

AG newsletter

ISU Extension Washington County

2223 250th St.

Washington, IA 52353

319-653-4811

www.extension.iastate.edu/washington

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... and justice for all

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CRP NATIVE GRASS FIELD DAY

September 13 Field Day will focus on establishing native grasses

Many of the bids in the 41st Conservation Reserve Program (CRP) signup included putting native grasses or native pollinator habitat on a portion of the CRP acres. To help landowners learn more about getting good establishment of the native grasses, a field day has been set for Tuesday, Sept. 13 at 6:00 p.m. at the Iowa State University (ISU) Southeast Iowa Research and Demonstration Farm near Crawfordsville.

Native grasses are slower to establish than many of the cool season forages farmers normally use for haying and grazing. The seed is also fluffier and may require some different seeding techniques. With proper planning, seeding, and weed control, excellent stands can be established in the first year.

Field day topics will include species selection, seeding mixes, seeding methods, weed control and maximizing wildlife benefits. Special focus will be on establishing native grasses on existing CRP where presently there is brome grass cover. Participants will also have the chance to compare native grass stands that were done as a dormant seeding in the late fall, an early spring frost seeding, and a late spring seeding.

To get to the SE Iowa Research and Demonstration Farm, go 1¼ miles south of Crawfordsville on Hwy 218, then 2 miles east on G-62, then ¾ mile north on the Louisa – Washington Rd. Watch for signs. The field day is sponsored by ISU Extension and Outreach, Natural Resources Conservation Service (NRCS), Farm Service Agency (FSA), and the Iowa Department of Natural Resources (DNR). For more information, call 319-337-2145.

PESTICIDE TESTING SEPTEMBER 9

IDALS will offer pesticide testing on September 9 at the Washington County Extension office. Tests are offered on the 2nd Friday of each month, from 10:00 a.m. – 2:00 p.m. at the Washington County Extension office. 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.

SEPTEMBER 8 FIELD DAY TO FEATURE ELWYNN TAYLOR

How Heat & Drought Will Impact Corn Yields

After a very wet spring, SE Iowa is now suffering from a drought that started in late June, with some corn fields already near death from the lack of moisture and excess heat. Dr. Elwynn Taylor, ISU Extension Climatologist, will discuss how the summer's heat and dry weather will impact corn yields at the fall field day at the Iowa State University Southeast Research Farm near Crawfordsville on September 8th starting at 1:30 pm.



Dr. Kendall Lamkey, chair of the ISU Agronomy Department, will discuss progress that has been made in breeding drought tolerant corn at a stop featuring the new "Aqua Max" corn from Pioneer Hi-bred. Other topics on the field day program include "Soil Sampling & Making Sense of Soil Test Results" presented Dr. Antonio Mal-larino, ISU Agronomist in Soil Fertility, and "Crop Season Review & Research Farm Highlights" by Kevin Van Dee, Research Farm Superintendent.

All Field days are open to the public and Certified Crop Advisor continuing education credits will be available for a fee. The farm is located 1 ¾ miles south of Crawfordsville on Hwy 218, then 2 miles east on County Road G-62, then ¾ mile north. Watch for ISU field day signs on Hwy 218.

ISU EXTENSION OFFERS FOOD PRESERVATION 101



Whether you wish to enjoy the taste of summer year round; have greater control over the nutritional value of your food, or enjoy preserving food as a hobby, Food Preservation 101 is being offered to bring you up-to-date information and resources. The program will discuss the importance of using USDA approved and tested recipes and methods to eliminate health concerns caused by improperly handled or preserved foods.

Jan Temple, Region 15 ISU Extension Nutrition and Food Safety Director, will be offering the Food Preservation 101 program to provide a brief overview of food preservation, the current methods to preserve food safely, and new recommendations to use while canning. The program will be held from 6:30 to 8:30 PM at the following locations:

- Monday, September 12, Johnson County Extension, 3149 Old Hwy 218 South, Iowa City, 52246, 319-337-2145
- Tuesday, September 13, Washington County Extension, 2223 250th St., Washington, IA 52353 319-653-4811
- Wednesday, September 21, Iowa County Extension, 2253 Hwy 6 Trail, Marengo, Iowa 52301 319-642-5504
- Thursday, September 22, Keokuk County Extension, 102 E. Washington, Sigourney, IA 52591 641-622-2680

Please call the office where you wish to attend so sufficient materials will be available. There may be a fee associated with attendance.

