

2017 UK-IPM Annual Meeting of Advisory Committee

March 1, 2017

12:00 Noon Central time, 1:00 Eastern Time

Video Conference Sites: Princeton – Room 109 and Lexington –C.E. Barnhart Room 249

Those attending were: Ric Bessin, Raul Villanueva, J.D. Green,, Win Dunwell, , Philip Anderson, Vicki Shadrick, Christi Forsythe and Colette Laurent at Princeton; Jen White and John Obyrcki at the Lexington video site.

1. Update on CPPM grant:

We are funded through an e-PM grant thorough Center for Pest Management in Washington D.C. and are in the 3rd year which is the last year of the grant. A new request for proposals for the program should be released soon. Dr. Bessin will be needing input on the new grant such as what groups would like to accomplish and how they plan to build upon what has already been done. To improve on the amount of funding received, we need to increase our focus on what we can accomplish if funds are received to promote and advance IPM. Groups need to focus on how the new funds enhance the program. Also, **need by May 1st the final report for the 3 year grant.** For this to be the final report, groups need to spend all funds in scope account this year. If not Dr. Bessin will have to write an interim report then next year a final report plus interim reports. Not spending the funds results in more work in reporting.

Changes have been made at the national level. The new IPM Program Leader is Dr. Rubella Goswami and Herb Bolt who has been the acting director will assist. Dr. Goswami replaces Marty Draper who is now head of the Department of Plant Pathology at Kansas State. No idea when IPM proposal will be coming out. Dr. Bessin will hopefully learn more in two weeks at the IPM Coordinators meeting. Last year there were rumors at the coordinators meeting that plans are to restrict indirect cost charged by Universities. For the past three years the grant allowed the charging of overhead but was waived by UK for the one time. So it is important that this be removed from the RFA. Budget may be a continuing resolution this year and the best we can hope for is level funding this year. Hope is the RFA will come out in a few weeks.

All grant funds need to be spent by August 31. Forms for the final report are available 90 days before the end of the grant. Report will be started about June 1. The sooner the final report is submitted the faster funds will be made available in fall.

2. Working Group Reports

The Grain Crops report was presented by Colette Laurent. The Grain Crops IPM Working Group completed Early Bird Meetings, Winter Wheat Meeting, Agent Trainings, Field Days, IPM Field School, monitor grain crop diseases and invasive insects, and developed educational publications that were distributed in a timely manner to interested parties. To date, the Wheat Field day and Corn & Soybean Field days were attended by 140 and 189 people respectively.

Participants indicated that the value of the information presented at the field days was valued at \$8 per acre. The Grain Crops Early Bird Series (Graves Co. 12/6/16; Henderson Co. 12/7/16 & Christian Co. 12/8/16) was attended by more than 190 people and represented 1,273,396 acres of grain crop production. Participants indicated that the value of information presented was \$8 per acre. The outcomes of these activities are that 70% (77 respondents) of the attendees at the Grain Crops Early Bird Series reported that they plan to make changes next (2017) season based on the information presented. Attendance at The Winter Wheat Meeting (1/5/17) was 125, representing 211,210 acres of wheat production and the program was valued at \$7 per acre. Educational credits were offered at both the Early Bird Series and the Winter Wheat Meeting. There was a combined participation of 26 Certified Crop Advisors (CCA) and 79 KY pesticide Applicators (Commercial and Private). Two agent trainings have been completed since to this point. There were 15 agents in attendance, 90% reported that they are more comfortable assisting clientele after the trainings and 78% will change recommendations to clientele based upon information received during trainings.

The remaining Grain Crops IPM Working Group objectives are scheduled to be completed. The Wheat Field Day is scheduled for May 9; Corn and Soybean Field Day will be July 27 and Various IPM Field Schools are being planned; and efforts to monitor grain crop diseases and insects are planned. Grain Crops IPM demonstration plots will be incorporated into both of the field days, the agent trainings and IPM Field School. The IPM Wheat Science Group and the IPM Corn/Soybean Working Group Annual Meeting, which streamlines the before mentioned IPM educational programs, is scheduled for August 2-3, 2017 in Elizabethtown, KY.

Dr. Bradley and Dr. Villanueva are completing work (Southern rust monitoring and Kudzu Bug Survey) started by Don Hershman and Doug Johnson. Group members are continuing to do publications and are redoing some of the extension publications. They are also increasing blog posts, twitter and that kind of thing including KY Pest News articles. Dr. Bessin suggested the group look at using IPM funding for publications. Funds must specifically be asked for as publications. One benefit of publications is they give a tangible item and are also listed in IPM report. A new weed scientist and an additional plant pathologist will be coming July 1. Dr. Bessin suggested that they be contacted and ask how the IPM Program can support their needs as they begin new programs.

