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Washington County Extension
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newsletter

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www.extension.iastate.edu/washington

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"The fees for service will be used to off-set direct expenses and to support the County Extension ANR Program."

Washington County Extension to Host IDALS Pesticide Testing

Washington County Extension is now a field test site for those needing to take pesticide application tests. Tests will be offered on the 2nd Friday of each month, April – December, from 10:00 a.m. – 2:00 p.m. All tests are available at this site and will be given on a first-come, first-serve basis. Tests are administered by the Iowa Department of Ag and Land Stewardship. Because it may be necessary to cancel or reschedule a test date or site, it is recommended you confirm the test time and site prior to travel. Study materials are available from your local Extension office or on-line from Iowa State University: <https://www.extension.iastate.edu/store/> then select "Environment" on the left sidebar of the page. For more information contact Washington County Extension at 319-653-4811 or IDALS Pesticide Bureau at 515-281-8591.

Managing Winter Annual Weeds in No-Till Fields

Bob Hartzler, Department of Agronomy

As no-till acres have increased in Iowa, so have the acres infested with winter annual weeds. The primary cost associated with these weeds is interference with crop establishment and early-season growth. Winter annuals become more difficult to control as they mature, therefore increasing herbicide costs. For some weeds, herbicide rates may simply need to be increased. Whereas, some weed species will require additional herbicides. For example, horseweed (marestail) can be controlled consistently with glyphosate and 2,4-D when in the rosette stage. However, after the stem begins to elongate additional herbicides typically are needed to provide consistent control. Delaying application for horseweed also increases the likelihood of selecting herbicide resistant biotypes.

The potential for winter annuals to interfere with production depends upon the severity of infestation. Fields with a short history of no-till often have small, scattered patches of winter annuals that may not interfere with crop growth. It may be difficult to rationalize an early herbicide application to control a non-economic infestation of winter annuals. However, delays in control may allow winter annuals to go to seed prior to the burndown treatment. Therefore, early-spring applications will prevent increases in the winter annuals which can reduce problems in future years.

Another advantage with early-spring applications is eliminating concerns with the planting interval required following 2,4-D applications. Corn or soybean should not be planted until seven days after application of 1 pint of 2,4-D 4 lb/gallon LVE (2/3 pint of 6 lb/gallon LVE). Ester formulations are recommended over amines due to a shorter planting interval for esters (15 day interval when soybean is planted following 1 pint 2,4-D 4 lb amine). In addition, esters often perform better under the cool conditions commonly encountered with spring applications. Inclusion of residual herbicides with the burndown treatment should provide a weed-free seedbed at planting, therefore eliminating the need for applying herbicides at planting. It is unrealistic under most situations to expect a preemergence herbicide applied several weeks prior to planting to provide full-season control. However, if properly selected for the weeds present in the field, the early application should allow the postemergence application to be delayed long enough to require only a single post application.

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Publication Helps Farmers Select Energy Efficient Fans for Swine Production

AMES, Iowa – Efficient fans are essential for proper ventilation of livestock production facilities. A new publication from Iowa State University Extension explains the factors farmers should consider when selecting or upgrading fans for hog buildings. “Energy Efficient Fans for Swine Production” ([PM 2089E](#)) is available to download from the Extension Online Store, www.extension.iastate.edu/store/.

Inefficient fans can add to a farmer’s cost of production, said ISU Extension program coordinator Dana Petersen. The most obvious cost is wasted energy that is expended while using an inefficient fan. Other costs can arise from poor air quality because of under-ventilation or wasted heat due to over-ventilation. Fans that are inefficient or mismanaged may allow air quality to diminish and therefore stress animals. Stressed animals are more susceptible to disease and also have less-than-optimal growth and feed conversion.

This publication is part of a [series of farm energy conservation and efficiency educational materials](#) being developed through the Farm Energy Conservation and Efficiency educational initiative. The purpose is to increase farmers’ awareness of opportunities for improving efficient use of farm energy. The initiative also will help farmers explore alternatives to reduce farm energy demand and to improve their farms’ overall profitability in a rapidly changing energy environment.

Iowa State University Extension received a grant from the Iowa Energy Center to carry out the initiative. Extension and the Iowa Energy Center are cooperating with Iowa Farm Bureau Federation, Central Iowa Power Cooperative (CIPCO), the Iowa Association of Electric Cooperatives, Consumers Energy, Alliant Energy, MidAmerican Energy, Office of Energy Independence and USDA in the effort. For more information, go to www.extension.iastate.edu/store. See especially the topic environment – energy.

