

Clark County Ag News

ANR Newsletter - A newsletter for homeowners and producers in Clark County about education opportunities and information regarding agricultural production from the Purdue Extension Service.

Put together by
Simon Kafari, ANR
Educator, Clark
County, 9608 Hwy.
62, Suite 1
Charlestown, IN
47111
Phone: (812) 256-
4591
Fax: (812) 256-4270
skafari@purdue.edu

May/June 2015

Spring is here and marks the beginning of increased activities on farms, landscape management and gardening. Bee keepers are also going to have a share of the season with flowers and nectar in abundance for bees. The Clark County extension office will be participating actively as always and our doors are opened for business to help find answers to questions and issues that may arise in the course of the spring and summer. The Clark County extension is again setting up another demo garden this year through the effort of volunteers who have dedicated part of their valuable time to doing this as an education site to the community on gardening. You can bring children to learn basics in gardening and to see the different vegetables growing in the garden. Adults are also welcome. We also welcome information and knowledge sharing and anyone who has valuable information to share with the Clark county farmers, gardeners and landscapers is welcome to do so through the County extension office.

AS a quick note, going forward and as part of our newsletter, I would include articles and topics of relevance to Ag and natural resources in the Clark County. These would come towards the end of the newsletter. They may be topics on frequent concerns or questions that we receive from farmers and other members of the community. It may be information on new research findings that we think the Ag community should be informed about or a reproduction of articles from various sources that are of relevance to the ANR community in the Clark County. I would also encourage the Clark County community to send articles of relevance to the Ag community to be published in the newsletter. These could be on sharing knowledge in an area of expertise or sharing information you have read and think is worth sharing with the Ag community. You may also e-mail me topics of ANR importance to the community and I would research them and publish in the newsletter. This section would be referred to as "CLARK WANTS TO KNOW". Naturally, the extension office would regulate and/or edit any work submitted to ensure that it meets the consumption needs of our Ag community.

I am eagerly looking forward to sharing my first spring and summer with you.

Thanks a lot for your support so far. You are all greatly appreciated.

Sincerely,

Mark your Calendar – Agricultural Events		
May 14 –Aug 6	7pm-8pm	After dinner garden conversation at the Clark County Extension office
Feb 19 to Dec 3rd		Horticulture at Home, Floyd County
May 5th	6pm-8pm	Beginning Beekeeping Workshop, Orange County
May 15 and 16		Southern Region Goat and Sheep Workshop-Scott County
June 4-6, 2015		Purdue Master gardener State conference, USI, Evansville, IN
June 27 th and 28 th		Open youth beef and Lamb show, Orange County

The After Dinner Garden Conversation

The start of spring often welcomes gardening activities that range from small balcony vegetables planted in hanging pots to raised bed gardening in boxes at the backyard to large scale commercial gardening. Community gardening also exist and caters for those who either do not have space for gardening at home or want to engage in vegetable gardening in a more social setting. Each of these different shades of gardening require expertise to either enjoy the time spent or turn a profit.

The increasing importance of vegetable gardening in the Clark County and the very diverse reasons why people engaged in gardening, as well as the vast difference in the levels of expertise of producers has called for the need to come together to share knowledge, learn better ways of doing things from each other and encourage and support each other. The after dinner garden conversation as the name implies is going to be doing just that. Some presentations would be part of the sessions but the main purpose is to encourage and facilitate an atmosphere of fun conversation and sharing of knowledge in vegetable gardening. If you messed up and turned your garden upside down when you first started gardening, we would want to hear your story. If you have discovered new ways of doing things such as raising healthy seedlings, or keeping your garden insect and disease free without the use of chemicals or you do things in a unique way unknown to others, please come and share your knowledge. But most importantly, if you want to have fun socializing and networking with other gardeners, come participate in the “after dinner garden conversation”. The after dinner gardening conversation is designed to cater for both conventional gardeners and gardeners interested in organic gardening so discussions will have elements of both.

