Weed Awareness

Prepared by the Lancaster County Noxious Weed Control Authority

Annual Report — 2001 in Review

The most significant change for the Lancaster County Noxious Weed Control Authority (NWCA) during 2001 was the addition of purple loosestrife as a noxious weed. This contributed to an increase of 481 more inspections during the year.

Inspection Activity

An average of 68 inspections was made each day over a seven-month weed season. There were 9,574 inspections made of 4,424 sites on 28,549 acres during the year. There were 3,840 violations found on 6,258 acres. This was 264 more violations than the previous year.

County Noxious Weed Control Program

There are seven weeds designated as noxious in Nebraska:

- Musk Thistle
- Canada Thistle
- Purple Loosestrife
- Plumeless Thistle
- Leafy Spurge
- Spotted Knapweed
- Diffuse Knapweed

All but the knapweeds are currently found in Lancaster County. The Noxious Weed Control Act requires landowners, both public and private, to control these weeds.

In Lancaster County last year, there were 2,083 violations found on 5,148 acres. The number of violations found by noxious weed is shown in the chart below.

Of these sites, 1,511 were controlled by landowners. The authority controlled 53 sites and 38 were contract controlled and owners billed $14,147. There were 12 properties assessed for nonpayment.

Purple Loosestrife was added to Nebraska's noxious weed list in 2001.

City Weed Abatement Program

The City of Lincoln's "Weed Abatement Program" requires landowners to maintain weeds and worthless vegetation at less than six inches on their properties and on one half of the adjacent streets and alleys There was a continuing emphasis on obtaining voluntary compliance of landowners. After notification, 93 percent of owners cut their overgrowth. This was accomplished with a 10 percent reduction in legal notifications issued from 66 percent down to 56 percent. All 38 violations on public property were taken care of after notifying the 12 different entities by letter or phone. There were 130 properties force-cut and owners billed $19,541. Of that, 76 properties were assessed for nonpayment.

Purple Loosestrife Exchange Program

Good progress has been made in the first year after purple loosestrife was designated a noxious weed. A strong information effort was initiated along with the implementation of a plant-exchange program. Five nurseries participated in a program of providing a 25 percent discount for replacement plants for lythrum plants removed from flower gardens. An estimated 2,000 plants were removed as a result of the exchange program and inspections made.

Public Awareness

A high voluntary compliance with the noxious weed control act and the weed abatement ordinance is dependent on landowner awareness and acceptance. Several approaches were used to improve the public awareness:

- A weed awareness special insert to the April Lancaster County Cooperative Extension Service Nebline with a circulation of about 10,000.
- The NWCA Web site at www.ci.lincoln.ne.us/cnty/weeds was maintained and updated. The Web site received over 25,000 hits in 2001.
- Over 1,000 special mailings to were made to multiple violators, leafy spurge owners, homeowner associations, CRP contractees, nurseries and garden centers, public land managers and others.
- An exhibit was prepared and displayed in the lobby of Lancaster Extension Education Center, at the Nebraska State Fair and other locations.

Program Management

A "Combined Weed Program Plan" was prepared, monthly reports submitted and then an annual report and program recommendations provided. Palm Pilots were used for field digital entry reducing office digital entry. The Musk Thistle locations are now available on the Web site. The possible special assessments were listed on Web site for viewing by title companies. This alerts them to outstanding bills. PalmPics were used in taking digital pictures to document violations.

Palm Pilots are used for field digital entry.

The Noxious Weed Control Authority

The Lancaster County Noxious Weed Control Authority staff assists landowners in the job of controlling noxious weeds. Many landowners are accomplishing control without any assistance or contact from the Authority. The Authority carries out a strong information and awareness program along with an extensive inspection program to encourage voluntary compliance of the Nebraska Noxious Weed Control Act.

The Authority has also provided the inspection and administration of the City of Lincoln's "Weed Abatement Program" since entering into an interlocal agreement with the City.

