

# Developing Processing Potato Germplasm with Stacked Late Blight Resistance in a Variety-Centric IPM Framework

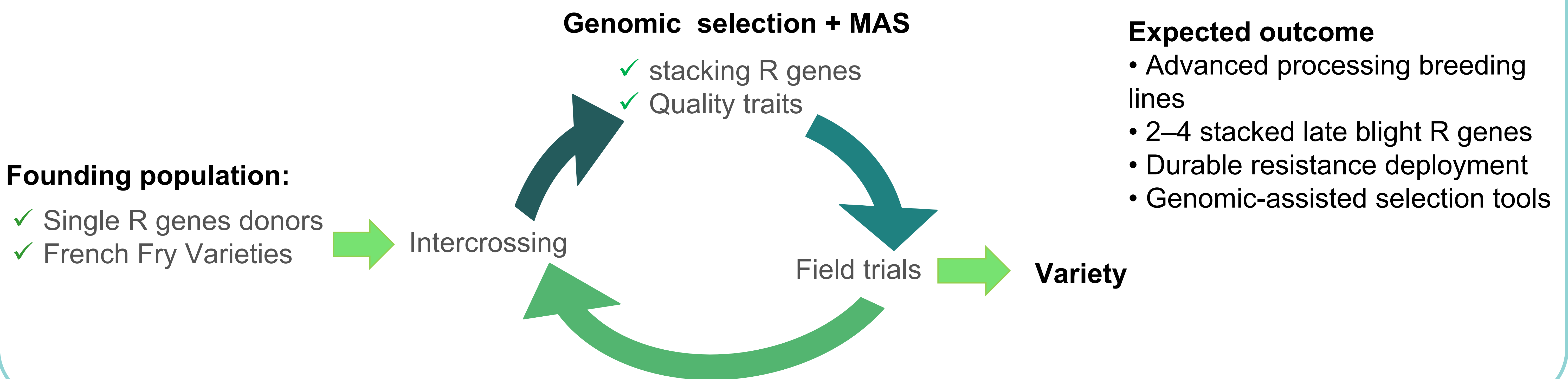


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IPMorama promotes a variety-centric integrated pest management (IPM) strategy by strengthening the link between resistance breeding, pathogen dynamics, and sustainable crop deployment. A key objective is the development of potato germplasm with well-defined and durable late blight resistance profiles that can be integrated into commercially relevant production systems. Within this framework, a foundation breeding population is being developed to introduce and combine late blight resistance (R) genes into modern potato processing backgrounds.

## Goal: genomic + MAS supported recurrent selection for stacking R-genes in processing varieties



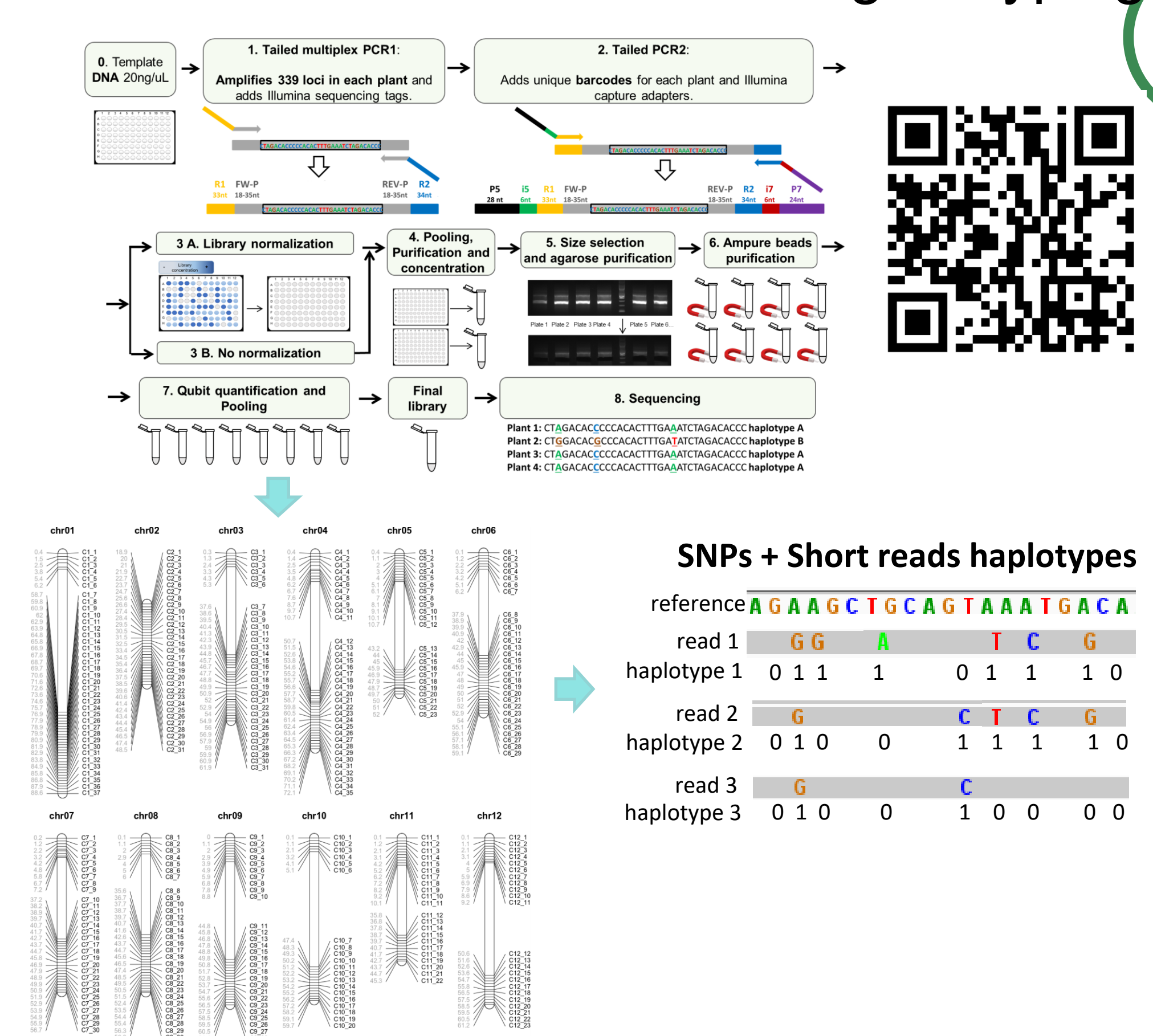
### Foundation population for resistance stacking:

