

A RESTRAINING CRADLE FOR SHEEP

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SUMMARY

The construction and attributes of a cheap, light-weight portable dye-banding cradle for sheep are discussed.

I. INTRODUCTION

Certain operations with sheep in the conduct of grazing experiments demand some form of mechanical animal restraint for maximum operator efficiency. This is particularly so in the measurement of wool growth rate using the dye-banding technique (Chapman and Wheeler 1963). This cradle was designed by Mr. J. G. Nation, and has been used for this purpose at 56-day intervals for 4 years with a flock of 120-140 sheep.

II. CONSTRUCTION

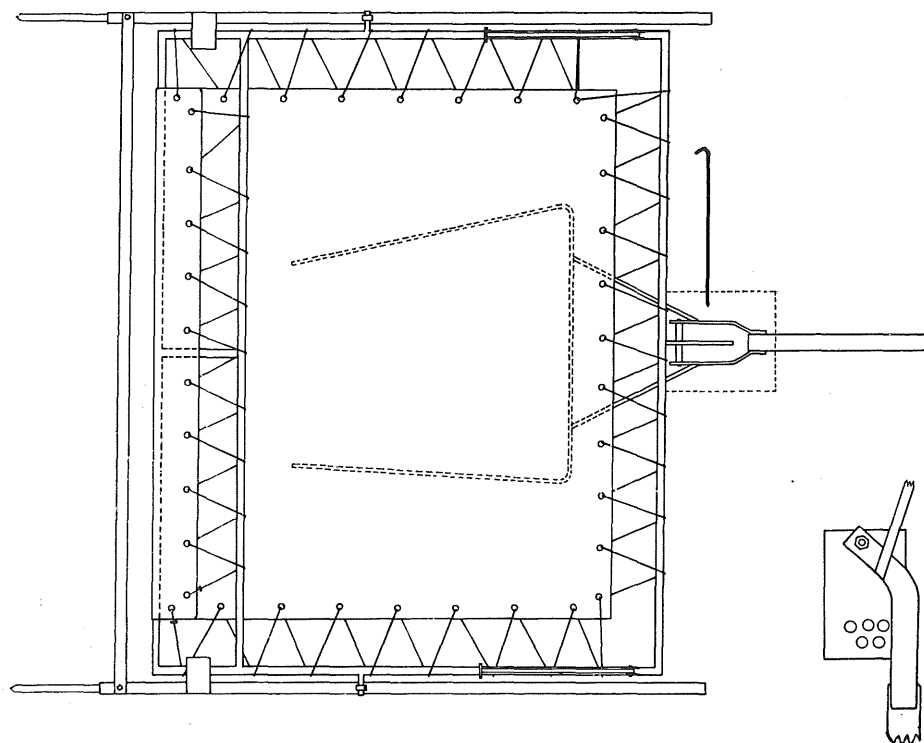


Fig. 1.—Plan of the dye-banding cradle in front elevation. Inset: the restraining device (side elevation).

