Vegetable Extension Program

Status: APPROVED

Project Director
Susan Scheufele

Start & End Date
2020-10-01

Primary Critical Issue
Sustainable Agriculture and Food Systems

Organization Project Number
Organization
University of Massachusetts

Accession Number
7002068

To Project / Program
"Vegetable Extension Program"

Fiscal Year
2021

In 2-3 sentences, briefly describe the issue or problem that your project addresses.

The UMass Extension Vegetable Program delivers research-based educational programming and conducts applied research to meet the needs of vegetable farmers statewide and to enhance the economic, human, and environmental health and sustainability of the vegetable industry in Massachusetts. This year, as the COVID-19 pandemic waxed and waned, our team continued to conduct virtual programming while also doing several in-person on-farm Twilight Meetings, and maintained a broad range of projects and activities and even increased our output in several key areas. Our success this year was due to our team’s dedication to our mission of serving our commercial growers and the people of the Commonwealth.

Briefly describe in non-technical terms how your major activities helped you achieve, or make significant progress toward, the goals and objectives described in your non-technical summary.

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In July, Hannah Whitehead was hired as a new Extension Educator III with expertise in vegetable production and pollinator health. This new hire brought the team back up to four full-time year-round staff members.

This summer we were allowed to hire students, which was not allowed under University COVID policies during 2020. We hired two part-time students who assisted with field research and farm scouting from June through August. One student was supported by funding from CAFÉ via the Summer Scholars program. This student, Jordan Smith, went on to pursue a fifth-year Master’s degree in Plant and Soil Sciences, and cited her experience over the summer working for the Vegetable Extension Program as a main motivator for pursuing this advanced degree.

We conducted a record number of research trials (10) at the UMass Crop and Animal Research and Education Farm with funding from grants, industry, the IR4-project, and grower support.

We made a concerted effort to increase our reach this year, through email and phone consultations (up 100 over last year) as well as farm visits (up 49 visits on 12 more farms compared to last year).

We had a record number of phone, email, text, and video chat consultations this year (N=222) after adding a new “Contact Us” section on our website and promoting it in our newsletter every week. These new modes of consultation allowed us to identify many new beginning farmers and others who were in need of assistance, or growers who we had not had contact with previously.

Results from an experiment on disease-resistant cucumber varieties was published in Plant Disease Management Reports, a peer-reviewed journal read by Extension professionals.

**Research:** 10 research trials were conducted at the UMass Crop and Animal Research and Education Center, South Deerfield, MA or on a collaborating commercial farm on the topics below. Results are shared with grower and Extension audiences through newsletter articles, Extension journals, and presentations.

- Evaluating Cucumber Varieties for Cucurbit Downy Mildew Resistance and Yield
- Evaluating Cucumber Varieties for Bacterial Wilt Resistance in a High Tunnel
- Evaluating Varieties of Spinach for Winter-Production and Resistance to Downy Mildew
- Reducing Damping-Off in Winter Spinach Production Using Cover Crops and Seed Priming
- Seed treatments for control of Cabbage Root Maggot in Radishes
- OMRI-Approved Fungicides to control Alternaria Leaf Spot in Broccoli
- New Fungicide Efficacy on Head Rot in Broccoli
- OMRI-Approved fungicides to Control Cercospora Leaf Spot in Swiss Chard
- Sentinel Plot to Monitor for Cucurbit Downy Mildew
- OMRI-Approved Insecticides to Reduce Wireworm Damage in Sweet Potatoes

**Regional Collaboration:**

43 Extension educators from across the Northeast region participated in weekly pest alert calls, sharing updates about activity of common pests and getting support identifying new and uncommon pests or production issues. This information is used to inform our weekly Pest Alerts column in our newsletter, Vegetable Notes. The group also shares information by email, and helps to facilitate priority setting and collaborative, regional grant writing.

This year our interim Vegetable Program Leader, Sue Scheufele, served as the General Chair of the New England Vegetable and Fruit Conference Executive Committee, overseeing planning and implementation of our regional biennial grower conference with >2,000 attendees.

**Program Sustainability**

**Professional Development:** Our team is dedicated to professional development and supporting staff to continue to pursue expertise. Staff participated in the following workshops and trainings:

- McKeag [21]
  - McKeag, L. Biodegradeable Mulch Meeting, UConn Extension. 11/18/20.
- **McKeag, L. Climate Adaptation Fellows weeklong workshop. Climate Adaptation Fellowship. 1/11/21.**
- **McKeag, L. NECAFS Annual Meeting. NECAFS. 2/17/21.**
- **McKeag, L. Dry Farming Collaborative Winter Meeting. Oregon State University. 2/25/21.**
- **McKeag, L. Ox Farm Packhouse Consultation. UVM Extension. 3/3/21.**
- **McKeag, L. Soil moisture sensor session for CAF. Climate Adaptation Fellowship. 3/23/21.**
- **McKeag, L. Guiding Resilience: 4-part Legal Workshop for Farm Service Providers. Farm Commons. 4/1/21.**
- **McKeag, L. Extension Climate Adaptation Meeting. UMass Extension. 5/6/21.**
- **McKeag, L. Climate Change Communication. National Extension Climate Initiative. 9/2/21.**
- **McKeag, L. Tilmor Cultivation Equipment Meeting. Brookfield Farm. 9/15/21.**

- **Whitehead (3)**
  - Soil Health Webinar, UMass Extension. Oct 8, 2021

- **Higgins (11)**

- **Scheufele (7)**
  - Soil Health Webinar, UMass Extension. Oct 8, 2021

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**Briefly describe how your target audience benefited from your project's activities.**

**Services:** We treated seed from 5 growers in five different states generating $490 in revenue through our [Hot Water Seed Treatment](#) service.