Fruit group presented was by Ric Bessin. The group is having meetings, working on invasive insects and disease monitoring. New activities, outputs and outcomes for 2016 included:

- Extensive apple grower survey in 2016. Surveyed and documented grower practices, needs and concerns, as well as cultivation practices. Results indicated that growers are not clear on how specific IPM practices (e.g. cultural practices) affect holistic systems. In the future, the group will give more focus to training of IPM and cultural practices.
- Train-the-trainer events in 2015 and 2016 (held in 4 locations). County Extension agent trainings and resources for expanded grower and homeowner reach (video available).

- Grower alerts and updates: various email list-servs for fruit crops, newsletter articles in Kentucky Pest News and Fruit Facts, and social media posts and updates (Spotted Wing Drosophila in KY Facebook page, UK Diseases of Fruit Crops Facebook and Twitter pages, etc)
- Consumer awareness: Life in the Orchard Facebook page, updated weekly with grower activities, pest management information, and post-harvest information.
- New resources and publications during Year 2:
 - Diseases – An IPM Scouting Guide for Common Problems of Strawberry in Kentucky; Backyard Disease Management Using Cultural Practices: With Low Spray, No Spray, and Organic Options (4-part series).
 - Insects – A new item the group will be stressing at 2017 meetings this year is the bringing in a national authority on sprayer calibration and coverage to emphasize how to properly set up sprayers for orchard spraying. The goal is that by spraying properly growers should be able to cut down on the number of sprays.
- Research Publications:
 - Munir et al. 2016. Characterization of *Colletotrichum* species causing bitter rot of apples in Kentucky orchards. Plant Disease.
- Impacts and Return on Investment
 - Apple growers – 34% increase in apple profits of \$5.8M to \$9.7M annual apple market value in KY indicates that the UK eIPM fruit working group are adding \$2.0M to \$3.3M in profits to the apple market each year. Over 76% KY growers referred to workshop materials in mgmt. decisions, 71% UK publications, 44% UK Ag Weather site (869 unique views in 2015).
 - AgWeather production models - 83% of KY apple growers utilized our online weather prediction model for fire blight in 2016, 67% experienced better disease control as a result of the tool, and 100% of participating growers will utilize the model in the future.
 - Agent In-Service, Organic and Sustainable - Attendees expressed a 41% increase in understanding of organic and sustainable approaches fruit and vegetable gardening/production and anticipated being 50% better able to assist stakeholders after the training. Agents indicated that the new knowledge would be utilized to advise stakeholders, in county trainings, and in newsletters.
 - Blueberry School survey - increase in understanding of more than 30% in plant disease management, insect management, weed management, fertility and composting, and organic certification.
 - MWWF survey – 34% increase in profit and 43% increase in fruit quality, 56% consulted university Extension specialists/agents, 60% consulted Extension pubs, 51% consulted weather prediction models
- Regional projects and collaborations
 - MWWF – 13 states represent \$3.7M total market value (KY \$7.8M)

Nursery Crops was presented by Win Dunwell. Since the group cannot do more for less, they dropped their scouting workshop. The IPM funds were used to support other programs. Dr. Chris Ranger from the USDA-ARS Horticultural Insects Research Lab and ambrosia beetle expert, came to Kentucky twice to visit an orchard and nurseries as part of IPM program. Dr. Ranger will continue to work with Dr. Ziniada Vilorio to address the problem of Ambrosia beetle management. This year the group needed to spend more funds dedicated to labor than in the past. The horticulture technician was needed to do more on farm demonstration activities. Productive activities include additional video tapes that included Dr. Chris Ranger and more production practices. Publications were produced for KPN and nursery listserv. The IPM grant help the Nursery Crops Group attain other grants such as the \$4,000 coming for a new irrigation system that will help control Phytophthora in blueberries. In the past there was a program called Southern Garden All stars in cooperation with Yew Dell Gardens in Louisville. The program was supposed to be commercial gardeners but attracted approximately 110 home gardeners. The group would like to add some consumer/landscape horticulture to nursery crops and bring in experts from other areas to do this to add to the program for minimal amount on money. Plans are to continue to have YouTube videos/presentations including a virtual workshop. Dr. Bessin that asked that the group include in their final report the the using of IPM funds as leverage to receive more funds.