If you are a beginner gardener and want to learn how to raise vegetables or want to acquire additional skills, then these sessions are for you. If you are a beginner Master Gardener, an intermediate Master Gardener or an advance master gardener and want to either learn from others or help others grow in the art of gardening, then this is the place to come to spend an hour or so with others with a common interest and passion as you. If you are “sitting on the fence” and not sure whether vegetable gardening is for you, the ‘after dinner garden conversation’ is what you need to join in and listen to diverse views on vegetable gardening so it can help you in your decision process.

Sessions start on the May 14th and occur every other week on Thursday evening (except July 22nd) from 7-8pm. There will be no class on July 9th due to the Clark County Fair. These sessions will run from May to August and will be facilitated by Simon Kafari, ANR Extension Educator, Clark County, Gina Anderson, ANR Extension Educator, Floyd County and Richard Beckort, ANR Extension Educator, Jackson County. Below are details on the schedule.

May 14th

Seed selection and seedling raising for the home garden

May 28th

The why and how of growing vegetables

June 11th

Managing garden Space for Vegetables

June 25th

The ABC of Growing Tomatoes

July 22nd

Managing vegetable insects and diseases in the garden

August 6th

Organic gardening in the home garden

Registration is \$15 for all the sessions. Snacks and beverages would be provided during sessions. You may register by printing and completing the attached registration form and mail it in to the Clark County Extension office, 9608 Hwy 62, Suite 1, Charlestown, IN 47111. You can also come into the office to register in person. Walk-in registration is also acceptable but we would prefer registration ahead of the start of the sessions because we would need a given minimum number of participants to have the sessions. If you have any questions or need additional information you may contact the Clark County Extension office by calling 812-256-4591. You can also send an e-mail to skafari@Purdue.edu.

Horticulture at Home, Floyd County, February 19th to December 3rd

Do you need to gain horticultural skills for your home gardening or go through refresher horticultural training to further strengthen your skills? If yes, do not miss the "Horticulture at Home" one-on-one training conducted at the Grant Line nursery and garden center by Gina Anderson, the Floyd County ANR educator. Classes which include hands-on training, begin on February 19th in the evening. For further details and registration, please contact Grant Line Nursery and Garden Center at (812) 945-5676 or Gina Anderson.

Class Dates and Topics:

February 19 - Seed Starting and Garden Planting

March 19 - Spring Containers

April 23 - Tree Care

May 21 - Veggies and Herbs

July 23 - Insect I.D. and Control

August 20 - Preserving Veggies

September 17 - Bulbs

October 22 - Pruning

December 3 - Live Greens

Beginning Beekeeping Workshop, Orange County

On May 5th, 2015 from 6:00pm-8:00pm at the Orange County Fairgrounds, there will be a beginning beekeeping workshop presented by Joe and Nancy Kimmel in conjunction with Purdue Extension Educator, Levi Berg—Orange County. This workshop is designed for people who would like to get started in beekeeping, those who have had previous beekeeping experience and want to get back into beekeeping, or those who just want to know more before taking the plunge. There is no cost to attend this workshop. Topics to be covered include; necessary beekeeping equipment, where to get bees, how to start a hive, keeping bees in a residential setting, feeding, inspections, and producing honey. If interested in beekeeping, please plan on attending this workshop, and if you have questions, contact Levi Berg at the Purdue Extension-Orange County Office at 812-723-7107.

Purdue Extension Southern Regional Sheep and Goats conference

OPEN TO THE PUBLIC

WHEN

May 15, 5-8PM

May 16, 9-3:30PM

WHERE

Scottsburg, IN

Day 1: Scottsburg High School Commons

Day 2: Scott County Fairgrounds

COST

MEALS PROVIDED

Whole Conference - \$35

May 15 session - \$20

May 16 sessions - \$15

Please Register by May 8, 2015 by calling Scott County Extension Office at: 812-752-8450

FAMACHA TRAINING

Friday Night from 5-8 PM, Dinner provided

ANIMAL HEALTH AND MANAGEMENT

Disbudding, castration, hoof trimming, vaccination, etc.

NUTRITION

Forage Analysis, judging hay quality, hay analysis and how it relates to nutrition

MARKETING

Goat Milk Stuff Tour and Brewer Livestock processing facility Overview

Purdue Master Gardener State Conference

The 2015 Purdue Master Gardener State Conference is scheduled to take place from June 4 – 6 at the University of Southern Indiana Evansville. The conference includes preconference activities on June 4 that include tours to Western Kentucky Botanical Garden, Owensboro, Kentucky, Utopia in the Gardens at New Harmony, Indiana and Around the River City, Evansville, Indiana.