**Fundraising:** We raised $7,500 in sponsorships and $4,000 in donations this year, for a total of $11,500 in program funds.

**Grants Submitted:** 5 new grant proposals were submitted and 4 were awarded (totaling $571,933). Several of these represent new projects or collaborations with faculty at institutions we have never worked with before, and with industry partners.

Below are outlined several key outcomes and accomplishments from the past year.

**Education**

**96 on-farm consultations** were provided to 18 farms, with at least 166 crop observations made, over the 2021 growing season.

We **organized 15 workshops** for 1371 growers and agricultural service providers. The bulk of these workshops were presented virtually due to the COVID-19 pandemic but we were also able to host 3 on-farm Twilight Meetings across the state.

We co-organized the **Southern New England series of 4 virtual twilight meetings** in winter of 2020-21 with our Extension neighbors to the south, URI and UConn, on topics including vegetable pests of the year, winter spinach, greenhouse seedling production, and high tunnel fertility. Attendance was very good at these online, collaborative programs, with **869 total live attendees and 652 subsequent views** online...
36 growers and agricultural service providers attended food safety trainings delivered and organized by Lisa McKeag. This Produce Safety Alliance certification needed to be re-imagined for delivery online, and participants were very pleased with the quality of the program, here is some of the participant feedback: Lisa and Michael did an excellent job in doing this seminar, I got a lot out of it; Extremely helpful; Very clear and great clarifications; It was very helpful and we will make a lot of changes to improve our systems.

The New England Vegetable & Fruit Conference went virtual this year, and planning the online conference represented a major undertaking for our team, since Sue Scheufele is currently the General Chair of the Planning Committee. Transitioning the 3-day conference to an online format took considerable effort, but we look forward to good turnout during the 5-day online event in mid-December 2021.

Publications: Production of the New England Vegetable Management Guide was postponed this year due to the on-going COVID-19 pandemic and the canceling of the New England Vegetable and Fruit Conference where Guides are distributed. The NEVMG also exists as a website, which received 211,212 total and 178,795 unique page views between October 1, 2020-September 30, 2021.

The Vegetable Program website, ap.umass.edu/vegetable, is another critical place for stakeholders to access a wide range of educational materials including factsheets, project outcomes, resources, and access services. According to Google Analytics, there were 414,550 total page views and 356,373 unique page views originating from different machines/devices to this site between October 1, 2020-September 30, 2021. The Food Safety sub-section of this site was updated to reflect changes to the "Do I Need to Comply?" section and the site was visited 656 times by 540 unique users. This fall we established a new page on our website to host research reports, after several requests from fellow ag service providers and grower.

Briefly describe how the broader public benefited from your project's activities.

Our newsletter, Vegetable Notes, is arguably our most important output every year. It delivers timely information about weather, crop production practices, pest activity, and so much more to over 2,874 readers including commercial growers, Extension personnel, ag service providers, and home gardeners/consumers. This year, we published 26 issues featuring 6 new articles were published.

We published 1 new factsheets or other new resources for the website this year.

Comments (optional)

- Articles published in refereed publications (Published Article (News, Professional, Trade) (1)
- Grants Awarded and Submitted (Grant Submission or Other Funding Proposal) (5)
- New England Vegetable Management Guide - Online (Websites or Other Electronic Delivery) (1) - 178795 Participants
  - On farm consultation (individual Consultations and Site Visits) (96) - 25 Participants
  - Phone and Email Consultations (individual Consultations and Site Visits) (222) - 150 Participants
  - Presentations at Professional Conferences & Meetings (Presentation/Poster (Academic) (12) - 675 Participants
  - Regional Pest Scouting Network (Direct - Other) (1) - 17 Adults
  - Research Trials (Research Project (Applied Research) (10)
  - The New England Vegetable and Fruit Conference (Facilitated Group Meetings and Conferences) (1) - 606 Participants
  - UMASS Food Safety Program Website (Websites or Other Electronic Delivery) (1) - 540 Participants
  - Vegetable Educational Programming (Facilitated Group Meetings and Conferences) (15) - 1371 Participants
  - Vegetable Notes - Newsletter (Printed Material (newsletter, factsheet, field manual) (32) - 5743 Participants
  - Vegetable Program Website (Websites or Other Electronic Delivery) (3) - 356373 Participants