MEAT GOAT BASICS & BEYOND

Meat goat producers and 4-H and FFA exhibitors have the opportunity to learn about nutrition, carcass traits, kidding basics and more. Meat Goat Basics & Beyond will be held Saturday, October 1, 2011 at the Washington County Fairgrounds.



Topics include: Meat Goat Carcass Evaluation and Improved Carcass Traits in Meat Goats – presented by Dr. Fred Homeyer, ABGA Judge & Owner of Antelope Creek Ranch, Robert Lee, Texas; Nutrition Basics for Meat and Show Goats – presented by Bruce Read, VP Nutrition & Product Development, Kent Feeds, Inc; Goat Kidding Basics: What you Need to Know about Kidding your Does – presented by Dr. Janet Sears, DVM, Oelwein Veterinary Clinic, Oelwein, IA.

The program is sponsored by the Tall Corn Meat Goat Wether Association, Inc., and ISU Extension Washington County. Check-in and registration begins at 8:30 a.m., with the program starting at 9:00 a.m. The cost is \$20 per adult and \$10 for 4-H & FFA youth. Lunch is included. For more information contact Susan Thorp, 641-660-1388, sthorp@mahaska.org.

Stay Informed - www.extension.iastate.edu/washington

IOWA LEARNING FARMS TO HOST FIELD DAY SEPT. 8

AMES, Iowa — Iowa Learning Farms (ILF) is hosting a field day at Hickory Grove Lake, near Colo, on Thursday, Sept. 8, from 5:30-8:00 p.m. The field day is free, includes a complimentary dinner and the public is invited to attend. The field day will focus on a water quality improvement project of the lake. Hickory Grove Park is Story County's largest park and opened in 1968. Hickory Grove Lake is a 100-acre man-made lake that attracts more than 70,000 visitors each year. The lake suffers from water quality issues stemming from soil erosion, debris in-flows and elevated nitrogen levels. It was placed on the Iowa Department of Natural Resources (DNR) impaired waters 303(d) list in 2008 for elevated bacteria concentrations. The Iowa DNR Lakes Restoration Program has claimed Hickory Grove Lake as a high priority for improving its water quality.

Attendees to the field day will learn about the lake's restoration program and about agricultural practices that help to reduce erosion and runoff of soil and sediment into the lake. Speaking at the field day are Iowa State University (ISU) agronomy professor Rick Cruse, who will discuss the Environmental Working Group report "Losing Ground" as well as the Iowa Daily Erosion Project. ISU animal science professor Jim Russell will speak about the water quality benefits of fencing area cattle to keep them out of local streams. Dave Nelson, an Iowa Learning Farms farmer partner and owner of Brokaw Supply in Fort Dodge, will discuss strip-tillage and its benefits in reducing soil erosion.

Strip-tillage marries the best aspects of conventional tillage with the benefits of no-till. Before planting (fall post-harvest, or spring pre-plant) a strip-tillage implement creates strips of tilled soil. Surface residue is left undisturbed between the tilled strips. Corn or soybeans are planted into the tilled soil strips, which warm and dry faster than the rest of the field. This practice offers better water infiltration, improved soil structure and potential for reduced fuel, machinery and other crop input costs.

Bring the family- Families are encouraged to come to the field day to see the Conservation Station. The Conservation Station's rainfall simulator shows the effects of rain on several different surface scenarios and subsurface drainage including highly disturbed land, no-till and residue-covered surfaces, buffers and permeable pavement. The learning lab portion of the Conservation Station includes displays and activities highlighting why soil and water quality are important to us all. Kids can become members of the "conservation pack" by participating in the Conservation Station activities.



The field day will be held at the Oriole Ridge Lodge in Hickory Grove Park on the north side of the lake. The park is approximately three miles southwest of Colo, Iowa. From Highway 30, approximately 2.5 miles west of Colo, turn south onto 680th Avenue and travel one mile. Turn right onto 250th Street and head west one mile; the park entrance will be on the left. Travel on the park road past the campground, beach and Bobwhite Shelter; follow the Y in road to the right. Oriole Ridge Lodge will be on the right.

