



The Weed Watch

A publication of the Panhandle Research Integration for Discovery Education Weed Management Area in conjunction with Middle Niobrara Weed Awareness Group and High Plains, Sandhills, West Central, and Platte Valley Weed Management Areas

Fall 2014 Newsletter

Noxious Weed Control - It's The Law!

**By Kristi Paul,
Sheridan County Weed Superintendent**

The Nebraska Noxious Weed Control Act states that “it is the duty of every person who owns or controls land in the state of Nebraska to effectively control noxious weeds on such land.” It’s the law, pure and simple. Yet many acres of noxious weeds across Nebraska have gone uncontrolled this year, and landowners and weed professionals across the state are declaring this “the worst weed year ever!”

What is a noxious weed and where did they come from?

Noxious weeds are non-native invasive plants, most of which originated in Europe, and arrived to the United States by accident in the ballast of a ship, or on purpose as an ornamental. Because these plants are not native, the insects, diseases and animals that would normally help to control these plants are not found here. This gives the weeds the advantage to invade and crowd out desirable vegetation in cropland, pasture, rangeland and other native habitats. These weeds invade roadsides and disturbed areas, displacing native plants and reducing habitat quality for wildlife.

Noxious weeds are spread by seed, wind, water, animals, and neighbors. Forage moving from one landowner, county or state to another should be noxious weed and seed free. For most noxious weeds, the seeds can lay dormant in the soil for many years, just waiting for the opportunity to fill a void in disturbed or neglected areas.

Perhaps the most important step in noxious weed control is prevention.

Be on the lookout on your property for “plants out of place,” and learn to identify noxious and invasive plants. If detected quickly, noxious weeds can be controlled before they get a chance to get “perennially established.”

I’ve got noxious weeds on my property.

Now what do I do?

Once noxious or invasive weeds are found on your property, there are a few factors that can affect your noxious weed control: correct plant identification, types of control, right time to control, right product for the job, and proper growth stage of the plant. Your local county weed superintendent should be able to assist with plant identification. The best tool to help answer many weed control questions is the *University of Nebraska EC-130, Guide to Weed Management in Nebraska*. It is updated annually, and can be purchased from your local county extension educator.

Types of control for noxious and invasive weeds can include cultural, mechanical, biological or herbicide

control. Cultural control involves the establishment of competitive vegetation to prevent or slow down the invasion of weeds. Mechanical control includes pulling, digging, disking, plowing or mowing noxious weeds. Biological control includes the use of federally approved insects or pathogens that attack specific weed species.

Why is herbicide control more successful in the fall?

Fall control of noxious and invasive weeds is usually the most successful, especially in perennial weeds such as **Canada thistle**, **leafy spurge**, or **field bindweed**. **When frost is just around the corner, these deep rooted perennial plants are pulling nutrients deep into their roots, preparing for the cold winter. Herbicide control at this time is effective because the plant pulls the herbicide deep into the root system. If the plant dies before the herbicide reaches the root system then the plant will persist. However, if the herbicide reaches the roots it will result in better control of the plant.** When we stress the importance of fall control, that doesn’t mean it’s OK to let all of the noxious weeds go to seed during spring and summer...you still need to keep them from going to seed. Noxious weed infestations that were allowed to mature and go to seed this summer will most likely have regrowth this fall. Treating this regrowth will give you a head start on next year’s weed control efforts. Perennial noxious weeds very seldom are controlled with one herbicide application. **It takes a perennial effort to control perennial noxious weeds.**

When it comes to biennial weeds such as **musk thistle**, **plumeless thistle**, **houndstongue**, and **Scotch thistle**, there is one thing to remember – these plants reproduce **ONLY BY SEED!** A single Scotch thistle plant can produce thousands of seeds. So, if you simply prevent these plants from going to seed, you can control the infestation (if the plants have gone to seed in past years, there will likely be a seed bank in the soil, so monitoring will be necessary for several seasons). This fall, many of these plants are growing in the “rosette” stage, or small circle of

leaves on the ground. Next spring, in biennial weeds, that rosette will bolt, bloom, flower, and produce seeds. **By spraying biennial plants in the rosette stage this fall, you will drastically reduce your infestation for next year.** The challenge of musk thistle, Scotch thistle or houndstongue is that single plant that hopes you miss it. **ONE PLANT** left uncontrolled can easily start a new infestation.

What is the advantage of spraying a small patch of noxious weeds?

If you get that patch sprayed when it’s the size of a pick-up... it may cost a few dollars. Wait until those weeds spread across several acres, and you now have to invest hundreds or thousands of dollars. If you choose to ignore or procrastinate on your noxious weed control, in the long



Scotch thistle single plant, left, and rosette, above.

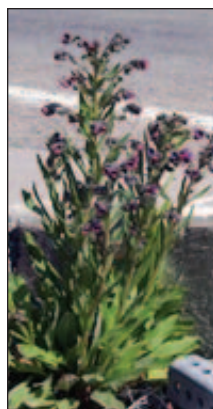
run you choose to spend more of the dollars in your wallet.

Are you doing the very best to protect your land from the invasion of more noxious and invasive weeds? Or are you doing just enough to get by?

Weeds know no boundaries. As good stewards of our land, whether it’s a small lawn in town or a 5,000 acre farm/ranch operation, homeowners and landowners must work to keep land free of noxious weeds. If you are persistent and willing to work at noxious weed control as part of your management practice, the diligence will pay off.



Houndstongue rosette, left, and single plant, right.



Canada thistle, left, and leafy spurge, above.

Focus on Phragmites Continues for PVWMA

By Charles Brooks, Phelps County Weed Superintendent

The Platte Valley Weed Management Area (PVWMA) continues on its mission to keep phragmites controlled on the main channels of the Platte River. No need to talk about eradication, as this plant has the vegetative resources (seed, stolons, and rhizomes) to keep its presence on any land areas that are wet enough to support it. The channels, drains, and creeks provide plenty of wet habitats for constant growth and regrowth. Through our work, PVWMA has found that adequate coverage of aquatic glyphosate can control the plant. However, since aquatic glyphosate has no residual effect, any plant that does not receive adequate herbicide coverage can regrow the following growing season. The PVWMA prefers to use the chemical Habitat® when spraying phragmites, as there is a residual effect that keeps plants from re-growing for three to five years.

