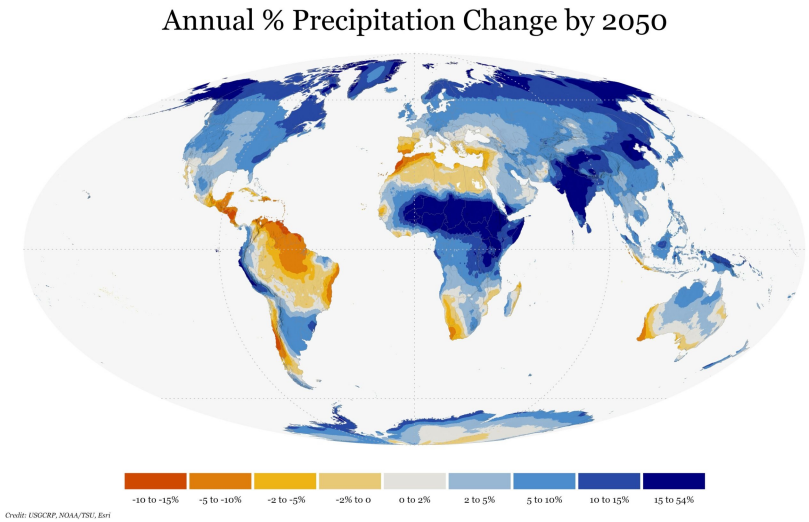
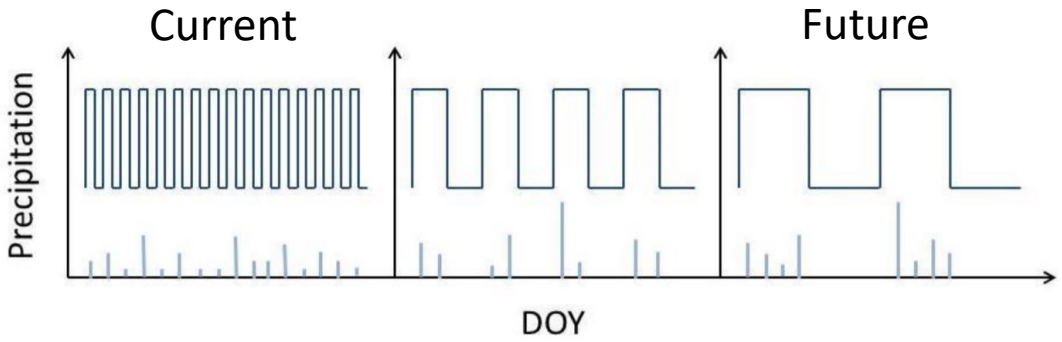
How do plants respond to the changing climate?

The changing climate results in altered **precipitation patterns** worldwide



⇒ More *extreme* precipitation patterns, with **longer dry** and **wet periods**



How do plants respond to changing precipitation patterns?

The changing climate results in altered **precipitation patterns** worldwide

⇒ Potentially alternating **drought** and **flooding** exposure

⇒ Little knowledge how such regime affects plant growth

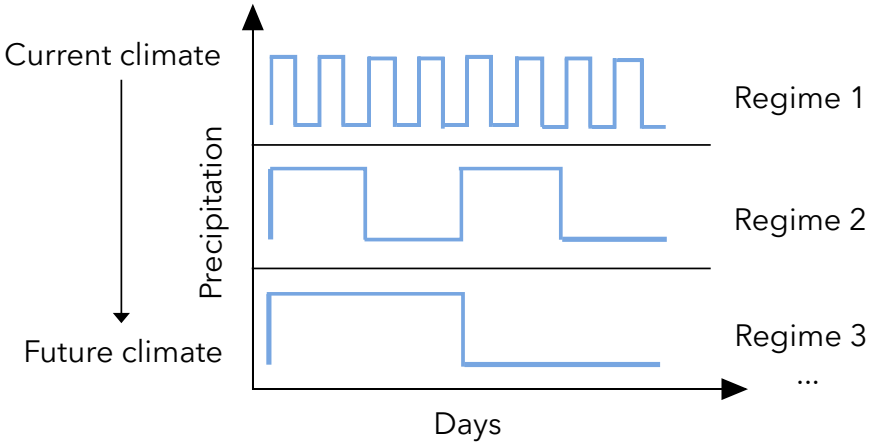
⇒ **How do plants respond to precipitation changes at the physiological and molecular level?**

