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Potato Protection for Small Acreages
Michigan State University Extension Service
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Issued July 1937
4 pages

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JUL 8 0 1937

Potato Protection

FOR SMALL ACREAGES

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get that extra 40 bushels per acre

Potato Protection for Small Acreages

J. H. MUNCIE—C. B. DIBBLE

Small patches of potatoes suffer from the inroads of the same diseases and insects as do large patches. The protection of these smaller fields is important to the grower and the person who is going to eat the potatoes grown. Good potatoes are usually produced on healthy, vigorous

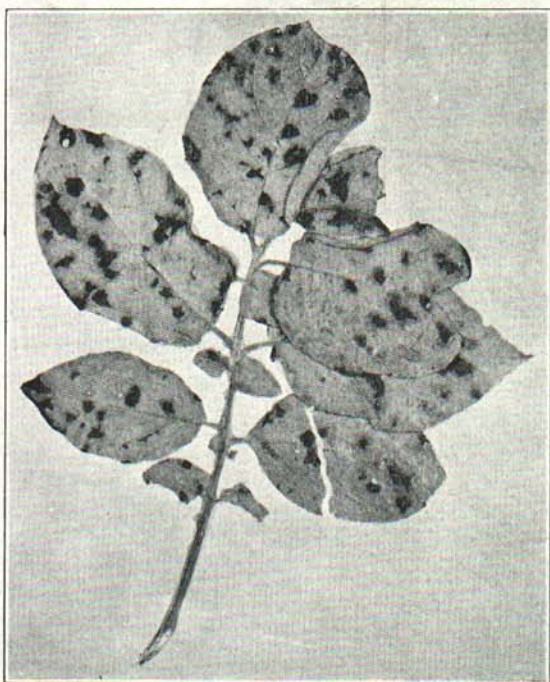


Fig. 1. Early blight makes brown spots on potato leaves.

vines that mature naturally. Better quality potatoes can be grown for use at home and to sell than are often offered to consumers of the Michigan product. The housewife will gladly pay more for clean, mature potatoes. Potatoes not protected with dust or sprays make poor seed stock. The yields from unprotected fields are usually decreased about 40 bushels per acre. The protection of potatoes from insects and diseases can be accomplished either by spraying or dusting. Spraying requires equipment that often costs more than the small acreage grower feels able to invest. When sprayers are available that will deliver 250 pounds of pressure their use is preferred. They will enable the grower to

secure adequate protection for the growing potato plants with a low cost.

Spraying

Spraying with 100 to 150 gallons per acre of 8-12-100 bordeaux, and calcium-arsenate, four to seven times each season will give good protection from leafhoppers, blight, striped potato beetles, flea-beetles and other leaf-eating insects. Hand sprayers as commonly used with low pressures seldom give effective protection.

Dusting

Protection with dry materials, dusts, is nearly as good as with wet sprays. There is no water problem to meet when dust is used and in



Fig. 2. Hopper-burn and enlarged leaf-hoppers.

the case of hand equipment the 30 to 40 pounds of dust is much easier to carry than 800 pounds of water for each acre.

Horse and tractor drawn dusters are being used but if water is readily available, the lower cost of the materials needed and the better job done by a good sprayer would usually lead a grower to buy and use a sprayer.

When traction dusters, horse or tractor drawn, are used the dust is prepared by the same formula as for the hand crank duster.

Hand Dusters

The crank type hand duster has become very popular in the last few years. The low cost of these machines, \$10 to \$25 and the short time necessary to cover a small patch of potatoes with good protection appeals to many small acreage growers.

For fields of less than five acres where engine sprayers are not available the crank type hand duster seems to "fill the bill". Two rows are dusted at a time. Most men can do an acre an hour and some do more. Good protection is readily secured by nearly everyone who has used these machines and is seldom attained with hand spraying equipment.

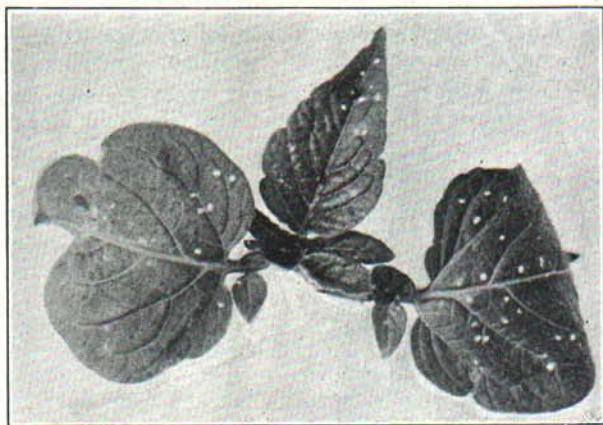


Fig. 3. Flea beetles eat small holes in leaves.

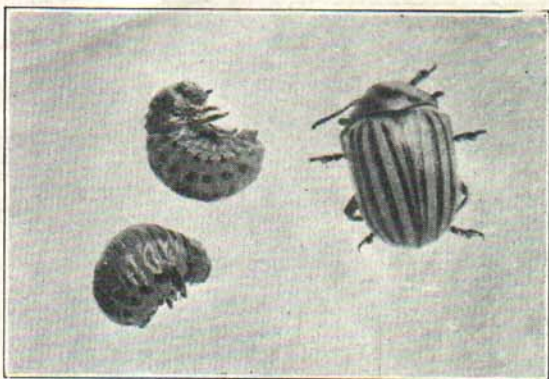


Fig. 4. Potato beetles must be controlled early.

How to Dust With a Crank Duster

1. Use copper-lime-arsenate dust.
2. Set nozzles to shoot at base of vine at 45 degree angle to roll the dust under the plants.
3. Apply 30 to 40 pounds of dust per acre.
4. Start early—as soon as most plants are out of ground.
5. Apply every 10 to 14 days or after hard rains.
6. Apply **only** when **air is quiet**, with or without dew.

Copper-Lime-Arsenate Dust

Mix thoroughly in a rotary mixer the following ingredients:

For 100 Pounds of Dust	For 20 Pounds of Dust
75 lbs. Hydrated Lime	15 lbs. Lime
20 lbs. Monohydrated Copper Sulphate	4 lbs. Monohydrated Copper Sulphate
5 lbs. Calcium Arsenate	1 lb. Calcium Arsenate

Several smooth stones in the mixer help the mixing operation.

Calcium arsenate is used for leaf eating insects and the small cost per acre seems to warrant its use in every application.

Ready mixed dusts can be purchased of most insecticide dealers on order but often cost much more than the ingredients for mixing at home.

CAUTION

1. **Keep mixed dust and monohydrated copper sulphate in tight dry containers as it absorbs moisture and cakes.**
2. **Do not get dust in wet or sweaty clothing on skin. Very serious burns may result. Wear high boots in wet vines.**

Printed and distributed in furtherance of the purposes of the cooperative agricultural extension work provided for in the Act of Congress May 8, 1914, Michigan State College of Agriculture and Applied Science and the U. S. Department of Agriculture, cooperating.

MICHIGAN STATE COLLEGE
OF AGRICULTURE AND APPLIED SCIENCE
East Lansing, Michigan
R. J. Baldwin, Director of Extension Work

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