The County Commissioners serve as the Lancaster County Noxious Weed Control Authority. Russell Shultz serves as the superintendent and supervises a seasonal staff of six weed inspectors with the assistance of Chief Inspector, Barb Frazier and Linda Spilker, account clerk.

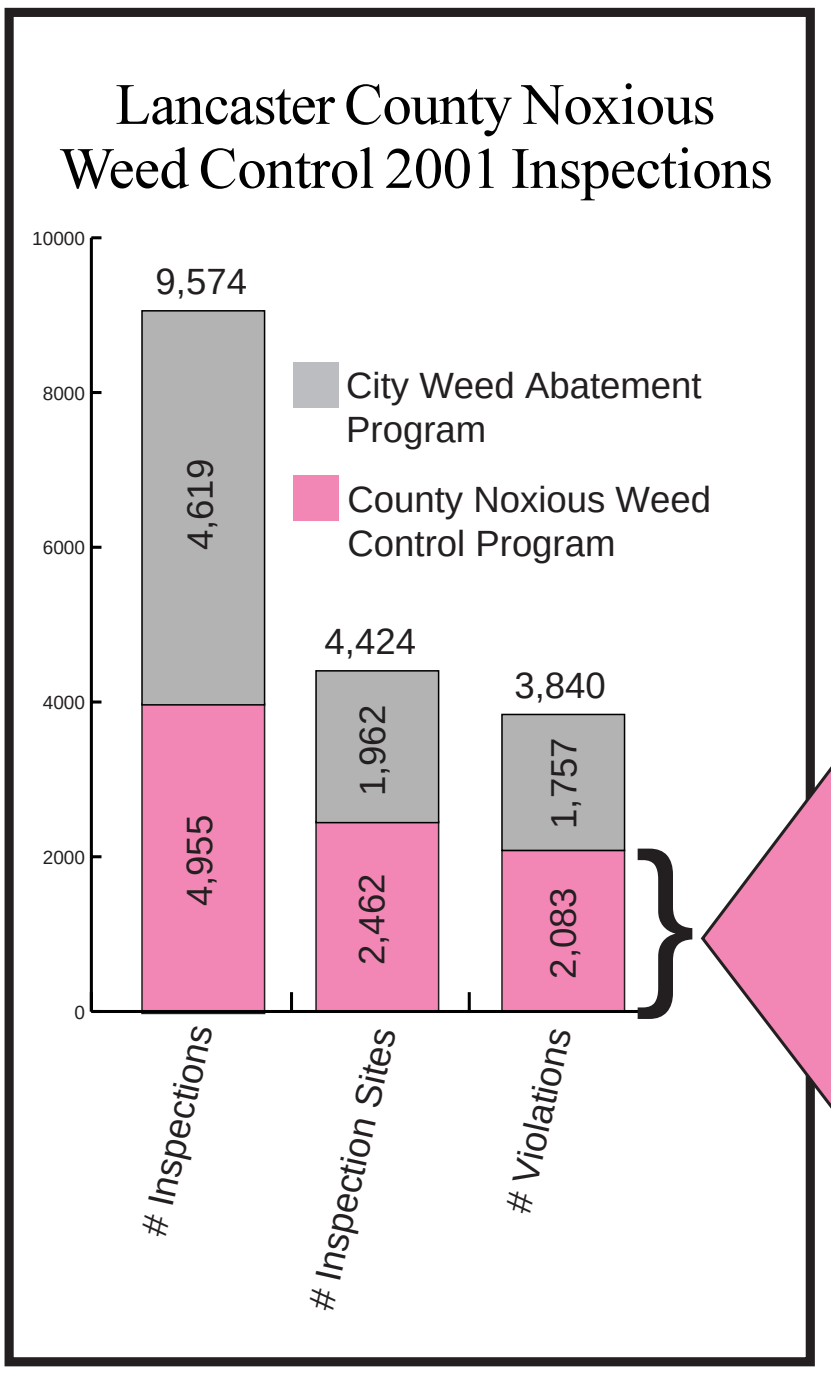
Noxious Weed Control Authority Mission and Goals