Adjusting Custom Rates for Fluctuating Fuel Costs

The 2010 Custom Rate Survey can be found at www.extension.iastate.edu/Publications/FM1698.pdf. Many Iowa farmers hire some custom machine work in their farm business, or perform custom work for others. Others rent machinery or perform other services. The information is based on a survey of 187 Iowa farmers, custom operators, and farm managers. For each operation, the average rate from the survey and the range are shown.

Custom rate values are rates expected to be charged or paid, including fuel and labor. The average price for diesel fuel was assumed to be \$2.25 per gallon. The schedule is intended only as a guide. Actual custom rates may vary according to availability of machinery in a given area, timeliness, operator skill, field size and shape, crop conditions, and the performance characteristics of the machine being used.

The question often arises, “how do we adjust custom rates as fuel prices fluctuate?” The following steps are easy to follow and serve as a guide to answer this question.

- 1) Figure the percentage change in fuel prices since the survey was undertaken (2010 survey is based on \$2.25 for diesel)
- 2) Fuel makes up approximately 20% of the total cost for planting and harvesting activities and 25% of the total cost of tillage activities

Example: If present fuel prices are say 50% higher than when the survey was done and you want to set a rate for planting corn, you can make adjustments as follows: $50\% \times 20\% = 10\%$ increase in the rate stated on the custom rate survey.

4-H County Council Sponsoring IJBBA Open Cattle Show



Washington County 4-H County Council will be sponsoring an IJBBA-sanctioned open cattle show on Saturday, April 17 at the Washington County Fairgrounds. This event is open to youth of all ages up to 21. To exhibit at this show, you do not need to be a member of the IJBBA or a member of 4-H. However, if you are a member of the IJBBA you will receive points.

This is a great opportunity for youth to compete against kids from other counties, work more with their cattle, gain experiences and have fun.

Check-in will be from 8-10 a.m. The show will begin at 11:30 a.m. Entry fee is \$35. **For Washington County participants only the entry fee is \$30.00 if registered by April 1st.** Entry fee includes a t-shirt per exhibitor. Make checks payable to the Washington County Extension Office, 2223 250th St. Washington, IA 52353. Supreme Champion will receive \$250 and Reserve Champion will receive \$150 for both market and breeding animals. All classes will pay back.

Health papers are required on all animals. If intending to show in a breed division, registration papers are required. Generators are recommended, but not required. In conjunction with this event will be a Pancake Breakfast from 7-10:30 a.m.

If you would like to enter, donate to the event or have additional questions please contact Harry Walker at 319-461-1458, Ryan Schneider at 319-930-0989 or Kati Peiffer at 319-653-4811. Registration forms are available at www.extension.iastate.edu/



Information about Corn Nematodes and SCN Available Online From ISU Crop Adviser Institute

Greg Tylka, Department of Plant Pathology

A new source of information about the biology and management of corn nematodes is now available free online from Iowa State University. It's a training module from the ISU Crop Adviser Institute. Topics discussed in the module include:

- the different species of nematodes that can parasitize corn
- review of the basic biology of corn nematodes
- symptoms of nematode damage to corn
- how to determine if a corn field has nematode damage
- current management options for corn nematodes
- the new cyst nematode discovered on corn in 2007

Certified crop advisers (CCAs) can earn 2.0 continuing education units (CEUs) by taking an exam after completing the module.

The corn nematode module complements the ISU Crop Adviser Institute soybean cyst nematode (SCN) module, which is available online for free. The SCN module, also worth 2.0 CEUs for CCAs, discusses:

- the biology and life cycle of SCN
- signs, symptoms and interactions of SCN
- proper soil sampling and field scouting techniques
- management strategies for SCN
- sources of SCN resistance

Both training modules include computer-generated graphics and animations plus video clips that illustrate soil extraction techniques. To access the ISU Crop Adviser Institute modules, instructions can be found at <http://www.extension.iastate.edu/CropNews/2010/0322tylka2.htm>

Eastern Iowa Forage Prices

These are hay prices paid at auction in recent weeks. Much of the price information is obtained from USDA Hay Market News. Personal contacts of local Iowa hay auctions secured price information for these market outlets. Auctions were chosen to reflect prices across Iowa. Other nearby auctions may exist. No endorsement of the listed auctions is intended.

