

# FARM AND YARD

## ISU Extension Tama County

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## FOR RURAL AND URBAN FAMILIES

### Crop Advantage Program Gives Producers Information for Making 2020 Decisions, Waterloo, January 16th

Brent Pringnitz & Meaghan Anderson, Ag & Natural Resources Extension Field Agronomists

AMES, Iowa – The 2020 Crop Advantage meetings will give producers a solid foundation of current research-based crop production information to help make smart, informed decisions for their farming operation.

The meetings are an opportunity for farmers and crop advisers to hear current research and crop production information from Iowa State University. Extension specialists will travel to 14 locations around Iowa from Jan. 3-30, providing Updated management options and recommendations on current and future crop production issues.

Meetings will also offer continuing education credits for Certified Crop Advisers and pesticide applicator recertification.

“There is no other program in our crop production education year where we are able to bring this many extension specialists together to individual sites across the state,” said Meaghan Anderson, field agronomist with Iowa State University Extension and Outreach.

This past year, over 2,000 individuals attended one of the meetings across the state, representing all 99 Iowa counties and surrounding states. Some 84% of attendees said information from Crop Advantage would likely save them between \$5 and \$20 per acre.

“Our goal is to prepare producers to manage potential issues when they arise, or even before they arise, by sharing the most up-to-date scientific knowledge from Iowa State University,” said Anderson. “Content at the meetings is driven by county needs and local production issues.”

Program topics vary by location and are selected for regional concerns and issues. Topics on this year’s agenda include: market outlook for 2020, weather and climate trends, grain drying and storage, emerging insect pests such as soybean gall midge, nitrogen management, tar spot and other corn and soybean disease issues, fertilizer application technology, and many more.

For locations, times and program details visit [www.cropadvantage.org](http://www.cropadvantage.org).

Early registration for each location is \$50; late registration made fewer than seven days prior to the meeting, or on-site, is \$60. Registration includes lunch, printed proceedings booklet, private pesticide applicator recertification and CCA credits.



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## Yard and Garden: How to Select and Care for Fresh Christmas Trees

Richard Jauron, Willy Klein, ISU Extension Horticulturalists

AMES, Iowa – The weekend after Thanksgiving is traditionally when most Christmas tree buying occurs. Whether you cut your own tree or buy a pre-cut tree there are several things to consider before buying and when selecting a fresh tree. Horticulture specialists with Iowa State University offer tips to make the most of your fresh tree. To have additional questions answered contact Hortline at [hortline@iastate.edu](mailto:hortline@iastate.edu) or call 515-294-3108.

What factors should be considered when purchasing a Christmas tree for the holidays?

A few decisions should be made before going out to buy a Christmas tree. Decide where you will be placing the tree in the home. Be sure to choose a location away from heat sources, such as a fireplace or furnace vents. Also, decide on the size (height and width) of the tree you want. Christmas trees may be purchased from cut-your-own tree farms or as cut trees in commercial lots. A list of tree farms in your area can be found at the Iowa Christmas Tree Growers Association website at <http://www.iowachristmastrees.com>. Carefully check trees at commercial tree lots to ensure the freshness of previously cut trees.

When looking for a tree, select one that has a straight trunk. A tree with a straight trunk will be easier to set upright in the stand. Check the diameter of the trunk to make sure it will fit in your stand. A tree with a bare side may be fine if you intend to place it in a corner or against a wall.

What types of Christmas trees are available?

Tree species commonly available at tree farms and commercial tree lots in Iowa include Scotch pine, white pine, Fraser fir, balsam fir, Canaan fir, Douglas fir, white spruce and Colorado spruce.

How can I determine the freshness of a cut Christmas tree?

The freshness of cut Christmas trees can be determined with simple tests. Gently run your hand over a branch. The needles on a fresh tree will be pliable. Those on a dry tree will be brittle. Another test is to lift the tree by the trunk and lightly bounce the butt on the ground. Heavy needle drop indicates a dry tree. A fresh tree will drop only a few needles.

What is the best way to store a cut Christmas tree?

If you don't intend to set up the Christmas tree immediately, place the tree in a cool, sheltered location. An unheated garage or shed is usually a good storage site. (The sun and wind dry out trees stored outdoors.) Place the butt of the tree in a bucket of water to help it stay fresh.

Should I make a fresh cut at the base of the Christmas tree before placing the tree in the stand?

