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Challenging Weed of the Month: Equisetum

For weed scientists throughout the Midwest (along with producers), this weed has proven to be one of the most challenging weeds in row crop to control. Although Equisetum (Equisetum arvense) is the official name for this weed, it is more commonly referred to as scouring rush, snakeweed, skeletonweed, jointed grass, and field horsetail (and a few names we can’t print). This particular weed has evolved all the way from the prehistoric dinosaur days of 325 million years ago. It has become very common in roadside ditches and is spreading into the fields from there. Scouring rush is a perennial and spreads by producing extensive underground root structures called rhizomes that can grow to depths of up to 6 feet deep.

The stems contain high concentrations of silica and were used by pioneers to clean and scour their pans. They are hollow and can grow to a height of 2-4 feet if left undisturbed. Density of scouring rush has been documented of up to 350 stems in a 2.5 ft² area. Because the nodes of the stem are segmented, if you give them a good “tug”, they will come apart easily.

Control and management of scouring rush, however, has proven not to be so easy. There is no “silver bullet” for taking out this weed. It has been suggested that deep tillage (moldboard plowing) in the spring may work as part of a management strategy to help reduce stands, and then planted to corn or a high population of soybeans. Scouring rush is not a highly competitive weed under dense canopies. This practice would have to be used for 3-5 years in order to make any measurable impact on the stand. Other literature states that once the weed has become established, tillage has little impact on the control of the weed. Make sure if tillage is used, that it is not too shallow, as that can spread the rhizomes of scouring rush out in the field farther and make the area larger than it was to start with.

Although the specific reasons for poor herbicide activity on this weed are unknown, chemical control options have been limited in corn and soybeans. Research done in Canada has shown that herbicides that contain the active ingredient flutmetsulam, which is in the products Python and Hornet give a rating of fair to good for control. Python can be used in both corn and soybeans, whereas Hornet can only be used in corn. The active ingredient in the product Permit, called halosulfuron, has also shown good activity and is on the Permit label. Maximum rate for Permit in corn is 1.3 oz/Acre. Yukon is another product that contains halosulfuron along with some dicamba in the formulation. Ignite has shown to have activity in Liberty Link crops.
In 2009 and 2010, University of Wisconsin put together some trials for scouring rush control. They targeted corn and aimed for timing of V3. In 2 studies, Steadfast @ .75 oz/acre + Status @ 5 oz/acre + additives, gave the best control. In another study, Steadfast @ .75 oz/acre + Hornet @ 4 oz/acre + additives, gave good control.

Non-cropland applications of chemical treatments seem to be the most effective treatments in controlling scouring rush. The goal is to keep it from spreading from the ditch into the crop land where our treatment options are greatly decreased. Telar (chlorosulfuron) @ 3 oz/acre + additives, proved to be the best treatments for scouring rush in a study done at the University of Nebraska. Be very careful to not get it into the field where corn or soybeans are to be grown, as it has a long soil residual, especially in high pH soils, and can injure these crops for subsequent years after application.

In 2009, Ken Pecinovsky conducted a small trial here close to the research farm at Nashua. The best control achieved was from the product called Crossbow which contains the active ingredients triclopyr + 2,4 -D ester, followed by Telar @ 3oz/acre. We are working at putting another study together here at the research farm in Nashua for 2011 and working with the latest chemistries that may have some activity on scouring rush.

New shoots should be 18” in height before a herbicide application is made to scouring rush.

Some of the products that have been mentioned do not have horsetail or scouring rush on the label. As stated in the Iowa State Weed Science publication “Equisetum: Biology and Management”, “While it is legal to use the herbicide to control a pest not specified on the label (as long as the weed is located in a labeled site), the manufacturer is not responsible for the performance of the product. There has been little recent research on equisetum management, thus the information provided above, should not be viewed as recommendations by Iowa State University.”

