

Deep roots, better crops? Investigating root and shoot traits in historical and modern pea genotypes

Dorte Bodin Dresbøll

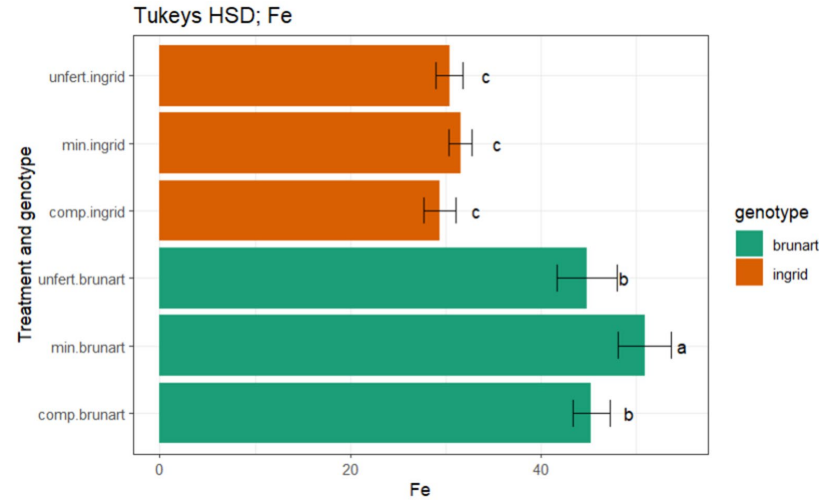
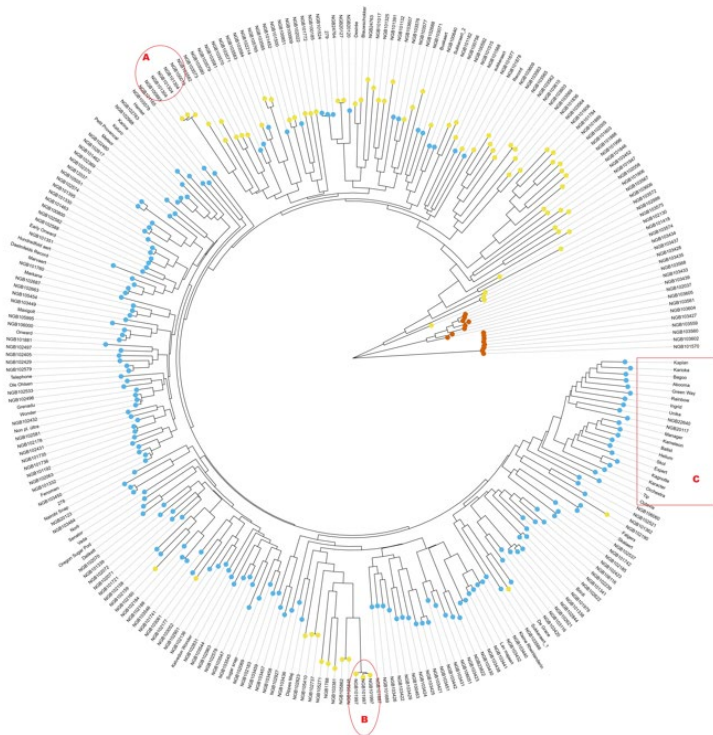
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Wacker**

