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Program Code: QQIPM

Program Name: Extension Integrated Pest Management -

Project Director

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Recipient Organization

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Performing Department

{NO DATA ENTERED}

Co-Project Directors

{NO DATA ENTERED}

Departments

{NO DATA ENTERED}

Non-Technical Summary

The Ohio Extension IPM Program is a comprehensive program organized to encourage collaboration and innovation between OSU Extension, OSU Department faculty, and a multitude of stakeholders. The IPM Program is integrally connected with focused Extension teams who strongly connect to stakeholders and help us gather input on our direction and priorities. We also have an advisory committee that annually reviews the past actions of the IPM Program and comments on the future direction of the program.

Other methods we use to gather stakeholder input comes from our program emphasis area leaders and from growers involved in our field days, workshops, and demonstration projects. Stakeholder comments are directly solicited from commodity groups, grower associations and other professional associations.

The Ohio Extension IPM Program is a balanced yet flexible program, serving both rural and urban audiences, allowing us to systematically respond to stated IPM Roadmap issues while being able to effectively address current pest issues and rapidly respond to emerging pest issues. We value traditional IPM programming conducted via field days, workshops, and conferences, yet embrace the use of newer electronic techniques such as webinars and video recordings. We constantly seek to expose new audiences to the benefits of IPM principles.

In this proposal we are focused on serving the needs of Specialty crop growers (fruits and vegetables), Agronomic crop growers (field corn, soybeans, wheat), maintaining and enhancing the outreach of our Pest Diagnostic Facilities, promoting early detection and sound pest management of bed bugs in residential and multi-unit dwellings, and reaching broadly to educate the average Ohio citizen through Master Gardener IPM training module and newly expanding Urban farming movement.

Accomplishments

Major goals of the project

For the next three years, each of the five EIPM program emphasis area will work to achieve all or a subset of these goals:

- 1) To develop, conduct, and resource IPM related workshops, conferences, webinars, and meetings to support the needs of our various clientele. It is critical this program remain flexible enough to conduct programs for new and emerging pest management issues that may radically impact entire emphasis areas and ensure the transfer of new practices and techniques developed from on-going research programs to appropriate clientele.
- 2) To develop and contribute to specific outreach resources such as newsletters, enhanced factsheets, e-publications, online IPM videos, and smart phone applications. It is critical this program continues to produce new resource materials to address current issues facing our various clientele.

- 3) To develop and maintain a responsive information network that serves our clientele, stakeholders, and collaborators. It is critical that this program modernize its web based and electronic information dissemination network to increase its visibility and utility.
- 4) To enhance the capacity of basic IPM program functions, such as pest diagnostics and pest monitoring. It is critical we maintain infrastructure for broad pest identification, monitoring, and reporting functions integral to statewide IPM programs as they serve clientele ranging from homeowners to commercial producers.
- 5) To increase our evaluation of all IPM program emphasis areas to adequately document output, outcomes, and impact. It is critical for the continued success of our program to report measurable progress and accomplishments to our funders, administrators, collaborators, and stakeholders.

What was accomplished under these goals?

General Impact

Agronomy – Corn, soybean, and wheat growers need to continuously upgrade their knowledge and skills to successfully manage insect, weed, and disease populations to remain competitive in the marketplace. To ensure continuous education, Agronomic specialists within the IPM program conducted numerous presentations, field demonstrations, on farm research projects, and soybean workshops to convey this information to growers in a relevant fashion. Soybean workshop evaluations based on 52 participants managing 60,000 acres revealed increased knowledge of insects, pathogens, and yield limiting factors. Knowledge gained at these events contributes to enhanced understanding of pest management which has the potential to reduce negative environmental and social impacts, while increasing the economic viability of the operation.

