

Leafy Spurge in Manitoba

- The newsletter of the Leafy Spurge Stakeholders Group -

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Goats do Bang Up Job on Leafy Spurge

What do you do if you have a noxious weed problem like leafy spurge? Well the first thing to understand is why some weeds become noxious. Some non-native plants become bad weeds because they have competitive growth habits, are unpalatable to livestock and arrive in our country with no pests or diseases. This combination of factors combined with our land management practices equals one big headache.

To deal effectively with leafy spurge you have to hit it where it hurts. And that means taking away its competitive advantage. Why does spurge do so well in our pastures? Because we actually manage the land to favor the spurge, not discourage it. In Manitoba livestock producers generally graze only one species of livestock, mostly

cattle or horses. Neither of these animals will eat spurge and that gives the spurge a huge competitive advantage.

Herein lies the secret to controlling leafy spurge. Spurge really can't take grazing pressure! Three to 5 years of grazing will reduce spurge stands significantly. If our forage grasses and legumes were this wimpy, we wouldn't have a livestock industry! Odd as it may seem, cattle and horses will suffer, possibly even die, from irritation to the skin, mouth and digestive tract if forced to eat spurge. But sheep and goats can eat large amounts of it without a problem and even do well on it.

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Leafy Spurge Tour and Research Discussion

On June 20, 2002, the Leafy Spurge Stakeholders Group hosted a leafy spurge tour and research discussion. This event was well attended by members of Brandon University, Manitoba Agriculture and Food, the University of Manitoba, and representatives from the Leafy Spurge Stakeholders Group. Brandon University faculty members Dr. Robin Marles and Dr. Bill Paton (Botany) and retired professor Mr. Al Rogosin also participated.

The purpose of this day was to identify areas where leafy spurge research is needed, as well as to increase interest in finding a solution to the problem.

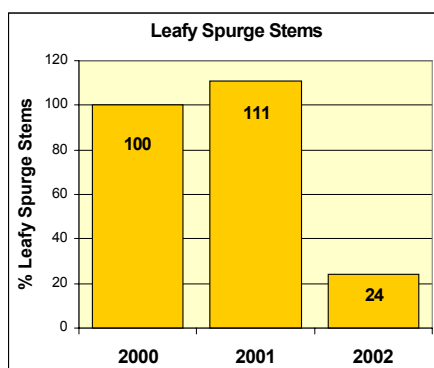
The morning began with a tour of various leafy spurge control sites around Brandon. These included a bio-

control release site, a visit to a multi-species grazing pasture (the goats proved very popular), as well as integrated management research plots. Brief introductory speeches given at each site were followed by questions and lively conversation surrounding the control measures.

Prior to the research discussion in the afternoon, Dr. Paul McCaughey presented the Strategic Analysis of Leafy Spurge Control Options for the LSSG Research Committee. Dr. McCaughey is a beef pasture management researcher from Agriculture and Agri-Food Canada in Brandon.

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Goats and Leafy Spurge Continued



In 2000 a project began just north of Wawanesa to demonstrate the use of multi-species grazing. If single species grazing can allow noxious weeds to take hold, then it stands to reason that it can be corrected by including livestock that will graze the problem plants.

Goats were stocked at about one goat per acre and grazed with 14 head of cattle on 100 acres of pasture. A continuous grazing system was used partly because other studies indicate that this will reduce spurge the quickest and partly because it worked well for the producer. However, rotational grazing systems also work but take just a little longer for the same results. The key to leafy spurge control is to repeatedly graze the plant through the growing season.

The goats and cattle soon adapted to each other and a routine established. The cattle quickly realized the goats were cleaning up the spurge and followed along behind them to eat the grass. Cattle avoidance of spurge is so great that they won't eat grass

within leafy spurge patches and goats really prefer spurge to grass. A match made in heaven.

In year one of the project stem density counts were taken. Although this site did not have dense stands of leafy spurge, it did occupy every square foot of the pasture. By the second year leafy spurge stem counts rose slightly, but each plant was smaller and later to bloom. By the third year spurge showed a significant weakening and stem counts dropped by 76%.

This project is following the same pattern as other grazing studies. The biggest decline of leafy spurge can be expected between 3 and 5 years after the introduction of sheep or goats to the grazing system.