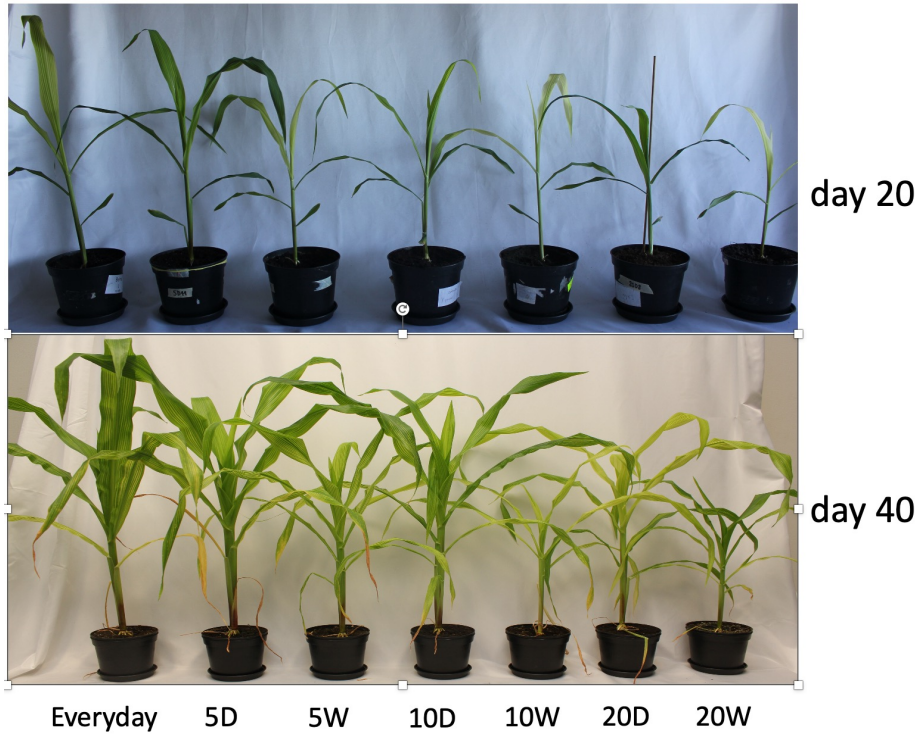
How do plants respond to changing precipitation patterns?

Experimental testing

Exposure of maize plants to varying watering regimes

⇒ Alternating **drought** and **wet** periods of varying duration





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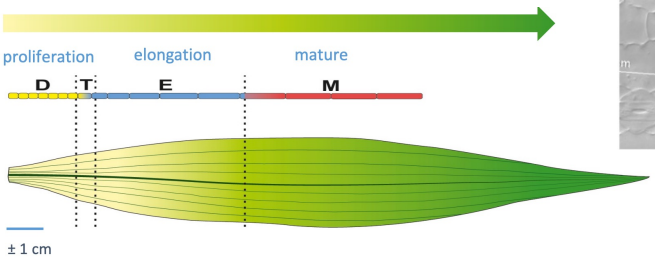
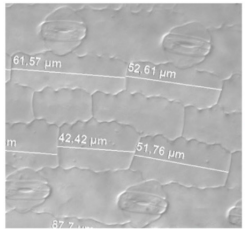
Experimental testing - Analyses

- **Physiological parameters**: *photosynthesis, respiration, …*

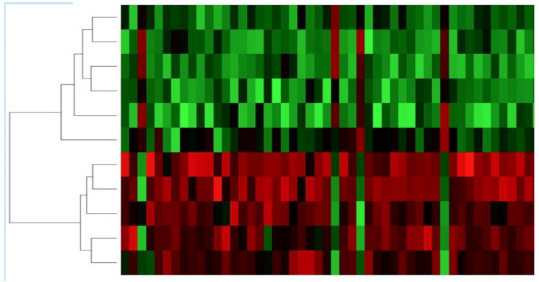
- **Growth analysis**: *growth parameters in leaf growth zone (cell size, meristem size, division rate, …)*





- **Biochemical analyses**: *metabolites and enzymes from various pathways and stress defence*

- **Transcriptome analysis**: *transcription changes (NGS), metabolic pathways*



How do plants respond to changing precipitation patterns?

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