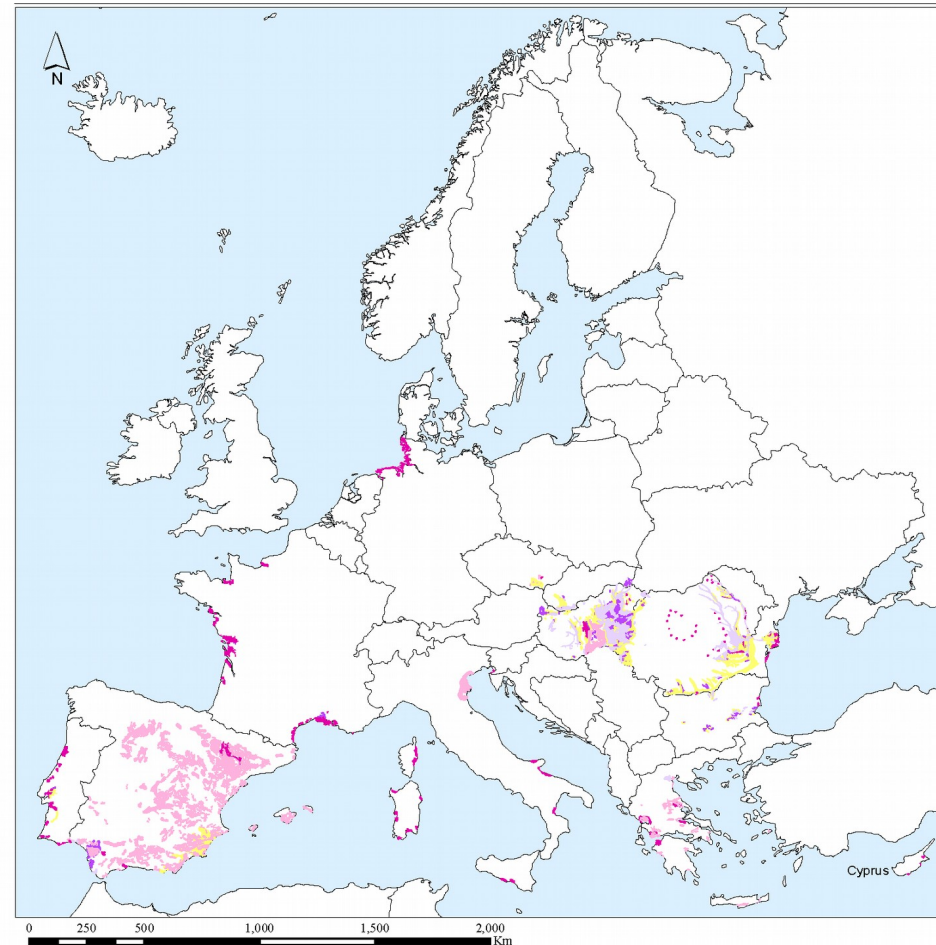


Breeding rootstocks for Mediterranean environmental conditions

Climate change → Higher temperatures
and less rain → Poor quality water

Persimmon growing áreas in Europe have
a high salinization risk

Persimmon is highly sensitive to salt
stress



Salt and drought stress tolerant
rootstocks can be useful

Breeding rootstocks for Mediterranean environmental conditions



Stress: 40 mM NaCl hydroponics irrigation

3 trials: 2015, 2016 and 2017

4 populations tested:

