

2016 UK-IPM Annual Meeting of Advisory Committee

March 2, 2015

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, John Grove, Carl Bradley, Raul Villanueva, J.D. Green, Jim Martin, Win Dunwell, Richard Preston, Philip Anderson, Vicki Shadrick, Colette Laurent and Patty Lucas at Princeton; Nicole Ward Gauthier, Jen White and John Strang at the Lexington video site; and John Sedlacek from Kentucky State University by phone.

1. Update on CPPM grant:

Currently in Year 2, **Annual Reports need to be to Ric Bessin by April 15**. Reports will be for a 12 month period from **June 1, 2015 to June 1, 2016**. (Note-this date is a change based on information from SRIPM coordinators meeting.) Funds need to be spent in year allocated. Do not wait till end of grant. Do not overspend. All groups should be working on Year 2 objectives. Groups need to be doing program evaluations to document achievement of goals/successes.

2. Working Group Reports

Fruit IPM group report was given by leader Nicole Ward Gauthier. A focus group with 10 fruit growers from across the state was created. The group was surveyed and documented needs and concerns, as well as cultivation practices. Results will influence Extension activities during the next two years of the grant cycle. IPM website revised and updated. A fruit section was added to the IPM site and publications and grower resources are now available in a single location for grower convenience. IPM fruits web site includes links to plant pathology, entomology and horticulture sites. Site is found at <http://www.uky.edu/Ag/IPM/fruitipm/fruit.htm>

Due to new and emerging problems they are using the Plant Disease Diagnostic Lab and grower visits. This resulted in these major findings: thread blight in apple, cherry, gooseberry, and various ornamentals confirmed in 7 counties; Bacterial leaf scorch was confirmed for the first time in blueberry in Kentucky; peach cankers resulted from winter-damaged wood; fruit and leaf diseases occurred in most cops due to rainy weather; no fungicide-resistant pathogens were documented.

In year one ,finalized weather prediction models and website. New format is easy to use; grower adoption is increasing. A 5-day forecasting add-on now allows growers to predict disease risks, as well as monitor real-time risks. There are 66 Mesonet stations across the state.

Train-the-trainer events in Year 1 (held in 2 locations). County Extension agent trainings and resources for expanded grower and homeowner reach (video available). Grower meetings and field days: Winter 2-day fruit and vegetable conference, orchard field days (2 locations), blueberry school with focus on transition to organic (video available), small fruit school, and

various county grower meetings and field visits. All meetings have a focus on IPM and reduced inputs. Resources and publications were distributed. Grower alerts and updates included: 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 that is updated weekly with grower activities, pest management information, and post-harvest information. New resources and publications during included:

- Diseases – Apple Rust Diseases, Black Knot of Plum, Peach Leaf Curl, Backyard Disease Management Using Cultural Practices: With Low Spray, No Spray, and Organic Options (4-part series).
- Research Publications:
 - Munir et al. 2016. Characterization of *Colletotrichum* species causing bitter rot of apples in Kentucky orchards. Plant Disease.
 - Williams et al. 2015. An assessment of organic apple production in Kentucky. HortTechnology
 - Strang et al. 2015. Evaluation of strawberry varieties in matted rows. Fruit and Veg. Crop Res. Rpt.
 - Wolfe et al. 2015. Rootstock effects on apple and peach tree growth and yield. Fruit and Veg. Crop Res. Rpt.
- Entomology publications and resources included:
 - ENTFACT 229 Spotted Wing Drosophila Biology, Identification and Monitoring
 - ENTFACT 230 Spotted Wing Drosophila Management
 - ENTFACT 231 Spotted Wing Drosophila And Backyard Small Fruit Production
 - Kudzu Bug in Kentucky web site - <http://pest.ca.uky.edu/EXT/Kudzu/welcomekudzu.htm>
 - Brown Marmorated Stink Bug in Kentucky - <http://pest.ca.uky.edu/EXT/BMSB/welcome.html>
 - SWDinKY Facebook page - <https://www.facebook.com/SWDinKY>

Impacts and return on investment were collected as part of the Blueberry School survey and MWWF survey. MWWF was a regional project and collaboration.

Grain Crops Report was presented by Collette Laurent. The foci of the Grain Crops IPM Working Group are to complete Early Bird Meetings, Winter Wheat Meeting, Agent Trainings, Field Days, IPM Field School, monitor grain crop diseases and invasive insects, and educational publications distributed in a timely manner to interested parties. To date, attendance at the Grain Crops Early Bird Series (Graves Co. 11/23/15, Union Co. 11/24/15 & Hardin Co.12/7/15) were attended by more than 157 people and represented 700,000 acres of grain crop production. Attendance at The Winter Wheat Meeting (1/5/16) was 150 people representing 297,000 acres of wheat production. Educational credits were offered at both the Early Bird series and the Winter wheat Meeting. There was a combined participation of 48 Certified Crop Advisors (CCA) and 94 KY pesticide Applicators (Commercial and Private) Based upon surveys

following each meeting participants valued the information received as \$10/A, which was an estimated value of \$4,047,400.00 Three agent trainings were completed monthly from September through November. There were 48 agents in attendance, 93% reported that they are more comfortable assisting clientele after the trainings and 79% will change recommendations to clientele based upon information received during trainings.

