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DEMONSTRATIONS SHOW THE VALUE OF FODDER CROPS

By F. E. RYAN, B.Sc. (Agric.), Agrostologist

DURING each summer season a series of demonstrations are arranged throughout dairying districts to show the value of fodder crops for extending the grazing period for dairy cows and to provide large quantities of suitable fodder during lean periods. Demonstrations are arranged with the co-operation of individual farmers.

The spring and summer season of 1956-57 was exceptionally dry and hot in most districts and the results obtained in these demonstrations are therefore of interest. There were a total of 19 demonstrations carried out of five types as follows:—

Maize and sorghum varieties for fodder.

Maize and sorghum varieties for grain.

Sudan grass, Japanese millet and sweet Sudan grass on summer moist areas.

Mangels and fodder beet.

Sudan grass on summer dry paddocks.

MAIZE AND SORGHUM FOR FODDER

As would be expected, this demonstration was severely influenced by the very dry conditions and good growth was obtained only in sections of paddocks which had retained their moisture a little longer than usual. Yields were generally low but some interesting results were recorded this year. Under good conditions of moisture throughout the summer and a high level of soil fertility Hickory King is usually more productive of fodder than the hybrid maize N.E.H.6 and D.S.28 which are somewhat earlier in maturity, but during last summer, these varieties tended to give better results than Hickory King because they had made their growth earlier before the onset of very droughty

conditions. At Denmark the maize varieties in two demonstrations were placed in the order—N.E.H.6 D.S.28 and Hickory King, with Hickory King providing the lowest yield. Of the fodder sorghums, Italian sorghum was slightly better than saccaline sorghum at one site but the order was reversed at the second site.

At Busselton some yields were recorded. At Yoongarillup these were as follows:—

Hickory King—21 tons 4 cwt. per acre.

N.E.H.6—13 tons 13 cwt. per acre.

D.S.28—9 tons per acre.

Italian sorghum—19 tons 6 cwt. per acre.

Saccaline sorghum—10 tons 8 cwt. per acre.

These yields were not representative of the whole paddock but are of the moister sections. Generally the productivity of the various varieties was proportional to those figures above.

At Margaret River where drier conditions were experienced a very different set of yields were obtained as follows:—

N.E.H.6—10 tons 3 cwt. per acre.

D.S.28—9 tons 1 cwt. per acre.

Hickory King—7 tons 1 cwt. per acre.

Italian sorghum—5 tons 17 cwt. per acre.

Saccaline sorghum—5 tons 2 cwt. per acre.

It is obvious from these figures that in spite of the extremely dry conditions experienced, a considerable amount of fodder has been provided during the summer months for dairy cows.

MAIZE AND SORGHUM FOR GRAIN

Three demonstrations were sown but owing to the very dry season very little grain was formed. Under the droughty conditions experienced the sorghum varieties were found to be more drought resistant than the maize but even they were unable to produce very much seed because of the dry year.

SUDAN GRASS AND JAPANESE MILLET ON SUMMER-MOIST AREAS

Two demonstrations were carried out in the Busselton district incorporating commercial Sudan grass, sweet Sudan grass and Japanese millet. In spite of the dry season reasonably good results were obtained with these fodder crops.

At the first grazing which took place in January, crops had made good growth with slightly more bulk being obtained from the Japanese millet and least from sweet Sudan grass.

As the season progressed, commercial Sudan grass made most vigorous growth and recovered better following grazing. Recovery of Japanese millet was somewhat poor and the sweet Sudan grass was intermediate in production and recovery.

This demonstration has again shown that for bulk production in the early summer both Japanese millet and commercial Sudan grass are high producers but that under a grazing programme, Sudan grass is able to recover better after grazing and will produce for a longer period. In these demonstrations sweet Sudan grass was not so productive as commercial Sudan grass.

MANGELS AND FODDER BEET

Four demonstrations were arranged during the year to show the growth of mangels and fodder beet—two at Bunbury, one at Busselton and one in Denmark.

In one case germination was very poor and the demonstration was a failure but on three other sites, the demonstration was successful.