For more information on equisetum, please refer to the 2 page publication from Iowa State University: “Equisetum: Biology and Management”, which is found at this location [http://www.weeds.iastate.edu/mgmt/2009/equisetum.pdf](http://www.weeds.iastate.edu/mgmt/2009/equisetum.pdf)

**New Soybean Publications**

**Soybean Field Guide (2nd Edition)** -
Iowa State University and the Iowa Soybean Association recently released a collaborative publication, the "Soybean Field Guide" (CSI 0010), which is a revision and update of the popular Soybean Disease and Pest Management Field Guide, originally published in 2008. The revised soybean guide has been expanded from 52 to 68 pages, and now features five sections on production, integrated pest management (IPM), diseases, insects and disorders. It includes several additional insects that impact soybean production, as well as disorders like hail damage and nutrient problems. And, like other books in the field guide series, the revised soybean guide is durable and weather-resistant. Printed copies of the Soybean Field Guide can be ordered for $10 from the ISU Extension Online Store or by calling (515) 294-5247; or by contacting ISA at (800) 383-1423. The guide can also be viewed online at [www.iassoybeans.com/productionresearch/](http://www.iassoybeans.com/productionresearch/).

**Early Season Soybean Scouting Card** -
With soybean planting nearing completion in many parts of Iowa, it will soon be time to start scouting fields for emergence, stand counts – and signs of early-season soybean plant problems. A new resource by the ISU Corn and Soybean Initiative, the "Early Season Soybean Scouting" card (CSI 0006), is a convenient field reference that can assist in this task. The tri-fold card is a pocket-sized record-keeping tool that features photos and descriptions of insects, diseases, disorders and injuries that can affect soybean seed, seedlings and young plants from shortly after planting through the V3 stage of growth. One flap of the card includes a space to record specific problems seen in individual fields in a chart-like layout, with room for additional comments. Funding from the Iowa Soybean Association and Iowa soybean checkoff have helped make the card available for just the cost of shipping from the ISU Extension Online Store. The card was produced by ISU Corn and Soybean Initiative staff Adam Sisson and Daren Mueller; Alison Robertson, ISU Extension plant pathologist; Erin Hodgson, ISU Extension entomologist; and Kristine Schaeffer, extension program specialist with the ISU Pest Management and the Environment program.
Continue Looking For Damping Off in Soybean Fields
Dr. Alison Robertson, Department of plant pathology, is doing research, as part of a national study, on soybean seedling diseases / damping off and is looking for fields with severe damping off issues. She will come to the field shortly after receiving notification and collect some samples. If you have or find a field with damping off problems and would be willing to have it be part of this research, please contact Alison at alisonr@iastate.edu or (515) 294-6708 or you may contact me. Please read one of this week’s ICM articles with very good pictures regarding Damping Off found in Western Iowa from Alison Robertson and Erin Hodgson, Department of entomology. Here’s the link: http://www.extension.iastate.edu/CropNews/2011/0601robertson.htm

Upcoming Dates to Remember

June 9-24, Various Forestry Field Days in Northeast, East and Central Iowa
ISU Extension Forestry is offering programs that range from (1) Cost Share Programs, Timber stand improvement, Basal area thinning with demonstrations on felling, girdling, and chemical treatment of cull trees, to (2) Crafts from harvested lumber, wood storage, wood drying Kiln, to (3) Understanding a timber sale, Developing a stewardship plan, Age management, Establishing your tax basis, Logging on shares, Grade and yield, etc. And others. Go to their web page to view all of the June programs offered. http://www.extension.iastate.edu/forestry/

June 10, Ag Professional Tour, NE ISU Research Farm, Nashua
9:30 to Noon. Discuss current crop growth and development issues, pest situations, showcase on-farm research, and offer insights into crop management for the current season. Have a short tour of research trials on the farm. Program fee of $10 at the door. 2.5 CCA credits available for an additional $10. The program is oriented toward Ag Providers, but all are welcome. For questions, contact Brian Lang at 563-382-2949.

June 15, Afternoon Spring Field Day & Special Morning CCA Session, SE ISU Research Farm, Crawfordsville

Spring Field Day Tour, Free program, tour stops include:
1:00 to 3:00 pm.
1) Crop season review, Kevin Van Dee, Farm Superintendent
2) Making marketing decisions, Jim Jensen, ISU Extension Farm Management Specialist
3) Cover crop establishment & management, Jeremy Singer, National Lab for Ag & Environment
4) Corn nematode management, Greg Tylka, ISU Extension Plant Pathologist
5) Making fungicide application decisions – Mark Carlton, ISU Extension Field Agronomist

CCAs available: 1.0 PM, 0.5 SW, 0.5 CM

Lunch available for $7.

