

The Weed Watch



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

Spring 2019

We would like to welcome the Southwest Weed Management Area group to The Weed Watch! Adding these seven counties puts The Weed Watch publication in the hands of homeowners and landowners in 57 Nebraska counties. Proof once again, that working together works!

WELCOME ABOARD

Southwest Weed Management Area Reorganizes

By Merle Illian, Acting Coordinator

The Southwest Weed Management Area (SWWMA) consists of Chase, Dundy, Frontier, Hayes, Hitchcock, Perkins and Red Willow Counties. This group recently reorganized to make grant funding opportunities more favorable to area landowners. Con Fielding, SWWMA Chairman said, "thus far, grant funding over the past 12 years has come from LB-701 funds and the Nebraska Environmental Trust. We will be looking at other funding sources such as the Nebraska Department of Agriculture, Natural Resources Districts, and Resource Conservation and Development funds. These funds will then be distributed over the seven county area to address high priority invasive vegetation needs, along with river and tributary cleanout projects. Other natural resource concerns will be determined by the SWWMA members and partners. Past funding averaged around \$250,000 annually. We hope to increase this annual budget by pulling in new partners and funding sources."

The reorganized group consists of County Weed Superintendents, Nebraska Game and Parks Commission, Natural Resources Districts, Nebraska Department of Agriculture, Nebraska Forest Service, UNL Extension Service, Resource Conservation and Development, landowners, and other local and federal agencies. It is a very diversified group of individuals deciding where the funding will have the most impact.

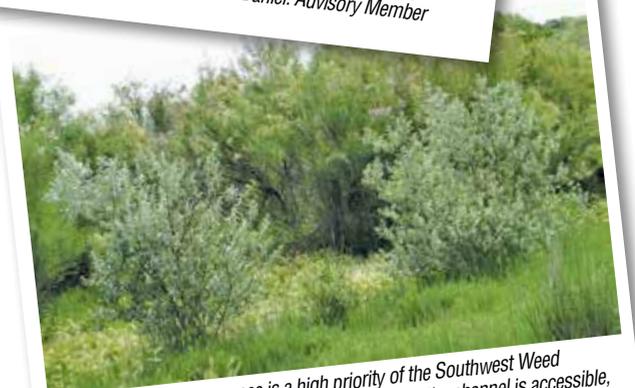
Several projects that have been discussed thus far include:

- Medicine Creek Cleanout (approved and waiting for water to recede). We will remove log jams and downed timber from the channel with an excavator. Then we will be able to traverse the creek channel to spray noxious and invasive vegetation
- Noxious/invasive vegetation control along the Republican River & its tributaries
- Work with federal and state personnel from Swanson Lake, Red Willow Lake and Medicine Creek Dam to address vegetation needs
- Cedar tree shearing and piling program
- River and tributary cleanout and tree thinning along the Republican perimeter
- Prescribed burns

Cost share opportunities available for landowners through these projects will range from 50% to 100%. Percentages will depend on which practice is implemented, and what percentage the committee members approve for cost share. Be watching local newspapers within SWWMA and other informational sources for announcements of the projects.



Pictured above is the Southwest Weed Management Area Executive Committee Members: Ted Tietjen: Secretary/Treasurer, Con Fielding: Chairman, Bill Elliott: Vice-Chairman & Ron Daniel: Advisory Member



Improved water conveyance is a high priority of the Southwest Weed Management Area. Once the debris is cleared and the channel is accessible, noxious and invasive vegetation will be controlled on the Republican River within the SWWMA.

Controlling Noxious Weeds at the Right Time vs When You Have Time

By Mitch Coffin, Noxious Weed Program Director,
Nebraska Department of Agriculture

Noxious plants are problematic across the country. These non-native plants have no natural enemies like our native plants do. Non-native invaders are tough and robust and easily become rooted in abused, disturbed and overgrazed lands throughout the Great Plains.

Since non-native plants (in most cases) do not have natural enemies it is easy for them to thrive and reproduce rather quickly. It is easy for a single plant to mature in one season and can multiply into hundreds if not thousands of plants in the timeframe of a year or two. Some seeds can lay in the soil for many years until the right conditions exist for them to germinate. How quickly plants reproduce depends in part on their life cycle, which can be either perennial, annual or biennial. Bottom-line, because of their aggressiveness these non-native plants are able to reproduce at an amazing rate in the right conditions.

With this said, let's talk about noxious weed control. There is not a certain date to use herbicide on a certain plant for effective control. This depends on your geographic location across the state. It also depends on temperature, day length, moisture and many other factors. These things can only be decided by scouting your property regularly. This doesn't mean looking once or twice.

Scouting is a season long activity. What someone should know is, if you had noxious weeds in a specific location on your property last year, then best bet is you may have noxious weeds in the same place this year. Now, maybe you did a great job of controlling those noxious weeds last year. But remember, these plants tend to produce large amounts of seed or may have an extensive root system. If you had a large problem last year,



MUSK THISTLE ROSETTE



MUSK THISTLE BUD



MUSK THISTLE BLOOM



MUSK THISTLE MATURE BLOOM

it likely means that one or more of the previous year's infestation was allowed to go to seed. Here we are, back to large amounts of seed just lying there waiting for the right opportunity.

Noxious and invasive weeds need to be controlled in a timely manner. This means applying control measures at the "Right Time vs When You Have Time". In the case of herbicide control, the product labels are very good about recommending what stage of growth to apply the herbicide to the targeted plant. Each product label is very specific to that herbicide and the plants it controls. Don't assume that one herbicide can be used to control all noxious weed species. The label has a wealth of information for best results, but the entire label needs to be consulted.

There are other tools in the tool box for weed control. Integrated Weed Management (IWM) has been around for a long time. IWM incorporates multiple tools to achieve success and is best explained in (EC130) GUIDE FOR WEED, DISEASE, and INSECT MANAGEMENT IN NEBRASKA on page eleven. This publication is produced each year and is considered one of the best guides in the country. You can purchase a copy through your local extension office or they can provide details on how to order one.

Remember, weed control is a season long project. Learn to identify noxious and Watch List weeds in your area and strive to control them at the proper stage of growth.

Noxious weed control involves two very important laws.