Make a fresh cut at the base of the trunk if more than 8 hours have passed since the tree was cut. Remove the bottom .5 inch or more of the trunk just prior to placing the tree in the stand. After a tree is cut, resin begins to collect in the water-conducting tissue, impeding the absorption of water. Making a fresh cut removes the resin-blocked tissue at the base of the trunk, allowing for greater water uptake.

Should I add any material to the water to prolong the freshness of my Christmas tree?

Do not add molasses, sugar, soft drinks, aspirin or commercial products to the water. Additives provide no real benefit. The keys to keeping a Christmas tree fresh are to place the tree away from any heat source (fireplace, heater, radiator, etc.) and keep the tree reservoir full of water. Check the tree reservoir at least once or twice a day. Fresh trees absorb large quantities of water, especially in the first 7 to 10 days. (In the first week, a fresh tree with a 4-inch-diameter trunk may absorb up to one gallon of water in 24 hours.) Do not allow the water level to drop below the bottom of the trunk as the tree will absorb little water thereafter.

How long can a cut Christmas tree remain in the house?

The length of time a cut Christmas tree can remain in the home is determined by the tree species, the freshness of the tree at purchase, and its placement and care in the home. In general, a fresh, well-cared-for Christmas tree should be able to remain in the home for three to four weeks. Remove the tree from the house when its needles become dry and brittle.

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## Considerations for Continuous Corn

Mark Licht, ISU Extension Cropping Systems Specialist

Continuous corn is a "three strikes and you're out" situation. And the first strike is automatic – high residue volume. This is how a farmer recently described it to me. Making continuous corn work means knowing what you are up against. First, realize that the yield drag for continuous corn can range from 0% to 30% but is typically between 5% and 15%. Yield drag has been associated with cooler and wetter soils, nitrogen (N) immobilization, increased disease risk, and allelopathy – all of which are influenced by corn residue volume.

Tips to avoid strikes 2 and 3 with continuous corn:

1. Location: fields that are naturally well drained or have extensive tile drainage systems are better suited for continuous corn. These field types will dry out more quickly, helping avoid costly spring planting delays. Also choose fields that are the most productive and allow the more intensive management needed for success.
2. Stand establishment: seed placement is critical for uniform spacing and emergence. Just because there is greater residue doesn't mean residue cleaners need to be set more aggressively. Adjust residue cleaners to move residue and not soil. High residue volumes can change planter performance and therefore how planter adjustments should be made. Make sure furrow opening and closing functions are working well.
3. Hybrid selection: choose hybrids that are targeted for high residue situations, have a strong, defensive disease package, and have excellent seedling vigor. Plan for resistance management of transgenic traits by rotating sources of insect protection.
4. Planting conditions and seeding rates: a slight seeding rate increase of 10% may offset stand establishment problems often realized with continuous corn. In southern Minnesota emergence fell 1% for every 10% increase in surface residue. Target planting when soil temperatures are continuously above 55oF to decrease risk of poor germination and seedling development.
5. Soil fertility: continuous corn requires 30 to 50 pounds per acre more nitrogen than corn following soybean. Consider starter fertilizers but don't expect a positive response in every situation. Response to starter N will be dependent on how much N is immobilized by residue decomposition and how much soil N mineralization occurs. High and very high phosphorus (P) and potassium (K) testing soils will have less response to starter fertilizers.
6. Disease management: seed treatments can be used to protect seedlings from root and shoot infections. Make in-season decisions on foliar fungicides based on hybrid selection, environmental conditions, and presence of foliar diseases. Foliar fungicides should be used to protect the ear leaf and leaves above the ear leaf from leaf diseases during the grain fill period.
7. Insect management: seed treatments can protect the seed and seedling from insect pests such as wireworms, seed corn maggots, white grubs, and slugs which can be more problematic in heavy residue situations. In-season insects such as corn rootworms and European corn borers may be problematic, especially for non-transgenic hybrids. Consider insect resistance management when developing management plans.
8. Manage residue: at harvest make sure that corn residue is evenly distributed across the harvest width. Create a seedbed that is residue free, preferably by using strip-tillage. Strip-tillage will warm up and dry out faster than a no-tillage situation while providing the soil health benefits of residue cover. Most research shows that application of liquid N will not enhance the rate of corn residue breakdown.



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## Make this deer season lead bullet free – for the birds!

