Internal

Adapting cereal varieties to climate change in the Nordic countries

– which traits can plant breeding work with and which ones are much more difficult?

08/25/2022 Tina Henriksson

Lantmännen

Lantmännen has a yearly investment of 100 MSEK in Swedish plant breeding

- Lantmännen Plant Breeding:
- 10 breeding program
- 3 breeding stations
- Large investment in new infrastructure-climate chambers and genotypng facilities

Why Swedish plant breeding?

- Adaptation to Swedish agricultural practices
- Adaptation to day length
- Lowering environmental impact
- Increased value for Swedish farmers
- Increased export
- We are a small country and nobodyelse will do it….

Lantmännen has the whole value chain

- Plant breeding
- Grain
- Mills
- Industry
- Consumer products

We work with a large number of crops

Cereals

- Winter wheat
- Winter triticale
- Spring barley
- Spring oats

Pulses

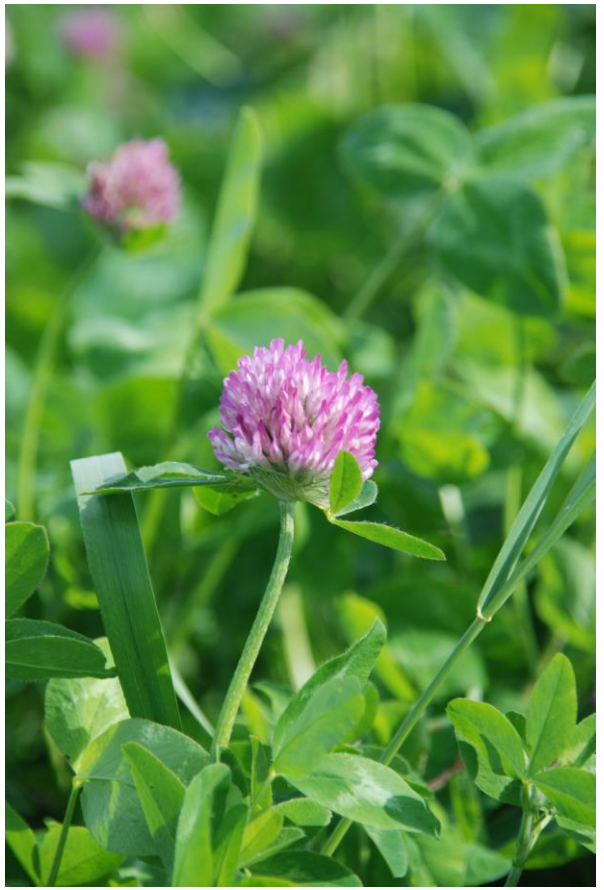
- Faba beans
- Peas

Forages

- Forage grasses
- Forage legumes

Potatoes

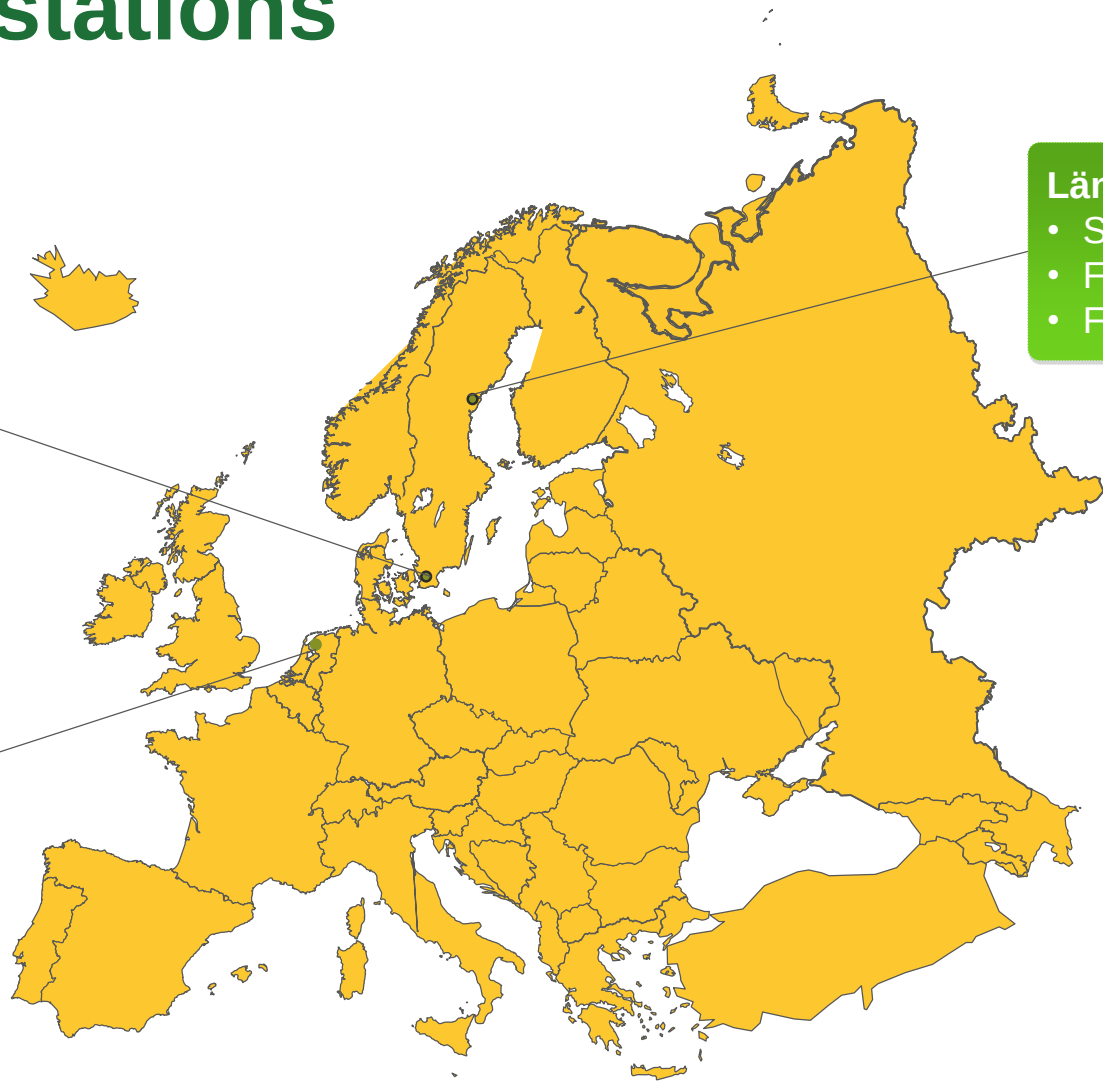
Salix



