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Cooler weather is starting to arrive, apples are maturing, and soon leaves will be turning. I typically enjoy fall and attending many fall festivals but I am not a winter person so I dread what follows weather wise.

The fall and winter months however are very busy as I will shift to farm programs, be attending conferences, and will be helping with the Monarch Madness event.

4-H enrollment will be beginning again in October. I encourage everyone to get that done early because if you have problems or wait until the deadline the system may crash and cause more stress. Don’t hesitate to call our office for help.

Our HHS educator will be busy this winter facilitating the next cohort of Leadership Knox County. Tonya is working to plan both adult and youth mental health first aid courses so be on the watch for those registration announcements.

If you have 4-H, health, human science, agriculture, natural resource, or gardening questions feel free to call us at

812-882-3509.

Valerie Clingerman Extension Educator

Agriculture and Natural Resources/County Extension Director

**Mastering Home Food Preservation**

We had another successful event with our 4-day intensive food preservation workshop. Participants enjoyed deepening their understanding of the science behind home food preservation. Topics covered included boiling water bath canning, pressure canning, jams and jellies, freezing, dehydrating, freeze drying, pickling, and fermentation.

Each day was an experiment in the kitchen as we compared different procedures and how they produced varying results. For example, we tested and compared how different apple varieties hold up to freezing, the quality difference between preserves made with sugar or artificial sweetener, the pros and cons of hot pack vs. cold pack, and the why, when and how to use a water bath vs. pressure canner. We even tracked the pH of cabbage as it fermented into sauerkraut.

Some participants were experienced preservers and some were brand new. They all left with one thing in common: more confidence to safely preserve food at home.

**4-H & Youth Development**

Mitch Wagoner

Extension Educator – 4-H Youth Development

mwagoner@purdue.edu

**4-H Enrollment for 2025-2026**

**Parents** can go into 4Honline (https://v2.4honline.com) to enroll/re-enroll their children in 4-H for 2026

**Starts: October 1, 2025 Ends: January 15, 2026**

**Certificated adult volunteers** need to go into 4hOnline (https://v2.4honline.com) to re-enroll as an adult volunteer and to sign your 2026 Adult Behavior Expectations by **Nov. 1**!

If you do not have internet access, please contact the Extension Office (812-882-3509) so we can help!

**Knox County Fair: July 27 – August 1, 2026**

**Indiana State Fair: August 7 – 23, 2026**



As the 2024-2025 4-H program year comes to a close, we reflect on the past year as we plan for the 2025-2026 4-H program year.

Youth reported they spent over 23,195 hours learning by doing and contributed over $469,136 to the local economy.

The future still looks bright to continue to develop youth.

