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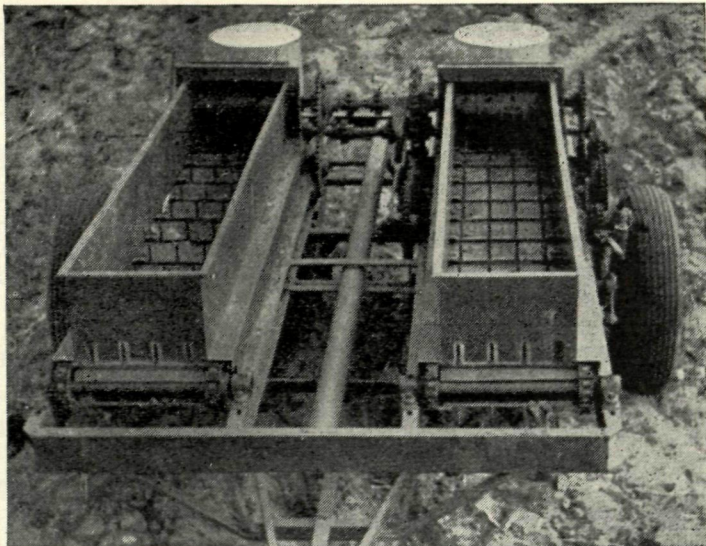


Fig. 1.—Two views of the Bermuda sprig planter

# KIKUYU GRASS PLANTING BY MACHINE

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**T**HE value of Kikuyu grass as a pasture plant is known to most dairy-farmers. It is deep-rooting and capable of good autumn, late spring and—in summer moist areas—all-year-round production. It is valuable on sandy soils even in the drier dairy-ing districts, is palatable to stock and can withstand heavy grazing.

The main disadvantage of this plant is that it cannot be sown from seed and therefore the establishment of any substantial area involves very laborious hand-planting. A Bermuda sprig planter was introduced from America and tested in the South-West of this State with good results and some details concerning this work will be of interest to dairy farmers.

## THE MACHINE

This machine automatically plants sprig grasses such as couch and Kikuyu. The unit opens up, fertilises, covers and packs the furrow. Two rows of sprigs may be planted at any distance apart, between 32 in. and 40 in. centres. Two troughs on top of the machine hold the sprigs. A shovel type of share opens the furrows while spiked conveyors pull sprigs into the feeder. A distributor breaks and separates

the sprigs and a chute guides them into the furrow. Fertiliser is then dropped into the furrow which is covered by small disc cultivators immediately behind the chute.

The machine was originally designed for Bermuda or couch grass, but appears to be adapted to the use of Kikuyu.

In practice, trials with this machine have covered several situations, including sowing of Kikuyu grass in virgin soils, in cultivated soils, in uncultivated grassland paddocks and in bracken infested areas.

## VIRGIN SOILS

The machine was found to work very satisfactorily on this type of country, providing it is reasonably free of roots and stones. Kikuyu was planted readily in these situations and the rate of planting was approximately 10 to 12 acres in one eight-hour day. On newly-cleared land,



Kikuyu grass can be readily established with this machine and, with the development of subterranean clover pasture on the area, a mixed clover-Kikuyu grass pasture can be developed fairly quickly. On such areas the sprig planter has distinct possibilities.

### **CULTIVATED AREAS**

In using the machine at Manjimup, Denmark and Walpole, it was found that it worked very efficiently on land which had been previously cultivated. The plough share opened up a small furrow, planted the grass roots and the small disc cultivators replaced the soil in the furrow before rolling. No difficulty was experienced in planting areas which were in this condition. This was also found to be the case where a bush-and-bog disc cultivator was used to chop down ti-tree regrowth in a previously cleared paddock. Following the cultivation, the sprig planter successfully operated in planting Kikuyu roots. From this trial it is clear that the machine will be of considerable value in establishing areas of Kikuyu grass, providing prior cultivation can be carried out.

### **UNCULTIVATED GRASSLAND PADDOCKS**

The possibility of introducing Kikuyu grass into the existing clover-grass pasture was considered at both Manjimup and Denmark. It was hoped that the machine would prove satisfactory in planting Kikuyu sprigs into the existing field without the necessity of cultivating the established clover-grass pasture. In both instances, it was found that the machine as designed, was not efficient in carrying out this work. The opening plough share threw the sods too wide for the disc cultivators to return the soil to the furrow after the sprig had been planted and where planting was arranged in such a paddock the sprigs were not covered by soil as the machine passed over.

Modifications were made to the machine in the form of leading coulter, smaller furrowing hoes and a baffle board designed to prevent the hoe throwing the sods too wide but this failed to overcome the problem. So far no satisfactory

method has been devised of using the machine to introduce Kikuyu roots into existing pasture swards without prior cultivation of the area.

### **BRACKEN-INFESTED AREAS**

The possibility of introducing Kikuyu grass into bracken-infested areas with the idea of choking out the bracken by the growth of Kikuyu, presents interesting possibilities. If Kikuyu grass can be established in this situation and animals encouraged to forage for the Kikuyu grass,



Fig. 2.—Raking up Kikuyu grass sprigs after using the bush-and-bog cultivator

their trampling will assist in bracken control and eventually the Kikuyu would be expected to choke out much of the bracken. In practice, this appears to be a possibility only after tall-growing bracken has been reduced by means of rolling and to such an extent that light will be allowed into the Kikuyu grass.