Where irrigation is used from the Platte River, the use of Habitat® herbicide is restricted to prevent damage to agricultural crops and grass. In 2014, we are waiting until

the irrigation season has ended and entities have stopped irrigating before we spray phragmites. The challenge facing PVWMA is to have enough time to complete the spraying prior to a killing frost.

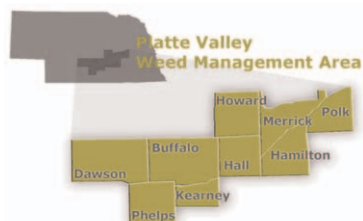
In an effort to get better control of phragmites on drains and channels, the PVWMA is offering a cost share program for landowners to control small patches on their property. The PVWMA is providing aquatic glyphosate and working with landowners who conduct the herbicide application as part of the partnership. Working with landowners and educating them is key to long term control of invasive plants on the Platte River.

PVWMA is also a member of the Nebraska Weed Management Coalition (NEWMAC). NEWMAC helps the various WMAs in Nebraska with their invasive plant control projects. NEWMAC's emphasis is "early detection rapid response" for control of new emerging invasive plants such as yellow flag iris, garlic mustard, houndstongue, perennial pepperweed and other watch list plants. PVWMA utilized NEWMAC funds to survey for perennial pepperweed, a potentially invasive plant listed

by the Nebraska Statewide Arboretum to be found in our area. Using an airboat, PVWMA was able to survey a section of the Platte River for perennial pepperweed. Fortunately no perennial pepperweed was found in the survey area.



Phragmites towers over Working Ecosystems' 9 1/2 foot tall airboat!



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Aerial Assault of Purple Loosestrife Continued by MNWAG

By Rod Stolcpart, Rock County Weed Superintendent

There is nothing more peaceful than to sit on any one of the many bridges on the Niobrara River and listen to the gentle flowing water pass through north central Nebraska as it slowly makes its way east to the Missouri River. The sights and sounds of summertime are very relaxing. And then you hear it, off in the distance the chopping sound of helicopter blades.

Several years ago, the partners of the Middle Niobrara Weed Awareness Group (MNWAG) decided that the only way to combat the spread of purple loosestrife was with the use of a helicopter. Because of the rugged terrain it was nearly impossible to reach the banks of the Niobrara River with conventional spraying equipment. Furthermore, the restricted use of airboats on the Niobrara National Scenic River limited MNWAG's ability to control the non-native purple loosestrife infestations along the river banks. With the financial assistance of a grant from the National Fish and Wildlife Foundation, approximately 800 acres of



Provine Helicopter Service completing aerial control of purple loosestrife on the Niobrara National Scenic River

purple loosestrife was treated in 2005. Over the years several return trips to the area has seen a drastic reduction in the severity of purple loosestrife, while native grasses and other plants are beginning to be seen in abundance. Just recently, the heli-

copter was once again on a "seek and destroy mission." By the end of the two day spraying effort 352 acres of purple loosestrife had been treated, meaning the infested acres have decreased by more than 50%. Our persistence is paying off.

MNWAG also has several biological control sites along the Niobrara River and some amazing results can be noticed in this area. With the cooperation of landowners participating in a 50-50 cost share program, noxious weeds including Canada thistle, musk thistle, leafy spurge and purple loosestrife have been controlled in areas not accessible by helicopter. Efforts will continue to ensure that the scenic Niobrara River will remain just that – SCENIC.



Hylobius transversovittatus is a species of weevil that feeds on purple loosestrife and has been introduced in an effort to control the plant.

Agate Fossil Beds National Monument Hosts 2014 Educational Weed Walk

By Katy Kuhnel, Rocky Mountain Bird Observatory/ Nebraska Game and Parks

The 2014 Panhandle Research Integration for Discovery Education (PRIDE) Weed Walk took place at Agate Fossil Beds National Monument (AFBNM) on June 24th. The event was a great success with a diverse group of participants. Those represented included Nebraska Weed Management Area Coalition, landowners, state, county and federal entities. The star of the day, yellow flag iris (*Iris pseudacorus*), was also in attendance. This walk was held to showcase yellow flag iris control project along the Niobrara River. The majority of plants had already bloomed but there remained a few flowering specimens for inspection and demonstration.

The day started out with donuts and coffee donated by PRIDE and AFBNM. The group then gathered under the pavilions for introductions and an opening speech by James Hill, AFBNM Superintendent and



James Hill, AFBNM Superintendent and Carmen Thompson, Midwest Region Inventory and Monitoring Program Manager, National Park Service, discuss yellow flag iris management goals.

PRIDE president, Lora O'Rourke. After recounting a brief history of the plant, the group proceeded to board the buses generously provided by AFBNM. The caravan headed across the highway to Agate Springs Ranch and the first stop on the morning's agenda. The spring-fed pond behind the original homestead is the location of the first planting of yellow iris by Kate and James Cook in 1906, brought in for the color the plants add to the landscape in May and June. The iris was clearly visible from behind the house and appeared to be the only plant surrounding the pond, save for a few cattails. The group gathered near the pond to listen to speakers including Mitch Coffin, Nebraska Department of Agriculture; Carmen Thompson, National Park Service; and Nick Sanderson, Sioux County Weed Superintendent. These individuals discussed the invasive characteristics of the

iris and what is being done to manage the plant on AFBNM and surrounding private lands. The dense monoculture of iris was very apparent along the pond banks, allowing visitors to see how native plants have been out-competed and almost eliminated from certain areas.

