



OUT ON A LIMB!

Winter 2001-2002

Win, Lose and Draw - The Status of Dutch Elm Disease in Saskatchewan

As the 2001 Dutch elm disease (DED) season drew to a close, it was apparent that in some areas of the province we were winning the battle, in some areas we lost ground, and in some places it was a draw.

In general, the communities that were actively doing DED management were the winners in 2001 as most saw their removal rates drop from previous years.

The main exception to this trend was the City of Regina that saw eight trees removed. Considering that Regina had only lost six trees in 19 years of fighting the disease, this increase in infections is certainly worrying. We were pleased to note that the town of Davidson has now enjoyed two disease free summers following their first brush with DED in 1999.

We are always saddened to see new communities become infected or to see infections reappear in a community. These would be the areas where ground was lost in 2001. Communities with new infections included Moose Jaw, White City, Grayson, Welwyn, near Sedley and the south end of Last Mountain Lake. Weyburn had its first infection in ten years. Lumsden, a community that had eased off its DED management activities, was the



Infected elm just prior to removal in Lumsden on June 21, 2001.

worst hit community in the province with a total of 68 infected trees removed. Several areas such as Carlyle and Katepwa saw similar infection rates to last year, so I guess we can call it a draw in these communities.

To put the year in perspective, we saw that a total of 21 communities had infections in 2001, a substantial increase from 14 in 2000. Infections were found again in Buffalo Pound Provincial Park, Carlyle, Carnduff, near Craven and Codette, Estevan, Fort Qu'Appelle, Kamsack, Katepwa, Lumsden, Moosomin, Nipawin, Regina, Weyburn, Yellow Grass and Zenon Park. After winter removals occurred a total of 520 infected trees were removed in 2001 versus a total of 694 trees in 2000.

SDEDA Workshop at Sherwood Forest

We are pleased to announce that our annual spring workshop and AGM will be held at the Sherwood Forest Golf and Country Club **on June 20, 2002**.

The new club house in combination with Sherwood Forest's long history of DED management, should make for an excellent location to hold the 2002 workshop.

Full details of the workshop will be mailed directly to members and contacts throughout the province. To make sure you are on the mailing list, please contact our office using the information listed on the back of this newsletter. The workshop always proves to be an excellent place to learn more about DED management and to link up with other DED practitioners.

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President's Message

A recent newspaper editorial urged the city in which it was written to “**get serious**” about their DED management. While this article related primarily to the disposal of elm wood in their landfill, it is a good message for all of Saskatchewan.

Many of our communities are doing well in most aspects of their DED management, however there is always room for improvement. For example, a community can prune all it likes and have an excellent surveillance program, but if it does not deal with the issue of backyard elm firewood they will likely lose the battle with DED. I encourage all of you to re-examine your DED programs and take action to fill in the areas where you are not active.

Speaking of “getting serious”, the SDEDA is very pleased to see that positive steps are being taken to consolidate all aspects of DED management into one department of government. This consolidation will also include much needed changes to the DED Regulations. The Honourable Buckley Belanger promised at our spring AGM to make this issue a priority and to deal it once and for all. It looks like his promise will soon become a reality.

We see that DED is continuing to spread across the province, but we know that we have slowed it down considerably. Now we believe that we can slow it down even more.

D'Arcy Schenk

Feature Community: Weyburn

Weyburn, a community with a population of 10,000, is situated on the banks of the Souris River in south-eastern Saskatchewan. Although DED has a firm foothold in areas to the west and southeast, Weyburn has experienced a very low incidence of the disease. One reason for this is that we have no native stands of elms in the vicinity of the City to facilitate the progression of the disease. Our DED control program has also contributed to our success in minimizing our losses to the disease.

The City of Weyburn has been very concerned about DED since 1991 when we experienced a single case of the disease on a privately owned elm. The tree was immediately removed by the Parks Department and until the summer of 2001 the City remained disease free. This past summer an elm tree located on the grounds of the Souris River Valley Extended Care Hospital tested positive for DED and was removed by the City.

According to our tree inventory there are 2599 elms located in Weyburn, including all City-owned trees, privately owned trees, and trees located on Provincial property. In years previous, basal spraying was conducted on all these trees, however, with the recent debate over the use of Dursban we no longer spray private elms. We will continue to assess this situation until a satisfactory solution for all those concerned can be arrived at.

In 1995 the Parks Department initiated a five year program to prune all City-owned trees with special emphasis being placed on elms. We actually completed the program in four years and are currently midway through the second pruning cycle, which we expect to complete in a total of three years. All pruning

is performed by qualified Parks Department employees during the winter months. Monitoring and surveillance is conducted by Parks Department employees on a regular basis along with further surveillance by representatives of SERM.