- Jane Thornton
Manitoba Agriculture
and Food

Who is the LSSG?

The Leafy Spurge Stakeholders Group (LSSG) was formed in the fall of 1998 to examine the issues and impacts of leafy spurge. The LSSG is a broad coalition of agricultural and conservation groups and all three levels of government. This coalition is spearheaded by the Weed Supervisors Association of Manitoba and coordinated by Brandon University's Rural Development Institute (RDI).

The goals of the LSSG are to design a process whereby an integrated and comprehensive approach to a province-wide strategy can be effectively and efficiently implemented. It is hoped that the RDI / LSSG partnership will result in the establishment of a centre of excellence for leafy spurge issues and research in the Province of Manitoba.

The second goal of the LSSG is to design a strategy to reduce levels of leafy spurge infestation in those areas of the province most severely affected.

The LSSG has the following publications available. Some are in .pdf format on the LSSG website (www.brandonu.ca/rdi)

Leafy Spurge Prevention and Control: Integrated Pest Management Manual (2002)

Increased Forage Production through the Bio-control of Leafy Spurge (2002)

Bio-Control of Leafy Spurge in Support of Recovery of Species at Risk (2001)

Impact of Biological Control Agents on Leafy Spurge in Manitoba (2001)

Impact of Biological Control Agents on Leafy Spurge in Manitoba (2000)

Leafy Spurge Field Work – Jiggins Bluff (Ducks Unlimited 2000)

Leafy Spurge: The Silent Invader (A factsheet, with the Mixed Grass Prairie Stewardship Project, 2000)

Economic Impact Assessment (2000)

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Leafy Spurge Tour & Research Discussion Continued

There were also presentations on current research and control efforts in Alberta and Saskatchewan. Dr. Rob Bouchier, an entomologist with Agriculture and Agri-Food Canada in Lethbridge, Alberta, spoke of his research with leafy spurge flea beetles and the results of his programs. Dr. Garry Bowes, coordinator of the Saskatchewan Integrated Noxious Weeds Management Program, emphasized an integrated management containment and exclusion method for landowners, which is proving effective in Saskatchewan.

The research discussion also proved fruitful, with many new ideas exchanged and discussed. Specific areas for research were pinpointed, and agencies that should be contacted for support and education were identified. Everyone contributed his or her thoughts on how to

achieve a coordinated provincial leafy spurge control effort.

Even though the field season has concluded, we hope to keep up the interest in leafy spurge management through the winter. The Rural Development Institute and the Leafy Spurge Stakeholders Group will be setting up displays and giving presentations at venues such as the Manitoba Grazing School, Ag Days, and Beef Days. And on January 16 and 17, 2003, the LSSG will host a Leafy Spurge Forum for producers and municipal councillors as well as researchers. Keep posted to the Leafy Spurge Web site at www.brandonu.ca/rdi for further information on this major event.

- Jennifer Pachkowski
Field Technician



*Jennifer Pachkowski
Field Technician
Rural Development
Institute
Brandon University*

LSSG Fights the Scourge of Spurge !

The Webster Dictionary defines "scourge" as "one who destroys". Perhaps this is a very fitting description for the leafy spurge plant. And certainly as we look at the role of the Leafy Spurge Stakeholders Group, there is no doubt that we have a major task on our hands in trying to contain the spread of this most insidious weed.

A little less than a year ago, having worked in agriculture for many years and being aware of the problems leafy spurge was causing, I took on the Chair of the LSSG believing that a major coordinated effort was needed if we were going to be effective in containing and partially controlling this noxious weed. Nine months later I am even more convinced that leafy spurge is a problem that is not only continuing to spread but is also having major economic consequences.

With these thoughts in mind the LSSG is working with its many stakeholder members in support of

research and communication programs aimed at containing and managing leafy spurge. Following are some of the main areas where the LSSG has been concentrating its efforts over the last few months:

- ◆ Developed a "Leafy Spurge: Issues and Strategies for the Province of Manitoba" document which was forwarded on to the Minister of Agriculture and Food.
- ◆ Established a Research Committee. With feedback from a LSSG sponsored Research Forum, the Research Committee then proceeded to develop a Strategic Plan for Leafy Spurge Research.
- ◆ Assisted the Research Committee in the development of a major research initiative that will focus on learning how to better manage leafy spurge in beef and horse pastures.