The buses were reloaded and the assembly then headed back towards AFBNM visitor center, with a quick stop along the road to view the extent of the iris spread along the Niobrara River. A short hike from the visitor's center along the Fossil Hills Trail gave attendees a chance to view project study plots along the river. Graduate student Jordan Spaak from Colorado State University gave a presentation about his Master's research project on yellow flag iris control and updated the group on management efforts. The group was able to see an area of iris that was sprayed with herbicide and how the plants were impacted. In addition, Spaak passed around examples of the native sedges that will be planted in place of the iris, in hopes of encouraging a return to more native conditions along the Niobrara River.

Throughout the rest of this year and the next few years, a team of contributors including the private landowners, Sioux County Weed Superintendent, Sioux County Board of Commissioners, Nebraska Game and Parks Commission, Agate Springs Ranch Foundation, Agate Fossil Bed National Monument and PRIDE will be involved in controlling the yellow iris infestation and will continue to educate the public about this invasive species. Plans include fall application of approved herbicide along the stretch of the Niobrara River within the project area. Additionally, educational kiosks and wayside signs will be

designed and placed at various locations throughout the project area so that visitors may understand how the plants came to be here, how they spread, and why it is essential to control them before they spread further downstream.

The Weed Walk ended with a satisfying lunch provided by PRIDE. In the afternoon, the NEWMAC group held their monthly meeting at the visitor center.

Overall, the day was a wonderful way to showcase the work that is being done to help eliminate the invasive yellow iris and restore the Niobrara River to its natural beauty. After attending the Weed Walk, folks that represented many counties and entities can be on the lookout for yellow flag iris in other areas across the state.



Jordan Spaak (right), Colorado State University graduate student, and Charlie Stump, Colorado State University student, have established many research plots within AFBNM that will evaluate a variety of control methods as well as rehabilitation efforts. Here Spaak showed the group the sedge species that were planted within plots treated with herbicide.



Yellow flag iris infestation along the Niobrara River within Agate Fossil Beds National Monument.

PRIDE Welcomes New Board Members

PRIDE is happy to welcome several new members to our board.

Shane Cullan grew up in Hemingford and is the Dawes County Weed Superintendent.

Lindsey Glock, Resources Technician, Upper Niobrara White Natural Resources District will fill in behind Kody Schwager who has recently moved on in his career. Lindsey holds a Bachelor of Science degree in Biology and Chemistry from College of Saint Mary and Master's of Science degree in Organizational and Natural Resource Management from Chadron State College. She absolutely loves being able to create a successful

working relationship with landowners and watching conservation projects being established.

Sarlyn McCormick is a Rangeland Management Specialist at the Pine Ridge Ranger District of the Nebraska National Forests and Grasslands. Sarlyn has been working with PRIDE for the last year and will be taking on secretary duties previously held by Leslie Stewart-Phelps. Sarlyn holds a Bachelor of Science Degree in Rangeland Management and Master's in Organizational Management from Chadron State College.

Shelley Steffl is a Wildlife Biologist with the Nebraska Game and Parks

Commission. Shelley received her Bachelor of Science degree in biology from Fort Hays State University in Kansas and a Master of Science degree in biology from Tarleton State University in Texas. Shelley works with private and public landowners throughout the Panhandle and Sandhills on habitat improvement projects for game and nongame species.

Katy Kuhnel is the Shortgrass Prairie Coordinating Wildlife Biologist with the Rocky Mountain Bird Observatory and Nebraska Game and Parks Commission. Katy received her Bachelor of Science degree in fish, wildlife and conservation biology from Colorado State University,

and is currently working on a Master's Degree in organizational management in natural resources from Chadron State College. Katy works in the northern Panhandle with both private and public landowners in the Panhandle on projects focused on managing/improving lands for both local wildlife populations and livestock.

PRIDE has had a busy year working on the following:

- Yellow Flag Iris Control Project
- Upper Niobrara White Natural Resources District Conservation Festival
- Production of the Spring and Fall Editions of *The Weed Watch*

Sand Creek Russian Olive Removal Project

- a joint effort between the U.S. Forest Service and the Nebraska Game and Parks Commission

By Katy Kuhnel, Rocky Mountain Bird Observatory/Nebraska Game and Parks

The U.S. Forest Service (USFS) and the Nebraska Game and Parks Commission have teamed up in an effort to remove invasive Russian olive trees from USFS lands north of Crawford, NE. Russian olive are not native to



Invasive Russian olive along Sand Creek.

western Nebraska and can cause great harm to the local ecosystem. Russian olive can take nutrients and water resources away from native plant species and decrease riparian and stream quality. Olive are quick spreading, difficult to control, and their overall impact on wildlife biodiversity is huge. With proper removal techniques, this invasive species can be controlled and native systems can be conserved.

The removal effort will take place on 156 acres along Sand Creek. Trees will be cut, followed immediately by cut stump treatment with an appropriate herbicide. The cut trees will then be piled for disposal. Work will take place late fall and winter of 2014-2015.

Any landowners interested in removing Russian olive from their property, or anyone with questions regarding this project, should contact Shelley Steffl at shelley.steffl@nebraska.gov, 308-432-6183 or Katy Kuhnel at kathy.kuhnel@nebraska.gov, 308-432-6122.



Clover: The Sweet...and the Not So Sweet...

By Lindsey Glock, UNWNRD

This past summer, there have been many questions and discussions about the abundance of sweet clover. Yellow sweet clover (*Melilotus officinalis*) is a biennial member of the bean family; it is closely related to species such as peas, lentils, and peanuts. With adequate moisture, and regardless of soil types, sweet clover can reach heights of four to eight feet in its second year of growth. During the second growing year, flowers, leaves, and stems emerge early. Once the above-ground portion of the plant is established, the clover then focuses its energy on establishing large tap roots. This large root system can anchor the plant deep into the soil profile. The sweet smelling, showy yellow flowers are a great source of nectar and pollen for honey production.

