

## A Device to Assist in Mowing Kudzu

**K**UDZU has the possibility of becoming an important crop in the Southeast. It affords excellent hay and grazing and is very valuable in controlling erosion. The acreage of kudzu in Alabama has increased tremendously in the past three or four years. At the present time there are about 12,000 to 15,000 acres of kudzu grown in this state.

### DIFFICULTIES IN MOWING

Considerable difficulty has been encountered in cutting the long, tough vines of the kudzu plant with a standard mower. Two of these difficulties are:

- (1) The clogging of the cutter bar by the extremely heavy growth of vines, even when the mower is operating in perfect condition.
- (2) Separating the swath from the uncut vines after the mower has cut the vines loose at the base.

It is necessary to separate the swath from the uncut vines so that the inner shoe of the mower will have a clean place to follow the next round. This job may often necessitate the help of one or two extra men to follow the mower with pitch forks to

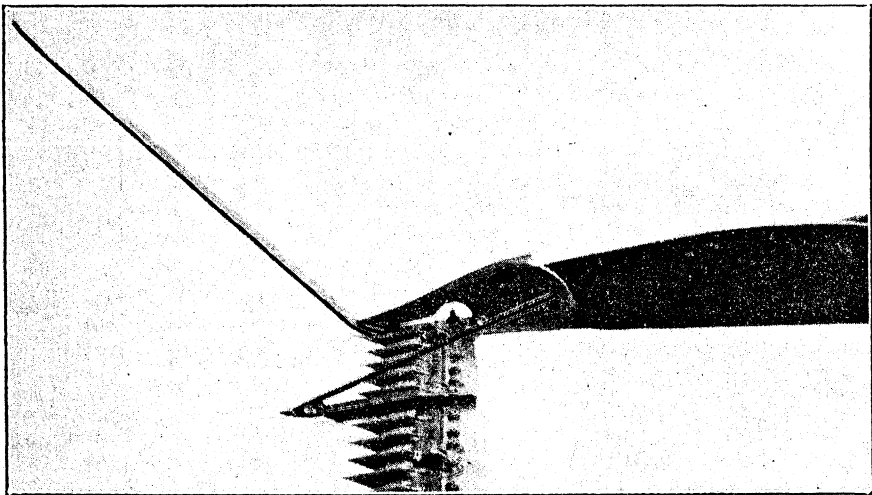


FIGURE 1.—A kudzu mowing attachment assembled on a mower.

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separate the swath from the uncut vines. This additional labor can be dispensed with by using the attachment described on the following pages.

### ATTACHMENT

Various attachments have been made and tested on a horse-drawn mower for the mowing of kudzu. The attachment assembled as shown in Figure 1 solved

this problem under the conditions where it was tested. Experiments with this attachment were conducted for a number of years on both young and old kudzu which ranged from 12 to 40 inches in height.

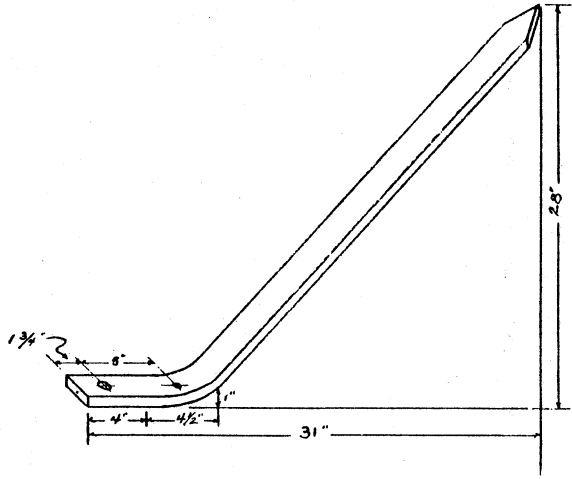


FIGURE 2.—Detail of rider bar which was attached at the outer shoe.

### SPECIFICATIONS AND INSTRUCTIONS

The attachment is very simple and can be made by most farmers or by a blacksmith. The one used in the test was made as follows: A curved rider bar,  $\frac{3}{8}$ -inch thick, 2 inches wide, and  $3\frac{1}{2}$  feet long, was bent to fit the curvature of the bottom of the outer shoe of the cutter bar (Figure 2). The outer shoe (Figure 3) and one bolt from the cutter bar were removed. The shoe was replaced with the curved bar which was fastened with two bolts. This bar served as a rider and pressed down the kudzu. Next, a sharp pointed V-shaped pick-up (Figure 4) was made and slipped over the point of the sixth guard and bolted to the top of the cutter bar. The pick-up was held in place by the guard bolt and a piece of  $\frac{1}{2}$ -inch pipe  $3\frac{1}{2}$  inches long which was fitted over the end of the guard. This piece of pipe, which was welded to the base of the pick-up attachment (Figure 4), was tapered in front to prevent clogging. The proper position of the short piece of pipe was located on the base and fitted over the point of the guard before the hole for the guard bolt was drilled. Due to the increased thickness of the base of the pick-up, the guard bolt was replaced with a longer bolt. The base of the pick-up consisted of an iron bar  $\frac{1}{2}$ -inch thick,  $1\frac{1}{2}$  inches wide, and 13 inches long; its rear end was flush with the back edge of the cutter bar. The elevating rod, which was welded to the point of the pick-up, was  $\frac{1}{2}$  inch in diameter and 19 inches