Walcott (EC IA) 2nd Sat Dec-Mar; Noon Feb 13, 2010 Sale
Alfalfa: SmSq \$100-225/T; LgSq \$110-120/T Mixed: SmSq \$5.35/bale, \$135/T; LgSq \$105/T; LgRd \$165/T Grass SmSq \$90-180/T; LgRd \$90-155/T Straw \$2.25/bale Cornstalks; (LgRd \$15/bale Jan)

Keosauqua (SE IA) Sat 11:30A Alfalfa & mixed: SmSq \$2.25-4.50/bale Grass : SmSq \$1.75-2.75/bale Straw: SmSq \$2.75-3.75/bale

Kalona (SE IA) 1st Wed, Yr-round 11:30AM (& 3rd Wed Oct-winter) Alfalfa : SmSq \$4.20-10.40/bale; (LgSq 52-74/b, \$220/T Jan) Mixed Leg/Gr: LgSq \$52-74/bale ; LgRd \$46-76/B Grass: SmSq \$3.60-4.80/bale; (LgRd \$50-59/bale Jan) Straw: \$3.10-3.40/bale Cornstalks: LgRd \$30/bale

Soil Temperature & Weather Outlook Website

The following web site provides a link to the three day history of the 4" soil temperature and the 6-10 day weather outlook. This site is provided by Iowa State University Extension and can be found at: <http://extension.agron.iastate.edu/NPKnowledge/>.

ISU Extension to offer Hazard Analysis Critical Control Point (HACCP) Training for Food Processing Plants

AMES, Iowa -- Iowa State University Extension will offer a Hazard Analysis Critical Control Point (HACCP) in Food Processing Plants course April 13-15 in Cedar Rapids.

The course is accredited by the International HACCP Alliance, said Sam Beattie, ISU Extension food safety specialist. HACCP is a food safety program designed to identify where potential hazards can be controlled in the manufacturing of a food and then introduce strategies to ensure that control is complete.

HACCP is a mandatory program for meat and poultry operations, as well as seafood and juice processors, Beattie said. "It appears that it also will become mandatory for all food processors, as it is a part of the new food safety legislation being passed through the U.S. Congress."

The course will be held at the Clarion Hotel and Convention Center in Cedar Rapids. Cost of the course and all materials is \$350. The registration deadline is April 9. The maximum number of registrants is

25. For more information and to register, visit the conference Web site, <http://www.ucs.iastate.edu/mnet/develophaccp/home.html>, or contact Beattie at beatties@iastate.edu.

Keokuk County Extension in partnership with DNR, Alliant Energy and Keokuk County Conservation Board would like to present

Operation ReLeaf Residential Tree Program
for Alliant Energy Customers to purchase trees for their property for \$25.00 each (limit 2 trees per household)

For More Information and for an Order Form
Contact Keokuk County Extension
at 641-622-2680
or go to www.extensioniastate.edu/keokuk

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ISU Researchers Help Cattle Producers Use Ethanol Co-products Effectively

It only takes a few minutes to participate in Iowa State University research with the potential to help countless feedlot producers.

Research concerning sulfur-induced polioencephalomalacia (PEM) is currently underway at Iowa State University and the Iowa Beef Center. Beef nutritionists and veterinarians are working together to understand how sulfur induced-PEM develops and are attempting to develop diagnostic tools and strategies for preventing this disease. The strategies being developed by ISU's research team should allow beef producers to increase the amount of ethanol co-products included in their diets, says Mary Drewnoski, ISU post-doc and member of the research team.

The high sulfur content of ethanol co-products is one of the major factors limiting the inclusion level of ethanol co-products in cattle diets. Excess sulfur in cattle diets can result in PEM, commonly referred to as polio or brainers.

To get a better idea of current ethanol co-product feeding practices, feedlot incidences of PEM and other dietary factors that may lead to PEM, Drewnoski and the ISU research team have created a short survey for feedlot producers to complete. In the few minutes that it takes to reply to this brief survey, producers can help researchers help Iowa's cattle producers.