The outcomes of these activities are that 48% (93 respondents) of the attendees at the Grain Crops Early Bird Series reported increased awareness of energy needed to produce soybeans. 46% (37 respondents) indicated they will reduce the number of chemicals used to produce corn & soybeans. And 20% of attendees indicated that they will seek advice on chemical products for corn & soybean production from UK extension specialists, professional agronomists/crop consultants or my own on-farm research.

Members of both the IPM Corn/Soybean and IPM Wheat Science Working Groups continue to distribute timely information to producers and interested parties. To date, members of the Grain Crops IPM Working Group have posted 12 blogs to the Grain Crops Update blog (<http://graincrops.blogspot.com/>) which received a combined total of 3465 views, written 7 Wheat Science research reports, 4 Wheat Science newsletter articles (312 Hardcopies and 924 electronic copies), and submitted five peer-reviewed journal articles.

The remaining Grain Crops IPM Working Group objectives are scheduled to be completed. The Wheat Field Day is scheduled for May 10, the Corn and Soybean Field Day will be July 28, Weeds Field Day/Training (June and August) in Lexington, 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 8-9, 2016 in Bardstown, KY. Dr. Raul Villanueva, new Extension Entomologist, will be joining the field schools. Records on invasion, location and intensity of the invasive stink bugs, (Kudzu bug, BMSB) as they approach our major corn/soybean production areas will also be documented and publicized in extension and research publications as data is collected. Plant disease diagnostic records continue to be placed into the National Plant Diagnostic Network database and state-specific databases.

Ric Bessin noted that peer-reviewed publications listed in our annual reports do not count in the work limit so be sure and include those publications.

Nursery Crops report was presented by Winston Dunwell. During year 2, IPM Pro app was re-done to have version 2. Most people are now using iPhone so the new version needs to be tested on iPhone and android. The new version is complete but needs to be tested. Survey

method has been changed and uses YouTube video numbers. The Shrub Book 2 is out. It was printed using a grant from the southern region IPM center and was distributed at different nursery meetings. Business cards were collected from those who took a copy and they are now being called to see if they are using the publication. SNIPM has written a grant to develop a regional pesticide guide for nursery crops. Working with VA and NC who already have guides for weeds disease and insects, the goal is to create a southern region guide for use by states that cannot afford their own guides such as Kentucky. On June 29 there will be a meeting in Louisville area for nursery crops. Win stated IPM funds are valuable to their projects.

Ric Bessin noted that IPM did get a waiver of funding for indirect cost for the current grant. However, to get more money a more competitive grant needs to be written. Nursery Crops has done an excellent job of documenting impacts for federal programs. Federal programs want impacts relating to effect on health, environment or economic. Nursery Crops have documented economic impact very well and other groups are encouraged to do the same. Grain Crops has also done well. The Federal Government is interested in ROI or return on investment.

NC will be hosting a regional meeting so speakers will be free this year and will not cost the IPM funds.

Ric Bessin again encouraged working groups to be sure to spend their grant funds and to not wait till the end of the grant. Groups also need to spend funds as they were budgeted and approved in grant.

Vegetable Group report was given by Ric Bessin as Shubin Saha was not able to attend. The big emphasis from this group has been in support of NRCS high tunnel program through EQUIP funding. This includes IPM training and efforts plus working on a scouting guide for high tunnel and green house producers. This made sense for this group as high tunnels is a major NRCS program that complimented IPM programs. A number of trainings have been held and a grant has been approved to further supplement funding for the trainings.

Cary Grable is doing video for vegetable group using equip purchased with IPM funds for videos.

4. Review of 2016 Priorities

Results of 2016 Priorities Survey were distributed. Survey was sent to County ANR and Horticulture agents, College of Agriculture employees, IPM listserv and Kentucky Pest News. Results were mainly from extension. This may mean that growers are not reading Kentucky Pest News in the winter. When repeated, we could ask for assistance from commodity groups to assist by distributing to their electronic mailing lists. The priorities are ranked 1 – 11 with 1

being the most important. It was discussed that the link for the survey should be distributed to groups and they can help distribute the link to increase participation. Using a paper survey was discussed but one advantage of the electronic survey is that the priorities are randomized each time and this removes any bias from the position of the priority in the list. It was suggested that we use grain growers and other mechanisms and repeat the survey in the fall when people are not as busy outside.