1. It is the duty of every landowner to control the noxious weeds on their property.

2. Read and follow the herbicide label instructions, as the label is the law.

Good luck with your weed control efforts, and please consult your local County Weed Control Superintendent for additional information and advice.

Removing Invasive Plants and Clearing Debris to Improve Water Flow

By Clint Riesen, High Plains Weed Management Association Coordinator

High Plains Weed Management Association (HPWMA) continues to provide cost share for the removal of invasive plant species along the North Platte River. Our projects also include lakes, ponds, streams, tributaries, creeks and any wetland that has a direct impact on the North Platte River within HPWMA. The counties covered include Scotts Bluff, Banner, Kimball, Morrill, Cheyenne, Garden, Deuel and southern Sioux. Russian olive, saltcedar and phragmites are the invasive species that the program works to remove from our local waterways and wetlands. Field coordinator Clint Riesen met with many landowners this past winter to discuss the program, answer questions and address concerns. A concern that is often discussed is flood control. As we have seen on the eastern side of our state, flooding can have detrimental effects along water ways. HPWMA's program provides many benefits to the landowners but also to the towns and residents close to the waterways. Invasive species such as Russian olive, saltcedar and phragmites tend to overgrow waterways and restrict the flow of water. These species tend to have shallow root systems that allow them to uproot and move downstream. This debris can cause major restrictions at culverts and bridges, leading to safety concerns and property damage. We continue to work hard to keep our streams and rivers flowing naturally.

Many land owners have taken advantage of our cost-share removal program; but continued maintenance is very important. Spraying of re-growth is highly encouraged and can also be cost-shared with HPWMA.

HPWMA, with funding provided by the Nebraska Environmental Trust, is a collaborative group that relies on landowners for project ideas to successfully remove invasive species from our waterways and wetlands. Recently, landowners have suggested using aerial application to control phragmites and saltcedar, so aerial application will be part of our plan for summer 2019. To discuss HPWMA cost-share projects of aerial spraying, invasive species removal or maintenance spraying, please contact Clint Riesen, Field Coordinator at (308)633-1264 or visit www.hpwma.org.

PRIDE WEED MANAGEMENT AREA

Box Butte County
Cody Renkoski
308-203-1454

Dawes County
Dan Wordekemper
308-432-3056

Sheridan County
Kristi Paul
308-327-5629

Sioux County
Nick Sanderson
308-668-9453

HIGH PLAINS WEED MANAGEMENT AREA

Coordinator
Joyce Mick
308-633-1264

Project Coordinator
Clint Reisen
308-225-0146

Banner County
Buck Hottell
307-214-5481

Cheyenne, Deuel &
Garden Counties
Cris Burk
308-760-1111

Kimball County
Rick Wangler
308-235-2681

Morrill County
Cody Renkoski
308-203-1454

Scotts Bluff County
Jeff Schledewitz
308-436-6709

Sioux County
Nick Sanderson
308-668-9453

Opportunistic versus Invasive... when is a weed not a weed?

By Chris Helzer, Nebraska Director of Science, The Nature Conservancy

"Those weeds are really taking over my pasture!"

That sentence is very often heard, but much less often correct. Unfortunately, however, that sentence has led to many healthy grasslands being broadcast-sprayed with herbicides. The result is usually a site with less plant diversity, and thus less productivity, resilience, and – ironically – ability to fight off real invasive plants.

It's easy to understand how a landowner would look at a pasture that is visually dominated by ragweed, buffalo bur, snow-on-the-mountain, hoary vervain, or a number of other weedy plants and think those plants are aggressively pushing grasses out of the way. In almost every case, however, the opposite is true. Grasses are usually the bullies of the plant community, and only when they are suppressed by fire, grazing, or some other pressure do the "weeds" thrive.

There are a few weeds that can out bully grasses, of course. Leafy spurge, crown vetch, and sericea lespedeza are good examples in Nebraska. They seem to be able to invade and spread regardless of the vigor of grasses and other competing plants. Landowners should absolutely work to control those aggressive perennial species before they get a foothold across large areas.

However, while there are some important exceptions, most pasture weeds are more opportunistic than aggressive. Opportunistic plants don't compete well with grasses or other perennial plants when those plants are at full strength, but can move quickly to fill spaces left between plants that are weakened by intensive grazing or drought. Most opportunistic species are short-lived and produce huge numbers of seeds, and those seeds sit in the soil waiting for a chance to germinate and grow. When surrounding grasses are stressed by intensive grazing, drought, trampling, or other disturbances, their root systems lose mass and competitive ability. That opens up space and resources for opportunistic plants to insert themselves between those grass plants.

The majority of those new plants will survive only as long as the vigor of the surrounding grasses remains low. As those grasses recover, they

regain their advantages, both above and below ground. Annual plants may bloom and drop more seed, but those seeds have to wait until the grasses are weakened again before they can germinate and grow. Perennial opportunistic plants might stick around a little longer, but most of those will also lose out to recovering grasses because of their poor competitive ability.

There's an easy way to find out whether or not the "weeds" in a pasture are aggressive or opportunistic – build an enclosure or two to keep grazing out for a year or more. If the grasses within those enclosures regain their vigor and dominance, you'll know it was grazing pressure and/or drought that was creating opportunities for weeds. If the weeds continue to dominate the area inside the enclosure for a couple years (assuming you're not in the middle of a drought that is keeping those grasses down), you'll know that either the grasses have been debilitated to the point of no return or the weeds are truly aggressive and in need of control.

As a final note, it's important to understand that grazing hard enough to suppress grasses and allow weedy plants to flourish temporarily is not necessarily a bad thing. Ecologically, the habitat conditions created by those tall weedy plants are critically important for many wildlife species, including upland game birds. Many important wildflowers also benefit from the opportunity to reproduce during short periods (a year or two) of weakened grasses. As long as grasses are allowed to recover before they are intensively grazed again, they'll be fine, and the wildlife, pollinators, and plant diversity of your prairie will all benefit from the temporary reprieve from grass dominance.

Opportunistic plants suffer from a public relations problem. While they are scorned by most people, these valuable plants are doing exactly what they're supposed to do. They are the temp workers of the plant community – the substitute teachers, backup quarterbacks and house sitters that keep prairies humming along when dominant grasses are on leave. By filling spaces between temporarily stressed grass plants, opportunistic plants can help prevent the truly aggressive weeds from easily gaining a foothold. They can also provide much needed habitat for wildlife and pollinators. Ragweed, hoary vervain, and buffalo bur aren't the villains of the story at all – they're the heroes! We just have to get used to seeing them that way.