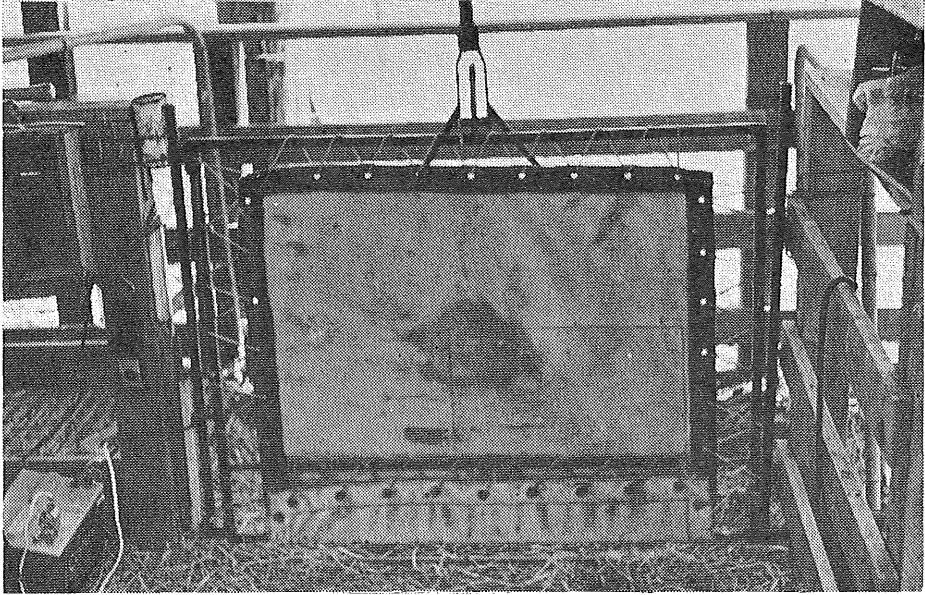


Fig. 2.—The cradle prepared for dye-banding, in vertical position.



Fig. 3.—Sheep restrained for dye-banding with the cradle pivoted in the horizontal position. Note the restraining device and the position of the restraining arms.

The cradle consists of two parts:

(i) A collapsible steel frame, designed to fit a partly enclosed space in a yard system normally occupied by weighing scales, though readily adapted to fit

an equivalent space in a race of temporary construction. The vertical uprights are extended downwards by 6 in. spikes which, when driven into the soil, place the horizontal bar at ground level.

(ii) A "sling", which pivots on the frame through two lugs to place the sheep in a horizontal position for dye-banding.

The sling consists of:

(a) A square steel frame to which a heavy-duty vinyl surface is attached by $\frac{3}{8}$ in. polythene rope through eyelets in the vinyl. Legs are attached to the framework to support the sling when in the pivoted position.

(b) The restraining device—two metal arms which are placed to lie behind the shoulder and in front of the back leg of the sheep and which pivot on a metal plate welded to the frame of the sling. The pivot acts as a fulcrum for applying adequate pressure to restrain an animal. The device is held in position by a steel pin inserted through one of seven holes in the metal plate.

III. DISCUSSION

The measurement of wool growth rate has been the subject of experimentation for many years. The method of animal restraint has, however, been seldom published. In many instances the number of test animals has been few and manual restraint on a flat surface, e.g. the tail-gate of a utility vehicle, by one of two operators has been applied. Healy and Holmes (1969) have developed a portable dye-banding cradle weighing 140 lb, based on a wooden surface on which sheep are manually held.

The cradle described in this note employs two operators, one to assist in pivoting the sheep into a horizontal, restrained position.

The following features demonstrate its usefulness:—

(i) The restraining device, minimizing manual handling, makes for versatility of the apparatus. Horns and toe-nails can be trimmed, inoculation carried out, ear tags inserted, brands applied and faecal samples taken while the sheep is thus restrained. The device ensures that the animal is firmly held, thereby increasing the accuracy of operations or measurements conducted.

(ii) The use of vinyl as a resting base, which enables the sheep to assume a more normal shape than if placed on an unyielding surface, is believed to be significant in improving the accuracy of skin surface area clipped for measurement of wool growth rate. The placement of the restraining arms to hold the sheep firm, and to straighten but not stretch the skin, facilitates easy parting of the wool for dye-banding and clipping and assists the accurate replication of measurements of clipped skin dimensions from sheep to sheep.

(iii) The apparatus is easily erected and dismantled, as it consists of only two separate parts. It weighs less than 20 lb and its portability is self-evident in that the support frame folds and the sling is a flat surface. Cost of components is approximately A\$13.

Though light, the construction is durable and has permitted the handling of sheep up to 150 lb live body-weight for the 4-year period, without damage to the apparatus. The cradle itself provides no limitation to the rate of dye-banding, this being governed by operator factors alone.

REFERENCES

- CHAPMAN R. E., and WHEELER, J. L. (1963).—Dye-banding: a technique for fleece growth studies. *Aust. J. Sci.* 26:53-4.
- HEALY, A. T. A. and HOLMES, D. E. (1969).—A cradle for dye-banding sheep. *Qd agric. J.* 95:167-9.

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