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Field of Leafy Spurge



Wayne Digby, PAg
Chairperson
Leafy Spurge
Stakeholders Group

Scourge of Spurge Continued

- ◆ Planned a Leafy Spurge Forum (to be held in conjunction with Ag Days) this coming January.
- ◆ Supported a number of projects aimed at both control of leafy spurge as well as at assisting municipalities and land owners in developing control strategies for leafy spurge.
- ◆ Supported extension and education events such as leafy spurge tours, workshops, presentations and displays.

The main function of the LSSG is that of providing coordination for the many stakeholder agencies who are trying to address the challenges of controlling and containing leafy spurge. However, to continue this kind of work requires resources. So over the next few months we will be talking to many of the LSSG stakeholders as well as to potential new stakeholders as we seek out resources to continue the struggle against “**the scourge of spurge**”.

-Wayne Digby, PAg
Chairperson, LSSG

RDI Bio-Control Research

The spring and summer of 2002 marked the final year of the three-year field research study, *The Impact of Biological Control Agents on Leafy Spurge in Manitoba*. The study was funded through the Matching Investment Initiative of Agriculture and Agri-Food Canada with the cooperation of Ducks Unlimited (DU), Manitoba Weed Supervisors Association (MWSA) and the Rural Development Institute (RDI).

Years I and II of the project focused on the establishment of a database on the population and survival rates of the brown flea beetle, *Aphthona lacertosa*, released on selected sites in 1997 by the MWSA.

For year III, Ms. Pauline Morton conducted the field study with the assistance of Ms. Deatra Walsh, a Masters of Rural Development student at Brandon University. Based on the findings from year I and II, Morton and Walsh focused their efforts on assessing the beetle population density at six of the 1997 biological control release sites and monitoring the DU beetle nurse site located at Jiggen's Bluff south of Oak Lake.

New activities for Year III included establishment of additional nurse and control release sites for beetles. Morton and Walsh also initiated a dispersal experiment to examine beetle behavior. Preliminary results of the field study indicate that six of the original 1997 release sites continue to have high

densities of beetles. At least one of the sites exhibited a significant reduction in leafy spurge.

Dr. Rob Bouchier of the Lethbridge Research Station and Dr. Paul McCaughey of the Brandon Research Station provided technical and scientific guidance on the project. Brandon University faculty members, Dr. Robin Marles, Dr. Bill Paton and retired BU professor Al Rogosin assisted the field research team throughout the course of the project.

RDI is currently developing research plans to continue the study of biological control of leafy spurge. These plans also include working with faculty in the Department of Economics at Brandon University to undertake an economic impact assessment of leafy spurge.

Further details on the findings from the three-year field study as well as an update on the economic impact of leafy spurge will be presented at the Leafy Spurge Forum being held January 16th and 17th, 2003. Day one of the Forum, aimed at producers, will be held in conjunction with Ag Days, while the second day, designed more for researchers, will be held at the Brandon Research Station. Visit the Leafy Spurge Web site at www.brandonu.ca/rdi for additional information.

- Karen Rempel
Research Associate RDI



Karen Rempel
Rural Development
Institute
Brandon University

Innovative & Sustainable Practices for the Control of Leafy Spurge in Manitoba

The Innovative and Sustainable Practices for the Control of Leafy Spurge in Manitoba is designed to foster research activities, transfer knowledge and increase public awareness initiatives of the impacts of leafy spurge on the environment, community, and economy.

Since controlling leafy spurge in Manitoba is a multi-faceted undertaking, the project has identified three priority areas that involve a diverse range of stakeholder interest. The three identified priorities are:

- (I) Sustainable Community Development / Understanding Our Environment
- (II) Ecosystem Conservation and
- (III) Sustainable Agricultural Practices.

This project is unique to Manitoba. The current practice of reacting to complaints and site specific weed problems will not be successful in the long term. Individuals, agencies and organizations currently undertake separate, uncoordinated and nominal efforts at controlling and managing leafy spurge. Through this project, there will be a coordinated, integrated effort to complement individual efforts.

The target groups for this project include agricultural producers, landowners, the real estate industry, municipal governments, wildlife and conservation organizations across the Province of Manitoba.

