STUDIES ON THE USE OF THE TERRACING PLOW FOR
SOIL CONSERVATION

Horace J. Harper

The terracing plow is an important agricultural implement because it can be used to build terrace ridges or it can be converted into a general purpose plow by replacing the terracing wing with a standard moldboard. One of the reasons why the terracing plow has not been used more extensively in the control of soil erosion is due to the fact that the terrace ridge cannot be completed in one operation. The loose soil must be packed by rainfall before it can be plowed a second time in order to increase the effective height of the ridge. Ramser, in discussing the need of improving machinery for terrace construction, states that more than one plowing is needed to build a terrace ridge having a proper height. Smith states that the terrace plow is effective for three rounds after which it acts like an ordinary plow, and that the small farmer who wishes to terrace a few acres can afford to consider this type of terracing equipment.

The cost of terracing tools has been one factor which has retarded the program of soil conservation in many areas. Although the cost of terracing equipment varies considerably, there are many farmers who are not able to purchase tools which are frequently recommended and used in terracing demonstrations. Since power is available on the average farm to operate a plow and since the average farmer can supply labor when he cannot supply capital, the terracing plow could be an important factor in the expansion of a soil conservation program which is seriously needed in many areas to reduce soil losses which occur as a result of the uncontrolled movement of run-off water.

EXPERIMENTAL

For several years studies have been in progress at the Oklahoma Agricultural Experiment Station in order to determine what methods should be used to reduce the rate of soil erosion on land which has been abandoned because it will not produce satisfactory yields of cultivated crops. The major portion of this land is low in fertility and unpalatable species of grass and weeds occur on these areas as a subclimax vegetation. Because of a lack of vegetative cover on these soils, erosion continues at a relatively rapid rate and small gullies develop into canyons with overfalls which are difficult to control. It was observed that the banks of shallow ditches are soon covered with  

1Contribution from the Department of Agronomy, Oklahoma Agricultural Experiment Station, Stillwater, Okla. Received for publication February 5, 1936.

2Professor of Soils. The author is indebted to the G. A. Kelly Plow Company, Longview, Texas, for assistance in connection with this study, and to L. E. Hazen, who supplied the dynamometer which was used to obtain data on the draft of different plows.