Adam Janke, ISU Extension Wildlife Specialist

This fall, over 100,000 Iowans will take refuge in the fields and forests of our state to participate in an annual ritual: deer season. This ritual however has shallow roots, dating only to the 1950s thanks to the successful restoration of white-tailed deer following their extinction in the state. The annual tradition is important for farms and farmers, car bumpers and their insurance companies, and most importantly, families who annually share time outdoors, creating memories, and harvest a healthy food source. The growth of this tradition in Iowa is a true conservation success story.

Soaring above many of these hunters this fall will be another symbol of the conservation movement's meritorious achievements of the 20th century. The bald eagle was once entirely absent from Iowa's rivers and fields due to the impacts of the chemical DDT. But, as the story for the white-tails goes, the eagle was restored through the passionate efforts of concerned citizens and wildlife agencies and today can be seen in every corner of the state.

Today, thanks to 21st century research in Minnesota, Arizona, and elsewhere, we're learning about an important nexus between these two conservation success stories that's leading scientists and both hunting and non-hunting wildlife champions to encourage a minor tweak in the traditional equipment used for hunting deer.

Lead bullets are the traditional ammunition used to harvest deer because they are effective, widely available, and inexpensive. Lead bullets are as old as firearm technology itself, but today's bullets are highly accurate and propelled at a high velocity. These bullets are effective at humanely killing deer and other quarry. But, researchers have found that when you use X-Ray technology on carcasses and gut piles left behind in the field, remnants of lead bullets remain.

Up to hundreds of tiny lead fragments can be left behind by a single bullet and when parts of the shot deer are left in the field (as is the case with gut piles or processed carcasses) other wildlife, including notably the bald eagle, can encounter the lead.

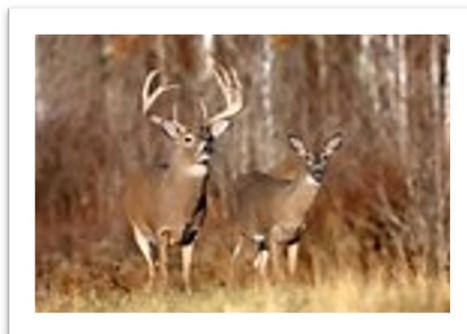
Lead is poisonous to all animals and the Centers for Disease Control and Prevention say that no level of lead dosing in humans is safe. Birds, including the suite of scavenging birds like bald eagles, are even more uniquely vulnerable to lead poisoning because of the unique structure and chemistry of their digestive system.

The Iowa DNR reports that around 100,000 deer are harvested in the state each year and the majority of these are harvested with bullets. Although there is no research in Iowa on what proportion of these deer are harvested with lead bullets, anecdotal evidence suggests the percentage is high. This means that each fall, a spike in potentially lead contaminated food sources are available for bald eagles and other scavenging birds. A study in Iowa found that half of bald eagles admitted to wildlife rehabilitation facilities in Iowa were experiencing lead poisoning.

The good news is that there are alternatives to lead bullets – technology that today is accessible online and in many retail stores that even just 10 years ago would have been hard to find. Non-lead bullets are often made of copper alloys and have similar, and in some cases even better, ballistic performance than traditional lead-based ammunition. Hunters willing to switch to hunting with non-lead ammunition need only to find a nonlead round that shoots well for them in their gun, sight the round in on the range, and go back to hunting.

The story of white-tailed deer and bald eagles in Iowa's landscape is one filled with lessons learned and new challenges confronted. From extirpation due to market hunting for deer or DDT for eagles, to restoration, and today abundance, humans and the wildlife we care for have been working to live together in this state. This unfolding story about the connections between deer, people, and eagles is one more chapter in that story of learning to live together and protect the resources we all value.

That's why this fall is a great time to make the switch to hunting deer (and other wildlife) lead free. For the birds!



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## Long-term Iowa State Research Shows Poultry Manure Improves Profits, Soil Health

Michelle Soupir, Agricultural and Biosystems Engineering, Ann Y. Robinson, Agriculture and Life Sciences Communications Service

AMES, Iowa — A 20-year study by Iowa State University researchers shows fertilizing cropland with poultry manure can benefit soil health and farm profits when compared to a commercial fertilizer.

The study looked at long-term impacts of poultry manure on soil quality, crop yield, production costs and water quality in conventional Iowa cropping systems.

“The data show that, when properly managed, poultry manure is a great source of nutrients to enhance crop production and can also benefit soil and water quality,” said Michelle L. Soupir, associate professor of agricultural and biosystems engineering, who joined the research team in 2009.