- ~5,000 F1 progeny
- Elite processing × resistant donor parents

### Year 1 selection

- KASP-based MAS
- Identification of single R genes
- Detection of preliminary resistance stacks

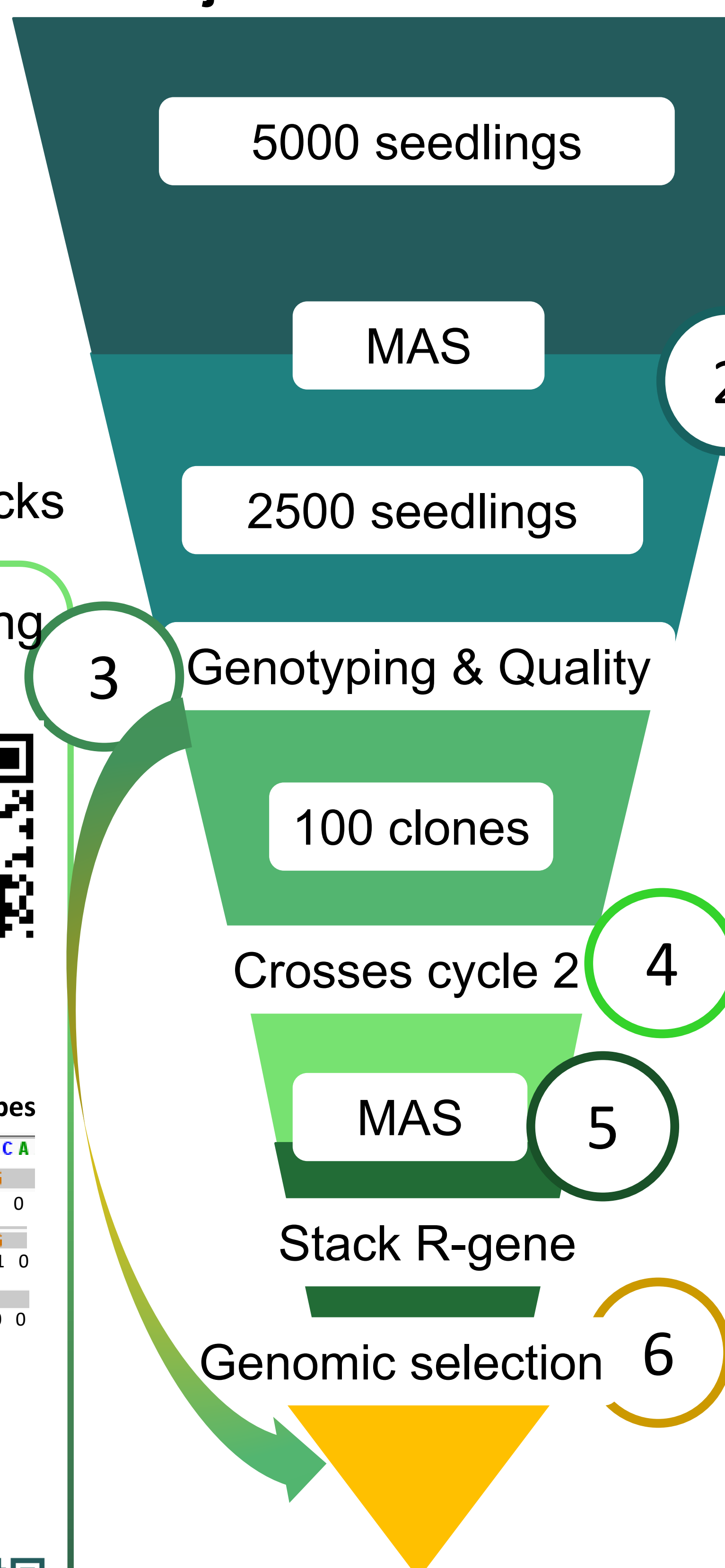
### PotatoMASH: Genome wide genotyping



### Characterization for fry colour

Develop Genomic Prediction models

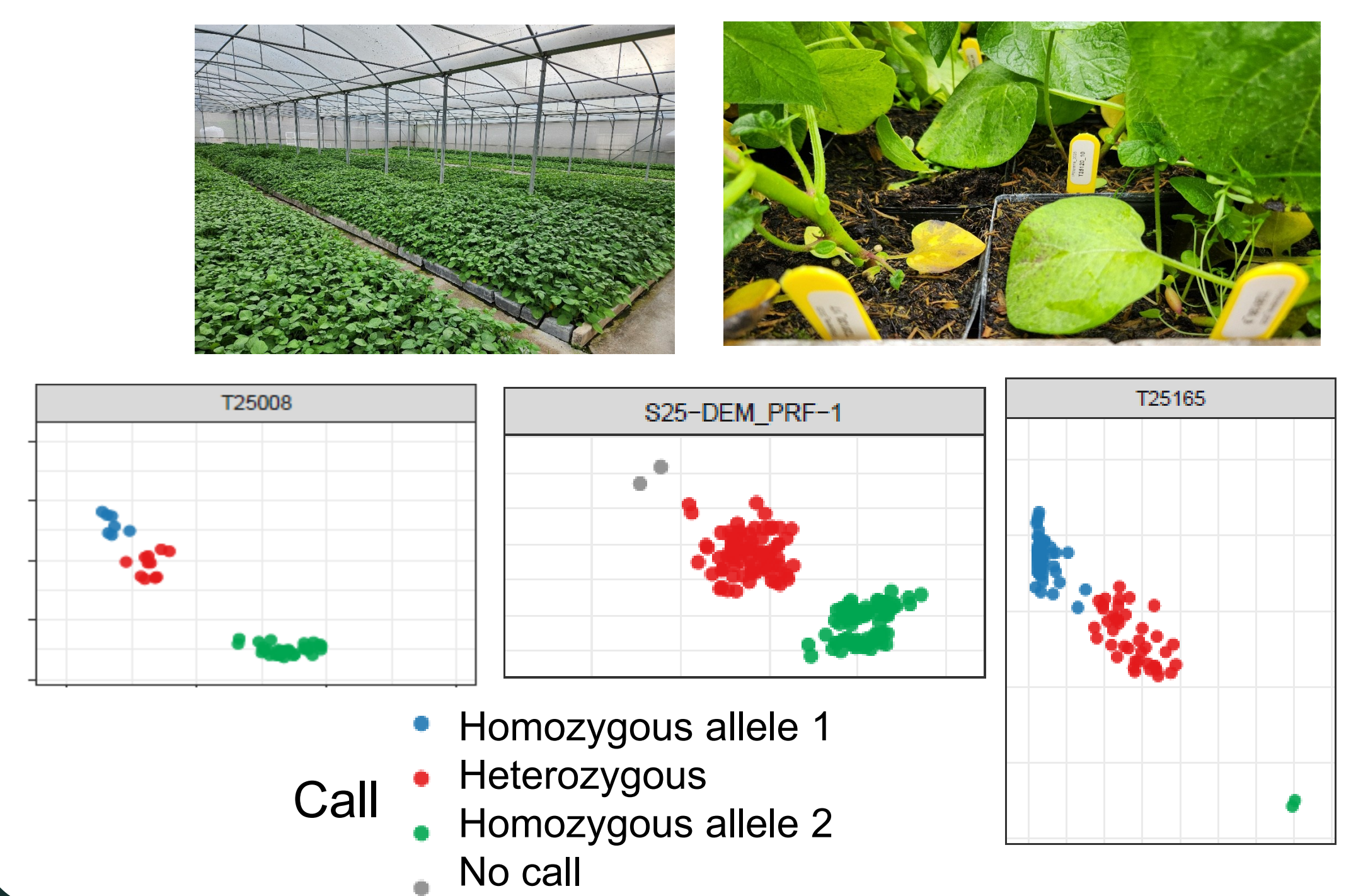
### Project start: 59 crosses



1 Crosses between R-donors and processing varieties

Late Blight	PCN	PVY	Wart
R2	H1	Ry-sto1	Sen1
Rpi-chc/ber/tar	Grp1	Ry-sto2	Sen3
R8	Gpa2	Ry-adg	Sen4
R9/Rpi-end2	Gpa4	Ry-chc	Sen5
Rpi-blb2	Gpa5	Ry	
Rpi-cap1	Gpa6	Nyon_sto	
Rpi-vnt1			

KASP → MAS to select ~50% with late blight genes



### Next steps

- Select progeny advanced for recurrent crossing
- Additional resistance stacking cycles
- Selection for processing quality
- PotatoMASH genotyping
- Genomic prediction for processing traits
- Integrated MAS + genomic selection

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