

Saskatchewan Dutch Elm Disease Association Fact Sheet #1— Dutch Elm Disease Overview



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What is Dutch elm disease?

Saskatchewan's majestic American elms won't have long to live unless all communities in Saskatchewan become involved in the fight against Dutch elm disease (DED). This deadly disease is well-established in communities in southeast and northeast Saskatchewan with the disease currently confirmed in at least 25 communities. It is just a matter of time before the disease is present province-wide. Fortunately, it is not too late to take the preventative actions needed to keep from losing our elm trees.

DED is caused by a fungus that blocks the water conducting vessels of an elm and kills the tree in as little as three weeks, and usually within one or two seasons. An infected tree must be removed to prevent the disease from spreading to healthy elms.

DED is spread in Saskatchewan by the native elm bark beetle (NEBB). The DED fungus has sticky spores that become attached to the beetle when it comes in contact with infected wood. The beetle then spreads the fungus when it feeds on and over-winters in healthy elms.

How can you tell that an elm is infected?

As early as June, the leaves of a DED infected elm will wilt, turn yellow, then curl and turn brown. Symptoms usually first appear in the crown of the tree, and can be seen until fall colours appear. Sometimes the curled, brown leaves will remain on the tree throughout the winter. Infections later in the summer can cause leaves to turn yellow and fall prematurely much like normal fall colouration.

What can we do to save Saskatchewan's elm trees?

There is no cure for Dutch elm disease, but tree losses can be minimized. Public awareness and involvement is essential.

The NEBB breeds in dead or dying elm trees, including firewood, and over-winters at the base of healthy elms. Management practices that limit the number and spread of the beetle will significantly reduce the spread of the disease. Here is what your community can do to protect your elms:

- Do not transport, use or store elm firewood. **It is illegal!** Up to 1,800 infested elm bark beetles can be found in one three foot elm log.



Dead elms in the Souris River Valley of Saskatchewan. Photo by Sylvia MacBean

- Keep your elm trees healthy by pruning dead or dying branches. Make sure that pruning is done by a certified pruner. Improper pruning, such as "tree topping" can weaken a tree, making it more susceptible to disease.
- Never prune your elm trees during the annual pruning ban that runs from **April 1st to August 31st**. The NEBB, which is attracted to fresh pruning cuts, is most active during this period.

- Do not use chipped elm wood as mulch. It also must be disposed of.
- Burn or bury all elm wood to the depth of 25 cms at a designated disposal site so that beetles cannot access the wood for breeding.
- Watch for the symptoms of



Leaves that wilt, curl, and turn brown or yellow are the first signs of a possible DED infection.

Dutch elm disease in your community. The leaves of infected elms will wilt, then curl, and turn yellow or brown. Reddish brown streaking under the bark of a twig with leaf symptoms is another sign of DED. Call 1-800-SASKELM so that the tree can be tested and removed if necessary.

- When DED has been found in or near your municipality, basal spraying with an insecticide approved for this purpose can help to reduce the NEBB population.

Please note that DED regulations apply to all elms including Siberian

and Manchurian elm.

How do you take samples for testing?

If there is no "official" person in your area who tests for DED you should:

- Examine the elm & look for yellow/brown curled leaves.
- Sterilize your pruning tools with bleach, 70% rubbing alcohol, or gas line antifreeze.
- From a branch showing symptoms, peel back the bark and look for brown staining in the sapwood.
- If brown staining is present remove another section of the branch showing the symptoms. Try to get a sample that is smooth and straight, lacking any cankers, and is not dried out

the sample closed.

- If you are sampling more than one tree, be sure to sterilize your pruning tools between cuts and keep the samples separate.
- Place the sample(s) in an envelope and include your name, address, phone number and the location of the tree(s).
- Ship as quickly as possible to the following address:

Crop Protection Laboratory
346 McDonald Street
Regina, Saskatchewan
S4N 6P6

- Samples should be taken by the end of September and will take two-three weeks to process. Samples are processed free of charge.
- Store the sample in a cool place

To find out more about Dutch elm disease and what you can do about it, or if you suspect an elm tree has the disease call:

1-800-SASKELM (1-800-727-5356)

- or dead.
- Cut this branch into 5 pieces that are:
 - 10 to 15 cm long
 - 2 cm in diameter
- Do not remove the bark, but do remove the leaves and twigs, wrap it in wax paper, and tape

to prevent deterioration.

- Take the sample from an area of the tree showing symptoms, otherwise the test may give inaccurate results leaving the disease undetected.

If you have questions about how to sample properly, please call the DED hotline at 1-800-SASKELM.

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