This photo shows two pastures in different stages of recovery from intensive grazing. The pasture on the right was grazed recently and western ragweed and native thistles are among the plants doing well while grasses are suppressed. The pasture on the left has had a year of recovery time from a similar grazing treatment and grasses have rebounded nicely.



Annual sunflowers erupted across this Sandhills pasture after a year of intensive grazing but were nearly gone a year later after the pasture was given time to recover. Sunflowers provide excellent cover for wildlife and high quality food for birds, pollinators, and many other animals.



A butterfly feeds in a big patch of curly-cup gumweed, an annual wildflower that thrives when surrounding grasses are stressed and weakened. These plants were gone a year later, after the site recovered from being grazed, but they provided high quality pollinator habitat while they were around.

EDITORS NOTE: Interesting and educational prairie information and photos can be seen weekly by following Chris Helzer's blog, PrairieEcologist.com. Chris is often featured in *Nebraskaland Magazine*. His nature photography is amazing.

PLATTE VALLEY WEED MANAGEMENT AREA

Project Coordinator • Rich Walters – 308-390-2511
Buffalo County • Bret Stubbs – 308-236-1244
Dawson County • Marty Craig – 308-324-3771
Hall County • Rob Schultz – 308-385-5097
Hamilton County • Brian Crabtree – 402-694-3666

Howard County • Rob Schultz – 308-380-2099
Merrick County • Kevin Koziol – 308-536-2523
Phelps County • Bobby Hamilton – 308-995-8485
Polk County • Jim Carlson – 402-747-2921
Sherman County • Mitch Dzingle – 308-745-1513 Ext 111

WEST CENTRAL WEED MANAGEMENT AREA

Arthur County • Kent Anderson – 308-764-2203
Keith County • Tim Ryan – 308-284-6601
Lincoln County • Todd Herndon – 308-532-4939
Logan/McPherson County • Richard Cook – 308-636-6157

Be Careful What You Plant

By Scott Erthum, Brown County Weed Superintendent

Many of us enjoy passing the long dark winter months poring over the numerous gardening catalogs that arrive in our mailboxes. Images of beautiful and unique flowers and plants we may try to grow in our own gardens spread across the pages. There is nothing wrong with wanting to beautify our outdoor living spaces. However, there is a right way and a wrong way to bring these stunning plants into our environment. Buying unique plants that have been approved for entry into the United States allows you to enjoy these plants for many years. Many ornamentals have been planted in landscapes; many of these same plants have escaped and become invasive in our native ecosystems. Be very cautious if buying unapproved plants, as you could be introducing a future noxious invader into your area.

The internet has transformed the way we have access to the far reaches of our planet. This isn't necessarily bad, but it does bring risks. Ebay, Amazon, and other sites bring many products, seeds, and plants to our doorsteps with just a few clicks. Many of these plants have the potential to grow, spread, and become a problem in a few short years. There are some common sense rules to remember when buying plants and seeds online.

The first and most important rule is to never buy seeds from foreign countries, especially China and Vietnam. According to Cindy Stuefer-Powell from the USDA-APHIS plant compliance program, China and Vietnam are the highest risk countries to import seed from because of lack of government oversight. So, even though seeds and plants from these two countries seem to do very well in parts of our country, they also pose the greatest risk of invasive possibility. These plants could escape and establish themselves in road ditches, along streams, and in our pastures. A second red flag to look for is the price the seller is asking for the offering. If the price seems low, like 99 cents for several seeds, that usually indicates that you are not buying a quality product. There is a cost to properly prepare seeds and document them for sale and shipment. Cheap seeds can harbor fungal spores and other weed seeds. Buying live plants pose other risks as well. The soil and packing materials can bring in unwanted seed, insects, or insect eggs. One such instance

was a plant being shipped from the southern U.S. to Nebraska in soil that had fire ants in it. (Cindy Stuefer-Powell, USDA Plant Compliance Program)

Seed Exchange sites can also be a bit of a disappointment and risky. Seeds that we plant don't always turn out the way we think they should. Many of the plants we grow now are hybrids. The seeds that are produced from these hybrids don't always resemble their parent plants. It's disappointing when all your hard work to grow these seeds results in nothing more than weeds.

Bamboos and ornamental grasses can give an exotic flair to your garden. These plants, while beautiful, are known to be aggressive growers and spreaders. Bamboo is quick growing, spreads by rhizomes, and can fill an area quickly. The grasses can live more than one year and reproduce by both rhizomes and seed. In the past, our cold Nebraska winters have limited these plants from spreading too much. Over the past few decades, two things have changed that could make our state much more hospitable to these fast growers. First, recent winters are not as cold as they used to be. Plants that never could survive here can now thrive here. The second thing happening is that new plants are being developed or discovered that are more tolerant to our cold winters than what they used to be. If you desire to plant ornamental grasses in your landscape, use caution and monitor these plants closely to prevent invasive spread.

It is fun to experiment with new and exotic plants. I myself have grown blue potatoes and red sweet corn. Please remember to buy seeds and plants from reputable and domestic, preferably local sources. Monitor the plants that you purchase. Dispose of packing materials properly and don't buy plants in soil. Finally, if you see that your new plants are spreading out of control, take measures to remove the plant from your landscape and dispose of it. Your local county weed superintendent may provide assistance for measures to prevent the breakout of an invasive plant species.



It seemed like a great idea to plant a Japanese Knotweed shrub by the deck, but now it has started to grow out of control!