Specialty Crops - Specialty crop growers need to continuously upgrade their knowledge and skills to successfully manage insect, weed, and disease populations over many crops to remain competitive in the marketplace. To ensure continuous education, discipline specialists within the IPM program gave presentations, produced videos, conducted field demonstrations, and held workshops to convey new information to growers in a relevant fashion. Spotted wing drosophila workshop evaluations based on 29 participants managing 100 acres of small and tree fruit revealed 95% were somewhat to very confident on SWD management. High tunnel workshop evaluations based on 57 participants managing 35,000 square feet of high tunnels revealed 100% had a moderate or higher understanding of basic IPM in high tunnels after attending the workshop. Knowledge gained at these events contributes to enhanced understanding of pest management which has the potential to reduce negative environmental and social impacts, while increasing the overall economic viability of the operation.

Community - Community members, such as urban agriculture producers and Master Gardener volunteers, are interested in socially and environmentally conscience pest management practices especially in the local foods context. IPM program specialists have conducted workshops in this area to help further train and educate this group of growers and citizens. Over 150 people attended four IPM diagnostic landscape and vegetable workshops with 78% able to select the pesticide least harmful to beneficial insects by the end of the workshop. Given the resurgence of local foods all across the state, having educational programs in place to teach people the basics about pesticides, pest identification, and IPM, allows them to grow produce in a way that minimizes risk to themselves and the environment.

Diagnostic Clinic - Backyard and commercial growers, and Ohio residents submit samples to the OSU plant and pest diagnostic clinic to determine the identity of insect and disease pests attacking crops, turf, landscape and nursery plants. In the past year, 828 samples were submitted to the main clinic and 300 specialty crop disease samples were submitted to the Miller lab for diagnosis. Once diagnosed, the clinic sends a report with standard treatment recommendations and factsheets as necessary to help further explain the pest or condition.

Housing – The IPM Program has responded to the bed bug resurgence by providing current research-based information on prevention and management, and actively participate in the Central Ohio Bed Bug Task Force (COBBTF), while teaching workshops for diverse community audiences around the state and at Pesticide Recertification conferences. Bed bug photos and PowerPoint presentations are posted on the COBBTF website for the public to view. This specialist has provided numerous interviews for national and local news affiliates. Workshop respondents (78%) indicated that the information provided was relevant to their work, and as a result of the workshop, many respondents (56%) felt very confident in providing accurate information on bed bug control options, up from 8% pre test scores. There is a tremendous need for science based information in this arena by a multitude of businesses, governmental agencies, and Ohio's citizens that the IPM Program is helping to fill.

Detailed Impact

Agronomics – As a team, this group of specialists conducted many outreach efforts but focused on soybean production workshops to evaluate their impact. At the first workshop with 33 attendees, identification of yield limiting factors increased 19% and understanding proper scouting and management tactics for stink bugs increased 48% by the end of the workshop. In the second workshop with 20 attendees, identifying yield limiting factors was increased 33% and scouting and managing stink bugs increased 54% by the end of the workshop. At the first workshop, growers valued the workshop at an average of

\$10 per acre. At \$10 per acre, the total economic impact of the workshop was \$300,000. At the second workshop, growers valued the workshop at an average of \$30 per care. At \$30 per acre, the total economic impact of the workshop was \$900,000.

Specialty crop – There were 29 attendees at the SWD workshop in April but only 21 respondents to the evaluation survey. Over 85% were very satisfied with the relevance and overall quality of the workshop. Eighty-one percent of respondents were very confident they could properly identify adult flies at the end of the workshop, up from 14%. Since monitoring is the keystone to managing this pest, 80% of respondents indicated they would use a baited trap to monitor for adults, and 100% indicated they would use the salt water test to inspect for larvae in the fruit.

In terms of the high tunnel workshop, 77% of respondents (n=30) indicated they had at least a moderate understanding for the basics of high tunnel production at the end of the workshop, up from 43%. Respondents indicated 100% they were very likely to definitely going to share some of the knowledge they learned today about high tunnels with others. Lastly, 83% of respondents strongly agreed that the knowledge they gained today will make them more competitive in the market place and 100% strongly agreed to highly recommend this program to other beginner high tunnel growers.

