

administered to a horse, twice a day for some sixty-four days. This extract was concentrated down until one cubic centimeter was approximately equivalent to one gramme of the dried fern. The usual daily dose was two thousand cc., but one day as high as five thousand five hundred cc. was administered. In all the animal received the equivalent of about two hundred and ninety pounds of fern, during which time he was only fed clean hay and was not allowed any exercise. No symptoms of bracken poisoning were noted, notwithstanding the fact that this animal had consumed, in the form of an extract, one hundred pounds more than the amount of dried fern necessary to kill experimental horse No. 3.

The disease as it occurs on the average farm in British Columbia is brought about in the following manner:—

Bracken (*Pteris aquilina L.*) is found in a large amount of the hay grown in the lower parts of the province, especially so on newly cleared or poorly worked farms, and it is on such farms that the disease is most common. During the severe weather the animals are confined for a long period, and none too liberal an allowance of hay given each animal, the result being that horses that otherwise would leave the bracken in their mangers are forced to eat it. (We have never seen an animal eat green bracken, and as a general rule horses do not eat dried bracken unless forced to, except greedy horses that eat their bedding, which often consists of fern rejected out of their hay.) The affected horses in nearly all cases received but little else than hay in the shape of food; where animals were given plenty of hay and roots, with occasional feeds of bran and oats, no trouble of this nature occurred. In this connection it may be remarked that no cases were reported in the city stables. While it is evident that a small amount of bracken can be eaten with impunity, large amounts coupled with unhygienic surroundings and lack of variety in diet will bring on the trouble.

Though the cause of this disease had not been definitely established heretofore, veterinarians have been quite successful in treating the malady if they were called early enough, and when at all possible farmers are strongly advised to summon such professional aid as is available.

*Symptoms.*—Usually the first indication of trouble noticed by the owner is an unsteady gait upon taking the animal out to water. The appetite is usually good. Animal inclined to constipation. Eye congested. Flanks tucked up. Nervousness. In the later stages if the head is raised the horse may fall. Stands with the legs spread and has a distinctly intoxicated look. Greedy horses are most liable to attack.

*Treatment.*—The treatment recommended by Dr. S. F. Tolmie, of Victoria, B.C., who has had a great deal of experience with such cases is as follows:—Remove all ferny hay and bedding. Administer a good brisk purgative, such as: Barbadoes aloes seven drachms, calomel one drachm, and ginger one drachm. Half-ounce doses of potassium bromide twice a day in the feed or drinking water. One to two drachms of potassium iodide three times a day is recommended. Give medicine in the feed or drinking water or with a syringe. Feed laxative food such as bran mash and carrots. Give enemas if necessary. When animal is very groggy place in slings with extreme care, avoiding excitement as much as possible. Tie with guy ropes on both sides, in front and behind. Slings should be applied so that the belt presses lightly on the abdomen when the animal is standing erect, but so that on the least flexion of the joints support will be given. In some cases cold packs to the head are recommended. Recovery after this form of treatment is the rule, but if begun too late, losses will occur. Care is needed in giving medicines to avoid unnecessary excitement as rough handling will invariably aggravate the symptoms.

To the farmer who is unable to secure professional aid we would suggest the following treatment:—First remove all ferny hay and bedding. Give a quart of raw linseed oil, taking especial care that none falls into the lungs. Give good clean hay, warm bran mashes and roots. The horse should be kept as quiet as possible, owing to