There are many infectious diseases of cattle that are not present in the United States. These are referred to as foreign animal diseases. The risk of intentional or unintentional introduction of a foreign animal disease into the US is greater today than ever before. Early detection is a key step in reducing losses to animal agriculture from a foreign animal disease. This is a continuation of a series of articles on foreign animal diseases. The purpose is to raise awareness about these diseases and hopefully provide the basis for early recognition of these diseases should they somehow show up on your farm.

Lumpy skin disease is a serious viral disease of cattle that can cause mild to severe signs including fever, nodules in the skin, mucous membranes and internal organs, and sometimes death. Decreased milk production, abortion, infertility, weight loss, poor growth, and damaged hides are of added economic concern. The disease primarily affects cattle. Experimentally, it also can infect giraffes, impalas, sheep, and goats. The disease does not affect humans. The World Organization for Animal Health (OIE) has classified lumpy skin disease as a List A disease, which is defined as a transmissible disease that has the potential for very serious and rapid spread, irrespective of national borders, that is of serious socio-economic or public health consequence, and that is of major importance in the international trade of animals and animal products.

Lumpy skin disease is caused by a virus in the family Poxviridae. It is closely related to sheep and goat poxvirus. The disease is found almost exclusively in Africa. Lumpy skin disease has not been found in the United States and thus is considered a foreign animal disease. The virus is spread primarily by biting insects, specifically mosquitoes and flies. Epidemics tend to occur during rainy seasons in Africa. Direct contact with cutaneous lesions, saliva, nasal discharge, milk, semen, muscles, spleen, and lymph nodes from infected cattle is also a minor source of infections. The virus can survive for as long as 1 month in scabs that have sloughed off of skin lesions.

Clinical Signs
The severity of clinical signs can range from inapparent to severe and depends on host susceptibility, dose, and route of virus inoculation. Young calves often have more severe...
Following infection, there is an incubation period of 2-5 weeks. The initial sign of lumpy skin disease is usually fever, which may last up to 4 weeks. Skin nodules ½ - 2 inches (1 –5 cm) in diameter generally occur within 2 days of the initial fever. These nodules may become painful and develop a characteristic inverted conical shape with central black area of necrosis (dead tissue). These deep necrotic lesions often form scabs. Nodules may occur on the muzzle, head, neck, back, legs, scrotum, perineum, udder, eyelids, ear, nasal mucosa, oral mucosa, and tail. Nodules can also develop in the gastrointestinal tract, trachea, and lungs. Pneumonia can be a secondary problem resulting from lumpy skin disease. Additional related signs include depression, anorexia (loss of appetite), salivation, nasal discharge and tearing. Lymph nodes may become enlarged up to 10 times their normal size. Lameness may occur from inflammation and necrosis of the tendons, and severe swelling of the brisket and legs. This lameness can be permanent with severe damage to tendons and joints from secondary bacterial infections. Permanent damage may occur to teats and mammary glands due to secondary bacterial infections and mastitis. Abortion, intrauterine infection, and temporary or permanent sterility in both bulls and cows may occur.

The morbidity rate can vary from 3 to 85%, depending on the presence of insect vectors and host susceptibility. Mortality is low in most cases (1 –3%).

Diseases that look like lumpy skin disease include pseudolumpy skin disease (a much milder disease caused by a herpesvirus), bovine herpes mammillitis (a disease with lesions generally confined to the teats and udder), dermatophilosis, ringworm, insect or tick bites, demodex, warbles, photosensitization, bovine papular stomatitis, and cutaneous tuberculosis. Most of these diseases can be distinguished by the clinical signs, resolution of disease, histopathology, and other laboratory tests.

**Control**

If any unusual skin disease is observed in cattle, your herd veterinarian should be notified immediately. Quarantine, slaughter, and burning of carcasses, disinfection of the premises, and insect control are important in controlling an outbreak of lumpy skin disease. A vaccine for Lumpy Skin Disease is available for use in infected countries.