The ultimate goal of the project is to establish a centre of excellence in research and provide a clearinghouse for the dissemination of knowledge through the Rural Development Institute (RDI) at Brandon University.

The objectives of the project are
(I) to increase awareness of leafy spurge among the general public, landowners/managers, and governments

(II) to disseminate accurate information about its extent and impact through a coordinated effort of agencies and individuals dealing with and affected by leafy spurge

(III) to provide landowners/managers information from which they can design appropriate programs for control and management of leafy spurge on their properties

(IV) to enhance and promote research activities and knowledge transfer, and
(V) to identify current and further potential for research activities and demonstrations.

The long term intention of this project is two-fold: first, to design a strategy or strategies to reduce levels of leafy spurge infestation in those areas of the province most severely affected; and secondly, to design a process whereby an integrated and comprehensive approach to a province-wide strategy can be effectively and efficiently implemented.

For more information, check out our website at www.brandonu.ca/rdi.

- Ryan Gibson
Rural Development Institute



“designed to foster research activities, transfer of knowledge, and increase public awareness initiatives of the impacts of leafy spurge”

Manitoba Conservation
Sustainable Development
Innovations Fund



Leafy Spurge Forum

January 16, 2003

Keystone Centre

Chairperson: Don Bromley

1:00 **Leafy Spurge – A Disaster in the Making**

Wayne Digby, PAg

Chairperson

Leafy Spurge Stakeholders Group

Have you Considered the Economics of Leafy Spurge Control?

Dean A. Bangsund

Research Scientist, Department of Agricultural Economics

North Dakota State University

Contain and Control Leafy Spurge on your Farms

Garry Bowes, PhD

Program Coordinator

Saskatchewan Integrated Noxious Weeds Management Program

Species At Risk

Heather Felskie

Species At Risk Extension Specialist

Agriculture & Agri-Food Canada – Prairie Farm Rehabilitation Administration

Panel Discussion

John Johnston, Weed Supervisor – What Some Municipalities are doing to Control Spurge

Brian Greaves, Producer – Using Multi-Species Grazing for Spurge Control

Gerry Williams, Producer – Controlling Spurge on Your Own Farms



Leafy Spurge Forum Presenters



Dean Bangsund is a research scientist in the Department of Agribusiness and Applied Economics at North Dakota State University in Fargo, North Dakota. He has 15 years of academic research experience in the areas of natural resource management, impact of agricultural industries, community development, and rural socio-economic issues. He has been an author on over 140 research reports and has made numerous presentations at state, national, and international symposiums. He received his Masters and Bachelor of Science Degrees in agricultural economics from North Dakota State University.

... more presenters on pages 7 and 8

Leafy Spurge Forum

January 17, 2003

Brandon Research Station

Chairperson: Paul McCaughey

9:30 **Leafy Spurge – A Disaster in the Making!**

Wayne Digby, PAg

Leafy Spurge Stakeholders Group

Fatteneh Zehtab-Jadid

Lecturer, Department of Economics
Brandon University

Integrated Method of Containing & Controlling Leafy Spurge

Garry Bowes, PhD

Program Coordinator

Saskatchewan Integrated Noxious Weeds Management Program

Economic Impact of Leafy Spurge on the Northern Great Plains

Dean A. Bangsund

Research Scientist, Department of Agricultural Economics

North Dakota State University

Lunch and Keynote Speaker

Heather Felskie

Species At Risk Extension Specialist

Agriculture & Agri-Food Canada – Prairie Farm Rehabilitation Administration

Range Management & Leafy Spurge Control

Kevin Sedivec, PhD

Extension Rangeland Specialist, Department of Animal & Range Science

North Dakota State University

Bio-Control Research Projects

Pauline Morton

Research Assistant

Rural Development Institute (Brandon University)

Long Term Biological Control Success

Sherry Puhnak

Natural Resources & Safety Technician

Canadian Forces Base – Shilo

Chemical Control

Kim Brown

Weed Specialist

Manitoba Agriculture and Food

Profile of the Integrated Pest Management Approach

John Johnston

Weed Supervisor

Glenwood Cameron Sifton Weed District



Although Heather Felskie is currently working for PFRA, thousands of Saskatchewan school children know her as the "Owl Lady". For 5 years Heather was the Director of the Saskatchewan Burrowing Owl Interpretive Centre. With one of the SBOIC imprinted owls, Luna or Scamper, Heather traveled to rural prairie schools to educate students and adults alike on the plight of the burrowing owl and its tie to the dwindling native prairie habitat. Now with PFRA, Heather is working to raise awareness about all prairie Species at Risk. Heather is also spearheading work on testing Beneficial Management Practices for SAR.

