Parasites in Fur-Bearing Animals

The problem of parasites is perhaps one of the most serious among the many the fur farmer has to cope with. Disease may strike suddenly and may cause an immense amount of damage in a herd during an epidemic. Parasites do not cause such sudden, spectacular losses; they do not appear suddenly, take their toll and vanish equally as suddenly as some of the acutely infectious agents among the pathogens are known to do. But parasites will always be with the fur farmer. Their method of attack is more subtle and insidious, which results in a continual drain on the condition, resistance and thrift of fur animals and the quality and value of pelts.

Parasites are a problem peculiar to each area and section of the country and even to each separate ranch, in many cases. We recognize many different external and internal parasites which are potentially dangerous to the fur ranches in practically all areas. The degree of potential injury is governed by many factors involving environmental position, geographical location, natural resistance, climate, precipitation, nature of soil, feed and feeding practices, ranch management and the degree of effective sanitation resulting therefrom. All of these factors and many more will help determine which of the parasites will become a menace and how serious the losses from such infestations will be.

While older animals develop a remarkable resistance to some of the internal parasites and may carry an astonishing number of them without showing much effect, they are the reservoir for constant reinfection of the new pup crop arriving yearly. The young animal is the most susceptible one and suffers the greatest damage, which many times becomes irreparable. Adults which suffer from chronic parasitism are not only “hard keepers” but may become easy victims to secondary infections of much more serious nature because of their progressively lowered resistance. The young once stunted in their growth may never recover, and their small, lusterless and discolorid furs will seriously diminish the income of the rancher.

A detailed review of the parasite problem will be presented in the next issue of this publication.

Mysis

At this time attention is directed toward a parasitic condition which has come to the foreground seasonally every year, but was especially severe this last spring, namely, infestation by maggots or fly larvae, scientifically known as myiasis.

Losses from myiasis in fur-bearing animals have been reported recently to such an extent as to constitute a serious menace. Young animals, even as early as one week of age, are most commonly affected, while older animals rarely show maggot infestation unless they are inactive due to disease or injury. It is interesting to note that ranches located in the mountains above 6,000 feet altitude are usually free of this malady, while the valley ranches seem to be visited regularly and in great numbers by these flesh flies. Various flies may be responsible for myiasis such as flesh flies (Sarcophaga), blue bottle flies (Calliphora), green bottle flies (Lucilia), screw worm flies (Chrysomyia), dog, cat and rabbit bot flies (Cuterebra) and several species of the grey flesh fly (Wohlfahrtia). The worst and most common offender in the Rocky Mountain region is of the latter genus, namely, Wohlfahrtia vigil. Most people may have seen this fly without realizing that it will cause so much great damage to pups and kits that few of them survive the multiple invasion by these maggots unless treated in time. This fly is universally distributed over the U.S. and Canada excepting the high mountain valleys and hillsides. This fly spends its larval stages as a parasite under the skin and may grow from an almost invisible organism to \( \frac{3}{4} \) inch in length. The skin of the adult animal is too dense to be easily or at all penetrated by the larvae, but the skin of the newborn or young is tender and these tiny, wiggling organisms quickly bore their way into the skin, usually in a furrow or fold, and disappear below the surface.

The adult fly is about twice the size of a house fly and has a grayish-black appearance. The back is marked by three rows of black spots which are distinctly oval at the abdomen and merge with each other at the greatest diameter of the oval, thus showing the interspaces diamond shaped and white when the wings are at rest. When the wings are slightly raised the pattern can be readily discerned.

The fly does not feed on animal products of any kind but, strangely enough, on sweets, such as the nectar of flowers. It pays no attention to animals until such time as its reproductive cycle arrives at the breeding stage. Then it seeks out animals anywhere it can find them; it is not deterred by darkness or winding passages leading into kennels; in fact it seems to prefer dusk. It will strike at various regions of the animal body but seems to prefer the face, neck, axillary and flank regions, as well as areas around natural body openings. After taking firm hold of the hair it will extrude from its rear a white mass, which at once becomes motile and disperses over the nearby (Continued on Page 21)
even to the point of dilapidation. Any fur farmer who lets his pens and equipment weather into bad condition will also be careless in feeding, breeding and sanitation. No fur farmer can let down in these things and still be efficient. The first step toward disintegration in any enterprise, if carried on to a conclusion, spells failure. To have an inspiration and a vision is fine—to be foolishly lax in carrying them out is a grave reflection on our intelligence, industry and constancy of purpose.

When the present war first broke out in Europe, which has since become a consuming flame involving all the world, silver fox farmers suddenly realized that their industry was in jeopardy. There was no restraining influence other than the tariff of 37½ per cent against the dumping of foreign skins into the American market. It required a national conference of fur farmers to bring about a unified and organized effort to forestall the calamity. It took two months to begin to get action, and then it took two more months to get a new trade agreement negotiated to overcome the emergency. In the meantime the market was panicky and thousands of skins were dumped on the market at a loss before conditions could again be stabilized. Once the job was done the producers lost interest. Through the collaboration of the Rocky Mountain Association an effort was made to get associations not then affiliated with the American National to delegate authority to that organization to assume the responsibility for guardianship in the national legislative field. Twelve such associations compiled. The American National was the one association in the country equipped through finances, organization and experience to accept such responsibility. It was a logical procedure then, and it is just as logical still. Instead of meeting with universal condemnation the movement aroused some bitter criticism, most of which was based upon personal prejudices or the fear that the American National might secure some undue advantages over competing organizations; organizations that logically should have been cooperative instead of competitive. I still maintain that in this particular instance some did not use their best intelligence.

In venturing into leadership in furthering the general welfare of any considerable number of people, one should be endowed with supreme qualities of diplomacy; he should have wisdom surpassing that of Solomon (who didn’t turn out to be so wise after all); he should have the patience of Job; together with independent resources so he could look every man in the face and tell him to go to hell if necessary. No one man possesses all of these qualifications. But unless he possesses a superb sense of humor, he is apt to finish a disappointed and sour individual. Fortunately, I still possess my sense of humor. I also still have my dreams and visions. I hope you have yours and that they will be good and you will bring them all to fruition in spite of all our foolish conduct.

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hairs. These actively wiggling tiny larvae quickly reach the skin and start boring into it. Viviparous flies retain the fertilized eggs in their bodies until they hatch and then deposit living larvae in the form of a white mass as described above. As the larva grows under the skin it feeds on the body fluids of the host and will excrete metabolic cleavage products around itself. This material is toxic to the host because it is absorbed by the host. Tissue reaction to such foreign bodies produces local inflammations with the production of a serous exudate which mixes with the excreta of the maggots and is eliminated through the opening in the skin. The latter is maintained so that the larvae are able to respire. Young animals affected with maggots will show wet spots on their fur and if the fur is parted one can observe the opening in the skin and the wiggling rear end of the maggot. Increased swelling...