

DEPARTMENT OF AGRICULTURE  
OTTAWA

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HEALTH OF ANIMALS

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MANGE

IN

HORSES AND CATTLE

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BULLETIN No. 12

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## 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-

tagion direct or indirect, although dirt, poverty and neglect undoubtedly favour its development.

The irritation of the skin is due, not to the bite nor to the movements of the parasite, but to a poisonous secretion or saliva which it introduces into the tissues, the most virulent being that peculiar to the *Psoroptes*.

#### SYMPTOMS.

The *acarus* once established on the skin of a congenial host, the symptoms of mange are not as a rule, long in becoming apparent although for reasons not yet fully understood, the disease is usually much more active in the winter than during the summer season. This peculiarity has long been noted, and in Europe has been attributed to the warmth of winter stabling, but as the same condition is observable in animals constantly exposed to the weather, some other explanation is evidently required.

Mange, whether due to *Sarcoptes* or *Psoroptes*, gives rise to intense itching, accompanied by loss of hair, and later by effusion, thickening of the skin and the formation of scabs or crusts. Redness is also always present, although this cannot be detected except in white or light coloured animals. As the disease advances the thickened skin, especially where loosely attached to the tissues, becomes corrugated in deep folds or ridges, this condition being very characteristic in chronic cases. The progress of the disease, at first slow, soon becomes rapid, owing to the tremendous rate at which the parasites multiply. According to Gerlach, one pair of *acari* are capable of producing, through successive generations, within three months, no less than 1,500,000 descendants. The period required for the eggs to hatch is short, varying from three to ten days, according to the favourable or unfavourable nature of the circumstances.

#### MANGE OF HORSES.

*Sarcoptic* scabies affects the larger animals, the horse, ass and mule only, the ox being, so far as known, free from the attacks of this genus, except when transmitted from the horse as indicated below. The disease at first develops slowly, its specific lesions being seldom noticeable before the expiry of at least three weeks from the date of infection. It is generally first noticed in the region of the withers, whence it extends in an irregular manner over the surface of the body proper, the extremities usually being left untouched. If neglected it soon produces constitutional disturbance, which, with the loss of rest and food due to the continual irritation, not unfrequently lead to a fatal termination. Cases of old standing are difficult to treat successfully, the disease frequently reappearing in animals apparently cured.

Except in the very early stages it is contagious in the extreme. Gerlach states that he has seen healthy horses become affected in fifteen minutes when placed alongside of mangy horses on which the disease had reached the scabby stage. The transmission is affected not through the eggs or the mature egg-laying female which are buried in the skin, but through the rapid movements of the younger individuals in both sexes. Many experiments have been conducted with the object of conveying *Sarcoptic* mange of the horse to animals of the other species, but as a rule, a temporary irritation, disappearing spontaneously or yielding readily to treatment, is the only result. This irritation is especially noticeable in man, and some authorities believe that the infection in this case is a real one.

*Psoroptic* mange of the horse, while not so intractable as that produced by the *Sarcoptes*, is still a very serious malady, capable, under favourable conditions, of causing great suffering to affected animals and corresponding loss to their owners.

It generally makes its appearance at or near the roots of the mane or tail, the first indication of infection being the rubbed or broken appearance of the long hairs of one or both of these appendages. Examination will reveal the presence of an eruption

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of small pimples containing fluid, which, on breaking, form a crust. This crust, as the exudation continues, becomes thicker but remains moist, thus differing from that of *Sarcoptic* mange, which is dry and scaly. As the *acari* multiply the disease gradually spreads from each centre of infection, and the irritation being greatly increased by constant rubbing, the skin eventually becomes thickened, inflamed and wrinkled, while the hair in many cases either falls out or is rubbed off.

Between the wrinkles is to be found a moist, filthy accumulation of broken scab, which, especially in warm weather, is offensive in smell, and contributes largely to the general skin irritation.