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.

Keosauqua (SE IA) Sat 11:30A Alfalfa & mixed: SmSq \$2.85-4.25/bale Grass : SmSq \$2.00-2.75/bale Straw: SmSq \$2.25-3.50/bale **Yoder Auction (Frytown) (SE IA)** 1st Weds, 11:30AM (winter 1st & 3rd Weds Oct) Alfalfa: SmSq \$3.60-5.60/bale; LgSq \$42.50/bale LgRd \$55/bale Grass: (SmSq \$3.00-4.00/bale; LgRd \$40-60/bale Jun) **Kalona Auction (SE IA)** Thursdays 11:00 AM Alfalfa: SmSq \$3.50-4.70/bale ; (LgRd \$51-70/bale Jun) Mixed : (SmSq \$2.75-4.35/bale Jun) Grass: SmSq \$1.45-2.25/b; LgRd \$25-45/bale Cornstalks: SmSq \$2.00/bale

POWERFUL TOOLS FOR CAREGIVERS

Do you help take care of an older family member or friend? Over 50 million family caregivers in America provide a vast array of emotional, financial, nursing, social, homemaking and other services on a daily or on an intermittent basis.

Powerful Tools for Caregivers is an educational series designed to provide tools you need to take care of yourself. As a participant you will learn how to: reduce stress, improve self-confidence, better communicate your feelings, balance your life, increase ability to make tough decisions and locate helpful resources.

Sessions are scheduled every Wednesday for six weeks and begin on September 28. Classes will be held at Sigourney Care Center's Windsor Place Assisted Living from 1:30 PM – 3:00 PM. Care will be provided for your loved one during the sessions if there is a need. There is a \$30 fee for the program which covers all six sessions and materials. For more information or to register, contact Nancy at Washington County Extension Office at 319-653-4811 by September 21.

PROGRAM SPECIALISTS/ COORDINATORS

Serving Region 15

Agriculture

Ag Engineering

Greg Brenneman 319-337-2145
gregb@iastate.edu

Beef Livestock

Byron Leu 641-472-4166
bleu@iastate.edu

Commercial Horticulture

Patrick O'Malley 319-337-2145
omall@iastate.edu

Agronomy

Jim Fawcett 319-337-2145
fawcett@iastate.edu

Farm Management

Jim Jensen 319-385-8126
jensenjh@iastate.edu

Bob Wells 641-673-5841
wellsjb@iastate.edu

Swine

Tom Miller 319-653-4811
tmiller@iastate.edu

Terry Steinhart 641-622-2680
tsteinha@iastate.edu

Program Coordinator

Kelsey Weber 641-622-2680
klweber@iastate.edu

Community Economic Dev

Himar Hernandez 641-682-5491
himarh@iastate.edu

Business & Industry

Sean T. Galleger 515-290-0181
galleger@iastate.edu

Families

Family Life

Kristi Cooper 319-377-9839
kcoop@iastate.edu

Nutrition & Health

Jan Temple 319-337-2145
mjtemple@iastate.edu

Resource Management

Phyllis Zalenski 319-462-2791
zalenski@iastate.edu

Mary Weinand 641-472-4166
mweinand@iastate.edu

Youth

Connie Cunningham 319-642-5504
conniec@iastate.edu

Janet Martin 319-337-2145
jmmartin@iastate.edu

County Youth Coordinator

Johnson Co.-Dianna Colgan 319-337-2145

Iowa Co.-Mary Veatch 319-642-5504

Keokuk Co.-Shelly Koehn 641-622-2680

Washington Co.-Amy Green 319-653-4811

External Relations

Amber Bisinger 319-377-9839
bisinger@iastate.edu

Regional Ext. Edu. Director

Gene Mohling 319-337-2145
mohling@iastate.edu

FOAMING PITS AN ISSUE THIS FALL

The issue of foaming in deep-pit swine barns continues across Iowa and in other Midwestern states. The number of reports of foaming pits increases this time of year, likely due to the fact the storage structures are getting full and the foaming is more noticeable as it gets closer to the slats or starts coming through the slats. The foam can act as a barrier to the natural release of methane that is generated in the pits. When the foam is broken due to pig activity, power-washing, pumping and agitation or other reasons, this can cause a rapid release of the methane and can potentially cause an explosive situation. In addition to the concern with rapid release of methane, is the fact the foam can cause interference with normal ventilation procedures. At this point in time an exact cause for the foaming is not known, nor are there well-known practices or products to reduce or eliminate the foam for the long term. We continue to urge caution when pumping and agitating from all manure sources, but in particular when pumping and agitating in foaming pits.

