Controlling plant growth in canopy shade

Supervisory team:
Main supervisor: Prof Kerry Franklin (University of Bristol)
Second supervisor: Dr Antony Dodd (University of Bristol)

Host institution: University of Bristol

Project description:
Plants can detect the presence of competing vegetation using photoreceptors and initiate rapid stem elongation to overtop competitors. Although shade avoidance can provide plants with a competitive advantage in fast growing stands, excessive stem elongation can lead to lodging and reduced plant survival. As such, plants have evolved multiple feedback mechanisms to attenuate shade avoidance signalling. The light environment deep within a canopy activates the photoreceptor phytochrome A, which inhibits stem elongation by an unknown mechanism. This project will combine plant physiology and molecular biology to understand how plants control stem elongation when leaves become shaded.