**LEARN TO IDENTIFY
INVASIVE PLANTS BEFORE
THIS HAPPENS!**

TWIN VALLEY WEED MANAGEMENT AREA • TWINVALLEYWMA.COM

Coordinator Merle Illian 402-746-3560	Adams County Eric Walston 402-461-7173	Clay County Bruce Rumsey 402-762-3652	Fillmore County Todd Boller 402-366-1921	Franklin County Mark Goebel 308-425-3716	Furnas County Todd Weverka 308-268-2824	Gosper County Marty Craig 308-324-3771	Harlan County Tim Burgeson 308-928-9800	Kearney County Joseph Anderson 308-832-2854	Nuckolls County Nick Elledge 402-879-1900	Thayer County Brian Schardt 402-365-4366	Webster County Dennis VenWay 402-746-2890
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SOUTHWEST WEED MANAGEMENT AREA

Chase County Brandon Beard 308-882-7520	Dundy County Richard Delin 308-423-2652	Frontier County David Luke 308-367-8304	Hayes County Boyd Gigax 308-286-3461	Hitchcock County Bill Hagemann 308-334-5852	Perkins County Michael Dolezal 308-352-7955	Red Willow County Bill Elliott 308-345-4333	Interim Coordinator Merle Illian 402-746-4558
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All parts of the Jimson weed plant are toxic, most particularly the seeds. Potent amounts of alkaloid compounds are present, which potentially cause convulsions, hallucinations, and even death if ingested.



Garden croton contains a milky latex sap that can cause dermatitis in some. If ingested, the bark, roots, latex and leaves are poisonous.



Poison hemlock: All parts of the plant are toxic.

POISONOUS PLANTS – More than just pretty or fragrant

**By Rod Stolcpart,
Rock County Weed Superintendent**

Webster's dictionary defines poison (regarding plants) as a substance that through its chemical action can impair, injure or kill an organism. While some plants are considered poisonous through touch, others release their toxins when ingested.

Whenever you see a plant that you cannot positively identify, do not touch the plant without a good pair of rubber gloves on. The reason for this is that some plants contain toxins in the sap, while others have parts, like leaves, that can act as an irritant to the skin or have other detrimental effects. *Codiaeum variegatum*, commonly known as garden croton, and leafy spurge are members of the Euphorbiaceae family. Both plants have a milky sap that can cause dermatitis in some people. The bark, roots, latex and leaves are poisonous, and if ingested can cause stomach and intestinal issues, or in extreme cases, death. Though these two species are poisonous, other members of the Euphorbiaceae family are not; some are even harvested to be eaten or used in medicines. Poison ivy (*Toxicodendron radicans*), is another common example of a plant that is known to cause contact dermatitis, or stomach and intestinal issues if ingested.

Delphinium, also known as larkspur is a genus of about 300 species of perennial flowering plants in the family Ranunculaceae, and is native throughout the Northern Hemisphere and on the high mountains of tropical Africa. All members of the genus Delphinium are toxic to humans and livestock when ingested. Larkspur, especially tall larkspur, is a significant cause of cattle poisoning on rangelands in the western United States.

While most poisonous plants are very pretty to look at some are also quite tasty. Take, for example Asparagus, especially garden asparagus (*Asparagus officinalis*) and the asparagus fern (*Asparagus densiflorus*). Asparagus is typically harvested before the plant reaches maturity. These young stalks are safe to eat, but the berries of the mature asparagus plant are poisonous. Rapid ingestion of more than five to seven ripe berries can induce abdominal pain and vomiting. Likewise, apple seeds are mildly poisonous, containing a small amount of amygdalyn, a cyanogenic glycoside. Cyanogenic glycosides are natural plant toxins that are present in several plants, most of which are consumed by humans. Cyanide is formed either during consumption or during processing of the food crop.

Ingesting a plant that is poisonous

is dangerous. Some of you may remember the 1997 story of the nine teenagers who were treated in the Kanawha Valley, West Virginia after ingesting Jimson weed. Jimson weed, *Datura stamonium* is a member of the Belladonna alkaloid family that grows naturally in West Virginia and has been used as a home remedy since colonial times. Alkaloids are a class of nitrogenous organic compounds of plant origin, which have pronounced physiological actions on humans. They include many drugs (morphine, quinine) and poisons (atropine, strychnine). Due to the easy availability of Jimson weed, teens often use it as a drug. Plant parts can be brewed as a tea or chewed, and seed pods, commonly known as "pods" or "thorn apples," can be eaten. Side effects from ingesting Jimson weed include dry mouth, dilated pupils, blurred vision, hallucinations, confusion, combative behavior and difficulty urinating. Severe toxicity has been associated with coma and seizures, although death is rare.

Poison hemlock (*Conium maculatum*), is another plant species of concern. This introduced species of hemlock is a biennial that grows 2-10 feet tall, has fern like leaves, and purple spots on the ribbed hollow stems. It produces clusters of small white flowers, which

then produce clusters of grayish colored seeds. Poison hemlock can form dense colonies along roadsides, meadows, marshes, and low-lying areas. All parts of the plant are toxic. Poison Hemlock's most famous victim was the Greek philosopher Socrates, who in 399 BC was convicted of multiple offenses, and sentenced to death. His student Plato witnessed his death. When the time came, a guard brought Socrates a drink of the poison, which he drank calmly. The condemned man walked around his cell until his legs felt heavy; then he lay down on his back. The guard pressed his feet and legs and asked Socrates if he had any feeling in them; he did not. "And then he touched him," Plato wrote, and said that "when it, the coldness reaches his heart, he'll be gone." A short while later, Socrates grew quiet and still, and then he was dead. (The Trial and Execution of Socrates: Sources and Controversies (Brickhouse, 2001))

In 2009, author Amy Stewart wrote the book, "*Wicked Plants, The Weed That Killed Lincoln's Mother & Other Botanical Atrocities*". This is a book that I would highly recommend for anyone interested in knowing more about poisonous and invasive plants. Please visit www.wickedplants.com for links to poisonous plant databases, photos of poisonous plants, and more.