Iowa State University released a safety video last September about practices that should be considered when pumping from foaming pits. This video has recently been updated and is located at: <http://www.vimeo.com/15463270>. Upon conclusion of watching this video please take a few minutes to complete the survey if you are experiencing foaming pits. The following link has information about what is known about the foaming pit issues present in the Midwest again this summer/fall and what producers should do from a safety standpoint. Several Midwestern Universities are working together to try and understand this issue better and are pooling their findings at: http://www.manure.umn.edu/applied/health_safety.html

NEW STINK BUG IDENTIFICATION CARD

A new, pocket-sized identification card for stink bugs in the Midwest will make identification of these insects much handier. Iowa State University Extension has just released the new identification card from authors Laura Jesse, Erin Hodgson, Donald Lewis, Matt O'Neal and Adam Sisson. The card was made possible with funding from a 2011 North Central IPM Center mini-grant. In 2011, the brown marmorated stink bug (BMSB) was confirmed in Iowa. These were dead specimens; no live BMSB have been confirmed this year. ISU entomologists are actively looking for this pest throughout the state because this invasive species has the potential to damage corn, soybean and many other plants. In addition, BMSB is a home invader similar to the multicolored Asian lady beetle. BMSB nymphs and adults have unique body characters (Fig. 1), but are easily confused with other stink bugs and incidental insects. This new card will help you distinguish some of the most common look-alikes in Iowa. In addition, a [previous ICM News article](#) gives longer descriptions for stink bugs. Brown marmorated stink bug nymph (*left, photo UGA1460050 by David R. Lance, USDA APHIS PPQ*) and adult (*right, photo David Shetlar, the Ohio State University*). To learn more about BMSB in Iowa, visit our [Stink bug Web page](#). If you think you see BMSB, please send a high-quality photo by e-mail to insects@iastate.edu or mail the specimen to the ISU Plant and Insect Diagnostic Clinic at I 327 Bessey Hall, Ames, IA 50011. Printed copies of the Stink bugs of the Midwest can be ordered from the [ISU Extension Online Store](#) at <https://store.extension.iastate.edu/> or by calling 515-294-5247.



NEW PUBLICATION ILLUSTRATES ENERGY EFFICIENT FARM LIGHTING

By [Dana Petersen](#), [Laura Sternweis](#)

AMES, Iowa – Farm lighting is a key factor for worker safety, animal production and overall farmstead security. Many farm facilities use incandescent bulbs in a variety of settings, but the upcoming phase-out of incandescents among U.S. retailers demands consideration of energy efficient lighting alternatives. A variety of bulbs and fixtures already are available to replace incandescent bulbs. A new publication from Iowa State University Extension compares some of the indoor and outdoor lighting options and their features. “[Energy Fundamentals for Farm Lighting](#)” (PM 2089N) is available to download from the Extension Online Store, www.extension.iastate.edu/store/.



“The incandescent bulb produces light using electrical resistance and much of its energy is wasted as heat,” said Jay Harmon, ISU Extension agricultural engineer. “In spite of low initial cost, the short bulb life and lack of energy efficiency make these bulbs a costly source of lighting.” The incandescent phase-out officially begins with 100W bulbs in 2012 and will grow to include the lower wattage bulbs during the next few years. Alternative options for farm lighting include energy efficient technology such as compact fluorescent bulbs (CFL), light-emitting diodes (LED) and tube fluorescent fixtures. This publication also explains lighting terminology for comparing the energy efficiency of different bulbs. “Incandescent bulbs will begin disappearing from hardware store shelves throughout the coming months,” said Dana Petersen, ISU Extension program coordinator with [ISU Farm Energy](#). “Contact your local electric utility provider to learn about available rebates on energy efficient lighting alternatives.”