D. kaki

D. lotus

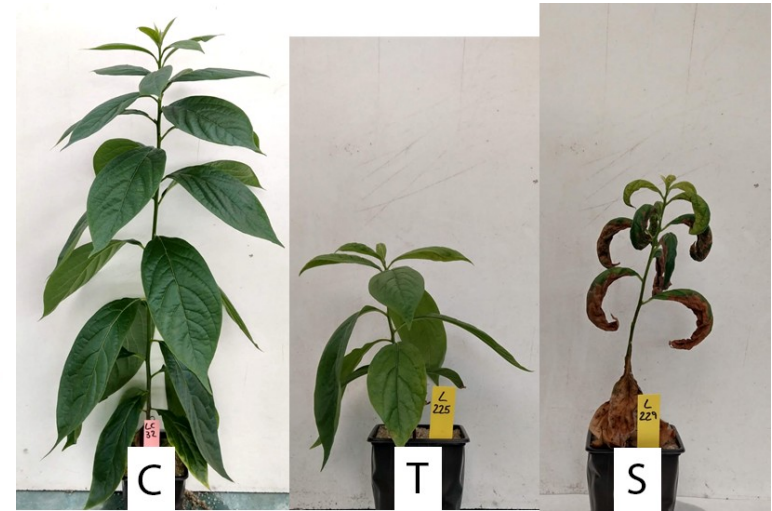
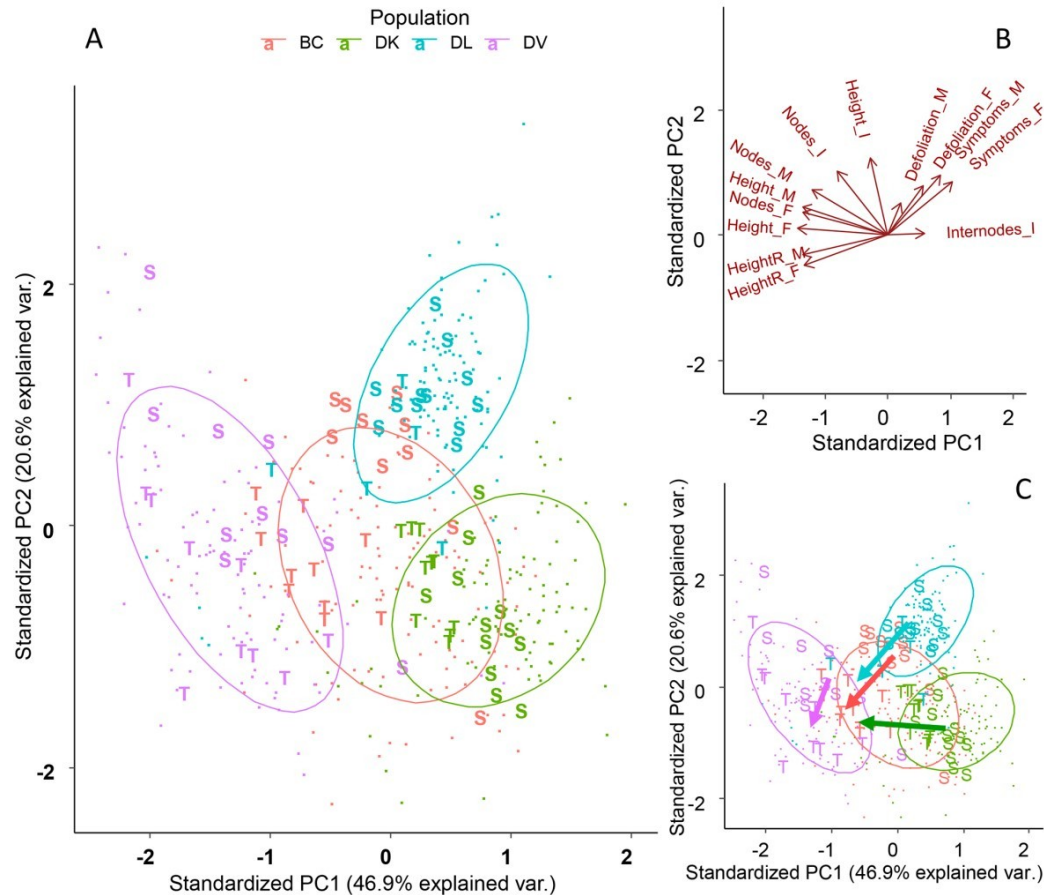
D. virginiana

D. kaki x *D. virginiana* (backcross)



Breeding rootstocks for Mediterranean environmental conditions

Many morphological and physiological measurements → Multivariate methods can assist in breeding program