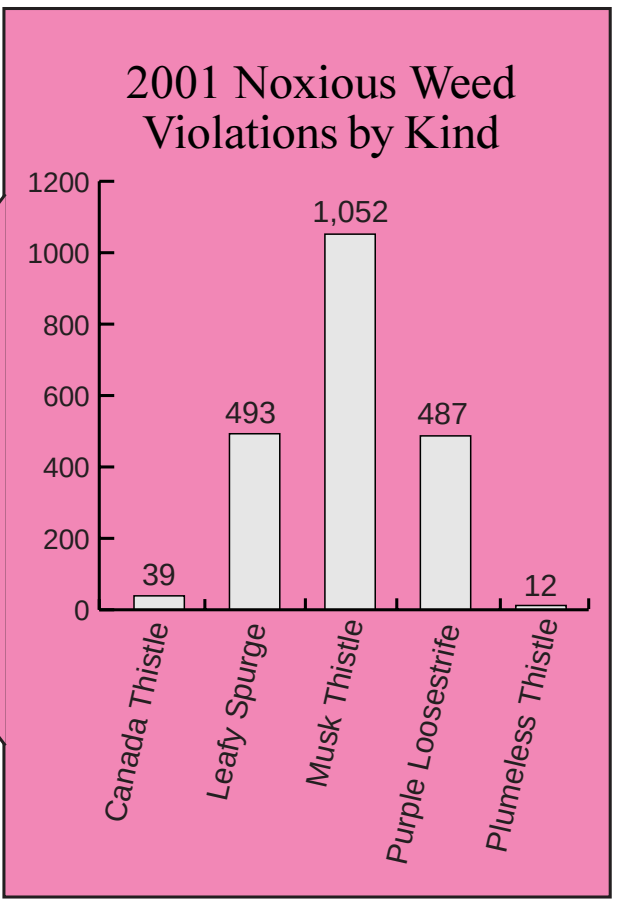
1. The education of the public concerning noxious weeds and to exercise the necessary authority to obtain effective control of noxious weeds county-wide and the education of the public concerning weed abatement and to exercise the necessary authority to cut and clear overgrown weeds and worthless vegetation in the city of Lincoln.
2. Make the landowners of Lancaster County aware of the legal requirements and benefits of controlling noxious weeds.
3. Make the citizens of Lincoln aware of legal requirements and benefits of cutting and clearing overgrown weeds and worthless vegetation.
4. Efficiently and effectively exercise authority when necessary to obtain acceptable noxious weed control.
5. Improve efficiency and effectiveness of operations through management techniques.

Contact Info

Lancaster County Noxious Weed Control Authority
444 Cherrycreek Rd,
Building 'B'
Lincoln, NE 68528-1507
Phone: 441-7817
Web site: www.ci.lincoln.ne.us/cnty/weeds

Lancaster County Noxious Weed Control 2001 Inspections





Weed Awareness

Purple Loosestrife Exchange Program

Purple Loosestrife is a tall, woody perennial that invades wetlands. It contributes to habitat loss by out competing native vegetation. Purple Loosestrife is a noxious weed under the Nebraska Noxious Weed Control Act.

Garden varieties, sometimes called Lythrum, cross pollinate with escaped plants to produce viable seeds and may even produce seeds themselves. These seeds can spread to neighboring wetlands.

Purple Loosestrife includes garden varieties sometimes called Lythrum.

A Nebraska-Wide Purple Loosestrife Exchange program was developed in cooperation with nurseries and garden centers last year. Many landowners participated in this program. The 2002 season is the last opportunity for growers of ornamental Purple Loosestrife to receive the discount offered by this program.