Species of Sweet Clover

There are two species of sweet clover; yellow and white. Yellow sweet clover can be seen in many locations across the Nebraska countryside and can be a desirable forage in its early growth stage. White clover (*Melilotus alba*), in contrast, is less desirable as a forage source due to reduction in palatability and digestibility as it matures. Both species of sweet clover are also used in many wildlife habitat plantings. Clovers provide both food and cover for many species of birds and other wildlife.

Benefits

Nitrogen source

Sweet clover has the ability to manufacture its own nitrogen. Furthermore, sweet clover can produce more nitrogen for neighboring grasses and plants than most legumes. This can lead to an increase in pasture and rangeland production following a heavy sweet clover year.

It probably did not matter which direction you were looking this past spring and summer, sweet clover was literally everywhere. Sweet clover took advantage of the many rains we have had this spring and summer, and grew



Bees frequently visit sweet clover blooms, helping to yield high quality honey. Photo courtesy of Seasons Flow (2011)

seven to eight feet tall and in very dense stands on rangeland pastures. Once these plants become woody, it makes them very complicated to manage.

Grazing can be utilized to manage second-year stands and works quite effectively.

Cattle can be turned into pastures in early spring, allowing them to graze the sweet clover while it is a six to ten inches tall. At this time cattle can stay ahead of the sweet clover's speedy growth. Once cattle have removed the top growth of sweet clover, they could be moved to the next pasture to allow native grass species to grow and compete with the sweet clover. This species reseeds itself easily, is drought tolerant, and is so widely acclimated that it can be seen growing on virtually every slope, road ditch, soil of extremely low fertility, and exists at many different altitudes.

Disadvantages

Coumarin is a crystalline substance that occurs naturally in sweet clover. If sweet clover becomes moldy or spoiled when cut for hay, the coumarin converts into a toxic chemical form which can act as an anticoagulant/blood thinner in cattle and other animals. It is extremely important that hay containing sweet clover is properly dried and cured as hemorrhaging and potential death can result upon ingestion.

Similar to alfalfa, sweet clover does have a first-year feed value, but greater volume of lesser quality in the second year. There is some risk of bloat, but is slightly less than alfalfa.

Sweet clover, though not a native species, can provide valuable benefits to livestock and wildlife. However, it can become problematic and invasive in many areas. If you plan to use these species, be aware of the nature of the plant and what positive and negative impacts they can have on your land.



(Photo courtesy of Lora O'Rourke)

Shannon O'Rourke riding through the sweet clover earlier this summer.

Aliens Among Us?

By Jan Bruhn, Box Butte County Weed Superintendent

Did you ever stop to think what you would do if aliens set up camp in your back yard, pasture or trees and they wouldn't leave? Or as you passed by your neighbors' property, you saw the same aliens and the number of these aliens increased as the weeks passed. Well that's happening this very year! Maybe you've noticed -

The alien species referred to here is Scotch thistle. Scotch thistle is native to Eurasia where it isn't considered a threat because of natural enemies that help keep it in check. The problem has become so serious on the North American continent that several states and at least seven Nebraska counties have classified Scotch thistle as a noxious weed. The increasing number of single plants and patches is mind boggling and frustrating for weed control specialists. Scotch thistle will become more than a headache if left untreated for just one year.



A single Scotch thistle plant produces thousands of seeds.

It all begins with one seed. This seed, enclosed in a very tough casing, drops inconspicuously to the ground. When conditions are right for that one seed to germinate, it may still go unnoticed for a year. It will grow close to the ground or is sheltered from sight by other plants or grasses. The first year's growth is called the rosette stage of growth.

These rosettes may grow 2 to 3 feet in diameter as this aggressive alien sends a taproot downward. Often, the stout taproot goes downward as deep as the above ground rosette is wide. Still, they may be hard to detect in out of the way places. But, the second year of this biennial plant's life will send it growing to a height of 8 to 10 feet tall. Stems also increase in diameter as the plant bolts upward. By the time flowers appear in June to August, the spiny leaves and stems may be too tough and sharp to handle with bare hands.

When that one seed is allowed to grow unnoticed and/or untreated, the number of seeds produced will increase exponentially. Soon there may be too many to count and the Scotch thistle will take over as many acres as it can!

Scotch thistle has been dubbed "the least recognized thistle in Nebraska." It grows wherever it can get a root down - in feed yards, disturbed sites, pastures, rangeland, railroad rights-of-way, around ponds, in roadsides, shelterbelts, wastelands, even our yards. Scotch thistle is a strong competitor and often crowds out more desirable forage plants. It can grow so abundantly that it forms dense stands livestock can't walk through. As it grows more dense, it crowds out other vegetation and forms a monoculture that may present a problem to re-vegetate



Given the opportunity, a single Scotch thistle plant will quickly form a dense stand.

with usable forage.

Weed control personnel have found that often the large leaves shelter other emerging Scotch thistle plants (seedlings) that have not been affected by the herbicide applications. If herbicide is used to treat a large infestation, care should be taken to check the area later for plants that may have been sheltered in this manner.

The invasion of the alien species, Scotch thistle, can be stopped. It will take the efforts of every person who owns, controls, or manages property to learn to recognize Scotch thistle and apply measures to eliminate any found on their property.

HPWMA Continues Noxious and Invasive Weed Control Projects

High Plains Weed Management Association (HPWMA) is actively working to inform and educate landowners about Russian olive, saltcedar and phragmites and the program that is offered to remove these species. HPWMA will cost share with the landowner for removal and re-growth treatment. HPWMA will cover 75% of the cost for removal, 50% for second year treatment and 40% for third year treatment, if needed. High Plains was pleased to host the Nebraska Environmental Trust (NET) Board this summer, as they held a meeting in Scottsbluff and viewed several projects. We want to thank the NET for their generous support that funds HPWMA.