For more tips on energy efficiency around the farmstead, visit <http://farmenergy.exnet.iastate.edu> or follow [@ISU_Farm_Energy](#) on Twitter. The Farm Energy publications are part of a series of farm energy conservation and efficiency educational materials being developed through the ISU Farm Energy Initiative. The purpose is to increase farmers’ awareness of opportunities for improving efficient use of farm energy. The initiative also will help farmers and utility providers to explore alternatives to reduce farm energy demand and to improve overall profitability in a rapidly changing energy environment.

GOSS’S WILT BACTERIUM/ MANAGEMENT IMPLICATIONS

Goss’s wilt is caused by the bacterium *Clavibacter michiganensis subsp. nebraskensis* (Cmn). Pure cultures of the bacterium in soil did not survive for long (less than two weeks), however the bacterium was able to survive for up to 10 months in infested surface crop residue. When the crop residue (leaves, stalks, cobs and ears) was buried at 4 inches or 8 inches, the bacterium was only detected in stalks residue after 10 months. Thus, conservation tillage practices that partially bury infested crop residue should reduce survival of the Goss’s wilt bacterium. Rotating to a non-host crop, such as soybean, will allow time for infested residues to breakdown and inoculum levels to decrease.

What effect does ensiling have on the survival of Cmn?

No research has been done on the effect of ensiling on the survival of Cmn. During silage production, Cmn would be exposed to high temperatures, other microorganisms and low pH. Although the effect of heat on the survival of Cmn has not been studied, it has been examined in closely related bacteria. Turner et al. (1983) concluded that survival of *C.m. subsp. michiganensis* (Cmm) was effectively reduced during anaerobic digestion at 95 F. Similarly Kaemmerer (2009) found *C.m. subsp. sepedonicus* was sensitive to heat during anaerobic digestion in biogas producers. Heat treatment at 127 F is used to control the sugar cane pathogen *Clavibacter xyli subsp. xyli*. Many bacterial plant pathogens are eradicated by a constant temperature of 140 F for one hour, in plant material (Noble et al., 2009). Thus, heat generated during silage production may negatively impact Cmn survivability.

The population of *C.m. subsp. sepedonicus* was negatively impacted by competition from other microbes in cattle manure slurry (Roozen and Vanvurde 1991). Similarly, composts have been shown to reduce the survival of Cmm presumably due to competition although heat could also be involved (Yogev et al. 2009).

Survival of Cmn in bedding straw? There are no reports on the survivability of Cmn in bedding straw. If bedding straw is very dry, Cmn growth is likely to be limited, as it is for most non-sporeforming bacteria. If the bedding straw is moist, survival may be better, although growth is likely to be low due to Cmn’s highly specific nutrient requirements, including the need for multiple vitamins for growth (Vidaver 1982), which may explain the general view that host plants are virtually the only habitat for this organism. Its survival on straw is also likely to be limited due to competition from other microbes associated with manure.



YARD AND GARDEN: LAWN WEED CONTROL

By [Richard Jauron](#), [Willy Klein](#)

The overall appearance of a lawn is directly related to the maintenance provided. September is an ideal time for many lawn maintenance practices—such as weed control. To have additional questions answered, contact the horticulturists at hortline@iastate.edu or call 515-294-3108.

When is the best time to apply a herbicide to the lawn to control dandelions and other broadleaf weeds?

Fall (mid-September through October) is the best time to control perennial broadleaf weeds in the lawn with broadleaf herbicides. In fall, perennial broadleaf weeds are transporting food (carbohydrates) from their foliage to their roots in preparation for winter. Broadleaf herbicides applied in fall will be absorbed by the broadleaf weed's foliage and transported to the roots along with the carbohydrates, resulting in the destruction of the broadleaf weeds. Broadleaf herbicides can be applied as liquids or granules. Before applying any herbicide, carefully read and follow label directions.

What is the proper way to apply broadleaf herbicides to the lawn?