5. Goals and Objectives

Question was asked are we wasting resources on unimportant things or missing emerging issues and goals. This is the time for feedback to see if we are addressing critical pest management issues. The issues can be research or educational based.

Philip Anderson stated that in the row crop realm there is more talk and interest in in-furrow fungicides for use in corn. This is probably one of the biggest issues being discussed. Since it is expensive, producers need to evaluate if the cost is justified. There is a chance that producers are not going to use this year because corn is less than \$4. Philip stated that there is probably more interest in in-furrow fungicides this year because of chemical company representatives talking about and it is being emphasized. Richard Preston added that Dosatron is an awesome tool because you could lay off and do side by side half and half or strips and is really clean because you are injecting something into it and then are not. It is a nice tool. For example you could check insecticide easily. Ric Bessin said low grain prices support IPM. Carl Bradley shared that he has done research on in-furrow fungicides in IL. It was suggested this could be a possible topic for an IPM meeting. Carl stated it would be a short talk.

John Grove asked to what extent does the Mesonet weather information play into IPM decision making? Ric stated that the Mesonet information is used in fruit disease and insect models that use real time data. The programs are on the Ag weather site and mobile apps are used in the field. Would like more people to use but could be an age barrier with some of growers. Younger growers are really using the models.

Dr. Grove stated he is asking because he received an email from Stuart Foster, Director of Kentucky Mesonet at WKU, and he is anticipating extremely significant funding pressure and has asked Dr. Grove to set up a meeting at the UKREC for interested users of the Mesonet to make them aware of the pressure being made on funding and problems maintaining it going forward. There are 66-67 Mesonet sites across Kentucky. The cost is not the stations but the IT cost to maintain interface and making the information available on web site and available for downloads for models, possible equipment upgrades and some maintenance cost. Win Dunwell stated the the information is of incredible valuable to horticulture. Richard Preston

stated that as a producer the real value is the information on UK weather station and that it is available quickly, unbiased and gets links to other information. UK is much better than commercial sites even if you have to click another link to get to the information. Ric Bessin stated that while we cannot help financially, how else could we help? John Grove said he will ask.

Ric Bessin asked if there are other issues or opportunities, things we need to move on.

John Strang stated he would like to see Select post emergence grass herbicide labeled for apple, blueberries, raspberries, blackberries and bearing strawberries.

Nicole Ward Gauthier asked if we needed to address the terminology/definition of organic fruit. Ric Bessin said when it comes to competing programs if making a statement on impact and safety of competing crops, fall back on what science says. We should look for published information to defend position, have a research foundation when making arguments. When talking about number of sprays use research based information.

Does \$3.50 corn and \$8.50 soybeans give new opportunities in IPM and if so how do you see those? Richard Preston suggested that re-training scouting could have an impact. Based on the presentation made this morning by Carl Bradley he was impressed with how important scouting will be when you have \$3.50 corn. With low prices we now have their (producers) attention. Scouting knowledge has been lost in previous era. Farmers and agents need to be re-trained. This is an opportunity to re-educate. When grain prices are high it falls on deaf ears.

Win announced the Nursery Crops group made their first drone flight over a nursery this year and it does have value. There are still some computer things being worked out. Growers think it is important in inventory monitoring, showing what they have in the field, skips, damaged inventory, wet areas, etc.

Ric Bessin asked does anyone know growers using drones to look at crops. Philip said some have and they are looking for weeds. He said one grower who had 40 acres of tobacco used a drone to show insurance adjuster field damage to 20 acres was much greater than he had estimated. There will be many more uses to come.

Win shared that the Nursery Crops group is looking to use drones to spray only target trees when pest has been identified. They are working on this with Ag Engineering and are part of a working group. Nursery Crops is finding the most value in insect scouting and control.

Are there any methods to address these problems? Carl Bradley can address in-furrow fungicide as a meeting topic or component of talk. Ric will work on the IR 4 issue to see if Select

post emergence grass herbicide can be labeled for apple, blueberries, raspberries, blackberries and bearing strawberries.

It was suggested that the need for education on scouting be promoted to the corn grower's board. It could be brought up at a corn grower's board meeting to make IPM an educational effort, that instead of 300 bushel corn try to survive next 3 years. Ric suggested the summer Corn, Soybean & Tobacco field day would be a good place to demonstrate and educate people on scouting techniques during the season. One of the strengths of field days is being able to take participants into field and show and demonstrate.

Vicki Shadrick said Grain Crops group (Carrie Knott) has done an excellent hands on series of trainings for new agents and that attendance was highly encouraged for agents.

