

# Low temperatures blocked late blight epidemic in '62

**L. C. CALLECK**  
Research Branch, Experimental Farm  
Weather conditions during the 1962 growing season were very conducive to the development and spread of late blight of potato.



L. C. CALLECK

During the July - September period a measurable amount of rain fell on 44 days to give a total of 16.38 inches. In addition, there were 11 days on which trace amounts were observed. This precipitation was exceeded but once in this area, the July - September period of 1942 having had a total fall of 20.25 inches. It was also a very humid season, a mean of 86.4 per cent being recorded for the three-month period.

This mean was considerably higher than normal. Had it not been for the generally low temperatures, the epidemic would have been more serious. The mean temperature for the period was 58.8 or about five degrees below normal.

The screening test of potato fungicides compared 13 products in 1962 and, under the severe

tion to the carbamate group. This fungicide contains both zinc and manganese ions in its complex molecule. The company has applied for registration and it may be expected that it will soon be competing with dithane M-22, manzate, and dithane D-14 on the market.

**NO ADVANTAGE**

Many growers spray with carbamate fungicide in the first part of the season and change to a copper fungicide in the second part of the season. The results of local studies made on this practice indicated that there was no advantage in splitting the schedule in this manner.

In the three years of this investigation, a full program of carbamate spraying gave a mean gain of 43.8 bushels of No. 1 tubers per acre over the split type programme. The loss from

tuber rot was lower where the straight schedule was followed. A high gallonage sprayer (120 gallons per acre at 375 pounds pressure) was considerably superior to a low gallonage sprayer (40 gallons per acre at 80 pounds pressure) in controlling late blight under the severe conditions encountered here in 1962. It was also demonstrated that, with both types of sprayer, disease control was improved by the addition of drop nozzles to the boom.

A sodium arsenite product at one gallon per acre, Cyanamid at three gallons per acre, and Reglone at 1.5 quarts per acre gave good kill of potato tops and were of equal value in tests made here in 1962.

In Prince Edward Island, carelessness in the use of arsenite top killers has resulted in

a heavy annual toll of cattle. In 1961, for example, over 70 head were lost. By means of press and radio bulletins, instructions were given on the safe handling and use of this type of top killer during the past season. We hope that the sharp drop to only four cows fatally poisoned by 1962 has been brought about by this publicity campaign.

Reglone is non-poisonous but its high cost is a deterrent against its general acceptance. At \$19.50 per gallon the cost per acre is \$7.50 or considerably higher than the approximately \$2.00 for arsenicals.

**MOTOR REWINDING & REPAIRS**  
**Storey Electric Ltd.**  
136 Prince St., Charlottetown  
DIAL 4-7341  
for 24-HOUR SERVICE

## YOUTHFUL EXHIBITOR SHOWS CHAMPION HEREFORD AT ANNUAL FAIR

# Alfalfa replacing clover; as widely grown as hay

By W. N. BLACK  
Since the introduction and establishment of alfalfa on Experimental Project Farms in the province, this deep-rooted legume has increased in popularity and has replaced a good percentage of the early red and alsike clover formerly utilized in standard seeding out mixtures. With the introduction of new winter-hardy varieties, alfalfa is now widely grown as a hay crop due to its high yields of very nutritious forage. Alfalfa has also gained in popularity due to its drought resistance and nitrogen fixing qualities. While soil conditions were a reaction, spoor satisfactory for the establishment of alfalfa in Prince Edward Island, plant growth in many sections of the province is most unsatisfactory, and the chlorotic appearance of the foliage indicates an improper balance of plant nutrients in the soil.

In 1960, plant food deficiency studies in alfalfa were initiated at the Monticello and Urbenville Experimental Projects.

The study comprises 12 treatments each of borax, superphosphate and potash. Each treatment is replicated four times in randomized block design and the study continues over a four-year period. Vernal alfalfa was seeded alone, at the rate of 15 pounds per acre by means of a Brillion Seeder in the spring of 1960. No nurse crop was seeded with this legume and weeds were largely controlled by a single 2,4-DB spray.

The alfalfa crop was not harvested during the year of establishment.

An analysis of yield data in 1961 showed respective treatments of boron, phosphorus and potassium, applied both in 1960 and 1961, having no significant effect on alfalfa production. No marked deficiency symptoms were observed in the crop grown on either soil type, namely, the Charlottetown and Exmouth soil series.

Only minor injury was sustained by the alfalfa crop in the Monticello during periods of freeze-up. At Urbenville, injury to alfalfa was severe and no yield data were obtained in

1962. A heavy aftermath followed the July 25th harvest of the alfalfa crop at Monticello and yields were recorded for the second time September 24th. Boron deficiency, as indicated by a distinct reddening of the alfalfa foliage, was observed in a few plants in the untreated check plots in reps. 1, 2 and 3 at the time of the July harvest. False blossoms were also in evidence. Plots which had received varying amounts of borax annually, namely, 6.25, 12.5 and 25 pounds per acre produced normal alfalfa plants as did plots receiving a total of 25, 50, 75 and 100 pounds of borax per acre over a three-year period but not more than 50 pounds in any one year.

With respect to phosphorus, alfalfa plants produced on untreated plots lacked vigor and the foliage was extremely pale. A weak, open stand of pale alfalfa plants was also obtained on those plots receiving but 60 pounds P205 per acre the year of seeding or the year following seeding. Alfalfa plants grown on plots receiving 30 pounds P205 per acre annually also exhibited deficiency symptoms. Where 90 pounds of P205 were applied per acre the year of seeding (1961), followed by a similar treatment in the spring of 1962, alfalfa was growing and the foliage had a rich green color.