How the Plant Exchange Works

The goal of the Purple Loosestrife Exchange program is to get Purple Loosestrife and ornamental Lythrum out of flower gardens and reduce the potential for further spread.

This program gives landowners an opportunity to replace their Purple Loosestrife plant with a discounted perennial. The discount is 25 percent off towards a perennial for each Lythrum plant that is removed (up to the number allowed by the nursery or garden center).

To receive the discount, landowners either:

- Contact Lancaster County Weed Control Authority office at 441-7817 for verification of removal and receive a discount coupon to take to a participating nursery or garden center.
- Bring any Lythrum variety, roots and all, to a participating nursery or garden center with a drop-off site (see list below).

Disposal of Purple Loosestrife

Never compost Purple Loosestrife or Lythrum. To prevent further spread from the plants once they are dug up, we suggest landowners either:

- Double bag the plants in black garbage bags (never use clear bags) and put the bags in the garbage for pickup and burial in a landfill.
- Take the bags to a participating nursery or garden center with a drop-off site.

Participating Nurseries and Garden Centers

Lancaster County participating nurseries and garden centers which offer perennial discounts and have drop-off sites for Purple Loosestrife or Lythrum are:

- Campbell's Nurseries, 7000 S 56, Lincoln
- Campbell's Nurseries, 2342 S 40, Lincoln
- Earl May Nursery, 5555 S 48, Lincoln
- Earl May Nursery, 71 & O, Lincoln
- Seeds of Life, 12400 Holdrege, Lincoln
- Williams Nursery, 1742 N 48 Street, Lincoln

The current listing of Nebraska-wide nurseries and garden centers that participate in the Purple Loosestrife Exchange Program can be found at www.neweed.org.

Why Certain Weeds Are Considered "Noxious"

Often pleasing to the eye, noxious weeds such as Purple Loosestrife can invade native wildlife habitat and agricultural lands, choking out desirable vegetation.

Many of Nebraska's worst weeds are not native — their origins can be traced back to Europe and Asia. Unfortunately, they flourish here in North America without the natural insects, animals, fungi and diseases that keep them under control in their homeland.

Weeds can hitch-a-ride onto your property, travelling via equipment, vehicles, hay, birds and other wildlife—even on your clothing. If soil is disturbed or cultivated, woodlands and shrubs removed or grasses overgrazed and in poor health, conditions are perfect for weeds to thrive and take over. Left unchecked and unmanaged, the problem will only get worse.

For example, leafy spurge has spread so rapidly in North Dakota and Montana; it has caused severe productivity declines on literally millions of acres of rangeland.

Armed with some basic management practices and control techniques, these beautiful invaders can be controlled or even eradicated.

Though you may have resolved that you really don't mind your property awash in a purple-blossomed sea of Canada Thistle, your neighbor probably won't like all the seeds drifting into his field crops or pasture. No weed stays within the fence lines.

As a landowner, it is your responsibility under the Nebraska Noxious Weed Control Act to control or destroy noxious weeds. Team up with neighbors and help each other control weeds in your area.

Livestock Grazing and Weed Prevention on Acreages and Pastures

A fairly common oversight on small farms and acreages is underestimating the forage needs of livestock and overestimating the productive capacity of grazing land. To maintain healthy livestock and forage production, you will need to develop a sustainable forage and feed plan.

This involves calculating the forage your animals consume, the forage and hay production on your land and the feed (hay) requirements per animal. These calculations will reveal if you can meet your animal's needs on your land.

In lieu of this, you can maintain a plentiful supply of hay and feed your livestock in a corral until the pasture gets tall enough to graze. Begin grazing when grass is 12 inches tall and remove livestock when the grass is eaten down to six inch height. Wait until the pasture regrows to 12 inches before grazing again.

Weeds can easily begun to grow in pastures where overgrazing has damaged the grasses.

