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## Warts (papillomatosis) in Cattle

Papillomaviruses are the cause of cutaneous warts in cattle and horses. These viruses have considerable host specificity.

In cattle, warts can occur on almost any part of the body. These warts are often morphologically specific, caused by distinct papillomaviruses, so that immunity to one of them does not necessarily confer immunity to others.

The method of spread is by direct contact with infected animals, infection gaining entry through skin abrasions. It is a disease mostly of young animals. Immunity after a natural attack persists for at least two years.

Warts ordinarily cause little harm and usually disappear spontaneously in 6 to 18 months. In purebred cattle, warts may interfere with sales because of their unsightly appearance. In extreme cases cattle with extensive cutaneous wart lesions may lose condition and develop secondary bacterial infections. Warts on teats of dairy cows often cause interference with milking. Warts on the teats do show an increasing frequency with age.

Clinically there is little difficulty in making a diagnosis of papillomatosis with the possible exception of atypical papillomas of cattle. These tumors persist for long periods and are discrete, low, flat and circular in appearance. If cattle have been vaccinated with the commercial wart vaccine and this type of wart occurs - it may be an atypical papilloma.

Surgery and vaccination, or a combination of both, are the most common forms of treatment and prevention. The vaccine for cattle may be a commercial vaccine (Colorado Serum Company Wart Vaccine), or an autogenous vaccine. It is beneficial to use many types of tissue from different sources in the vaccine - which Colorado Serum Company does with their commercial wart vaccine. This allows the vaccine to potentially provide more "broad spectrum" protection against a variety of papillomavirus isolates in the field.

Two injections of vaccine 3 - 5 weeks apart are recommended.

Surgical removal is sometimes necessary and removal of one or two warts in cattle has been recommended to encourage the rapid disappearance of the remainder. (This does not work in horses.)

Vaccination of cattle with Colorado Serum Company's **Wart Vaccine** is an effective prevention. An autogenous vaccine prepared for a specific problem in a small community may have an advantage if they have a unique local isolate.

