

Weed Awareness

Biological Control Methods Underway In Nebraska

Nebraska's noxious weeds are not native to the state and, in most cases, not native to the United States. These plants have been introduced either on purpose or by accident. When this happens, the natural enemies that can attack these plant species are usually left behind in the plant's home environment. Natural enemies are most often a plant disease or insect, which may attack one or several species of a plant.

Cooperators

Since 1988, the United States Department of Agriculture (USDA), divisions of Animal and Plant Health Inspection Service (APHIS) and Plant Protection and Quarantine (PPQ), in cooperation with the Nebraska Department of Agriculture (NDA) and the Nebraska Weed Control Association (NWCA), have been releasing biological control (biocontrol) agents for certain noxious weeds in Nebraska. These natural enemies are insects, which have been collected from their native environment.

Screening before the prospective biocontrols can be released, they are placed in quarantine to determine if they are host specific to the plants they are intended to control. (This means the agent will only attack the intended plant species and will not affect other plants, which are valuable to our environment.) Once the quarantine process is completed, the biocontrol agents are released in the field to establish insectaries. The insectaries are monitored for insect survival and population levels. When the desirable population is reached, the biocontrol agents are ready for redistribution to new locations to develop other



Aphthona lacertosa flea beetles have been released in Lancaster County to help control leafy spurge.

insectaries. After several insectaries have been established, small populations of agents are moved to smaller noxious weed infestations.

Future

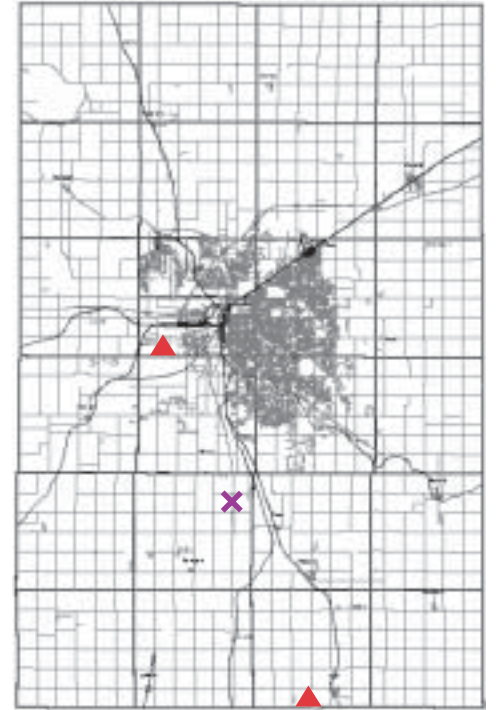
Currently, work is being done to pursue biocontrol agents for all of Nebraska's noxious weeds. USDA/APHIS/PPQ, NDA and NWCA are actively investigating new agents for release. While this approach may never completely control noxious weeds, we view biocontrol as another tool to help battle these invasive plant species.

Results

Biological control is just one part of an effective control program. It must be used along with other methods of control such as herbicides, mechanical and competitive vegetation. It takes many years after the initial release of biocontrol agents for the population to grow large enough to cause significant damage to the target plant. *Rhinocyllus conicus* (thistle-head weevil) is now having a significant impact on musk thistle, 30 years after it was first released.

Lancaster County Biocontrol Releases

There are three formal release sites in Lancaster County and informal type releases and/or spread from other counties of the thistle-head weevil. *Aphthona lacertosa*, a leafy spurge flea beetle was released in 1996 and 1999. *Gallerucella calmariensis*, a purple loosestrife beetle was released in 1998. These biocontrol agents have become established, but it will take several years before they have an impact or the sites can be harvested of insects for release to other sites.