The summer has been a busy time here in the Panhandle. Clinton Riesen, HPWMA Coordinator, has been contacting landowners about re-growth and offering solutions to remove the invasive species that have re-grown. Many of these properties have not been sprayed since the initial removal of the trees. Since the inception of the program in 2008, almost 4,000 acres have had removal projects initiated. Monitoring and regrowth



Robin Rust of Rust Vegetation Management spraying regrowth of Russian olive.

application has been completed on only a small percentage of those areas. Consequently, we are finding there are many big trees, requiring more time and herbicide to control. The spraying cost is higher and landowners are hesitant to fit that added cost into their budgets. Currently, there are many projects lined up

to have estimates completed, to be approved by the landowners, or ready to move forward with treatment. Landowners that have gone through with the spraying have been pleased with the results.

While checking re-growth, Riesen has been stopping to talk with area landowners and provide information about the program that is offered. This approach has proved to be successful and many of the landowners appreciate the information provided.

HPWMA Goals for 2014-2015

- Get removal project underway in September
- Continue to communicate with partnering landowners
- Check acres for regrowth, line up agreements
- Contact new landowners to provide education and cost share assistance possibilities

If you are interested or have questions about the program, please check out the web site at www.HPWMA.com or contact Clinton Riesen at (308)633-1264 or (308)225-0146.



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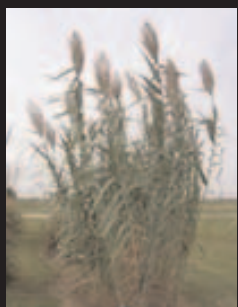
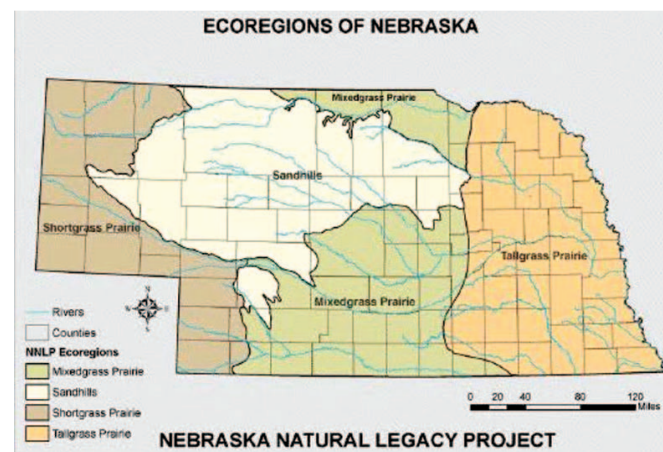
Invasive Plants Watch List: 2014

Kristi Paul, Sheridan County Weed Superintendent and PRIDE board member

These lists were developed to provide a region-based list of invasive plants to be “on the watch for” in Nebraska. Each ecoregion’s species were categorized based on early detection and rapid response potential. A complete list and images of invasive plants in Nebraska can be found at <http://snr.unl.edu/invasives>.

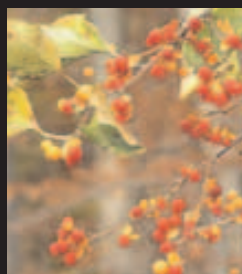
Category 1: Future Invasive Species

These 6 plants are the same for all ecoregions in Nebraska, as they pose a significant risk if introduced. The aquatic weeds are just one boat ride away from invading any Nebraska lake.



Giant Reed

Giant Reed (*arundo donax*) is known to be growing in eastern Nebraska.



Oriental Bittersweet



Water Hyacinth



Brittle Naiad



Hydrilla



Giant Salvinia

Category 2: Shortgrass Prairie Ecoregion



Russian Knapweed



Goat's-rue



Black Henbane



Houndstongue



Saltlover



Perennial Pepperweed

Category 2: Sandhills Ecoregion

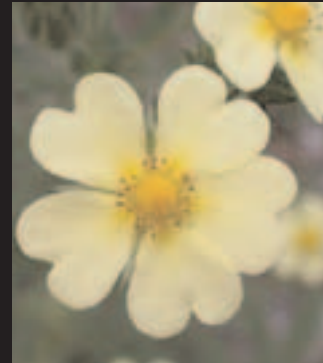
Black knapweed
Houndstongue
Yellow bedstraw
Broadleaf pepperwort/
Perennial pepperweed
Eurasian water-milfoil
Sulphur cinquefoil



Yellow Bedstraw



Meadow Knapweed



Sulphur Cinquefoil



Eurasian Watermilfoil

Category 2: Mixed-grass Prairie Ecoregion

Amur maple
Russian knapweed
Garlic mustard
Australian beardgrass
(Caucasian bluestem)
Cutleaf teasel
European alder-buckthorn
Japanese honeysuckle
(also Morrow, Showy Fly)
Eurasian water-milfoil
Sulphur cinquefoil



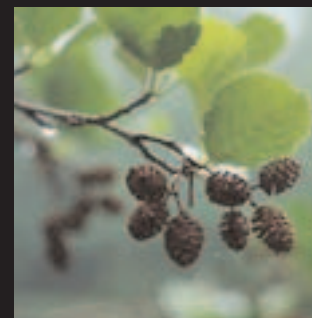
Amur Maple



Garlic Mustard



Caucasian Bluestem



**European Alder
Buckthorn**

Category 2: Tallgrass Prairie Ecoregion

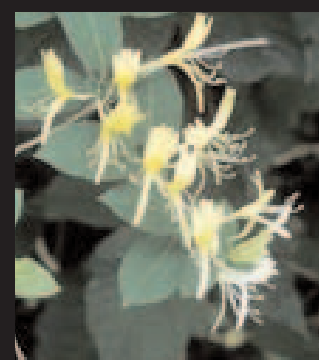
Amur maple
Russian knapweed
Garlic mustard
Australian beardgrass
(Caucasian bluestem)
Yellow bluestem
Black knapweed
Yellow star thistle
Sweet autumn virgin's-bower
Houndstongue
Cutleaf teasel
Sickleweed
Goat's-rue
Yellow bedstraw
Japanese honeysuckle
Eurasian water-milfoil
Kudzu
Hoary cress
St. John's wort
Crown Vetch



Cutleaf Teasel



St. John's Wort



**Japanese
Honeysuckle**

The complete list of Invasive Plants in Nebraska along with species photos can be found at the Nebraska Invasive Species Project website: <http://snr.unl.edu/invasives>.