One attempt was made with the sprig planter to plant a bracken-infested area, but the heavy bracken fouled up the machine and the attempt was not successful. It is expected that on bracken which has been rolled for several years, and reduced in vigor by that means, it should be possible to plant Kikuyu grass among it.



## AREA PLANTED

At Manjimup the area planted in the spring of 1956, was approximately 20 acres and in the Denmark-Walpole district an area of approximately 160 acres has been planted with this machine. Reports concerning establishment have been good and it appears that this type of planting has been quite efficient in establishing the grass.

## SUPPLY OF ROOTS TO THE MACHINE

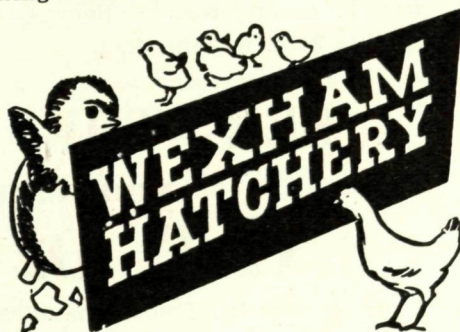
The supply of roots to the machine must be maintained by rotary hoeing a Kikuyu grass paddock, gathering the roots and loading them into the troughs on the machine.

At Manjimup roots were lifted following rotary hoeing and the mechanism successfully teased out the roots and fed them through the chute. It was found however, that the roots were best taken from a sandy area rather than a heavier soil type. In the sandy area, long roots were available and they were freed of adhering soil quite readily. Roots taken from heavier soil types were shorter in length and sods were lifted up which did not tease out readily. In the Denmark district the most efficient means of obtaining roots was by means of a bush-and-bog cultivator. Again Kikuyu grass taken from lighter soil types was found to be more efficient in the machine.

To date, trials with this machine have been most promising and indicate that it will be very valuable for sowing Kikuyu in the lower South-Western districts of the dairying areas of Western Australia.

## PLAN

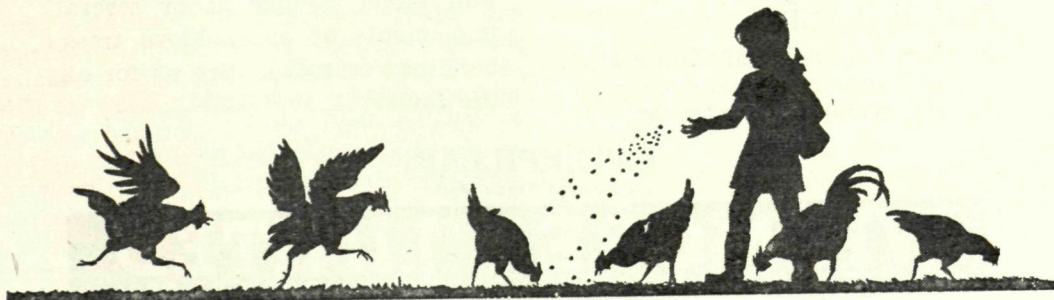
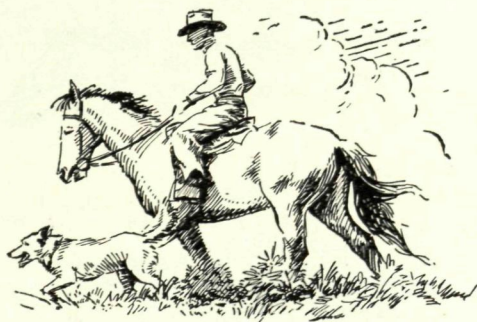
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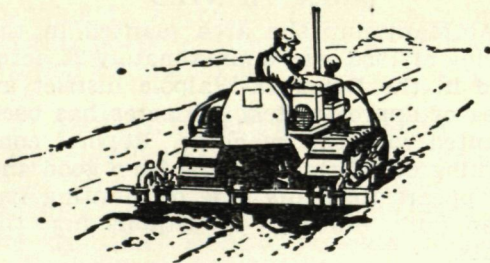
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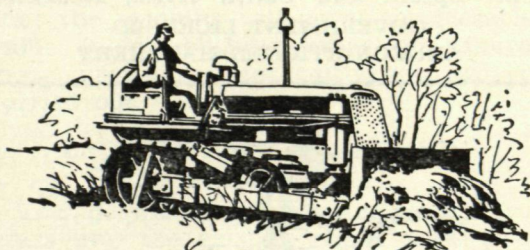


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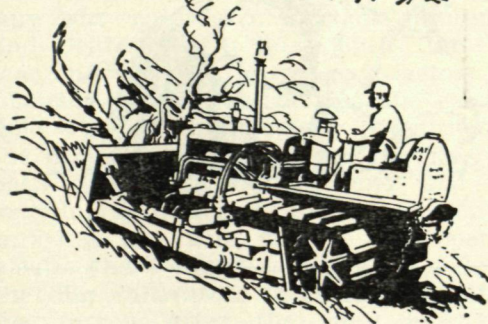
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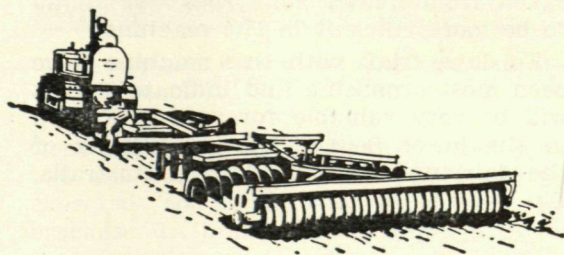
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