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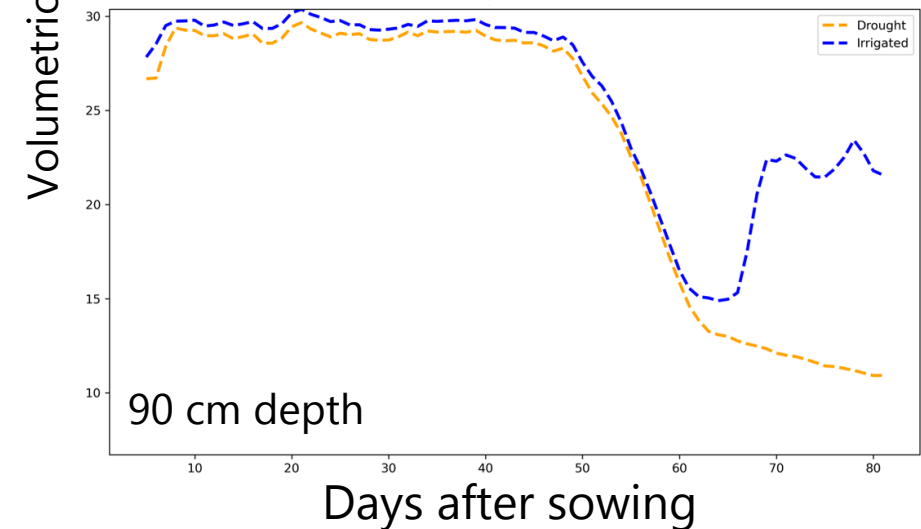
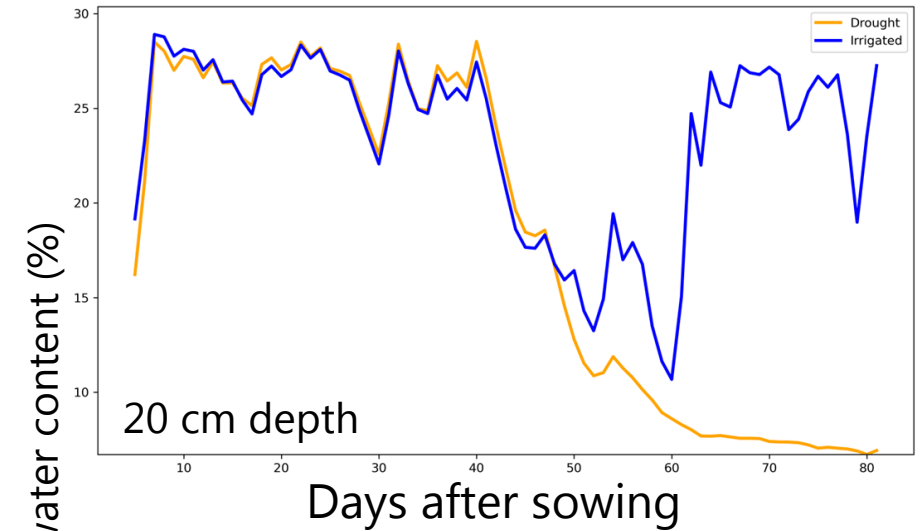
Are old pea accessions hidden gems for a more plant based diet?

