**OVERVIEW OF IITA CASSAVA BREEDING PROCESS MAP**

**Crossing 1**

**Seedling 2**

**Recurrent Genomic Selection**

**CET 4**

**PYT 5**

**AYT 6**

**SAH 8**

**Phenotyping**

**On-Farm 9**

**NPT 10**

**Release 11 & Stewardship 12**

**GEBV & Selection3**

**UYT 7**

**-QC 2a**

**-MAS 2b**

**-GS 2c**

**-PS 2d**

**-Trial establishment**

**-Phenotyping**

**-Analysis and Selection**

**-QC (Genotyping)**

**-GS4a**

**-PS4b**

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**Phenotypic analysis of single trials**: H2, BLUEs, BLUPs, SEs)

**Phenotypic analysis of multiple trials** and platforms;

BLUEs, BLUPs, H2;

GxE analysis (AMMI, GGE, Stability etc)

Data visualization

User-defined output and reporting

Decision support

* Index selection
* MAS
* GS
* PS

Data quality control

Digital data collection tools

**Experimental design** of field trials and phenotyping experiments

QTL, GWAS, & GS (mixed models)

Diversity of genetic resources (Population structure, diversity, ADMIXTURE, etc)

Pedigree & marker-based Identity by descent, Identity by state (parent ID, cross fidelity, genotype identity)

**Genotypic data analysis**

High throughput **Phenoapps**

Environment: management, location, year, trial metadata

BrAPI