Mite Infestations

Sheep scab is caused by mites living in sheep's fleeces or hair. The mites and their faeces cause intense itching which can lead to sheep:

- rubbing and scratching against fence posts.
- nibbling and biting at their fleeces.
- **sheep scab is spread**

-Sheep scab is mainly spread by direct contact between sheep.

-The mites that cause the disease can also be picked up from fences, posts and trees that infected sheep rub against.

-Mites can also be spread on the clothing and equipment of sheep handlers.

- **1-Sarcoptic Mange**
- ***Sarcoptes scabiei var ovis*** is rare in sheep.
- Sarcoptic mites of sheep are a species

specific strain of *Sarcoptes scabiei*, a mite species that infests also cattle, pigs, other livestock and also humans.

- transmitted when animals come in close physical contact. However, sheep can pick mites from the immediate environment or fomites.

-The mites dig tunnels beneath the skin.

Their saliva has potent digestive enzymes that dissolve the skin tissues. They feed on the resulting liquids.

-Mite digging causes skin irritation, which is enhanced by allergic reactions to the saliva.

- The affected skin develops pimples and papules that become crusty, and shows hardening, thickening, and building of folds.
- Infestations often affect non-wooly skin and frequently start on the head and face. to later spread along the neck and the fore legs
- **In goats, S scabiei var caprae** is responsible for a generalized skin condition characterized by marked hyperkeratosis.

- Lesions start usually on the head and neck. In both species,

Treatment ;

RX

the injectable formulations of ivermectin, doramectin, or moxidectin at 200 µg/kg are efficient treatments.

2- Chorioptic Mange {*Chorioptes bovis*}

- Chorioptic sheep mites (also called "leg mites", or "foot scab") are quite abundant worldwide, but less harmful than psoroptic or sarcoptic mites.
- -they are neither suck blood, nor dig tunnels as sarcoptic mites, but bite the outer skin layers and feed on skin debris, fat, lymph or exudates.
- -Preferential sites or chorioptic mites are the hoofs and lower part of the legs; occasionally they also affect the scrotum, the face and the lips. Affected parts show formation of scales and crusts.
- -Itching is not as severe as with psoroptic and sarcoptic mange, and the scratching and biting reactions of affected animals are also less vigorous.

Treatment:

RX

- **- If necessary, the animals can be treated using sprays or dips containing organophosphates (diazinon, metrifonate, propetamphos) or pyrethroids (deltamethrin, flumethrin) as permitted.**

3-Psoroptic Mange (Sheep Scab)

- ***Psoroptes ovis* i**nfestation is a reportable disease.
- Sheep scab is a serious and very harmful sheep disease. Lesions often **affect the back, the flanks and the shoulders.**
- Infestations remain often unnoticed until wool loss becomes evident, which mostly means that the whole flock is probably already infested.
  - Affected animals suffer from intense itching (pruritus) and react vigorously scratching, biting and rubbing against objects, which causes injuries that can be infected with secondary bacteria.

All this leads to weight loss and wool loss, reduced milk production, and general weakness that makes the affected animals more susceptible to other diseases.

- Large, scaly, crusted lesions develop almost exclusively **on woolly parts of the body.**
- - Intense pruritus manifests by biting and scratching.
- - Left untreated, sheep often become emaciated and anemic.
- -Mites are sometimes found in the ears.

Diagnosis

- - is based on the presence of the previously mentioned symptoms,
- - but has to be confirmed **examining skin scrappings of** affected parts under the microscope for visualization of the mites.

Treatment:

RX

-Ivermectin and moxidectin (200 μg/kg) given twice with a 7- or 10-day interval, respectively, are effective.

-Doramectin (300 μg/kg) given once is also effective.

-Dipping is most effective if done within 2 wk after shearing and must be repeated after 14 days.

- Approved treatments for mange in sheep are

0.3% coumaphos, 0.15–0.25% phosmet, 0.03–0.1% diazinon, and 2% hot lime-sulfur.

3-Demodectic Mange

- This has been reported in sheep **(Demodex ovis) and goats (D caprae)**, in which it causes lesions similar to those in cattle.
- -In goats, nonpruritic papules and nodules develop, especially over the face, neck, shoulders, and sides.
- -The nodules contain a thick, waxy, grayish material that can be easily expressed; mites can be found in this exudate.
- -The disease can become chronic.
- - Localized lesions in goats can be incised, expressed,

Treatment

RX

- Repeated dipping or spraying with the acaricides recommended for other manges is usually carried out but is more to prevent spread than to cure existing lesions.

-Ivermectin, cure 98% of beef bulls when used at 0.3 mg/kg. Recent developments in the development of diagnostics may allow newer techniques that will effectively detect infestations.

-**Trichlorfon (2%) has been reported to be effective for demodicosis in sheep.**

4-Psorergatic Mange (Itch Mite, Australian Itch)

- ***Psorergates ovis*** is a common skin mite of sheep in many parts of the world;
- -The disease is characterized by intense generalized pruritus and scaliness, with matting and loss of wool.
- -immature mites remain mostly below the epidermis, adult mites are on the skin surface, move freely and spread the infestation throughout the host's body.
  -Transmission mainly of adult mites is by contact, mostly from freshly shorn sheep to shorn or wooly sheep

  - Because of their small size, the mites are difficult to find in skin scrapings.

  This disease can cause significant economic losses through weight loss and wool damage.

  Treatment:

  RX

  -Dipping or spraying with 2–3% lime-sulfur, 0.2% malathion, or 0.3% coumaphos is effective in controlling the disease; 2 treatments with a 14-day interval are needed.

  Ivermectin and other avermectins/milbemycins given SC have been reported to be curative.

- Treatment Prevention in general
- In severe cases, crusting can make it difficult for products to make contact with the mites and scabs may have to be removed before treatment.
  1- keeping the animals well fed and in good health and hygienic conditions to limit the harm that such outbreaks can cause .
  2- All animals in a herd must be treated, because it is impossible to know which are the carrier animals .
  3- If a herd is free of mites, contamination can only come from cattle brought in. Consequently, to avoid contamination all incoming animals must be treated against mites .

4- Two injections with a macrocyclic lactone (e.g. doramectin, ivermectin, moxidectin) with 7 to 10 days interval,

- but keep the animals isolated until 10 days after the second injection.

5 -Approved dips contain mostly a few organophosphates (e.g. diazinon, phoxim) or synthetic pyrethroids (e.g. flumethrin).

-To ensure adequate control the use instructions in the product label must be strictly followed,

- especially regarding dip vat replenishment. It is also a must that:

•The sheep remain at least 1 minute in the dip

• Sheep heads are completely underwater at least once

• The dip is freshly prepared

•The sheep have a minimum wool length (not less than 2 weeks off-shears)

- It is also important to treat with acaricides the premises, objects, and equipment that have been in contact with the sheep (e.g. boxes, pens, fencing, trailers) .