

ISU Iowa County Extension

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Upcoming Events

Mark your Calendars now with these upcoming events.

Income Tax Changes for 2019

Article Author: Charles Brown, ISU Extension and Outreach Farm Management Specialist

The Tax Cuts and Jobs Act (TCJA) was signed into law December 22, 2017. Among many changes, it created new tax brackets for 2018 thru 2025. It also eliminated the deduction for personal exemptions and raised the standard deduction in 2019 to \$12,200 for single filers, \$24,400 for married filing jointly and \$18,350 for head of households. Keep in mind that most of the changes in TCJA end in 2025 and move back to pre-2018 tax law.

Table 1. Tax Brackets and Rates, 2019

Rate	For Unmarried Individuals, Taxable Income Over	For Married Individuals Filing Joint Returns, Taxable Income Over	For Heads of Households, Taxable Income Over
10%	\$0	\$0	\$0
12%	\$9,700	\$19,400	\$13,850
22%	\$39,475	\$78,950	\$52,850
24%	\$84,200	\$168,400	\$84,200
32%	\$160,725	\$321,450	\$160,700
35%	\$204,100	\$408,200	\$204,100
37%	\$510,300	\$612,350	\$510,300

Section 179 Expense election was one of the changes that was made permanent. In 2019, this is now \$1,020,000 and the phase-out starts \$2,550,000. On the Iowa returns, the maximum amount is \$100,000 and the phase-out starts at \$400,000. In 2020, Iowa couples with the Federal amounts.

One of the other major changes in the TCJA was the repeal of like-kind exchange treatment for traded personal property. Under old law when a farmer traded machinery, the farmer depreciated the difference paid plus any remaining basis on the item traded in and no taxes were due. Under TCJA when a farmer trades machinery, the trade is considered a sale in the amount the dealer allowed for the trade-in, triggering ordinary taxable gain, and the farmer gets to depreciate the full purchase price of the machinery received. If the farmer does not want to pay tax on the gain of the trade-in, they are forced to use Section 179 or bonus depreciation to offset the taxable gain. Iowa did not couple with the Federal change in 2018, but maintained the old like-kind exchange rules. In 2019, for Iowa returns, farmers may use the old rule for like-kind exchanges or use the new Federal rule. In 2020, Iowa will couple with the Federal rule.

Also new in 2018 was the new “post card” 1040 Form that also had multiple schedules attached to it. After numerous complaints, there is another new 1040 Form for 2019. This one is a combination of the old 1040 and the 1040 from 2018.

To learn more about the latest tax changes tune into the Iowa Farm Bureau Federation’s annual Iowa Farm Income Tax webinar on Friday, November 15, at 1:00p.m. For complete details visit the Iowa Farm Bureau website.

Maintain Grain Quality This Winter

Article Author: Kristina TeBockhorst, Ag Engineering Field Specialist



Cool fall weather on top of delayed planting and maturity has caused less than optimal drying conditions this fall. Many farmers faced challenges in getting grain dried with natural air (low or no heat) and some may have grain in storage that is wetter than normal. To prevent spoilage, we want to keep grain cool and pay close attention to the quality of grain through the winter.

It is important to maintain grain temperatures between 30-40 degrees F for winter storage, especially for wet grain (above 15% corn and above 13% beans). This storage temperature minimizes insect activity and mold growth in the stored grain. Cooling grain below 30 degrees F may have some added benefit, however there is a possibility for ice to form in the grain.

Table 1 from North Dakota State University gives the approximate allowable storage time in days for cereal grains, like corn. Note that soybeans are expected to have similar storage properties to corn, but 2% drier (i.e. 13% soybeans store similar to 15% corn).