*Psoroptic* mange does not spread over the surface of the body as rapidly nor to as great an extent as the *Sarcoptic* form. Gerlach states, however, that the vitality of the *Psoroptes* when removed from the host, as for instance on blankets, brushes or harness, is greater than that of the *Sarcoptes*. When favoured by moisture at a temperature approaching that of the animal's skin they may possibly live for two months, but if kept dry they are likely to die within a week. On the body of the host, or under like conditions, the eggs of the *Sarcoptes* usually hatch in from 4 to 8 days and are sufficiently mature to commence reproduction when about a fortnight old. Unhatched eggs on damp ground or manure may retain vitality for a month, while in dry surroundings they die in less than a week. Bright sunlight is rapidly fatal to both insects and eggs.

*Symbiotic* mange is, in horses, generally confined to the legs, where it causes great irritation, and eventually loss of hair, thickening and inflammatory exudations. It is most frequently seen in heavy horses with hairy legs. It spreads very slowly and yields readily to treatment.

*Psoroptic* mange of cattle presents few points of difference from that of the horse as described above, and, as already stated, is due to a very similar variety of the same species of *acarus*.

It is frequently first noticed in the region surrounding the root of the tail, although it may also commence operations at the withers or on the neck. Its manifestations greatly resemble those observed in *Psoroptic* mange of horses, and it has the same tendency to apparently recover in summer only to reappear with the return of the cold weather. It yields rapidly to treatment, and only becomes serious when neglected.

*Symbiotic* mange in cattle is even less serious than in horses. It is seldom seen except at the root of the tail, and only extends to other regions when long neglected. It is very slightly contagious, and is amenable to simple treatment.

#### TREATMENT OF MANGE.

In animals properly domesticated the treatment of mange is comparatively simple.

Affected animals should be clipped, the place where the clipping is performed thoroughly disinfected, and the hair burned. The animal should then be well rubbed all over with soft soap, to which a small quantity of creolin or some similar agent may, with advantage, be added. This should be followed, after a lapse of several hours, by a thorough dressing with the following preparation:—

|                          |           |
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| Sulphur. . . . .         | 2 pounds. |
| Oil of tar. . . . .      | 8 ounces. |
| Raw linseed oil. . . . . | 1 gallon. |

These ingredients are to be heated gradually together, but must not be allowed to boil.

This mixture should be well rubbed into the skin, at a temperature as high as can comfortably be borne, and allowed to remain on for ten days, when it may be washed off and the application repeated. Where large numbers, especially of range

animals, have to be dealt with, the most economical and effective method of treatment is by dipping in a specially constructed vat with the following mixture, which should be constantly maintained at a temperature of not less than 105° nor more than 110° Fahrenheit:

|                             |              |
|-----------------------------|--------------|
| Flowers of sulphur. . . . . | 24 pounds.   |
| Unslaked lime. . . . .      | 10 "         |
| Water. . . . .              | 100 gallons. |

The lime should be slaked so as to form a rather thick lime paste. The flowers of sulphur should then be added to this paste, and the whole well stirred. The mixture is then to be placed in a kettle with twenty-five or thirty gallons of boiling water, and boiled for two hours or more, during which time it should be stirred at intervals. After the sulphur disappears from the surface the mixture, including the sediment, may be poured into a barrel provided with a spigot a few inches from the bottom. After being allowed to settle, the liquid is to be drained off through the spigot, and enough warm water added to make 100 gallons. The sediment remaining in the barrel must not be used for dipping purposes, but can be utilized to advantage in the disinfection of fences, yards and buildings.

In making larger quantities the same proportions should of course be used.

#### TESTING THE DIP.

The specific gravity of the official lime and sulphur dip authorized for use by the Department of Agriculture of the Dominion of Canada is 1023.0.

By using an ordinary urinometer, an instrument commonly used by physicians for determining the density of urine the reading should be 23.0.

These readings are obtained with the dip at a temperature of from 105° to 110° Fahrenheit.

Should the urinometer sink below the mark at 23.0, the dip is too weak, that is, there is an insufficient amount of the chemical products obtained by the fusing of the lime and sulphur by boiling and more of the stock solution should be added that the correct reading may be obtained.

It may be stated by individuals preparing dip that the official formula will not produce the result indicated, but in dip so prepared a careful examination will reveal that there is still free sulphur in suspension. A continued boiling of the stock solution will give a product which on proper dilution will give a correct reading on the instrument. In fact the Canadian official formula will, if the ingredients are boiled for three or four hours, give a dip much stronger than is obtained by the two hours' boiling.