Feedlot producers interested in taking the survey should go to www.iowabeefcenter.org and click on the survey link on the right hand side of the page. To learn more about the survey or the PEM research being conducted at Iowa State, contact Drewnoski at (515) 294-3448 or medrewno@iastate.edu

New Spreadsheet Helps Producers Evaluate Economics of Increasing Weaning Age

Pork producers interested in learning how their finances could be affected by changing the weaning age will want to investigate a new spreadsheet available from the Iowa Pork Industry Center (IPIC) at Iowa State University (ISU.)

Developed by Derald Holtkamp of the ISU College of Veterinary Medicine's Veterinary Diagnostic and Production Animal Medicine, this free spreadsheet helps producers evaluate effects of increasing weaning age, including how their breeding inventory must change.

"This is a breed-to-finish production and budgeting spreadsheet that evaluates both the costs and benefits of these changes," Holtkamp said. "It also assists producers in determining how much their inventory must change for alternative weaning ages to ensure the farrowing capacity of a farm is not exceeded."

Holtkamp said the spreadsheet is easy to use and understand. Users enter operation-specific production and financial information to develop a baseline, and can evaluate alternative breeding herd inventories and weaning ages for up to four scenarios. Total annual profit for the operation is the preferred economic outcome to evaluate the scenarios relative to the baseline.

The "Evaluation of Weaning Age Calculator" is available at no charge in Excel® 2003 and Excel® 2007 versions. Both are available by completing a registration form on the IPIC Web site. Go to <http://www.ipic.iastate.edu/software.html> and select "Spreadsheets." Then choose the appropriate registration link for the version of the spreadsheet.

You must have Excel® 2007 installed on your computer to use the 2007 version of the spreadsheet. If you are not sure which version of Excel® is installed on your computer, choose the Excel® 2003 version of the spreadsheet. It will work if you have either Excel® 2003 or Excel® 2007 installed.

This newsletter brought to you by:

Iowa State University Extension - Region 15

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Twin Wind Energy Conferences Examine Trends, Policy Changes

Iowans interested in wind energy may participate in a pair of conferences in April that will provide updates on trends in wind energy technology, workforce development and policy changes that affect the entire wind industry.

The Iowa Alliance for Wind Innovation and Novel Development (IAWIND) Conference and the 2010 Iowa Wind Energy Association's (IWEA) Annual Meeting and Conference will be held April 6 and 7 at the Scheman Conference Center on the Iowa State University campus in Ames.

The April 6 IAWIND Conference will feature national and international speakers from industry, academia and the public sector to highlight the latest trends in technical, research and development, manufacturing and workforce issues facing the wind industry.

The April 7 IWEA conference, "Harnessing the Power of the Plains," will explore the impact on wind energy from the federal level to the individual business. Industry leaders will address legislative, regulatory and legal issues, as well as transmission, safety and wind development in Iowa.

More information about the conferences is available online at <http://www.uccs.iastate.edu/mnet/iawind/home.html>.

Those who would like to know more about IAWIND may visit <http://www.iawind.org/> or contact iawind@uiowa.edu. Individuals who are interested in learning more about IWEA may visit www.iowawindenergy.org or contact Loma Roggenkamp at info@iowawindenergy.org.

Water Gardens Workshop Offered

The Keokuk County Master Gardeners will be hosting Jamie Beyer on April 6 at the Sigourney Library at 6:30 p.m. He will be giving ideas and tips on Water Gardens construction and features. Pre-registration would be appreciated at 641-622-2680 or 800-515-2680. Registration fee \$5. Contact Shirley Conkity at conkity1@iowatelecom.net for questions or more information.

World's Largest Tractor in Iowa



"Big Bud 16V - 747", the world's largest tractor, will be making its way to Iowa for the first time ever this spring. It will be available for viewing from April 12 - July 31 at Heartland Acres Agribition Center, Independence.

Built in Havre, Montana in 1977, "Big Bud" was 1 of over 500 "Big Bud" brand tractors that were built by Ron Harmon and the crew of the Northern Manufacturing Company. "Big Bud" is the only 16V-747 model that was produced and was specifically designed to produce higher horsepower to deep-plow cotton fields for the Rossi Brothers near Bakersfield, Calif. The tractor was built to produce 760 horsepower using a 16-cylinder Detroit Diesel engine but has operated at 980 horsepower. "Big Bud" measures 27 feet long, 20 feet wide, and 14 feet tall and weighs over 130,000 pounds.

