FARM AND YARD

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ISU Extension Bremer County
720 7th Ave SW
Tripoli, IA 50676
Phone: (319) 882-4275
Fax: (319) 882-4292
www.extension.iastate.edu/bremer

FOR RURAL AND URBAN FAMILIES

Conservation Reserve Land Can Make Attractive Bee Habitat

Randall Cass, , ISU Extension Entomologist

Iowans who want to do more to help protect bees and provide additional habitat should consider the Conservation Reserve Program.

The federal program, commonly referred to as CRP, has been protecting land and wildlife habitat for 30 years, but more recently, landowners who enroll in the program also have begun taking advantage of protecting pollinators, including honey bees.

Entomologist Randall Cass with Iowa State University Extension and Outreach, wrote an article for the May-June edition of "Acreage Living Newsletter" that helps explain how CRP ground can benefit bees.

He said the state is losing its bees at a staggering rate, of about 40-60% per year. With nearly 5,000 beekeepers in Iowa, that amounts to a big loss.

CRP land is desirable for pollinators because it is left unfarmed, and in the case of pollinator habitat, it contains a mix of foraging species like wildlflowers and flowering legumes. Research conducted by Iowa State University has shown that honey bees on these sites perform better than when placed near agricultural sites, according to the article.

According to Cass, it's important that beekeepers and Iowa landowners understand the opportunity that exists. He said that NRCS offices are willing to connect beekeepers with CRP landowners, and landowners can connect with beekeepers by visiting the Iowa Honey Producers Association website to find contact information for a beekeeping club in their area.

For more information visit: https://www.extension.iastate.edu/news/conservation-reserve-land-can-make-attractive-bee-habitat

Extension Links:

- Acreage Living
- Ag Decision Maker
- Beef Center
- Corn Production and Nitrogen Usage
- Dairy Team
- Iowa Water Quality
- ISU Horticulture Extension
- ISU Natural Resources
- ISU Nutrient Reduction Strategies
- Manure Management
- Master Gardener Program-ISU
- Newsletters from ISU Extension
- Pesticide Management
- Plant and Insect Disease Lab
- Pork Center
- Soil Fertility

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Concrete Inspection for Livestock Buildings

Kris Kohl, ISU Ag Engineering Specialist

Summer is a great time to do a thorough inspection of your concrete in confinement buildings. Start with a thorough cleaning of the building so you can see everything, especially the beams and bottoms of the slats.

The changes in feeding pigs high distiller's grain diets have led to higher sulfur contents in manure which is resulting in higher hydrogen sulfide levels in livestock buildings. When this gas is combined with moisture in the building it becomes sulfuric acid (which is battery acid) that is very corrosive to steel. Cracks in the concrete allow the sulfuric acid to rust the rebar, destroying the properties of reinforced concrete. The rust molecule is much bigger than the iron molecule it replaces, and it will continue to break the concrete away from the steel like frost heave in the winter. Concrete has very high compressive strength but low-tension strength so the rebar is placed where the tension loads are high, but because it is subject to corrosion, it must be protected with 2-3 inches of concrete. If the rebar moves during the pour it can get close to the edges where it will begin to rust.

When inspecting, look at each beam column joint for cracks. Cracks along the length of the beams and slats indicate that the steel rebar is starting to rust and corrode and should be replaced by the next term of the building. Cracks that are radiating up at an angle from the column beam corners indicate a concrete shear failure and will result in a catastrophic failure without much warning. The joints of the beams need to be in the middle of the columns. Most of the failures that have been observed occur when beams are not centered above the column. Because most beams are a standard 10-feet long, one error in column placement often results in a whole row of beams being off center, which leads to multiple failures.

Slats are the easiest to inspect because they are easier to see. Cracks along the side and bottom of a single slat indicate that the rebar is corroding, and the slats will need to be replaced within a year or so. If several slats are showing the same cracks, the situation is more critical and should be replaced as soon as possible.