Please visit the conference website for additional information and to register: <http://www.swimga.org/2015-master-gardener-conference-june-4-6-2015/>. You may also e-mail : mgconf2015@twc.com should you have questions about the conference.

Open your beef and Lamb show, Orange County

The Orange County 4H INC.'S open youth beef and lamb show is, June 27th and 28th 2015 at the Orange Count 4-H Fair grounds, Paoli, Indiana

Beef Show Schedule (Eastern Time)

Fri, June 26, 2015 5pm Barns Open for Cattle

Sat, June 27, 2015 8-10am Animal Check-In

Sat. June 27, 2015 Noon Heifer Show

Sat. June 27, 2015 2pm Steer Show

Judge: Josh Blackford, Potamac, Illinois

Lamb Show Schedule (Eastern Time)

Sat, June 27, 2015 7pm Barns Open for sheep

Sun, June 28, 2015 8-10am Animal Check-In

Sun, June 28, 2015 Noon Market Lamb Show

Sun, June 28, 2015 2pm Breeding Show

Judges: Andrew or Dennis Feller

For More Information include awards and rules, contact:

Barry Wilson (Show Manager)

(812) 583-1519 Barry. Wilson@Layne.com

Purdue Extension-Orange County Office

(812) 723-7107

berg31@purdue.edu

CLARK WANTS TO KNOW

The Brown Marmorated Stink Bug - a nuisance or a menace?

It is that time of the year when we would, as happens year after year, welcome insects and bugs into our homes, gardens, lawns and farms. Most of these creatures may be viewed either as a nuisance or as a menace in one form or another. Rather sadly, except for a few bugs and insects the largely un-notice role of most of these supposedly “bad” insects and bugs is their beneficial place to humanity and/or the environment. Very often the roles some of these insects and bugs play in maintaining the right ecological balance, in suppressing the insurgence of other pests or in helping the reproductive processes in trees and crops, the list goes on, may not be appreciated by us. So with the unwelcoming appearance of these creatures once again, it is important that as we deal with them in one way or another, we constantly ask ourselves one question – how do I handle insects and bugs in a manner that promotes co-existence rather than eradicating them? Even at times that insects and bugs are creating health problems or causing economic damage, it is always important to first think of other ways to prevent or significantly minimize the impact without resorting to measures that will eliminate them.

One creature that scientists are beginning to have a lot of interest in is Halyomorpha halys, commonly known as the Brown Marmorated Stink Bug. Complains were made last year to several County extension offices throughout Indiana including the Clark County and this year, some of the early visits we are getting is to seek help or understanding of the Brown Stink bug and its likely impact this year. I have therefore put together some information on the stink bug so we have basic information about this bug.

Background

The sting bug is native to China, Japan, Korea and Taiwan and was accidentally introduced into the United States, first into Eastern Pennsylvania. It was first collected in September of 1998 in Allentown, but probably arrived several years earlier. However it is stated that the first positive identification of the bug was in 2001. The bug belong to the order Hemiptera and family Pentatomidae. It is said the brown marmorated stink bug is more likely to invade homes in the fall than others in the family. It is fairly new to Indiana although it is said to have been in the country for close to 20 years now. The “sting” bug got its name from its stench and appearance. This bug is both a nuisance and a menace although complains in the Clark County are more on its nuisance than its attack on crops and vegetables.



Brown marmorated stink bug (Photo Credit: John Obermeyer)

Life Cycle

Eggs are laid in clusters of up to 25 on the underside of leaves. It is said the female can lay up to 400 eggs in her life time. According to Timothy J. Gibb, Insect Diagnostician, Department of Entomology, Purdue extension, adults emerge during the spring (late April to mid-May), mate and deposit eggs from May through August. The eggs hatch into small black and red nymphs (immature form of the bug) that develop through five molts (shedding their skin) to get to the adult stage.

