

MANGE IN HORSES AND CATTLE.

The disease known as Mange, or Scabies, is of considerable interest to farmers and stockmen, especially those located in or near the ranching districts of Western Canada. Animals worried by the constant irritation of the mange parasite not only fail to fatten, but may fall into such a low condition that in severe winters large losses are not infrequent, the vitality of those affected having become so reduced as to render them incapable of withstanding successfully the double ordeal of short-commons and extreme cold.

Another important point to be considered by ranchers and stockmen is that our live stock trade, foreign and domestic, cannot flourish save on a basis of freedom from disease, and that confidence in this regard is more easily destroyed than created. It is, therefore, imperative, that Canadian stock, when offered or intended for sale, shall be absolutely healthy. These conditions being understood and accepted, it goes without saying that it is clearly to the interest of stock owners to co-operate with the officers of this Branch in their efforts to stamp out Mange wherever found.

MANGE INSECTS.

The term Scabies, or Mange, is applied to a class of skin diseases produced by parasites of minute size belonging to the natural family *Sarcoptidae*, which comprises three genera, the *Sarcoptes*, the *Psoroptes* and the *Symbiotes*.

Of the genus *Sarcoptes* there are several species, two only of which, however, affect mammals, viz., the *Sarcoptes* of scabies and the dwarf *Sarcoptes*. The latter are found on the heads of some small animals, such as the cat, rabbit, &c., and are not of great importance to stock-owners.

The *Sarcoptes* of Scabies, on the other hand, comprise a large number of varieties; which live on man and many animals. This species, which is responsible for the most serious forms of parasitic skin diseases, is distinguished from other mange *acari* by the peculiar manner in which the female deposits her eggs, namely in a burrow or gallery excavated for the purpose beneath the epidermis.

Of the genus *Psoroptes* there is but one species, although there are several varieties affecting different animals. It is this species of *acarus* which is responsible for the mange usually affecting both the cattle and horses of the western ranges. It must however, be distinctly understood that a different variety infests each of the two species of animals mentioned, and that the malady is not transmissible from the horse to the ox or *vice versa*, although a slight temporary irritation of the skin may occasionally result from the transfer of the *acarus*.

All the mange insects are very minute, varying in length from $\frac{1}{40}$ to $\frac{1}{100}$ of an inch, the *Psoroptes* being slightly larger than the *Sarcoptes*, and consequently more easy of detection. The most certain mode of distinguishing true mange from other irritations of the skin, many of which closely resemble it in general characteristics, is, of course, the isolation of the *acarus*.

In the *Sarcoptic* form this is often difficult, as the parasites are usually deeply imbedded in the skin. The *Psoroptes*, however, can generally be detected by exposing to the sun's rays, preferably inside of a window, a quantity of the scabs and other debris scraped from the skin of the patient. After an hour or so of this exposure the movements of the *acari*, if present, can be detected with the aid of a good magnifying glass, although a low power microscope may be required to determine the exact variety to which they belong. It is needless to say that true mange is produced only by *acari*, and that it is impossible for the disease to originate in any way other than from con-