



Utah IPM Program

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IPM Program

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USU IPM Pest Advisory Program

The IPM pest advisory program includes weekly pest updates which are free subscription-based newsletters that provide commercial growers and homeowners with pest alerts, site-specific treatment timings, pest biology, and control recommendations. The ultimate goal is to keep pesticide applications at a minimum. The advisories are delivered as a pdf in an email, and can also be browsed online or accessed through a keyword search.

We offer pest advisories on 4 topics: ornamental landscapes (4,000 subscribers), turf (3,800 subscribers), fruit (6,000 subscribers), and vegetables (6,000 subscribers). The information provided in the newsletters comes from weekly insect trapping and pest monitoring in 18 locations throughout northern Utah. In addition, many growers, Master Gardeners, and others submit pest monitoring results from their own farms.

In 2012, we delivered 24 advisories (email) covering fruits, vegetables, and landscape ornamentals, to a subscription base of over 11,000 subscribers. The impact of the program has been very beneficial to growers and homeowners in the state and has advanced the use of IPM in the state. We surveyed subscribers in 2012 and found positive improvements since 2008:

- pest monitoring has increased by 134%
- the use of pheromone traps has increased by 16%
- avoiding spraying during bloom has increased by 41%
- adoption of reduced risk and biocontrol products has increased by 1,400%
- use of organophosphate and pyrethroid products decreased by 45%
- reports of healthy plants increased by 34%

Most subscribers (86%) use the advisories as their sole source of pest management information, and 99% reported that they would retain their subscription.

The collage shows four distinct advisory pages. From left to right: 1. 'Tree Fruit IPM Advisory' with a focus on insect/disease activity and photos of fruit. 2. 'Small Fruits & Vegetables IPM Advisory' with a focus on insect/disease activity and photos of various crops. 3. 'Tree Fruit IPM Advisory' with a focus on insect/disease activity and photos of trees. 4. 'Utah State University Turfgrass IPM extension' with a focus on turfgrass monitoring and photos of lawns.

IPM in Agronomic Crops

The Utah IPM Program addresses needs in agronomic crops through the awards of mini-grant to county extension agents. Competitive mini-grant activities expand the reach of the Utah IPM Program and result in greater knowledge of stakeholders on local and regional IPM issues.

Two mini-grant projects had the following impacts:

- high school and FFA students learned about the benefits of biocontrol and helped to collect and disseminate \$17,500 worth of biocontrol agents to private land
- landowners learned about the most successful IPM methods for treating buckhorn plantain.



IPM in Specialty Crops

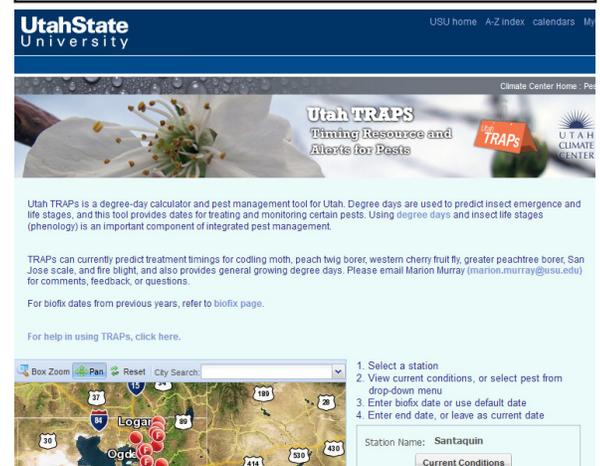
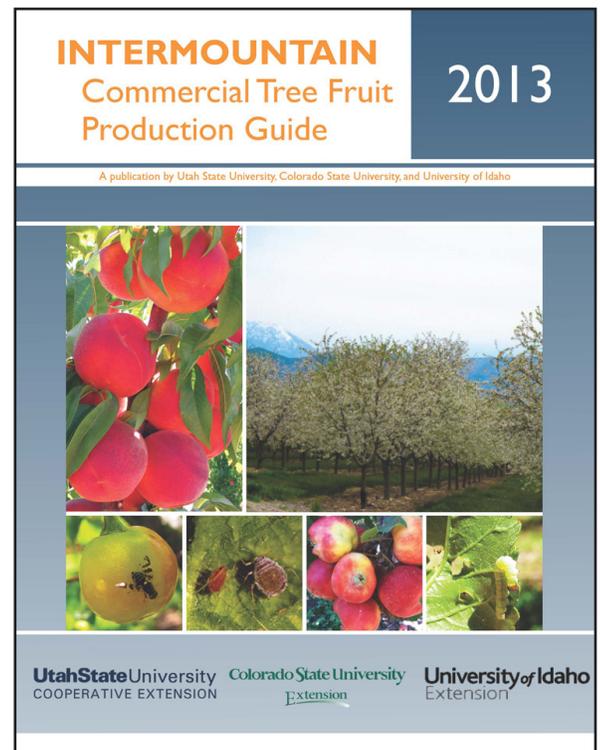
The intermountain tree fruit production guide has been very successful; we are on our third addition, with authors from USU, Colorado State University, and University of Idaho. The guide is unique in that it separates out reduced risk/organic products from conventional, and focuses on pest biology, monitoring, and thresholds.

