

An inexpensive potato late blight control using a combination of chitosan and copper fungicides

Lee A. Hadwiger, Dept. of Plant Pathology, WSU, Pullman

Due to a long interest in a biopolymer called chitosan, I was fortunate to learn of a processed copper compound with anti-algae properties that can be used in combination with chitosan.

Phytophthora infestans the causal agent of Potato Late Blight is more closely related to algae than to the true fungi. The testing of the combination of these two entities, in the field, greenhouse and laboratory incubator, has indicated a high level of efficacy in the control of late blight with a very low application rate. Thus the advantages of this treatment over the standard fungicides are based primarily on cost.

The efficacy has been evaluated in comparison with two fungicides, Bravo and Kocide, and found to be similar. However, the combination treatment utilized 1/40 th the rate commercially recommended for Kocide. Further, the leaf yellowing observed with Koide treatments and the leaf residue visible with Bravo were eliminated.

The suggested action of this combination is based on the properties of chitosan that make it a "sticker". The safety of the chitosan is indicated by its clearance for human consumption. The individual components of the treatment have EPA approval. Since the individual entities have regulatory approval it is anticipated that it should be available to growers in the near future.