



Technische Universität München



Wissenschaftszentrum  
für Ernährung, Landnutzung und Umwelt



# Tracking the speed of climate change in crop farming

## Background

Phenology of plants is a perfect bio-indicator of anthropogenic warming. Leaf unfolding and flowering of fruit trees and wild plants species however often have higher apparent temperature sensitivities than crops. It is still an unsolved question why phenology of crops and farming activities differ in their response to warming. One factor might be the switch in cultivars and varieties modulating the warming responses.

## Objectives

The master thesis will investigate whether old historical cultivars and varieties of major crops in Bavaria have a different temperature response in their phenology and if so, if these differences may explain the previous finding of “farmers are not tracking the speed of climate change”. You will be part of our research team at the professorship of Ecoclimatology at TUM collaborating with colleagues of LfL / Ruhstorf. Your thesis will rely on existing data on test cultivation of old landraces and varieties of LfL as well as own phenological observations in spring 2020 at Ruhstorf.

## Prerequisites

- strong enthusiasm, willingness and self-reliance to work on this topic
- ability to conduct field work in spring at Ruhstorf at least one a week
- evidence of strong interest in crop production, climate change and data analysis
- familiarity with “R” or at least willingness to learn quickly
- thesis can be written in English or German.

Did we catch your attention? Would you prefer to write your master thesis in an attractive teamwork setting? Please contact [annette.menzel@tum.de](mailto:annette.menzel@tum.de) for further information and send your application until Feb. 21<sup>st</sup>. Field work will start in March 2020.