Good grazing management = livestock health and weed prevention

Signs of Poor Grazing Management

Your grazing management system needs adjusting if your animals are:

- chewing on trees, shrubs, fences or barns
- losing weight or overweight
- consuming dirt while trying to graze

Poor pasture conditions may lead to increased parasite problems, reduced body condition and overall poor health of your livestock and increased weed problems.

Tips to Avoid Overgrazing

To avoid overgrazing your pastures each year, you may need to:

- Buy additional feed or rent pasture.
- Take steps to increase your forage production by fertilization and rotation grazing system.
- Reduce the number of animals.
- Seek assistance.

Tips for Successful Grazing Management

- Depending on the size of acreage, develop a pasture-rotation grazing system. Eliminate continuous, season-long grazing.
- On a limited acreage, you may have only enough pasture to exercise your animals and will need to supply feed year-round.
- Pasture rotation, good grazing management and fertilization produces more grass, fewer weeds and healthier animals.
- Corral livestock and feed them hay until your pasture grasses are at least 12 inches high. Move animals to another pasture when 50 percent of the grass plant remains. Do not re-graze until grasses are at least 12 inches high again.

Horse Grazing Tips

Horses do not need 24-hour access to feed and forage. The daily nutritional needs of an idle, mature horse can be met with as little as three to four hours of grazing on good pasture. Corral animals for the rest of the day to prevent overgrazing and help extend the forage available in your pastures. Horses are "spot" grazers, so pasture rotations with other livestock or regular mowing may help improve grass production.

Some of these materials are derived from Weeds of Nebraska and the Great Plains*, published by the Nebraska Department of Agriculture. For more information please contact: Nebraska Department of Agriculture, PO Box 94756, Lincoln, NE 68509 or call 471-2394.*

Weed Awareness

Weed Prevention Tips

There are several options for the control of noxious weeds. The easiest and most effective approach is prevention.

Maintain Healthy Grass

Healthy stands of desirable vegetation make it difficult for weeds to get established.

Before purchasing grass or forage seed mixes, it's always good practice to request to see a Certificate of Seed Analysis, which details every seed (including weed seeds) contained in the bag. Even if your dealer says the seed is certified, he/she is required by federal law to provide the certificate on request.

Replant bare areas and water if necessary.

Do not overgraze pastures (see article on opposite page).

If farming, practice conservation tillage to minimize soil disturbance.

Prevent Spreading Weed Seeds

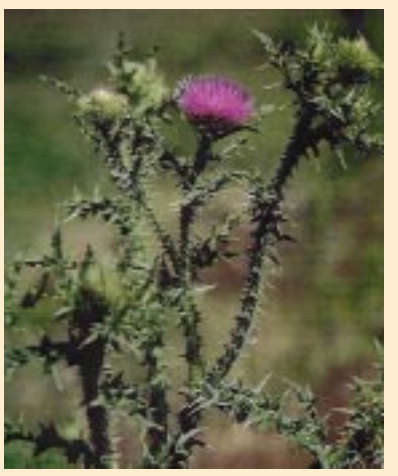
Another basic principle of prevention of new sites becoming infected is not to spread seeds and viable plant parts to new sites. This can be accomplished by being alert to activities that might spread existing infestations and not to infest new sites with movement of noxious weed contaminated articles or materials on to your property.

Noxious weeds may be disseminated by several methods or articles. Following are some treatments for articles capable of disseminating noxious weeds, when such articles are suspected to have noxious weeds present:

- **Harvesting machinery and equipment:**
  - Remove all loose material from the top and sides of the machine and all other places of lodgement by sweeping or the use of forced air or forced water.
  - Remove all noxious weeds from shakers, sieves and other places of lodgement.
  - Run the machine empty for at least five minutes, alternately increasing and decreasing the speed.
  - Follow the manufacturer's detailed instructions for cleaning the machine.
  - Whenever possible, aforementioned treatments should be performed while the article is still on the land on which it became infested. If treatment cannot be performed at this location, the location selected should be such as to minimize the possible dissemination of noxious weeds.
- **Trucks, RV's, other vehicles and articles such as railroad ties, fence posts and fencing:**
  - Wash vehicles prior to moving from weeds to weed-free areas whenever possible.
  - Treat by brushing, sweeping, forced air, forced water and/or physical removal of noxious weeds.
- **Livestock:**
  - Avoid moving livestock directly from weedy to weed-free areas.
- **Grain and seed suspected to contain noxious weeds should not be sold or transferred to another person:**
  - Treat by using a seed cleaner which is effective in removing the noxious weeds from the grain and seed.
  - Screenings remaining following treatment should not be used for feed or for any other purpose which could result in the dissemination of noxious weeds.
- **Soil, sod, nursery stock, hay, straw, manure and other similar materials:**
  - No known acceptable method of treatment exists for these articles. Such articles should not be moved from the location at which they initially become infested, but may be utilized at that location.

Five of Nebraska's noxious weeds can be found in Lancaster County:

Musk Thistle



Plumeless Thistle

Canada Thistle

Purple Loosestrife

Leafy Spurge

Controlling Existing Infestations

Following are some recommendations for controlling existing weed infestations.

Musk and Plumeless Thistle

When attempting to control musk thistle or plumeless thistle, it is imperative to prevent seed production. They are biennial weeds that reproduce only by seed. Each plant is capable of producing up to 20,000 seeds. In areas where there are only a few plants, the tap root can be severed below the soil surface with a shovel, which effectively kills the plant. The application of 2,4-D at the two quarts rate per acre will kill the rosettes in April to mid-May and in the fall. Roundup is not very effective. The plants germinate throughout the spring and fall so the sites must continually be reinspected and treated. Herbicides with residual control such as Tordon 22K, Clarity and Vanquish may be applied at eight ounce rate per acre with the 2,4-D to control the later germinating thistle and minimize the follow-up control required. When the plants start producing their flower stem (bolting) they are more difficult to kill. Escort or Ally at a .3 ounce rate per acre along with one quart of 2,4-D is effective through 50 percent flowering. Maintaining a good healthy stand of grass is very effective control.

Musk thistle leaves (left) are not as deeply serrate and lack hairs, while plumeless thistle leaves (right) are deeply serrate and have hair on the undersides.

Canada Thistle

Canada thistle is a perennial plant that reappears unless controlled. It spreads by seeds and extensive underground rhizomes. There are male and female plants. Both have to be present in order for viable seeds to be produced. Many of the small infestations in Lancaster County appear to have been spread by infested sod and nursery stock and are not producing viable seed because both the male and female plants are not present or the plants are being cut not allowing them to flower. This plant is very persistent when it infests a lawn or yard area. The usual lawn herbicides are not very effective in its control. Two herbicides available to commercial lawn applicators, Confront and Millenium, provide good control. Lawn broadleaf herbicides that include dicamba provide some control. Individual plants could be spot treated with Roundup. Digging will not provide control. Canada thistle in nonresidential areas could be treated with Tordon 22K at one quart per acre, or Curtail three quarts per acre or spot treat with two to five percent solution of Roundup Ultra.

Purple Loosestrife

Purple loosestrife plants are not difficult to control. But they can produce over a million tiny seeds per plant. These seeds can remain viable for many years until the conditions are right for their germination or they can be easily transported by water and other means to a site with saturated soil conditions where they can germinate. This is why it is very important that ornamental lythrum is removed from yards since their seeds will most likely contribute to the establishment of infestations of wild purple loosestrife along the streams and drainageways in the City and County. Ornamental plants can be killed with a broadleaf herbicide labeled or spot treated with Roundup avoiding contact with desirable plants. These plants could also be dug, removing all rootstock. Do not compost. Dispose of in secured black garbage bags with other refuse. Reinspect and treat uncontrolled plants. Wild infestations can be controlled with aquatic formulation of 2,4-D amine at two quarts per acre or spot treat with Rodeo at two ounces per gallon of clean water. Reinspect and treat uncontrolled plants.