And Iowa has a good supply: The state’s consistent top placement in poultry production results in enough poultry manure annually to treat as many as 40 percent of the continuous corn acres or 7 percent of the total row crop acres, according to calculations by Soupir’s research team.

The research began in 1998 with 11 plots on Iowa State’s Agricultural Engineering and Agronomy Research Farm near Boone. In its first decade, experiments compared three treatments in a corn-soybean rotation. A commercial fertilizer, urea ammonium nitrogen (UAN), was applied at the recommended rate of 150 pounds per acre and manure was applied at two rates, one that reflected the commercial fertilizer rate and the other, for comparison, at double the recommended rate.



In the research’s second decade, the focus was on comparing treatments on continuous corn. Manure and UAN were applied at the recommended rate of 200 pounds of nitrogen per acre for continuous corn, along with a half application rate for comparison.

After 20 years, the study found particulate organic matter and several other measures of soil quality were significantly better in the manured plots. Particulate organic matter helps stabilize soil particles, which can improve soil’s resistance to erosion and water holding capacity.

Corn yields increased 25 percent during the continuous corn studies when poultry manure was applied at the same rate as UAN. During the corn-soybean phase of the study, average corn and soybean yields were similar when poultry manure was applied at the same rate as UAN.

“During the continuous corn phase, average revenue returns increased by about 15 percent for manure treatments compared to UAN, due to the increased yields,” said Ji Yeow Law, a research associate who analyzed crop yields and economics for the study.

Though manure costs were generally higher, the manure was still more profitable during the continuous corn phase, when considering the total production cost per bushel of output. The higher revenues linked to the manure treatments in the continuous corn system suggest that it may be more economical to transport manure over greater distances from poultry facilities to farms.

“This could result in more manure availability for growers seeking fertilizer and also mean a larger potential market for poultry producers selling manure,” Law said.

He noted economic results will vary depending on fertilizer prices, manure price and availability. Manure value also will vary due to different nutrient levels. The researchers found wide variation in manure nutrient levels, leading them to emphasize the need for regular manure testing.

“The economic benefits of poultry manure are likely to be lost if landowners also apply UAN as ‘insurance,’ adding nitrogen fertilizer that’s not needed,” said Soupir.

“This also applies to the positive water quality benefits we found.”

Nitrate-nitrogen losses measured in tile drainage from manured plots were 7 to 16 percent lower from the continuous corn and corn-soybean plots, respectively, than from plots commercially fertilized at comparable rates.

“The research shows a number of important benefits from using poultry manure,” said Soupir. “It also confirms the importance of using good conservation and nutrient management practices to avoid phosphorus buildup when manure is applied at the nitrogen rates.” For the complete article visit: <https://www.cals.iastate.edu/news/releases/long-term-iowa-state-research-shows-poultry-manure-improves-profits-soil-health>

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## STRESS

It is normal to experience change in our lives. Even though we may expect normal change, it can still create stress. Sometimes our expectations about the results of change are unrealistic. Unexpected changes also impact families with tragic loss. Death or disabling injury or illness, divorce, and job loss can turn life upside down. Readjustment can be slow and painful. We need to be sure to care for ourselves and others during these stressful situations.

To assist you, Iowa Concern has stress counselors that can talk with you over the phone (1-800-447-1985) or in one-on-one live chat. You can also check out the frequently asked questions (currently unavailable for updating), or email an expert. Referrals for mental health counseling can also be accessed through Iowa Concern.

### Additional Resources

- Iowa Healthy Families Line - 1-800-369-2229  
Toll-free telephone line for health information and referral for pregnancy, immunizations, and more
- TEEN Line - 1-800-443-8336  
Toll-free telephone line Iowa teenagers can call to discuss issues they are facing; available 24 hours/day, 7 days/week
- Depression - symptoms, treatment, and support sponsored by the National Alliance Mental Illness (NAMI)
- Publications focused on nutrition and wellness, parenting, stress, and more are available at the Extension Store [www.extension.iastate.edu/store](http://www.extension.iastate.edu/store).