Moisture Content (%)	--- Grain Temperature (°F) ---					
	30°	40°	50°	60°	70°	80°
	Approximate Allowable Storage Time (Days)					
14	*	*	*	*	200	140
15	*	*	*	240	125	70
16	*	*	230	120	70	40
17	*	280	130	75	45	20
18	*	200	90	50	30	15
19	*	140	70	35	20	10
20	*	90	50	25	14	7
22	190	60	30	15	8	3
24	130	40	15	10	6	2
26	90	35	12	8	5	2
28	70	30	10	7	4	2
30	60	25	5	5	3	1

Table 1. “Approximate” Allowable Storage Time for Cereal Grains, North Dakota State University.

* Allowable storage time exceeds 300 days

While cool grain should store well through the winter, be sure to check stored grain weekly through the winter and spring. Monitor grain for odors and grain heating and consider running the fan to keep it cool. When not in use, cover fans to prevent warm air, rain, or snow from entering the bottom of the bin. When air temperatures start to warm in the spring, be ready to get grain dried or moved.

Did you “core” the bin?

It is always a good idea to “core” the grain bin just after filling the bin by removing about half the peak height. This will level the top of the grain and remove the fines accumulated in the center of the bin, which improves aeration and storage quality. If the top of the grain does not show signs of an inverted cone after coring, beware of grain bridging and do not

enter the bin until the bridging has been corrected.

For more information contact your local Extension Ag Engineer:

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Improving Crop Yields and Water Quality with Manure Management

By Brian Dougherty, ISU Field Ag Engineer, NE Iowa

As fields get harvested many farmers are making fall manure applications. Managed properly, manure can be an excellent source of valuable nutrients, but it can also pose risks to water quality when applied long before a crop is present to take up the nitrogen provided by manure.

Two on-going research projects at the Northeast Research and Demonstration farm near Nashua, IA are taking a closer look at the role manure application timing, a cereal rye cover crop, and the use of a nitrification inhibitor have on water quality and crop yields.

Manure Application Timing and Cover Crops

The first study evaluated how an early fall manure application, early fall manure application with a cereal rye cover crop, a late fall manure application, and a spring UAN application effect water quality and yield in a corn-soybean rotation. Manure was just applied prior to the corn crop.

An early fall manure application was one that went on as soon as soybeans were harvest prior to the soils being less than 50°F at the four-inch depth. The late manure application was made after the soils trended below 50°F.

Water Quality Data

Data from 2016 to 2018 showed that a cover crop can help reduce nitrates in tile drainage when manure must go on early, as illustrated in **Table 1 below**.

		Nitrate-N concentrations in drainage water (mg/L)			
Crop	Year	Early Manure	Early Manure w/ Rye Cover	Late Fall Manure	Spring UAN
Corn	2016	20.5	11.3	15.7	12.0
	2017	27.2	12.0	20.1	13.2
	2018	12.3	11.9	11.2	10.5
	Avg	20.0	11.7	15.6	11.9
Soybean	2016	10.9	6.7	12.0	11.4
	2017	9.5	4.9	8.7	12.6
	2018	7.2	5.6	8.3	9.5
	Avg	9.2	5.7	9.7	11.2

Table 1. Annual nitrate-N losses via drainage water from each treatment.

Yield Data

There was no significant difference in corn yield in the early fall manure plots with and without a cover crop (Fig 1). This suggests that a cereal rye cover crop is a good fit to improve water quality and has negligible effects on crop yield when managed appropriately.

While the cover crop did not affect yield, the timing of manure application had a big impact on yield in the corn-soybean rotation research (Fig. 1). The late fall manure application averaged 40 bu/ac greater corn yield than early fall manure over the 3-year period. While these results may be optimistic, other research has shown a 10 to 15 bu/ac advantage with delaying manure application until soils have cooled below 50°F. There is a significant economic benefit to later manure application that consistently shows in research results.