Leafy Spurge

Leafy spurge is one of the most difficult weeds to manage because of its persistent nature. Anyone who manages this plant is frustrated by the poor long-term control herbicides provide and the length of time biological controls requires. To add to the frustration, "control" of leafy spurge is usually the only obtainable goal as eradication is not possible once it establishes its root system. Herbicides that provide effective control are Plateau/Oasis at 8-12 ounces in the fall with an application of 2,4-D in the spring to control seed formation or Tordon 22k at one pint per acre plus one quart of 2,4-D applied during the spring and fall. A two to five percent solution of Roundup can be used as a spot treatment. The Apthona species of flea beetle have provided some control over a long period.

Weed Awareness

Weed Control Web site

The Lancaster County Noxious Weed Control Authority Web site, **www.ci.lincoln.ne.us/cnty/weeds** provides very useful information about the Authority's program and activities and about weed control and management. The site received over 25,000 hits in 2001.

Via the Web site, you can:

- ➜ Contact the Noxious Weed Control Authority.
- ➜ Make a weed complaint.
- ➜ Make a real-time search of current weed inspections.
- ➜ Look at a map of noxious weed locations in the county.
- ➜ See the latest listing of possible weed special assessments.
- ➜ Study noxious weed and weed abatement laws and regulations.
- ➜ Learn about noxious weed identification.
- ➜ Read about the County Noxious Weed and City Weed Abatement Programs.
- ➜ See plans and reports.
- ➜ Check on noxious weed controls.
- ➜ Learn about managing natural areas in an urban setting.
- ➜ Test your knowledge about Nebraska weeds.

The site is continually being updated. The "Current Weed Inspections" search has just been added. By clicking on "Current Weed Inspections," anyone will be able to get information on any or all of our active ongoing weed inspections. The search will show the inspection number, weed type, parcel identification number, owners name, situs address, complaint date, first inspection date and the date that the landowner was contacted in person, by mail or publication of notice.

Links to Other Weed Control Web Sites:

- Nebraska Weed Control Association: www.neweed.org
- North American Weed Management Association: www.nawma.org
- Federal Noxious Weed Program: www.aphis.usda.gov/ppq/weeds

2002 Weed Control Plan

The Lancaster County Noxious Weed Control Authority has outlined the following for 2002:

Inspection Activity

The Authority estimates that it will make approximately 9,000 inspections of 4,000 sites to encourage landowners to manage their noxious weeds and provide for weed abatement.

The Authority will make inspection services available to those who request the inspection of articles capable of disseminating noxious weeds.

The Authority will also will make weed free forage inspections. A certificate and tags will be provided to allow for shipment and/or sale within or outside the state. Weed free certified hay often can be sold at a premium price.

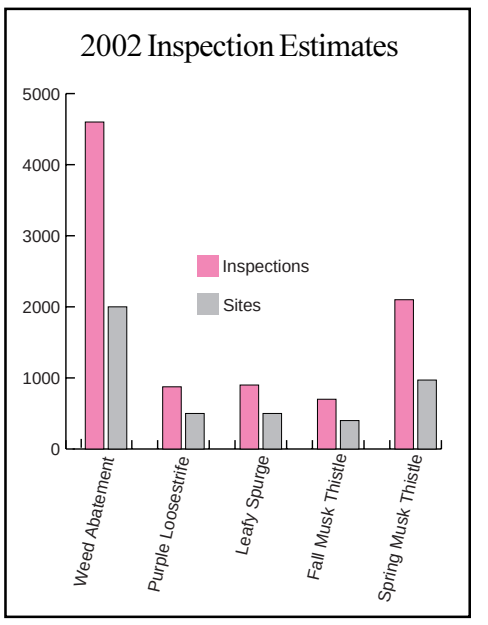
Prevent New Weed Problems

Efforts are planned to:

