

## QUEENSLAND DEPARTMENT OF PRIMARY INDUSTRIES

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**IDENTIFICATION OF CATTLE USING ROLLER LICKERS**

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**SUMMARY**

Two observations were conducted to determine the suitability of 'Evan's Blue' soluble dye added to a molasses-urea supplement and a paint raddle built around a roller-licker for identifying animals taking supplement.

Dye at a concentration of 5% (w/v) in the supplement effectively marked the face, jaw and muzzle region of light-coloured animals for 2 to 4 days. However, dye staining could be seen on black animals only on a close inspection. A bluish-green stain was present in the faeces of animals consuming the supplement.

The paint raddle marked animals on the neck and brisket areas and paint marks were clearly visible for 5 to 7 days.

**I. INTRODUCTION**

In supplementation trials carried out on commercial properties in the extensive areas of Queensland, it is often desirable to be able to identify those animals that have been taking the supplement. The prevailing conditions preclude handling cattle or continuous observation. Consequently, the tritiated water technique (Leng *et al.* 1975) and continuous observation (Ernst 1973) are impractical.

The observations reported here were therefore conducted to test the suitability of two different methods of identifying animals taking a supplement under extensive grazing conditions.

**II. MATERIALS AND METHODS**

Two observations were carried out at 'Swan's Lagoon' Cattle Field Research Station, Millaroo, 110 km south of Townsville, where feeding a molasses-urea supplement to stock during the dry season is a routine practice.

**Observation A**

The aim of this observation was to determine at what level 'Evan's Blue' soluble dye had to be added to a standard molasses-water mix to effectively mark the general facial area of cattle. Equal weights of molasses and water were mixed and the mixture divided into three equal portions. The dye was added at concentrations of 0.1%, 1.0% and 5.0% w/v to the prepared mixtures.

Three groups of three Brahman cross steers were selected on the basis of colour of face, muzzle, mouth and tongue so that each group contained steers with light, medium and dark-coloured facial parts. Groups were allocated to the different concentrations of 'Evan's Blue' at random and the muzzle, jaw, dental pad and tongue of each steer was swabbed thoroughly with the molasses-water-'Evan's Blue' preparation, while the steers were restrained in the head-bail. The animals were retained in yards for 24 h without feed or water, when the degree of staining of the treated areas was assessed by two observers.

### Observation B

This observation was designed to determine the effectiveness of adding 'Evan's Blue' at the 5% concentration as a marker under field conditions and the value of a paint rattle around the licker, as an additional check.

Fourteen Brahman cross steers, approximately 3 years of age, were selected on the same basis as in Observation A. The steers grazed native pasture and were fed a molasses-urea supplement designed to provide 0.25 kg molasses and 60 g urea per head per day until most animals appeared to be using the lickers. 'Evan's Blue' dye was then added to the supplement at a concentration of 5% by weight and animals observed daily to determine the effectiveness of marking. This dye supplement was fed to the steers for 14 days.

A paint rattle was constructed around the licker at a height of 65 cm and approximately 56 cm from the edge of the licker. The rattle consisted of a rectangle constructed of galvanized piping supported on four legs. Each side of the rectangle was made of 25 mm diameter pipe with an outer sleeve of 31 mm pipe which was free to revolve. Hessian bags, wrapped tightly around the revolving pipe to a depth of 6 to 12 mm and fastened with tie wire, completed the rattle.

The hessian bags were thoroughly saturated with new standard motor oil before being bound on the pipe. A preparation of six tablespoons of heavy bodied white oil paint base per 100 ml of motor oil was thoroughly mixed and painted on the bags.

### III. RESULTS

In observation A, the 0.1% and 1.0% dye preparations failed to mark medium and dark coloured animals effectively, while the 5% solution marked all steers.

In observation B, dye staining was visible on steers 24 h after the dye was introduced to the supplement. However, on dark coloured animals, the dye staining could be seen only on close inspection. The staining was pronounced on the face, muzzle and jaws, and the stains were visible for 2 to 4 days after the supplement containing dye was consumed.

Faeces of animals consuming the dye-supplement showed a blue-green discoloration.

The paint rattle marked animals on the neck and brisket and marks could be seen 5 to 7 days after the rattle was removed. However, some steers were seen to have paint marks but no dye staining, which indicates that the presence of paint marks on an animal does not confirm that it consumed supplement. In these animals the paint marks were generally on the face and ribs, whereas those animals that had licked the roller had paint marks clearly evident on the neck and brisket areas.

#### IV. DISCUSSION

The effectiveness of 'Evan's Blue' soluble dye in these observations provides an easy means of identifying animals taking supplement, but it does not provide an effective means of identification with dark coloured animals under extensive conditions where they cannot be closely examined. Back-raking of animals to check for presence of dye in the faeces would provide a means of periodically checking the accuracy of the dye staining. No adverse effects on the steers were observed during the course of the 14-day observation period.

The paint raddle proved effective in marking animals but, unfortunately, the presence of paint marks on an animal does not confirm that it consumed supplement. It would be most unlikely that steers could lick the roller without being clearly marked on the neck and brisket areas. The possibility exists that these animals may have licked the roller briefly, but with such low quantities of dye being consumed, discoloration in the faeces would not be evident. The use of the raddle rail around the licker did not appear to have a significant effect on usage of the licker by stock.

The revolving raddle was chosen in preference to a fixed one as it reduces the rate at which the paint-oil mixture seeped to the bottom of the raddle and dripped off. The recharging frequency was lower with revolving than with fixed raddles. Neither method gives any indication of the quantity of supplement consumed.

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