CROPS FOR THE FUTURE RESEARCH CENTRE
PROGRAMME CONCEPT NOTE
CROPBASE
A global web-based support tool and knowledge base for underutilised crop research and development.

Problem Statements
- Lack of access to integrated, credible and multidisciplinary knowledge is a major limitation to research, development and end use of underutilised crops.
- There exist many underutilised crops with fragmented knowledge systems and lack of quantitative evidence. To augment and integrate existing and new knowledge systems, key research challenges, methods of enquiry and exploration and researchable knowledge gaps need to be identified.
- Multidisciplinary and multinational research and cross community dialogue is severely inhibited by the different disciplines, languages and means of communication of academic and social groups that represent knowledge systems on underutilised crops.

Objectives
- To provide a single-entry tool that can be used to;
    - identify the potential supply/demand and end-use characteristics of a wide range of underutilised crops under contrasting environments.
    - develop tools which can be deployed to secure missing framework data for any underutilised crop, whether at the genetic, soil-plant, post-harvest, sociocultural or supply chain level.

Outcome
CropBase will provide an ever-evolving knowledge base to support underutilised crops and facilitate uptake pathways for specific crops across the Research-Value-Chain (RVC). To achieve this it will;
- Collate, evaluate and disseminate applicable information to each sub-community using digital tools such as: *CropFinder, CropMapper, CropBreeder, CropGrower* and *CropUser*.
- Share relevant information between sub-communities across disciplinary and geographical boundaries in technical or non-technical language depending on the direction of information transfer between sub-communities.
- Develop and test an integrated data and knowledge system that supports and links CFFRC programmes, builds new partnerships and underpins national and regional initiatives.

Potential CFFRC Partners
International and national partners and end-users involved with development of underutilised crops, especially those contributing to existing and new CFFRC research projects and regional initiatives. Disciplinary expertise will be sought across the RVC including, biotechnology and breeding systems, physiology and agronomy, product development, software and hardware development, marketing, socio-economics and cultures, operations and supply chain management and business.

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Programme Activities

Prototype Platform Development
- Build on the prototype CropBase system using proven industry grade open source projects.

Knowledgebase Population and Continued Platform Development
- Literature reviews on several underutilised crops to provide a pool of integrated information.
- The form and structure of this existing information will inform continued platform development and facilitate development of a generic CropBase knowledge system.

Concurrent Knowledgebase and Plant Research and Platform Evolutionary Development
- Working alongside other CFFRC research projects, CropBase will evolve a knowledge system to support these projects, summarise research outputs and identify research gaps and priorities.
- CropBase will support users across the RVC using novel digital techniques and the Internet.

Incorporating Research into Knowledgebase and Platform Evolutionary Research and Development
- Upon project completion, accumulated knowledge will be integrated into the CropBase Knowledgebase, ready for general global information dissemination.
- Using this mechanism, gaps in a particular crop's knowledge base can be established, thus providing a transparent and intuitive method for outlining future research requirements.
- The identification of `researchable gaps' for sub-communities across the RVC will provide a basis for further platform evolution to serve each sub-community and expedite progress.