Leafy Spurge Forum Presenters



Wayne Digby holds a Bachelor of Science in Agriculture Degree in addition to a Masters in Adult Education. Wayne has considerable experience in needs assessment, project development, project management and agricultural extension from both a Canadian and International perspective. For the past 17 years Wayne has worked as the Regional Director, Southwest Region with Manitoba Agriculture and Food. Previous to that he was the Agricultural Representative in the Killarney area, Senior Livestock Officer in Botswana, Africa, as well as Rural Development Counselor in the Swan River and Russell areas.

Since January 2002 Wayne has managed his own company, Digby Consulting, providing community energy development consulting in areas such as ethanol and wind power. While with Manitoba Agriculture and Food Wayne was very concerned about Leafy Spurge and recognized the need for a major effort to control or contain the spread of this weed. For the past year Wayne has served as Chair of the Leafy Spurge Stakeholders Group.

Garry Bowes was born and raised on a mixed grain farm located near Portage la Prairie, MB. Garry was educated at the University of Manitoba where he completed his Bachelor of Science in Agriculture (Plant Science) in 1964, followed by his Masters in Science in 1966 (Plant Science). In 1974, Garry received his PhD in Ecology from the University of Guelph.

The Research Branch of Agriculture and Agri-Food Canada employed Garry as a scientist for 30 years. He researched user-friendly methods to control noxious weeds (scentless chamomile and leafy spurge) and brush. For a year and half, he was employed by PFRA as a Senior Pasture Analyst where he measured the amount of brush and its rate of spread on PFRA pastures.

Today, Garry is the coordinator of the Integrated Noxious Weed Management Program for Saskatchewan. This is a 4.5-year project on awareness and control of scentless chamomile and the biological control of persistent perennial weeds. The Agri-Food Innovation Fund (AFIF) and Technology Adoption and Demonstration (TAD) Fund, through the Saskatchewan Association of Rural Municipalities, in cooperation with Saskatchewan Agriculture and Food fund this program.



Kevin K. Sedivec, PhD is an Associate Professor/Extension Rangeland Specialist with Animal and Range Sciences Department at North Dakota State University, Fargo. Kevin has been a State Specialist since 1989, and has held Professor status since 1995 at NDSU.

He has worked with grazing and leafy spurge control since 1990. He has published numerous articles on grazing impacts on leafy spurge infested rangeland using multi-species approaches, multi-species grazing in combination with bio-control, fire and herbicide effects, herbicide impacts, and nutritional status of noxious weeds. Some of his articles have appeared in the *Journal of Range Management and Weed Technology*.



2002 Field Season

“Bio-control of Leafy Spurge in Support of Species at Risk” is one of the projects that I worked on this past field season. I spent some time revisiting last year’s leafy spurge bio-control release sites, as well as performing new releases in other areas. This project is only in its second season, so no definite conclusions can be drawn from the research thus far. However, I am encouraged by the initial results.

One of the more inspiring activities included in this project involved interviewing a local family about their efforts towards conservation of the rare small white lady’s slipper. Their motivation comes from a genuine love and respect of the prairie landscape as well as a desire to preserve it for the future. Biological control, combined with careful herbicide application after the small white lady’s slipper plants have died back, has kept the small amount of leafy spurge under control in the lady’s slipper habitat. These control methods have also dramatically reduced leafy spurge densities in other areas on the property.

This concern and effort towards conservation is also seen in other landowners who were interviewed as part of the Species at Risk project. These landowners are trying to conserve the western spiderwort, which although more populous than the small white lady’s slipper, has been assigned the threatened status in Manitoba due to diminishing habitat. Encroaching brush and trees as well as fierce competition from leafy spurge are taking over prime areas where the western spiderwort is found. The LSSG is using biological control methods (in the form of *Aphthona* flea beetles) to try to control leafy spurge in these ecologically significant areas.

