

### **ADVANCES AND LACK THEREOF IN MANAGEMENT OF THRIPS IN POTATOES**

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Historically thrips were not thought of as a pest of potatoes. However, now there are thousands of acres of potatoes treated in Washington each year. We estimate that 10 to 25% of potato acres are treated depending on the year. The pest is most commonly a problem in longer season potatoes because the thrips have more time to build up to damaging levels. The actual damage or yield loss that occurs on a per acre basis is unknown. Thrips are only recognized as a pest of potatoes in the Columbia Basin of Washington and Oregon.

In Washington, the distribution of fields treated for thrips ranges from the southern Columbia Basin to north of Moses Lake. However, some areas of the state seem to perennially not have problems with thrips. The leading theory of why thrips have become known as a pest in potatoes is due to a shift in insecticides used on potatoes. Formerly, most potatoes in Washington were treated with carbamate (Temik, Furadan) and organophosphate (Monitor, dimethoate, Di-Syston, etc) insecticides. These products have efficacy against thrips. In the last ten years, product removals (e.g. Di-Syston), product use restrictions (e.g. Furadan) and new product introductions have significantly reduced the amount of these products used on potatoes. The widespread use of neonicotinoid insecticides, such as Admire, Platinum and Belay and highly selective insecticides such as Beleaf and Fulfill has allowed thrips populations to surge that formerly had been controlled by broad spectrum insecticides.

Due to its cryptic nature, lifecycle characteristics and recent appearance as a pest, virtually no research has been conducted on this species. The publication "*Integrated Pest Management Guidelines for Insects and Mites in Idaho, Oregon and Washington Potatoes*" by Schreiber, Jensen, Pike, Alvarez and Rondon contains the official recommendations for management tactics for potato insects in Washington, Oregon and Idaho. There are currently no control recommendations for thrips due to the lack of information on the pest. The one product that is commonly used for thrips control is Monitor, and it was removed from the market place in 2009/2010. There exists very little information on what products are effective against thrips now that Monitor is exiting the market place. Schreiber conducted a single successful efficacy trial in 2007. There are no nonchemical control methods recommended for use on potatoes.

Data are presented on 2011 research on thrips biology, efficacy and field biology.