
NORTHWEST CENTER FOR SMALL FRUITS RESEARCH

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Research Reporting Form

Please complete **this form** using the space provided, i.e., insert text into the form. Do not write your report on a separate sheet. Please refer to the “Research Reporting Requirements” instructions for deadline to submit.

1. a. Title: Weed and Insect Control in Cranberry Beds

b. Principal Investigators: Kim Patten

c. Cooperators:

2. a. Reporting Period Covered:

b. ARS Agreement Number (when applicable):

3. Progress Report

a. Abstract (1/3 to 1/2 page in lay person terms describing what you did):

b. Objectives:

1. Develop and assess new controls for perennial weeds in cranberry beds
2. Develop and assess controls for blackvine weevil in cranberry beds
3. Assess organophosphate alternatives for insecticide management on cranberry beds

c. Methods and Materials:

Objective 1- perennial weed control: Field trials were implemented across numerous growers' cranberry beds infested with yellow loosestrife (*Lysimachia terrestris*) and other weeds. Trials consisted of various timings of mesotrione, rimsulfuron and quinclorac applied alone and in all herbicide combinations. Data on efficacy, phytotoxicity have been collected.

Objective 2 – blackvine weevil (BVW): Research was conducted to assess acetamiprid, indoxacarb and novaluron as adulticides on several cranberry farms infested with blackvine weevil and strawberry weevil. Treatments were applied at the first sign of adult emergence and sweeping data collected 1 week and 1 year after treat (1 WAT and 1 YAT). Lab bioassays were conducted with adult BVW to assess duration of efficacy of field aged leaf residue of indoxacarb.

Objective 3- organophosphate alternatives: Trials were conducted on several growers beds to assess the efficacy of chemigation applied HGW 2Y45, HGW 86, acetamiprid, spinetoram, MBI-205 and novaluron on first and second generation blackhead fireworm (BHFV). Comparison to methoxyfenozide and Diazinon were made. Efficacy was assessed by sweeping.

d. Accomplishments / Progress Report (comparison of results with original goals):

e. Reasons why goals and objectives were not met (when applicable):

Only two sub-objective were not addressed. 1) Larvicide efficacy studies on BVW was drop in 2009 based on the lack of efficacy of any of the previous trials. Similarly combinations of best adulticides and larvicides were not initiated owing to a lack of effective larvicides. New trials will be implemented in 2010. 2) Whole farm treatments for BHFV using chemigation will be postponed until 2011, to allow for more time to assess the best non-OP treatment protocol.

f. Charts, graphs and/or diagrams:

g. Is this a final report?: No

NCSFR Research Reporting Form

4. a. Potential Significance to Industry:

Registration and use of indoxacarb for BVW control has prevent > \$1 M in crop losses in 2009 & 2010. The successful results of spinetoram for BHFV control represents the first truly functional non-OP chemistries that is effective via chemigation. Its use will finally allow for a success nonOP transition of the industry.

b. Other Funding Sources that you have applied to for this project:

WSCPR, BCCC, WSCC, CI

c. The NCSFR and commissions are trying to coordinate funding efforts. If the same project is submitted to multiple sources for funding, it needs to be clear if they are complimentary (i.e. each source is being asked for what percentage of the total project and give total budget for project) or redundant (the request is duplicated in the hopes that it will get funded): These source are complementary. Total Budget XXX
NCFSR (%), WSCPR (%), WSCC (%) and CI (%)

5. Scientific Citations: Provide a list of all scientific citations and papers that have been published as a result of the funding you received from NCSFR including peer, extension, and other publications.