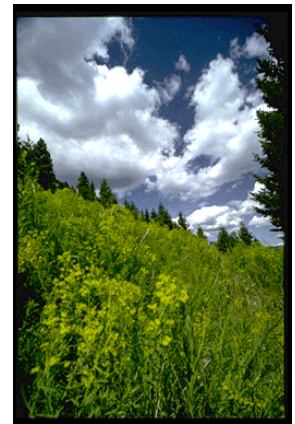
Another project, “Best Practices: Manitoba Municipalities and Integrated Control Strategies for Leafy Spurge”, involved increasing awareness at the municipal level about the extent and impact of leafy spurge infestations. Four rural municipalities lacking

aggressive leafy spurge control programs were invited to participate in this project. The council members were very generous with donating their time and they were open about their thoughts with leafy spurge control. This produced some surprising results. Although two of the municipalities did not have any set weed control programs, councillors were found to be extremely knowledgeable about the leafy spurge infestations in their wards. Many of the councillors live in rural areas and fight leafy spurge on their own properties. The other two municipalities have general weed control programs in place, which they feel are sufficient to deal with their infestation levels.

High costs involved in control, and other, higher priority issues were the most common reasons given by municipal councillors for not implementing targeted control programs. My role was to provide the councils with more information on how costly the leafy spurge problem is, as well as to stress that putting off controlling leafy spurge will only lead to far higher costs in the future.

John Johnston, weed supervisor for the Glenwood, Cameron, Sifton Weed District, helped me in this regard by sharing his expertise with those who attended the workshop, one of the project’s deliverables, on October 1. Because most municipal councillors were unable to attend due to the late harvest and previous commitments, the workshop was modified to reflect the diversity of those who were able to come. These included representatives from Brandon University’s Department of Economics, a designated weed supervisor from one of the municipalities, the manager of the Mid-Assiniboine River Conservation District, as well as the Manitoba Agriculture and Food contact for this project. John’s presentation inspired the group and allowed for a range of questions and ideas on the issue of controlling leafy spurge.

After John’s presentation, participants were given a weed management plan template (based on a template produced by the Nature Conservancy), and a brief explanation on how it should be used. The template is extremely useful in that it can



be adapted to reflect the situation and needs of the user. It clearly guides the reader through each step of the planning process, from establishing management goals to implementing the management plan.

We hope that the new councils elected this fall will carry on with any initial work or ideas started this past summer, and use the weed management plan template to help them control leafy spurge more effectively.

- Jennifer Pachkowski
Field Technician
Rural Development
Institute
Brandon University

Economic Impact Assessment Executive Summary

In the summer of 1999, the Leafy Spurge Stakeholders Group embarked on a project to develop an estimate of the leafy spurge infestation in Manitoba and its potential impact. Data on infestation levels was obtained from three main sources. These sources included (I) a survey of weed control districts conducted by Weed Supervisors (II) reports from Manitoba Agriculture Representatives on estimates of infestation in 112 rural municipalities and (III) a 1981 survey from which data was extrapolated to provide information for those rural municipalities for which there were no other data sources. The group relied on the analysis model developed at North Dakota State University (NDSU).

There are four steps to the impact analysis methodology, which are as follows: (I) identify the potential impact of the infestation by land-use type (II) determine the impact in quantitative terms (III) calculate the direct economic impacts in financial terms and (IV) estimate the secondary impacts.

Data from the study undertaken by the Leafy Spurge Stakeholders Group estimates that the net economic impacts associated with the leafy spurge infestations in Manitoba may be approaching **\$20 million** per year. It is estimated that at least **340,000 acres** are impacted. Without control actions being initiated to limit the growth rate of the infestation, it is possible that the impacted acres (and associated economic impacts) could increase rapidly.

The total annual economic impact on pastureland is estimated at **\$16 million**. An estimated **225,000 acres** of grazing land is infested in Manitoba with a potential impact of a reduced herd size of **16,540 head**. Leafy spurge costs Manitobans more than **\$5 million** per year in increased producer income (\$2 million per year) and reduced production expenditures (\$3 million per year). Potential secondary economic impacts on other business sectors are estimated at **\$11 million** per year. Additionally, land values are potentially reduced by over **\$30 million**. This brings potential increased property tax implications for owners of croplands and residential holdings as land values are reassessed. If taxes on infested acres may be reduced due to lower assessment values, taxes on other lands may have to be raised to compensate for the lost revenue.