At Lowden, a yield of 15 tons per acre was estimated and the crop was fed off by stock during the late autumn and winter. The stock relished the beets which grew to a weight of 7 to 8 lb. In each case both tops and roots of the beets were eaten readily by stock. In some cases they were eaten on sites where they had been grown, without pulling.

This crop was shown to be valuable in the provision of fodder for stock in the late autumn and early winter period.

SUDAN GRASS ON AVERAGE PADDOCKS

This demonstration was arranged to show that Sudan grass could be used on paddocks which are not normally considered to be summer-moist providing they were ploughed up sufficiently early in the spring to conserve soil moisture. Six demonstrations were arranged in various districts and some excellent results were recorded.

At Lowden, estimates of yield were made at the time of the first grazing and it was considered approximately 13 tons per acre of green material were produced. This crop was grazed a second and a third time after the original estimates were taken. The Sudan grass planted on these paddocks showed outstanding drought tolerance and crops continued to grow right through the summer months and were still producing some leaf material in March and April.

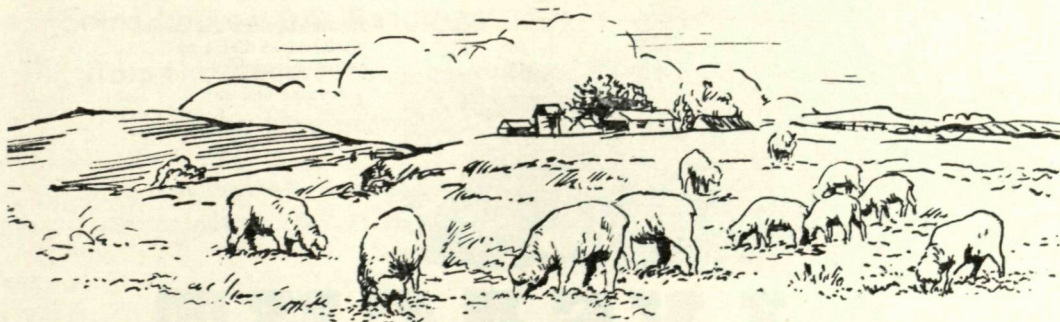
An electric fence was used in most cases and the Sudan grass was strip-grazed. Some excellent grazing figures were obtained in various instances. Thus in one case it was estimated that the Sudan grass had a carrying capacity of 1 2/3rd cows per acre for six weeks. In another, 26 cows were carried for 27 days on 8 acres and after they were removed the Sudan grass recovered rapidly and made very vigorous growth for further grazings. In another case 22 cows were carried on 8 acres for 14 days at one grazing. At a second grazing they were fed one hour per day for 7 days and a third grazing the 22 cows were grazed for the full day and were carried for a further 7 days. Even after this grazing, further regrowth occurred and spasmodic grazing was continued.

The success of these demonstrations indicates quite clearly that Sudan grass is a very valuable crop for extending the green grazing period and therefore the lactation period of dairy cows.

VALUE OF THESE DEMONSTRATIONS

One of the most important factors in the production of butterfat per cow and consequently per acre is the length of lactation. In Western Australia the average lactation from dairy cows is too short

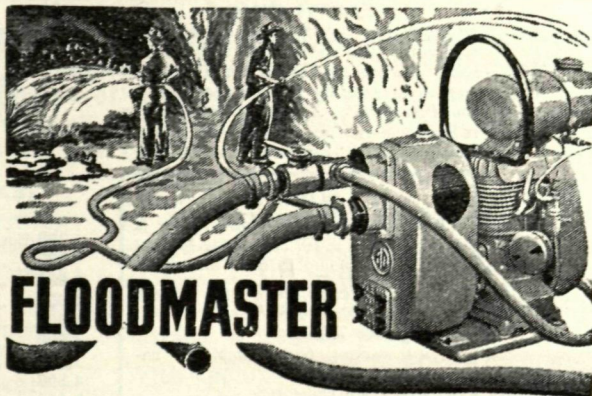
for best results, but extending the lactation period of the cow also means that provision must be made for out of season grazing. To achieve this, summer fodder crops must be grown to extend the period when green feed is available. These demonstrations which are arranged in various districts are intended to show the value of the various crops for this purpose. It is obvious from the results obtained in 1956 that very substantial quantities of fodder can be obtained by this means.



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