Map of release sites for Lancaster County Biocontrol of Noxious Weeds

- ▲ *Aphthona lacertosa* (for control of leafy spurge)
- ✕ *Gallerucella calmariensis* (for control of purple loosestrife)
- Released county-wide *Rhinocyllus conicus* (for control of musk thistle)

Weeds and Biological Control Agents	
NOXIOUS WEED	INSECT CONTROL AGENT
Purple Loosestrife	<i>Gallerucella calmariensis</i>
Leafy Spurge	<i>Aphthona czwalinae</i> , <i>Aphthona lacertosa</i>
Musk (Nodding) Thistle and Plumeless Thistle	<i>Rhinocyllus conicus</i> , <i>Trichosiromus horridus</i>



Gallerucella calmariensis



Aphthona lacertosa



Rhinocyllus conicus

Amendments to the Nebraska Noxious Weed Control Act

The Agricultural Committee of the Unicameral has introduced LB 869 to amend the Nebraska Noxious Weed Control Act. LB 869 provides additional cash fund support for the Department of Agriculture's responsibilities under the Noxious Weed Control Act. The bill provides for a series of transfers from the Weed and Insect Book Cash Fund to the Noxious Weed Control Cash Fund and directs a portion of revenues from future sales of the weed book to the noxious weed program.

Additionally, the bill assigns two new weed management authorities to the Department of Agriculture to enhance tools for responding to noxious weeds and invasive plants. Specifically, LB 869 authorizes the director to 1) temporarily designate plants as noxious weeds and 2) to administer a grant program to encourage the formation of multi-stakeholder weed management entities and other types of projects led by local weed control authorities to proactively address noxious weed control concerns and emerging invasive plant problems. The grant program is not specifically funded but the director is authorized to seek grants and other revenue sources. The bill is also intended to coordinate with pending federal legislation that would provide federal pass-through funds to encourage eligible projects similar to those enumerated in the bill and thereby prepare Nebraska to effectively compete for and administer federal funds should they become available.

2004 Weed Control Plan

Inspections

The authority plans on making 7,300 inspections of 3,100 sites in the 2004 weed season to encourage landowners to voluntarily manage their noxious weeds and provide for weed abatement.

Weed Abatement

There are plans to make 4,200 inspections of 1,900 sites as a result of

complaints received and observations by inspectors. Advance inspections will be scheduled for about 100 problem sites. Pre-season letters will be sent to 170 owners with multiple violations last year.

Noxious Weeds

It is anticipated 3,020 inspections will be made on 1,200 sites. We have pre-selected 1,097 sites for inspection. This includes 150 sites on railroads, 130 sites

on county roadsides, 50 sites on the sanitary landfill and 767 sites on private land. These inspections will be made for the following noxious weeds:

- Purple loosestrife 47
- Musk thistle 766
- Leafy spurge 265
- Canada thistle 19

The authority will again contract for weed control on sanitary landfill sites.

Awareness

The education of the public concerning noxious weeds and weed abatement are a high priority. The Purple Loosestrife Information Campaign will continue. Assistance will be provided on use of natural areas. The "Be Neighbor Friendly" brochures on noxious weeds and weed overgrowth will be updated. The Internet homepage at www.ci.lincoln.ne.us/cnty/weeds will be maintained and updated. A Weed Awareness Insert will be prepared for the Cooperative Extension Service NEBLINE.

Program Management

Monthly reports provided to the City Council, Mayor and County Commissioners. Annual plan and budget will be prepared. Voluntary service will be utilized from community corrections to assist with office operations. Efforts will be coordinated with Parks & Recreation Department on maintenance of landscape plantings within sidewalk space.

Fifth Annual National Invasive Weed Awareness Week



Russell Shultz, the Authority Superintendent participated in a week-long series of events and activities held in Washington, DC during the Fifth Annual National Weeds Awareness Week, February 23-27. He is a board member of the North American Weed Management Association that works cooperatively with groups and other regional, national and private organizations to raise the awareness and increase understanding of invasive plant management issues in the United States.

Over 100 people from across the country participated in events that included exhibits and a children's fun day at the U.S. Botanical

Garden Conservatory. Presentations, briefings with U.S. Department of Agriculture and Interior Agencies, meetings with non-governmental groups and organizations, visits with Legislators and discussions on further enhancing the fight against invasive plants, were presented at the "kick-off breakfast."