PEAS & LOVE - 300+ accessions of peas from gene banks

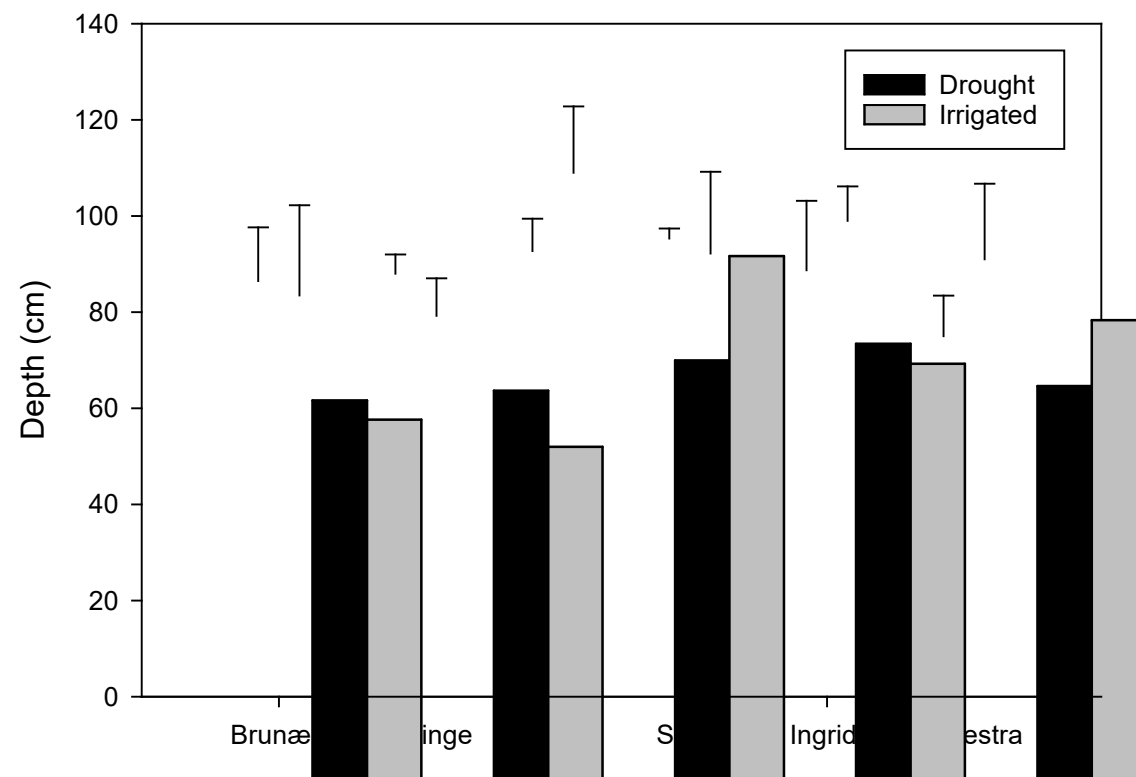


Peas were grown in 1.5 m tall rhizotubes with two treatments – well-watered and drought stressed