The Invasive Plants Watch List also lists which counties in Nebraska have "County Added" noxious weeds. This list is described on page 11 of *The Weed Watch*.

Carry on the Hunting Tradition by Not Carrying Weeds and Seeds

By Sarlyn McCormick, US Forest Service

The days have begun to shorten and the morning air carries a crispness that signals the start of fall hunting seasons for upland birds, waterfowl, turkey and big-game. For many outdoorsmen and women this time of year is busy preparing for backwoods hunts, scouting flight patterns and vantage points, as well as getting your gear ready for the season ahead. As ethical hunters and responsible recreationists, we have a duty to ensure that the actions we take during this season won't adversely affect the successes of upcoming seasons.

A major threat to wildlife habitat and the future of hunting is the spread of noxious and invasive weeds. Noxious and invasive weeds can suppress streams and rivers, inhibit wildlife movement patterns, and reduce the health of wildlife habitat. When preparing for your upcoming hunts and while on the hunt, there are several things you can do to help keep the lands on which you hunt productive. This will provide habitat benefits for future generations of outdoorsmen and women and the wildlife that call it home.

What is a Hunter's role in preventing the spread of weeds?

When getting your gear ready for a hunt, inspect it for seeds, twigs, or other plant parts. Many noxious and invasive weeds will spread by seeds stuck to hunting clothes, blinds, and equipment cases. Carefully remove seeds and plant parts and dispose of them in a sealed container in trash bins not intended for composting. Likewise, at the end of a hunt or before changing locations be sure to inspect yourself, your equipment, and most importantly your hunting dog for any seeds that may have been picked up while in the brush. Often overlooked, the vehicle that got you there may also have picked up seeds and plant parts of noxious and invasive weeds. Checking and cleaning the undercarriage and wheel wells of your vehicle before leaving an area is another important step in not spreading weeds.

Learn to recognize local noxious and invasive weed species. Avoid camping, driving, and camouflaging your hunting party in areas infested with weeds. Scouting is a useful tool not only for figuring out where and when to



To prevent the spread of noxious or invasive weeds be sure to check clothing, gear, and vehicle tires to be sure you are not taking seeds to a new location.

hunt, but also for determining areas that may be infested with weeds that should be avoided. If using plants for camouflaging your blind avoid using invasive weeds. If you are not sure if the plants you have used are weeds, the best policy is to remove them from your blind at the end of the hunt and leave the plants in the same area you found them.

When hunting in back country or on public lands, the use of pack animals is often a necessity. Planning ahead for these types of hunts is especially important in preventing the spread of noxious and invasive weeds. When using pack animals, bring in only feed (hay, pellets, or cubes) and bedding that is certified weed and seed free. Feeding weed-free forage to animals 96 hours prior to entering back country and public lands will ensure that any weed seeds that may have been ingested prior to the trip will not be brought and deposited along the way. On many public lands the use of weed-free forage is a requirement. It is always a good idea to contact the public land agency prior to your visit to find out its specific restrictions. Designated wilderness areas automatically require the use of certified weed-free forage under the Wilderness Act of 1964. When bringing weed-free forage onto public lands, be sure to keep tags, twine, and labels as required by the destination state to show that the feed was certified weed and seed free. Resource officers generally require you to show such documentation.

What is weed-free forage and where can it be found?

The North American Weed Management Association (recently renamed North American Invasive Species Management Association) began the Weed-Free Forage program in the late 1990's. Prior to harvesting forage the

producer will call a county weed superintendent who is a certified weed-free inspector. The superintendent will inspect the field and surrounding areas to determine that the forage is free of weeds. The forage is then harvested and certification marking in the form of tags or special twine is attached to indicate that it is weed-free.

The best way to obtain weed seed free forage is to call the county weed superintendent in or near the county you plan to hunt; they typically have a list of local forage producers who have certified weed-free forage for sale. There are also numerous websites that list such producers;

Nebraska: www.newweedfree.org/

Colorado: http://www.colorado.gov/cs/Satellite/ag_Conservation/CBON/1251625424345

Wyoming: <http://wyagric.state.wy.us/component/content/article/34-agnews/170-wyoming-businesses-selling-certified-weed-free-forage-and-hay>

Montana: <http://agr.mt.gov/agr/Programs/Weeds/NWSFF/>

Doing our part for successful hunts in the future...

We all must do our part when hunting to ensure that the spread of noxious and invasive weeds is not accelerated by the choices we make this season. Planning ahead, scouting, and a keen eye are already a hunter's secrets to success. Applying the same principles to the prevention of spreading noxious and invasive species will go a long way in the protection of the lands we value for the numerous hunting opportunities they hold. Although we may not all be after the same game, we can all agree that the spread of noxious and invasive weeds threatens not only health of the lands on which we hunt, but also the ability of future generations to enjoy the great outdoors and the lessons it has to offer.



Preserve your habitat today so that future hunters can carry on the tradition.

SWMA Update

By Doug Mulligan, Brown County Weed Superintendent

The Sandhills Weed Management Area has been busy this year with several projects. We distributed over 21,000 copies of *The Weed Watch* in the spring, and will complete this educational and outreach component again this fall. SWMA also had an educational booth at the Ranch Expo, held each June in Bassett.

SWMA has several noxious weed control projects lined up:

- Leafy spurge control project in Cherry County
- Purple loosestrife control project in Cherry County
- Phragmites control projects in Brown, Custer, Garfield and Valley counties
- Survey the Cedar River in Garfield County for phragmites and purple loosestrife

SWMA is also a member of NEWMAC, and has utilized funds from NEWMAC, the Nebraska National Forest, and the U.S. Fish and Wildlife Service.