The Stink bug as a pest

The bug is known to be an Agricultural pest in its original homes and in Japan it is a pest to soybeans and fruit crops. The invasion patterns of this true bug suggest it will soon become a severe pest in the US. In 2010, it caused a lot of damage to multiple crops in the mid-Atlantic region and in Pennsylvania it produced severe losses to orchards of apples and peaches. Fruits attacked include apples, peaches, figs, mulberries, citrus fruits and persimmons. It has also been reported to attack ornamental plants, weeds, soybeans and beans for human consumption. It has been observed damaging tomatoes, lima beans and green peppers and found feeding on blackberry, sweet corn and field corn.

Both the adult bug and nymph feed on crops and weeds using their long-piercing sucking mouth parts to pierce into plants and suck out juice. The result of feeding is the formation of necrotic spots or stains on fruits. Feeding on tree fruits such as apple results in a characteristic distortion referred to as “cat facing,” that renders the fruit unmarketable (see picture below). Like most insects with piercing-sucking mouth parts, these bugs can potentially transmit plant pathogens as well.



The Stink bug as a nuisance in homes

Adults begin to search for overwintering sites starting in September and continue through October, depending on temperature. The bug survives winter by taking shelter in protected areas included cracks and crevices and when they get the opportunity they enter homes. It is during the period the bugs are searching for overwintering sites that they are seen congregating on walls of homes. The primary objective of bugs entering homes is to find a getaway and survive the winter. They do not feed neither do they breed in homes.

While their main intent is to go into hibernation once they take shelter, the warmth in homes makes them active and they are found crawling and flying within homes. When home owners try to get rid of them and they feel threatened or sense danger, they emit a pungent odor through tinny holes in the abdomen. This is a defensive mechanism intended to keep the bugs away from being eaten by their predators such as lizards and birds.

Management and control of the sting bug

The feeding habits of the bugs (insert their proboscis below the surface of fruit, and then feed) make some insecticides ineffective. With the very mobile nature of the bugs, a new population may fly in after the resident population has been killed making chemical control expensive. Research shows that spraying only the perimeter of a Soy bean field may be effective.

In China, *Trissolcus japonicus* a parasitoid wasp species in the family Scelionidae is a primary predator. This species is not currently present in the U.S., but is undergoing study for possible introduction. Native predators such as wasps and birds are showing increased signs of feeding on the bugs as they adapt to the new food source. Several other species of the parasitoid wasp have been documented attacking stink bug eggs in a Virginia soybean field.

Two important vectors of this pest are Tree of Heaven, and Princess Tree, both landscape ornamentals. If possible, these ornamentals should be removed where they are close to susceptible crops.

To keep stink bugs out of homes requires sealing cracks and crevices in homes and using tighter doors and windows. When the bugs get inside homes, they can be removed manually and dropped into a container of soapy water. This not only kills them but also offers some relief from the bad odor. Both live and dead stink bugs also can be removed from interior areas by using a broom and dustpan or with the aid of a vacuum cleaner. Either way, they should be killed rather than released outside so that they do not simply reappear back inside the home. If the bugs become intolerable nuisance and must be sprayed with chemicals, then this should be done outdoors around the house using recommended insecticides and following label instructions on use of the chemical. Rick Foster, Purdue University Extension Entomologist says the most effective insecticides on these bugs are the pyrethroids such as bifenthrin, cyhalothrin, cyfluthrin and cypermethrin. Exterior applications of insecticides may offer some minor relief from infestations where the task of completely sealing the exterior is difficult or impossible. Applications should be done by a licensed pest control operator in the fall just prior to bug congregation. Unfortunately, because insecticides are broken down by sunlight, the residual effect of the material will be greatly decreased and may not kill the insects much beyond several days or a week. It is not advisable to use an insecticide inside after the insects have gained access to the wall voids or attic areas. While insecticidal dust treatments to these voids may kill hundreds of bugs, there is the possibility that carpet beetles will feed on the dead stink bugs and subsequently attack woolens, stored dry goods or other natural products in the home. Although aerosoltype pyrethrum foggers will kill stink bugs that have amassed on ceilings and walls in living areas, it will not prevent more of the insects from emerging shortly after the room is aerated. For this reason use of these materials is not considered a good solution to long-term management of the problem. Spray insecticides, directed into cracks and crevices, will not prevent the bugs from emerging and is not a viable or recommended treatment.

