Utilisation of host resistance to manage blackleg of canola in South Africa

Huibrecht Schreuder

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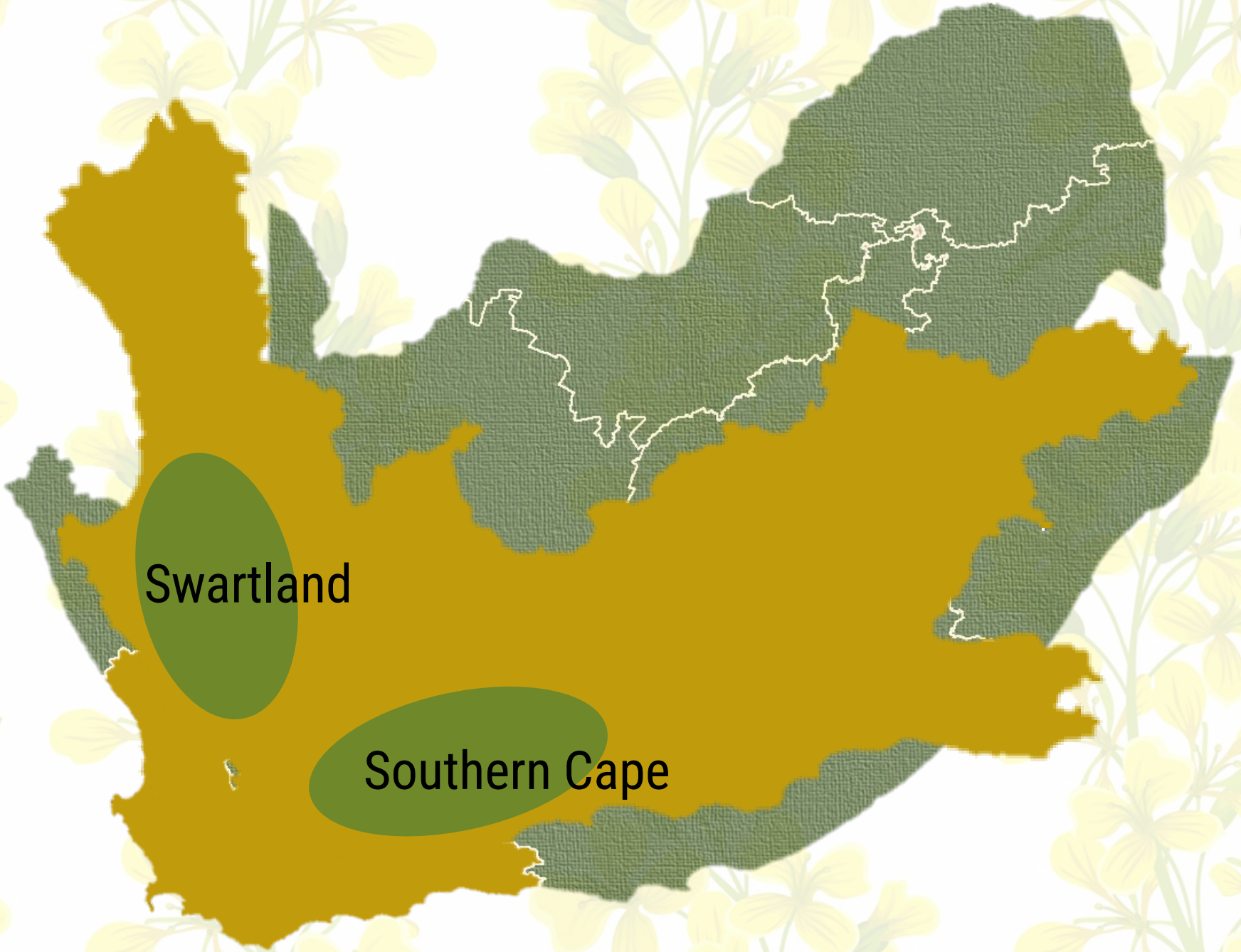
Canola production in SA