When the dip is too strong the urinometer will not sink in the solution to the desired mark (23.0), and the dip will then require dilution with water.

The simplest method of testing the dip at the dipping vat is as follows:—

A bucket, to the bail of which a small rope is attached, is lowered into the vat and filled with the dip and the urinometer floated in this. The temperature can also be taken at the same time.

#### TEMPERATURE.

The question of temperature is a most important one and many different methods of maintaining heat have been recommended. Experience has shown however, that, in heating vats of any size, a steam boiler is the cheapest and most satisfactory agent.

Whenever the dipping fluid becomes foul it must be changed and even where but few animals have passed through the vat, it should never be used when more than

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a week old. It is false economy to use dip of the strength or cleanliness of which any doubt can be entertained. When dip becomes foul or is loaded with sediment it is very likely to cause trouble with the heating apparatus, except when live steam is used for this purpose.

To prevent the oxidization of the dip, where it is necessary to allow it to stand for a few days in the vat, the best means is a coating of oil. Any heavy oil is suitable for this purpose, the heavy black or residual oil from refineries is probably the cheapest. One gallon will cover a vat holding four thousand gallons. It is scarcely necessary to say that this oil should, as far as possible, be removed before resuming dipping operations.

#### OFFICIAL TREATMENT.

It should be noted that in the official treatment of affected animals or of those which, from having been in contact, direct or indirect, with the infection of mange, or for other reasons, are suspected of being affected, the use only of the two formulæ mentioned in this bulletin will be permitted. These preparations, when properly compounded and used, are the most reliable known to the Department, and, if applied at the temperature indicated above, will be found effective, not only for mange, but for other parasitic infestations.

#### PRIVATE TREATMENT.

The above limitation does not apply to private operations by owners, who are at liberty to use any other preparation they may prefer, for preventive purposes or in the treatment of animals for lice or for skin affections, other than mange.

It should not be forgotten, however, that, in order to avoid prosecution, all cases of mange actual or suspected, must be promptly reported, as required by law, in order that they may be officially dealt with.

#### DIPPING VATS.

The first issue of this bulletin, published in 1904, contained plans and specifications for the construction of dipping vats and heating apparatus. This was deemed advisable, as there were then, in the whole infected area, only two somewhat primitive vats, both badly out of repair. There are now, in the same area, over two hundred dipping plants, many of them being of excellent design and well constructed. It is, therefore, scarcely necessary to deal with this phase of the subject in the present issue. For similar reasons no instructions are given as to the actual working of the plants, the experience gained by stock-owners during the enforcement of the various compulsory orders of recent years being more valuable from a practical point of view than volumes of printed directions.

#### DISINFECTATION.

In addition to treating affected animals, it is of course necessary to thoroughly cleanse and disinfect stables, yards and corrals in which they have been kept, cars in which they have been carried, and scales in which they have been weighed, as also all articles with which they have, in any way, been brought in contact.

Thorough disinfection can doubtless be attained by the use of various agents, of which live steam, when applied under careful supervision, is perhaps as effective as any. As, however, it is frequently impossible for inspectors to actually oversee and direct disinfecting operations, it is in all such cases necessary to furnish proof that

the work has been thoroughly done by employing a mixture of lime-wash and carbolic acid in the proportion of one pound commercial carbolic acid to five gallons of lime wash. The soil of yards and corrals, in which diseased cattle have been kept, should either be ploughed and thoroughly saturated with a solution of some reliable disinfectant, or well sprinkled with fresh lime.

Too much care cannot be exercised in dealing with any of the forms of disease produced by mange *acari*, as they are insidious to a degree, and frequently reappear after all danger is thought to be passed.

OTTAWA, August, 1911.

J. G. RUTHERFORD,

*Veterinary Director General and Live Stock Commissioner.*

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## SPECIAL MANGE ORDER FOR ALBERTA AND SASKATCHEWAN.