Well maintained concrete should last the lifespan of the building. The current situations with higher loads from heaver pigs reminds all of us why we should expect the unexpected.

Maintaining Safe Drinking Water in Your Private Well

Jamie Benning, ISU Extension and Outreach Water Quality Program Manager

Many rural residents in Iowa rely on private wells as their source of water for drinking, cooking, washing clothes, and watering livestock. Even if your well and the area around it have remained unchanged, it is important to test water annually for indicators of contamination, including nitrate and bacteria, to ensure the water is safe to drink. The spring and early summer months are an ideal time to test as melting snow and spring rains move through the soil and recharge groundwater sources. Changes in color, taste, and odor are also indicators that a test should be taken to ensure the health and safety of water for drinking and other uses.

Testing well water

The Iowa Department of Public Health administers a program for private well water testing. Water testing kits can be ordered through your local county environmental health department or county sanitarian. Many counties participate in the Grantsto-Counties Well Program that provides financial assistance for water testing. Testing kits may also be ordered through the Iowa State Hygienic Laboratory Private Well Water section. For more information about testing for specific contaminants, visit the Iowa Department of Natural Resources Private Well Testing website.

Protecting well water

While some groundwater contaminants are naturally occurring in certain aquifers, other contaminants, including nitrate, petroleum products, and bacteria, are influenced by management of the area around the well and within the well capture zone. Maintaining minimum separation distances between the well and common sources of nitrate, bacteria, and other contaminants are recommended to minimize well water contamination and maintain well water quality. Separation distances for common acreage and farm contaminant sources can be found in ISU Extension publication PM0840, Good Wells for Safe Water.

Source water protection

Managing contaminants not only benefits the private well owner, but also minimizes the impact of common contaminants on neighboring wells, local community source water supplies and surface water. Groundwater recharges rivers and streams, transporting any contaminants that are not filtered by the soil into surface water. Following best management practices and recommendations including applying nitrogen fertilizer at Iowa State University recommended rates, proper use and disposal of chemicals, and closure of unused wells will protect drinking water of private well owners and source water for nearby communities.

Weed watch: Wild parsnip and poison hemlock

Kristine Schaefer, PSEP Program Manager I

Conditions the last few years have been especially favorable for two weeds in the parsnip family--wild parsnip (*Pastinaca sativa*) and poison hemlock (*Conium maculatum*). Wild parsnip and poison hemlock are non-native plants that originated in Europe. The edible roots of wild parsnip were consumed in ancient Greece and Rome while poison hemlock was used as a poison, most notably known as the poison that killed Socrates. Both can pose health hazards that many people may not be aware of.

Identification

Wild parsnip and poison hemlock typically act as biennials (occasionally as perennials), forming a rosette of basal leaves the first year, overwintering, and then flowering the second year. Wild parsnip flowers primarily from May through July; poison hemlock flowers from May through August.

Habitat and distribution

Wild parsnip and poison hemlock typically inhabit roadsides, pastures, field edges, or natural areas. Poison hemlock prefers moist conditions along streams and low-lying areas. Wild parsnip favors calcareous soils and sunny areas. Both are adaptable to different environments and can be found throughout most of the United States and Canada. They produce a large amount of seed, which contributes to their persistence and spread. Poison hemlock is listed as a secondary noxious weed in Iowa.

Special warnings

Wild parsnip plant parts contain a substance called psoralen, which can cause a condition known as "phytophotodermatitis." This reaction occurs when plant juice gets on the skin and the skin is exposed to sunlight. The results are skin reddening, rash development, and in severe cases, blisters and burning or scalding type pain. Wild parsnip burns often occur in elongated spots or streaks. Dark red or brownish skin discoloration develops where the burn or blisters first appeared and can last for several months.

All parts of the poison hemlock plant are highly toxic to humans and animals and may result in death if ingested. Most of the recent cases of human poisoning have resulted from mistaking poison hemlock with edible species of the carrot family. Livestock poisoning usually occurs from the presence of poison hemlock in hay or when pastures are overgrazed and other sources of food have been depleted.