The potential direct and indirect economic impact on public land is **\$2.5 million**. In terms of recreation, direct impacts could amount to **\$674,000** per year, with secondary economic impacts of **\$1.55 million** per year. These estimates are related to reduced expenditures on consumptive and non-consumptive wildlife-associated recreation. Approximately **107,000**

acres of public lands are infested. Most of these acres are primarily identified in the sandy-soil and sand-duned terrain associated with the Carberry Sandhills as well as the Assiniboine and Souris River basins. Riding Mountain, Duck Mountain and the sandy-soil areas east and southeast of Winnipeg may also be vulnerable to this noxious weed.

Potential watershed impacts were estimated at **\$281,000** per year (direct impacts of \$157,000 and secondary impacts of \$124,000).

Estimated control costs for rights-of-way are **\$400,000** per year. This figure includes (I) Weed Control Districts cost of \$300,000 (II) Highways Department cost of \$53,000 (III) Railways cost of \$12,000 and (IV) an undetermined cost of Pipelines and Hydro.

The LSSG recognizes there are gaps in the data that leads to potentially underestimating the total scale of the infestation and economic impacts. Infestation rates for many municipalities were not provided. Based on a 1981 survey, it is known that some municipalities not included in weed districts had moderate to heavy infestations of leafy spurge at that time and several other municipalities had light infestation. The amount of infested public land may be understated as some parks and provincial forests were not included in the sample.

For the full report, please visit www.brandonu.ca/rdi.

	Grazing Land	Public Land	Rights of Way
Direct Annual Impacts	> \$5 M	\$0.8 M	\$0.4 M
Secondary Annual Impacts	> \$11 M	\$1.7 M	N/A
Total Annual Impacts	> \$16 M	\$2.5 M	\$0.4 M
			 Over \$19 M per year

Association of Manitoba Municipalities Resolution

AMM Resolution 52-2002

Provincial Support for Municipal Weed Control
Sponsor: RM of Roblin

WHEREAS the Province has named leafy spurge and milkweed as noxious weeds;

AND WHEREAS municipal government bodies provide the majority of chemical and other controls of leafy spurge and milkweed, whereby each municipality determines the type and level of control imposed;

AND WHEREAS the costs of controlling leafy spurge and milkweed are increasing each year;

THEREFORE BE IT RESOLVED that the Association of Manitoba Municipalities lobby the Province to provide an adequate support program that requires participation by all municipalities to control and eradicate leafy spurge and milkweed from Manitoba



Leafy Spurge Forum Registration

Please pre-register for the Leafy Spurge Forum Friday, 17 January 2003.
For more information call (204) 571-8550 or (204) 571-8551.

Name: _____

Organization: _____ Position: _____

Address: _____

City/Town: _____ Prov _____ Postal Code: _____

Telephone: _____ Fax: _____

E-mail: _____

Fax this form to (204) 729-9090 or mail it (address on reverse side). Don't forget to visit our website, www.brandonu.ca/rdi.



Leafy Spurge Stakeholders Group

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We're on the Web!

See us at:

www.brandonu.ca/rdi

Members of the Leafy Spurge Stakeholders Group

- Keystone Agricultural Producers
- Manitoba Conservation
- Canadian Wildlife Service
- Nature Conservancy of Canada
- Manitoba Habitat Heritage Corporation
- Canadian Wildlife Habitat
- Canadian Forces Base Shilo
- Agriculture & Agri-Food Canada
- Manitoba Transportation & Government Services
- Manitoba Intergovernmental Affairs
- Manitoba Cattle Producers Association
- Association of Manitoba Municipalities
- Manitoba Agriculture and Food
- Manitoba Sheep Association
- Manitoba Equine Ranchers Association
- Manitoba Weed Supervisors Association
- Prairie Farm Rehabilitation Administration
- Agricultural Crown Lands
- Ducks Unlimited
- Dow AgriSciences, Range & Pasture
- Mid-Assiniboine River Conservation District
- Rural Development Institute (Brandon University)



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