

## **Maine IPM State Report**

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The UMaine Cooperative Extension IPM Program delivers pest management education, monitoring, forecasting, diagnostics, and individualized problem solving. In addition to commodity-specific outreach programs, the Insect and Plant Disease Diagnostic Lab and the newly instituted Tick ID Lab, provide local, statewide, and regional support. The efforts of the lab and program staff help a variety of commercial and non-commercial stakeholders with effective, efficient, environmentally sensitive, and safe pest management. The Extension IPM Program collaborates with the Maine Department of Agriculture, Conservation, & Forestry (ME DACF), grower organizations, other university departments, and other New England universities to serve the people of Maine and the region.

The different programs have reached a number of underserved audiences, including Somali farmers in central Maine, Maine's Native American tribes, and Maine's growing Amish population.

### **POTATOES**

The Potato IPM Program maintains 200 specialized insect traps, coordinates a statewide network of electronic weather stations, and surveys 100 potato fields on a weekly basis. A successful IPM program can reduce production costs through decreased pesticide applications and can save growers millions of dollars in potential crop losses through effective monitoring techniques. In 2017, the Potato IPM Program made over 1200 individual grower contacts and trained over 200 potato industry personnel at conferences and training sessions. Based on conference surveys, improved decision making resulting from training sessions equated to a savings of \$216,820. The economic impact of the Potato IPM Program's insect monitoring was \$8,834,260 in 2017.

### **TREE FRUIT**

Apples are the dominant tree fruit in Maine, with peaches a distant second. The main program components are the Maine Tree Fruit Newsletter (which covers horticulture, marketing and other topics in addition to IPM), the AgRadar apple pest and horticultural tracking and forecast system, a pest scouting cooperative subsidized by the Maine State Pomological Society, an annual full-day preseason IPM meeting, presentations at other meetings, and individualized telephone and field visit support. Observations from the scouting coop are shared with over 400 commercial and hobbyist growers through the newsletter.

In the year-end program survey, 100% of the 20 apple growers who participated in the scouting coop said that the visits were useful to their decision making. Ninety-two percent of surveyed growers said they had benefitted from an Apple IPM Program presentation or consultation, and 100% said that the newsletter had helped them with pest management decisions. On average, growers estimated that support from the Apple IPM Program helped them reduce pest damage losses by 31%, while also reducing production costs by an average of \$574 per acre. The Apple IPM Program had an estimated \$1.7 million impact on Maine's apple crop.

### **SWEET CORN**

The Sweet Corn IPM Program reaches over half of Maine's commercial sweet corn growers and two thirds of the acreage through farm scouting and the weekly growing season newsletter. The post-season survey indicated that 93% of growers receiving information from the Sweet Corn IPM Program were able to decrease production costs as a result. We estimate that the program has saved, on average, more than three annual insecticide applications over more than 3000 acres of sweet corn.

## **CRANBERRIES**

The Cranberry IPM Program provides monitoring for insect pests and online educational resources for growers. Through the IPM Program outreach, Maine cranberry growers gained an industry wide increase in annual yield of approximately 20-30%. In 2017, an estimated 70% or \$69,300 worth of cranberry yield was saved from an outbreak of black-headed fireworm and other emerging pests.

## **SMALL FRUIT**

Eight farmer volunteer sites are monitored by Extension IPM scouts each growing season and the pest management recommendations are delivered to over 65 growers statewide through weekly newsletter, e-mail, and blog updates. Outreach is also conducted through Small Fruit and Vegetable Field Day, Twilight meetings (8), and Vegetable and Small Fruit Schools (4). A recent focus has been field trapping and weekly reports on spotted wing drosophila. Additionally, we have worked with growers to adopt alternative strategies such as pest resistant cultivars, biological controls, and insect barriers. The year-end evaluation of growers indicate that an overwhelming (85%) modified their pest management practices as a result of the program and were able to reduce pesticide applications, some by as much as 50%. Most growers indicated an improvement in crop quality, and found that IPM has both reduced pesticide costs (up to \$100/acre) and improved crop profitability. The strawberry IPM program was recognized by the National Association of County Agricultural Agents as a national winner of the SARE Search for Excellence in Sustainable Agriculture Program.

## **HOME & GARDEN/PUBLIC HEALTH**

Through the continued outreach efforts of the Home & Garden IPM Program and the Tick Identification Program, we have significantly increased the number of direct contacts with the public regarding pest management options and the safe, judicious use of pesticides. The majority of these contacts resulted in behavioral changes in the form of better IPM decision making and the utilization of lower hazard management strategies

The Tick ID Program has allowed us to delve deeper into some of the vector-borne public health issues plaguing our state and region. In conjunction with the ID program, a tick website has been developed to increase public knowledge of tick biology, ecology, management, and personal protection. Outreach on ticks, mosquitos and bed bugs through multiple public speaking engagements and media interviews has also helped increase public awareness. Additional outreach has continued on a number of home and garden pests including Japanese beetles, white grubs, and brown-tail moth that can create significant economic hardships on property owners and managers

## **TRAINING & PROFESSIONAL DEVELOPMENT**

Training and professional development opportunities include an annual Maine Potato Conference, annual Maine Potato Pest Management Conference, annual Maine Apple Preseason IPM Workshop, Small Fruit and Vegetable Field Day and associated Twilight meetings (8), annual Master Gardener Field Day, annual Lowbush Blueberry Field Day, annual Apple Field Day, Vegetable and Small Fruit Schools (2), and an annual Tri-State Greenhouse IPM Conference. On-farm individual consultations to growers in multiple commodities were conducted to provide one-on-one training in pest identification and management. Dozens of pesticide education seminars and community outreach presentations regarding ticks, mosquitoes, bed bugs, and other emerging pest issues were also conducted.