backwards and thereby predisposing to other causes of lameness, especially sole ulcers. The normal smooth, soft and pliable perioplic horn of the heel becomes eroded due to excessive standing in slurry (and possibly on rough concrete) and is therefore primarily a disease of winter housed cows. A dry period at pasture or in straw yards (but preferably not in cubicles) is important to allow regeneration of the heel.

Vertical and Horizontal Hoof Fissures

These occur when there has been a disruption in horn formation. Vertical fissures are often known as sandcracks. An anterior digital dermatitis lesion is becoming an increasingly common cause. The incidence of vertical fissure in beef cows has been markedly reduced by supplementing the feed with biotin.

A total, but temporary, cessation of horn formation, for example following a severe toxic mastitis, leads to a horizontal fissure. The time when the "insult" occurred, which led to the cessation of horn formation, can be estimated from the distance of the fissure from the coronary band, since hoof wall passes down the hoof at 5mm per month.

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Much of this information has been published in Cattle Lameness and Hoofcare, (Farming Press, Ipswich, Suffolk, UK and Diamond Farm Enterprises, Box 537, Alexandra Bay, NY 13607) and is reprinted with their permission. Readers should consult this book for details of hoof-trimming. Thanks go to Catherine Girdler for typing the manuscript.

Abstract

Simulated airborne spread of Aujeszky's disease and foot-and-mouth disease

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The atmospheric dispersion of virus was simulated using a computer model which had been developed for predicting the dispersion of toxic gases from chemical engineering plants. The results were compared with data from four outbreaks in which virus was believed to have been transported by air: two outbreaks of foot-and-mouth disease in the United Kingdom in 1967 and outbreaks of Aujeszky's disease in Yorkshire in 1981 to 1982 and Indiana in 1988. There was relatively good agreement with most of these data. The paper shows that the model could be useful in an emergency because the risk of virus spread could be predicted in real time.