Through all our initiatives, City Council and Administration have remained committed to our efforts in keeping Weyburn disease free. The citizens of Weyburn have also been very cooperative and diligent.

For the future we are looking at the feasibility of a program that would encourage property owners to prune their elms, perhaps on a cost share basis. In addition to diversifying our urban forest through planting of new and different species, we are growing elm varieties that are promoted as DED resistant.

Claude Morin—Parks Planner

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Executive Director's Report

It is important for any organization to know that they are moving ahead and accomplishing some of their goals. As you will see from reading through this newsletter, the SDEDA is doing exactly that. There are several other areas of activity worth noting as well:

- We are continuing our efforts to raise awareness about DED via newspaper advertising, media releases, television and radio appearances, articles for newspapers and newsletters, and by attending various conferences and trade shows.
- Aside from our work with Focus on Forests—Saskatchewan, we are also working on DED related school curriculum materi-

als (under the title of "There's a Fungus Among Us") and hope to have them distributed to schools across the province by the spring of 2002.

- We continue to seek funding for various projects, in particular for the research project with Simon Fraser University.
- We have also been actively working with tree pruners and tree pruning educators to ensure that they are up-to-date on DED prevention and proper tree pruning practices.



If there is any way that the SDEDA can help you in your fight against DED please let us know.

Glenn Gustafson

Changes to DED Regulations Expected Soon!

The SDEDA has been working closely with the provincial government to move ahead with much needed changes to the DED Regulations. As it is currently planned, the Regulations will be moved from the Pest Control Act to the Forest Resources Management Act when the latter act goes before Cabinet for modifications in 2002. This will consolidate DED legislation, enforcement and management within

one provincial department, namely Saskatchewan Environment and Resource Management (SERM). We expect this change **to make a major impact** on the success of DED management in the province.

At the same time that the Regulations are moved between Acts, they will also be updated in several important ways, e.g. requiring that anyone pruning elms have an endorsement to do so (see further information on p. 5).

The updated regulations will also allow the use of elm wood under certain specific conditions and with proper authorization. Another important change will be a provision allowing the treatment of infected elms with curative injections rather than requiring the removal of these trees. Watch future issue of "Out on a Limb" for updates on these upcoming changes.



Injection demonstration using "Alamo" during the 2001 annual spring workshop in Lumsden.

Focus on Forests Looks at DED

The SDEDA has been working with the Focus on Forests-Saskatchewan (FOF-S) program to include urban forest and DED specific information in their forest education program. For example, a new activity called "The DED Dash" was provided as a means of teaching students about the life cycle of the native elm bark beetle as it relates to the spread of DED.

We will continue working with FOF-S staff to provide activities for their high school education program about DED and urban forests in general. The high school activity will likely focus on the economics of DED management through examining case studies from various parts of North America where some communities implemented intensive management programs and other communities sat back and did nothing.

For more information about the FOF-S program contact Chris Van Tighem at (306) 477-5066.

SERM Program Report

Saskatchewan Environment and Resource Management (SERM) has an integrated DED Program that consists of various components such as those discussed below:

BioForest was contracted to conduct **surveillance** in 43 communities this summer. Cities with a population greater than 15,000 were responsible for their own surveillance. **Samples** were sent to the Crop Protection Lab to determine if they were positive for DED.

Buffer zones, where removals and basal spraying occurs, have been established outside Regina, Estevan and Fort Qu'Appelle to stop or slow the progression of the disease. Establishment of a buffer outside Moose Jaw has also been started.

Schneider Brothers was contracted to do **tree removals** in all the surveyed communities and buffer areas. Diseased trees that are found in the first survey of communities are removed in the summer while infected trees found in the second survey and infected buffer trees are removed in the fall and winter. SERM has removed approximately 15,000 trees since 1991.

Cost Share Agreements exist between 32 communities and SERM. These agreements ensure management activities for DED take place and are cost shared between the community and SERM. Activities in 2001 included pruning, basal spraying, public education, disposal site establishment, training and tree removals.

Basal spraying was carried out in various communities to control elm beetle populations. **Beetle trapping** was done in conjunction with Alberta to determine if there is a population of European Bark Beetles along the Saskatchewan/Alberta/Montana borders.

Public inquiries were handled through SERM's Hotline (1-800-SaskElm) which is in operation all year long. **Communications** were carried out through a contract with the SDEDA and our own activities.

The key to a successful provincial program is to have co-operation between communities, landowners, and other provinces.

