

## Occupational Health - Zoonotic Disease - Fact Sheet

### ORF - CONTAGIOUS ECTHYMA

#### **KEY FACTS:**

- Orf is caused by a viral agent.
- The primary viral reservoirs are sheep and goats.
- Orf virus infection in animals is commonly referred to as sore mouth, scabby mouth, or contagious ecthyma. Other names include contagious pustular dermatitis, infectious labial dermatitis, ecthyma contagiosum, and thistle disease.

**SPECIES:** Sheep, goats, and wild ungulates.

**CAUSATIVE AGENT:** Orf is a dsDNA virus in genus Parapoxvirus of family Poxviridae.

**TRANSMISSION:** The Orf virus is transmitted from infected animals to humans by direct contact or by exposure to fomites carrying the virus. Orf virus infections in humans typically occur when broken skin comes into contact with the virus from infected animals or contaminated equipment. The virus is highly resistant to adverse environments and can persist for many years.

**DISEASE IN ANIMALS:** Orf virus infection results in crusted areas on muzzle, eyelids, oral cavity, feet, or external genitalia. Necrosis in the skin and mucous membranes of the gastrointestinal and urogenital tracts can also occur. Intense pain can interfere with eating resulting in weight loss.

**DISEASE IN HUMANS:** Exposure to the Orf virus can result in large painful nodules usually distributed on the hands. The infection usually resolves with minimum scarring 1-2 months later. More serious illness can result in immunocompromised patients including large tumor-like lesions, progressive disease, development of multiple lesions, or erythema multiforme reactions involving rashes on the mucous membranes and skin.

**DIAGNOSIS:** Diagnosis is made by presence of symptoms and a history of contact with infected sheep, goats, or wild ungulates. Molecular testing (PCR) may also be used. *Please review current literature before prescribing diagnostic testing as recommendations may have changed.*

**TREATMENT:** In humans, 1 percent cidofovir applied topically has been shown to be an effective treatment. *Please consult your physician for treatment as recommendations may have changed.*

**PREVENTION/CONTROL:** For susceptible animals, there are commercially available preparations of live virus marketed as vaccines. Producers considering using an Orf vaccine product in their flock should consult a veterinarian as vaccination practices vary depending on breed and geographic location. To prevent and control unintended infections, use uninfected

animals for research, and isolate any animals used in clinical trials. Additionally, only conduct projects in laboratories with proper engineering controls and train staff members in the proper use of required personal protective equipment when they are in spaces containing live agent.

More information on Orf virus can be found on the Centers for Disease Control and Prevention website at: <https://www.cdc.gov/poxvirus/orf-virus/>