GEL DRENCHING FOR BLOAT CONTROL

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Summary

Several experiments have been carried out studying dose persistance, gel stiffness, gel length, and methods of administration. The greatest single factor preventing advancement of the method is the lack of a suitable method of administration. The method of gel drenching for bloat control is continuing to be further developed and tested.

I. INTRODUCTION

Gel drenching is aimed at reducing the frequency of dosing at present required for control by drenching with detergents. The principle of gel drenching is to administer the prophylactic in the form of a grease or soft gel, from which the prophylactic diffuses, If the grease or gel is sufficiently cohesive, then the rapid dilution that occurs with a liquid dose should, to some extent, be avoided.

II. MATERIALS AND METHODS

Experiments were performed to determine:

(i) the influence of the rate of diffusion of antibloat detergent from the gels. Three alcohol ethoxylate detergents of similar anti-bloat potency but different rates of diffusion from ethylcellulose gels were'compared using lactating dairy cattle stall-fed with bloat potent red clover (Trifolium pratense),

(ii) the influence of the hardness or stiffness of the gels on the persistence of bloat control following dosing, Pre-formed gel slugs of an alcohol ethoxylate gelled with three grades of ethylcellulose to give gels of increasing hardness were similarly compared.

Also, a commercial dairy *fames* was supplied with gelled Pluronic L62 to study the method under field conditions.

III. RESULTS

The results obtained from the three experiments described are:

(i) dose persistence increased as diffusion rate decreased,

(ii) dose persistence increased with the hardnessof a gel to a point where the gels were recognized as foreign bodies on regurgitation and were then rejected, At this point, dose persistence was very irregular,

(iii) under field conditions, bloat was first observed three days after treatment with the material.

IV. DISCUSSION

The method of gel drenching for bloat control is showing promise in that it is giving a longer period of control than the liquid drench for each application but the main problem at present with it is the method of administration. The method is continuing to be further developed and tested with the aim of alleviating some of these problems.

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