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Stakeholder-Identified Priorities for Massachusetts Specialty Crop IPM 2019-2020

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Stakeholder-Identified Priorities for Massachusetts Specialty Crop IPM 2019-2020

The UMass Integrated Pest Management (IPM) team, funded through USDA-NIFA Extension Implementation Program, met with our specialty crop advisory group in Winter 2019 and 2020. Attendees (19) included fruit and vegetables farmers and agricultural service providers. At each meeting, time was allotted to evaluate and prioritize activities and goals for the project.

At the 2019 Advisory Council meeting, the EIP team suggested three main topic areas of Education, Research, and Expertise with the sub-categories of soil, pest, cultural practices, business and marketing and other. The intent was to identify topic areas of importance that growers wished to receive more education from the team, topics growers wanted the team to research, and areas of expertise underserved by the current team. Attendees were then asked to suggest specific topics under these sub-categories and, once compiled, attendees voted for their top two preferences. The list below summarizes voting from the 2019 meeting.

Educational Priorities	No. votes
Biological control	8
Pest management	7
Soil health	7

Other Education topics:

Soil fertility, drones for IPM, twilight fruit meetings, fruit nutrition, organic no-till, bird control in sweet corn, orchard floor management.

Research Priorities	No. votes
Variety trials vegetable disease resistance	5
Diversify cover crops for soil health	5
Emerging specialty crops for Northeast	4
Nonchemical weed management	4
Tree fruit IPM practices	3
Soil health, beneficial nematodes	3
Mitigation, adaptation to climate change	3

Other Research topics:

On-farm compost production, drones for pest monitoring, orchard floor management, beet and spinach field germination, organic pesticide efficacy trials.

Expertise Priorities	No. votes
Weed management	9
Organic weed management	5
Organic production practices	5
Biological control	4
Mechanical cultivation	4

Other Expertise topics:

Soil health, pest modeling, market development, business modeling.

Other comments from growers:

- Foster agricultural students or trainees for an internship program or a working/learning program on UMass farms
- Train new generations of crop consultants, IPM practitioners
- Produce flip cards with apple pests at different stages and life cycles
- Acknowledgement of loss of Extension positions over time
- Develop spray chart for small-sized applications
- Develop more connections with Extension via diagnoses and other services
- Publish handout on IPM to distribute at farm stands and other public points of contact

At the 2020 Advisory Council meeting, we distributed the list of our current objectives from our EIP project. Attendees were asked to indicate their opinion on whether to keep or delete the objectives. We also asked attendees to suggest new topics that could be considered for inclusion in the next proposal for EIP.

Objective: Improving IPM practices

Growers supported CONTINUED work on:

- Spotted wing drosophila
- Brown marmorated stink bug
- Spotted lanternfly
- Apple IPM
- Brassica IPM
- Organic pesticide efficacy

Growers supported NEW work on:

- Allium leafminer
- Spinach and lettuce downy mildew
- Swede midge
- Efficacy of biological and organic pesticides
- Blackbirds in sweet corn
- Vertebrate pests

Bacterial diseases
Phytophthora blight in cucurbits
Increased IPM on asparagus
Efficacy of mixing coppers with biologicals

Objective: Increase IPM implementation through training

Growers supported CONTINUED work on:

Training scouts
Mentor farmer training
Diagnostic support
Workshops and trainings for growers
Producing videos to demonstrate IPM techniques
Newsletters, fact sheets
Translation of publications into Spanish

Growers supported NEW work on:

Glyphosate alternatives for no/reduced till
Help develop course in Stockbridge School of Agriculture on IPM implementation
Develop 1-page pest sheets (ID on front, management on back) for Mentor farms
Have weekly pest call with growers and scouts (esp. for Mentor Farm program)

Objective: Demonstrate New Technology

Growers supported CONTINUED work on:

Digital planning and record keeping (smart phones)
Drones
Pest mapping
Weather stations

Growers supported NEW work on:

Irrigation management technology
Explore drones for spraying as well as monitoring
Develop information on small-scale economics

Specific Recommendations for Twilight Meetings

Climate change: impact on pests, warmer winters, dormancy, carbon sequestration

Irrigation Efficiency: drip irrigation in perennials, regulations, organic/no-till

Weed Management: id, tools, pesticide efficacy, longer winter workshop

Emerging topics for experienced growers

Objective: Development of Extension Expertise

Growers supported continued work on:

- Weed management
- Webinar and video production
- Business topics for decision-making

Growers supported new work on::

- Irrigation and drought management
- Climate change adaptation

Feedback on Mentor Farm* Program

- Extension provides great expertise on IPM strategies
- Participation in the program had significant impacts on farm practices
- Increased knowledge of pest biology and management
- Relies on notes obtained from participation to train new workers
- Knowledge gets passed down to new crew members without Extension's presence
- Planned Extension visits promote time set aside for scouting and learning
- Seasonal refreshers after 'graduating' would be helpful
- Visits from trained scouts were very highly valued

CHALLENGES:

- Increase visibility of mentor farmers to foster connection with other growers and farmer-to-farmer education.
- High worker turnover rate, so must re-train frequently

*Mentor Farms receive intensive, hands-on training for 2-3 growing seasons.

UMass Extension IPM Team

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