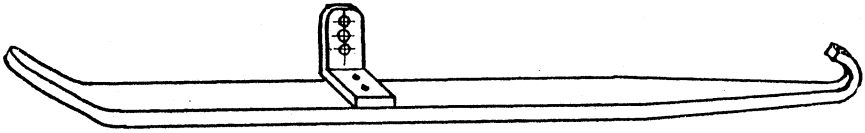


FIGURE 3.—Diagram of the outer shoe which was removed from the mower in order that the rider bar could be attached.

long. The pieces composing the pick-up were welded together but could be fastened by riveting. This attachment forced the kudzu across the cutter bar at an angle of about 45 degrees where it was cut by the sickle. The swath board then moved the vines to the left of the uncut material which provided a clear place for the inner shoe or slide of the mower to operate during the next trip.

If small stones were present in the field of kudzu, and if it were thought necessary to tilt the front of the cutter bar upward, an outer shoe could be made and bolted in place with one bolt. The shoe in this case can be made very similar to the one removed from the mower, but it should be shorter and its hooked end should turn downward. It can then be slipped under the back of the rider bar. The front end of the shoe should be hinged through an extra hole in the rear of the rider bar. The rear upper side of the rider bar should be morticed down to obtain a smooth fit and to permit adjustments. The shoe can be held in place and adjusted by the original bolt (see Figure 5).

#### OTHER CROPS

In addition to the use of the attachment for cutting kudzu, it was used satisfactorily on a mower for cutting an extremely heavy growth of interplanted hairy vetch and oats. The vetch and oats had fallen down but had not begun to decompose. An attempt was made to mow another crop of interplanted vetch and oats of similar growth in which case the lower part of the

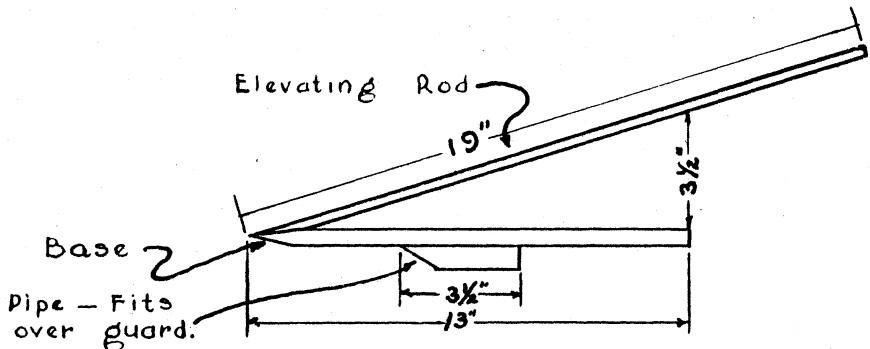


FIGURE 4.—Detail of pick-up which was fastened on the sixth guard from the outer shoe.

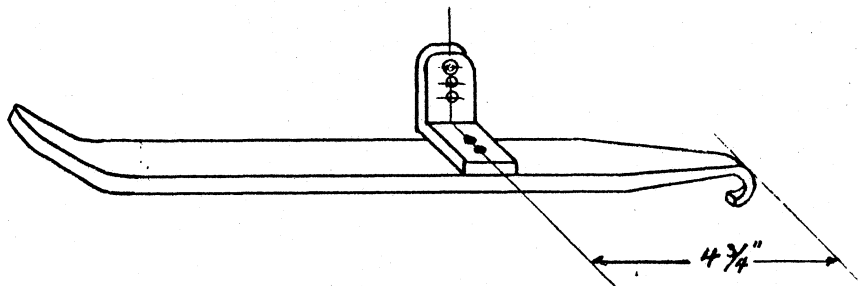


FIGURE 5.—Homemade outer shoe which can be slipped under the rider bar and attached with original bolt.

vetch had partly decomposed. The second crop could not be mowed with or without the attachment due to the fact that the decomposed vetch completely clogged the entire cutter bar of the mower.

Quite often considerable difficulty may be encountered on extremely heavy growths of cowpeas or soy beans, but it is believed that this attachment could be used to an advantage on these crops.

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