Improving Crop Yields and Water Quality with Manure Management (continued)

By Brian Dougherty, ISU Field Ag Engineer, NE Iowa

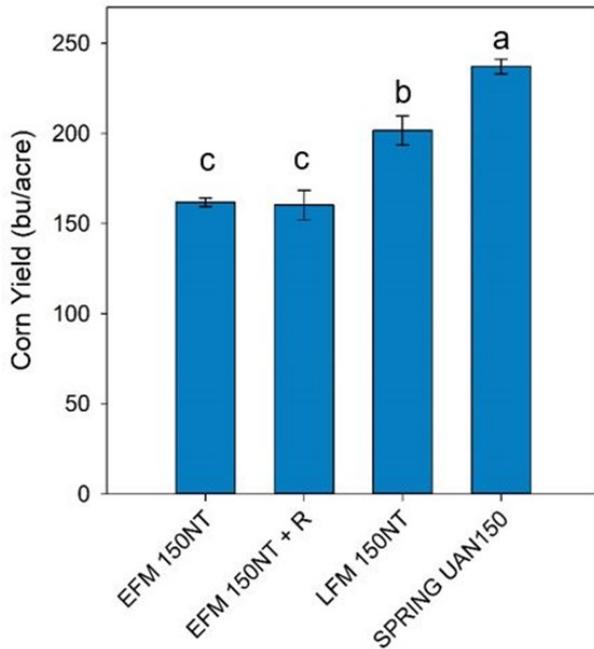


Figure 22. Average yield data for 2016 through 2018 crop years for corn in corn-soybean rotation (EFM150NT: Early to mid-October manure application, EFM150NT+R: Early to mid-October manure application and a cereal rye cover crop, LFM150NT: Early to mid-November manure application, Spring UAN: UAN application 3 weeks after planting). All plots received 150 lb N/acre. Treatments with the same letter are not significantly different.

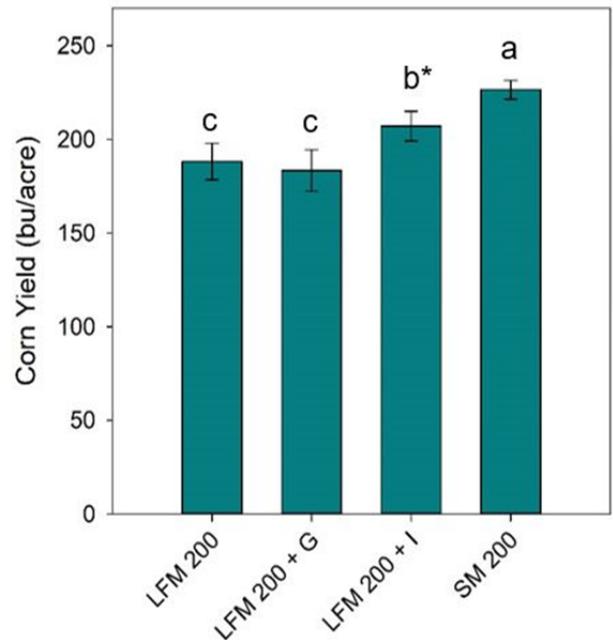
Manure Application Timing and Nitrification Inhibitor

The second study evaluated the effect of manure application timing (late fall vs. spring) in continuous corn. This study's treatments included a late fall manure application, late fall manure + gypsum application, late fall manure + Instinct® application, and a spring manure application.

Like with the study above, the late fall manure was applied after the soil temperatures were less than 50°F at the four-inch depth. There were no significant differences among these treatments looking at the water quality data, but there were significant differences among these treatments from a yield perspective (Figure 2). The late fall manure application + Instinct® resulted in a 16 bu/acre yield increase

over the late fall manure application with no inhibitor (2017 and 2018 data only). Additionally, moving the manure application from late fall to spring resulted in a 38 bu/ac improvement in yield. The gypsum treatment had no impact on corn yield.

Figure 3. Average yield data for 2016 through 2018 crop years for continuous corn (LFM200: Early to mid-November manure application, +G: Gypsum application, +I: Instinct nitrification inhibitor, SM200: Spring Manure. All plots received 200 lb N/acre. Treatments with the same letter are not significantly different. * Instinct plots were planted to soybeans in 2015).