Our plantbreeding stations

Svalöv
- Winter wheat
- Winter triticale
- Spring barley
- Spring oat
- Peas
- Field beans
- Forage grass
- Forage legumes
- Salix

Emmeloord
- Triticale
- Potatoes



Lännäs
- Spring barley
- Forage legumes
- Forage grass

Climate change in short and the long run - can plant breeding meet the challenges?

- Plant breeding is a powerful tool to create value
- Plant breeding slowly but surely follows climate change and adapts the varieties
- Plant breeding creates robust varieties and on farm security for farmers

In the short run

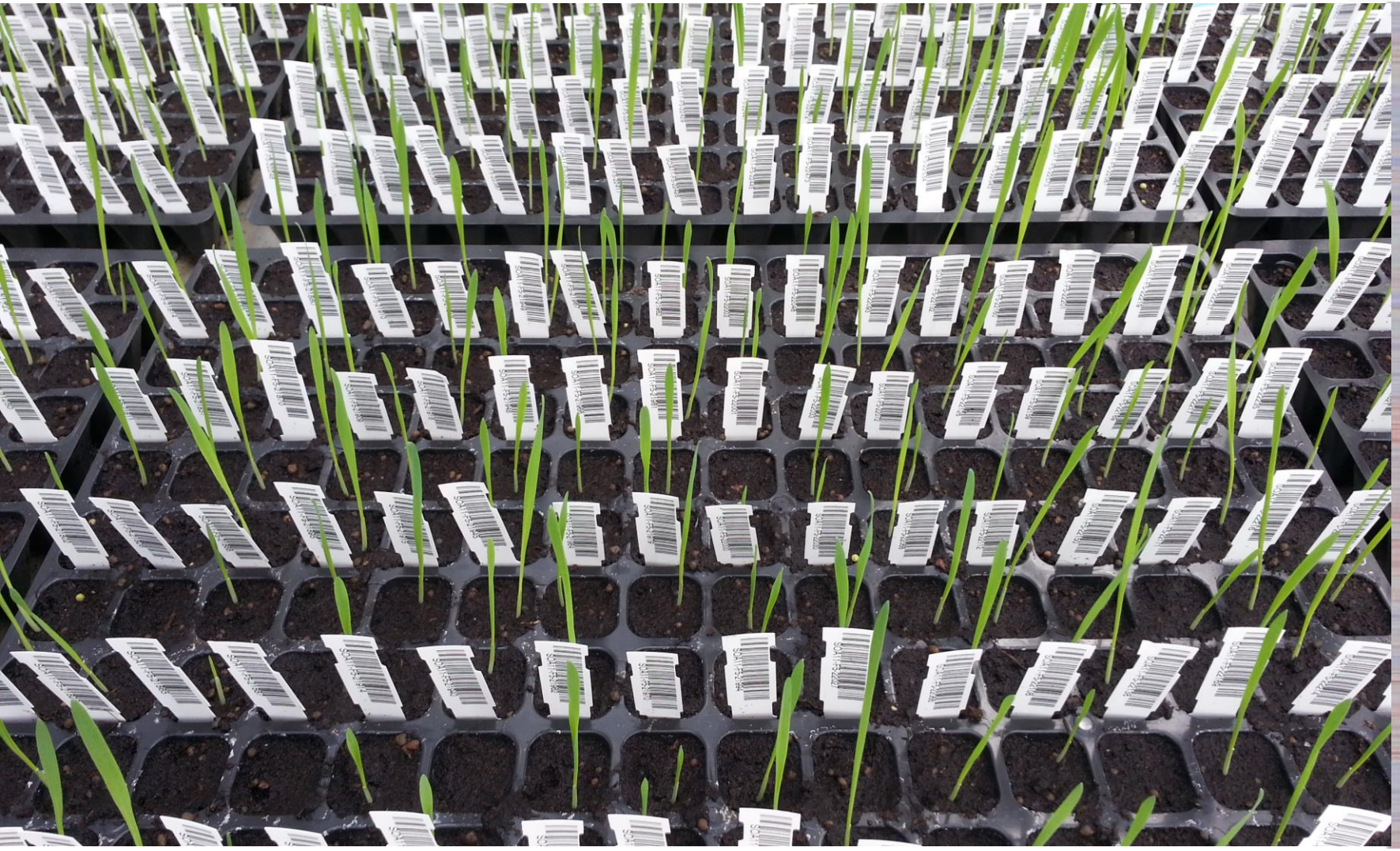
- adding of more locations with different environmental challenges,
- use of more selection for root traits and development of methods for this
- Use of new methods for selecting for stress tolerance,
- Use of new markers for stress tolerance- development of these
- Use of new image analysis methods in the evaluaton and selection process
- Use of genomic selection together with speed breeding and marker selection to speed up the development
- In the long run,