**Knox County 4-H Exhibitors at State Fair:**

Althoff, Jayna

Althoff, Jon

Anderson, Ali

Anderson, Andi

Anderson, Lexi

Anthis, Lillian

Baum, Brigston

Beard, Caroline

Blackburn, Reese

Blubaum, Ellie

Blubaum, Taylor

Boyles, Kolten

Branch, Elyse

Branch, Lexi

Candler, Lauren

Cardinal, Bennett

Cardinal, Bryson

Cardinal, Jonathan

Carrie, Alice

Carter, Landon

Catt Jr, Robert

Chesser, Lyla

Cockerham, Kallie

Cockerham, Katelyn

Deckard, Alea

Decker, Adron

Decker, Chloe

Dellinger, Lee Emma

Detweiler, Grace

Dunn, Abigail

Dunn, Brantley

Dunn, Landon

Dyer, Jocelyn

Ferguson, Samantha

Garretson, Avery

Gilmore, Amy

Gilmore, Audrey

Gilmore, Joslyn

Green, Katie

Hammelman, Jeremiah

Hammelman, Moxon

Hancock, Ruby

Hansen, Kolton

Hatcher, Angel

Harting, Oliver

Hayden, Andrew

Hedge, Madison

Heinz, Abigail

Hendrix IV, Charles

Hollis, Jillian

Horrall, Maddy

Hughes-Pritchard, Elsie

Hughes-Pritchard, Lewis

Jacob, Aubrey

Johnson, Luke

Johnson, Rylee

Kahre, Briar

Kaiser, Cora

Keeton, Ella

Khurana, Arjun

Kixmiller, Gavin

Klem-Kixmiller, Kali

Knoy, Hannah

Krohn, Peyton

Lafferty, Kadie

Land, Kendra

Loudermilk, Braydon

Loudermilk, Ella

Loudermilk, Levi

Misiniec, Alexis

Navara, Cole

Navara, Kiersten

Nettles, Brooklynn

Nettles, Caleb

Noland, Abby

Nowaskie, Holt

Nowaskie, Sarah

Parker, Leigha

Pearce, Jude

Pieper, Henry

Primus, Silas

Quarterman, Colton

Reynolds, Kolten

Reynolds, Phebe

Rickard, Emilee

Rickard, Natalee

Ricketts, Colton

Risley, Mitchell

Roark, Avery

Roberts, Haley

Schopmeyer, Evelynn

Schopmeyer, Orrin

Setser, Elijah

Small, Dillon

Smith, Riley

Southwood, Makayla

Sprague, Joshua

Spurgeon, Trace

Strohm, Zoe

Summers, Iva

Sydow, Joshua

Sydow, Lydia

Toney, Miles

Vieke, Maggie

Vieke, William

Wagoner, Abigail

Wells, Regan

Wolters, Adalin

Wolters, Hope

Wonning, Alli

Wonning, Brady

**Congratulations to all those who competed at State Fair!**

Sweepstake: Building Project:

* Wolters, Adalin “Sewing Wearable”

Special Merit: Building Project:

* Anthis, Lillian “Foods, Preserved”
* Beard, Caroline “Floriculture”
* Carter, Landon “Entomology”
* Gilmore, Amy “Needle Craft”
* Johnson, Luke “Tomato Plate”
* Navara, Keirsten “Foods, Baked”
* Nowaskie, Holt “Construction and Architectural Replica”
* Parker, Leigha “Sewing Wearable”
* Rickard, Natalee “Shooting Sports”
* Sydow, Lydia “Needle Craft”
* Vieke, Maggie “Photography”

Fashion Revue Honor Group:

* Candler, Lauren “Separates”

5th overall Gilt: Blubaum, Taylor “Yorkshire, Gilt”

Champion Intermediate Barrow Showmanship: Blubaum, Ellie

Breed Champions:

* Loudermilk, Braydon “Landrace Barrow”

Reserve Breed Champions:

* Althoff, Janya “Horned Dorest, Market Lamb”
* Blubaum, Taylor “Chester White, Barrow”
* Blubaum, Taylor “Tamworth, Gilt”
* Garretson, Avery “Dorper, Market Lamb”

**Upcoming Dates**

* **4-H Enrollment Begins: October 1!!**
* National 4-H Week: October 5 – 11
* Tractor Supply Paper Clover: November 28 – December 14
* 4-H Enrollment push ENDS: January 15, 2026
* 4-H Scholarships “Senior Year & Accomplishment” DUE: January 25, 2026

**Social Media**

Facebook: “KnoxCountyIN4H”

Instagram: “@knoxcountyin4h”

## **Health & Human Sciences**

Tonya Short, Extension Educator – Health & Human Sciences

Short43@purdue.edu [www.facebook.com/KnoxCoHHS](http://www.facebook.com/KnoxCoHHS)



# Extension Homemakers—Updates

Next **County Council** meetings are September 8 & November 3, 2025. This meeting is for county officers, club presidents, and anyone else who cares about Knox County Extension Homemakers.

**Club Presidents:** If you have activities or announcements to include in the newsletter, get that information to Tonya by the 15th of even numbered months. E.g. Information to Tonya by June 15 for printing in the July-August newsletter.

# Evansville Fall District Meeting

**When:** September 30, 2025

9:30 ET – Registration (Continental Breakfast) 10:00 ET – District Meeting

**Where:** Daviess County 4H Building, 4-H Way, Washington, IN 47501

**Menu:\*** Fried Chicken, Beef Tips, Mashed Potatoes, Carrots, Corn, Garden Salad, Rolls, and Apple Crisp

**Program:** Grain Processing Corporation (GPC)

**Registration fee:** $ 15.00 **Registration deadline:** September 19, 2025

~Don’t forget your silent auction items!~

\*For any dietary restrictions, call or text Lawana Hand at the number below.

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REGISTRATION FORM

County: \_\_\_\_\_\_\_\_\_\_\_\_\_ Number attending: \_\_\_\_\_\_\_\_ Amount enclosed: \_\_\_\_\_\_\_\_\_\_

Name of attendees: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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County treasurer and phone #: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Detach and send this form with one check payable to Daviess County Extension Homemakers from your county treasurer to:

Lawana Hand 1672 W. 400 S., Washington, IN 47501; cell # (812) 257-9665; lawana.hand@gmail.com

# Proper Storage of Canners

Properly cleaning your canners can help extend their life and lessen your work to get them ready the next season. Here is a checklist to help get your canner ready for storage. Cleaning after every canning session will help ease cleaning needed at the end of the season.