With potassium, deficiency symptoms were exhibited in plants receiving less than 60 pounds K2O per acre annually. Chlorosis in the form of white or yellowish dots first appeared in a crescent arrangement around the tops of the leaflets. It later involved the entire leaf margins, followed by the death of the tissues which turned a yellowish brown. These deficiency symptoms were present on plants grown on the untreated check plots and on 18 of 64 plots receiving as much as 45 pounds K2O per acre annually. On plots receiving inadequate applications of potash, growth was definitely retarded.

Deficiency symptoms were most pronounced in the second crop of alfalfa cut September 24th. A trace of boron deficiency

was observed in plot 12, rep. 2, receiving 6.25 pounds of borax per acre annually. Where 12.5 pounds of borax per acre were applied annually no deficiency symptoms were observed. While no symptoms of boron deficiency were observed in plants on the untreated check plots the alfalfa which was rather pale and did not appear thrifty. Plots which received 50 pounds of borax in the spring of 1962, produced alfalfa plants the leaves of which showed a distinct paleness around the edges. This condition may have been due to excess applications of borax.

Phosphorus deficiency was a very evident in second cut alfalfa in 1962. On the check plots and those receiving as much as 45 pounds P207 per acre annually the crop lacked vigor, the foliage was pale and chlorotic was evident in varying degrees. Only one treatment, namely 90 pounds P205 in 1960 followed by 90 pounds P205 per acre in 1963 gave rise to healthy vigorous growing plants.

Potassium deficiency reached serious proportions in the second cut of alfalfa. Slight K deficiency was observed in the foliage of plants where annual treatments of 60 pounds K2O were applied. Even where 90 pounds K2O were applied in 1960 and 1962 K deficiency in the crop was apparent.

These studies indicate that annual treatments of B, P and K are required for the satisfactory production and maintenance of alfalfa.

This project will be continued in 1963.

**S.R. Johnston Ltd.**

**BUY WITH CONFIDENCE**

**If You Are Buying A NEW or USED CAR or TRUCK**

Buy Where You Save Dollars

We always have a large display of New or Used Cars and Trucks on our Lot. Come in and see us today. REMEMBER always buy your used car or truck from a new car dealer.

**S.R. JOHNSTON LTD.**

YOUR FORD DEALER

Sr. Peters Road Parkdale Dial 4-8548

**IN THE SPOTLIGHT**

**YARD LIGHTS SAVE WASTE!**

Burned buildings from overturned lanterns, injuries from falling in the dark and lost time from being unable to see to work are all waste.

If you're never used Yard Lighting when doing chores on dark nights, or for protection from prowlers, decide now to put Reddy Kilowatt to work on the job and learn what a great help and convenience he can be.

**MARITIME ELECTRIC Company Limited**

**Attention Farmers**

for **SEED Treatment**

See Your Following Local Dealer

The Seed Cleaning plants listed below have purchased seed treaters. Be sure to have your grain treated as well as cleaned.

Boates Feed Service	O'Leary
Alfred DesRoche	Miscouche
Ross Corner Feed Service	North Bedeque
Delaney's Feed Service	Kensington
Wilfred Pickering	Clinton
Glen Waddell	Cape Traverse
E. D. Ives & Co.	North Tryon
Everett Gallant	Oyster Bed Bridge
Canada Packers Ltd.	Charlottetown
Earl Ings	Mr. Herbert Fraser & Anear
D. A. MacRae	Montague
Russel White & Son	Heatherdale
Canada Packers Ltd.	Brookfield
Ira MacDonald	Summerside
Cardigan Feed Service	Covehead
Clark's Feed Service	Cardigan
J. C. Hancock	Mount Stewart
Acadian Producers Co-op	Murray River
Robert Cousins	Wellington
	South Baltic

Treating gives yield increase from two to four bushels per acre. Root Rot and seed disease as well as smut are controlled. If a treater is not available use a mercury dust as home.

Treat Seed Every Year...

**P.E.I. Department of Agriculture**

attention farmers in **ALBANY** and surrounding districts

**NOW IN STOCK FOR IMMEDIATE DELIVERY**

**TURNIP & POTATO FERTILIZER**

If you wish Credit please come in and make arrangements before delivery date. We carry a complete line of Fertilizers and Lime... and deliver direct to the field. For delivery from local plants, we require one days notice. For imported Fertilizers and Lime, ten days notice will be required.

**DISTRIBUTORS OF HAINES POTATO EQUIPMENT**

We are also the Island Distributors for Haines potato equipment, including seed cutters, seed treaters, graders, sizers, bin loaders, sprouters and harvesters. Specializing in seed cutters and treaters NOW.

**ERIC ROBINSON**  
ALBANY, P. E. I.

OFFICE—BORDEN 116-4 RESIDENCE—BORDEN 37-11

**Give Your Animals Brand Name Protection**

from **Hughes Drug Co. Ltd.**

When you buy animal products, the investment of a few extra pennies to give your herd and flock the protection only the best products afford is a wise one. It pays in immediate results — it pays in future profits—to buy Famous Brand products known to one and all for quality and dependability. These are the products you get at HUGHES DRUGS — at money-saving low prices.

"Your Dollar Buys More at the Hughes Drug Store"

**HUGHES DRUG COMPANY LIMITED**

150 Queen St. Charlottetown Dial 4-5545