SANDHILLS WEED MANAGEMENT AREA - MIDDLE NIOBRARA WEED AWARENESS GROUP*

WMA Office – 308-346-3393
Blaine/Thomas • Carol Conard – 308-346-4047
Boone • Jack Nordeen – 402-608-0595
Brown • Scott Erthum – 402-760-0093*

Cherry • Barbara Small – 402-322-1067*
Custer • Ridge Horky – 308-872-2410
Garfield • Jimmy Petersen – 308-214-0301
Grant • Cody Renkoski – 308-203-1454

Hooker • Neal Hayward – 308-546-2706
Greeley • Walter Bjorklund – 308-428-5955
Keya Paha • Travis Mundorf – 402-497-3800*
Loup • Zane Young – 308-214-0923

Nance • Chad Borowiak – 308-536-2443
Rock • Rod Stolcpart – 402-822-0186*
Valley • Darrel Kaminski – 308-383-2701
Wheeler • Doug Reiter – 308-654-3397

Invasive Plants Watch List: 2019

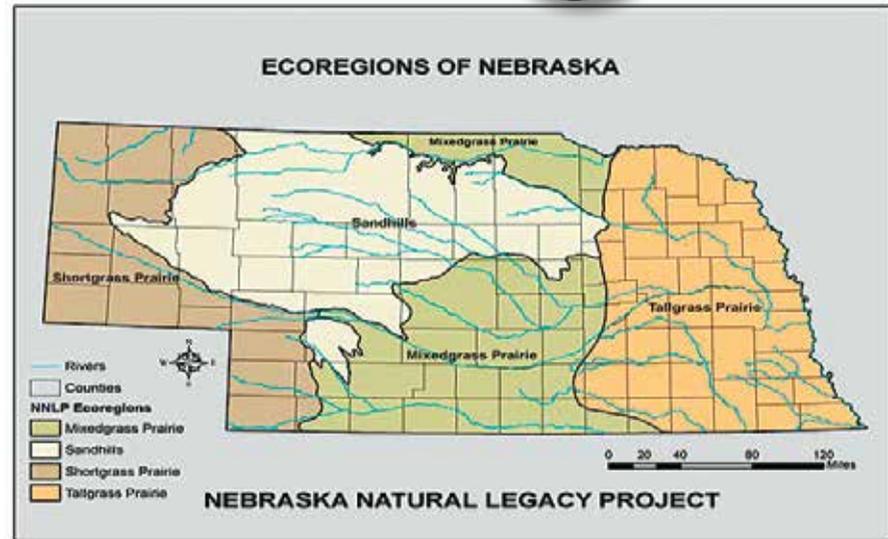


MAP COURTESY OF NEBRASKA GAME AND PARKS COMMISSION

NEWS FLASH!

In 2018, absinth wormwood and yellow flag iris were added to Nebraska's Watch List in all ecoregions.

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



Oriental Bittersweet



Water Hyacinth



Brittle Naiad



Hydrilla



Giant Salvinia

CATEGORY 2: Shortgrass Prairie Ecoregion



Absinth Wormwood



Black Henbane



Houndstongue

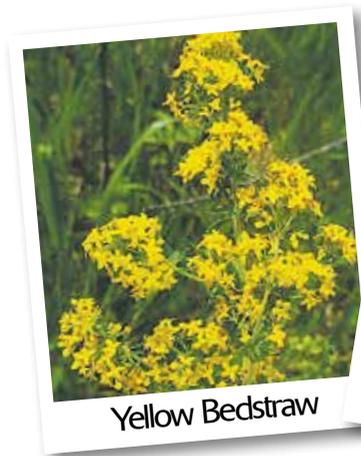


Russian Knapweed



Yellow Flag Iris

CATEGORY 2: Sandhills Ecoregion



Yellow Bedstraw



Absinth Wormwood



Sulfur Cinquefoil

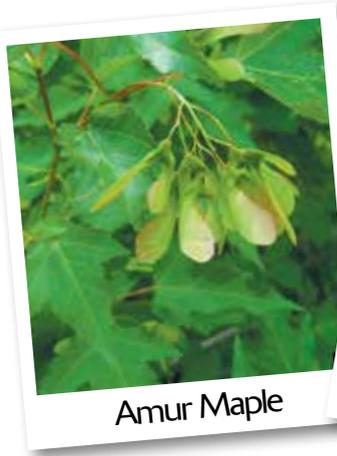


Eurasian Watermilfoil

ABSINTH WORMWOOD
BLACK KNAPWEED
EURASIAN WATER-MILFOIL
HOUNDSTONGUE
SULFUR CINQUEFOIL
YELLOW FLAG IRIS
PERENNIAL YELLOW BEDSTRAW

CATEGORY 2: Mixed-grass Prairie Ecoregion

ABSINTH WORMWOOD
AMUR MAPLE
AUSTRALIAN BEARDGRASS
(CAUCASIAN BLUESTEM)
COMMON AND
CUTLEAF TEASEL
EURASIAN WATER-MILFOIL
GARLIC MUSTARD
JAPANESE HONEYSUCKLE
RUSSIAN KNAPWEED
SULFUR CINQUEFOIL
YELLOW FLAG IRIS



Amur Maple



Garlic Mustard



Caucasian Bluestem



Common Teasel

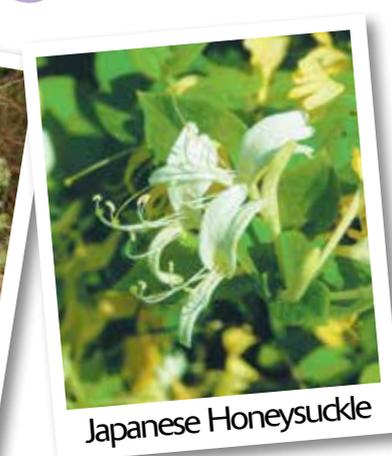
CATEGORY 2: Tallgrass Prairie Ecoregion



Cutleaf Teasel



Sickleweed



Japanese Honeysuckle

ABSINTH WORMWOOD
AMUR MAPLE
AUSTRALIAN BEARDGRASS
(CAUCASIAN BLUESTEM)
BLACK KNAPWEED
CALLERY PEAR (NON-URBAN)
COMMON AND
CUTLEAF TEASEL
CROWN VETCH
EURASIAN WATER-MILFOIL
GARLIC MUSTARD

GIANT REED
HOUNDSTONGUE
JAPANESE HONEYSUCKLE
ORIENTAL BITTERSWEET
PERENNIAL YELLOW
BEDSTRAW
RUSSIAN KNAPWEED
SICKLEWEED
YELLOW BLUESTEM
YELLOW FLAG IRIS

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.

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>

Plan, Prepare, Prevent

By Kristi Paul, Sheridan County
Weed Superintendent

All of the noxious weeds in Nebraska are non-native. Most are native to Europe or Asia, and arrived here either as an ornamental brought with settlers in the late 1800's, or by accident, such as seeds in a ship's ballast. Because the weeds have no native insects or other mechanisms to help control them, the noxious weeds become invasive. They can quickly become a monoculture and outcompete native vegetation, which alters pasture, rangeland, roadsides, riverbanks and recreational habitat. What can you do to make sure your property is not infested with noxious weeds?

