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Original Research Article

# The best methods of control sarcoptic mange infested cattle, sheep and rabbit farms

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**Abstract:** This paper studied to identify the best method to control scabies for animals, cattle, sheep and rabbits. Ivermectin Injection method is considered under the skin of the animal accompanied by anti-surface of the animal body, such as the use of Tincture iodine or sulfur ointment or spray a pesticide recommended is the best method to kill scabies in animals where control is internal and external at the same time.

**Key Words:** anti-surface; Ivermectin Injection; scabies; sulfur ointment; Tincture iodine

## INTRODUCTION

Mange is a highly contagious skin disease caused by one or a combination of several species of mites. Mites affect both domestic animals and humans, but also wildlife of zoonotic importance (Bornstein *et al.*, 2001 and Kahn *et al.*, 2005). The most common mite species in wild and domestic animals is *Sarcoptes scabiei*. This parasite is a ubiquitous ectoparasite that infects more than 100 species of mammals worldwide. In humans it is known to cause considerable morbidity in a number of different counties (Walton *et al.*, 2004) and epidemics can be caused by contagion from a single case of scabies in crowded living conditions. Sarcoptic mange may lead to considerable economic losses in domestic animals with repercussions for the animal trade (Pence and Ueckermann, 2002). It also has devastating consequences for wild animals, above all in isolated populations a situation that is worsening due to the limitations of available chemotherapy (Soulsbury *et al.*, 2007).

An appropriate disease control program against mites should take into account the entire ecosystem and thus integrate measures targeting both wildlife and livestock. Disease control in domestic animals may be able to interrupt mange transmission to wild animals and vice versa (Serrano *et al.*, 2011). Recently, attempts have been made to understand mange molecular epidemiology using genetic tools to differentiate between isolates from different hosts and geographical regions (Sanderson *et al.*, 2007). The epidemiology of mange is still not well understood and seems to differ between animal species and areas of the world (Alasaad *et al.*, 2011). The aim of the study to know the best methods to resist mange in cattle, sheep and rabbits farms during previous studies.

### *The best methods of control mange mite infested cattle farms*

In general treated sheep for controlling scabies took less time to recovery than in case of cattle scabies. The best results in controlling scabies were obtained when used Ivermectin injection and used sulfur or tested

pesticide spray on body surface of cattle mange. Ivermectin injection is the best way to control animals mange and using spraying on animals, Also Injection can be used only twice a month is better than a one-time usage. The results were obtained by (Desoky, 2011 and Witmer *et al.*, 1995).

All husbandry animals showed a slight improvement in the clinical picture of mange disease by using Ivermectin injection, when used at two time in a month (20- 30 days to Recovery of the skin) may be due to avermectin paralyses and ultimately kills parasitic nematodes, arachnids and insects by its effect on the nervous system of these parasites. Avermectin injection at the recommended dose rate controls re-infection with sarcoptic mange acquired up to 14 days (life cycle) after treatment. At therapeutic doses, avermectin has no adverse effect on cattle and sheep since it does not readily penetrate their central nervous system. Avermectin belongs to the avermectin class of anthelmintic endectocides. This finding is in agreement with (Alasaad *et al.*, 2011 and Desoky, 2011).

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***Recommended dose with ivermectin in cattle***

Ivermectin used a rate 1 ml per 50 kg body weight by subcutaneous injection, each ml contains 10 mg of avermectin sufficient to treat 50 kg of body weight. Also, Injection can be used only twice a month is better than a one-time usage

***The best methods of control mange mite infested sheep farms***

The first method (1) for controlling sheep mange took less time to skin recovery were obtained when used Remove old skin + Mangecides + Noromectin1.0% injection (two time a month) on body surface of sheep mange may be due to Mangecides contains sulfur and oxygen prevents the mite also, remove the skin until it reaches the material to mite and Noromectin injection is indicated for the effective treatment and control of the following harmful species of gastro-intestinal roundworms, lungworms, eye worms, warbles, mites and lice.

Second method (2) Noromectin injection is the best way to control animals, can be used twice a month may be due to Noromectin injection is highly effective against internal and external parasites at a dose volume of 1 ml per 50 kg bodyweight. It can be administered quickly and easily or Mangecides + Noromectin1.0% injection is better methods.

Noromectin injection for sheep can be administered to sheep at any stage of pregnancy or lactation provided that the milk is not intended for human consumption. Noromectin injection for sheep will not affect the fertility of breeding ewes and can be given to all ages of animals including young lambs. The same result was obtained by (Abo Elmaged, 1998; Betty and Richard, 2008; Cozma *et al*., 2010; Hagawane *et al.,* 2010; Desoky, 2011; Desoky and Hamdon, 2014).

***Recommended dose with ivermectin in sheep***

The rate 0.5 ml per 25 kg body weight by subcutaneous injection (based on a recommended dosage level of 200 mcg ivermectin per kilogram body weight.

***The best methods of control mange mite infested rabbit farms***

The best results in controlling scabies on rabbit were obtained when used Noromectin injection, paraffin oil and Mangecide (one time in a month) on body surface of rabbit mange compared with other methods. Noromectin injection and Paraffin oil (one time) on ear mange may be due to paraffin oil and Mangecide paraffin oil oxygen prevents the mite also Noromectin injection is highly effective against internal and external parasites at a dose volume of 1 ml per 50 kg bodyweight, it can be administered quickly and easily. Noromectin injection control sarcoptic and *psoroptic* mange mites as infections start to build up. Noromectin injection may also be used as an aid in the control of biting lice and *chorioptic* mange mites, but complete elimination may note occur. Treat all animals in contact with each other to prevent cross infection. These results were recorded also by (Kaya *et al*., 2010; Millán, 2010; Desoky and El-Sheikh, 2014).

***Recommended dose with Noromectin in rabbit***

Noromectin1.0% 1/2 ml injection / individual by subcutaneous injection (based on a recommended dosage level of 200 mcg ivermectin per kilogram body weight).

1. Paraffin oil (surface used)
2. Mangecide (surface used)
3. Composition (Benzyle benzoate, Salicylic acid, Sulphur, Phenol, Tar)
4. Skin recovering= the growth of new skin
5. Remove old skin = remove the old skin until it reaches the material to mite
6. Noromectin 1.0% w/v

**Presentation:** A clear, Colorless, slightly viscous, sterile, non-aqueous solution containing 1.0% w/v ivermectin.

**Manufactured by:** Norbrook Laboratories Limited, Newry, N Ireland, BT35 6JP

**Safety:** Studies have demonstrated a wide safety margin and the recommended use level had no adverse effect on breeding performance.

**Chemical group:** macrocyclic lactone (Avermectin)

**Used method:** Injection

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