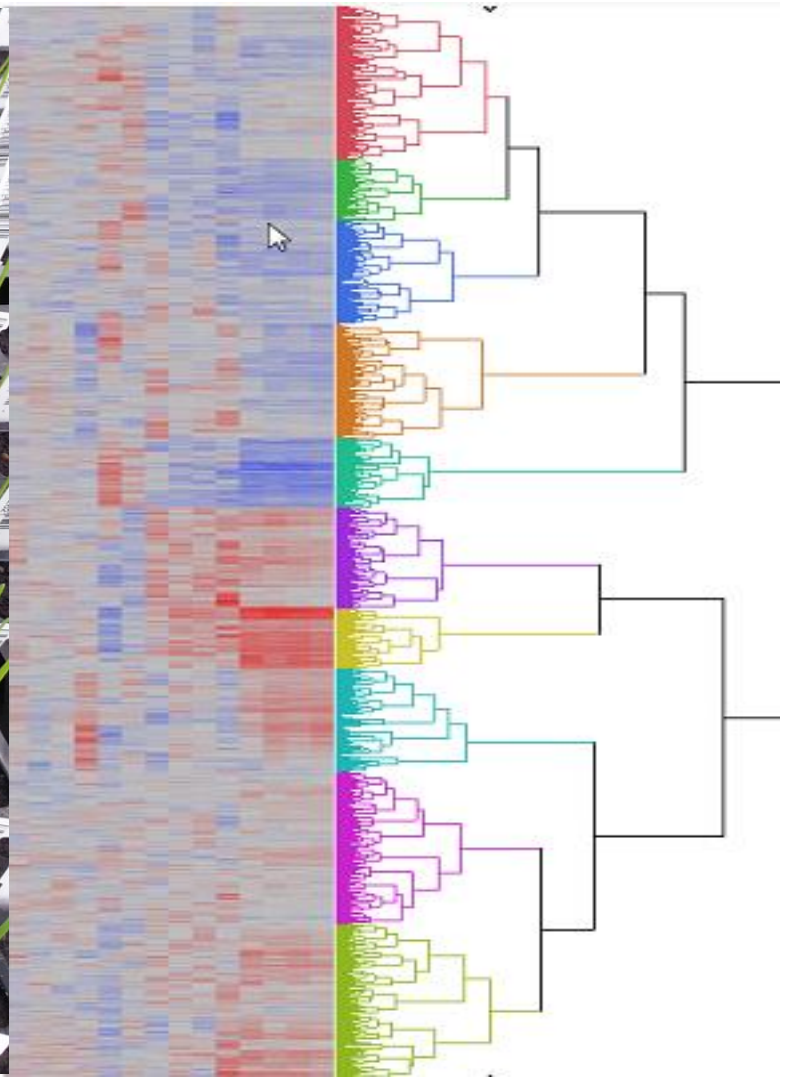
In the long run

- New crops
- New characters
- New resistances

Växtförädling 3.0 – Precisions fenotypning

Växtförädling 3.0 – Genomik





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