the two cultivated plots although not in the same ratio as the soil loss.

Nichols at the Alabama Agricultural Experiment Station found that when the rows were on the contour there was a very small loss of soil from cultivated fields on slopes up to ten per cent, while the soil loss, when the rows were with the slope, increased from a negligible amount to about 1500 pounds per acre for a one-inch rain in 8½ minutes. When the slopes of the cultivated fields were further increased from 10 to 20 per cent the rate of soil loss resulting from a one-inch rain in 8½ minutes increased with the slope. The soil loss increased from three-fourths ton to nearly 60 tons per acre when the rows ran with the slope, while the soil loss increased from 0 to about 30 tons per acre when the rows ran with the contour. The soil losses resulting from our common practices of cultivation are two times or more greater than the losses resulting from contour farming. In every case the contoured rows produced greater yields than rows running with the slope. Nichols' experiments indicate very clearly that slopes above 10 to 12 per cent should not be cultivated in the usual manner if we are going to maintain our soil fertility.

Fig. 1. Corn rows running on the contour

In places where it is necessary to farm part of the steep slopes in cultivated crops, strip farming should be employed—that is, strips of sod are alternated with strips of cultivated crops, the strips running along the contour of the land. The strips of cultivated land can range in width from 50 to 100 feet depending upon the steepness of the slope. The run-off from the cultivated land will be retarded when it goes through the sod strips and will drop its silt load in the grass instead of carrying it on to the streams.

A good example of rows running on the contour is shown in Figure 1. The sod strip below the corn strip shows in the left side of the picture. In most cases the slope of the land will be uneven enough to make it necessary to have point rows, that is, rows that do not run to the end of the field; but if all these point rows are run parallel to either the upper or lower series of long rows, they cause very little difficulty. When planting or cultivating, turns should always be made from the longer to the next shorter row.

Strip and contour farming takes a little more time than ordinary farming, but the big saving in soil fertility makes the total cost in favor of the first method. After the contour and strips have once been established, there is no upkeep cost. It is very important to have the strips laid out exactly on the contour, otherwise they will not be effective.

Figure 2 shows a farmer starting to plow on the contour.

Fig. 2. Plowing a land on the contour

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