SANDHILLS WMA

308-346-3393

Blaine/Thomas
Carol Conard
308-346-4047

Cherry
Barbara Small
402-322-1067

Grant
Jan Burgess
308-458-2821

Keya Paha
Travis Mundorf
402-497-3800

Rock
Rod Stolcpart
402-822-0186

Boone
Todd Buettner
308-750-5214

Custer
Ridge Horky
308-872-2410

Hooker
Neal Hayward
308-546-2706

Loup
Lynn Strong
308-942-6218

Valley
Darrell Kaminski
308-383-2701

Brown
Doug Mulligan
402-387-2287

Garfield
Jay D Tetschner
308-346-5696

Greeley
Walter Bjorklund
308-428-5955

Nance
Kevin Koziol
308-536-2523

Wheeler
Doug Reiter
308-654-3397

Common Mullein – All Too Common!

By Lora O'Rourke, PRIDE President

We have all seen it, as kids we had sword fights with the long dried stems and even used its soft flannel like leaves for doll bedding. Unfortunately, now we see it all too common within the burned areas of the recent wildfires in our region, as well as on roadsides, in pastures and riparian areas.

Common mullein (*Verbascum thapsus*) is a biennial species that has fuzzy, alternate and overlapping leaves that can grow to 12-18 inches in length. The light green leaves form rosettes during its first year of growth. During the second year of its life cycle the plant sends up a 2-6 foot tall bloom stalk. Yellow flowers occur in June and July along the top of the stalk. One common mullein plant produces 100,000 to 180,000 seeds that can remain viable in the soil for decades. Common mullein reproduces only by seed and can become abundant in disturbed areas such as in burned, flooded or overgrazed areas. Common mullein is a native of Eurasia, and was brought into North America by early settlers to treat respiratory disorders such as asthma, tuberculosis, bronchitis, and pneumonia. It occurs throughout the U.S. and southern Canada.



Rosette stage of Common mullein in the first year of growth. Herbicide control is most effective at the rosette stage.

Chemical Control

For the best control, herbicide should be applied while the mullein plant is in the rosette stage. Rosettes can be found during initial spring growth or in the re-growth period of the cool fall months. It is ineffective to spray herbicide in the middle of the hot summer since mullein has slowed growth and will not readily uptake the herbicide.

It is very important to add methylated seed oil surfactant to the herbicide mix. This will allow the herbicide to "stick" to the extremely hairy leaf surface and makes it easier for the plant to absorb. Once the herbicide enters the plant and it is translocated to the root system where it can then more effectively control the plant.

It is recommended to apply herbicide when the rosette has 6-12 leaves and before the stem starts to grow, which is usually in early May.

- 2.0 to 2.5 ounces per acre of Chaparral™ herbicide at rosette stage. Increase rate to 2.5 to 3.3 ounces per acre for bolting plants less than 12 inches tall OR
- 1.5 to 2.1 pints per acre of ForeFront® HL herbicide at early rosette stage only OR
- 1.5 to 2.1 pints per acre of GrazonNext® HL herbicide at early rosette stage only.

Mechanical Control

Small populations of mullein can be controlled by digging up the plants in late April and early May. Individual plants can be dug out or cut at the soil surface as long as the whole rosette is removed. Single mowing of new 1-2 foot tall plants can reduce population and seed production for the season, especially in dry years. **Cutting a common mullein plant just at flower stage is not a good idea, unless you cut it below ground level. If you simply cut below one flowering stock on a single mullein plant, three to ten new**

flowering stocks will regrow on that single stem.

Prevention

Minimizing disturbances may be the most effective and economical method of common mullein control. However, this is not always possible when it comes to wildfire. Common mullein seed lies dormant in the soil for years waiting for the chance to germinate. When disturbance is limited we can restrict common mullein's success. If common mullein does become established, the best strategy is to control common mullein while the population density is low, before the plant can generate a persistent seed bank. Plant numbers can easily expand from a few to hundreds per acre in just a couple years.

Deer, elk, mountain goats, and small mammals will feed on common mullein primarily in the winter months when little other forage exists. Goats will eat common mullein while cattle and sheep typically avoid it.



Common mullein has an extensive tap root which allows it to survive in very dry years. Heavy stands can reduce grass production as much as 50%, especially in dry years.



Seeds are downy capsules that are round and about 1/4 inch in diameter. Each capsule splits when mature into 2 cells filled with numerous tiny, dark brown seeds. An individual plant produces 100,000 to 180,000 seeds.



Common Mullein is very difficult to control within burned ponderosa pine in the Pine Ridge Area.



UNWNRD Conservation Festival

Teaching students about identification, prevention and the importance of noxious and invasive weed control.



**PRIDE
WMA**

Box Butte County
Jan Bruhn
308-487-3755

Sheridan County
Kristi Paul
308-327-5629

Dawes County
Shane Cullan
308-432-3056

Sioux County
Nick Sanderson
308-668-9453



WEST CENTRAL WMA

Arthur County
Kent Anderson
308-764-2203

Keith County
Tim Ryan
308-284-6601

Lincoln County
Rod Yost
308-532-4590

Logan-McPherson
Richard Cook
308-636-6157

Something for Kids (of all ages)

T E G R A T A Z E D E P S E L A E C I R E S K
P S G N I M I T S I H C N A R R A M V U R T N
M T S A I A D U G R O W T H U N A E E S I E A
U O L W M K O N A T I V E T A P G F L S V P P
S O A W E I I G C T G L S D P A I E T I E P W
K R U Z X E M H H I P I A I R L A I S A R U E
T A N O A I T I D E O T N O D F T A I N E R E
H D N O T H D C V M H G F L Y G V E H O C P D
I E A E I D O I L I C E I S E N T V T L O L S
S C S S E S S U S O E W P Y I I N L S I V E D
T T T N T S E T N R V U U C R T E E S V E L E
L L C E E U L T F D R E R A I N M W E E R O E
E A I R N E R D R G S D R M A U N T L S Y O S
I S G O U O E M E E E T A W R H O A E T E S T
S G E S L E V O H S E I O E P A R D M N P E N
A C T I W M W W I S D S N N C L I E U E A S E
N D A O Y E A R O B E T Q R G L V E L I C T M
D E R N E L A I N N E R E P R U N W P R S R E
H E T D K B R E T A W E D I R P E D L T D I G
I F S O L D S N O I T A R E N E G N A U N F A
L B I E N N I A L C O M P E T I T I N N A E N
L U E V I T A N N O N H C R A E S B R U L A A
S N O I T I D N O C K A D N A L S S A R G T M
O N I E L L U M N O M M O C R E S I S T A N T
L U N O I T C A F O E D O M E D I C I B R E H
D S I R I G A L F W O L L E Y S T C E J O R P