Area planted, production and yield

Canola production in SA

Grain SA, 2023

Challenges to production

- Blackleg

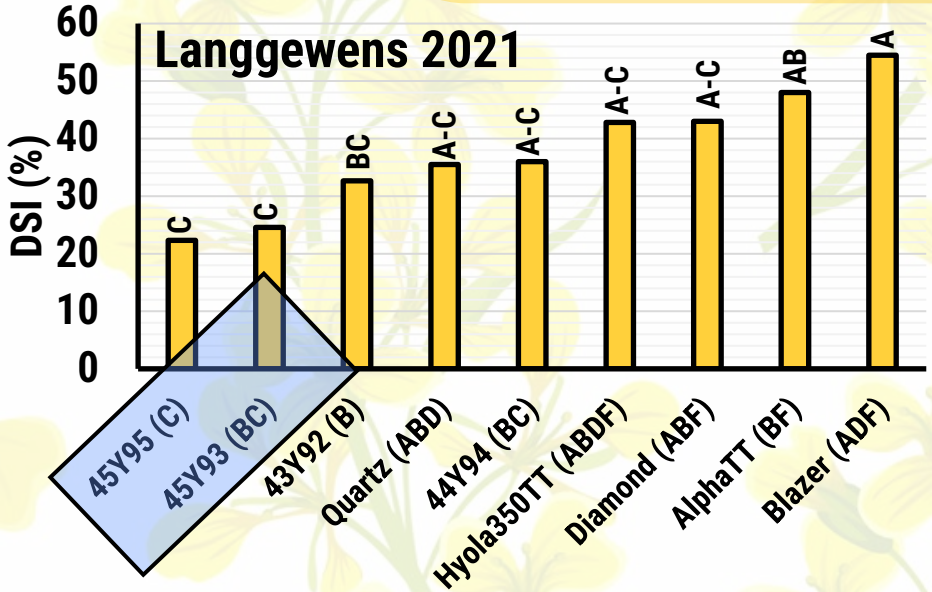
- Sclerotinia

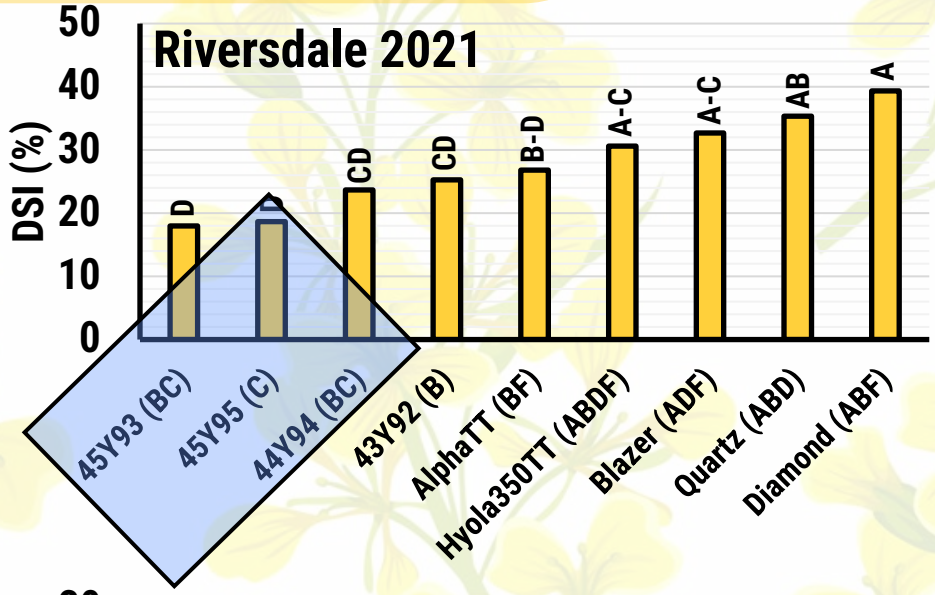
- Diamondback moth

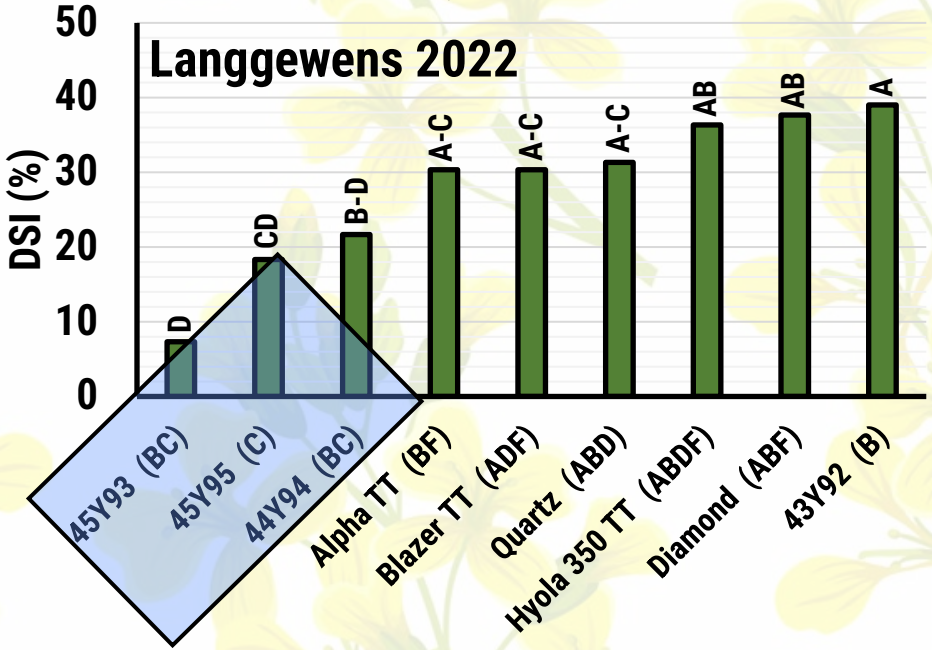
Cultivar trials

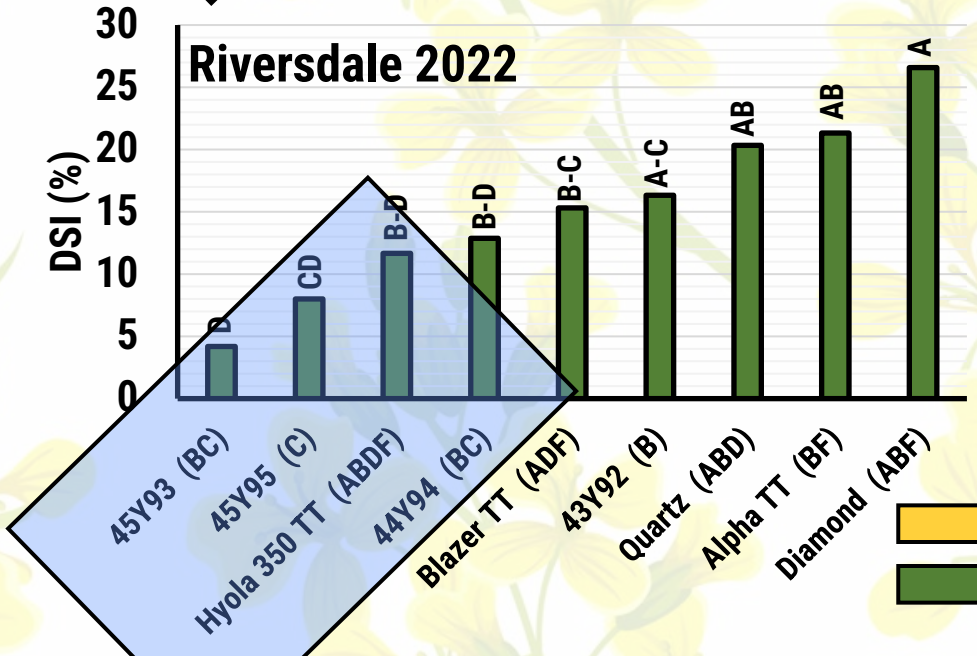
2021	2022
Quartz (ABD)	Quartz (ABD)
43Y92 (B)	43Y92 (B)
45Y95 (C)	45Y95 (C)
Diamond (ABF)	Diamond (ABF)
Alpha TT (BF)	Alpha TT (BF)
Blazer TT (ADF)	Blazer TT (ADF)
44Y94 (BC)	44Y94 (BC)
Hyola 350 TT (ABDF)	Hyola 350 TT (ABDF)
45Y93 (BC)	45Y93 (BC)
44Y90 (B)	Enforcer CT (ADF)
Hyola 559 TT (ABD)	CC90014 Conv.
Hyola 650 TT (ABD)	CC91117 (ABD)
	HyTTec Trophy (AD)
	HyTTec Trifecta (ABD)
	Hyola 90013 (ADF)
	CHYB4372TT
	CHYB3688TT (BC)