* Wash your canner thoroughly with hot soapy water. Avoid getting water into the dial gauge or the pipe leading to the gauge.
* Use a pipe cleaner to clean the vent pipe.
* Ensure the safety valve moves freely and is free of food debris or mineral buildup.
* Use a soft-bristled brush to clean the trough of the gasket. Ensure the gasket fits snugly, is flexible, and free of cracks.
* For metal-to-metal seals, ensure that the sealing surface is smooth and free of any grease.
* Place crumpled paper towels or newspaper in the bottom of the canner to help absorb moisture and odors.
* Place the lid upside down. Do not seal the lid on the canner.
* To remove any discoloration, fill the canner with enough water to cover the discolored area. Add 1 tablespoon cream of tartar per quart of water used. Cover and boil until the discoloration disappears. Empty and wash with hot soapy water.
* Buildup from hard water can be prevented by adding 2 tablespoons of vinegar to the water in the canner. This will also prevent white buildup on the jars.
* Store all canning equipment in a clean, dry area.
* Dial gauges should be tested for accuracy at the start of each canning season. Many Extension Offices can provide this service and inspect your canner. Weighted gauge canners do not need to be tested, but you may still bring them in for an overall inspection if you wish.

# Canning Tomatoes

Some recipes for canning tomatoes will provide an option to use a boiling water bath or a pressure canner. No matter which you choose, the tomatoes must still be properly acidified. High-acid foods are the only products that can be safely processed in a boiling water bath. Foods considered low acid must be processed in the pressure canner. So, I am frequently asked that if someone uses the pressure canner can they omit the acid. The answer is a strong no. Here’s the reason why. It’s a long answer, so stick with me.

One of the safety tests when creating recipes is calculating the heat treatment. Simply put, heat treatment is the amount of heat necessary for the center of the jar to reach the needed kill temperature. A boiling water bath processes at 212°F while a pressure canner at 11 pounds pressure reaches 240°F. While most pathogens will die at 212°F, there is one that will not: C. botulinum, the bacteria that causes botulism. Because botulism is so serious, it is the pathogen we are most worried about. C. botulinum can survive boiling temperatures but cannot survive in acidic environments. So, we can either acidify our foods or pressure can at that very high heat.

So back to the question: “If I’m using a pressure canner then why do I have to acidify?” Indeed, a pressure canner does get hot. However, the processing time is not long enough to reach the proper heat treatment needed for a non-acidified tomato. These recipes were developed with equal heat treatments for the boiling water bath and pressure canner. For example, the recipe for quarts of whole tomatoes calls for a boiling water bath for 45 minutes or a pressure canner for 10 minutes at 11 pounds on a dial gauge canner. These two options produce the SAME heat treatment.

\*Boiling water bath of 212°F for 45 minutes = Pressure canner of 240°F for 10 minutes\*

No, you may not just add more time to the pressure canner and call it good. Why? Because that recipe has not been properly tested for safety. Then why would someone choose the pressure canner over the boiling water bath? If you run these recipes side by side, they take about the same amount of time from start to finish. Some would choose a water bath because they do not have a pressure canner or do not feel confident using one. According to the National Center for Home Food Preservation, “for some products, pressure canning will result in a high quality and more nutritious product.”

So there you have it. You can use whatever options the recipes provide. But for safety’s sake, do not alter or deviate from the recipes in any way. If you have questions about this or any other food preservation topic, you may contact Tonya at 812-882-3509.

# ServSafe Manager courses

ServSafe Manager Certification is an approved training in the state of Indiana to become a certified food protection manager.

ServSafe Food Handler is for anyone else who needs basic food safety and food handling training, including home-based vendors, food service workers, volunteers, or others who work with food and only need the basic training. This course is NOT intended for food service managers.

Here is information on upcoming ServSafe Manager Courses. If you have any questions, please contact Tonya at short43@purdue.edu or 812-882-3509.

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| --- | --- | --- |
| **When** | **Where** | **Learn more or register at** |
| October 9, 2025 | 4-H Fairgrounds, Washington | <https://cvent.me/wk2NRw>  |
| July 23, 2026 | Vincennes | Registration to come |

# Bite by Bite: Nutrition for Life Podcast

Anywhere you look you can find a magic pill or formula promising to protect your health and transform your body in three easy steps. And, many of these claims do have (or at least started with) a speck of valid science. So, how to you cut through all the hype and separate truth from false marketing claims? The truth is, it doesn’t have to be that complicated! Join us as we explore and dissect different fads and trends to discover the real science behind food and nutrition.