Key Take-Aways

Both of these studies demonstrated that there is a yield benefit when delaying manure application to closer to when the crop will use the nutrients. While waiting to apply manure until late fall or spring carries risks, so does early application to bare ground.

When possible apply manure when soil temperatures are less than 50°F at the four-inch depth. If manure is applied before soil temperatures are less than 50°F at the four-inch depth, consider using a cover crop to help reduce the risk of losing N. The closer we can match manure application to plant N demand, the less risk we have of losing that N (and our money) to the environment. It's worth putting some thought into how you might incorporate cover crops and shift to later manure applications on your own operation.

Ag Decision Maker

Ag Decision Maker is an agricultural economics and business resource covering a wide range of topics to manage risk:

- farm management
- agricultural marketing
- new business development
- cooperatives

Learn www.extension.iastate/agdm

Contact adgm@iastate.edu

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Agronomy in the Field for Women

Article Author: Rebecca Vittetoe, ISU Extension and Outreach Field Agronomist

Women landowners, farmers and ag retailers will have the opportunity to meet again this fall and winter to learn more about agronomy and related agricultural topics through distance-learning sessions of Agronomy in the Field.

The goals of Agronomy in the Field are to strengthen agronomic skills for women that allow for better decision-making, provide a better understanding of inputs for crop production, see and understand different conservation practices and increase confidence in communication with their spouse, farming partner, ag retailer or tenant.



Programs are hosted by Iowa State University Extension and Outreach field agronomists Angie Rieck-Hinz, Meaghan Anderson and Rebecca Vittetoe, with help from guest speakers on a variety of important topics.

Distance-learning sessions of Agronomy in the Field will be offered monthly from November through April. Sessions will start at 6 p.m. and will typically last until 7:30 p.m. These sessions will be provided through a web-conferencing program, so women can join online from the comfort of their own home or participate in a watch party offered at several local county extension offices across the state.

All sessions will be recorded so women can access them at a time convenient for them if they can't join the live sessions.

The sessions that will be offered this fall and winter are as follows:

- December 17** Farming for bushels or profitability?
- January 14** Alternative Crops and Markets
- February 18** Growing season weather outlook and weather resources
- March 17** Planning for successful implementation of a herbicide program resources
- April 7** Early season scouting tips and tricks

Any interested women landowners, farmers and service providers who would like to participate in upcoming sessions should contact Rieck-Hinz at 515-231-2830 or amriec@iastate.edu; Anderson at 319-331-0058 or mjanders@iastate.edu; or Vittetoe at 319-653-4811 or rka8@iastate.edu, so access can be provided for web-conferencing and resource materials. There is no cost to participate in these sessions.

2020 Farm Bill Decisions

ISU Extension and Outreach Farm Business Management Field Specials, USDA Farm Service Agency and ISU Extension and Outreach Human Science Specialists will cover the following topics: Program Rules and Regulations, the ARC or PLC Decision & Farm Stress Management.

No registration fee. Call your county extension office in advance or register online (<https://www.extension.iastate.edu/agdm/info/meetings.html>)

Meeting Dates and Locations:

Benton County - December 3 at 6:30 p.m.

Linn County - December 4 at 5:30 p.m.

Cedar County - December 5 at 1:00 p.m.

Washington County - December 10 at 6:00 p.m.

Benton County - December 11 at 1:00 p.m.

Johnson County - December 13 at 5:30 p.m.

Keokuk County - December 17 at 5:30 p.m.

Jones County - December 19 at 5:30 p.m.

Scott County - January 2 at 2:00 p.m.

Ag Chemical Dealer Meeting to be Held in Coralville

Article Author: Rebecca Vittetoe, ISU Extension and Outreach Field Agronomist and Brent Pringnitz, ISU Program Services Coordinator

ISU Extension and Outreach will brief ag retailers on crop production issues and management recommendations in Coralville



Updates on the latest crop production products and recommendations will be the featured topics at a meeting sponsored by Iowa State University Extension and Outreach **December 17 in Coralville**.