Seven new high tunnel tomato disease management fact sheets were posted online May 2014

(<http://u.osu.edu/hightunneldiseasefacts/>). Between May and October 2014, the site was visited 47 times with 22 unique visitors and 639 pageviews.

Community – Master Gardener volunteers attended workshops to better understand IPM in landscapes and vegetables. At four workshops with 153 total participants, there was a 47% increase in confidence to select the right pesticide for use in a landscapes and vegetable crops, 20% increase in understanding how to use IPM in landscapes and vegetables, and 38% increase in understanding how the disease triangle fits into an IPM Program.

Diagnostic Clinic - During the project period services were utilized in 67 of Ohio's 88 counties. Over 50% of samples were submitted by homeowners (165), Extension educators (100), arborists (160), and landscapers (102) predominantly in the areas of woody ornamentals (416), field crops (148), insect identification (92) and herbaceous ornamentals (82).

Housing - Four workshops evaluated what knowledge target audiences gained on bed bug identification, prevention, and general IPM tactics. A total of 63 evaluation responses were obtained, and the vast majority of the respondents indicated that they were very satisfied with the presentation quality (89%), instructor subject knowledge (97%), and overall workshop quality (95%). Respondents also expressed their intentions to change their behaviors, with 68% indicating that before taking the workshop they never or rarely inspected a hotel room for signs of bed bugs, but after the workshop, 94% expressed that they planned to always do so.

What opportunities for training and professional development has the project provided?

Funding from the IPM Program partially supported at least seven co-PI's and their graduate students to travel to regional or national meetings to make oral presentations or posters on information related to projects within the program.

At least six undergraduates were exposed to basic data, lab, and field collection techniques in the areas of Agronomy and Specialty crops.

Nine US and international scholars were trained in classic and modern disease diagnostic techniques in OSU's International Plant and Pest Diagnostics short course. Six OSU graduate students received intensive training in plant disease diagnostics in the OSU Vegetable Pathology Lab.

Extension educators were trained on proper placement of Western Bean Cutworm insect traps, as well as identification of WBC adults for on-farm monitoring projects.

How have the results been disseminated to communities of interest?

Information generated from the IPM Program has been delivered in many outlets such as winter meeting presentations, breakfast meetings, twilight meetings, field days, regional meetings, national, and international meetings, workshops, webinars, NGO meetings, state association meetings, commodity association meetings, newsletter articles (C.O.R.N., VegNet, Buckeye Yard and Garden), and through Purdue/OSU Ag Answers.

Information was also relayed through Powerpoint presentations, factsheets, "how to" videos posted on the IPM YouTube channel, and Pesticide Applicator Training videos in each program area and discipline.

For those growers that participated in on-farm applied research projects, they received phone calls, personal visits, or a hard copy reports detailing the project status or results in a timely manner.

Electronic updates on the IPM Program and vegetable disease management recommendations were provided on Twitter via @OSU_IPM and @OhioVeggieDoc, and Ohio Veggie Disease News (<http://u.osu.edu/miller.769/>). There is a new bed bug

website is available to all with internet access (<https://u.osu.edu/bedbugs/>).

There was physical distribution of more than 34,000 bed bug insect ID cards, 134 small bed bug display cases, and 97 large bed bug display cases were distributed to governmental, NGO, healthcare, schools and related businesses throughout Ohio.

What do you plan to do during the next reporting period to accomplish the goals?

This award ended September 30th, 2014 and will not be continued any further, there fore there are no plans to accomplish any further goals on this particluar grant. For future awards, quarterly meetings will be held with the project leads to ensure projects are completed in the appropriate timeline.