Plans for future grants:

Demonstrations of Irrigation control and cultivar selection in container-grown blueberry and Rhododendron to reduce stress and disorders.

UK Nursery/Landscape funded PlantPoint soil moisture monitoring irrigation control. We feel that reducing moisture stress (abiotic disorders) by avoiding too wet or too dry conditions disease such as Phytophthora and reduce leachate from containers leading to weed growth and environmental contamination.

Continued hosting workshops and production of IPM videos for training growers and Extension agents to be scouts and to manage production systems to reduce pests and maintain plant quality

Vegetable Group- no report

Previous grant include 5 working groups. This is flexible and can change or evolve into other groups, however you envision your groups and based on what your objectives are and what is needed to get the work done. It was suggested the possibility of combining the two smallest groups, the Fruit and Vegetable group. The Nursery Group would be interested in working with the Fruit Group since they just completed 3 grants dealing with blueberries, and ambrosia beetles being a problem in woodies and orchard plus Phytophthora being a problem on multiple plants. These things could tie a group together as maybe a perennial crop working group. There are lots of possibility and flexibility to define and advance IPM. Nutrient management, water management, intensive crop management are all part of IPM. We should not confine ourselves. School IPM program is also possible if interest is there to get work done.

3. Review of 2017 IPM Priorities

Priorities Survey was conducted using Kentucky Pest News and Extension Agents listserv. 117 responses were recorded. There were several interesting suggestions made on how to improve the IPM program. Topics included: five suggestions to increase pollinator protection; how to control bed bugs when working with limited resource clients; more research on bed bug control; nursery plants; vegetable; herbicide resistant weeds; more information on fungicides; three suggesting more information for organic growers; education for part time and small scale farming; wildlife pest control; role of climate change in emerging IPM issues; slug management; Dicamba product use; SCN; GMO crops; how to broaden the IPM audience; alternative crops for more diverse rotations. The complete list is included with the survey results following the minutes.

Would the advisory group like to see any of these worked into priorities for the state wide program? After discussion the following priority was suggested; Educational programs to find new technologies to make agriculture more efficient and advance IPM. An example of this is the use of drones in nurseries which can be used to do immediate inventories and assist with irrigation control which can greatly increase profit. The technology is not very expensive and there is a need to make growers aware of this type of technology. Dr. Bessin asked how the current priorities are matching with needs being seen. Philip Anderson commented that the university has a good communication channel that benefits retail down to the grower at all levels. The current information being distributed by specialist and the priorities are on target with what growers need. Many get information from the UK Grain Crops Blog but also view Purdue's Chat and Chew which takes information from the UK Grain Crops Blog. Information is distributed through several outlets and may sometimes be redundant but needs to be done to reach all audiences.

Group also discussed IPM for new crops such as Chia which maybe a new rotational crop. The profit is very competitive with row crops and Kentucky is in the process of getting an herbicide approved. Plant bugs can be a problem. Some IPM work has been done in KY on Canola. Black leg is a problem in Kentucky. When requesting IPM funds for new crop such as Chia or Canola you could include the benefits to wild pollinators.

With no further comments or discussion the meeting ended.

2017 Priorities (113 completed the survey)

Based on responses, ranked from 1 to 10 with 1 being the most important. Responses received one point when ranked 1st, 2 for 2nd, 3 for 3rd, on to 11 for being 11th. Lowest score was ranked # 1. Score shown at end of the statement.

1. There are concerns with the development of glyphosate resistance weeds (water hemp, palmer amaranth and horseweed/marestail) and the impact this will have on no-till by bringing back tillage in areas where this is a problem. This will also lead to increased use of 2,4-D which is problematic for nurseries and producers of other horticultural crops. (423)
2. Increase educational efforts on invasive species (plants and insects) including detection, management and impacts. Educational efforts need to include public and private sectors and emphasize cultural controls such as avoiding planting or replacing old plants/trees with susceptible host plants. (483)
3. The use of 2,4-D resistant corn and soybeans and Dicamba resistant soybeans in proximity of nurseries and vineyards may be problematic. (569)
4. Abandonment of IPM practices and the use of calendar sprays when applying fungicides and insecticides. Concern is this can lead to the development of resistance to fungicides and insecticides such as the now documented cases of Frogeye leaf spot resistance to strobilurin. (661)
5. Need to emphasize the maintenance of weather stations in Kentucky to provide critical information and data needed by producers and researchers. This information needs to become more easily accessible through the use of new technologies such as app for phones and possibly the development of tailor made products to meet the needs of growers and homeowners. (672)
6. There is a need to develop IPM educational materials for novice home gardeners. (687)
7. Educate crop producers and home gardeners on the proper disposal of outdated and unwanted chemicals and pesticides through the program offered by the KY Department of Agriculture. (730)
8. Long term utility of Bt crops and grower compliance with resistance management techniques. Emphasize need for grower education on the use of refuge in a bag products. (736)
9. Re-emergence of Southern corn rust is of great concern as corn acreage increases especially in areas such as southern Florida. This provides more overwintering and opportunity for it to move northward. (770)
10. The need exists to emphasize the appropriate use of insecticide seed treatments specifically the unnecessary use of insecticide seed treatments on soybeans. (775)

