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The Influence of Cattle Feed/Water Trough Height in Preventing Access to Badgers

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Introduction

Badgers have been observed feeding and drinking from cattle troughs in fields being grazed by cattle, giving rise to concern about the risk of tuberculosis being spread to cattle by infected badgers in this way (Muirhead *et al.* 1974; Sleeman and Mulcahy, 1993). Concentrate feed is commonly fed to calves and weanling cattle at grass on dairy farms and on some dry cattle farms. Herdowners have been advised by the Department of Agriculture and Food, through District Veterinary Offices and by means of advisory leaflets, to raise troughs off the ground to prevent access to badgers. A minimum distance of 80 cm (31.5 in) between the ground and the top edge of troughs has been recommended. In addition, herdowners were advised to have troughs free-standing, i.e. away from banks of ditches which could provide access to troughs. As some reservations were expressed about the adequacy of these recommendations, the Tuberculosis Investigation Unit examined the role of trough height in preventing access to badgers. This study was conducted over a four-week period in September/October, 1997.

Study Description

In this investigation cattle feed and water troughs were positioned close to an active badger sett in a grass field on a dry cattle farm. Cattle were removed from the field for the duration of the study. Badger activity in the vicinity of the troughs was recorded each day by close circuit television cameras between 7.00 pm and 7.00 am each day.

All observed badger movement took place after dark at times ranging from 9.07 pm. to 4.13 am. Standard metal cattle feed troughs (height = 61 cm) and plastic water troughs (height = 25 cm) were used. Trough heights were adjusted during the study and ranged from 18 to 81 cm distance between the ground and the top edge of the troughs. The body of the feed trough which was 15 cm deep tapered from a width of 38 cm at the top to 20 cm at the base and was supported on four legs. The plastic water trough was rectangular in shape and 25 cm in height. Cattle feed troughs available at agricultural merchants generally range from 46 to 74 cm in height. Peanuts were used as the feed source and placed both inside the troughs and also along the top edge of the troughs each evening.

Results

The main points observed at different trough heights were as follows:

At 18 and 30 cm, badgers fed off the edge of the trough and from the body of the trough either while standing on the ground or inside the trough.

At 38 and 46 cm, badgers took feed off the edge of the trough and from the body of the trough while standing on the ground and gripping the top edge of the trough with the front feet.

At 53 and 61 cm, food was removed from the top edge of the trough but not from the body of the trough. Attempts by badgers to climb into the feed trough at a height of 61 cm failed, as they lost grip and slipped.

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At 71 and 81 cm, badgers were unable to get food either from the top edge or the body of the trough.

Troughs were also placed close to a second badger sett for one week during the study and similar observations were recorded regarding the removal of food by badgers.

In the case of the water trough, the badgers did not show much interest and were not observed drinking water.

During this investigation badgers were seen to forage a lot on the ground before approaching a trough and also after feeding at the trough. This badger activity may be due to the observation that feed can fall from troughs when cattle are feeding.

Conclusion

Based on this study, cattle feed and water troughs should be (a) free-standing and (b) at least 61 cm high, and preferably higher, in order to prevent access to badgers and thereby to minimise the risk of infected badgers transmitting *Mycobacterium bovis* to cattle by this means. Special arrangements may be required where small calves are unable to feed comfortably from troughs at these heights. The foraging of badgers on the ground in the vicinity of feed troughs as observed could lead to further contamination in the area, particularly when cattle are fed outdoors over a period of time. It may be advisable to move outdoor feed troughs regularly or to treat the ground in the vicinity periodically e.g. with hydrated lime.

References

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