PLAN:

- ✓ Learn to identify noxious weeds. If you are not sure which thistle may be growing on your property, dig one and take it to your local county weed superintendent for identification. While noxious thistles need to be controlled, native thistles are seldom invasive. Native thistles serve as hosts to many beneficial insects, and provide food for many of our native birds.

- ✓ Learn about the life cycle of the weeds that grow on your property. Biennials reproduce only by seed, so by keeping them from going to seed, you can control them. Perennials reproduce by both seed and their root system, which makes them much more difficult to control.

- ✓ Plan for what will happen if you do nothing. 1. Noxious weed control is the law. 2. Good neighbors control noxious weeds. 3. A small patch of noxious weeds can be controlled for a few dollars. Let them go, and it might cost you \$1,000 or more.

- ✓ Plan to spray for different weeds at different times. Not all noxious weeds grow at the same time. Leafy spurge emerges early in the spring. Musk and Canada thistle are a little later. When musk thistle in western Nebraska is just starting to bloom, it's already going to seed in the middle part of the state. We must pay attention to our own backyard.

- ✓ Make a map and mark your calendar. Once noxious weeds infest your property, they are very seldom eradicated in one season. Keep track of where they grow on your property, and what time they should be sprayed. Being proactive rather than reactive can make a world of difference in the control of noxious weeds. A lot of folks have smart phones these days, which is a great way to snap a photo and mark the location.

PREPARE:

- ✓ Having a sprayer to do the work saves time and money. Choices include a one or two gallon sprayer that you carry by hand, a 15 gallon sprayer on your ATV, a 30 gallon tank on your UTV, or a pickup with a 200 gallon sprayer; Make sure you have the right tools to do the job.

- ✓ Purchase quality herbicide from quality companies. Also, make sure you use a good quality surfactant to improve the success of your application. If you get a phone call from someone selling "Kill Everything In Just One Application," and it sounds too good to be true? It likely is. If the caller is not reputable, ask him or her two questions. First, is the product labeled for use in Nebraska? If they say yes, ask them to email or send you a label. Second, ask them what is the active ingredient of the product they are selling? A reputable company knows the active ingredient(s), mode of action, and application rates of the products they sell.

- ✓ Read and follow the label on the herbicide. The label is the law, and will give many recommendations about amount of herbicide, amount of water, amount of surfactant. It will also name restrictions that apply to the product, such as Personal Protective Equipment (PPE) which could be long pants, long sleeves, gloves, etc. The label will also give you weather restrictions, such as recommended wind speed, what temperatures are safe to use the product, or what precautions to take for grazing or haying. The herbicide label will also advise whether the product is approved for use near rivers, streams or around wetlands.

- ✓ If you choose to call a custom applicator to spray your weeds, that is completely fine...just don't wait until the noxious weeds are blooming to call, only to find out that you are 14th on the list! Plan ahead.

PREVENT:

- ✓ Look around. Take a different route around the fence line, across the pasture, and through your trees.

- ✓ Watch for unusual plants. If you don't recognize some strange plants, get help with identification. A plant or two can easily be controlled, and may prevent a large infestation.

- ✓ Buy certified seed, and purchase certified weed free forage if possible.

- ✓ Pay attention where hay is fed or stored. Noxious weeds often get started around those areas.

- ✓ Keep the noxious weeds from going to seed. Biennial weeds such as musk and Scotch thistle reproduce only by seed. Once they go to seed, you will be dealing with a seedbank for many years.

- ✓ Prevent the weeds from spreading. Monitor beyond the infestation, look for new patches that may be starting, and keep the weeds from moving to other fields, pastures or your neighbor's property.

BE PERSISTENT:

Once established, noxious weeds will take many years to control. If they were easily controlled, or one time of herbicide application would eradicate them, we wouldn't need a noxious weed law. Noxious weeds are known to be invasive, so you need to be as persistent about controlling them as they are to survive.

New Brochures Focus on Invasive Plants

By Jan Bruhn, PRIDE Member

Occasionally a weed will show up in a different place than it has ever been seen before. In many cases, these uninvited plants can present a real problem if not identified and left unattended.

For instance absinth wormwood, sulfur cinquefoil and cutleaf teasel are relatively new to Nebraska. They are being found in small infestations across different parts of the state. Many people have found the weeds and didn't know what they were. As part of an Outreach and Education program, the Nebraska Weed Management Area Coalition (NEWMAC) recently published brochures to help the public identify several invasive and potentially noxious weeds. NEWMAC, Signature Graphics and The Kearney Hub teamed up to create and publish the brochures, funded by grants received from Nebraska Department of Agriculture and Nebraska Environmental Trust.

These five brochures focus on the following species; absinth wormwood, common teasel and cutleaf teasel, common mullein, sulphur cinquefoil and houndstongue. While these weeds are not yet state listed Nebraska noxious weeds, we hope the public will learn to recognize and control them before they become established in large infestations. Contact your local County Noxious Weed Control Superintendent to get copies of the brochures.



SPOTLIGHT on Canada Thistle

By Kristi Paul, Sheridan County Weed Superintendent

Impact:

Canada Thistle (*Cirsium Arvense* (L)) is highly invasive. It severely reduces pasture capacity, desirable forage, and degrades wildlife habitat. Once an infestation gets established, it forms dense stands and begins to quickly displace native vegetation, including desirable pollinator habitat. Canada thistle thrives in cropland, especially irrigated acres. Crop production is decreased, and control of Canada thistle can be very costly.

Life Cycle:

Canada thistle is a perennial native to Europe and Northern Africa. The erect stems of Canada thistle grow 2-5 feet tall, and branch only at the top. Alternate lobed leaves are shiny, and green. Clusters of pink to purple flowers bloom July through August. The flower of a Canada thistle is the size of your pinky finger, and is much smaller than most thistles.

Canada thistle has a very extensive root system. Horizontal roots may extend 15 feet or more, and vertically the roots can extend from 6-15 feet deep. Lateral roots produce buds or rhizomes which will shoot up new plants at 2-6 inch intervals. When lateral roots are disturbed by tillage or other means, a piece

of root as small as ¼ inch can produce a new plant.