Credits: None of this material is my own and I would like to give credit to sources I gathered the information from and put it together - Purdue University "Hot news" (HN-90-W, HN-72-W), "Featured Creatures (July 2010), IFAS, Wikipedia. Purdue University, Department of Entomology (various). My sincere apologies if I inadvertently left out giving credit to any source I took this material from.

Do you know where to go to for your soil and Plant tests, pests' identification and recommended control?

Spring and summer are very busy times for vegetable gardeners and crop farmers. These are times when we get most questions on weeds, bugs, insects and soils. Below are two places to have handy around this time.

1. Soil testing

A. Soil testing for lawns, landscape, golf courses and gardens:

The Clark County Soil and Water Conservation District (SWCD) does soil testing for gardens, lawn and turf, landscape and golf courses. Testing can either be basic (soil and buffer pH, organic matter, available phosphorus, exchangeable potassium, cation exchange capacity, potassium, calcium and magnesium) or more detailed to comprise of basic plus soluble salts, surfer, Zinc, manganese, iron, copper and boron. As of today, basic testing is \$22 and more complex testing is \$32. Both tests also provide suggested fertilizer recommendations for up to three crops. The SWCD office is located at 9608 Highway 62, Charlestown. You

can also call the office on 812-256-2330 if you need instructions on how to take soil samples or have any questions.

B. Soil testing for crop farms

In addition to doing soil testing for lawns, gardens, golf courses and landscape, A&L Great Lakes Laboratories, Inc. at Ford Wayne does soil testing for crop farms as well. Their address is 3505 Conestoga Drive, Fort Wayne, IN 46808. Their telephone number is 260-483-4759. You can go to their website for their sample submittal form as well as for instructions on how to submit soil samples. The url is WWW.algreatlakes.com. The cost as of today is \$9.35/sample.

Other testing locations recommended by Purdue Plant and pest Diagnostic Laboratory can be found at the following link - <http://www.ppd.purdue.edu/PPDL/PPDL-4-Soil%20Testing%20Labs-08.05.14.pdf>

You can also call your Clark County extension office if you need additional help. The number is 812-256-4591.

2. Plant and pest identification and control

Plant and pest identification and control recommendations is done by Purdue University at the Plant & Pest Diagnostic Laboratory (PPDL). Their website is <http://www.ppd.purdue.edu/PPDL/services.html>. Information on how to take samples and sample submittal forms are on the website. Basic testing is \$11 for samples within Indiana and \$22 for samples from out of Indiana. Services the lab provides include:

Identification and control recommendations for:

- Insects
- Mites
- Spiders
- Other multi-legged creatures
- Plant diseases
- Disease causing organisms, including Fungi Bacteria Viruses
- Unknown plants, including weeds
- Nutritional problems*
- Other non-infectious problems
- Vertebrate pests

The PPDL does not do soil, nematodes and tissue tests. For nematodes test please use the link below. <http://extension.entm.purdue.edu/nematology/cv/submissionform.pdf>.

New Identification Guidelines for Moving Cattle in Indiana - Begin in 2015

Below is information on new identification for moving cattle in Indiana beginning 2015 that was published in the ANR newsletter of Washington County. I find the information very useful for Cattle owners in the Clark County as well so I have reproduced it here.

What is Official Cattle ID in Indiana?

The Indiana State Board of Animal Health (BOAH) recognizes three forms of identification as official for cattle and bison. All are approved by USDA for interstate movements of livestock.



840 Tags
- May or may not be an RFID (radio frequency device)
- 15 digits, beginning with "840" with US shield



NUES (brite) Tags
- National Uniform Eartagging System
- Steel or plastic options for cattle must include US shield



Official USDA Program Tags
- Such as orange calfhood vaccination tags

Movement of Cattle & Bison



Cattle entering Indiana must be accompanied by documentation and bear official ID (as recognized by BOAH).
Official ID required for:
-All sexually intact, 18 months or older
-All dairy breed females (including crosses)
-All dairy breed bulls and steers (including crosses) born after 3-11-13
Exceptions:
-Animals moving directly to a slaughter facility
-Animal moving directly to an approved market, where the animal will be ID'ed
Documentation required:
-Pre-entry permit from BOAH
-Certificate of Veterinary Inspection written within 30 days of entry
Exceptions:
-Direct-to-slaughter
-Direct to an approved market
-Veterinary care (no ownership change). Does not include embryo transplants
-Passing through the state



Upon change of ownership, and for exhibitions and rodeos, Indiana cattle must have official ID and may need documentation.