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## Private Pesticide Continuing Instruction Course

Iowa State University Extension and Outreach Tama County office will be offering 3 opportunities to attend the Private Pesticide Applicator Continuing Instruction Course, led by Extension Field Agronomist, Meaghan Anderson. The first session is scheduled for Tuesday, January 14 at 9:30 AM in the Gladbrook Memorial Building. The course will be offered again on March 18 at 1:30 PM at the Tama Civic Center and on March 26 at 6:30 PM at the Traer Memorial Building. No pre-registration is needed.

The course will run for approximately two and a half hours. The registration fee is \$20. To obtain additional information about the CIC, contact Sara Sorensen at your county extension office.

The course will fulfill 2019 recertification requirements for private pesticide applicators. Topics to be covered include safe handling and storage of pesticides; laws and regulations; personal protective equipment, and pests, pest management, and pesticides.

## Farm Bill Information

If you were unable to attend one of the Farm Bill Meetings in person, you can access the information through a series of 3 recordings. They are available here: <https://www.extension.iastate.edu/agdm/info/farmbill.html> along with the Excel spreadsheets mentioned during the meetings. If you don't mind driving and prefer to attend an in-person meeting, there are some opportunities in December and January <https://www.extension.iastate.edu/agdm/info/farmbill.html>.

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# WOMEN MANAGING FARM FINANCES in 2020

## TUESDAYS

### Tuesday, Feb. 4 Balance sheets

The annual balance sheet shows the overall solvency of the business and the change in net worth shows the direction and speed that the business is going. Participants will gain an understanding of how to complete a balance sheet, and learn to calculate key ratios like current ratio and debt to assets to help them interpret how their business is doing.

### Tuesday, Feb. 11 Income Statements

Farmers will often look at the tax return to estimate profitability, but the tax return doesn't include inventory changes. Participants will learn how to take an expense and income report and calculate accrued income to understand how profitable their farm operation is.

### Tuesday, Feb. 18 Cash flow

Lenders are focusing more on the businesses ability to cash flow from operations rather than relying on equity to justify loans. Participants will understand how to prepare a cash flow that shows how the four sources: operating, investing, borrowing, and off-farm impact the annual cash flow projections.

### Tuesday, Feb. 25 Budgeting and Benchmarking

The cash flows are based on budgets. In this session the participants will look at the different components of budgeting and look at how costs are different for different producers and what factors influence those differences. Participants will gain an understanding of different sources of information for benchmarking and how efficient their operation is by utilizing benchmarks

### Snow Date– Tuesday, March 3

To register, send payment along with your name, phone and email by January 28th to the Tama County Extension Office.

FEBRUARY 4  
FEBRUARY 11  
FEBRUARY 18  
FEBRUARY 25  
6:30—8:30 pm

Light snacks will be served.

Cost for all 4 sessions-\$40

Tama County Extension  
203 W. High St.  
Toledo

*The fees for service will be used to off-set direct expenses and to support Ag and Natural Resources Extension Programs.*

## Tama County

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### Calendar of Events

Dec 4 – Pest Control CIC, 9 AM, Extension Office  
Dec 7– Clover Kid Gift Making, 10AM-NOON, Traer Public Library, Traer  
Dec 7 – 7th-9th Grade Bowling Party, 7-9 PM, Gladbrook Bowl, Gladbrook  
Dec 10– Winter Container Workshop, 6:30-8:30 PM, Extension Office  
Dec 12– Extension Council Meeting, 7 PM, Extension Office  
Dec 14-Clover Kid Gift Making, 10AM-NOON, Extension Office  
Dec 16-Master Gardener Mtg, 5:30 PM, Extension Office  
Dec 17-4-H Club Officer Training, 7-8 PM, Extension Office  
Dec 20-Last reshow date for 2019 CIC trainings, Call the office to arrange  
Dec 23-4-H/FFA Beef Weigh-In, 8:30 AM, Tama Livestock Auction, Tama  
**Dec 24-25 – Holiday, Extension Office closed**  
**Jan 1 – Holiday, Extension Office closed**  
Jan 7-Fairboard Meeting, 7 PM, Extension Office  
Jan 8 – Commercial Manure Certification, 9 AM Extension Office, Toledo  
Jan 9– Extension Council Meeting, 7PM, Extension Office  
Jan 14– Private Pesticide Training, 9:30 AM, Memorial Bldg, Gladbrook  
Jan 16 - Crop Advantage, 9 AM, Hawkeye Community College, Waterloo  
Jan 25 - YQCA Training, 10 AM, Extension Office  
Jan 27– Youth Advisory Committee Mtg, 7PM, Extension Office