LIME-SULPHUR NOT A GOOD POTATO SPRAY

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FROM BULLETIN BY
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Lime-sulphur dwarfs potato plants. From a spraying test made at this Station in 1911 and reported in Bulletin No. 347, the conclusion was reached that "lime-sulphur cannot replace bordeaux mixture as a preventive of potato diseases." A similar test made in 1912 strengthens this conclusion. The lime-sulphur treatments caused dwarfing of the plants as in 1911, did not repress but seemingly increased the damage from tipburn, did not keep off flea-beetles, apparently did not check late blight and rot, and resulted in greatly decreased yields as compared with rows sprayed with bordeaux mixture.

Plan of test. The rows under test were arranged in sections, as in other potato-spraying work at the Station. The first row in each of the five sections was sprayed with bordeaux mixture (6-4-50), the second row with concentrated lime-sulphur solution diluted to give the standard strength for foliage (1 to 40), and the third row was left untreated. Potato beetles were combated by the use of arsenate of lead, and were well controlled on all rows.

Troubles. Flea-beetle injury was slight, but decidedly least on bordeaux-sprayed rows; tipburn appeared in August and affected the checks and lime-sulphur rows badly, the latter much the worst, so that nearly all the plants on the lime-sulphur rows were dead several days before very many had died on the check rows, while the plants sprayed with bordeaux showed little of the trouble at any time; dwarfing of the plants treated with lime-sulphur was noticed by Aug. 20 and the difference in size grew more pronounced as the season advanced; late blight appeared very late in this field, the attack not being noticeable until most of the plants on the lime-sulphur rows were dead from dwarfing and tipburn, so that the subsequent rot did less harm on these rows than on the check rows owing to the few living blighted plants to serve as centers of rot infection.

Gains and losses. The check rows yielded at the rate of 240½ bu. to the acre, of which only 165 bu. were marketable owing to the large amount of rot. The lime-sulphur rows gave 39 bu. less of total yield than the checks, but because rot had not spread so fast gave a slight increase (6 bu.) in marketable tubers; and the bordeaux-sprayed rows outyielded the checks by 48 bu. in total product and 111½ bu. in marketable potatoes.

*This is a brief review of Bulletin 352 of this Station, on Lime-Sulphur vs. Bordeaux Mixture as a spray for potatoes, II, by M. T. Munn.