In addition to roots, Canada thistle produces over 1,000 seeds per plant. The light brown seeds have a feathery tuft of tan hair on them. This can be effective in transporting the seed great distances from the mother plant. Often the seed drops close to the parent plant, and the tuft blows away. Canada thistle seed is viable for as many as 20 years; prefers warm moist soil and full sunlight to germinate.

Canada thistle seedlings develop the ability to reproduce from their root systems about seven to eight weeks after germination.

Where found in Nebraska:

Canada thistle grows in rangeland, riparian areas, irrigated cropland, road ditches, fence rows, stream and lake banks and disturbed areas.

Control Methods:

Mechanical Control: Methods such as mowing or tillage do NOT work on their own. Mowing actually stimulates the root system to shoot up new stems. To be most effective, mowing or tillage should be used in conjunction with an herbicide treatment or treatments.

Biological Control: The thistle stem weevil and thistle stem gall fly are two insects found to be effective against Canada thistle in riparian areas or tree belts. It can take several years to see the results of biological control, so other control methods may be needed to prevent the spread of the Canada thistle. Biological control should be coordinated with your local county weed control superintendent.

Herbicide Control: According to the 2019 Guide for Weed, Disease and Insect Management in Nebraska, EC-130, products such as Milestone™, GrazonNXT®, Tordon® 22K, and Stinger® are recommended to control Canada thistle. Different products are labeled for use in cropland, rangeland, Conservation Reserve Program (CRP), roadsides, and riparian areas. Read and follow the product label, as the label is the law.

There is no one time treatment for Canada thistle. The key to control Canada thistle is to be as persistent about controlling it as it is at spreading on your property.

<https://extension.colostate.edu/topic-areas/natural-resources/canada-thistle-3-108/>

http://www.agriculture.gov.sk.ca/Canada_Thistle_Control
<http://www.inhs.uiuc.edu/research/VMG/cthistle.html>



Canada thistle rosette



Canada thistle leaf



Canada thistle buds



Canada thistle flowers



Canada thistle infestation

PHOTO CREDITS

PAGE 1

Merle Illian, SWWMA

PAGE 2

Loke Kok, Virginia Polytech Univ.; Richard Gardner, Bugwood.org; Mary Ellen Harte, Bugwood.org; Steve Dewey, Utah St. Univ., Clint Reisen, HPWMA

PAGE 3

Chris Helzer, The Nature Conservancy

PAGE 4

Chris Evans, Univ. Illinois; Richard Gardner, Bugwood.org

PAGE 5

Forest and Kim Starr, Starr

Environmental; Howard Schwartz, Colo. St. Univ./Bugwood.org; Steve Dewey, Utah State University

PAGE 6

Wilfredo Robles, MSU, Bugwood.org - common water hyacinth
Jil Swearingen, USDI NPS, Bugwood.org - oriental bittersweet
Scott Robinson, GDNr, Bugwood.org - giant salvinia
Steve Dewey, USU, Bugwood.org - black henbane/Russian knapweed/perennial pepperweed
Catherine Herms, TOSU, Bugwood.org - goat's rue

Troy Evans, GSMNP, Bugwood.org - brittleleaf naid
Robert Vidékj, Doronicum Kft., Bugwood.org - hydrilla
Bonnie Million, National Park Service, Bugwood.org - halogeton
Leslie J. Mehrhoff, UC, Bugwood.org - Nebraska Game & Parks, Ecoregion map
PAGE 7
Cindy Roche, Bugwood.org - meadow knapweed
Chris Evans, IWAP, Bugwood.org - garlic mustard
James R. Allison, GDNr, Bugwood.org

- Japanese honeysuckle
Theodore Webster, USDA ARS, Bugwood.org - sulfur cinquefoil
Chris Evans, IWAP, Bugwood.org - Eurasian water-milfoil - cutleaf teasel
Norbert Frank, UWH, Bugwood.org - European black alder
Rob Routledge, Sault College, Bugwood.org - Amur maple
Mike Haddock, kswildflower.org - Caucasian bluestem, St Johnswort
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LL.Berry, Bugwood.org; Alec McClay, McClay EcoScience, Bugwood.org; Kristi Paul, Sheridan Co.; Chris Kelly; Cris

Burks, Deuel Co.
PAGE 11
Loke T. Kok, VPI, Bugwood.org - bull thistle
John Cardina, TOSU, Bugwood.org - bull thistle
Howard F. Schwartz, CSU, Bugwood.org - field bindweed
Howard F. Schwartz, CSU, Bugwood.org - woollyleaf bur sage
Steve Dewey, USU, Bugwood.org - Scotch thistle- houndstongue
John Cardina, TOSU, Bugwood.org - bull thistle
Jan Samanek, SPA, Bugwood.org - field

bindweed
K. George Beck, James Sebastian, CSU, Bugwood.org
Kristi Paul, Sheridan County
PAGE 12
Sara Rosenthal, USDA ARS, Bugwood.org - diffuse knapweed
Jil Swearingen, USDI NPS, Bugwood.org - common reed
Jil Swearingen, NPS, Bugwood.org - Japanese knotweed
Steve Dewey, USU, Bugwood.org - plumeless thistle
Barbara Tokarska-Guzik, University of

Silesia, Bugwood.org
giant knotweed
Bonsak Hammeeras, Bioforsk - NIAER, Bugwood.org - Canada thistle
Barry Rice, sarracenia.com, Bugwood.org - leafy spurge
Eric Coombs, ODA, Bugwood.org - purple loosesstrife
Mike Haddock, kswildflowers.org - Sericea lespezeza

SOMETHING FOR

KIDS OF ALL AGES

G W M U L C H R S T N A L P C I T S I N U T R O P P O
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 A D P S R P A S T U R E L T S I H T S S E L E M U L P

Absinth wormwood
 Acre
 Aerial application
 Annual
 Biennial
 Bindweed
 Bull thistle
 Canada thistle
 Common mullein
 Control
 Diffuse knapweed
 Drift
 Environment
 Field
 Giant knotweed
 Growing
 Habitat
 High plains
 Houndstongue
 Inspect
 Invasive
 Japanese knotweed
 Label

