



Utah IPM Program

# ANNUAL REPORT 2013

## IPM Program

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The major goal of the Utah IPM Program at Utah State University is to increase the use of sustainable pest management practices on agricultural, recreational, and urban lands in a way that provides economic benefit and human and environmental protection. The Program's and research activities present timely and accurate IPM information, providing residents of Utah the confidence to successfully adopt sustainable pest management practices.

Objectives of the Utah IPM Program are to:

1. Provide a core of IPM-dedicated resources that serves as a focal point and catalyst for effective IPM team-building and communication with all relevant groups in Utah.
2. Provide relevant, effective, and multi-disciplinary training and education on IPM concepts and technologies to Utah citizens.
3. Organize and facilitate collaborative IPM research and educational efforts.
4. Serve as the IPM resource center for Utah.
5. Support and facilitate communication on local, state, and regional IPM activities, including planning and reporting.

In 2013, the Utah IPM Program's education and applied research activities have resulted in changed human practices that reflect good stewardship and economic sustainability, including increased pest monitoring (134%), increased use of non-chemical control options (34%), increased adoption of safe pesticides and biocontrol options (1,400%), and decreased use of toxic pesticides (45%). These changes in behaviors lead to a safer environment. As toxic pesticide inputs decrease, soil and water quality increase. Humans are less exposed to pesticides and growers are better able to protect workers and sell healthy, pest-free produce.

# IPM in Specialty Crops

The USU IPM Pest Advisory service consists of newsletters and an online decision aid tool called Utah TRAPs (Timing Resource and Alert for Pests, [climate.usu.edu/traps](http://climate.usu.edu/traps)). During 2013, we delivered 16 fruit, 6 vegetable, 8 landscape, and 4 turf newsletters to over 20,000 subscribers. TRAPs is a website that allows users to decide whether or not to treat for certain fruit pests based on 45 locations in the state. In 2013, we added a login-based frost alert text message system, expanded forecasted data to 3 weeks, added an interactive map plus 3 weather stations, provided real-time access to weather data, and created a "one-stop" pest summary page.

In fall of 2010 and 2012, we surveyed users of TRAPs and subscribers to the Pest Advisory service. We found the following changes over time:

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

The IPM Program coordinated and conducted 4 research projects in 2013. Results of applied research have led to increases in IPM practices and/or reductions in pesticide use, and include:

- reducing nitrogen fertilizer on onions from 300 lb/acre to 120 lb/acre reduces onion thrips densities and transmission of iris yellow spot virus, saving growers about \$15-40/acre
- the discovery of the precise insecticide application timing for western cherry fruit fly saved growers \$493/acre
- precisely timed applications of spinosad and lambda-cyhalothrin reduced European earwig injury to peach by 22%, resulting in a savings of \$398/acre
- codling moth mating disruption Puffers applied at 1 per acre in apple was found to be as effective as the grower standard, saving 1.5 labor hours/acre and reducing pesticide inputs by 75%

The Intermountain Tree Fruit Production Guide was updated in 2013, with authors from USU, Colorado State University, and University of Idaho. The guide is unique in that it focuses on reduced risk/organic products, pest biology, monitoring, and thresholds. We surveyed recipients of the tree fruit production guide after 2 years of use, and found that 60% increased their level of monitoring, 48% used the "organic/reduced risk" recommendations, 73% learned more about pest biology from the guide, and 72% said they are more likely to adopt recommended IPM practices.



**Tree Fruit IPM Advisory**  
Utah State University Cooperative Extension  
Utah State University Extension, Winter 2013

**Announcements**

**SPOTTED WING DROSOPHILA UPDATE**  
Last season, SWD continued to be a major pest of tree fruit in Utah. The most recent update to the SWD program was published in the Utah State University Extension, Winter 2013. The update includes information on SWD biology, monitoring, and management. The update is available at [climate.usu.edu/traps](http://climate.usu.edu/traps).

**BROWN HORNED STINK BUG UPDATE**  
The brown horned stink bug (BHSB) is a pest of tree fruit in Utah. The most recent update to the BHSB program was published in the Utah State University Extension, Winter 2013. The update includes information on BHSB biology, monitoring, and management. The update is available at [climate.usu.edu/traps](http://climate.usu.edu/traps).

**Landscape IPM Advisory**  
Utah State University Cooperative Extension  
Utah State University Extension, Winter 2013

**What's in Bloom**  
This month, we have information on what is in bloom in Utah. This information is useful for growers to know when to monitor for pests and when to apply pesticides. The information is available at [climate.usu.edu/traps](http://climate.usu.edu/traps).

**In the News**  
This month, we have information on what is in the news in Utah. This information is useful for growers to know what is going on in the world of agriculture. The information is available at [climate.usu.edu/traps](http://climate.usu.edu/traps).

**Utah State University extension Turfgrass IPM Advisory**  
Utah State University Cooperative Extension  
Utah State University Extension, Winter 2013

**Turfgrass Management**  
The choice of turfgrass species isn't discussed very often as a turf management practice, but choosing species that thrive naturally in your location with minimal inputs can help to moderate disease and insect pressures.

**Focus On: Buffalograss**  
Buffalograss (*Bouteloua curtipendula*) is a warm-season grass that is native to the western United States. It is a hardy, drought-tolerant grass that is well-suited for use in arid and semi-arid regions. Buffalograss is a good choice for turfgrass in these areas because it requires less water and fertilizer than other species. It is also resistant to many common turfgrass pests and diseases.

**INTERMOUNTAIN Commercial Tree Fruit Production Guide 2013**  
A publication by Utah State University, Colorado State University, and University of Idaho

**Utah State University Cooperative Extension Colorado State University Extension University of Idaho Extension**

## IPM in Schools

Pest management in our most sensitive indoor environments—the schools where our children learn and our educators work—is outdated, reactionary and often relies on unwarranted, calendar-based pesticide applications made in and around schools. Successfully implemented IPM programs throughout the country have shown reductions in pest complaints and pesticide use in schools by 71 to 93%, with no long-term increase in costs.

In Utah, the Salt Lake City School District has shown great successes using IPM, including:

- \$28K per year savings on contracted pest control services
- No increase in full time staff.
- Minimal ongoing program costs of \$4K per year.
- Pest control equal to or better than prior pest management strategies
- Decreased pest numbers
- Major reduction of pesticide use indoors from monthly, calendar-based pesticide applications to only one ounce of pesticides used in 2011-2012.

In 2013, the Utah IPM Program held over 30 school assessments to determine pest levels and areas where improvements can be made. Employees in each of those



schools also received training in using IPM in schools. This training was well-timed, considering the fact that the Utah Legislature passed the “School Rule,” mandating IPM in Utah schools. The focus for the future will be to help schools to meet the goals of the new rule and to train Utah Health Department employees to enforce it.

## Consumer/Urban IPM

In 2013, the IPM Program gave 58 talks, produced 7 how-to videos, and 18 fact sheets. The IPM website was updated, and the commodity content (fruit, vegetable, landscape, field crops IPM) was expanded to include easy to understand information on pest management. 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.



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