*Authorized by Order in Council, June 8, 1911.*

Whereas, the disease of mange exists among cattle throughout those portions of the Provinces of Saskatchewan and Alberta which may be described as bounded by the International Boundary, the Rocky Mountains and a line drawn as follows:—

A line from the Rocky Mountains along the northern boundary of the Stony Indian Reserve to the line between ranges 5 and 6 west of the 5th meridian, thence north along that line to the line between townships 40 and 41, thence east along that line to the 4th principal meridian, thence south along the 4th principal meridian to the Red Deer River, thence along the Red Deer and Saskatchewan rivers to the line between ranges 7 and 8 west of the 3rd meridian, thence south along that line to the International boundary.

Therefore, His Excellency in Council is pleased, in virtue of the provisions of Chapter 75 of the Revised Statutes of Canada, 1906, to Order that the annexed regulations relating to mange in cattle in certain portions of the Provinces of Saskatchewan and Alberta, shall be, and the same are hereby established.

### REGULATIONS.

#### CATTLE FOR SHIPMENT OUTSIDE THE AREA FOR PURPOSES OTHER THAN IMMEDIATE SLAUGHTER.

1. Cattle intended for grazing, feeding, breeding purposes or milk production, or any purpose other than immediate slaughter shall not be removed or be allowed to move out of the above described tract, nor shall any railway company accept or load any such cattle for shipment, unless they are accompanied by the certificate of a regular salaried Veterinary Inspector of the Department of Agriculture stating that they are free from disease and that they have been, within a period of thirty days immediately preceding the date of shipment, treated under the supervision of a regular salaried Veterinary Inspector and in a manner satisfactory to him, and that they have not, since being so treated, been exposed either directly or indirectly to the contagion of mange.

#### CATTLE FOR IMMEDIATE SLAUGHTER OUTSIDE THE AREA OR FOR EXPORT TO EUROPE.

2. Cattle intended for immediate slaughter or for export to Europe shall not be removed or allowed to move out of the above described tract nor shall any railway company accept or load any of such cattle for shipment, except under the following conditions:—

(a) Cattle, other than those consigned to Winnipeg or to points in Canada east of Winnipeg, shall be removed or allowed to move out of the above described tract, either by rail or otherwise, only when accompanied by the certificate of a Veterinary Inspector of the Department of Agriculture stating that they have been examined by him and have been found free from infection of mange and other contagious disease.

(b) Cattle, consigned to Winnipeg or to points in Canada east of Winnipeg, whether originating within the above described tract or not, shall be inspected at Winnipeg, and no railway company shall release such cattle at Winnipeg, or load such cattle for re-shipment therefrom, until they have been submitted by daylight to a Veterinary Inspector of the Department of Agriculture and certified by him to be free from mange and other contagious disease.

(c) Cattle found on inspection to be affected with mange or other contagious or infectious disease shall, except as hereinafter provided, be dealt with as may be ordered by the Veterinary Inspector.

INFECTED CATTLE FOR IMMEDIATE SLAUGHTER WITHIN THE AREA.

3. Cattle showing evidence of mange, originating in a place which has been declared to be an infected place, may be removed therefrom for shipment by rail for slaughter at a given destination within the quarantined area, only in the judgment of a regular salaried Veterinary Inspector, who, if he sees fit, may issue a license for such removal, as provided in Section 23 of the Animal Contagious Diseases Act.

4. In the event of any cattle affected with mange but which have not originated in a place declared to be an infected place, being presented for shipment by rail, such cattle, together with any others with which they have been in contact, shall be immediately detained and isolated, or may, if the Veterinary Inspector sees fit, be shipped, under the conditions hereinafter set forth, to a slaughter house within the area, properly equipped as hereinafter provided, for immediate slaughter only. The Veterinary Inspector shall immediately report the matter to the nearest regular salaried Veterinary Inspector of the Department, who shall thereupon take such further action as may appear to him to be necessary.

5. The loading of the above classes of cattle must be personally supervised by an Inspector, who must see that the cars conveying them are duly billed to a slaughter house as above provided and that the said cars bear the placard required by Section 7 of this Order.

(a) The Inspector at the point of shipment shall also notify by telegraph the Inspector at the point of destination of the fact that the cattle are being forwarded.

