

We have done no tests with Diazinon against the rosy apple aphid, the pear psylla, "cat facing" bugs, or cherry fruit flies, but results from elsewhere indicate that Diazinon is very effective in these cases.

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## TICK PARALYSIS IN CATTLE IN BRITISH COLUMBIA IN 1957<sup>1</sup>

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Several serious outbreaks of tick paralysis in cattle were caused by the Rocky Mountain wood tick, *Dermacentor andersoni* Stiles, in the Nicola-Kamloops area of British Columbia in the spring of 1957. These were favoured by prolonged tick activity during a late spring, and by lack of, or inadequate, spraying of animals with BHC. Several rain showers also served to weaken residues that originally may have been sufficiently strong to afford normal protection from the ticks.

The first outbreak occurred on April 10 at the J. Lauder ranch, Merritt. Three hundred yearling cattle, which had not been bothered by ticks during the past three years and hence had not been sprayed, became infested with clusters of several dozen engorging ticks per animal. Ten were paralyzed in the field; three of these died. The remaining animals were rounded up and sprayed the following day with BHC at the recommended rate of 4 ounces of wettable powder (Ortho BHC 10 Wettable, 10 per cent gamma

isomer; California Spray-Chemical Corporation, Portland, Oregon) per gallon of water.

On April 19, at Drew's ranch, Stump Lake, 32 yearlings in a herd of 118 became paralyzed. The herd, which had been sprayed with BHC wettable powder (Ortho BHC 10 Wettable) at 2 ounces per gallon of water two weeks previously, was resprayed; and stricken animals were deticked in the field and each given 600,000 units of penicillin to safeguard against pneumonia. Seven animals died.

The following day a large outbreak was reported by the Nicola Stock Company at what is known locally as the Saxon Field, about six miles up Quilchena Creek. This area has been heavily infested with ticks for many years, and in 1944, in a derris-sprayed herd of 1,230 yearlings, 400 were paralyzed and 50 were lost. In 1957, the herd had been sprayed with BHC, but at only  $\frac{1}{2}$  ounce of wettable powder (Ortho BHC 10 Wettable) per gallon of water, resulting in little residual protection. When the writer visited the area on April 21, nine cowboys were searching some ten square miles

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Some of 120 cattle that were paralyzed by ticks while being held overnight for treatment with BHC.

of rangeland for 200 paralyzed animals. Many of the cattle had collapsed in creek bottoms and underbrush and were suffering from exposure. The more advanced cases were completely immobilized; some had already been attacked by magpies and coyotes. Others were able to sit up. Their behaviours varied from glassy-eyed helplessness to complacency. As they were discovered the engorging ticks were combed off or doused with diesel oil. Most of the animals recovered by the following day, and only about 30 were lost. The remaining 500 unparalyzed but heavily infested animals were rounded up and driven four miles to the nearest corral. By next morning, when equipment was assembled for BHC spraying, 120 of these had become paralyzed. All these recovered completely although some were still unable to walk steadily two days later. Two were drowned while attempting to drink at a nearby lake. In addition to the total animal losses, the owner suffered losses from animal shrinkage due to movement

and lack of food, and in wages for manpower.

Another outbreak occurred at the W. Davis ranch at Mammoth Lake on April 26, when 14 yearlings in a herd of 70 became affected. All recovered after an emergency treatment of coal oil and crankcase oil, followed by a BHC spray. This was the first time that this rancher had cattle paralyzed by ticks during his thirteen years of ranching in this valley.

### Summary

In 1957, four outbreaks of paralysis occurred in cattle from attacks by the Rocky Mountain wood tick, *Dermacentor andersoni* Stiles, in the Kamloops-Nicola districts of British Columbia. In herds of 300, 118, 700, and 70 yearlings, 10, 32, 320, and 14 animals respectively were paralyzed, with losses of 3, 7, 30, and 0 respectively. The outbreaks were favoured by a combination of prolonged tick activity and insufficient protection from BHC sprays due to showery weather and inadequate dosage.