Stop firebreak erosion

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THOUGH it is generally realised that ploughed firebreaks are an erosion hazard, many farmers are forced to use the plough due to the lack of other more suitable machinery, or due to the presence of too much trash for a tyne implement to handle. Erosion damage is commonly caused by concentration of water down a long furrow and if this flow can be interrupted and diverted the hazard is not so great.

In order to obtain this effect, Mr. E. P. Hogben of Wickepin, uses a novel but effective method which could well be copied by other farmers. Every four or five chains while travelling uphill, Mr. Hogben turns a complete left-hand turn (see Fig. 1). This blocks out the furrow and water is diverted out along the bottom arc of the circle, the water thus being discharged in small quantities.

If there is a steep side slope to the right, the water would run back into the furrow. To avoid this it is necessary to plough as in Fig. 2.

While travelling downhill, it is more difficult to design a method for producing the same result unless the plough has a suitable automatic or screw lift. It is necessary to veer away from the fence at about 30 degrees till about 1½ chains from
the fence, the plough is lifted out and after turning (see Fig. 3) the furrow is crossed with the plough dropped, while travelling in an uphill direction and the line then continues downhill. If two cuts are made the second cut only need be worked in this manner.

In contour banked paddocks, turn the circle above each bank so that the bank will handle the discharged water.

Firebreaks dependent on the cultivation and loosening of the soil to kill vegetation can be made with scarifier, disc harrows or plough. Of these, by using the methods suggested, the ploughed firebreak, only, can be made to cope with heavy summer rains. Probably the safest method is to use a formed road with spur drains for water disposal. A formed road can be kept clean with a scraper or plough. If all farm tracks are formed into built up roads and a road put around the boundary of the farm, there would be the benefit of permanent firebreaks and the comfort and convenience of a stable system of smooth roads to all parts of the farm. (See Bulletin No. 2133 dealing with farm roads, their construction and water control.)

Book Review.

METHODS OF SURVEYING AND MEASURING VEGETATION

By Dorothy Brown.


This book deals with methods of surveying and measuring the vegetation of grazing lands. Although limiting the work to grazing lands renders the title somewhat misleading, Miss Brown has so adequately covered the great range of types of vegetation that are used for pasture and so fully reviewed the extensive literature that the reader is offered a wealth of information on methods of measurement. Miss Brown emphasises that she has not attempted a critical evaluation of methods, yet she succeeds in indicating the types of pasture to which any particular method is applicable and makes useful comparisons with other methods which might be considered in such circumstances. This classification and comparison reviews the literature up to 1951, over three hundred papers being cited.

The methods are classified not primarily according to the type of vegetation on which they are employed but on the basis of botanical analysis, productivity, and utilisation. The book deals with (a) vegetation and its sampling; (b) botanical analysis, using the criteria of frequency of occurrence, number, area covered, and weight; (c) productivity, covering estimate of error, weight estimate, area and weight, actual weight, the animal as a measure, and pasture recording and regional surveys; and (d) utilisation, including weight, linear measurements, and reconnaissance methods. At most stages attention is directed to statistical considerations, and this critical attitude towards quantitative ecology permeates the whole book. Miss Brown has not only done an excellent job of collation but has done much to clarify the confusion of terms which has previously existed.

The work is so useful that it is to be hoped that the Bureau will be prepared to issue a supplement later. The present book will undoubtedly encourage a wider and more intelligent use of many methods and will stimulate work on critical comparisons of different methods.

We have come to expect a high standard of C.A.B. Bulletins. The present bulletin well maintains that standard. It is simply and easily written, printing and layout are good, and diagrams and figures are clear and informative. The book is a tribute to Miss Brown's ability and industry.
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