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Differential plasticity to water and nutrients between crops and their wild progenitors

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Highlights:

- We compared norms of reaction of functional traits of crops and their wild progenitors
- Domestication effects on phenotypic plasticity to nutrients and water were found
- Domesticated plants decreased performance more under drought than wild plants
- The greater phenotypic homeostasis of wild plants may be a target for future breeding

ABSTRACT

Crop domestication has resulted in relevant phenotypic divergences between crop plants and wild progenitors, but domestication effects on phenotypic plasticity are poorly known. We grew plants of domesticated and wild progenitor accessions of seven taxonomically-diverse crops in three experimental glasshouse treatments differing in soil water and nutrient availabilities, and measured