For more information about "Big Bud" and Heartland Acres visit www.heartlandacresusa.com or call 319-332-0123.

Last Chance for Private Pesticide Applicator Re-certification

One final 2009-2010 private pesticide applicator continuing instructional course will be offered Thursday, April 15 at the following times/locations in Region 15:

9:00 a.m. at the Iowa County Extension Office and 1:30 p.m. at the Johnson County Extension Office, Washington County Extension Office, Keokuk County Extension Office.

If you wish to recertify by training and not by exam, you must attend a CIC session each year. Remember, you always have the option of taking the exam. There is a \$20 fee per person. Pre-registration is not required.



County Fair Livestock Weigh-In Dates

The 2010 lamb and meat goat weigh-ins for area county fairs are set. For complete guidelines and requirements please contact your local Extension Office. Lambs and meat goats nominated for the Iowa State Fair and Ak-Sar-Ben will require retinal scans and DNA; there is a \$5 per animal per show fee for each nomination.

Lamb & Meat Goat Weigh-ins

Iowa County-for Iowa State Fair entries, Thursday, May 6, 6:30-8:00 p.m., Johnson Co. Fairgrounds; Iowa County-for county fair only, Friday, May 7, 6:00-7:00 p.m., Fairgrounds; Johnson County-Thursdays, May 6, 6:30-8:00 p.m., Barn 5, Fairgrounds
Keokuk County-Saturday, May 1, 8:00-10:00 a.m., Expo Grounds; Washington County-Saturday, May 8, 8:30-11:30 a.m. Fairgrounds

County Fair Dates: Iowa County Fair-July 15-18, Keokuk County Expo-July 13-19, Washington County Fair-July 18-23, Johnson County 4-H/FFA Fair-July 26-29

April 10th High Tunnel/Low Heat Greenhouse Workshop Planned for Fairfield

There will be a free high tunnel/low heat greenhouse workshop at the Maharishi University of Management (MUM) Organic Farms greenhouse on April 10 from 1:00 p.m. to 3:00 p.m. The greenhouse is located at 2075 140th St. in Jefferson County, about 6 miles north of Fairfield. The main presenters will be Linda Naeve, Iowa State University (ISU) and Steve McLaskey, Maharishi University of Management. The workshop is sponsored by MUM, ISU, and the Leopold Center. Linda Naeve will talk about her experience with high tunnel site selection, types, and construction. Steve McLaskey will talk about his research project funded by a Leopold Center grant to test the feasibility of growing vegetables in a large unheated greenhouse in the winter in Iowa. He is comparing growth and yield of several vegetables in the unheated one acre greenhouse with an unheated 30 foot by 96 foot unheated hoop house greenhouse, and a 30 by 96 foot greenhouse heated just enough to keep it from freezing.

To get to the workshop from Fairfield, drive north on Highway 1 about 6 miles, turn left on 140th St. It is the first driveway on the right. From the north, drive south on Highway 1 five miles south of the intersection with Highway 78. Turn right on 140th St, and right at the first driveway.. Any questions can be directed to Steve McLaskey, Director, M.U.M. Organic Farm Greenhouse: 641-472-3233 or Office: 641-472-7000 x3307.

Examining Projected Demand for Iowa Crops

Demand for Iowa crops has been helped by outside influences, especially the recovery in energy prices. Ethanol margins have moved above breakeven and support for biofuels has been boosted by the substantial rise in crude oil prices over the past year, according to Chad Hart, Iowa State University Extension grain marketing economist.

“The energy price recovery has helped ethanol margins remain positive over the past several months. Biofuels continue to see support from higher energy prices.”

The turnaround has allowed U.S. ethanol production to continue growing. According to Hart, ethanol now ranks second only to livestock feed in demand for corn.

“Projections for the 2009 crop show more than 4 billion bushels of corn heading to ethanol plants,” Hart said. “Looking beyond to the 2010 and 2011 crop years, ethanol demand will continue to build with the Renewable Fuels Standard.”

In 2010, that standard requires production of 12.95 billion gallons of renewable fuels, up from 11.1 billion gallons in 2009. Hart said corn-based ethanol will account for much of the conventional biofuel portion of the standard, increasing corn demand for ethanol to 4.4 billion bushels in 2010 and 4.6 billion bushels in 2011. “Based on the standard, by 2015, over 5 billion bushels of corn could be used for ethanol production,” he said.