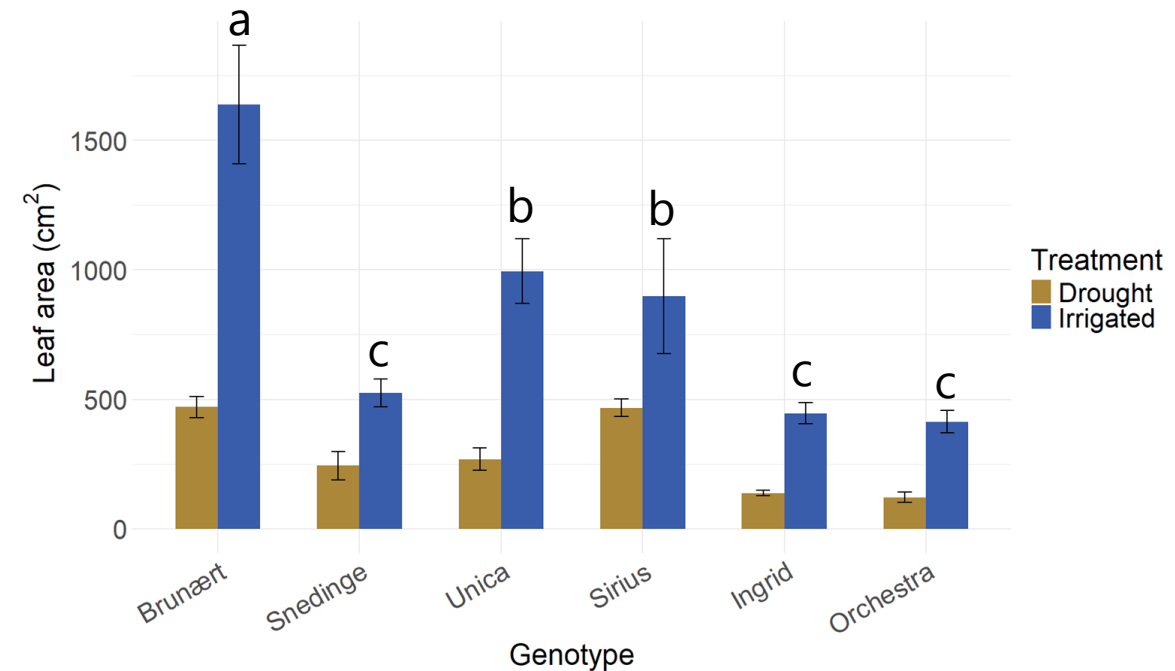
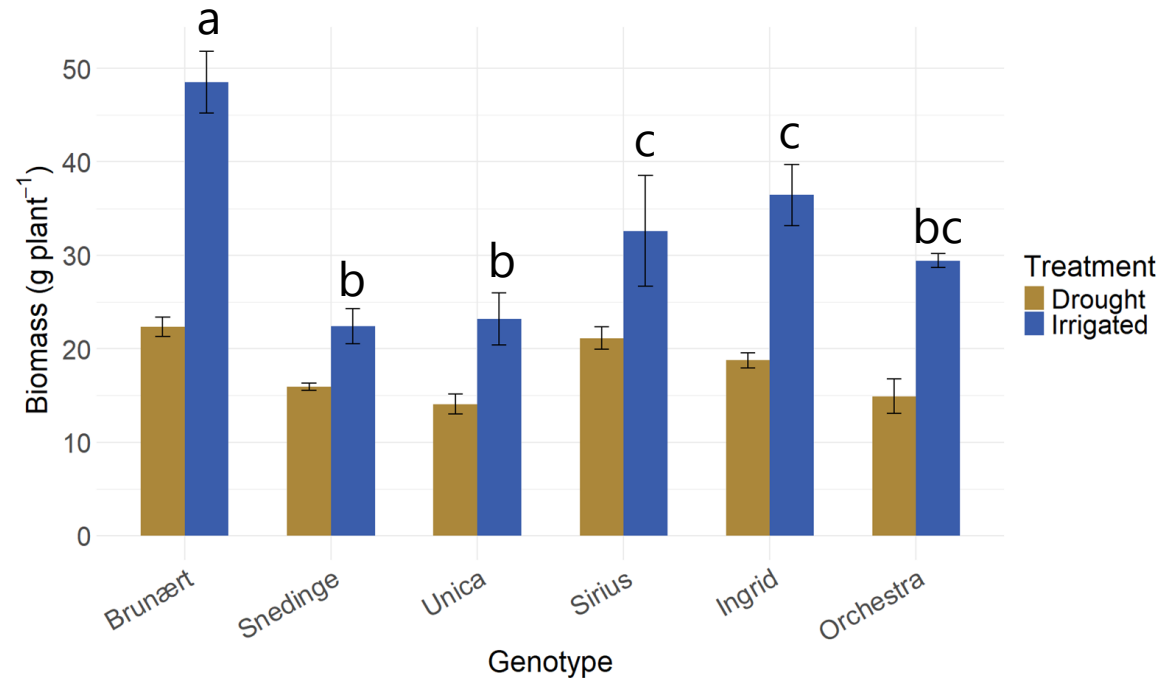
Six cultivars spanning 100 years of breeding



