

Research Proposal Submitted in Response to Request in **HB2427**

The following are summary points of research on Brassicacea, the mustard family which includes both *Brassica* and *Raphanus* (radish) species, proposed by Oregon State University. The outcome of this research will be to provide data for the legislative process on the production of canola for seed within the Willamette Valley and to determine if canola should be regulated differently than the other Brassicacea species. In order to conduct a valid scientific study with defensible results, all of the elements need to be included. Our null hypothesis for this work will be that if there are no significant differences in pest incidence or volunteer plant occurrence among radish, turnip and canola fields of similar size, then these crops should be treated equitably in any regulatory processes.

The success of the research will depend upon: 1) cooperation from the Willamette Valley Specialty Seed Association (WVSSA) and the Willamette Oilseed Producers Association; 2) availability of acres in the control area for canola production; 3) access to current interactive pinning maps and supporting data are required in order to select canola field locations and follow Brassicaceae production over time. Without these items the work cannot be done successfully and should not be done.

Objectives:

Objective 1. Conduct a comprehensive literature review of Brassicacea production.

Objective 2. Monitor 5 fields of canola, turnip, and radish over 3 years. Fields would be 50 to 100 acres in size (maximum of 500 acres within the control area with 500 acres outside of control area). In order to ensure research results, at least 8 fields of canola would need to be planted in each year. Fields have been lost in the past due to winter injury or poor stands and the additional fields are required to ensure that there are 5 suitable test locations. Similar sized canola, turnip and radish fields will be monitored for diseases, insects and volunteers in subsequent crops. In addition, *Brassica* specialty seed fields will be monitored for diseases and insects. Field margins and roadsides will be monitored for off field movement of canola, turnip, and radish. Monitoring will continue for all research fields for 3 years; thus in year 3, 45 fields will be monitored. This objective will require on-going cooperation from specialty seed growers for access to fields of radish, turnip and *Brassica* specialty seed crops.

Objective 3. Map the Willamette Valley for available acres to determine how many acres of Brassicacea species can be grown (including typical isolation distances) and still maintain the viability of the specialty seed industry. Mapping will require access to data held by the WVSSA. Data needed from the WVSSA includes number of acres of each variety and location of fields that have produced a Brassicaceae crop in the past 5 years and the 3 years of this project. The increase or decrease of Brassicacea crops during this period will provide insight into what the growth potential in acres of those crops is in the near future. In order to reduce the budget for this objective, we will need full cooperation from the WVSSA for use of the pinning map programs already produced by OSU, ODA and WVSSA.

Budget projection August 2013 – December 31, 2016 - \$690,000 includes 20% required by OSU

Distribution:

2013-2014 - \$240,000 (monitor 15 fields; initial surveys; collect mapping data; literature review)2014-

2015 - \$250,000 (monitor 30 fields; monitor roadsides and field perimeters; complete map)

2015-2016 - \$200,000 (monitor 45 fields; monitor roadsides and field perimeters; update map; complete report)