*Steve Hyde
DED Operations Coordinator*

Research Project with SFU Moving Ahead Slowly

The "kairomone" research project mentioned in last spring's newsletter, is slowly moving ahead. While a graduate student has not yet been found to work on this project, it is expected that this person will be in place to begin field work on the project in summer 2002. The work will likely centre on the natural elm stands found near Outlook.

The new quarantine facility at Simon Fraser University (SFU) is now complete and has passed all necessary inspections. A detailed press release can now be seen at the SFU media release web site at <http://www.sfu.ca/mediapr/sfnews/2001/Nov15/gries.html>. This facility is key to the success of the project.

oped, which has made the capture of these beetles quite challenging. A kairomone based trap might form the basis of an effective system to detect, monitor and trap beetle populations and to provide a more environmentally sensitive alternative to basal spraying, which is becoming increasingly controversial.

We are also hoping that through this research we will be able to develop a more complete understanding of the NEBB behaviour and life cycle, e.g. to find out how temperature affects the appearance, breeding and overwintering of the NEBB. This in turn may lead to other options for its control down the road.

The SDEDA has also been actively fundraising to help secure additional funding for the project to match funding provided from SERM. As this is a three year project, funding from several sources will be necessary. Make sure to watch future issues of "Out on a Limb" for updates on this project.



Close-up of native elm bark beetle, the main vector of Dutch elm disease in Saskatchewan.

For those who are not familiar with the project, our aim is to develop a "kairomone" (a tree based pheromone-like substance) that can be used in a trap to capture the native elm bark beetle (NEBB). This substance has never been successfully devel-

Urban Forest Diversification Program Makes Impact

The SDEDA was pleased to take a more active role with the Tree Canada - Saskatchewan Urban Forest Diversification Program in 2001. Thanks to sponsorship from the EJLB Foundation and the George C. Metcalf Foundation, we were able to contribute close to \$10,000 of tree stock to the program.

In all, **2725 trees were distributed** to 35 Saskatchewan communities that are actively fighting or threatened with DED. The Discovery elm was not part of the program this year, however several new varieties were tried. Twenty-nine tree varieties were distributed from the communities of Estevan, Prince Albert, Saskatoon, Regina, Swift Current, and Yorkton on the week of September 17 to 20th.

We were also able to attract funding from The Samuel and Saidye Bronfman Family Foundation for a "Tree Care" program. This program allowed us to provide tree planting and tree care information to participating communities, as well as to assist with the actual distribution of the trees at the Saskatoon location. We will continue our Tree Care education through attending a variety of trade shows and conferences this winter.

TransCanada Pipelines, the major sponsor for this program, will be directing its funding to another province next year. We believe that the



Unloading and sorting tree stock at the Wascana Centre Authority greenhouse in Regina.

program will continue, even if it is a much smaller endeavor.

For more information about the Tree Canada Foundation or the Urban Forest Diversification Program, please contact Murray Little at (306) 764-0057.

Did You Know?

Elm logs were hollowed out in Roman times for use as water pipes. When unearthed today, they are still found to be in good condition.

Venetians built their city on elm logs because they do not rot in water.



Elm leaves were used for charms and for incense.

Young elm branches were also used to make magic wands!

Elm Pruners will soon need Endorsement

As mentioned previously in this newsletter, one of the anticipated changes to the DED Regulations will require that any person who prunes an elm **must have an endorsement** to do so from the Apprenticeship and Trade Certification Commission. To qualify for an endorsement, pruners must provide the Commission with proof that they have completed an approved tree pruning course followed by three seasons (or 1500 hours) of pruning experience.

Currently, the list of approved tree pruning courses includes the:

- ISA Certified Arborist Program
- SIAST Tree Pruning Course (if completed after improvements to course in the summer of 2001)

... one of the anticipated changes to the DED Regulations will require that any person who prunes an elm must have an endorsement to do so ...

Other courses will be added to this list if they meet the standards of the SDEDA. The Apprenticeship and Trade Certification Commission is not yet able to accept applications for endorsement, but will be able to do so in the near future. The

SDEDA will be in contact with pruners to keep them informed as new information becomes available.

While it is believed that the requirement for endorsement will

be made law sometime in 2002, it will likely not be enforced until 2005 to allow tree pruners time to acquire an elm pruning endorsement.

Those who have questions about this process or are interested in information about training opportunities should contact our office at (306) 933-5546 or via email at: ggustafson@serm.gov.sk.ca

Dutch Elm Disease in North Dakota

Dutch Elm Disease has been and continues to be a major catalyst in North Dakota for communities to develop some type of community forestry program. The first confirmed case of DED was discovered in 1969. Since that time DED has spread to all major stands of native elms in the state and efforts to slow the impact of the disease have shifted primarily to communities.