“This meeting is intended to keep ag retailers informed on new research or products pertaining to diseases, insects, weeds, and crop nutrition,” said Josh Michel, field agronomist with ISU Extension and Outreach.

The Coralville Ag Chemical Dealer Update qualifies for Certified Crop Adviser (CCA) continuing education credits and provides recertification for calendar year 2019 for Commercial Pesticide Applicators in categories 1A, 1B, 1C, and 10.

Some of the topics on the agenda for the Coralville meeting include insect, crop disease and weed management updates and managing consequences of unavoidable soil compaction.

Early registration is \$70 if received by midnight, December 10. Late or on-site registration is \$85. A similar meeting will take place in Ames on December 18. Visit www.aep.iastate.edu/acu for more program details and to register online.

The Coralville meeting will be held at the Radisson Hotel and Conference Center at I-80 exit 242. Check-in will begin at 8:30 a.m. with coffee, juice and morning refreshments. The program will start at 9 a.m. and end at 3:45 p.m.

For more information about the Coralville meeting, contact ISU Extension and Outreach Field Agronomists Rebecca Vittetoe, rka8@iastate.edu, or 319-653-4811; Virgil Schmitt, vschmitt@iastate.edu, 563-263-5701; or Joshua Michel, jjmichel@iastate.edu, 319-523-2371. For questions about registration, contact ANR Program Services at 515-294-6429, or anr@iastate.edu

Crop Advantage Series

Article Author: Brent Pringnitz, ANR Program Services

Crop Advantage meetings provide a solid foundation of current, research-based crop production information to help make smart, informed decisions for the farming operation. The 2020 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 January 3-30, providing updated management options and recommendations on current and future crop production issues. In addition, meetings will also offer continuing education credits for Certified Crop Advisers (CCA) and pesticide safety recertification.

Program topics vary by location and are selected for regional concerns and issues. Topics on the agenda this year include: trade with China, Market outlook for 2020, considerations for phosphorus and potassium with variable yields and low commodity prices, grain storage, weed management and herbicide resistance, insect pest updates, tar spot in corn and other disease updates, and a weather outlook for 2020.

Early registration for each location is \$50; late registration made less 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. Online registration and additional information is available at www.cropadvantage.org. For questions, contact ANR Program Services at 515-294-6429 or anr@iastate.edu, or contact your regional Iowa State University Extension and Outreach field agronomist.

January 3 - Burlington, IA

January 6 - Sheldon, IA

January 7 - Storm Lake, IA

January 8 - Ames, IA

January 9 - Moravia, IA (Honey Creek)

January 10 - Mason City, IA

January 14 - Okoboji, IA

January 15 - Fort Dodge, IA

January 16 - Waterloo, IA

January 17 - Davenport, IA

January 23 - Atlantic, IA

January 28 - Coralville, IA

January 29 - Le Mars, IA

January 30 - Denison, IA

Soil Fertility Workshops



The cost of managing soil fertility in Iowa continues to change, with increased fertilizer input costs and a rising demand for nutrients from higher-yielding crops.

To help producers maximize profits, Iowa State University Extension is hosting six workshops from the end of January through February called *Soil Testing Interpretations and Recommendations: Maximizing Return on Investment*.

Extension field agronomist Josh Michel shared that the workshops will lead farmers through the basics of soil testing, analytical tests, calculating crop nutrient removal, understanding return on investment from fertilizer applications, how crop response correlates to soil test levels and what is known about crop response to micronutrients.

The workshops are designed to help farmers understand their current soil nutrient situation, the amount their crops are using in a growing season and what needs to be added, says Rebecca Vittetoe, another ISU field agronomist who will be presenting at these workshops.

Registration is limited and is required. Registrants should contact their ISU Extension county office or the site location they wish to attend. Fees can be paid the day of the workshop. Registration for each event includes publications, copies of presentations and brunch or lunch.