Find us on Apple podcasts, Spotify, or anywhere you listen.

Follow us on Facebook and Instagram @BiteByBiteNutritionForLife

# Leadership Knox County

We are gearing up to launch our 2025-2026 cohort for Leadership Knox County. Be sure to follow along on social media as this class deepens their knowledge of Knox County, grows in their leadership strengths and expands their confidence in being a community leader. @KnoxCountyHHS @KnoxCountyChamberOfCommerce



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## **Agriculture & Natural Resources**

Valerie Clingerman-Extension Educator

Agriculture & Natural Resources

clingerman@purdue.edu

\*\*Like **Purdue Extension Knox County Ag and Natural Resources on Facebook.**

**\***\*To receive monthly e-newsletters call 812-882-3509 or e-mail me to be added.

**Upcoming Events**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Date | Event | Time (Eastern) | Location | Contact info. |
| Sept. 17 | Pumpkin Field Day | 1:30pm-5:30pm | Vincennes | Register by calling 812-886-0198 or <https://tinyurl.com/SWPACpumpkin> |
| Sept. 20 | Monarch Madness (see details below) | 11:00am-2:00pm | Vincennes | 812-882-8210 ext 3 |
| Nov. 5 | Private/Commercial Applicator Program | 10:00am-noon | TBD | 812-882-3509 |
| Dec. 11 | Agriculture Outlook and Private/Commercial Applicator Program | 8:00am-noon | Vincennes | 812-882-3509 |
| Jan. 12 | All categories pesticide training | TBD | Montgomery | 812-882-3509 |
| Mar. 11 | CORE/Category 14 training and exam | TBD | Evansville | 812-882-3509 |

**Monarch Madness**

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Join us Sept. 20th at Fox Ridge Nature Park from 11:00am-2:00pm.

During this event you will learn how to catch, identify, and determine gender of monarchs.

If you are lucky enough to catch one you will be helping with university research to track migration patterns and monitor monarch health by testing for parasites. There will be food and other vendors there as well.

# **Effects Of Severe Stress During Grain Filling in Corn**

# **Written by Bob Nielsen, Retired Purdue University**

* Perfect conditions for ear size determination and pollination can be negated if severe stress occurs during the grain fill period.
* Yield loss during grain fill can occur from 1) stand loss, 2) incomplete kernel set, 3) decreased kernel weight, and 4) premature plant death.

Yield potential in corn is influenced at several stages of growth and development. Ear size potential (number of potential kernels) is determined quite early, from about leaf stage V6 to V15 (knee-high to about shoulder-high). The next influential period for the corn crop is pollination. The period following successful pollination and finishing at kernel black layer is defined as the grain filling period in corn and represents the final important yield determination period.

Perfect conditions for ear size determination and pollination can be negated if severe stress occurs during the grain fill period. Yield loss during grain fill can occur from 1) stand loss, 2) incomplete kernel set, 3) decreased kernel weight, and 4) premature plant death.

### **Incomplete Kernel Set in Corn**

The term “kernel set” refers to the degree to which kernels have developed up and down the cob. Incomplete kernel set is not always apparent from “windshield” surveys of a corn field. Husks and cob will continue to lengthen even if kernel set is incomplete. A wonderfully long, robust-looking, healthy green ear of corn can completely mask even a 100 percent failure of pollination or severe kernel abortion.

TECHNICAL TRIVIA:
**Pollination** is the movement of pollen from the tassels to the silks.
**Fertilization** is the actual union of the male and female gametes once the pollen tube reaches the ovule.

One of the causes of incomplete kernel set is **unsuccessful fertilization of the ovules during pollination**. Unsuccessful fertilization results in ovules that never develop into kernels and, subsequently, ears with varying degrees and patterns of incomplete kernel set. Many factors can cause incomplete pollination and distinguishing between them can be very difficult. See my related article for more discussion about unsuccessful fertilization.

Another cause of incomplete kernel set is **abortion of fertilized ovules** early in the grain filling period. Aborted kernels will be shrunken, mostly white, often with the yellow embryo visible; compared to normal plump yellow kernels. Unfertilized ovules, on the other hand, will result in visibly blank areas on the cob.

**[Long Description](https://extension.entm.purdue.edu/newsletters/pestandcrop/wp-content/uploads/sites/2/2025/08/agron1.png%22%20%5Co%20%22)**

Kernels are most susceptible to abortion during the first 2 weeks following pollination, particularly kernels near the tip of the ear. Tip kernels are generally last to be fertilized, less vigorous than the rest, and are most susceptible to abortion. Once kernels have reached the dough (R3) stage of development, further yield losses will occur mainly from reductions in kernel dry weight accumulation.

