

Div Seek Hub in West Africa: Contribution of AfricaRice and IITA

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Annual General Meeting & Roundtable Workshops
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AfricaRice

IITA
Research to Nourish Africa

Outline

- I. Rationale of a Div Seek International Pilot Hub
- II. Accomplishments
- III. Conclusion



I. Rationale of a Div Seek International Pilot Hub

1. To bring together researchers in CGIAR centres and national institutions in West Africa with a focus on the genetic diversity analysis for pre-breeding and genebank management
2. To develop a strong network for sharing of guidelines, standards and best practices for diversity analyses and data management
3. To leverage support and guidance from the broader Div Seek community

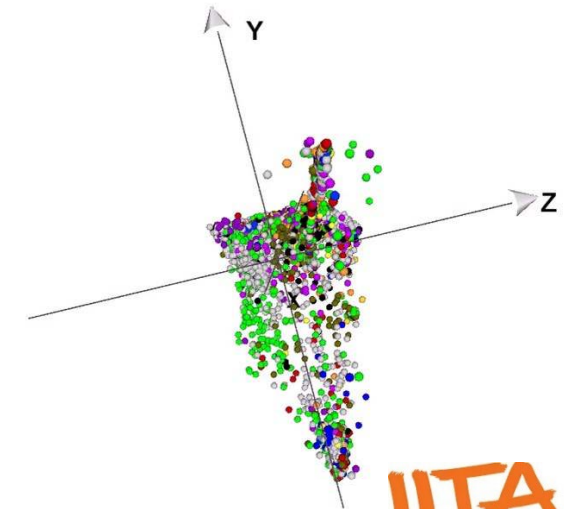
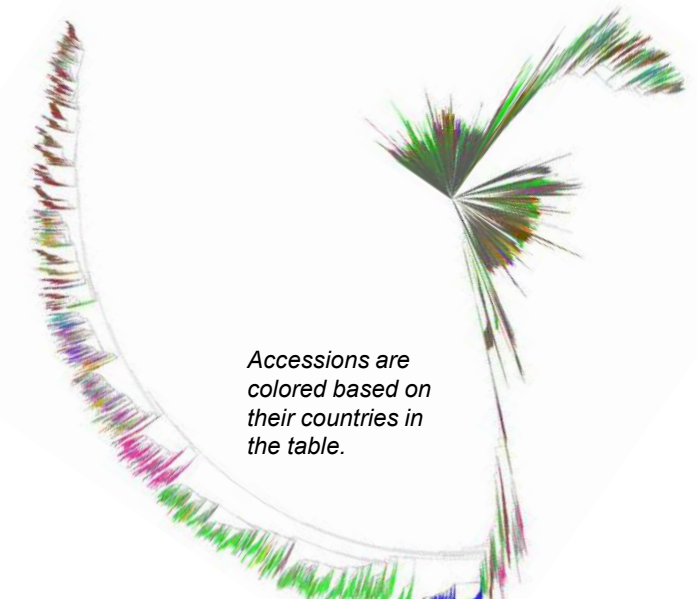


II. Accomplishments

Task 1. Studies on the genetic diversity and potential for pre breeding of international and national collections of key staple crops of sub-Saharan Africa?

- **10k** accessions genotyped using 49,685 SNPs DArTseq SNPs
- **7k** (out of **10k**) from West Africa Countries
- Minicore set of indica & glaberrima accessions originated from west Africa
- Data available and could be used on genetic diversity, QTL/GWAS/gene discovery/others studies...

Countries of origin	Nbr of accessions
Benin	158
Burkina Faso	549
Cote d'Ivoire	328
Gambia	252
Ghana	64
Guinea C & B	497
Liberia	945
Mali	533
Mauritania	1
Niger	14
Nigeria	2252
Senegal	502
Sierra Leone	629
Togo	275
Others	2353



Task 2. A network for partnership and technical backstopping

1. AfricaRice & IITA has been playing a major role in training graduate students in genetic resources
2. Provided technical backstopping in germplasm characterization and other genebank related activities to NARS partners
3. Shared available information and data with the NARS researchers to help them in selecting germplasm for their breeding program



Task 2. A network for partnership and technical backstopping



Arnaud Gouda, PhD Student in Genetics and molecular biology (Benin)

- Genetics diversity and pop structure
- Development of diagnostic using molecular and bio-info
- DArTseq Data Analysis Course for Genebanks (CIMMYT, Mexico)
- IIRI Online Introductory and Advanced bioinformatics course on SNPs to GWAS.



Laurence Dossou, PhD Student crop protection, virology (Benin)

- African RYMV new strain Identification using molecular tools
- Development of new molecular tools to detect African RYMV strains
- Online course « Understanding plant virus – Infection, transmission and detection ». JR Biotek foundation
- Online course « Molecular plant breeding and data analysis : methods and applications. JR Biotek foundation



Jean Rodrigue Sangare, Research Associate at IER-CRRA (Mali)



Conclusion

1. We made progress on research activities that help to better understand our collections, creation of subsets, identify new donor for improvement program,
2. The capacity building and the technical backstopping of NARS were initiated

This work has been affected by lockdowns due to the pandemic



The way forward

1. To pursue the collaboration with NARS
2. We need to collaborate with the genebank network in West and Central Africa to develop research projects that will benefit the hub .
3. Continue to build a network of NARS partners in molecular characterization of the genetic resources





Thank you!



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