From specialist perspective best thing we can do is train agents. Agents need to be a part of all trainings and focus needs to be on agents.

6. Next Annual Meeting

Is the timing of this meeting working? Yes, there were no complaints. It works well for producers to attend and one hour is sufficient. There is no need to survey participants.

Ric Bessin will be attending an IPM coordinators meeting in 2 weeks after the southeast branch ESA meeting in Raleigh. Kentucky's priorities will be delivered to the group and presented for inclusion in regional priorities. So when IPM grants come out you can reference the southern region priorities. We need to keep surveying stakeholders because priorities are needed for funding to continue for extension and research work. Does anyone have a need to be worked into state priorities?

With no other business the meeting adjourned at approximately 1 p.m. CST.

2016 IPM Priorities Survey

90 Responses – Priorities listed in order of importance based on survey result

(1- Most important and 11- least important)

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. (Mean=3.66)
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.(Mean=4.90)
3. "The use of 2,4-D resistant corn and soybeans and Dicamba resistant soybeans in proximity of nurseries and vineyards may be problematic.(Mean=5.03)
4. There is a need to develop IPM educational materials for novice home gardener.(Mean=5.61)
5. 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.(Mean=5.90)
6. 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 product. (Mean=6.10)
7. 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. (Mean=6.26)
8. 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. (Mean=6.49)
9. The need exists to emphasize the appropriate use of insecticide seed treatments specifically the unnecessary use of insecticide seed treatments on soybeans.(Mean=6.61)
10. 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.
(Mean=7.25)
11. Need to support ipm-Pipe programs and develop diversified funding to so they do not rely entirely on USDA funds. (Mean= 8.18)

Ask Patty if you would like a copy of the data collected with the mean, variance and standard deviation for each priority.

2. Please use the space below to suggest other agricultural pest related problems or issues that you think need additional research or educational efforts.

Text Response

sugarcane aphid in milo

Protected agriculture (high tunnels and greenhouses) are increasing in use with limited management options for arthropod pests and disease. More IPM work needs to be focused in these areas.

Maximize use of cover crops for soil health and measure impact of cover crops on pests.

how cover crops such as ryegrass effect insect pressure in the crop field

Controlled environment pest management

Develop thresholds/decision aids to assist in making decisions on whether or not it is economically sound to spray diseases with a fungicide. At what disease level should I start spraying?

I have issues with Grey Leaf Spot. Knowing how much is needed to warrant a fungicide application in corn. Same goes with Frogeye in soybeans

increase in diversity of crop and landscape to slow the spread diseases within monoculture plantings.

Brown Marmonated Stinkbug, as close to organic as possible without being certified organic, emphasis on cleaning orchards to remove overwintering diseases/etc.

Educational tools on how and when to use the most appropriate pesticides.

Effects of conventional tillage on RR resistant crop populations

Sugarcane Aphids, Waterhemp, Palmer

2-4,D use in our area reduces the ability of a grower to grow grapes in this area. Teaching others how to scout for pests in certain crops.

none

Specifically, work is needed regarding spotted wing Drosophila in soft fruits.

Banded fertilizer or strip till

brown Marmonated stink bug

IMPORTANCE OF SCOUTING CROPS

There is great need to focus on urban landscape IPM as Kentucky landscapers are woefully ignorant and also frequently abuse and misuse chemicals. There is also no enforcement of existing regulations.

Home invasive insects, brown Marmonated stink bug, beneficial insects, more organic controls
Get places that sell plants and agricultural chemicals to either not sell invasive plants (preferred) or fully educate their buyers by giving alternative options at the location of the plant, chemical
pasture management issues of weed and pest control.

Always include economic threshold levels on pests that are harmful to crops, preferably in number of sweeps.

Ed. efforts: increase CCA/CPAg/CPA training (incl. web self training); better ad. of UK ext. websites & pubs (IPM, variety testing) Pest issues: people want to know how pbs in KY are addressed by UK

Frogeye leaf spot in soy and tobacco, hosts etc. . palmer amaranth/water hemp control, better education on what is effective for them and what isn't.

More on pests of forage crops.

herbicide restent weeds

Where growers can save money without losing yield

Statistic

Value

Total Responses

28

3. I am best described as

#	Answer	Response	%
1	an agriculture producer/ farmer	1	1%
2	agriculture business or industry person	5	6%
3	government employee such as NRCS, FSA, SCS	2	2%
4	University or Cooperative Extension Service Employee	78	87%
5	independent crop consultant	1	1%
6	owner of small family farm	3	3%
7	consumer living in a city or urban area	0	0%
8	consumer living in rural area	0	0%
	Total	90	100%

Statistic	Value
Min Value	1
Max Value	6
Mean	3.91
Variance	0.49
Standard Deviation	0.70
Total Responses	90