

TREASURE VALLEY PEST ALERT.NET: AN INTERACTIVE INTERNET BASED PEST MANAGEMENT TOOL

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Current Situation, Issues and Target Audience

Malheur County, Oregon and SW Idaho (Treasure Valley) contain one of the largest contiguous irrigated agricultural production regions in the Northwest. Irrigation projects support a diversified production, processing and marketing economy. In 1999 the farmgate value of crop production in Malheur County alone was \$86.4 million. A wide range of economically important disease, insect, and noxious weed pests exist within this complex agroecosystem. Pest management and crop protection issues are extremely important from economic, environmental and human health perspectives.

Sixteen percent of the cost of production on four high valued crops, alfalfa seed, onions, potatoes, and sugar beets are taken up by pest control inputs. These inputs include pesticides, custom applications, and management overhead. Further estimates indicate that in 1999 \$12.7 million was spent just in Malheur County for crop protection of these same four crops. These expenditures are most beneficial when used in the most timely and expeditious fashion. Environmental issues of watershed enhancement, endangered species protection, as well as applicator and farm worker protection set up a critical need for an improved area wide information network to support the integrated pest management system. Effective newsletters are published regularly by extension agents for onions, potatoes, forage seeds and other products and issues. Currently, growers and fieldmen do not have a reliable network to receive timely pest outbreak information. Establishing a pilot area wide information network has great potential to assist growers, fieldmen, consultants and commercial applicators in the entire region.

Proposed Plan of Action and Program Outcomes

Faculty from two universities (OSU and U of I) representing multiple disciplines, departments, and counties, are forming an Eastern Oregon SW Idaho Interactive Pest Alert Network Team. The team will develop an innovative information network to improve pest outbreak awareness, IPM decision making, and pest control efficacy. This network will be primarily computer based using Internet technologies (Figure 1).

Basic network components

- ☞ Website hosting service
- ☞ Part time webmaster and student assistant
- ☞ Interactive Pest Alert website with integration of pest outbreak bulletins, PNW Pest Management Handbooks and appropriate IPM links
- ☞ Promotion of the Network to encourage pest outbreak reports from observers and use of website by target audience
- ☞ Timely pest outbreak e-mail alerts to target audience
- ☞ Website and e-mail distribution list maintenance

Anticipated program outcomes

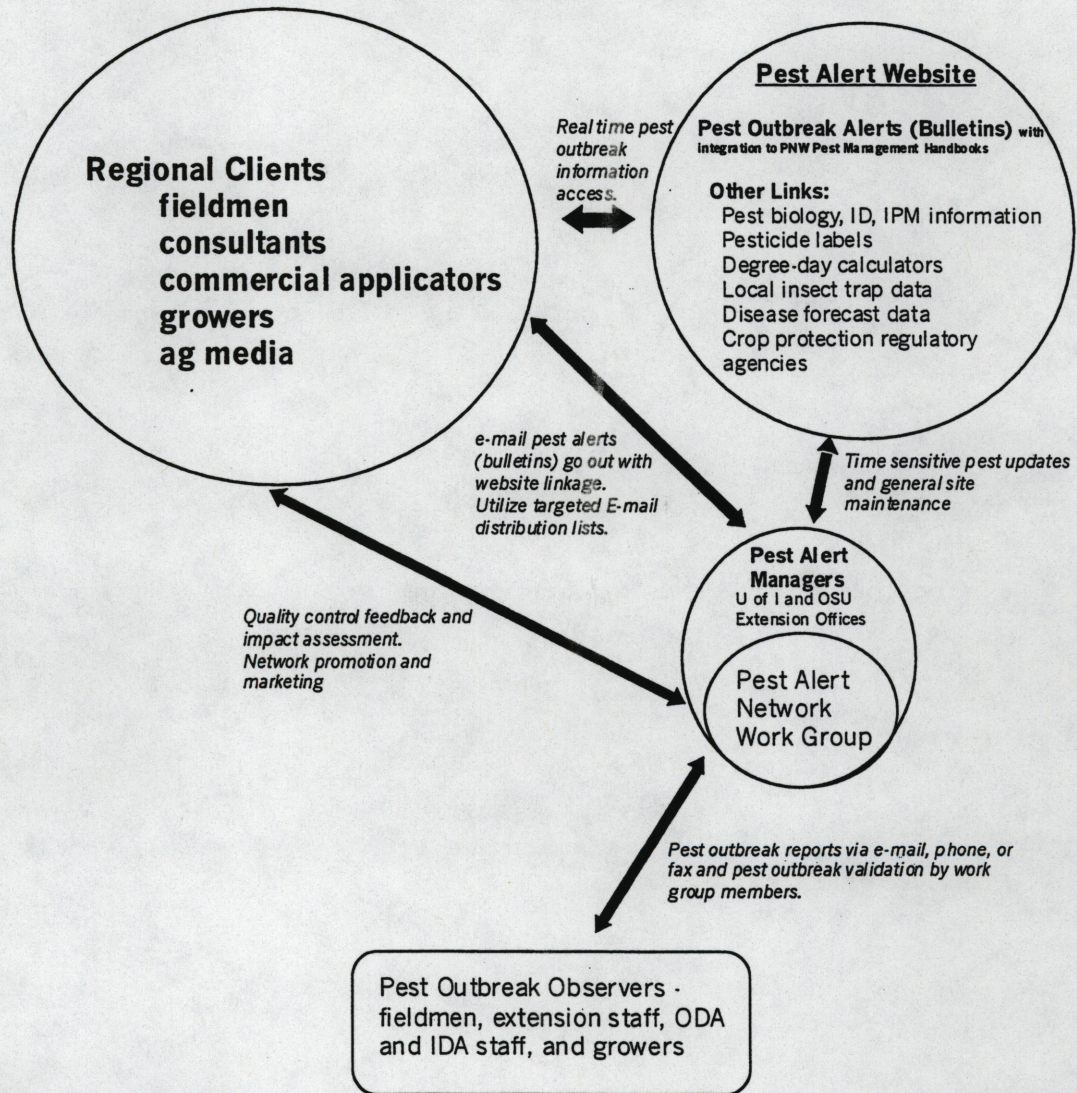
- ☞ Improved pest outbreak awareness by growers and fieldmen
- ☞ Better pest control actions with regard to timeliness of scouting and mapping of pest outbreak hot spots
- ☞ More effective pesticide treatments applied when and where they are needed,
- ☞ Reduced pest damage to crop yield and quality
- ☞ More judicious use of crop protection chemicals from an environmental and worker safety stand point

Documenting and Evaluating Outcomes

Use and impact of the Interactive Pest Alert Network will be evaluated following the first operating season 2001. Number of website hits will be one indicator of the utility of program. Size and growth trends of pest outbreak reports and pest alert e-mail distribution lists will be recorded. Improved control of specific high priority pest problems will be evaluated including: *Late Blight* and *Green Peach Aphid* in potatoes, *Downy Mildew* in onions, *Codling moth* in apples, *Lygus Bug* in alfalfa seed, and *Cereal Leaf Beetle* and *Jointed Goatgrass* in small grains. Pre and post season e-mail surveys will be conducted to document effectiveness and impact of the Interactive Pest Alert Network to target audience. Changes in pest awareness, management practices and behaviors will be monitored.

Figure 1. Network Conceptual Flow Chart

Treasure Valley Interactive Pest Alert Network



Cooperators

