

THE PATH TO MOST RESISTANCE

(Based on three genes for resistance)

PARENTS

100% Chinese chestnut
(Blight resistant/orchard type)

x

100% American chestnut
(Blight susceptible/timber type)

Resistant American Characteristics & Average % American Parentage

Degree of Resistance

Low to No
Resistance

Intermediate

Fully
Resistant

50%	(F₁) First Generation Hybrid		100%	
75%	Backcross: American x F₁ = BC₁	87.5%	12.5%	0%
87.5%	Backcross: American x BC₁ = BC₂	87.5%	12.5%	0%
93.75%	Backcross: American x BC₂ = BC₃	87.5%	12.5%	0%
93.75%	Intercross: BC₃ x BC₃ = BC₃F₂	34.4%	64.0%	1.6%
93.75%	Intercross: BC₃F₂ x BC₃F₂ = BC₃F₃	0%	0%	100%*

Each generation of trees is inoculated with blight fungus and selected for resistance and American characteristics. Each backcross generation requires a minimum of five years to complete. The F₁ generation can be completed in three years.

*This percentage of highly-resistant trees is the hope of The American Chestnut Foundation. It is based upon certain scientific assumptions, and cannot be proven at this time.

THE AMERICAN CHESTNUT FOUNDATION

469 Main Street, Suite 1, P.O. Box 4044

Bennington, Vermont 05201

802-447-0110 ~ fax 802-442-6855 ~ chestnut@acf.org