**PURPLE LOOSESTRIFE**

**What You Should Know, What You Can Do**

**THE ACREAGE**

Purple loosestrife (Lythrum salicaria), a beautiful but aggressive invader, entered in eastern North America in the early 1800’s. Plants were brought to North America by settlers for their flower gardens, and seeds were used to weigh down the vessels for stability on the ocean. Since it was introduced, purple loosestrife has spread westward and can be found across much of Canada and the United States.

**THE PROGRAM**

Purple loosestrife is a very large problem which can rapidly degrade wetlands, diminishing their value for wildlife habitat. Wetlands are the most biologically diverse ecosystems on Earth and provide habitat for hundreds of species of plants, birds, mammals, reptiles, insects, fish and amphibians rely on healthy wetland habitat for their survival.

However, when purple loosestrife gets a foothold, the habitat it once had and wildlife lose, some simply relocate to.pk="0" data-url="http://www.canada.ca/en/environment-climate-change/services/wetlands-water/wetland-conservation/brochures/wetland-conservation.html" data-title="Wetland Conservation Program"

**THE CHALLENGE**

Many organizations throughout North America have put in place coordinated control efforts to combat the spread of purple loosestrife. Their success has been characterized by unprecedented cooperation. Federal and provincial, conservation, natural resource and environment agencies, universities, nursery trade associations and conservation groups have all contributed to the battle against purple loosestrife, and are represented in the purple loosestrife invasion by many awareness of the threat posed by this invasive plant and how to prevent its spread.

Individuals, resource managers and community groups can make an effective contribution to controlling purple loosestrife. For more information on purple loosestrife, contact the organizations listed on page seven for additional information.

---

**GUIDELINES FOR PURPLE LOOSESTRIFE CONTROL**

**HOW TO IDENTIFY PURPLE LOOSESTRIFE**

- **Low Density** (10-50 plants in the area)
- **Medium Density** 50 to 1,000 (0.1 – 0.5 hectares)
- **High Density** more than 1,000 (1 to 100 hectares)

**SET TO CHARACTER**: 000

**DON’T BE FooLED BY THESE LOOK-ALIKES**

- **Small**: less than 1 acre (0.4 hectares)
- **Medium**: up to 4 acres (1.6 – 2 hectares)
- **Large**: more than 4 acres (more than 2 hectares)

---

**HOW TO CONTROL PURPLE LOOSESTRIFE**

- **Spray** with herbicides after flowering
- **Cut** & **Burn** from late summer to early fall
- **Mechanical** with root cutting tools
- **Physical** by mowing or digging

---

**INCLUDED IN THIS BROCHURE**

- Ontario Federation of Anglers and Hunters
- Canadian Nursery Trades Association
- Ontario Ministry of Natural Resources
- Minnesota Department of Natural Resources
- Ducks Unlimited Canada
- Canadian Wildlife Service
- Universities
- Conservation organizations
- Nursery trades associations
- Natural resource and environment agencies
- National wildlife services, state/provincial conservation and community organizations have taken action to control the spread of purple loosestrife.
sprouting. For several years before seeds may lay dormant occur the following season, water, wind, wildlife and seeds are easily spread by As tiny as grains of sand, Depending on where you live, a dense web which chokes out other plant life. Each flower spike is made up of many individual flowers. Individual flowers have many individual flowers. They are usually arranged downy, with smooth edges. As flowers

### Purple Loosestrife

**THE PROBLEM**

- Sprouting from the root, spreading from a dense web which chokes out other plant life.

**THE CHALLENGE**

- Pulling, cutting or digging plants in these more extensive and can send out up to 30 to 50 shoots, creating colonies are likely to become established there.

**DONT BE FooLED BY THESE LOOK-ALIKES**

1. Swamp Loosestrife
2. Blue Vervain
3. Winged Loosestrife

**HOW TO CONTROL PURPLE LOOSESTRIFE**

- Ensure that your efforts to control the spread of purple loosestrife are effective. Before control activities begin, use the following diagram to estimate the size and density of the infestation, and select the following plants to choose one or more appropriate loosestrife control options.