Broadleaf herbicides can be applied as liquids or granules. Before

applying any herbicide, carefully read and follow label directions. When applying liquid formulations, potential spray drift problems can be avoided by following simple precautions. Don't spray when winds exceed five miles per hour. Also, don't spray when temperatures are forecast to exceed 85 degrees Fahrenheit within 24 hours of the application. Since coarse droplets are less likely to drift than fine sprays, select nozzles that produce coarse droplets and use low sprayer pressure when applying liquid broadleaf herbicides. When spraying, keep the nozzle close to the ground. If only a few areas in the lawn have broadleaf weed problems, spot treat these areas rather than spraying the entire lawn. Apply just enough material to wet the leaf surfaces. Granular broadleaf herbicides are often combined with fertilizers. Apply granular broadleaf herbicides and fertilizer/broadleaf herbicide combinations when the weed foliage is wet. Broadleaf herbicides are absorbed by the weed's foliage, not its roots. To be effective, the granules must stick to the weeds and the herbicide must be absorbed by the weed's foliage. Apply granular products in the early morning when the foliage is wet with dew or

irrigate the lawn prior to the application. To ensure adequate leaf surface and herbicide absorption, don't mow the lawn two to three days before treatment. After treatment, allow three or four days to pass before mowing. This allows sufficient time for the broadleaf weeds to absorb the herbicide and translocate it to their roots. To prevent the broadleaf herbicide from being washed off the plant's foliage, apply these materials when no rain is forecast for 24 hours. Also, don't irrigate treated lawns within 24 hours of the application.

How do I control creeping Charlie in my lawn? Ground ivy ("creeping Charlie") in lawns can be controlled with broadleaf herbicides. Products that contain 2,4-D or triclopyr are most effective. 2,4-D is an active ingredient in many broadleaf herbicide products. Triclopyr can be found in Ortho Weed-B-Gon Chickweed, Clover, and Oxalis Killer for Lawns and a few other products. In Iowa, herbicide applications should be made between mid-September and Nov. 1. Two applications are necessary to effectively control ground ivy. The first application should be made in mid to late September, the second a month later.

THINK ABOUT STORED GRAIN PESTS BEFORE HARVEST

Stored grain insect pests are an economic concern in Iowa. Growers should think about taking preventative measures now – before harvest – to protect grain quality. Infestations can directly reduce grain weight and nutritional value, in addition to indirectly causing mold and other contaminations. Primary stored grain pests feed within intact kernels while secondary pests feed on broken kernels or grain dust. Examples of primary pests include rice weevil, granary weevil and maize weevil. Common secondary pests are red and confused flour beetles, sawtoothed grain beetle, and Indianmeal moth. Integrated pest management (IPM) of stored grain pests should be implemented to increase overall profit.

Sanitation. This is the most important IPM practice for storing and protecting grain. Some experts say that successful sanitation is 80 percent of an effective IPM program in stored grains. Removing any potential pests and their food before filling grain bins will greatly enhance any subsequent management actions.

- New grain should NEVER be stored on top of existing grain; remove old grain and clean bins before adding new grain.
- Clean all grain handling equipment before harvest and storage of new grain, including combines, wagons, trucks, augers, aeration fans, etc.
- Remove any grain or grain dust from inside the bins by sweeping empty bins and brushing down walls.
- Remove any spilled grain from around the outside of the bin and storage facility.
- Carefully inspect storage bins, and seal/caulk any cracks, holes or gaps that could be potential entry points for insects or rodents.
- Look for possible moisture leaks in the roof and repair if necessary.
- Remove any vegetation from within 10 feet of storage bins to discourage insects from establishing.

NORTHEY: FARMERS ENCOURAGED TO UPDATED IOWA HAY / STRAW DIRECTORY LISTINGS

Iowa Secretary of Agriculture, Bill Northey, has encouraged Iowa hay and straw producers to register or update their listing on the Iowa Hay and Straw Directory. The directory lists Iowa producers with hay and straw for sale, as well as organizations and businesses associated with promoting and marketing quality hay and straw.

“This directory is designed to help both buyers and sellers by listing Iowa growers that have hay and straw and straw available,” Northey said. “This directory has proven to be a valuable asset to Iowa farmers and encourage those that can use it to take full advantage of this resource.” The listing is available to interested buyers throughout the nation, however only sellers from within Iowa can be included on the list. Names are gathered throughout the year with added emphasis now that hay harvest has started. Sections within the Hay and Straw Directory include “Forage for Sale,” “Forage Auctions,” “Hay Associations,” “Forage Dealers,” “Hay Grinders” and “Custom Balers.”