Participants

Actual FTE's for this Reporting Period

Role	Non-Students or faculty	Students within Stuffing Roles			Computed Total by Role
		Undergraduate	Graduate	Post-Doctorate	
Scientist	1.8	0	0	0	1.8
Professional	0.5	0	0	0	0.5
Technical	0.5	0	0	0	0.5
Administrative	0	0	0	0	0
Other	0	1	0.5	0	1.5
Computed Total	2.8	1	0.5	0	4.3

Student Count by Classification of Instructional Programs (CIP) Code

Undergraduate	Graduate	Post-Doctorate	CIP Code
9	1	0	01.00 Agriculture, General.

Target Audience

The following groups of people have been reached by the outreach efforts of the OSU EIPM Program during September 1, 2013 – August 31, 2014; commercial fruit growers, commercial small fruit growers, commercial vegetable growers, home gardeners, Master Gardeners, students, diagnosticians, teachers, extension educators & other professionals, Ohio NRCS state and local staff, crop consultants, certified crop advisors, seed company representatives, agri-chemical company representatives, commodity board representatives, and field crop producers. Other targeted audiences include small scale Appalachian farmers, rural and urban farmers, African American and Hispanic farmers, socially and economically disadvantaged refugee immigrant farmers from several counties in Africa. Amish & Mennonite farmers who are educationally disadvantaged (8th grade education at best) were also served by this project.

Products

Type	Status	Year Published	NIFA Support Acknowledged
Conference Papers and	Published	2013	YES

Citation

Jasinski, J., C. Welty. 2013. Monitoring spotted wing drosophila (*Drosophila suzukii*) in Ohio. Entomological Society of America, Austin TX. Nov. 10-13, 2013.

Type	Status	Year Published	NIFA Support Acknowledged
Journal Articles	Published	2014	NO

Citation

Baysal-Gurel, F., Subedi, N. Mamiro, D. and Miller, S. A. 2014. First report of anthracnose of onion caused by *Colletotrichum coccodes* in Ohio. Plant Disease 98:1271.

Type	Status	Year Published	NIFA Support Acknowledged
Journal Articles	Accepted	2014	NO

Citation

Baysal-Gurel, F., Li, R., Ling, K.-S. and Miller, S. A. 201x. First report of Tomato chlorotic spot virus in Ohio. Plant Disease. Accepted for publication. <http://dx.doi.org/10.1094/PDIS-06-14-0639-PDN>.

Type	Status	Year Published	NIFA Support Acknowledged
Journal Articles	Accepted	2014	NO

Citation

Subedi, N., Testen, A. L., Baysal-Gurel, F. and Miller, S. A. 201x. First report of black leaf mold of tomato caused by *Pseudocercospora fuligena* in Ohio. Accepted for publication. <http://dx.doi.org/10.1094/PDIS-06-14-0625-PDN>.

Type	Status	Year Published	NIFA Support Acknowledged
Journal Articles	Published	2014	NO

Citation

Testen, A., Mamiro, D. P., Meulia, T., Subedi, N., Islam, M., Baysal-Gurel, F. and Miller, S. A. 2014. First report of Leek yellow stripe virus in garlic in Ohio. Plant Disease 98:574.

Type	Status	Year Published	NIFA Support Acknowledged
Journal Articles	Published	2014	NO

Citation

Testen, A., Walsh, E. K., Taylor, C. G., Miller, S. A. and Lopez-Nicora, H. D. 2014. First report of bloat nematode (*Ditylenchus dipsaci*) infecting garlic in Ohio. Plant Disease 98:859.