Rooting depth

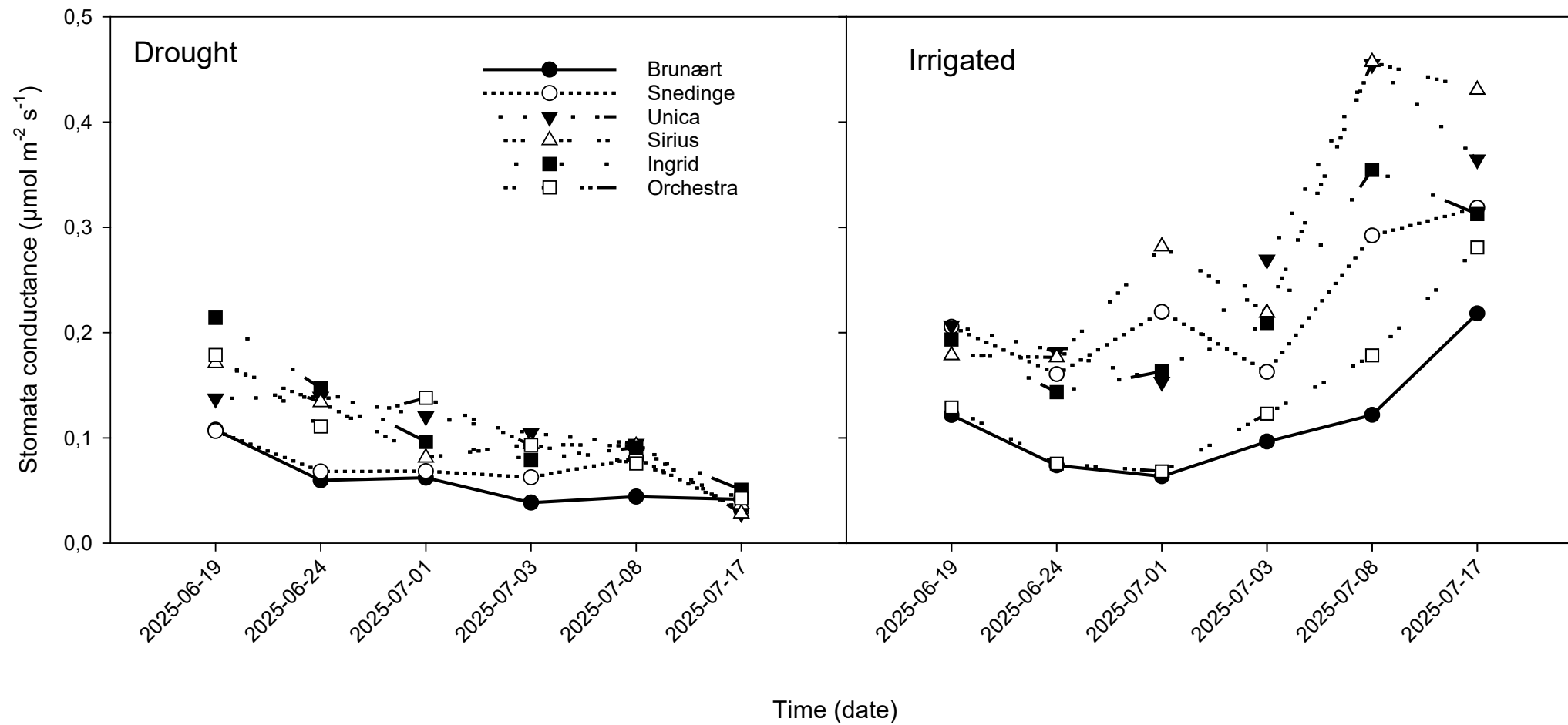


Plant growth was significantly reduced by drought stress



Largest growth penalty in the oldest cultivar Brunært subjected to drought

Stomata conductance differ between cultivars

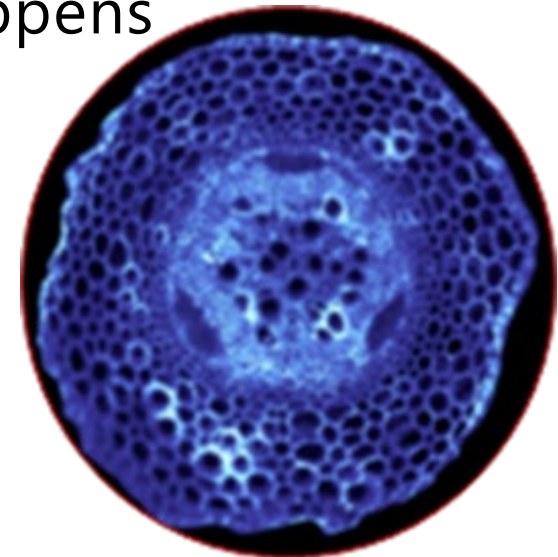


Conclusion

- All pea cultivars were significantly affected by drought stress
- Drought tolerance has not changed with new cultivars – with Brunaert being an exception

Large differences in aboveground biomass – what happens belowground?

- Root distribution - pRLD
- Root anatomy
- Nodule number



Thank you for your attention



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