The Canadian Sweet Chestnut

-Newsletter of the Canadian Chestnut Council-

Issue # 84

July 2022

http://www.canadianchestnutcouncil.ca

Council Mission - to help restore the American Chestnut to the areas of Canada it once occupied.

Current Priorities

1) Breeding resistance

2) Breaking Isolation / Establishing Gene pool Nodes

3) DNA Analysis

4) Survey of existing Chestnuts in the wild

In this issue:

Ontario Government signs Stewardship Agreement with CCC (Ron Casier)

On March 14, 2022, the Minister of the Ministry of Environment, Conservation and Parks signed the Stewardship Agreement for the American chestnut with the Canadian Chestnut Council under the ESA 2007 which will be in force until December 31, 2036. Work on achieving this agreement was started in 2012, but for various reasons never came to fruition. Starting in February 2021, a concerted effort was made by the MECP to work out an agreement with the CCC prior to the end of the year. This was at the direction of the then current Minister, who was interested in the American chestnut.

Why a Stewardship Agreement?

Prior to the agreement, the CCC operated under a "B" permit from the MNRF, which required renewal annually and prior permission for the CCC to do its work on the breeding of blight resistance and conservation of the American Chestnut and for any new initiatives which the CCC wished to explore.

The purpose of the Stewardship Project is to contribute to the recovery of the Species by maintaining In Situ populations of the Species which collectively represent the genotypic diversity of the Species in Ontario and Canada and individually exhibit strong Demographic Viability, high Genetic Fitness and a high Tolerance to Chestnut Blight.

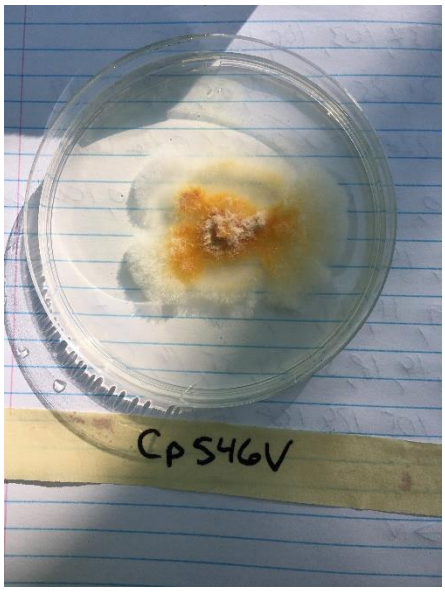
Under the Agreement, the CCC has permission to work on the American Chestnut both in the breeding of blight resistance and conservation of the species for the next 15 years! We are required to generate five-year plans to the MECP and make annual reports on all work done. We have permission to genetically analyze and preserve the unique Canadian genome of the species. The usage of genetic engineering to the Chestnut's DNA is prohibited, while genetic modification is allowed. Establishing seed colonies and breaking isolation to preserve and enhance the wild native American Chestnut population is encouraged. Renewed Hypovirulence research and other Biocontrol is permitted. Micropropagation and other mass propagation techniques are to be continued. The survey of the native population is to be continued. The distribution of Chestnut nuts or seedlings for horticultural purposes is not permitted. The biggest shift was that all American chestnut, whether native and now planted and *hybrids* are all protected. The CCC sets its own protocols for all work and projects under the agreement. The Agreement endorses the work priorities of the CCC and formalises our work. The agreement will provide the CCC has advance standing in the applications for funding due to the government's recognition of our work.

Breeding Resistance Update (Dragan Galic)

From the 2021 fall planting, 2336 seedlings were produced. 2060 F2 and 276 F3.

For reasons unknown, last year's inoculation did not work. The Research Associate at the University of Guelph, supplies both a strong strain and a weaker strain of the blight. Subsequent testing of the blight supplied showed it to be virulent. Temperature may have played a role.

This year, our lead researcher, Dragan Galic conducted the inoculations at our two plantations Onondaga Farms (June 23) and River Bend (June 24).



Inoculant

Inoculated tree

The inoculant (blight) is grown in the laboratory at the University of Guelph. It is placed in a small-bore hole in the trunk of the tree and covered with paraffin film. The success of the tree to withstand the blight is measured by the extent of any lesion that develops.

Pollination preparation

Student Owen Rolland wraps flowers

As of the first w/o July 2022, Dragan and summer students are in the midst of pollination process at Onondaga and River Bend Plantations and some wild trees as well. To begin the pollination process, the before 50% of the individual flowers are out, they are wrapped to avoid fertilization from other unwanted sources. Subsequently, approximately 12 days later, the flower will be pollinated with pollen from one of trees that has shown resistance in the CCC breeding program.

DNA Leaf Testing – 2022 (Doug Fagan)

Picture courtesy of Tom Nagy

Again, this year, citizens can submit their chestnut leaf samples to determine whether a tree is pure American Chestnut, a hybrid or something totally different.

For further information on how to submit a leaf for testing, see the Foundation website and click on the link. Microsoft Word - mericanchestnutLeafSamplingPromotion (1) (1).doc (canadianchestnutcouncil.ca)

Canadian Chestnut Council Annual Meeting – 2022

Mark your calendar. The annual meeting will take place October 22nd. Our hope, this year, is to return to in-person meetings, but we are also considering a hybrid meeting to accommodate members who live a distance away.

Registration -11:00am Meeting – 12:00am

Tim Horton Children's Foundation – Onondaga Farms
Glen Morris Road, St. George Ontario

The meeting will include updates on the initiatives of the Canadian Chestnut Council.

Want more information:

Website - www.canadianchestnutcouncil.ca

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