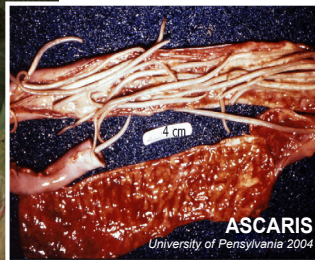


## WESTERN SARE PROFESSIONAL DEVELOPMENT PROGRAM

*The Agriculture Development in the American Pacific (ADAP, 1996) and USDA Hatch, (2009) sponsored a project that provided basal reference for animal health status in the CNMI and Micronesia. This study establishes baseline information of the common diseases encountered by local producers on their livestock.*

*This fact sheet, as a general overview, was intended to serve as a reference guide alone and not encourage producers to diagnose diseases on their own. We still highly recommend them to consult their local veterinarian.*

*Based on two animal health surveys conducted on 1996 and 2009, the following diseases emerged as the most reported among local producers:*



### 1. INTERNAL PARASITISM

Internal parasites such as worms are considered the main culprit of production loss from livestock in the Pacific. Clinically, the parasites causes anemia, scouring, depression and even death. *Ascaris*, *Haemonchus*, *Oesophagostomum* and *Fasciola* were the most common parasites identified in the 1999 and 2000 Animal Health Survey.

### 2. EXTERNAL PARASITISM

Tropical islands are prone to tick infestation that causes anemia. Some species of ticks could cause tick paralysis while others cause tick toxicosis.

Mange or scabies in livestock is a skin condition caused by microscopic mites in or on the skin. The mites cause intense itching and discomfort which is associated with decreased feed intake and production. Scratching and rubbing result in extensive damage to the animal's hides. The mange mites, which are reported to affect ruminants and swine, include *Sarcoptes scabiei*, *Psoroptes caprae*, *P. cuniculi*, *P. communis*, *Chorioptes texanus*, and *Demodex spp.*

Lice infestations of livestock cause intense itching resulting in damage to hides from scratching. Lice are usually host specific and can be divided into blood sucking (Anoplura) and biting (Mallophaga) lice.



### 3. FUNGAL INFECTIONS

Dermatophytosis or Ringworm is a transmissible infectious skin disease caused most often by *Trichophyton verrucosum* and *T. mentagrophytes* in livestock. The fungi that cause parasitic infection (dermatophytes) feed on keratin, the material found in the outer layer of skin, hair, and nails. Ringworm is characterised by round, alopecic lesions which expand in a ringed fashion.

### 4. WARTS

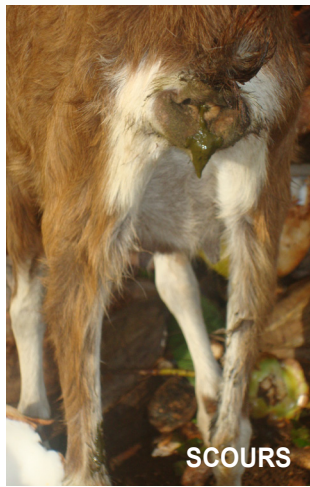
Warts in cattle are caused by the contagious virus papillomavirus (*fibro-papillomatosis*). Calves are the most susceptible to warts while cattles over 2 years of age are seen with fewer cases of them. Warts appear from 1 to 6 months after infection with the virus although not all animals carrying the virus will have warts. It can be transmitted from the unapparent carrier to the susceptible calf.



### 5. MASTITIS METRITIS AGALCTIA (MMA Syndrome) - UDDER DISEASES

Mastitis refers to the inflammation of the mammary gland and is characterised by the enlargement of the udder and abnormal milk secretion, with or without fever. The disease has a multiple etiology but *Staphylococcus aureus* and *Streptococcus agalactiae* are the most common bacteria isolated from cases of mastitis in small ruminants. Other bacteria encountered include *Corynebacterium pyogenes*, *Klebsiella spp*, *Mycobacterium spp* and *Brucella spp*. After entry through the teat canal the bacteria colonize and multiply in the mammary tissue. Some bacteria produce enzymes and toxins

which causes inflammation and damage to the mammary tissue. Pyogenic bacterium causes abscessation and suppuration. These inflammatory changes are associated with abnormalities in milk or no milk secretion known as agalactia. The severity of infection may lead to the uterus thus causing metritis.



### 6. SCOURS

In livestock, diarrhea is called scours. It is defined as an increased in frequency, fluidity, or volume of fecal excretion. The feces may contain blood or mucous and smelly. There are many causes of diarrhea, it can be caused by bacterial, viral or parasites infection and diet. Common types encountered are Neonatal diarrhea/scouring and post weaning diarrhea in pigs, Colibacillosis, and swine Dysentery-bloody diarrhea.

### 7. RESPIRATORY DISEASES

The main infectious agents involved in respiratory disease among livestock in the Pacific are bacteria, virus and the non-infectious agents are the climate and weather. Some of the respiratory diseases identified are: Infectious Bovine Rhino tracheitis, Mycoplasma and Salmonella in cattle; swine influenza in pigs, Pastuerella in goats and Mycoplasma in poultry.



### 8. FOOT ROT

Footrot is a contagious infection of the feet characterized by inflammation of the skin-horn junction, under-running of the horn, ulceration and necrosis of the sensitive laminae of the foot and severe lameness. The disease is associated with production losses and sometimes mortality due to starvation. Footrot in goats and cattle is caused by a large Gram-negative rod-shaped bacterium, *Bacteroides nodosus* which is commonly associated with *Treponema penortha*.

### 9. EYE PROBLEM - CONJUNCTIVITIS

Conjunctivitis is simply an inflammation of the soft tissues surrounding the eye and eyelids. Ruminants such as cattle and goats affected with conjunctivitis will have reddening of the eyeball and swelling of the inner lining of the eyelid. The three most common causes of conjunctivitis in cattle would include: 'Pink-eye' or Infectious bovine keratoconjunctivitis (IBK); Infectious bovine rhino-tracheitis (IBR); and foreign bodies in the eyes such as dust.



### 10. OTHER MISCELLANEOUS DISEASES

Other Miscellaneous diseases that was noted during the study were: wounds, abscess and cuts, abrasions, furuncles, traumatic disease, salt poisoning, heat stroke, ammonia burn in poultry, cannibalism, aflatoxicosis and mycosis.

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