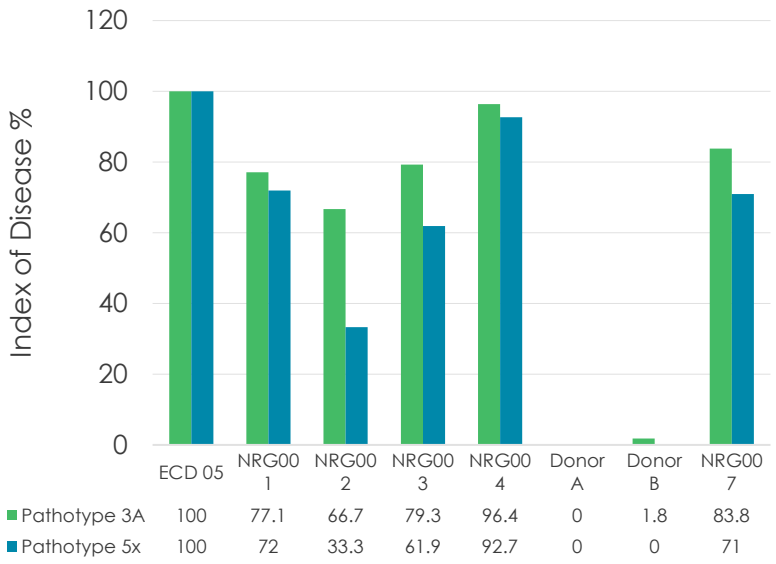
Novel High-Resistance Canola Cultivar Development to Clubroot

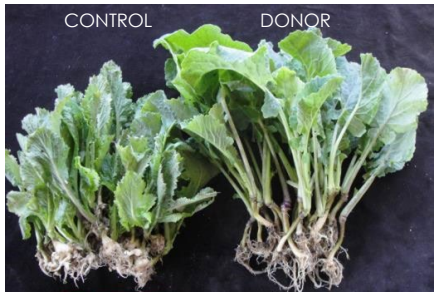
Development of high yielding clubroot resistant varieties of canola

Results:

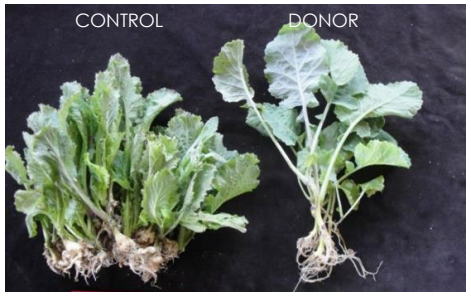


	ECD 05	NRG001	NRG002	NRG003	NRG004	Donor A	Donor B	NRG007
Pathotype 3A	100	77.1	66.7	79.3	96.4	0	1.8	83.8
Pathotype 5x	100	72	33.3	61.9	92.7	0	0	71

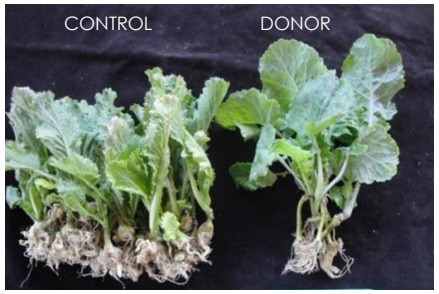
Donor A inoculated with pathotype 5X



Donor B inoculated with pathotype 5X



Donor A inoculated with pathotype 3A



Donor B inoculated with pathotype 3A

Plant data provided from Stephen Strelkov Lab UofA

Main goals:

- ✓ Identify new genetic material and transfer from exotic species to common, accessible varieties
- ✓ Pyramiding and combining the most successful genes from multiple sources
- ✓ Introgression with speed and accuracy into common varieties for clients

nrgene

January 2021
Screen genetic resources to identify novel resistance

June 2021
Score pathotype resistance for each source identified

December 2022
Genetic mapping and development of DNA markers used for tracking

January 2023
Produce genome wide SNP set to facilitate integration and MABC

January 2023
Pyramiding of several sources of resistance to establish durable disease resistance

July 2023
Unique genomic locations were successfully mapped, and DNA markers were developed