(b) Unless loaded through special yards and chutes reserved exclusively for such shipments, all yards and chutes, weigh scales or other appliances with which they have been in contact shall be declared infected places and shall not again be used until cleansed and disinfected to the satisfaction of an inspector; such cattle shall not be allowed to come in contact with other animals; shall be consigned direct only to such slaughter houses within the hereinbefore described tract as are provided with private yards and chutes; shall not be unloaded at any point en route, and shall under no pretext whatever be removed alive from the slaughter house or the yards and premises immediately connected therewith.

GENERAL PROVISIONS REGARDING SHIPMENT.

6. All waybills and bills of lading accompanying shipments of cattle originating within the said tract, other than those shipped under the provisions of Section 1 of this order, shall have plainly written or stamped across the face thereof a notification that the cars conveying such shipments are to be cleansed and disinfected after being unloaded and before being again used.

7. All cars conveying such cattle must bear a placard having clearly printed thereon, in letters not less than six inches long, the words 'Cattle for immediate

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slaughter only.' Such cards shall in no case be removed unless and until the cars have been cleansed and disinfected after being unloaded at final destination.

(a) When cattle shipped to United States points are transferred to United States cars, such cars shall also bear a similar placard, but the placards shall not be removed from the Canadian cars unless and until the cars have been cleansed and disinfected under official supervision.

8. At points where cattle originating in the said tract, other than those provided for in Section 1 of this order, are unloaded, they shall be placed in special yards, and such yards shall be used for no other purpose and shall be cleansed and disinfected when so ordered by an inspector.

9. Cars conveying such cattle shall be cleansed and disinfected to the satisfaction of an inspector after being unloaded and before being again used.

10. Cattle shipped for immediate slaughter or for export shall not be sold or otherwise disposed of for any other purpose.

#### THE TRANSIT OF CATTLE THROUGH THE AREA.

11. The transit of cattle through the said tract is permitted, subject to the following regulations:—

(a) Cattle passing by rail through the said tract from one part of Canada to another shall, at points where unloading is necessary, be placed in yards specially reserved for this purpose, and shall not be permitted to come either directly or indirectly in contact with cattle which have originated within the said tract, other than those provided for in Section 1 of this order.

(b) Cattle imported from the United States into the said tract destined for points in Canada outside thereof may, under compliance with the quarantine regulations, and with the provisions of the next preceding paragraph hereof, be permitted to pass without unnecessary delay through the said tract direct to their destination without further restrictions.

12. Any infraction of these provisions shall be deemed an infraction of the Animal Contagious Diseases Act and dealt with accordingly.

13. The Minister is hereby empowered to make such alterations in the boundaries of the quarantined area defined by this Order as may from time to time seem to him necessary or advisable.

### SPECIAL MANGE ORDER FOR BRITISH COLUMBIA.

*Authorized by Order in Council, June 8, 1911, as amended by Ministerial Order, July 5, 1911.*

Whereas the disease of mange exists among cattle throughout that portion of the Province of British Columbia which may be described as bounded by a line drawn as follows:—

Beginning at the mouth of the North Thompson River, thence north along the said river to the line between townships 22 and 23, thence easterly along the line between townships 22 and 23 to the north-west corner of township 22, range 11, thence south along the line between ranges 11 and 12 to the southern boundary of the railway belt, thence westerly along the southern boundary of the railway belt to the line between ranges 17 and 18, thence northerly along the line between ranges 17 and 18 to the South Thompson River, thence east along the South Thompson River to the place of beginning.

Therefore His Excellency in Council, in virtue of the provisions of Chap. 75, R.S.C., 1906, is pleased to make and establish the following regulations relating to mange in cattle in certain portions of the Province of British Columbia, and the same are hereby made and established accordingly.

#### REGULATIONS.

1. Cattle intended for grazing, feeding, breeding purposes or milk production, or any purpose other than immediate slaughter shall not be removed or be allowed to move out of the above described tract, nor shall any railway company accept or load any such cattle for shipment, unless they are accompanied by the certificate of a regular salaried Veterinary Inspector of the Department of Agriculture stating that they are free from disease and that they have been, within a period of thirty days immediately preceding the date of shipment, treated under the supervision of a regular salaried Veterinary Inspector and in a manner satisfactory to him, and that they have not, since being so treated, been exposed either directly or indirectly to the contagion of mange.