HIDDEN WORD FIND – Responsible landowners take pride in their management efforts to control weeds on private lands in order to protect our environment. Sometimes the greatest challenge is to understand how invaders spread, the groups involved in treating them, and tools they use. Find the words listed below in the puzzle to the left.

Words are arranged horizontally, vertically, diagonally, forwards (left to right), backwards (right to left) and top to bottom or bottom to top.

Word List for Word Find

- | | | |
|--------------------------|--------------------|-------------------|
| acre | invasive | resistant |
| act | knapweed | river |
| aggressive | knotweed | roots |
| annual | landscape | Russian olive |
| biennial | leafy spurge | saltcedar |
| bindweed | management | Sandhills |
| Canada thistle | mapping | Scotch thistle |
| common mullein | moisture | search |
| conditions | musk thistle | seeds |
| control | native | sericea lespedeza |
| dig | NEWMAC | shovels |
| desirable | nonnative | strategic |
| environment | noxious | stream |
| erosion | nutrient | sweet clover |
| Eurasia | perennial | target |
| feed | phragmites | timing |
| generations | plan | trees |
| grassland | plumeless thistle | walk |
| growth | prairie | water |
| help | PRIDE | Weed Free Forage |
| herbicide mode of action | projects | weeds |
| hidden | pull | wildlife |
| hiking | purple loosestrife | WMA |
| houndstongue | ranch | yellow flag iris |
| hunting | recovery | |

Can You Find the Differences?



ANSWERS to differences:

1. Hat is different.
2. Hair is different.
3. Button is missing.
4. Apple stem is missing.
5. Pumpkin stem is longer.
6. Grass is different.
7. Brown leaf is missing.
8. Orange leaf is added.

County-Added Noxious Weeds



Field Bindweed

Banner	Garden
Box Butte	Morrill
Cheyenne	Scotts Bluff
Dawes	Sheridan
Deuel	

5 to 6 feet long. Perennial - spreads by seeds and rhizomes.

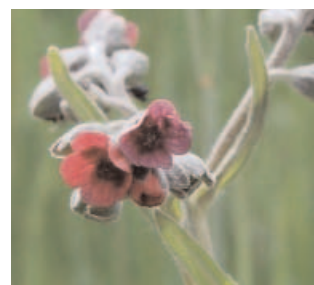


Kristi Paul, Sheridan County Weed Superintendent and PRIDE board member

In addition to the twelve weeds that have been declared noxious in Nebraska, every county has the option to petition the Director of the Department of Agriculture to place additional weeds on the “county-added noxious weed” list. Many counties in Nebraska have county-added noxious weeds, which landowners are required to control.



1 to 4 feet tall. Biennial - spreads only by seeds.



Houndstongue

Dawes
Sheridan



Scotch Thistle

Banner
Cheyenne
Dawes
Morrill
Kimball
Sheridan
Sioux

1 to 10 feet tall.
Biennial - spreads
only by seeds.



Woollyleaf Bursage

Banner

1 to 2.5 feet tall.
Perennial - spreads by
seeds and rhizomes.

Perennial Yellow Bedstraw Cherry

2 to 4 feet tall.
Perennial -
spreads
by seeds
and rhizomes.



GOOD NEIGHBORS CONTROL NOXIOUS WEEDS!

Bull Thistle Rock

1.5 - 6.5 feet tall.
Biennial - spreads
only by seeds.



PRIDE

serves as a cornerstone to build and maintain partnerships between the many cooperators in invasive weed management and education. With this collaborative effort, a more efficient and successful approach to invasive weed management and awareness is achieved. PRIDE's efforts in pooling of funds and resources from contributors will result in a compounding of investments and rewards. For more information or to get additional copies of *The Weed Watch*, contact Kristi Paul, Sheridan County Weed Superintendent, PO Box 449, Rushville, NE 69360. Phone 308-327-5629



Nebraska's Noxious Weeds

It is the duty of each person who owns or controls land to effectively control noxious weeds on such land.

Noxious weed is a legal term used to denote a destructive or harmful weed for the purpose of regulation.

The Director of Agriculture establishes which plants are noxious. These non-native plants compete aggressively with desirable plants and vegetation.

Failure to control noxious weeds in this state is a serious problem and is detrimental to the production of crops and livestock, and to the welfare of residents of this state. Noxious weeds may also devalue land and reduce tax revenue.

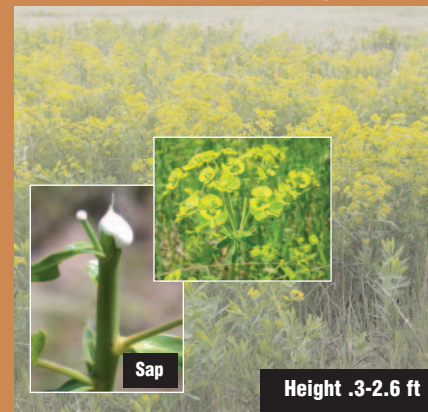
Canada Thistle



Musk Thistle



Leafy Spurge



Spotted Knapweed



Plumeless Thistle



Saltcedar



Phragmites



Diffuse Knapweed



Japanese Knotweed



Giant Knotweed



Purple Loosestrife



Sericea Lespedeza