The larger communities were the first to respond to this threat by hiring part-time foresters. These foresters were responsible for the identification of the disease,

DED has spread to all major stands of native elms in the state and efforts to slow the impact of the disease have shifted primarily to communities.

removal of diseased trees and education of city leaders and the public about the spread and control of the disease. The North Dakota Forest Service and the North Dakota State University aided these foresters with informational seminars and educational material about DED.

The larger cities of North Dakota have since hired full time foresters and developed community forestry programs. The development of a strong sanitation program has been the corner stone to slow the spread of DED to a manageable level. The sanitation program varies in each community but in general consists of a survey of firewood piles in the spring, if elm firewood is found, a notice is sent to the property owner to dispose of the wood. A second survey occurs to insure that the wood has been properly disposed.

The cities are generally surveyed from mid to late June through mid September for trees showing symptoms of DED. The survey includes public and private trees. The trees are marked and removed in a timely fashion. Routine pruning is done on publicly owned trees on a rotational basis to maintain the health of

the trees. The amount of time between scheduled pruning varies with the community.

Tree planting programs are developed to replace trees removed and for new tree plantings. The goal is to develop a community forest that has a diverse population of tree species and ages. The use of chemical control for DED has been

limited to high value elm trees.

In recent years storms have damaged the community forest in several cities. Aid provided by the Federal Emergency Management Agency

(FEMA) has allowed for quick cleanup of downed or damaged trees. Without FEMA aid the cities would not be able to effectively maintain their sanitation programs and the loss to DED would likely increase significantly.

Small communities, in general have not been as successful in developing a good DED control program. Many small communities lack the resources to hire trained personnel to implement and maintain a good sanitation program.

The North Dakota Forest Service in cooperation with the U. S. Forest Service has been able to offer technical and financial assistance to these communities. Technical assistance has included, but not been limited to, inventories of street trees, identification of infected elm, educational materials, community seminars about DED, information on adapted tree species and information about how to develop a diverse community forest. The financial assistance comes in the form of competitive challenge grants. Communities can apply for grants that have a 50-50 cost share. The com-

munity's 50% can be in the form of cash or in-kind labor, equipment or services. The Program Development Grant can be used for, but is not limited to, tree removal, hiring of a part time forester, hiring a consultant, conducting a tree inventory, purchasing computerized inventory programs, or developing a community forest master plan.

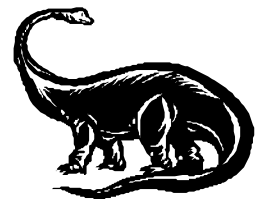
The North Dakota Forest Service is unable to fund all the grant requests it receives; those communities that are not funded are encouraged to continue seeking financial and technical assistance. The implementation and maintaining of a good sanitation program is key to slowing the progression of DED.

*Joel Nichols
Community Forestry Specialist
North Dakota Forest Service*

Did You Know?

Elms can live to be at least 300 years old!

Elms first appeared in the Miocene Period, about 40 million years ago.



The American elm can grow to over 115 feet tall and can reach a diameter in excess of ten feet!!

The cooling effect of one urban elm is the same as five air conditioning units.

Provincial Insect and Disease Report

The eastern spruce budworm *Choristoneura fumiferana* continues to be the most significant insect pest in Saskatchewan's Boreal Forest. Since 1981, this insect has defoliated over 2.4 million hectares of spruce-fir forest.

In 2001, 51,803 hectares of spruce forests were sprayed using the biological insecticide *Bacillus thuringiensis* var. *kurstaki* (*B.t.k.*). In total 22,219 hectares of forests were sprayed in areas around Big River and Montreal Lake. In the eastern part of the province, 29,584 hectares of defoliated forests were sprayed in the Amisk and Deschambault Lake areas. In general, spruce budworm population reduction and foliage protection was variable in all spray areas.

Building forest tent caterpillar *Malacosoma disstria* populations have reached outbreak in parts of the Aspen Parkland Ecoregion. Increased nuisance, safety concerns, and reduced visitation in two Provincial parks in this region have led to a decision to reduce populations in

these parks. A single application of *B.t.k* (Foray 48B) was sprayed on 930 hectares in the core areas in Greenwater Lake and Duck Mountain Provincial Parks. Defoliation and incidence of pest nuisance was reduced significantly in treated areas in both parks.

Dutch Elm Disease continued to spread in the Province. In 2001, 135 infected elms were removed in communities and a further 385 were removed in buffer zones set up around Estevan, Regina and Fort Qu'Appelle. This was a reduction in total removals for 2000. Most removals occurred in the town of Lumsden.