- In areas too heavy inhabited by other plants that may spread as a result of seeds escaping the area, Biodegradable controls such as red pellets are a bit more effective, but have not been proven to be effective in the long term.

- Pulling purple loosestrife by hand is easiest when plants are young (up to two years) or when in sand. Pulling, cutting or digging plants in these more extensive and can send out up to 30 to 50 shoots, creating colonies are likely to become established there.

- Remove as much of the root as possible. Watch drainage ditches or streams leading from heavily infested areas, as new purple loosestrife plants are likely to be established there.

- Avoid using chemicals for weed control, as it kills only the above ground part, and may in fact contribute to the problem. However, chemical control is used in the United States to combat purple loosestrife, especially in water. However, as of 1996, spraying is not recommended as it kills all broad-leaved plants. This also provides an opportunity for seeds present in the soil to sprout.

- Be sure you are correctly identifying purple loosestrife! A permit is required for dividing purple loosestrife near or in water, however, as of 1996, spraying is not recommended as it kills all broad-leaved plants. This also provides an opportunity for seeds present in the soil to sprout. Chemical control is used in the United States to combat purple loosestrife, especially in water. However, as of 1996, spraying is not recommended for this type of application due to the potential for adverse effects on fish and wildlife. Additional research is needed to determine the effectiveness of this method for long-term control in the wild, and there are currently no authoritative recommendations for spraying in the wild.
**BIOLOGICAL CONTROL**

**FIND THE BIOLOGICAL CONTROL AGENTS**

Finding biological control agents can be a daunting task. To identify potential biological control agents for purple loosestrife, the North American Invasive Species Council and the consultants at the University of Guelph used the following process:

1. **Identify the Insect**
   - Purple loosestrife is a wetland plant that is not native to North America. It spreads rapidly, causing ecological and economic damage. Biological control agents are needed to manage its population.

2. **Select the Target Species**
   - The target species is the biological control agent that will be released to control purple loosestrife. The agents selected must be specific to purple loosestrife and not affect other native species.

3. **Testing**
   - Biological control agents are tested in controlled environments to evaluate their effectiveness and compatibility with other organisms. The testing process includes feeding trials and field verification to ensure the agents will not cause harm to other species.

4. **Release**
   - Once testing is complete, biological control agents are released in targeted areas where purple loosestrife is present. The agents are monitored to evaluate their effectiveness and impact on the plant population.

**THE IMPACT OF BIOLOGICAL CONTROL ON PURPLE LOOSESTRIFE**

Biological control agents have had a significant impact on purple loosestrife populations. By reducing the plant's reproduction and spread, the agents have helped to restore wetland ecosystems and improve water quality.

**THE BENEFITS OF BIOLOGICAL CONTROL**

Biological control is a sustainable approach to managing invasive species. It reduces the risk of introducing new pests and diseases and minimizes the environmental impact of chemical control methods.

**THE DISADVANTAGES OF BIOLOGICAL CONTROL**

While biological control can be effective, it is not a quick solution. It can take years to see significant reductions in purple loosestrife populations, and the success of the agents depends on various factors, such as climate and habitat.

**SUMMARY**

Biological control agents have been successfully used to manage purple loosestrife populations in North America. Continued monitoring and evaluation of the agents will be necessary to ensure their effectiveness and safety.

---

*Images: Insect photos courtesy Don Hamilton, University of Guelph.*
In some states and provinces, numerous weed laws or other environmental laws make it illegal to plant purple loosestrife. Cultivars and its cultivars. However, it is still possible to grow purple loosestrife seeds are present in some wildflower seed mixes. Check the label before you buy any seed packages.

Several species of garden perennials display characteristics similar to purple loosestrife. They are not host to our natural environment. The following plants are some of the environmentally-friendly species available at garden centres and nurseries.

