

**Vincent P. Jones**

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Director, WSU-Decision Aid System ([www.decisionaid.systems](http://www.decisionaid.systems))

**Program Areas:**

- Behavior and ecology of pests and natural enemies
- Biological control
- Population biology and modeling
- Pest management of insect and mites
- Development of decision support systems for agriculture

**Current Projects:**

- Evaluation of plant volatiles for monitoring and manipulating natural enemies to improve biological control. This project is evaluating how plant volatiles affect natural enemy behavior and control of secondary pests (aphids) on apple. It involves video analysis of behavior and predation in the vicinity of artificial lures as well as overall evaluation of distance effects and practical management considerations
- Expansion of the WSU-Decision Aid System (DAS) for tree fruit to cover the fruit growing areas of British Columbia in conjunction with the Okanagan Sterile Insect Release Program, AgCanada Researchers, and the BC Fruit Growers.
- Development of models for pests and natural enemies in tree fruit. We are currently in the process of validating 10 new insect models for pests, natural enemies, and honeybees. Five of these models are complete and the others should be complete and implemented within the next 4 years. Work on the honeybee model is being done in collaboration with Dr. Gloria DeGrandi-Hoffman, USDA Carl Hayden Bee Research Lab, Tucson, AZ. All models will be added to the WSU-DAS system upon completion.
- Development of a training system to help pest managers assess the effect of their management programs on codling moth and leafrollers as well as several natural enemies. This system will be based on demographic degree-day models that were developed in our laboratory and will interface models and historical weather data to provide quantitative examples of management impacts.
- Development of a decision support system for potato growers in Washington state. This is a collaborative project with Drs. Dave Crowder (WSU-Entomology), Carrie Wholeb (WSU Extension), Bill Snyder (WSU-Entomology) and potato industry scientists. This project will leverage the current infrastructure of the WSU DAS system for tree fruit to simplify the maintenance and development of the potato system.
- Evaluation of the factors affecting woolly apple aphid populations in apple orchards. This is a project by Robert Orpet, a graduate student working with Drs. Crowder and Jones, and is evaluating differences in organic and conventional orchards, cultural practices, pesticide spray programs, natural enemy efficacy, and sociological barriers of IPM implementation.