Type	Status	Year Published	NIFA Support Acknowledged
Conference Papers and	Published	2013	YES

Citation

Jones, S. C. "Bed bug biology/behavior and research updates." Sixth Annual Central Ohio Bed Bug Task Force Summit, Columbus, OH, 11 October 2013. (Invited)

Type	Status	Year Published	NIFA Support Acknowledged
Conference Papers and	Published	2013	YES

Citation

Jones, S. C. "Bed bug basics—identification, prevention, control." Cuyahoga County Bed Bug Task Force Fall Conference, Cleveland, OH, 29 October 2013. (Invited)

Type	Status	Year Published	NIFA Support Acknowledged
Conference Papers and	Published	2013	YES

Citation

Jones S. C. "Bed bugs: a menace for healthy housing." 2013 Ohio Housing Conference, Columbus, OH, 6 November 2013. (Invited)

Type	Status	Year Published	NIFA Support Acknowledged
Conference Papers and	Published	2013	YES

Citation

Andon, J., B. Bloetscher, D. J. Shetlar, and S. C. Jones "Implementing a bed bug management policy in Ohio schools" (poster). Annual Meeting of the Entomological Society of America, Austin, TX, 10-13 November 2013.

Type	Status	Year Published	NIFA Support Acknowledged
Conference Papers and	Published	2014	YES

Citation

Jones S. C. "Bed bugs: a heavy burden on the elderly." 2014 Forum on Aging, Cincinnati, OH, 4 March 2014. (Invited)

Type	Status	Year Published	NIFA Support Acknowledged
Conference Papers and	Published	2014	YES

Citation

Jones S. C. "Q&A on bed bug biology and control." Ohio Capital Corporation for Housing, 2nd Annual Managers and Maintenance Conference, Columbus, OH, 10 April 2014. (Invited)

Type	Status	Year Published	NIFA Support Acknowledged
Conference Papers and	Published	2014	YES

Citation

Jones S. C. "Bed bug management." Ohio Provider Resource Association, Disability Housing Conference, Dublin, OH, 9 April 2014. (Invited)

Type	Status	Year Published	NIFA Support Acknowledged
Websites	Published	2014	NO

Citation

A new website <http://u.osu.edu/bedbugs/> hosted by The Ohio State University includes internal links to photo galleries, research articles, additional internet resources, and detailed answers to frequently asked questions (FAQ).

Type	Status	Year Published	NIFA Support Acknowledged
Journal Articles	Published	2013	NO

Citation

Fisher, J.R., McCann, D.P. and Taylor, N.J. 2013. *Geosmithia morbida*, Thousand Cankers Disease of Black Walnut Pathogen, was found for the first time in Southwestern Ohio. Plant Health Progress doi:10.1094/PHP-2013-1201-01-BR.

Type	Status	Year Published	NIFA Support Acknowledged
Journal Articles	Published	2014	NO

Citation

Ruhl, G. and Taylor, Nancy J. 2014. The use of a French cooking technique, chiffonade, to Improve accuracy for virus testing. NPND News, Vole 9, Issue 2, pg. 3.

Type	Status	Year Published	NIFA Support Acknowledged
Conference Papers and	Published	2014	NO

Citation

Smith, D., Chilvers, M., Dorrance, A., Hughes, T., Mueller, D., Niblack, T., Wise, K. 2014. Charcoal Rot Management in the North Central Region. Univ. of Wisconsin A4037.

Type	Status	Year Published	NIFA Support Acknowledged
Other	Published	2014	NO

Citation

Culman, S. W., Dorrance, A. E., Hammond, R. B., LaBarge, G. A., Lindsey, L. E., Loux, M. M., Michel, A. P., Ozkan, H. E., Paul, P. A., Sulc, R. M., Taylor, N. J., Thomison, P. R., and Watters, H. D. 2014. Corn, Soybean, Wheat, and Alfalfa Field Guide. The Ohio State University/CFAES/OSUE. Bulletin 827.

Type	Status	Year Published	NIFA Support Acknowledged
Conference Papers and	Published	2014	NO

Citation

Konkle, Samantha N., Mark M. Loux, and Tony Dobbels. 2014. Status of herbicide resistance in Ohio Amaranthus spp. Proc, 2013 North Central Weed Science Society annual meeting. www.NCWSS.org. No. 121.

