



Khadija Boughazi

# Do maize plants cope with early suboptimal temperatures under ambient and elevated atmospheric CO<sub>2</sub> concentrations?

Khadija Boughazi, Nathalie Wuyts, Carel Windt, Onno Muller, Kerstin Nagel, Uwe Rascher, Fabio Fiorani

## Phase I: Exposure to low temperature stress and two CO<sub>2</sub> concentrations

Cold x ambient CO<sub>2</sub>  
[20-12 °C] [CO<sub>2</sub>] 400ppm



Medium cold tolerant



High cold tolerant

Cold x elevated CO<sub>2</sub>  
[20-12 °C] [CO<sub>2</sub>] 800ppm

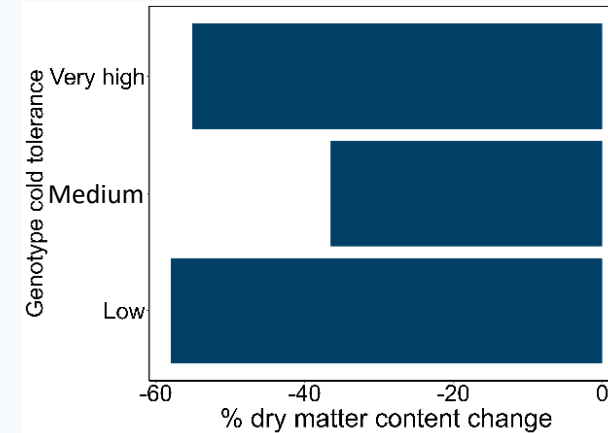


Medium cold tolerant



High cold tolerant

## Phase II: Shoot biomass after the recovery phase



Plants pre-exposed to suboptimal temperatures combined with eCO<sub>2</sub> show a reduction in dry matter content

The reduced dry matter content upon recovery from suboptimal temperature stress combined with eCO<sub>2</sub> may be an effect of plant acclimation to these environmental conditions.