Extra care should be taken to wear protective clothing before working with or exposure to wild parsnip or poison hemlock.

Control measures

Cultural methods that favor the growth and development of desirable plant species are the best measures to deter wild parsnip and poison hemlock. Mechanical removal of flowers and seeds by hand pulling, digging the root crown, or repeated mowing can be effective control methods. Elimination of seed production is the goal. Since flowering does not occur all at once, the area must be monitored for several weeks. Chemical control options are available if mechanical methods are not feasible. Glyphosate can be spot sprayed on basal rosettes, applied in early spring or late fall when most desirable vegetation is dormant. Other options include phenoxy herbicides, such as 2,4-D or dicamba, applied in early spring or late summer/fall. Avoid contacting desirable plants with these herbicides. The area should be monitored as additional herbicide applications or mechanical control measures may be necessary for the next couple of years to control newly emerging plants.

2020 Iowa Farm Custom Rate Survey

Alejandro Plastina, ISU Extension Economist; ann Johanns, ISU Extension Program Specialist

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 Iowa Farm Custom Rate Survey was mailed to 298 people by the US Postal Service and 192 people via email in early February 2020. The information below is based on 106 responses and 3,022 custom rates provided by Iowa farmers, custom operators, and farm managers. Fourteen percent of the respondents perform custom work, 15% hire work done, 53% indicated doing both, and 18% did not indicate whether they perform or hire custom work. For each type of work, the average rate from the survey, the median, and the range are shown. The average is calculated as the simple average of all responses. The median is the middle number among the ordered responses (from smallest to largest). The reported range excludes the minimum and the maximum values to avoid reporting extreme values.

For the full report, go to https://www.extension.iastate.edu/agdm/crops/pdf/a3-10.pdf or contact your local ISU Extension office.

Recycling Pesticide Containers

Kristine Schaefer, PSEP Program Manager I

The Ag Container Recycling Council (ACRC) sponsors a free program to recycle clean triple-rinsed or pressure-rinsed pesticide containers up to 55 gallons in size. Refer to the ACRC Container Preparation Checklist for more information on preparing containers. Under the ACRC program, G. Phillips and Sons, LLC, located in Stanwood, IA collects and recycles containers in Iowa. For more information, visit G. Phillips and Sons, LLC. To set up a pickup, call G. Phillips & Sons at 563-942-0391 or email them at pickup@gpsagrecycle.com.

Several companies will recycle larger containers, such as mini-bulk and intermediate bulk containers (IBCs). They may have different requirements for collection and costs. Some of the companies serving Iowa include:

G. Phillips and Sons, LLC
https://www.gpsagrecycle.com/

Mauser Packaging Solutions
https://mauserpackaging.com/

Schuetz Container Systems, Inc.
Ticket Service – Collection and Reconditioning of IBCs

Tri-Rinse, Inc.
https://www.tri-rinse.com/

IOWA STATE UNIVERSITY
Extension and Outreach
Bremer County Extension
720 7th Ave SW
Tripoli, IA 50676

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Bremer County Extension Staff

Adriane Carlson
Regional Director

Ron Lenth
County Education Program Coordinator

Cody Emery
County Youth Coordinator

Tammy Curley
Office Manager/Bookkeeper

Jeannette Mukayisire
Family Finance Specialist

Heather Henning
4-H program Specialist

Area ISU Extension

Ag Engineering
Brian Dougherty, *brian1@iastate.edu*
563-239-7070

Agromomy
Terry Bosol, *tlbasol@iastate.edu*
641-435-4864

Farm Management
Melissa O'Rourke, *morourke@iastate.edu*
563-382-2949

Dairy Specialist
Jen Bentley, *jbentley@iastate.edu*
563-382-2949

Calendar of Events

While our office is open, we follow CDC and Iowa State University guidelines regarding the Covid 19 virus, so our meetings and events are cancelled or postponed until further notice. We will keep you informed on future developments. Stay healthy.