2. Cattle intended for immediate slaughter shall not be removed or be allowed to move out of the above described tract, nor shall any railway company accept or load any such cattle for shipment, unless they are accompanied by the certificate of a Veterinary Inspector of the Department of Agriculture stating that they have been examined by him and found free from mange or other contagious disease.

3. The Inspector at the point of shipment shall notify by telegraph the Inspector at the point of destination of the fact that the cattle are being forwarded.

4. Cattle found on inspection to be affected with mange shall not be removed or permitted to move out of the above described tract under any pretext whatever, except that by the authority and under the supervision of a Veterinary Inspector of the Department of Agriculture such cattle may be moved to points within the area for immediate slaughter.

5. Such cattle shall not be allowed to come in contact with other animals; shall be consigned direct only to such slaughter houses within the hereinbefore described tract as are provided with private yards and chutes; shall not be unloaded at any point en route, and shall under no pretext whatever be removed alive from the slaughter house or the yards and premises immediately connected therewith.

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6. When cattle are shipped for immediate slaughter they shall not be sold or otherwise disposed of for any other purpose.

7. All way bills and bills of lading accompanying shipments of cattle originating within the said tract, other than those shipped under the provisions of section 1 of this order, shall have plainly written or stamped across the face thereof a notification that the cars conveying such shipments are to be cleansed and disinfected after being unloaded and before being again used.

8. All cars conveying such cattle must bear a placard having clearly printed thereon, in letters not less than six inches long, the words 'cattle for immediate slaughter only.' Such cards shall in no case be removed unless and until the cars have been cleansed and disinfected after being unloaded at final destination.

9. Unless loaded through special yards and chutes, reserved exclusively for such shipments, all yards and chutes, weigh scales and other appliances with which they have been in contact shall be declared to be infected places and shall not again be used until cleansed and disinfected to the satisfaction of an Inspector of the Department of Agriculture.

10. Cars conveying such cattle shall be cleansed and disinfected to the satisfaction of an Inspector after being unloaded and before being again used.

11. Cattle for transit by rail through the said tract from one part of Canada to another, shall, at points where unloading is necessary, be placed in yards specially reserved for this purpose and shall not be permitted to come in contact with cattle which have originated within the said tract, other than those provided for in section 1 of this order.

12. Any infraction of these provisions shall be deemed an infraction of the Animal Contagious Diseases Act and dealt with accordingly.

13. The Minister is hereby empowered to make such alterations in the boundaries of the quarantined area defined by this Order as may from time to time seem to him necessary or advisable.

**SPECIAL ORDER GOVERNING THE MOVEMENT OF HORSES IN ALBERTA  
AND SASKATCHEWAN.**

*Authorized by Order in Council, August 19, 1911.*

Whereas, certain contagious diseases exist among horses in those portions of the provinces of Saskatchewan and Alberta which may be described as bounded by the International Boundary, the Rocky mountains and a line drawn as follows:—

A line from the Rocky Mountains along the northern boundary of the Stoney Indian Reserve to the line between ranges 5 and 6 west of the 5th meridian, thence north along that line to the line between townships 40 and 41, thence east along that line to the 4th principal meridian, thence south along the 4th principal meridian to the Red Deer River, thence along the Red Deer and Saskatchewan Rivers to the line between ranges 7 and 8 west of the 3rd meridian, thence south along that line to the International boundary.

And whereas it is advisable and in the public interest, with a view to eradicating the disease, that regulations be established for this purpose.

Therefore His Excellency in Council is pleased to make and establish the following regulations and the same are hereby made and established accordingly.

**REGULATIONS.**

1. No horse, except as hereinafter provided, shall be removed or allowed to move out of the said tract unless and until it has been examined by a Veterinary Inspector of the Department of Agriculture and certified to be free from contagious disease.

2. All horses which are intended to be removed or to be allowed to move out of the hereinbefore described tract, except as hereinafter provided, shall be inspected, and if found diseased or to have been in contact with diseased horses shall be dealt with in accordance with the provisions of the Animal Contagious Diseases Act and of the regulations made thereunder.

