



# Centre for Crop Systems Analysis - CSA

## Making More with Plants

- High quality plant production in sustainable agro-ecosystems through research and teaching
- Improvement and innovation of plant production at various levels of integration
- Assessments of risks arising from climate variability and climate change
- Analysis and management of biotic interactions at field and landscape scale

## Core Expertise

- Quantification of complex, non-linear interactions between plants (or genotypes), management and the environment (G×M×E)
- Studies of processes that investigate form and functioning of crops, weeds and grasslands in relation to genetic, management, biotic and abiotic factors
- Analysis of global change processes with particular attention to climate-related risks and opportunities
- Quantitative ecology and modelling of ecological processes in space and time



## Global Partnerships

CSA seeks global partnerships to analyse and develop sustainable and profitable plant production chains and cropping systems in temperate, sub-tropical and tropical regions.



## Methods

Development and application of modelling tools to generate insights into complex systems interactions at multiple scales:

- Predicting phenotypic responses to multiple traits in breeding programmes
- Optimising crop management via functional-structural plant modelling
- Quantifying G×M×E interactions in a changing world
- Biochemical C3 / C4 photosynthesis modelling
- Modelling agro-ecological processes at field and landscape scale

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<b>Theme 1</b>	<b>Theme 2</b>	<b>Theme 3</b>	<b>Theme 4</b>
<b>Crop Systems Biology</b>	<b>Crop Form and Function</b>	<b>Designing Climate Robust Systems</b>	<b>Quantitative Agro-Ecology</b>
<b>Theme 5 Natural and Social Sciences Interactions</b>			