

It is concluded to be not improbable that bracken contains a small amount of a poison which is able to accumulate in the system and which requires a certain time to produce its full effect, after which severe illness may begin in an explosive manner, possibly some weeks after the poison has been withheld. It seems probable from practical observation that individuals vary in susceptibility, since some cases develop later than others in the same herd; some animals on the same pasture even seem to be highly resistant, and may not show the least sign of illness, while others are dying around them. It is at least possible that the former animals have acquired resistance by a natural process of immunization, as may happen in the case of poisons of the ricin class, and only those succumb which have too brusquely and continuously fed upon the poisonous substance, with the result that they are fatally attacked before the acquired resistance can establish itself. The article concludes that no time should be lost in changing a herd showing symptoms of fern poisoning on to pasture containing no fern.

Hadwen and Bruce (1920) (see abstract in *Experiment Station Record*, Oct., 1920, p. 471) record the results of their observations on the results of the consumption by horses of common bracken (*Pteris aquilina*) on the Pacific slope of British Columbia. Feeding experiments were made with the dried fern. From these the authors concluded that it can be assumed that an addition to the daily diet of about 6 lb. of dried bracken will kill a horse in about a month.

W. E. Lawrence (1922) ("Principal Stock-poisoning Plants of Oregon," Station Bull. 187, Oregon Ag. College), dealing with the common bracken-fern of that State (*Pteridium aquilinum pubescens* Underw.), states that the symptoms known as fern-staggers in horses are undoubtedly more common than any other trouble caused by poisonous plants in western Oregon. The trouble is confined almost entirely to horses, though there are occasional reports that cattle have been poisoned by this fern. It is noteworthy that in these last two countries, both on the Pacific slope of North America, the mortality should be caused by the dried fern fed as an impurity in the hay, the difficulty being in many localities to harvest the hay without contamination with much bracken. Ferny hay is usually rated dangerous when it contains about one-third of the common bracken. It usually requires about a month of feeding upon ferny hay to cause fern-staggers, which is most common in dry years. Horses are known to acquire a taste for the fern after the initial dislike has been overcome, at which stage even bedding with fern must be discontinued, for the horses will then eat the bedding.

Mr. C. C. Empson, when Stock Inspector for the Nelson District, assured the writer that fern poisoning in cattle was prevalent in his district in the winter, when the young fern is coming through the ground from March until June, especially in the latter month, and even as late as September. The symptoms he records are gradual emaciation and anæmia, the animals being almost bloodless when killed or when they die; and they pass a good deal of blood up to the time of death. A beast will acquire a taste for the fern, and even if put on to good grass will return to the fern if it is possible to do so. The droppings are often mixed with blood-clots. After a burn cases are more prevalent, and it is very difficult to pull cattle round when once they are badly affected.