Official ID required at change of ownership:

- All sexually intact, 18 months or older
- All dairy breed females (including crosses)
- All dairy breed bulls and steers (including crosses) born after 3-11-13

Exceptions:

- Animals moving directly to a slaughter facility
- Animal moving directly to an approved market, where the animal will be ID'ed

Documentation required:

- Owners, sellers, lessors and purchasers must keep records of all cattle and bison sold, purchased, leased, bartered, or exchanged for 5 years.
- Records include:
 - ID
 - Name and address of: seller, lessor, owner, purchaser



Always call ahead to the state-of-destination for cattle moving out of Indiana.

Official ID:

- Cattle and bison that meet Indiana's ID requirements will meet the ID requirements for all states, based on USDA's ADT rules.

Official ID:

- 840s
- NUES tags
- USDA program tags

Documentation:

- Call ahead to ask specific details about required documentation. USDA recognize Certificates of Veterinary Inspection for inter-state movements.

Questions:

- What is the time limit on CVIs?
- Is a pre-entry permit required?
- Other requirements, such as tests?

Obtaining ID Tags

The Indiana State Board of Animal Health (BOAH) is NOT CURRENTLY offering free 840 electronic identification (EID) tags to Hoosier cattle producers. Hoosiers have several options for obtaining official ID:

Veterinarians: Some practitioners will supply tags. This is especially useful to producers who need only a few, such as 4-Hers. Note: Producers may apply the tags themselves; a veterinarian is not required to administer non-program tags.

Tag Suppliers: Producers may purchase tags directly from distributors. A list of suppliers serving Indiana can be found at: http://www.in.gov/boah/files/Guide_to_Cattle_and_Bison_Official_ID_1-2015.pdf.

Note: Be sure to specify tags that bear the US shield when ordering; all other forms are not considered official.

A list of 840 Tag

Suppliers can be found at [http://www.in.gov/boah/files/840_Tag_Distributor_List_Updated_2-2015\(1\).pdf](http://www.in.gov/boah/files/840_Tag_Distributor_List_Updated_2-2015(1).pdf)

Official Tagging Sites: In Indiana, all licensed livestock markets are considered tagging sites. However, the market may or may not provide this service on animals not moving through the facility. Likewise, all animals that move through a given market must be tagged in some manner upon arrival, if the animal does not already bear official ID.

NOTE: A state-issued premises ID number is required to order official identification.

More information about which manufacturers' products meet federal standards for official ID is available on the USDA Tag webpage <http://www.in.gov/boah/2533.htm>

Important Information About Tags

Indiana's 840 RFID Tag Program

For several years, through grant monies, BOAH was able to provide free radio frequency identification (RFID) tags to cattle producers at no charge. The supply of free tags is depleted, and BOAH can no longer offer tags at no charge.

Obtaining Tags

A premises ID number issued by BOAH is required to order official ID tags. The premise ID is necessary to link the tags to a specific location--usually the animals' point-of-origin. Once assigned to a specific premise, the tags CANNOT be transferred to another farm or operation. Those who have cattle on multiple locations should request different tags for each premise.

Tag Removal/Loss

Under federal law, 840 tags can only be used in American-born livestock. Removal of tags is unlawful once they have been placed in an animal, because they are official U.S. government identification.

If an animal loses an official ID tag, another official ID may be applied. The producer should note the date and reason the new tag was placed, as well as the ear tag number(s) of the old and new ID in the farm's records. This is important information, should an animal/farm be involved in a disease trace.

