

POTATO

SEED TREATMENTS

IN 1956

By William G. Hoyman¹

Antibiotics and other materials were used for treating cut Sebago seed to determine their value in reducing blackleg. Each of the 11 treated and two nontreated lots (table I) consisted of 50 cut seed pieces replicated four times in a randomized plot.

No sprouts were showing when the seed was cut and treated on April 25, and some sprouts were just beginning to show when the

second cutting was done May 18. The seed cut April 25 was stored in burlap bags in the shipping room of the Potato Research Center, East Grand Forks, Minn. During the 23-day storage period the temperature varied between 40 and 65 degrees F. and the range of relative humidity was 42 to 80 percent.

All seed cut April 25 appeared to be in good condition May 18, except that treated with the wax emulsion

TABLE I.—Potato Seed Treatments And Their Effectiveness In Reducing Blackleg.

Treatments	Dates cut and treated	Percent blackleg
Dip treatments		
Wax emulsion containing 0.25% catechol and 1% Dowicide A.....	4/25	50
Agrimycin, 200 ppm ¹ —Parzate, 1 pt./30 gal.....	4/25	3
Wax emulsion containing 0.25% catechol and 0.02% streptomycin nitrate.....	4/25	1
Roccal, 10%, 1 gal./100 gal.....	5/18	5
Roccal, 10%, 1 gal./100 gal.....	4/25	7
Agrimycin, 200 p.p.m.....	4/25	6
Mercuric chloride, acidulated, 4 oz., 1 qt./25 gal.....	5/18	.5
Semesan Bel, 1 lb./7.5 gal.....	5/18	.5
Mercuric chloride, 4 oz./25 gal.....	5/18	1
Dust treatments		
Agrimycin, 1,000 p.p.m.....	4/25	13
Streptomycin nitrate, 500 p.p.m.—Captan, 7.5%.....	4/25	2
No treatment		
Check	5/18	7
Check	4/25	18

¹Parts per million.

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containing catechol and Dowicide A. Approximately 33 percent of the cut surfaces of this seed had not suberized.

Pyrophyllite was used as the diluent for the two dust treatments and each was applied at the rate of 1.5 pounds per 100 pounds of cut seed. Each of the nine dip treatments was for one minute. Seed cut May 18 was treated in the morning and planted the same day along with seed cut Apr. 25.

The emergence counts taken on July 5 indicated no treatment caused a delay in growth. Blackleg readings were made July 5 and 17, Aug. 6 and 24, and Sept. 4. The results indicated

the three treatments containing mercury were the most effective in reducing this disease, followed by the two materials containing streptomycin nitrate.

Summary

Eleven potato seed treatments were used on cut Sebago seed in 1956 to evaluate their effectiveness in reducing blackleg. Acidulated mercuric chloride, mercuric chloride, Semesan Bel and a material containing catechol and streptomycin nitrate were the most effective dip treatments. The most effective dust contained streptomycin nitrate and Captan.

Costs and Returns

FROM BARLEY AND FLAX

In the Red River Valley

By Norman Ulsaker¹ and Theo H. Ellis²

Farmers in the Red River Valley face many new problems. Mechanization of production has been adopted rapidly. Weed sprays and commercial fertilizer are becoming important in crop production. Institutional factors such as acreage allotments and the Soil Bank have entered the picture. As a result of these and other changes, the farmer must make adjustments and must constantly examine alternative methods of production in the attempt to attain a higher and more stable income.

A serious obstacle to adequate farm planning is the lack of information on labor and material requirements for different crop enterprises and the uncertainty in

arriving at the best combination of enterprises.

As part of a research project conducted by the agricultural economics department, farmers were

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