**Kernel abortion can be caused by any stress that greatly limits photosynthetic rates and, thus, photosynthate availability during or shortly following pollination…**

* Severe drought stress.
* Excessive heat stress.
* Severe nutrient deficiencies (especially nitrogen).
* Extensive loss of green leaf tissue by foliar diseases like gray leaf spot (Cercospora zeae-maydis), northern corn leaf blight (Exserohilum turcicum), or tar spot (Phyllachora maydis).
* Extensive loss of green leaf tissue from severe hail damage.
* Consecutive days of heavily overcast, cloudy conditions.

The full article can be found at <https://extension.entm.purdue.edu/newsletters/pestandcrop/>

# **Fall Pruning and Planting for Indiana Gardens**

# **Written by Karen Mitchell, Purdue University**

#

Fall is quickly approaching, bringing cooler temperatures, refreshing rains, and fewer pests. It’s a perfect time to tackle garden tasks, from pruning perennials to planting vegetables.

**Pruning**

Fall is a good time to prune out dead, damaged, or diseased plant material. You can also tidy up perennials that have finished blooming and make light shaping cuts on shrubs. Consider saving some stems when cutting back the spent blooms of herbaceous perennials. When left standing, these stems provide habitat for pollinators and food for wildlife while also adding winter interest to a garden that may otherwise remain empty for the cold months ahead.

Do not prune spring-blooming shrubs such as lilacs, forsythia, or spicebush in the fall, otherwise you’ll cut off next year’s flower buds. The bigleaf and oakleaf hydrangea also produce blooms on old wood. These are best pruned immediately after flowering. Always use sharp, clean tools and cut just above a bud or branch junction at a slight angle. For pruning best practices along with a comprehensive list of recommended pruning times for common woody perennials, refer to [**Pruning Ornamental Trees and Shrubs**](https://www.extension.purdue.edu/extmedia/HO/HO-4-W.pdf).

**Planting**

Fall is prime time to plant hardy perennials, trees, and shrubs. The soil remains warm long after the air temperature drops, giving roots time to establish before the ground freezes. Aim to finish planting by mid-to-late October in most parts of Indiana. Consider natives such as purple coneflower, serviceberry, or buttonbush for low-maintenance beauty. Visit the Indiana Native Plant Society’s [**Native Plant Finder**](https://finder.indiananativeplants.org/) to explore other native options for your landscape.

It’s also the season for planting bulbs for spring blooms and vegetables for a fall harvest. Tulips, daffodils, and crocus should be planted before the soil freezes to provide a burst of early spring color. You can also sow quick-growing cool-season vegetables like leaf lettuce, spinach, and radishes for a fall harvest. Check out [**The Fall Vegetable Garden**](https://www.extension.purdue.edu/extmedia/HO/HO-66-W.pdf) for a planting guide on cool-season vegetables.

**Prep for Winter Protection & Spring Success**

Trees, shrubs, and perennials should continue to be irrigated deeply up until the ground freezes. Add a layer of mulch after the soil cools to insulate roots from harsh temperature swings. Be sure to keep mulch a few inches away from tree trunks or shrub stems to prevent rot or rodent damage. [**Winterize Your Trees**](https://www.extension.purdue.edu/extmedia/fnr/fnr-484-w.pdf) offers more tips on protecting your perennials from the often frigid and dry conditions of an Indiana winter.

**Referenced resources**

 Pruning Ornamental Trees and Shrubs – Purdue Extension HO-4-W

[**https://www.extension.purdue.edu/extmedia/HO/HO-4-W.pdf**](https://www.extension.purdue.edu/extmedia/HO/HO-4-W.pdf)

Indiana Native Plant Society’s – Native Plant Finder

[**https://finder.indiananativeplants.org/**](https://finder.indiananativeplants.org/)

 The Fall Vegetable Garden – Purdue Extension HO-66-W

[**https://www.extension.purdue.edu/extmedia/HO/HO-66-W.pdf**](https://www.extension.purdue.edu/extmedia/HO/HO-66-W.pdf)

Winterize Your Trees – Purdue Extension FNR-484-W

[**https://www.extension.purdue.edu/extmedia/fnr/fnr-484-w.pdf**](https://www.extension.purdue.edu/extmedia/fnr/fnr-484-w.pdf)

The full article can be found at:

 <https://purduelandscapereport.org/article/fall-pruning-planting-for-indiana-gardens/>

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