Through a valuable collaboration with the Utah Climate Center, we developed the Utah TRAPs website in 2009. TRAPs stands for Timing Resource and Alert for Pests, and it allows users to decide whether or not to treat for certain fruit pests. The user selects a location on the map, picks the pest insect, and results provide management recommendations based on the temperatures of that site. In 2012, we added 38 additional locations to the map, and improved the user interface.

In winter 2012, we conducted a baseline IPM survey of vegetable growers, and found that 18% of the reported acreage considered themselves users of IPM. IPM growers had larger farms, greater farm experience, and mostly farm full-time. When asked to rank what might encourage IPM adoption, a decreased cost was first, and “education, workshops, and demonstrations” was third. Over half (53%) would value a vegetable spray guide. Results of this survey will be used to secure funding for a vegetable production guide, development of IPM demonstration sites, and establishing grower meetings/workshops. We have already established two small farms projects, “Western Small Farm-IPM Working Group” and “Pests of the West” in collaboration with several western states.

Results of applied research have led to increases in IPM practices and/or reductions in pesticide use, and this year’s research impacts include:

- a systemic insecticide, applied after egg-laying western cherry fruit fly females were present in tart cherry orchards, significantly reduced infestation as compared to non-systemics, and growers that followed this practice in 2012 saved \$493/acre;



IPM in Specialty Crops (continued)

- precisely timed applications of spinosad and lambda-cyhalothrin reduced European earwig peach fruit injury by 22% as compared to untreated trees, resulting in a yield savings of \$398/acre;
- densities of onion thrips were found to be highest at field edges and nearby weeds that harbor onion thrips will be investigated for their ability to serve as reservoirs of Iris yellow spot virus;
- a comparison of two mating disruption products for peach twig borer found that the newer option is not more effective than the grower standard option;
- a comparison of codling moth mating disruption puffers applied at 1 per acre in apple was found to be as effective as the grower standard mating disruption product, saving 1.5 labor hours/acre.



IPM Support for Diagnostic Facilities

The IPM group coordinates workshops and in-service training programs with the Utah Plant Pest Diagnostic Lab. The trainings and online tools and diagnostics conducted in collaboration improves Master Gardeners and Extension agents' ability to diagnose problems, and has reduced demands on UPPDL staff.

IPM in Schools

Educational programs include two one-day workshops for several school district staff, an educational poster on common school pests, 6 new school IPM fact sheets, and one professional talk. A collaboration was formed with Colorado State University IPM Program on an EPA School IPM grant. Through the training, written literature, and a new collaborative grant, the USU school IPM program was able to expand its successes in IPM adoption to one additional school district.



Consumer/Urban IPM

In 2012, the IPM Program gave 58 talks, produced 7 how-to videos, and 18 fact sheets. The IPM website was redesigned, and the site was reorganized by commodity (fruit, vegetable, landscape, field crops IPM) to improve user navigation. Optimal distribution of pest management information in residential environments has resulted in increased knowledge of our clientele, seen by the decreased number of inquiries on when/what to spray and general pest identification.