Farmers interested in listing should visit the Department’s website at www.IowaAgriculture.gov. An application form can be found at: <http://idalsdata.org/IowaData/hayAndStraw.cfm>, or by going to the “Bureaus” link and then selecting “Agricultural Marketing.” Then click on “Hay & Straw Directory” link at the bottom of the page. For those without internet access, please call the Hay/Straw Hotline at 800-383-5079. The Department will fax or send a printed copy of the application to be filled out. The Department is also supporting the Iowa Crop Improvement Association’s “Iowa Noxious Weed Seed Free Forage and Mulch Certification Program.” Through this program Iowa forage and mulch producers can take advantage of many emerging market opportunities for “Certified Weed Free” products. For more specific information on this program producers should contact the Iowa Crop Improvement Association at 515-294-6921. More information can also be found by visiting: www.agron.iastate.edu/icia

REDUCE RISK OF MYCOTOXIN CONTAMINATION BY SCOUTING FIELDS FOR EAR ROT

By Alison Robertson, Plant Pathology /Microbiology; Charles Hurburgh, IGQI

Hail storms damaged several corn and soybean fields in parts of Iowa last week. In some areas, the corn and beans are completely lodged as a result of the storm. In other areas, leaves are significantly stripped, but the grain seems relatively undamaged. During the 2009 growing season, approximately one million acres of crops from Sac to Grundy Counties were damaged by a single hail storm. Most of the corn crop was at growth stage R2. We conducted a survey to assess the impact of hail damage on grain quality (Robertson et al., 2010). We found that hail damage to kernels increased the risk of ear rot and mycotoxin contamination.

Scout for ear rot

The corn that was damaged in the hail storms last week was further along in development (growth stage R5) than the grain damaged in 2009, but it still may be at risk for ear rots and associated mycotoxin contamination. Fields that were damaged need to be scouted in the next 10 to 14 days for ear rot. If more than 10 percent of the ears in a field are moldy, the field should be scheduled for an early harvest. Check with your insurance company regarding their requirements for claims. Most companies will want to assess the field before it is harvested.

Fields that were not damaged by hail should also be scouted

for ear rot, since the hot, dry weather with occasional rain that has occurred recently is favorable for *Aspergillus* and *Fusarium* ear rot development. Symptoms of *Aspergillus* ear rot are a powdery olive-green mold that develops on damaged kernels (Figure 1). High temperatures (80 to 100 F) and high relative humidity (85 percent) favor the growth of *Aspergillus* in the field. Note that the presence of *Aspergillus* ear rot does not necessarily indicate aflatoxin contamination. Aflatoxins are produced under certain conditions, and are most often a problem when night temperatures remain above 70 F. The U.S. Food and Drug Administration regulates [aflatoxin levels](#) in food and livestock feed. An "action level" of 20 parts per billion (ppb) for aflatoxin in corn has been established for interstate commerce.

Fusarium ear rot symptoms are characterized by white to light pink mold that usually occurs on damaged kernels (Figure 2). High temperatures (above 77 F), drought stress before or after silking and mechanical damage favor infection and the development of *Fusarium* ear rot. Mycotoxins associated with this ear rot are fumonisins, and the optimum temperature for fumonisin production is 75 F (which is cooler than that for aflatoxin). Bush et al (2003) found fumonisin concentrations increased from physiological

(con't on back)

RETURN SERVICE REQUESTED

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REDUCE RISK BY SCOUTING FIELDS FOR EAR ROT

maturity, thus early harvest may help reduce the level of contamination. The U.S. Food and Drug Administration (FDA) has guidelines for safe [levels of fumonisins](#) in corn used for foods and animal feeds. Fumonisin are acutely toxic to animals (especially pigs and horses), and have been linked to increased cancer rates and other human health problems.



Figure 1. Symptoms of Aspergillus ear rot are a powdery olive-green mold that develops on damaged kernels.



Figure 2. White to light pink mold is characteristic of Fusarium ear rot