Type	Status	Year Published	NIFA Support Acknowledged
Conference Papers and	Published	2014	NO

Citation

Lindsey, L.E. March 2014. Finding and Removing Limits to Soybean Yield. Conservation Tillage and Technology Confer, Ada, OH.

Type	Status	Year Published	NIFA Support Acknowledged
Journal Articles	Published	2014	NO

Citation

Lindsey, L.E., S. Prochaska, H.D. Watters, and G.A. LaBarge. 2014. Identifying Soybean Yield-Limiting Factors in Ohio. Journal of Extension. Vol. 52, No. 5.

Type	Status	Year Published	NIFA Support Acknowledged
Conference Papers and	Published	2013	NO

Citation

1. Hammond, R., and A. Michel. 2013. 2013 Update on Insect Management Tactics. Ohio Pesticide Commercial Applicator 2013 Recertification Conference. OSUE

2. Hammond, R., and A. Michel. 2013. 2013 Update on Field Crop Insect Activity. Ohio Pesticide Commercial Applicator 2013 Recertification Conference. OSUE

3. Hammond, R., and A. Michel. 2013. 2013 Update on Insect Management Tactics. 2013 Ohio Pesticide Private Applicator Recertification Proceedings. OSUE

4. Hammond, R., and A. Michel. 2013. 2013 Update on Field Crop Insect Activity. 2013 Ohio Pesticide Private Applicator Recertification Proceedings. OSUE

Type	Status	Year Published	NIFA Support Acknowledged
Conference Papers and	Published	2013	NO

Citation

Jones, S. C. "What's new?—research update."Cuyahoga County Bed Bug Task Force Fall Conference, Cleveland, OH, 29 October 2013. (Invited)

Other Products

Product Type

Survey Instruments

Description

Spotted wing drosophila workshop evaluation instrument. Helped presenters measure and document changes in knowledge about this pest for growers and Extension educators who were in attendance.

Product Type

Survey Instruments

Description

Basic and advanced high tunnel workshop evaluation instruments. Helped presenters measure and document changes in knowledge about pest management and production practices for growers and Extension educators who were in attendance.

Product Type

Survey Instruments

Description

Soybean production workshop evaluation instrument. Helped presenters measure and document changes in knowledge about pest management and production practices for growers and Extension educators who were in attendance.

Product Type

Survey Instruments

Description

Bed bug workshop evaluation instrument. Helped presenters measure and document changes in knowledge about pest management practices and identification of pests by school officials, health workers, and other housing authorities who were in attendance.

Product Type

Audio or Video

Description

Produced five videos on how to set up and trap for both spotted wing drosophila and brown marmorated stink bug. These videos are posted on the OSU IPM YouTube channel:

<https://www.youtube.com/channel/UCzcWaLH3mx7HUKh4OF7bYPA/feed>

Product Type

Other

Description

The following are articles written for the VegNet newsletter to help growers manage these pests.

Welty, C., J. Jasinski. 2014. Ohio Plans For Spotted Wing Drosophila Monitoring And Workshop. VegNet Newsletter. Vol. 21, No. 1.

Welty, C., J. Jasinski. 2014. Spotted Wing Drosophila Workshop. VegNet Newsletter. Vol. 21, No. 3.

Welty, C., J. Jasinski. 2014. Spotted Wing Drosophila Update. VegNet Newsletter. Vol. 21, No. 16.

Jasinski, J. 2014. Powdery Mildew found in High Tunnel Cucumbers. VegNet Newsletter. Vol. 21, No. 18.

Jasinski, J. 2014. Spotted Wing Drosophila Update. VegNet Newsletter. Vol. 21, No. 19.

Jasinski, J. 2014. Powdery Mildew Program Efficacy on Pumpkins – An Aerial View. VegNet Newsletter. Vol. 21, No. 23.