Corn feed and residual demand is another projected increase over last year, Hart said. Feed demand, however, has declined with the financial woes facing the livestock industry.

LIVESTOCK PROJECTIONS

“Poultry, dairy, pork and beef producers have been reducing numbers,” he said. “From higher feed costs, lowered demand with the recession and the H1N1 outbreak, the livestock industry has encountered wave after wave of troubling news.”

But, he added, futures prices for livestock and feed products at the close of 2009 suggest reason to hope for a rebound in the livestock industry moving through the summer.

One sign of coming improvements is the projection for increased meat export demand with the drop in value of the U.S. dollar. For corn, livestock feed remains the largest demand category. “But it is also the demand category with the weakest outlook,” Hart said. “If the improved margins fail to materialize, feed demand will slip further.”

EXPORTS

Corn export demand is expected to rebound as well, also supported by the continued weakness in the U.S. dollar as well as recent approvals of GM corn varieties in Mexico and the European Union.

For soybeans, exports are “the big story,” Hart said. The strength of export demand has led the U.S. Department of Agriculture to increase its soybean export estimate several times. By example, he said China has already purchased more soybeans from the U.S. than Iowans produced in 2009.

But, he added, Brazil and Argentina have shifted more area to soybean production, which will mean competition for U.S. growers. A potential for a record-setting South American soybean crop has contributed to futures prices favoring corn for 2010, Hart said. “But crop input costs have come down from last year’s highs, improving the economic outlook for both crops.”

Estimates from ISU Extension show per-bushel costs of roughly \$3.50 for corn and \$8.67 for soybeans. Based on projected prices and costs, Hart said corn also holds a return advantage going into 2010.

“So corn will likely gain acreage from soybeans and other crops in 2010,” he said. “But the land shifts will not be dramatic. Given the situation today, I expect corn plantings to be around 90 million acres, with soybean area falling to 77 million acres. As in previous years, other crops will lose area to corn and soybeans.”



Timing is Everything: Successful Spring Planting Will Likely Take Patience & Planning

With memories of the last fall's difficult harvest still all too vivid for farmers, this winter has presented its own challenges. And now, according to an Iowa meteorologist, a wet spring is predicted.

"Soil moisture levels are at or above field capacity. It will not take abnormally high amounts of April precipitation to leave large portions of the Corn Belt too wet for effective planting," says Elwynn Taylor, Iowa State University (ISU) ag meteorologist.

One of challenges facing farmers will be compaction.

"Farmers did what they had to do to get crops out last fall, but there will be ramifications," says Iowa Soybean Association Director of Production Research David Wright. "Heavy wagons, trucks, grain carts and combines moving across wet ground all contributed to soil compaction. There are now some things farmers need to watch for in the 2010 soybean crop."

"Spring is not the time to alleviate compaction, but farmers will want to avoid creating more compaction," says Greg Brenneman, ISU Extension ag engineering specialist. "With wetter soil, that is more of a challenge. I would advise farmers to not try to get out in the field very early. Doing so and working wet soil will create more compaction."

In particular, farmers who didn't get to do as much field work as they would have liked last fall may feel like their window of opportunity is short. It will be a challenge to let fields dry out.

"Soil has a natural way, through thawing and freezing, to remedy soil compaction and improve soil structure," says Mahdi Al-Kaisi, ISU Extension agronomist. "Stable soil structure is like a building block formation that is able to hold up the weight of implements running over them, while still forming conduits for water to move through and providing natural aeration for a root to grow. Because of the stable and strong soil structure, untilled soil can tolerate the weight of machinery. Tillage breaks up that soil structure, reducing the soil's strength to hold the weight of heavy equipment."

While farmers think tillage will reduce soil compaction, Al-Kaisi says it will actually only make it worse. It won't cure the deep soil compaction and, by disturbing the upper soil layer, will destroy soil's natural structure or soil aggregates and creates another layer of compaction under heavy rain and field traffic.

"Put simply, the more wheels and machinery that move over wet soil, the more compaction will take place," John Holmes, ISU Extension field agronomist, says. "Avoid making any more trips than absolutely necessary across a field with wet soil."