Tag Placement

Official identification for cattle can come in several different forms. Indiana allows the use of RFID tags, and plastic and metal ear tags. (Some producers may choose to use tattoos; however, Indiana will no longer recognize them as official ID beginning in 2015.) Additionally, some producers choose to add identification for their own farm's record-keeping system. Whatever type of tag is used, the following Official Identification of Cattle guide gives details on the proper placement of the various tags and tattoos for cattle. A sketch has also been provided. This guide can be found at

[http://www.in.gov/boah/files/STUDENT_AID_Official_Identification_of_Cattle1\(2\).pdf](http://www.in.gov/boah/files/STUDENT_AID_Official_Identification_of_Cattle1(2).pdf).

Source: *Indiana Board of Animal Health*, <http://www.in.gov/boah/2645.htm>

European Corn Borer, the Pest that Hasn't Gone Away – (John Obermeyer) –A reproduction from 2015 Pest and Crops newsletter.

For the last several years, we have heard from pest managers about European corn borer (ECB) infestations and damage catching the producer, or themselves, off guard when growing non-traited corn (e.g., popcorn, white corn, etc). This seems to occur more often when large acreage of unprotected corn is grown in close proximity. Though this pest has been in decline since the early 2000's, when Bt-traited corn was becoming predominantly grown in the state, it is very obvious that their many other hosts, including weeds and

vegetables, has kept them present...though low-key. Even more fascinating to us is younger field personnel are unfamiliar with this pest of old when encountered.

It is not our intent with this newsletter article to cover complete ECB biology, damage, and management considerations, as this can still be found in many field crop pest management books sitting on the shelf. Primarily, our questions have been about how and when to monitor for this pest. For seasoned pest managers, they recall it was a complex and fickle pest, even in its "heyday" before Bt-corn, varying greatly in damage from year to year. It should be no surprise that for the past couple of decades, there has been virtually no advancement in monitoring and predicting this pest, as the necessity of this work and university research dollars to do it dried up. For years, we maintained and reported captures from a black light trapping network (placed at eight regional Purdue Ag Centers), ECB being one of many Lepidoptera species. As expected, as Bt corn acreage increased/expanded, ECB moth captures declined; many times they were nearly absent throughout the year. There are no plans to resurrect that trapping program.

One important attribute of ECB biology, concerning monitoring, is that male and female moths mate at the appropriately-named "action sites" during the evening and night. Action sites are grassy areas outside of the field, examples being waterways and roadsides. In order to know early and peak flights of the moths, one must monitor during these times. ECB typically has two generations, historically mean flights are from May 26-June 10 for the first flight and July 26-August 14 for the second. The range accounts for the developmental (heat) differences from southern to northern Indiana. To "ground-truth" these calendar dates, one can use black light and/or pheromone traps. The other less technical approach, but perfect for night-owls, is to drive farm lanes of the non-traited corn with your vehicle's bright lights. Yes, you will see them flying around and eliminate a few on the windshield. A slight caution with this method, there are other insect species that can have massive night flights but are not a concern to crops, e.g., mayflies.

Black light and pheromone traps (we have the Iowa strain in Indiana) both have their advantages and disadvantages. Traps need to be placed close to the crop of concern and checked daily, and the general rule is that more traps are better. Trapping for ECB is an art, not a science, and the important point is that trap catches are NOT PREDICTIVE of infestations and/or damage. The reality with any of the methods, even the night drive, is that you are gathering relative flight information to better time your scouting visits to the cornfields, ideally peak mating and egg-laying. Also, there are degree-day models available online to help track ECB development once you know moths are flying. Nonetheless, there are no shortcuts for scouting trips to determine egg laying and/or damage. ECB female moths are quite discerning about which field, and where in the field, they deposit their eggs. Meaning they will likely be clustered, rather than uniform, in a given field. If you have not had the pleasure, scouting for first-generation ECB is a walk-in-the-park compared to the second.

With prior research and the tools developed, this new/old pest can be managed quite successfully. Depending on acreage involved, it may require personnel dedicated to understanding and monitoring for this pest. Some might consider hiring a crop consultant that provides such services. If you are contemplating the thought of planned rescue treatments without the monitoring, there are plenty of experienced field personnel that will tell you that it won't work. The treatment window from egg hatch to larval boring is short, once in the stalk, control is not possible and they are safe. Happy scouting!