9:00 to Noon, Special CCA Session, $50 fee ($70 after June 13), includes lunch and afternoon CCAs. RSVP if you plan to attend this session or want to reserve a lunch at noon, please send a note to fawcett@iastate.edu by June 13.
1) 9:00 am, Recent tile drainage research results & 20 years of conservation tillage research, Greg Brenneman, ISU Extension Ag Engineer
2) 10:00 am, Nematodes that feed on corn – biology & control, Greg Tylka, ISU Extension Plant Pathologist
3) 10:30 am, Everything you ever wanted to know about cover crops but were afraid to ask, Jeremy Singer, National Lab for Ag & Environment

CCAs available: 2.5 SW, 0.5 PM
Information posted at: http://www.extension.iastate.edu/Pages/eccrops/meetserc.html.

June 23, ISU Weed Science Field Day – (Ames, Ia) –
The field day will take place at the ISU Curtiss Farm, and will showcase different weed management strategies, application timings and performance of different herbicides and modes of action. Registration begins at 8 a.m., followed by brief remarks before the self-guided tour. The cost is $20 to cover refreshments and a field book detailing weed demos and research at the Curtiss Farm and other locations. More
June 22, Strip-Till Field Day, West Liberty
10:30 am to Noon, followed by lunch. Doug Nolte and the Iowa Learning Farm (Iowa State University), hosts the event at 1021 Highway 6, West Liberty, IA. The farm is just in Muscatine County near the Johnson County line. Program details will be forthcoming.

June 29, Elwynn Taylor Highlights the Annual June Field Day, ISU Northeast Research Farm, Nashua
ISU Extension specialists will highlight in-season crop development and pest problems on Wednesday June 29 at the Annual June Field Day of the Northeast Iowa Ag Experimental Association (NEIAEA).

The afternoon program runs from 1:00 to 4:30 and will feature five speakers. Ken Pecinovsky, ISU Research Farm Superintendent will review crop progress. Elwynn Taylor, Climatologist, will discuss weather and crop yield predictions. Alison Robertson, Plant Pathologist, will talk about corn and soybean diseases. Matt Helmers, Ag Engineer, will cover tile and field drainage issues. Greg Tylka, Nematologist, will explain nematode pest management in corn and soybeans.

The field day is free and open to the public. CCA credits applied for (1 SW, 1.5 PM, 1 CM) and available for $20. It starts at the Borlaug Learning Center on the Northeast ISU Research Farm near Nashua. Directions: From Nashua at the Jct of Hwy 218 (Exit 220) and Co. Rd. B60, go west on B60 1.1 miles to Windfall Ave., then south 1 mile to 290th St., then east 0.2 miles to the farm. For more information about the event, call Brian Lang at 563-382-2949.

Manure Events Happening this Summer

Environmental Issues Update for Medium Feedlot and Dairy CAFOs
Each workshop starts at 10 a.m. and ends by 3 p.m.
ISU Contacts: Larry Tranel, Jenn Bentley, Denise Schwab, Russ Euken, Angie Rieck-Hinz
June 27- NICC Dairy Center at Calmar
June 28 Country Junction in Dyersville
June 29 Buzzy’s in Welton
June 30 Moose Lodge in Charles City
Please register for lunch accommodations
More info at: http://www.agronext.iastate.edu/immag/afoinfo.html
Registration is available at above link.

July 13, Small Dairy and Open Beef Feedlot Manure Management Field Day
This event will be held at the Mike Bettin Farm in Sac County. Please watch the IMMAG events page for more details. Planned demos include a manure effluent pumping demonstration, manure spreader calibration demonstration.

FOR ADDITIONAL DETAILS AND INFORMATION, PLEASE REFER TO THE IMMAG EVENTS PAGE:
http://www.agronext.iastate.edu/immag/events.html