Product Type

Other

Description

Comparison of 2 baits for detection of spotted wing Drosophila and Comparison of 4 trap styles for season-long detection of brown marmorated stink bug in sweet corn and apples. Information used to help growers select the proper bait and use proper trap for these pests.

Product Type

Other

Description

Workshop on spotted wing Drosophila. (Columbus OH, 4/30/2014), Webinar presentation on management of insect pests of brambles in home gardens. (2/20/2014), Presentation on stink bug management in organic crops (Granville OH, 2/15/2014), Field day presentation on pepper pest management (Fremont, 7/31/2014). These events were aimed at educating growers and citizens about managing these pests.

Product Type

Other

Description

Revised Handout on spotted wing Drosophila management for commercial growers, Revised Handout on spotted wing Drosophila management for home gardeners, Revised Slideshow on spotted wing Drosophila biology and revised management for commercial growers, revised slideshow on management of insect pests of brambles in home gardens. All of these products were aimed at commercial or backyard fruit producers.

Product Type

Other

Description

Wrote or revised 7 factsheets for growers related to diseases in high tunnels.
Botrytis grey mold: <http://u.osu.edu/hightunneldiseasefacts/tomato-diseases/botrytis-grey-mold/>
Cucumber mosaic virus: <http://u.osu.edu/hightunneldiseasefacts/tomato-diseases/cucumber-mosaic/>
Tomato leaf mold: <http://u.osu.edu/hightunneldiseasefacts/tomato-diseases/leaf-mold/>
Powdery mildew: <http://u.osu.edu/hightunneldiseasefacts/tomato-diseases/powdery-mildew/>
Sclerotinia white mold: <http://u.osu.edu/hightunneldiseasefacts/tomato-diseases/sclerotinia-white-mold/>
Tomato mosaic virus: <http://u.osu.edu/hightunneldiseasefacts/tomato-diseases/tomato-mosaic/>
Tomato spotted wilt virus: <http://u.osu.edu/hightunneldiseasefacts/tomato-diseases/tomato-spotted-wilt/>

Product Type

Other

Description

Wrote over 10 articles on disease management in vegetable crops during the 2014 growing season in the VegNet Newsletter which were circulated to growers on a weekly basis in and around OH from March to August.

Product Type

Audio or Video

Description

At the hight tunnel workshops in April, training videos of each topic taught were captured and will soon be available online for growers to use as a reference.

Product Type

Other

Description

Wrote over 10 articles on crop production and management in vegetable crops during the 2014 growing season in the VegNet Newsletter which were circulated to growers on a weekly basis in and around OH from March to August.

Product Type

Other

Description

Webinars where bed bug information was disseminated.

Jones, S.C. "Bed bugs and their health impacts." MedNet webcast on "Entomology Medicine," Columbus, OH, 21 February 2014. (Invited)

Jones, S. C. "Tackle bed bugs with multiple strategies." 1 hr webinar "Getting the Best of Pests" training program sponsored by the University of Georgia's College of Agricultural and Environmental Sciences, 16 April 2014. (Invited)

Product Type

Other

Description

To help train workers who interact with the general public on these issues.

A total of seven 3-hr bed bug workshops for Franklin County Children Services, Columbus, OH; OSU Extension in-service training, Columbus, OH, 6 November 2013; Columbus Center for Human Services staff development day; Columbus, OH, 20 January 2014; Ohio Housing Finance Association staff training, Columbus, OH, 20 February 2014.

Product Type

Educational Aids or Curricula

Description

The following items have been developed for use in bed bug programming and education efforts in Ohio and around the midwest.

Designed, printed and distributed 34,000 Household Insect Identification Card (S.C. Jones, D.J. DeGirolamo, J.L. Bryant)- the front side of the ID card depicts photos of bed bug nymphs, male and female adults, and tell-tale signs as well as a variety of other common household arthropod pests such as carpet beetles, German cockroach, lady beetle, stored product beetles, brown marmorated stink bug, tick, and flea; the back of the card lists tips for bed bug prevention and control.

