Arch. Inst. Razi, 1968, 20, 81 - 83

EXTERNAL PARASITES OF LIVESTOCKS IN IRAN (*)

By :

G. Maghami (D. V. M.)

Department of Parasitology, Razi State Institute,

P.O. Box 656, Teheran, Iran.

In Iran, because of the environmental conditions favorable to the growth of ectoparasites, and seasonal migration of tribal flocks, the parasites with diseases caused by them have been spread into most parts of the country.

At the present time, the ectoparasites such as ticks, mites, lice, sheep ked, flies, midges etc. are the main difficulties in animal husbandry and they cause tremendous economic losses in the country.

The main external parasites of animals occuring in Iran are:

1) ticks: Ornithodoros laborensis, O. canestrinii, O. O. papillipes, Argas persicus, A. reflexus (hermanni), Ixodes ricinus, Hyalomma anatolicum anatolicum, H. anatolicum excavatum, H. asiaticum asiaticum, H. savignyi, H. rufipes glabrum, H. detritum, H. dromedarii, H. Schulzei, H. brumpti, Boophilus annulatus, Boophilus microplus, Haemaphysalis concinna, Haem. punctata, Haem. cholodkovskyi, Haem. otophila, Haem. inermis, Dermacentor marginatus, D. daghestanicus, Rhipicephalus bursa, Rh. sanguineus.

The ticks: **Ornithodoros erraticus, O. tartakowskyi, Ixodes crenulatus** are collected in burrows of wild mammals and lezards; and the tick **Hyalomma aegyptium** is collected from the body of turtles.

2) the other external parasites of animals occuring in Iran can be reckoned as follow according to the hosts:

SHEEP & GOATS — **Sarcoptic** and **psoroptic** manges are widely distributed over the country and are the greatest pest that sheepmen have to combat with. For the treatment, we tried BHC bathing with encouraging results. However, in winter season, because of the coldness it is rather difficult to dip or spray animals. For this reason, we tried some experiments at the Razi Institute treating animals by oral administration of Dieldrin which will be discussed later.

Different species of lice such as **Linognathus ovillus, Bovicola caprae, Lino-**

(*) Presented to the 3rd Cento Seminar on Parasitic Diseases of livestock, Lahore (Pakistan), 18 - 29 April 1966.

gnathus pedalis, as well as **Melophagus ovinus** are also prevalent in most parts of the country.

Oestrus ovis, Hypoderma bovis and **H. lineatum** are wildspread in eastern part of Iran. The first species are found in sheep, and other two species are known from goats.

Various species of ticks are the main external parasites of sheep and goats which transmit several diseases to these animals.

CATTLE — The incidence of **sarcoptic** and **psoroptic** manges are rather low among cattle. The lice, **Linognathus vituli,** are seen mostly among calves, and **Haematopinus eurysterus** are found in buffaloes. However, damages caused by these lice are less important than those of hypodermosis due to **Hypoderma bovis.** Various species of ticks cause also much damage to the skin of cattle and transmit blood protozoa to these animals.

HORSE — **Hypobosca equina** and several species of flies which cause various myiasis of digestive tract are prevalent in most parts of Iran. The incidence of **sarcoptic** and **psoroptic** manges are very low among horses. Infestation with lice, **Haematopinus asini** and **Bovicola equi,** among horses and donkeys are rarely seen in southeast. For the present, various species of ixodid ticks can be considered as the most important pest for horses.

CAMEL — The main external parasites are ticks and various species of **tabanus** flies. The latter transmits **Trypanosoma evansi** mecanically and cause heavy losses. The **sarcoptic** mange and nasal myiasis due to **Cephalopsis titilator** are observed in certain regions and mostly in the south-east Iran.

RABBIT — An outbreak of **sarcoptic** mange occured 3 years ago among the laboratory breed rabbits at the Razi Institute which was treated successfully with Tetmozole.

DOG — Ticks and flies as well as fleas are the main ectoparasites of dogs in Iran. **Demodectic** mange is also rarely seen.

CAT — During the last two years we were able to diagnos 3 cases of **Notoedric** mange due to **Notoedres catis** from cats of Tehran. The fleas, **Ceratophylus felis,** are mostly seen among the cats.

POULTRY — External parasites that infest chickens consist of ticks **Argas persicus;** lice **Menopon gallinae, Menopon pallidulum, Men. stramineum, Gonicotes gigas, Goniodes spp., Lipeurus caponis, Lip. heterographus;** fleas **Echinophaga gallinacea;** mites **Dermanyssus gallinae,** and sometimes bed-bugs **Cimex lectularious** causing heavy losses to poultrymen. **Cnemidocoptes mutans** is rarely seen.

CONTROL

Several trials for destruction of external parasites from animals and stables have been carried out since 1958 by Veterinary Department and local farmers by the use of chlorinated insecticides as well as organo-phosphorus acaricides. While I should like to report here on some experiments performed at the Razi Institute for treatment of sheep psoroptic mange and eradication of lice by oral administration of Dieldrin (Rafyi & Maghami 1959).

Each of 62 sheep infested with psoroptic mange received through the mouth 30 mg. of wettable powder of Dieldrin 50% per kg. body weight in 30 ml of water. At the tenth day after treatment, 54 sheep began to grow wool at their infested parts, and recovered completely. Of the 8 sheep remained, 2 died due to the intoxication of Dieldrin administration. Other 6 sheep were retreated after 7 days with the same method as stated above, and this second treatment yielded complete recovery to them. It would be necessary to refer that the intoxication appeared 1-12 hours after the administration of Dieldrin in some sheep which were very weak. However, immediate treatment with sodium sulphate could disappear any sign of this intoxication from them.

It should be noted that 5 ewes had been given Dieldrin lambed, which were sucking their mothers' milk, did not show any sign of intoxication for 40 days during which they were under observation.

From the results of these experiments, we concluded that the oral administration of Dieldrin 30 to 50 mg/kg body weight does not cause any intoxication in fatty animals. However, in the case of meagre sheep, even the administration of Dieldrin at the rate of 10 mg per kg body weight tends to cause the intoxication. This might be a noticeable suggestion on the role of fat in animal bodies. Namely those having a good amount of fat, dieldrin would be absorbed by fat and come gradually into blood. On the contrary, in the case of those sheep with no/or little amount of fat, the rate of Dieldrin would become abruptrily high in blood stream, and eventually the intoxication would be resulted.

In addition, we have to mention here that the blood of the treated sheep was highly toxic for the Argasid ticks which would die after feeding on the treated animals up to 53 days following the administration of Dieldrin.

In another experiments, Dieldrin was given orally at the rate of 20 mg/kg body Wt. to 14 sheep and 2 goats infested with lice (Linognathus ovillus). At the 3rd day following the treatment the number of lice reduced and on the day five no lice could be seen.

REFERENCES

A. Rafyi & G. Maghami (1959) - La lutte contre les Argasidés, Gâle psoroptique et Phtiriase des moutons par l'administration des insecticides par la voie buccale. Bull. Soc. Path. éxot., 1959, 52, Pp. 20 - 42.