Lawn
 Leafy spurge
 Mnwag
 Mulch
 Musk thistle
 Native
 Natural
 Nebraska
 Noxious
 pasture
 Perennial
 Perennial yellow bed-
 straw
 Opportunistic plants
 Phragmites
 Plan
 Platte valley
 Play clean go
 Plumeless thistle
 Poisonous plants
 Prepare
 Prevent
 Pride

Purple loosestrife
 Regular
 Research
 Riparian
 Saltcedar
 Sandhills
 Seed
 Seeds
 Sericea lespedeza
 Southwest wma
 Spotted knapweed
 Surface
 Twin valley
 Volume
 Waste
 Water
 Weather
 Weeds
 West central
 Wind
 WMA
 Woollyleaf bursage

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

If you have comments about this puzzle, send your name and address to:
 PRIDE WMA, PO Box 449, Rushville, NE 69360

Find 10 Differences Kids Logic Game



COUNTY-ADDED NOXIOUS WEEDS



FIELD BINDWEED

Banner Garden
Box Butte Morrill
Cheyenne Scotts Bluff
Dawes Sheridan
Deuel



Kristi Paul, Sheridan County Weed Superintendent and PRIDE Board Member. In addition to the twelve weeds that have 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.

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.

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



COMMON MULLEIN

Cheyenne
County

*1 to 7 feet tall
Biennial -
spreads only
by seeds.*

HOUNDSTONGUE *1 to 4 feet tall.
Biennial - spreads
only by seeds.*
Dawes
Sheridan



SCOTCH THISTLE

Banner
Box Butte
Cheyenne
Dawes
Morrill
Kimball
Scotts Bluff
Sheridan
Sioux

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



YELLOW FLAG IRIS

*3-5 feet tall.
Perennial - Forms
dense stands.
Reproduces by seed
and rhizomes.*



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.*



BULL THISTLE

Rock
*1.5 to 6.5 feet tall.
Biennial - spreads
only by seeds.*



NEBRASKA'S NOXIOUS WEEDS

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

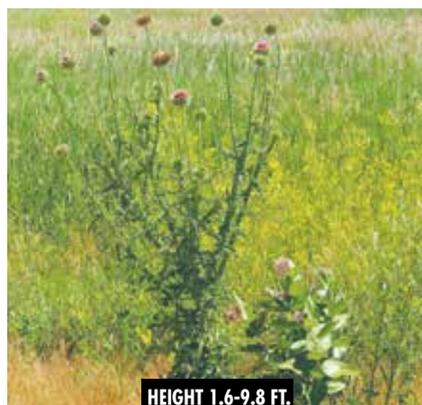
Noxious weed is a legal term used to denote a destructive or harmful weed for the purpose of regulation.

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 and reduce tax revenue.



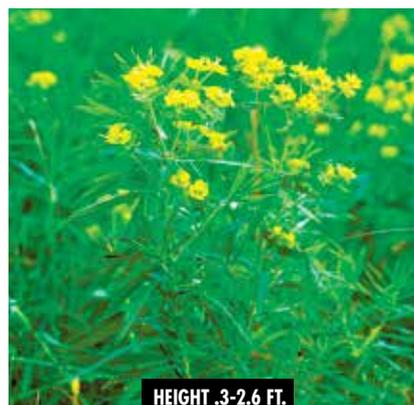
HEIGHT 1-3.9 FT.

Canada Thistle



HEIGHT 1.6-9.8 FT.

Musk Thistle



HEIGHT .3-2.6 FT.

Leafy Spurge



HEIGHT 1-3.9 FT.

Spotted Knapweed



HEIGHT 1-4.9 FT.

Plumeless Thistle



HEIGHT 3.3-20 FT.

Saltcedar



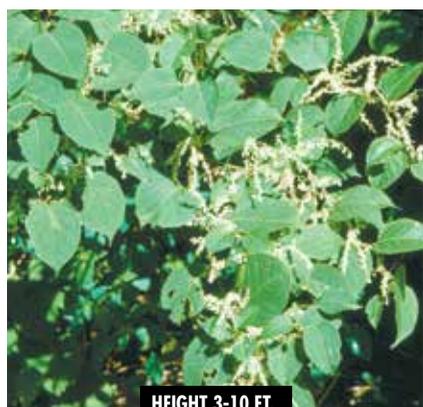
HEIGHT 3.2-20 FT.

Phragmites



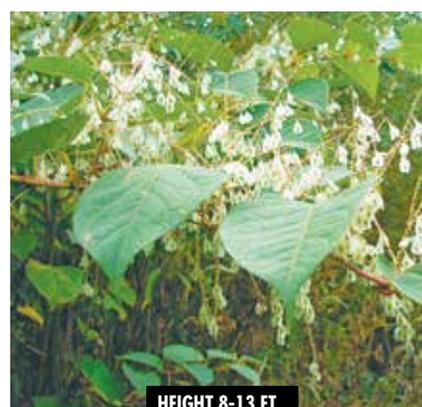
HEIGHT 1-3.9 FT.

Diffuse Knapweed



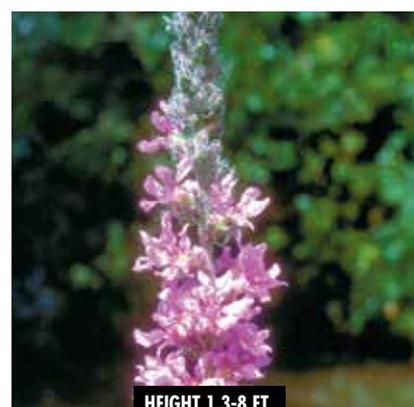
HEIGHT 3-10 FT.

Japanese Knotweed



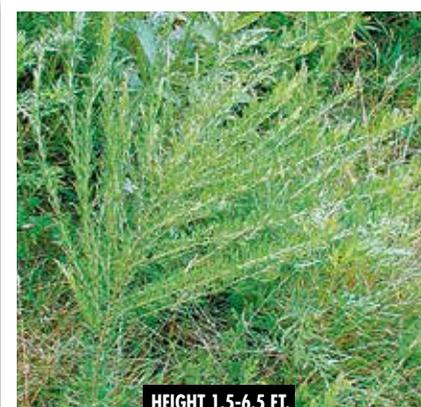
HEIGHT 8-13 FT.

Giant Knotweed



HEIGHT 1.3-8 FT.

Purple Loosestrife



HEIGHT 1.5-6.5 FT.

Sericea Lespedeza