All workshops run from 9 a.m. to 12:30 p.m. and the locations where the workshops will be held are as follows:

January 31. ISU Extension Jefferson County Office. Registration is \$40 per person and pre-registration is required by Jan. 29. Enrollment is limited to 30. Call 641-472-4166.

February 7. Poweshiek Water Association, Brooklyn. Registration is \$10 per person and pre-registration is required by Feb. 5. There is no registration cost for Corn Grower Members, but RSVP by Feb. 5. Enrollment is limited to 30. Call 641-623-5188. Meeting sponsored by Iowa Corn Growers.

February 13. ISU Extension Jones County Office. Registration is \$40 per person and pre-registration is required by Feb. 11. Enrollment is limited to 30. Call 319-465-3224.

February 21. ISU Extension Marion County Office. Registration is \$40 per person and pre-registration is required by Feb. 19. Enrollment is limited to 30. Call 641-842-2014.

February 27. Southeast Research and Demonstration Farm near Crawfordsville. Registration is \$40 per person and pre-registration is required by Feb. 25. Enrollment is limited to 30. Call 319-653-4811

February 28. ISU Extension Black Hawk. Registration is \$40 per person and pre-registration is required by Feb. 26. Enrollment is limited to 30. Call 319-234-6811.

For additional information or if you have questions, please contact one of the extension field agronomists helping to host these meetings: Meaghan Anderson (319-331-0058 or mjanders@iastate.edu), Terry Basol (641-426-6801 or tlbasol@iastate.edu), Josh Michel (563-581-7828 or jjmichel@iastate.edu), Virgil Schmitt (563-263-5707 or vschmitt@iastate.edu), or Rebecca Vittetoe (712-540-3319 or rka8@iastate.edu).

Are Those Around You Showing Signs of Stress?

Article Author: Tammy Jacobs, Human Sciences Extension and Outreach Hotlines Coordinator

Uncertainty in the farm economy makes this 24/7 resource extremely valuable.

The [Iowa Concern Hotline](tel:800-447-1985) (800-447-1985) is a 24-hour a day, 7-day a week free, confidential resource for anyone with concerns or questions about farm finances, crisis and disaster response and personal health issues. Access to an attorney is also available to help provide legal education.



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2020 Southeast Iowa Manure Applicator Certification

Tuesday, January 14, 2020

Keokuk County Extension Office – 9:30 AM

Henry County Extension Office – 1:30 PM

Monday, January 27, 2020

Wayne County Extension Office – 1:30 PM

Wednesday, January 29, 2020

Johnson County Extension Office – 9:30 AM

Louisa County at the Southeast Research Farm – 1:30 PM

Monday, February 3, 2020

Davis County at the Corydon Courthouse – 1:30 PM

Tuesday, February 4, 2020

Cedar County Extension Office – 9:30 AM

Muscatine County Extension Office – 1:30 PM

Wednesday, February 5, 2020

Benton County Extension Office – 9:30 AM

Thursday, February 6, 2020

Jefferson County Extension Office – 9:30 AM

Lee County Extension Office – 1:30 AM

Monday, February 17, 2020

Washington County Extension Office – 6:30 PM

Dairy Days

Topics will include: Ventilation Options for Freestall Barns, Dealing with Farm Stress, Dairy Market Updates, Stress & Metabolic Responses on Dairy Cows and Group Calf Housing and its Effects on Calf Behavior



9:30 am-Registration; 10:00 am-Program Start

A \$15 registration fee covers the noon meal and proceedings costs. Pre-registration is requested by the Friday before each event to reserve a meal. For more information, contact your ISU Extension and Outreach county office or your dairy specialist listed on back.

January 20 - Riceville, Windy Tree Café, 101 E. Main St

January 21 - Calmar, Iowa's Dairy Center, 1527 Hwy 150 South

January 23 - Waverly, Civic Center, 200 1st Street NE

February 4 - Kalona, Chamber of Commerce, 514 B. Ave.

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