

Control of goat grass is not difficult where rotation with row crops is possible. It is easily killed by cultivation. The only complicating factor is the difficulty of killing plants growing in fence rows, roadways, and other waste places. The grass does not compete with native grasses in undisturbed sod.

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**G**ULLIED Land Reclaimed by the Use of Brush Followed by Terracing Preliminary to terracing land cut up with deep gullies that can not be crossed with farm machinery, it is sometimes advisable first to partly fill the gully by intercepting eroded soil in the run-off water. Where an abundant supply of brush is available, an ideal method for

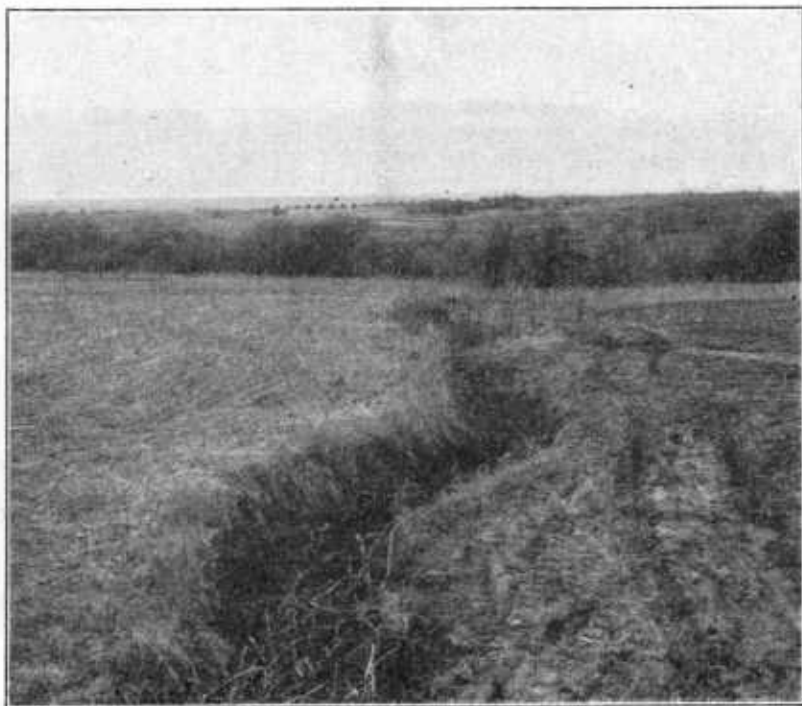


FIGURE 75.—Gully about half filled with brush to check erosion and intercept silt in the run-off water

collecting a deposit of soil is to partly fill the gully along its entire length with brush. This method has some advantages over the use of brush dams in that a greater proportion of the silt in the run-off water is caught and deposited in the gully, resulting in only small loss of soil from the field. The gully should be filled to about one-half its depth at the middle, and the brush should extend up the sides as near to the top of the banks as possible. This provides a passageway for the run-off water without permitting erosion on the sides of the gully. Two very common mistakes are to fill the gully so full of brush as to cause an overflowing of the banks and the eroding of a new parallel

gully down the slope, and to neglect to protect the sides of the gully against the erosive action of the water.

Before laying the brush it is a good plan to cover the bottom and sides of the gully with straw, grass, or some other similar material to protect the soil from the eroding effect of water percolating through the brush. Starting at the lower end of the gully the brush should be laid with the butts downstream, overlapping it in a manner similar to that employed in shingling a house. This ties the brush effectively together throughout the length of the gully and reduces to a minimum any possible movement from the force of the run-off water. If rock is available it should be placed on top of the brush along the center line of the gully as an anchor and to prevent the movement of the top



FIGURE 76.—Showing silt deposited to top of brush in gully shown in Figure 75

brush. It also serves to hold the brush closer together and permits a more rapid filling of the open spaces with silt. If rock is not available, stakes driven with tops tilting uphill and connected with cross poles will answer the same purpose.

#### Test at Erosion Experiment Farm

In the spring of 1929, on the department's soil-erosion experiment farm near Guthrie, Okla., a gully with a bottom width of from 2 to 7 feet, a top width of from 5 to 15 feet, and a depth of from 2 to 8 feet, was about half filled with brush as shown in Figure 75. During a period of about one month during which time four ordinary rains occurred, 1 to 2 feet of soil was intercepted by the brush and deposited

in the bottom of the gully. Before the fall of the same year the gully had been filled with eroded soil practically to the top of the brush. (Fig. 76.)

In the fall the edges of the gully were plowed in and sufficient soil was scraped into the gully to permit crossing with tractors and terracing implements. The land was then terraced and, with some additional work between terraces consisting of plowing in the sharp edges of the banks, it was possible to cross the gully at any place with farm

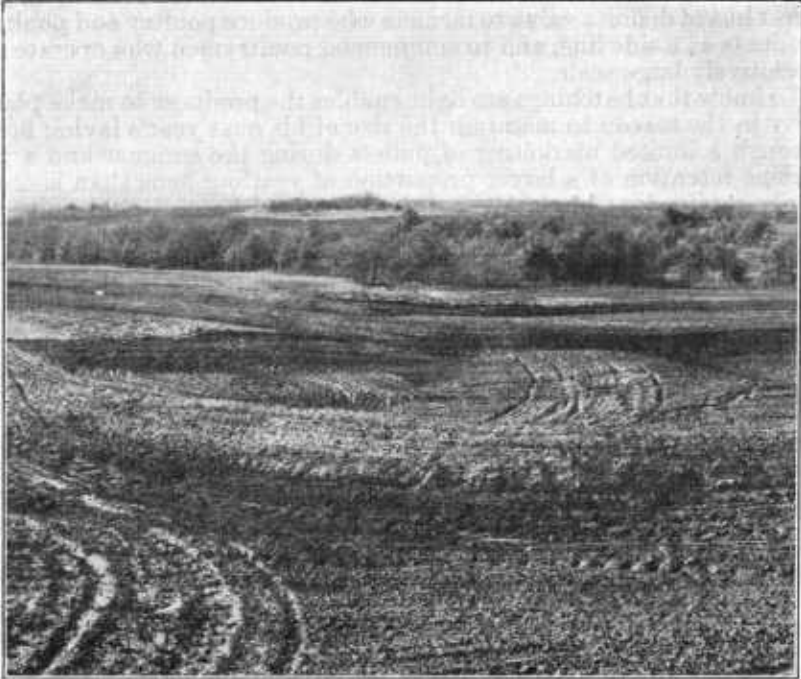


FIGURE 77.—View taken at same location as views in Figures 75 and 76 after land was terraced. Note disappearance of gully, all land being available for farming purposes

machinery. Figure 77 is a view taken in the same location as those in Figures 75 and 76 from which it is apparent that the gully has entirely disappeared and the former sharp edges have given way to smooth curves which can be readily crossed with farm machinery. All of the waste land formerly occupied by the gully is reclaimed for cultivable purposes.

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**H**ATCHERY Reports, Issued Monthly, Aid Poultrymen to Regulate Production. Chicks hatched in the spring become either a part of the summer's supply of broilers or fryers or of the laying flocks that furnish the egg supply of the following season. A crop of baby chicks smaller than usual, therefore, is indicative of a smaller supply of young poultry for the summer markets, a reduction in the number of pullets