**SALVIA** (Salvia splendens)

A wildflower of wet areas in North America. This plant has spikes of scarlet-red flowers in summer. Excellent beside a pond or stream.

**ASTILBE** (Astilbe)

This spectacular perennial produces flowers in a variety of colors ranging from blue to pink and white. The flowers form large 0.5m (2') spikes along the 1-1.75m (3-5') stem. It grows best in full sun and good garden soil.

**LUPINES** (Lupins)

A hardy perennial that is drought resistant and somewhat bug-proof. Most gardeners have blue to pink and crimson. Availability and appropriateness of the lupine species and their varieties will vary in the different geographic areas of North America.

**SALVIA** (Salvia splendens)

A wildflower of wet areas in North America. This plant has spikes of scarlet-red flowers in summer. Excellent beside a pond or stream.

**ASTILBE** (Astilbe)

This spectacular perennial produces flowers in a variety of colors ranging from blue to pink and white. The flowers form large 0.5m (2') spikes along the 1-1.75m (3-5') stem. It grows best in full sun and good garden soil.

**LUPINES** (Lupins)

A hardy perennial that is drought resistant and somewhat bug-proof. Most gardeners have blue to pink and crimson. Availability and appropriateness of the lupine species and their varieties will vary in the different geographic areas of North America.

**SALVIA** (Salvia splendens)

A wildflower of wet areas in North America. This plant has spikes of scarlet-red flowers in summer. Excellent beside a pond or stream.

**ASTILBE** (Astilbe)

This spectacular perennial produces flowers in a variety of colors ranging from blue to pink and white. The flowers form large 0.5m (2') spikes along the 1-1.75m (3-5') stem. It grows best in full sun and good garden soil.

**LUPINES** (Lupins)

A hardy perennial that is drought resistant and somewhat bug-proof. Most gardeners have blue to pink and crimson. Availability and appropriateness of the lupine species and their varieties will vary in the different geographic areas of North America.

**SALVIA** (Salvia splendens)

A wildflower of wet areas in North America. This plant has spikes of scarlet-red flowers in summer. Excellent beside a pond or stream.

**ASTILBE** (Astilbe)

This spectacular perennial produces flowers in a variety of colors ranging from blue to pink and white. The flowers form large 0.5m (2') spikes along the 1-1.75m (3-5') stem. It grows best in full sun and good garden soil.

**LUPINES** (Lupins)

A hardy perennial that is drought resistant and somewhat bug-proof. Most gardeners have blue to pink and crimson. Availability and appropriateness of the lupine species and their varieties will vary in the different geographic areas of North America.

**SALVIA** (Salvia splendens)

A wildflower of wet areas in North America. This plant has spikes of scarlet-red flowers in summer. Excellent beside a pond or stream.

**ASTILBE** (Astilbe)

This spectacular perennial produces flowers in a variety of colors ranging from blue to pink and white. The flowers form large 0.5m (2') spikes along the 1-1.75m (3-5') stem. It grows best in full sun and good garden soil.

**LUPINES** (Lupins)

A hardy perennial that is drought resistant and somewhat bug-proof. Most gardeners have blue to pink and crimson. Availability and appropriateness of the lupine species and their varieties will vary in the different geographic areas of North America.

**SALVIA** (Salvia splendens)

A wildflower of wet areas in North America. This plant has spikes of scarlet-red flowers in summer. Excellent beside a pond or stream.

**ASTILBE** (Astilbe)

This spectacular perennial produces flowers in a variety of colors ranging from blue to pink and white. The flowers form large 0.5m (2') spikes along the 1-1.75m (3-5') stem. It grows best in full sun and good garden soil.

**LUPINES** (Lupins)

A hardy perennial that is drought resistant and somewhat bug-proof. Most gardeners have blue to pink and crimson. Availability and appropriateness of the lupine species and their varieties will vary in the different geographic areas of North America.