3. No railway company shall accept or load for shipment from or to any point either within or without the said tract any horses which have originated therein unless such horses are accompanied by the certificate of an Inspector of the Department of Agriculture, as above provided.

4. All cars and other vehicles used for the carriage of horses originating within the said tract shall be cleansed and disinfected to the satisfaction of an Inspector as soon as possible after being unloaded and before being used for any other shipment.

5. All way bills and bills of lading accompanying shipments of horses originating within the said tract shall have plainly written or stamped across the face thereof a notification that the said cars are to be cleansed and disinfected immediately after being unloaded.

6. The transit of horses through the said tract is hereby permitted subject to the following regulations:—

Horses for transit by rail through the said tract from one part of Canada to another shall at points where unloading is necessary be placed in yards reserved for their exclusive use, and shall not be permitted to come in contact with horses which have originated within the said tract.

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Horses imported from the United States into the said tract destined for points in Canada outside thereof may, upon compliance with the quarantine regulations and with the provisions of the next preceding section hereof, be permitted to pass, without unnecessary delay, through the said tract direct to their destination without further restrictions.

7. Any infraction of these provisions shall be deemed an infraction of the Animal Contagious Diseases Act and dealt with accordingly.

8. The Minister is hereby empowered to make such alterations in the boundaries of the quarantined area defined by this Order as may from time to time seem to him necessary or advisable.

**REGULATIONS RELATING TO MANGE.**

*By Order in Council dated 22nd July, 1911, in Virtue of The Animal Contagious Diseases Act, R.S.C., 1906.*

1. No animal which is affected with or has been exposed to the infection of mange shall be permitted to run at large or to come in contact with any animal not so affected or exposed.
2. Any Inspector may declare to be an infected place within the meaning of the 'Animal Contagious Diseases Act,' any place or premises where the infection of mange is known or suspected to exist.
3. No animal nor any portion or product thereof shall be removed out of any place so declared to be an infected place without a license signed by an Inspector.
4. Inspectors are hereby authorized to inspect any animals affected with mange, or suspected of being so affected, or which have been in contact with animals so affected or suspected of being so affected, or which have been in any way whatever exposed to the infection of mange, and may order any such animals to be collected, detained, isolated, dipped, or otherwise dealt with as may to them appear advisable.
5. The expenses of and incidental to the collection, isolation, seizure, or otherwise dealing with animals for the purposes of these regulations shall be borne by the owners of the animals and no indemnity shall be allowed to the owner in case of damage arising out of or resulting from such actions except as hereinafter provided.
6. Where a Veterinary Inspector so orders, no animal or animals shall be allowed access to any field, common, yard, stable or other place or premises where mange exists or has existed.
7. Premises on which animals affected with mange have been kept are to be dealt with at the expense of the owner, in a manner satisfactory to the Veterinary Inspector.
8. Animals affected with mange or which have been in contact with or in close proximity to animals affected with mange, may, on an order signed by a Veterinary Inspector, duly appointed under the 'Animal Contagious Diseases Act' be forthwith slaughtered and the carcasses disposed of as in such order prescribed, compensation to be paid to the owners of such animals if and when the Act so provides, but no Inspector shall order the slaughter of such animals without having first received, from the Minister, special authority to do so.
9. Before an order is made for the payment of compensation in any of the cases aforesaid there must be produced to the Minister of Agriculture a satisfactory report, order for slaughter, certificate of valuation and slaughter and certificate of cleansing and disinfection, all signed by an Inspector.
10. Any Inspector may declare any steamship, steam or other vessel, railway car or other vehicle on or in which animals affected with or suspected of being affected with mange are or have been placed for the purpose of transit, to be infected, and may also declare such vessel, car or other vehicle to be no longer infected after it has been thoroughly cleansed and disinfected in accordance with his instructions.
11. Every yard, stable, cow shed, outhouse or other place or premises, and every wagon, cart, carriage, car, or other vehicle, and every utensil or other thing infected or suspected of being infected with mange shall be thoroughly cleansed and disinfected by, and at the expense of the owner or occupier in a manner satisfactory to an Inspector.