



Thursday 5 November

EU-India PARTNERING EVENT

Theme: *Sustainable production and management of biological resources from land, forest and aquatic environment*

Ankush Prashar

Scottish Crop Research Institute (SCRI)



A joint event organized by



This event is co-funded by
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RESEARCH CENTRE



Sustainable production, Sustainable production, Sustainable production, Sustainable production

➤ **SCRI is Scotland's leading institute for research on plants and their interactions with the environment, particularly in managed ecosystems.**

➤ **Lead centre in the UK research on potatoes, barley and soft fruits.**

➤ **Research Focus:**

- **Processes that regulate the growth of plants**
- **Responses to pests, pathogens and the environment**
- **Breed crops with improved quality and nutritional value.**

➤ **SCRI also preserves internationally important ex situ biodiversity in the form of crop germplasm, an essential resource for crop improvement or cultivar production for sustainable agriculture.**



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PROJECT IDEA



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- **Constraint:** Shortage of water and poor understanding of stress physiology, phenology and their genetic control for plants that form specialized storage structures such as tubers, bulbs and fleshy fruit.
- **Aim:** Breed for high water use efficiency while sustaining yield.
- **Approach:** Exploit existing natural variation to adapt these crops to water stress conditions.
 - Phenotype germplasm or populations extensively at several locations under different water and nutrient management systems (Stomatal conductance, photosynthetic capacity).
 - Genotype these populations and identification of QTLs/associations.
 - Investigate candidate genes responsible for trait variation.

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SEVENTH FRAMEWORK
PROGRAMME

PARTNER SOUGHT



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The focus on the WUE project is based on the development of breeding and producing varieties (eg. Potato) in more dry and warm/hot regions to serve as (staple) food for populations in these regions.

➤ **Institutes/Universities:** Research work involves:

- Genetic variation of this trait.
- Methods to determine the trait
- Genetic and/or molecular basis of tolerance to water stress/water use efficiency.
- Preservation of ex situ variation or germplasm.

➤ **SME/Companies:**

- Carry out phenotypic trials at different locations.
- Field trials all over the world to test new and existing varieties in a wide range of climate conditions.

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CONTACT DETAILS



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