Interspecific *Urochloa (ruziziensis x brizantha x decumbens)*

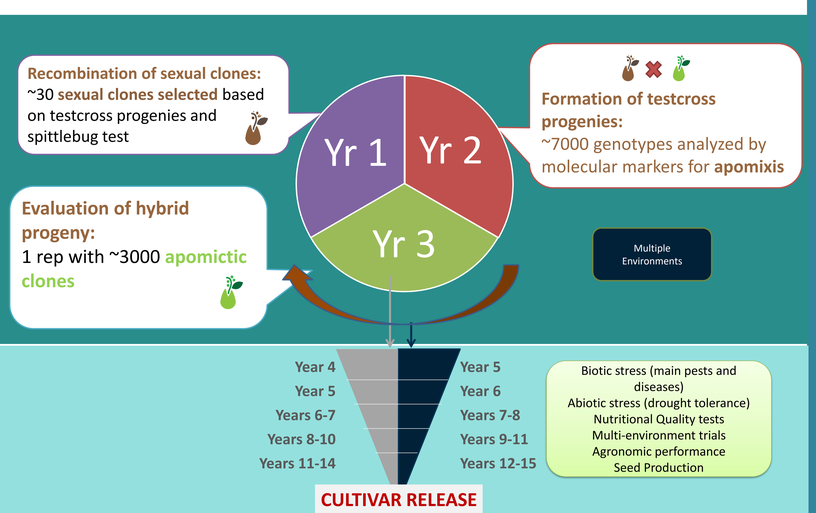
UAV image of experimental field trial

Megathyrsus maximus (syn. *Panicum maximum*)

The challenge

- Adaptation of *Urochloa* and *Megathyrsus* to different farm sizes and systems i.e. Large-scale farms, continuous grazing in LAC; small-scale farms, cut and carry systems in EA; knowledge gap in WA.
- Adaptation to different ecological regions (climate, soils, pests and diseases) i.e. spittlebugs major pest in LAC absent in Africa, spidermites major pest in EA absent in LAC.
- Forage quality and production are two major effect traits on food and nutrition security, economic growth and climate change mitigation which have been overlooked.

Our innovative approach



INITIATIVE ON Accelerated Breeding

CGIAR

Alliance Bioversity & CIAT

Improving *Urochloa sp.* and *Megathyrsus maximus* for sustainable livestock systems to increase food and nutrition security, climate resilience and better livelihoods

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Outcomes

- **Six cultivars** released globally
- As of 2021, Urochloa hybrids were sown on **1,236,495ha** globally.
- The **main market for Urochloa hybrid commercialization** is Latin America and the Caribbean (1,183,336ha), followed by the U.S. (16,489ha), Asia (15,641ha), Australia/Oceania (9,689ha), Africa (6,388ha), and Europe (1,331ha) (Papalotla Seeds data)
- In Kenya, with good management practices, **farmers can harvest up to 4-6 times/year.** Results from pilot studies indicated that using *Urochloa* and *Megathyrsus* led to 10-50% increases in milk yield. (FIA Project Report 2022)

Next steps

- Clearly identify Target Population of Environments and increase testing network in Africa (Kenya, Zambia, Senegal)
- Establish High Throughput Phenotyping methods for forage quality and production and spidermite tolerance to increase efficiency and accuracy of selection and Genetic Gain.
- Establish Machine Learning methods to analyze phenotypic data
- Establish a Breeding Management System
- Establish a Genomic Selection Pipeline

Partners

PAPALOTLA SEMILLAS

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