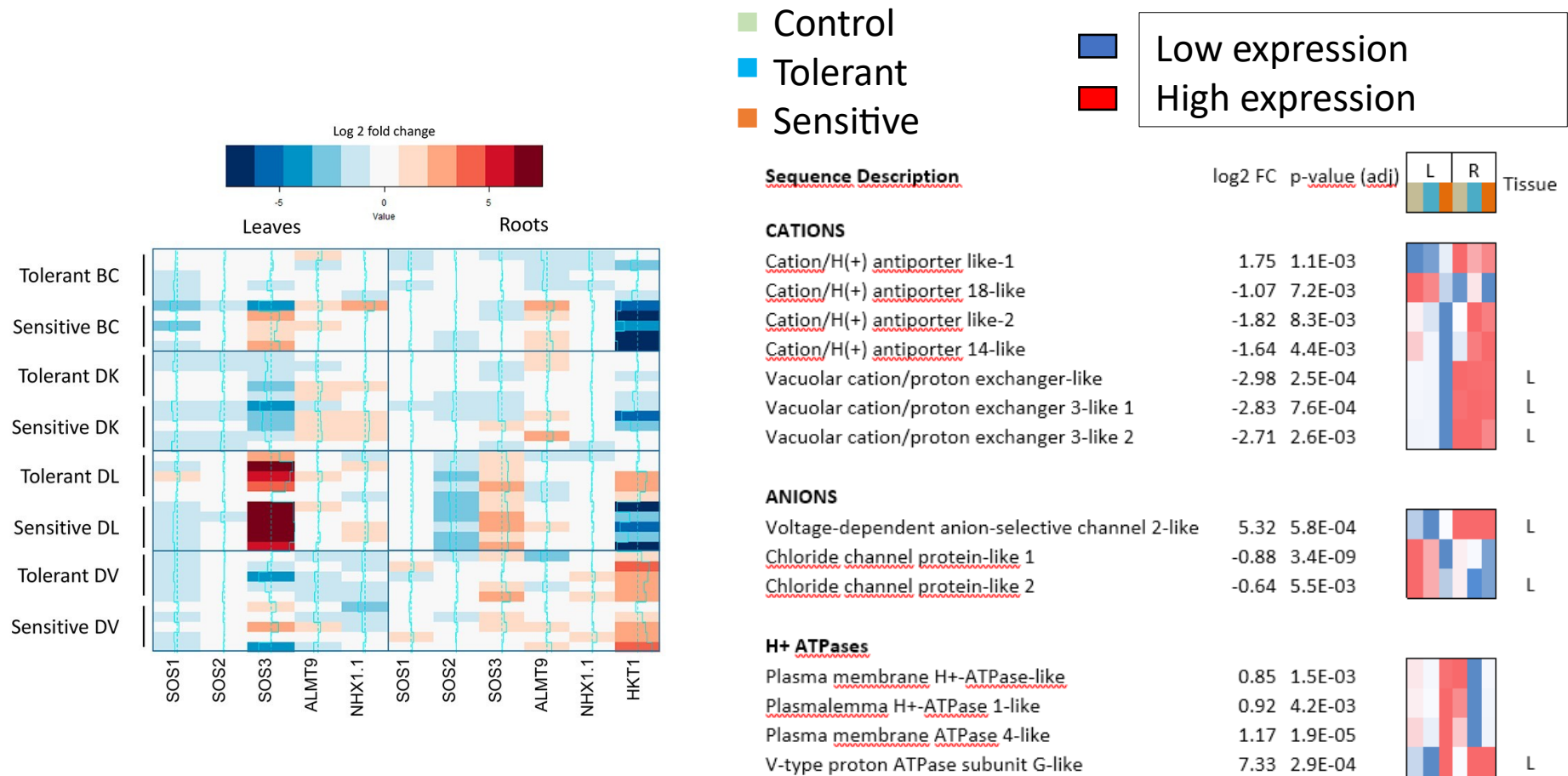


2-dimensional projections are useful for breeding. Clear division between tolerant and sensitive phenotypes.

Main differences:

- Growth rate
- Photosynthesis
- Water Use Efficiency (WUE)
- Defoliation

Breeding rootstocks for Mediterranean environmental conditions



RT-qPCR and RNA-seq confirmed differences in gene expression of key salt-stress related genes. Differences between populations and between tolerant and sensitive phenotypes within populations were observed