1. detect new occurrences of noxious weeds or plant species with noxious weed potential
2. respond to new occurrences found
3. prevent existing noxious weed infestations to new sites

Four invasive weeds have been selected for early detection, monitoring and response (see article below):

- Sericea Lespedeza
- Johnsongrass



- Diffuse Knapweed
- Spotted Knapweed

Prevent Spread of Noxious Weeds

Controlling noxious weeds on currently infested sites is very difficult. It takes a multi-year effort with persistence and several follow-up efforts each year. Efforts to prevent new sites from becoming infested are much easier and very cost effective. Even though prevention is simpler and obviously a good approach, prevention efforts have not become a common practice.

Increase Public Awareness

The Authority will continue efforts to educate landowners about noxious weeds and weed prevention.

Weeds That May Become Threats in Lancaster County

Four invasive weeds have been selected for early detection, monitoring and response by the Lancaster County Noxious Weed Control Authority. Landowners are asked to contact the Authority at 441-7817 if any of the following weeds are spotted:

Sericea Lespedeza

Johnsongrass

Spotted Knapweed

Diffuse Knapweed

Sericea Lespedeza

Sericea Lespedeza is a perennial that grows to five feet tall. The stems are erect with small hairs laying flat along the ridges on the stem. Leaves have three leaflets that are 1 to 1-1/2 inches long and less than 1/4 to 1/2 inch wide with the larger leaflets on the lower portion of the stem. They are wedge-shaped with small flat hairs on the lower surface. There are one to four flowers in the axils of the leaves with petals whitish to light yellow and may be tinged with purple.

Sericea Lespedeza was introduced to the United States from China in 1900 for erosion control. It contains tannin, which makes that plant essentially unpalatable to livestock with the exception of sheep and goats. Animals and the movement of infested hay spread Sericea Lespedeza. This plant is tolerant to drought. The seed may remain viable for more than 20 years.

Sericea Lespedeza is a major problem in Kansas where it has been designated a noxious weed. It has been found in southeast Nebraska and Lancaster County.

Johnsongrass

Johnsongrass is an introduced, creeping perennial that reproduces by seeds and stout horizontal rhizomes. The stems are erect. The plant may grow from two to eight feet tall. The stems are smooth, pithy, stout and leafy. The leaf blades are flat and have conspicuous midveins. The flowers and seeds are in large, open, reddish-purple panicles.

These grasses have escaped cultivation and become troublesome agricultural weeds in temperate to tropical regions throughout the world. Johnsongrass grows rapidly, is highly competitive with crops and can be difficult to control. Infestations in crops can reduce harvest yields significantly. It has been designated a noxious weed in 18 states.

Johnsongrass has not been considered a problem this far north. It has been found in Lancaster County and has persisted.

Spotted Knapweed and Diffuse Knapweed

Spotted Knapweed and Diffuse Knapweed are native to central Europe.

Spotted Knapweed is a simple perennial that reproduces from seed and forms a new shoot each year from a taproot. The plant can have one or more shoots up to four feet tall. Rosette leaves can be six inches long and deeply lobed. Leaves on shoots are smaller and finely divided, becoming smaller toward the top of the shoot and are covered with fine hair. Flowering heads are solitary and occur on shoot tips. They are up to one inch in diameter. Flower color usually is lavender to purple. Seed head bracts are stiff and black tipped, with five to seven pairs of short, feathery appendages. Seeds germinate in spring or fall. Perennial plants resume growth in early spring. Flowering occurs throughout the summer into fall.

Diffuse Knapweed is similar but has white to rose or purple flowers. The bracts surrounding each flower bear four to five pairs of lateral spines and one, long terminal spine.

Spotted Knapweed and Diffuse Knapweed have both been designated noxious weeds in Nebraska and have been found in north central and northeast Nebraska in rangeland, meadows and roadsides, especially sandy soils. They both could potentially be problem weeds in Lancaster County.