

Detection of Mating in Sheep Under Field Conditions

H. M. RADFORD*

Methods of determining which ewes actually mate would provide direct evidence of the importance of this factor in reducing lambing percentages in the field. They could allow continued joining and, particularly in stud practice, joining with other rams of ewes which have not mated in a particular period, and also permit the drafting of mated ewes into small mobs for lambing.

The usual experimental method of detecting mating involves painting the brisket of the ram with branding fluid or grease raddle at least every 2-3 days, and examining the ewes for marks on the rump. This is obviously impractical under field conditions. Accordingly efforts have been made to devise other methods. This note describes the difficulties encountered, and defines the requirements of a suitable marking device.

A solid crayon fitted to the ram with a canvas harness has been used widely in America. Preliminary observations with the American harness were disappointing. Of three crayons tried, one broke off, and another wore away after marking only 13 ewes. In consequence attention was initially directed to the development of a reservoir type sheep branding pad which could be fitted by harness to the ram. Such a pad was developed, and was reasonably successful in small trials, but as it was bulky, heavy, and likely to be expensive to manufacture, attention was redirected to the development of a suitable crayon.

A crayon mixture thought to be suitable was selected from a number prepared by Dr. G. F. Wood of the C.S.I.R.O. Wool Textile Research Laboratory, Geelong. To avoid the twisting observed with the narrow American crayon, the local crayons were made wider.

Field trials of harness and crayons were made with the co-operation of graziers and the Victorian Department of Agriculture. Four properties, 19 rams and some 900 ewes were involved in the trials which lasted for 6-9 weeks on each property. Modifications to overcome the troubles encountered in the course of these trials produced a harness and mounting which withstood well the tough conditions encountered. Crayon marks were observed on almost all ewes of all flocks. However, the time the mark on each ewe was observed has yet to be related to time of lambing. Unfortunately, many of the marks observed were very faint. Continued study of the crayon used revealed three distinct disadvantages - (i) it hardened with time after manufacture; (ii) it developed a glazed surface when on rams on pasture; and (iii) it picked up dirt readily after being wet. Hard, glazed and dirt-covered crayons mark wool only faintly. With Dr. Wood's generous co-operation attention is now being devoted to development of a crayon without these disadvantages.

To the present, then, a suitable harness and crayon mounting has been developed, and the requirements of a crayon have been defined. Such a crayon must mark well, it must not wear unduly, it must not harden, glaze or pick up dirt, and it must be simple and cheap to manufacture.

*Division of Animal Health and Production, C.S.I.R.O., Animal Health Research Laboratory, Parkville, Victoria.