"This may be a year for farmers who work their soil to try doing less tillage than they normally would," Holmes says. "For instance, if they didn't get chiseling done last fall, they may forego it this spring and just do the secondary tillage just before planting to prepare the seedbed. Though it might be a challenging year to try something new, they may decide to try some no-till, especially in soybeans, where they didn't get fall tillage done or in fields where corn didn't get combined until spring."

Holmes adds, "In parts of the state where farmers feel they must do something, this is a year when an implement called a rotary harrow might be useful, though in most of the state, these

are not common." Not the same as a rotary hoe, the rotary harrow has single lines of heavy teeth that poke holes in the ground without stirring it up and allows water to penetrate. It can dry out the ground and yet isn't aggressive.

Though researchers have documented the yield benefits of early planting, agronomists emphasize it is more important the soil is ready. A few days can make a tremendous difference in the soil's condition.

Planted in wet fields, young soybean seedlings could have problems with root development, which may, in turn lead to further problems.

"I'd encourage farmers to plant seed with excellent resistance to diseases," Holmes says. "Since the seed will likely be going in a cold, damp soil, it would be a good idea to treat it with a fungicide."

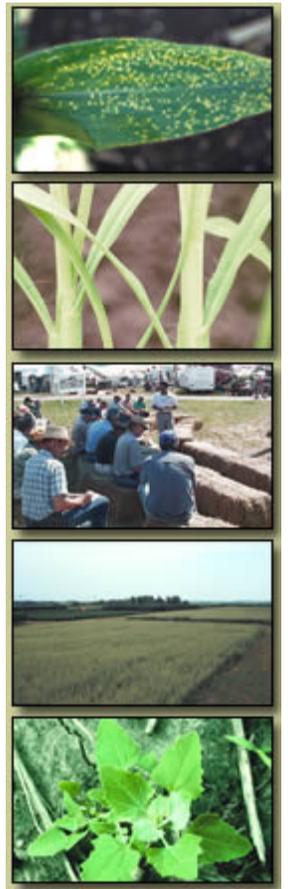
"There is no question that seed treatments can increase yield in fields where risk of seedling diseases are high," says ISU Plant Pathologist X.B. Yang. "Seed treatment will not improve germination rate, but will protect against further stand loss if fields have a history of damping off and the spring is wet. If the planting season is going to be cool and wet, the value of using treated seeds increases."

"Wet, saturated soil conditions at planting can increase the risk of damping-off caused by *Pythium* and *Phytophthora*," says ISU Plant Pathologist Alison Robertson. "These pathogens cause similar symptoms on soybean seedlings, and lab tests are usually required to distinguish which pathogen is present. *Pythium* prefers cooler, saturated soils and is more of a problem in early planted beans. *Phytophthora* may be an issue when the soil is warmer and saturated."

According to Robertson, soybean varieties with resistance to *Phytophthora* pathogen are available, but varieties with resistance to *Pythium* are not available.

"As the season progresses, there may be further effects from the winter that will pose problems later in the summer," Wright says. "For instance, we don't yet know the impact of all the snow cover on the overwintering of the bean leaf beetle or aphids. Soybeans planted in compacted fields that have experienced problems with root development may be susceptible to problems with foliar diseases like sudden death syndrome (SDS). While SDS infection occurs shortly after germination, symptoms may not be apparent until later in the summer. Additionally, if the young seedling roots have difficulty taking up enough potassium, those soybeans could be more attractive to soybean aphids later in the summer. There may also be issues of delayed maturity."

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What do you enjoy most about your position as field agronomist?

Every cropping year is different, so as a field agronomist I am always learning something new. It is rewarding to try to help others adapt to the rapidly changing agricultural technologies, and to learn from their neighbor's mistakes.

What sort of activities are you involved in and which ones do you enjoy the most?

As a field agronomist, I enjoy most being in the field. Besides all of the winter teaching programs, such as private pesticide applicator programs, I'm involved with doing applied research and educational activities in farmer's fields and on the SE IA Research & Demonstration Farm near Crawfordsville. I also do a lot of trouble shooting in the summer investigating crop problems.

What activities do you think producers benefit from most when they attend?

I think producers benefit the most when they can see for themselves how various technologies work in the field. This past fall producers attending the Advances in Precision Ag EXPO at the Crawfordsville research farm could try out for themselves new technologies, such as auto-steer. I also try to include local research and experiences into winter educational programs.