11. Need to support ipm-Pipe programs and develop diversified funding to so they do not rely entirely on USDA funds. (886)
12. Low prices will increase the importance of scouting. Emphasis need to be placed on re-training of producers and agents in scouting techniques that have been lose to previous era.
13. The use of drone technology in scouting, crop management and monitoring.
14. Address the use of in-furrow fungicide.

NOTE: New priorities 12, 13 and 14 can be moved in ranking if needed. My error, they were not in the electronic survey.

SUGGESTED PRIORITIES

Vole control in plasticulture strawberries

Resistant Weeds

The health and vitality of native bee populations in urban and rural settings. Also, IPM for horticulture needs greater emphasis for the landscape industry.

Continue to help the bee and pollinators

Pollinator protection education needs to be incorporated into all pesticide related educational programs.

Educate producers on the importance of not spraying insecticides while bees are foraging, which means only spray flowering soybeans before 9:00AM and after 6:00 PM..

Native pollinator habitat enhancement for areas adjoining crop lands. See Xerces Society for guidelines, ideas.

We have no solutions for limited resource people who have bed bug infestations.

Research on composting poultry littler to mitigate odor issues

Research on Johnsongrass as a hay crop and feed source

Continue Research on bedbug control

nurserymen to have available diverse plant material, native and variety selection for landscape to reduce chemical use, attract wildlife and beneficial insects. Client have a challenge finding UK rec.

potato bugs resistance to sevin

Less stink bug talks more talks on fungicides

anything to help producers understand the inputs they are using particularly herbicides in dealing with resistant weeds is great.

pest control for organic growers (I'm having more and more requests for organic controls)

Education on crop production focused on beginning, part-time, and small-scale farmers

Wildlife Pest species

role of climate change in emerging IPM issues

notill slug damage, post soybean insecticide application, resistant weed control in corn and soybean, wireworm in corn, tobacco fungicide resistance, improved private pesticide applicator training,

Dicamba product use

Discourse on the role that GM crops can have in reducing dependence on pesticides and in pest resistance management. Also, on the methodology of developing GMO's, their benefits and their detractions.

Soybean cyst nematode

11 is a repeat of # 1

Increase efforts to reach those not involved in extension IPM programming. These individuals tend to be primary candidates for product abuse either by lack of knowledge or intended use issues.

Water quality/water management

Insect infestation of our native trees, enhance the use of our farmers markets

spotted wind drosophila, brown marmorated stink bug,

Use of non-organic chemicals created, and create further problems. Organic solutions are the only reasonable solutions - does this questionnaire offer that choice of opinion?

Further dissemination of information pertaining to GMO crops. What this means to the grower, homeowner, and consumer, including advantages and disadvantages with their adoption.

Certified organic crop protection and production.

Proper water utilization for pest management and protection

Alternative crops for more diverse rotations such as forages/alfalfa, hemp, native grasses, veggies, etc. How livestock/cattle might fit.

we grow small fruit and a small amount of veg. which are sold from the farm we really limit our spraying of pesticides on our property no problem with insects limited fungicide no herbicides

SURVEY RESPONDENTS

| | |
|---|-----|
| An agriculture producer/farmer | 1 |
| Agriculture business or industry person | 5 |
| Government employee such as NRCS, FSA, SCS | 2 |
| University or Cooperative Extension Service | 78 |
| Independent crop consultant | 1 |
| Owner of small family farm | 3 |
| Consumer living in a city or urban area | 0 |
| Consumer living in rural area | 1 |
| DID NOT ANSWER | 22 |
| Total | 113 |

78 People looked at the survey or started it but did not complete it.