An overview of experience in resistance breeding and prospects

Presented by
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Alfalfa Field day at Kearney Research and Extension Centre

UNIVERSITY OF CALIFORNIA
Agriculture and Natural Resources

Origin: Born and Raised in Uganda

Sorghum drying in the field for food

Kyambogo University, Uganda, 2004

Bachelor of Vocational Studies in Agriculture with Education

Wageningen University and Research, the Netherlands, 2010

Master of Science in Plant Biotechnology (Molecular Pathology and Plant breeding)

Thesis: "*The role of genes required for VE1 mediated resistance to Verticillium in basal defense*" Advisor; Prof.dr.Ir. Bart Thomma

University of Greenwich, UK, 2021

Doctor of Philosophy in Agriculture, Health and Environment.

Thesis: "*Phenotyping and genetics of whitefly, Bemisia tabaci, resistance in African and South American cassava genotypes*" Advisors; Prof. Maruthi Gowda, Prof. John Colvin, and Prof. Linda Walling

Professional Development

- Martin Luther University in Halle, Germany, 2006, Certificate in theoretical and practical basic course in developmental plant genetic resources
- RLP Agro science (GmbH) Alplanta- institute for plant research, Germany
- Environment management course sponsored by In-Went, Germany, 2005-2006
- Vegetable marketing through field demonstrations, sponsored by Cornell University (Feb-Mar 2005) in India

Phenotyping and genetics of whitefly, *Bemisia tabaci,* resistance in African and South American cassava

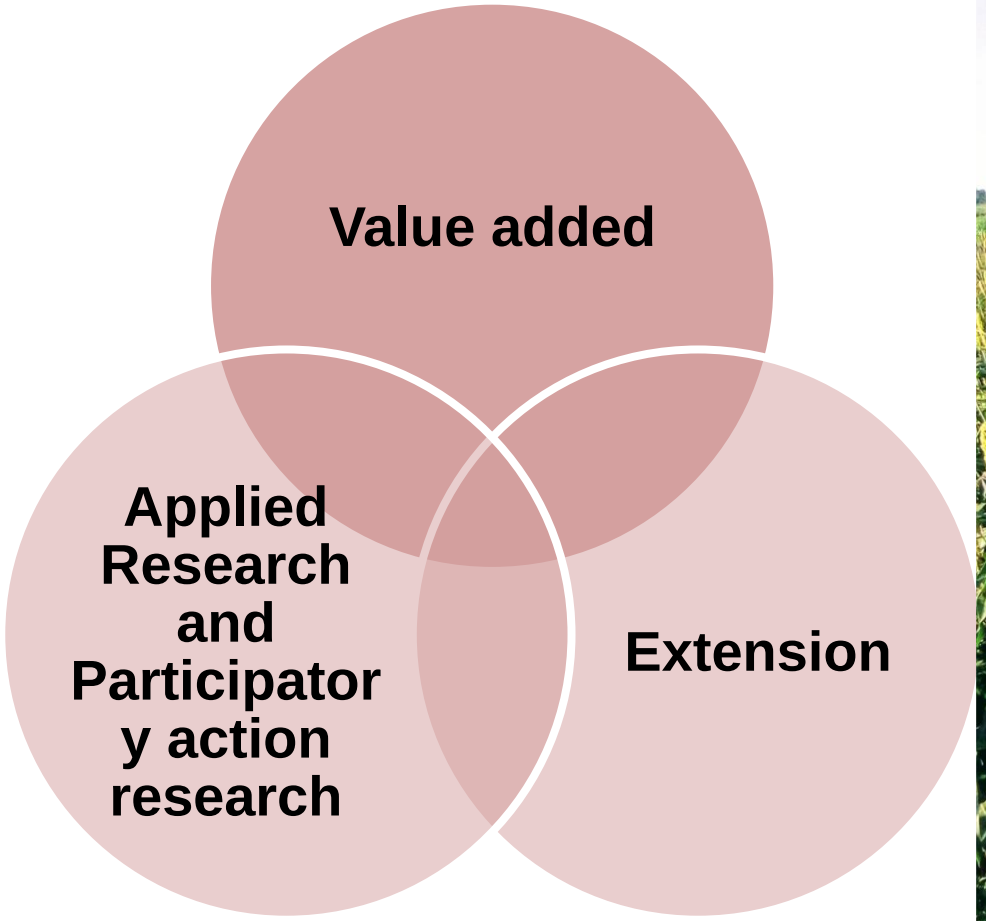
Introduction

- Cassava (Yuka) is a major staple in the developing world, providing a basic diet for more than 800 million people worldwide.

- It is one of the most drought-tolerant crops, capable of growing on marginal land and can adapt to different soil types and climatic conditions.

- Cassava is a food security and industrial crop (bioenergy, starch, beer etc)

Vision for CE-Abiotic stress



Plans for Sorghum Abiotic stress program

1. Conduct and report needs assessments to identify priority issues or problems relevant to the local clientele groups being served.

2. Conduct applied research designed to monitor changes and solve statewide and locally relevant problems related to water quantity and quality in crop production.

- Assessments of crop traits with potential links to improved drought resilience
- Understanding genetic, environmental and agronomic management (GxExM) impacts on sorghum productivity under drought stress
- Understanding the role of root systems on drought/ water stress resilience.

3. Valued added- Biofuel
4. Extension, outreach and technology transfer

Questions

- How many people here are growing sorghum?
- How many are diversifying their cropping systems by growing two of these: Alfalfa, corn or sorghum?
- How many switched from corn to grow either Alfalfa or sorghum?
- What would you like to see more as regards sorghum research ?


Thanks for Listening