Sore Mouth of Sheep and Goats

BY M. S. SHAHAM

SORE MOUTH, a virus disease that attacks young animals especially, is serious partly because it so often leads to complications with other infections. It can be controlled, as this article makes clear, by sanitary measures and the use of preventive vaccination.

SORE MOUTH is widely prevalent among lambs in feed lots and is considered by some authorities to be almost always present to some degree wherever lambs are fattened for the market. The disease also occurs in range bands and farm flocks and not uncommonly affects goats, particularly kids. Technically, it is known as contagious ecthyma.

CAUSE AND SYMPTOMS

Sore mouth is a highly contagious disease caused by a specific filtrable virus \( (1, 3, 5, 7) \), which is capable of remaining infective for months in the dried scabs that develop in the course of the illness.

The affection seldom appears in animals over 1 year old. Lambs shipped to the feed lot frequently develop the disease, usually within a week to 10 days after arrival. Small vesicles appear on the lips, gums, or tongue, which are considerably swollen and somewhat reddened. After a few days the vesicles become pustules. These finally rupture, leaving raw, granulating sores, that bleed easily and are encrusted with thick, grayish-brown scabs (fig. 1). Within 3 to 4 weeks the scabs drop off, and the lesions heal, leaving no scars.

This description applies to the typical uncomplicated case. The chief trouble caused by such an infection is the extreme soreness.

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2 Italic numbers in parentheses refer to Literature Cited, p. 838.
of the affected parts. Lambs or kids nurse reluctantly, and older animals graze with difficulty and even at the trough may eat sparingly. In consequence growth is more or less impaired, and considerable weight may be lost. Death from the disease is rare.

Occasionally bacterial infection, chiefly by *Actinomyces necrophorus*, takes place (4). In such instances, areas of dead tissue frequently develop in the stomach and intestines, the liver, or the lungs. The death loss from such so-called secondary infection may reach 50 percent of the animals affected. In some sections of the
country, infestations of the lesions, or injuries, of sore mouth with screwworms is a common trouble. (See The Screwworm and Blowfly Problem, p. 313 of this Yearbook.)

The lesions of contagious ecthyma, with or without complicating bacterial infection, sometimes appear on the udders of nursing ewes and goats, and the resulting soreness may lead to the animals’ refusing to permit their young to nurse. Then, either through the accumulation of milk in the udder or bacterial infection or both, caked udder, mastitis, or “blue bag” may develop. Sometimes the eyelids are involved, and the sight is threatened. Contagious ecthyma has also been reported to produce lesions on the ears, under the tail, on the inside of the thighs, or in other areas where there is little wool or hair.

**PREVENTION**

Before the vaccine now used was developed, isolation of affected animals and general sanitation of corrals, barns, sheds, etc., were the only practicable means of controlling sore mouth. These measures are still to be considered effective adjuncts in the prevention and control of the disease, and they may be followed without using vaccine in flocks where the veterinarian considers this procedure advisable.

The vaccine now commercially available was developed at the Texas Agricultural Experiment Station (1, 2, 7) between 1932 and 1935. Made from the scabs taken from typical cases, it is similar in nature to smallpox vaccine and is applied to scratches in the skin on the under side of the tail, the inside of the thigh, or elsewhere. Susceptible animals develop takes resembling the lesions of the natural disease, and after recovery they are immune, with relatively few exceptions, for several months to 2 years or longer. Animals that have recovered from the disease itself are similarly immune.

In range areas where the disease is known to prevail, a practical procedure has been to have the lambs or kids vaccinated at the time of marking, that is, when castration, docking, and earmarking are done, though sometimes this may not be wise or convenient for various reasons. It has been found that the disease can be almost entirely prevented in feed-lot sheep if they are vaccinated at least 10 days before being shipped (2, 6). Immunity thus has time to develop before exposure to infection during shipping.

Since the scab that falls away from the site of the vaccination contains the causative virus just as does the scab from a natural case, sheep should not be shipped until after the vaccination wounds have completely healed. Delay until then is believed to result also in a more complete resistance to any infection that might be acquired en route. Because the virus may be distributed around premises where vaccine has been used, either through accident in handling the vaccine or the falling of the scabs from the vaccinated animals, vaccine should never be used except in areas or on premises where the disease has been diagnosed by a veterinarian.

The disease spreads so rapidly in feed lots, and occasionally on
the range or farm, that vaccination after it appears is rarely practical. There may be some benefit from vaccination, however, if it is done promptly before many of the animals have developed symptoms.

**TREATMENT**

As indicated in the discussion of symptoms, treatment, except for isolation of the affected animals in clean, roomy quarters, is usually unnecessary. The disease runs its course, and medicinal aid is seldom required and rarely practical. The chief considerations are the prevention of screwworm infestations and secondary infections. If such complications arise, vigorous treatment with selected larvicides and antiseptics is indicated. The foci of bacterial invasion are usually beyond the reach of any known medicinal agent, but the extensive development of such complications can be largely avoided by local antiseptic treatment. If screwworms infest the lesions, they should be promptly removed.

**LITERATURE CITED**