Lodgepole pine dwarf mistletoe *Arceuthobium americanum* is the most significant pest of Jack pine. According to a recent study, between 1988 and 1992, 123,982 hectares of Jack pine forest were

severely infected by dwarf mistletoe resulting in an estimated loss of 1,116,000 m³. The best approach to managing the disease is to cut stands in heavily infected areas; thus removing its host plant.

Other forest health issues of interest in the province include: the spruce weevil *Pissodes strobi*; yellow headed spruce sawfly *Pikonema alaskensis*; and the Larch bark beetle *Dendroctonus simplex*, in addition to continued threats from Mountain pine beetle *Dendroctonus ponderosae* in the Cypress Hills area and the potential for transmission into Jack pine in a climate change scenario. Initial meetings have been undertaken to develop an emergency preparedness plan to ensure the smooth transition of responsibilities across Federal and Provincial jurisdictions in the event of an invasion by exotic insects.

Rory McIntosh
Provincial Forest Insect and
Disease Specialist

The eastern spruce budworm continues to be the most significant insect pest in Saskatchewan's Boreal Forest.

Join the SDEDA Today!

If you or your organization are interested in the management of DED please consider joining the SDEDA. Simply fill out and send in the form along with your payment of \$25 for a one year membership.

Date: _____

Contact: _____

Organization: _____

Street/Box #: _____

City/Province: _____

Postal Code: _____

Phone #: _____

Fax# _____

Email: _____

Membership Fee \$25
Donation _____
Total: _____

Send your cheque or money order to:

Saskatchewan Dutch Elm Disease Association
102—112 Research Drive
Saskatoon, Saskatchewan
S7K 2H6

“Preserving the American elm in Saskatchewan”



Charitable Registration Number:
87251 7594 RR001

Dutch Elm Disease in Manitoba

The annual Manitoba Conservation DED surveillance program ran for approximately three months during the summer of 2001, encompassing 38 cost-sharing communities and the buffer zone around Winnipeg. Within each cost-sharing community, the Province is responsible for the survey and marking of diseased and hazardous elm trees.

The Province and the communities participating in the program cost-share DED management aspects such as sanitation pruning, basal spraying with chlorpyrifos, replacement planting, general tree care and education and training courses. The city of Winnipeg runs its own management program with the assistance of a \$900,000 grant from the Department of Inter-Governmental Affairs. Dutch elm disease now extends

throughout the entire natural range of the American elm in Manitoba. River areas continue to have high levels of DED, especially along the Red and Assiniboine Rivers. The Boyne River near Carmen and the Souris River in southwestern Manitoba remain extensively infected. In the western and northwestern portions of the province the Swan, Red Deer, Carrot and Saskatchewan Rivers plus numerous smaller rivers are heavily infested.

Tree removal data from the past year is provided as follows: From April 1, 2000 to March 31, 2001 Provincial DED sanitation crews removed 14,579 trees. Of the 14,579 diseased and hazard trees that were removed, 10,117 were removed within the Winnipeg DED Buffer Zone and 4,462 were re-

moved throughout the remainder of the Province. The Cities of Winnipeg and Brandon removed 6,161 and 248 trees in 2000, respectively.

Survey data for the current year is provided as follows: During the summer survey of 2001, 4,064 elms were marked in and around the 38 cost-sharing communities and 5,973 elms were marked for removal within the Winnipeg buffer zone, bringing the total of elm trees that were tagged for removal to 10,371. In addition, 223 firewood piles were identified. In the City of Winnipeg, 6,005 elms were marked for removal, of which 5,498 were diagnosed as having DED and the remainder classified as hazards.

*Linda Christianson &
Jon Leferink
Manitoba Conservation*

Upcoming Training Opportunities!

SIAST's Tree Pruning and Tree Injection Course will be offered in Lloydminster on the last week of March, 2002. The course length will be shortened to three and a half days with a requirement for the training materials to be studied before the class starts. The cost for the course will be \$325, however the location has not been finalized.

For more information, please contact:
- Sandra Shiels at SIAST in Regina (306-798-0456 or 1-800-667-7730)
- Ken Hood in Lloydminster (306-825-3604)

Precision Felling, Cutting and Chainsaw Safety Course by Arbornmaster will be held in North Battleford on May 29 & 30, 2002 (location to be announced).

The cost will be \$365.00 plus GST. Members of ISA will receive a \$60.00 discount and CEU's will be offered.

For more information, please contact:
- Keith Anderson (306) 445-1740

The course is sponsored by the City of North Battleford

For more information on DED in Saskatchewan check our web site at: www.sdeda.ca

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