



# PEI Soil & Crop Improvement Association - Taking Charge Team

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## Evaluation of American Chestnuts and Red Oak trees

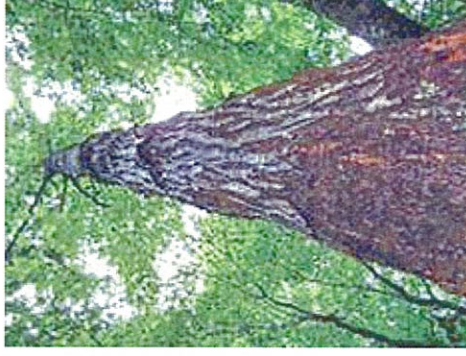
Collaborator: Dan MacLean

Location: Tyne Valley.

Introduction: Prior to the chestnut blight of the early 1900's, American chestnut was wide spread in eastern U.S.A. The tree was particularly valuable commercially since it would grow at a faster rate than oaks. The chestnut wood is rich in tannins, making it highly resistant to decay and therefore used for a variety of purposes, including high quality furniture, shingles, home construction, flooring, piers, plywood, and utility poles. Tannins were also extracted from the bark of the American chestnut for tanning leather.

The nuts of the American chestnut were once an important economic resource in the U.S.A. as they were sold on the streets in larger cities. This tradition still continues with consumption highest during the Christmas season but now the European Sweet Chestnut is used. The value of the nut is directly related to the size, ranging from \$1.50 per pound wholesale up to \$5.00 per pound retail. In 2006, the United States imported 4,634 metric tons of European chestnuts valued at \$11.5 million.

Treatments: The project was initiated in spring of 2006. Three tree types - American chestnut, hybrid American chestnut and red oak - were planted on a southeast sloping pasture. The soil type was O'Leary and the slope ranged from 8 to 9%. The feasibility of producing chestnut trees and nuts under PEI conditions will be evaluated. Each treatment was replicated 6 times in a randomized complete block design. Data will be collected on mortality and growth rate.



**An American chestnut tree**

Source: <http://www.acf.org/>



Canadian Cattlemen's Association

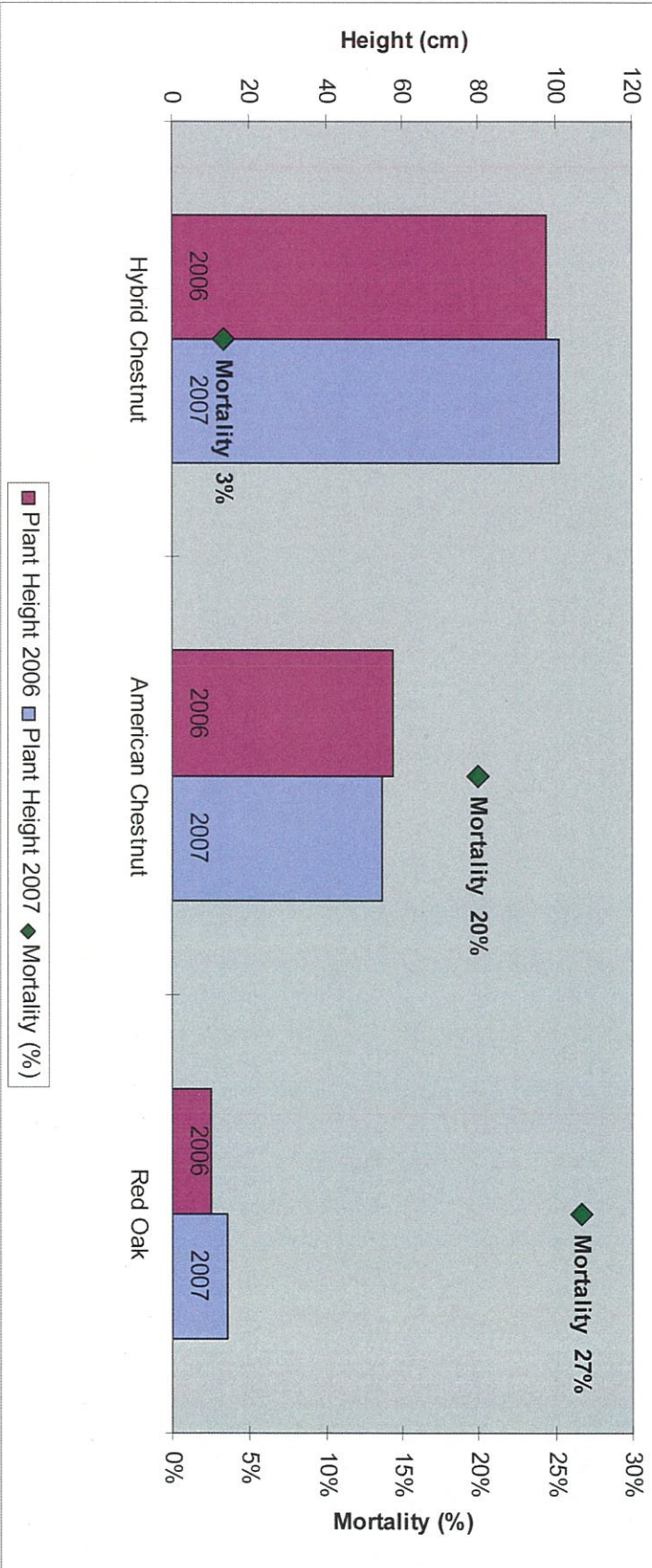


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## Chestnut experiment



### Discussion:

The graph above shows the average growth of plants after one year (planting took place in 2006) as well as plant mortality. There was little growth in any of the tree types in the first year, however, plant mortality varied considerably among the tree types with hybrid chestnut having the lowest mortality at 3% followed by American chestnut at 20% and red oak at 27%.

\*Some information and photos were obtained from the web pages:

<http://en.wikipedia.org/wiki/Chestnut> and <http://www.agmrc.org/agmrc/commodity/nuts/chestnuts/>