Designed and distributed 134 Small Display Case—displays a variety of bed bug specimens to aid in proper identification.

Designed and developed 97 large Display Case—displays a variety of bed bug specimens for identification as well as specimens of other common household insect pests for comparison.

Product Type

Other

Description

A webinar given to 22 OSU Extension Ask an Expert/Ask a Master Gardener program.

Taylor, Nancy J. 2014. A good sample is a must!

Product Type

Educational Aids or Curricula

Description

Factsheets for the public that will be published Jan. 1, 2015 with the new OSU branding; this is a joint OSU and Michigan State University project.

Wilson, M., Draper, E., and Bennett, P. (2014) Smart trees and shrubs for Ohio landscapes. Ohio State

University Extension. (pending).

Finneran, R. and Braig, E. (2014) Smart lakefront plants. Ohio State University Extension. (pending).

Wolfe, D. and Kulhanek, A. (2014) Going native can be a smart choice for Ohio landscapes. Ohio State University Extension. (pending).

Bennett, P. and Finneran, R. (2014) Fertilizer basics for the smart gardener. Ohio State University Extension. (pending).

Meyer, C., Boggs, J., Bennett, P., and Finneran, R. (2014) Don't guess - soil test!. Ohio State University Extension. (pending).

Bennett, P. and Smitley, D. (2014) Mow high for weed and grub control. Ohio State University Extension. (pending).

Product Type

Other

Description

Four Master Gardener Volunteer Diagnostic Workshops were held in Franklin, Lake, Huron and Montgomery Counties which were attended by 163 people with the goal of increasing pest identification skills.

In addition, five webinars were held with an average of 15 people in attendance for each session on pest management topics for the Ask a Master Gardener volunteer program. The webinars were recorded for later viewing.

Product Type

Educational Aids or Curricula

Description

Developed 6 powerpoint presentations on all aspects of field crop pest management for OSU Extension educators.

1. Seed Treatments: Where are we headed? Separating what's in and on the seed
2. 2013 Herbicide Update: Corn, Soybeans, and Wheat
3. Corn/Wheat Disease Update
4. Soybean Disease Control Update
5. Insect Update – 2013
6. Update of Management Tactics, Transgenics, Seed Treatments, and Foliar Insecticides 2013

Product Type

Educational Aids or Curricula

Description

A series of four maps showing distribution of infestations of Palmer amaranth and waterhemp in Ohio were developed. These were components of Powerpoint presentations on weed management, for use by OSU state and field specialists in training of OSU Extension educators and clientele.

Product Type

Other

Description

The agronomy specialists each contributed information in their own discipline area to the following workshops for growers.

Everything But the Kitchen Sink: High Input Soybean Production (offered at four locations) and Yield-Limiting Factors in Ohio Soybean Production (offered at two locations).

Product Type

Other

Description

Workshops and presentations made to growers, industry, agribusiness, and Extension educators by the agronomic entomologist.

Scouting for insect issues in soybean, Assessing the risk of Bt resistance in western corn rootworm, Asiatic Garden Beetle Field Day, Use of Genetically Modified Organisms in Field Crops, Insect management in field crops, GMOs: Great Myths Operating about Genetically Modified Organisms, Pesticide Applicator Training, Insect management in corn, Invasive insects on the Move, Insect ID and Management in Soybean, Current & Future Corn and Soybean Insect Concerns, Seed Treatments in Corn: Impacts on Pests and Pollinators, Update on Corn Insect Management, and Insect Concerns for Wheat and Soybean.

Changes/Problems

In the area of plant and pest diagnostics, the loss of a staff person and the extended interval of time needed to replace that staff person prevented us from completing as much work as we outlined in the proposal. Another issue was loss of the initial collaborator who committed to establishment of a remote diagnostic station and subsequent time needed to identify a new collaborator, which was done.