Cultivar trials 2021 and 2022

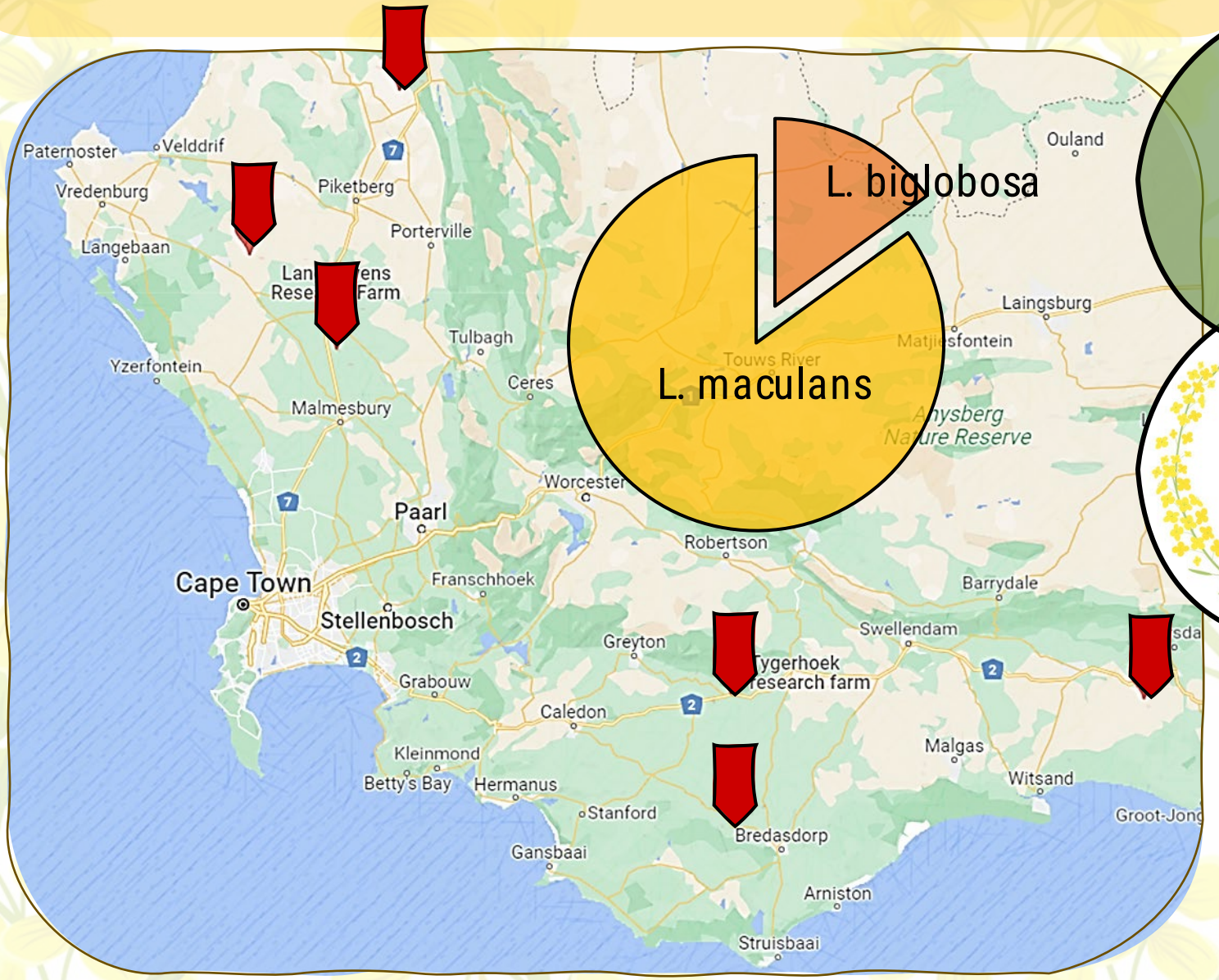








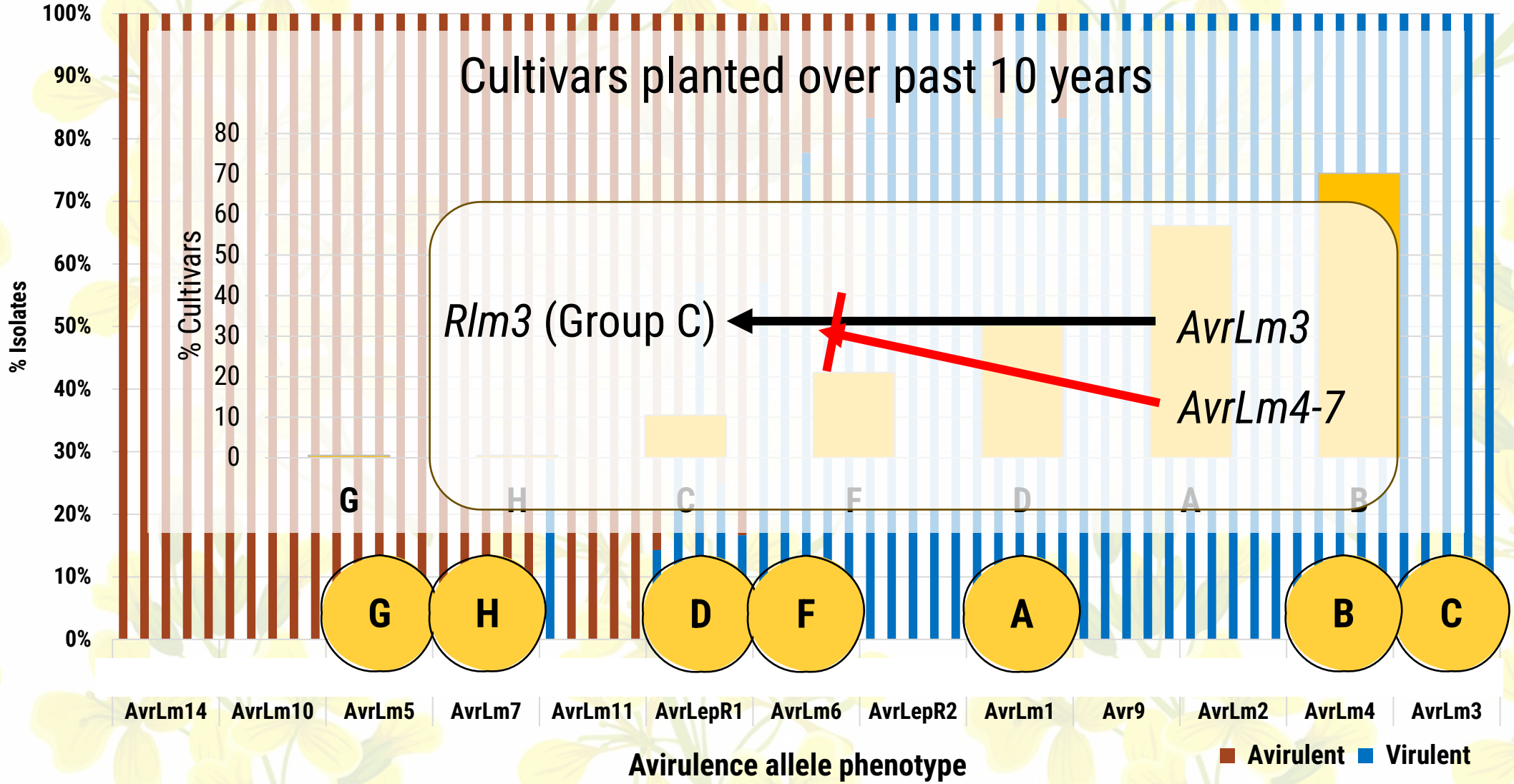
Obtain a representative population



2020 - 2022

~4 000 isolates

Avirulence genes present in population



Discussion

- Major gene resistance in commonly planted cultivars has largely been overcome
- Producers can benefit from the widescale rotation of R-genes
  - Many challenges to implement this strategy
  - Little information available

Discussion

- Producers can benefit from the establishment of R-gene monitorir sites
  - Acquiring seed with specific resistance genes are challenging in South Africa
- C-group cultivars have good minor gene resistance
  - Lack of major gene resistance leads to in-field selection of minor gene resistance by breeders
- This is preliminary data based on a small sample size
  - More genomes will be sequenced to get a better picture

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South Africa

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- Mariana van Deventer, Kirsty Potgieter and Zander Folsher (University of Stellenbosch)
- Piet Lombard and Zane Sedeman (Western Cape Department of Agriculture)
- Pioneer, Agricol, Limagrain and Barenbrug (Seed supply)
- Dr Angela van de Wouw, Dr Alexander Idnurm and team (School of BioSciences, University of Melbourne)

Thank You!

Western Cape Government
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