



Molecular Characterization of Eight Accessions of Fonio Millet (*Digitaria spp*) Grown in Ghana.



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Introduction

- ❖ Fonio millets (*Digitaria exilis*, *D. iburua*) are amongst the important indigenous cereal crops that greatly contribute to household food security in semi-arid and sub-humid drought-prone areas of West-Africa.

Aim

- ❖ To evaluate genetic diversities among eight accessions of fonio millets in Ghana.
- ❖ To access the genetic variability of eight accessions of fonio millets cultivated in Ghana using SSR markers.
- ❖ To determine the similarities of the bands among the eight fonio accessions using SSR markers.

Materials & Methods

- ❖ Seeds of eight accessions of fonio millets, were obtained from CSIR/PGRRI – Bunso in the Eastern Region.
- ❖ Leaf samples were collected from all the accession.
- ❖ Total genomic DNA was extracted from leaves of fonio (two weeks old seedlings) using a modified CTAB protocol (Takrama, CRIG.)
- ❖ Nanodrop spectrophotometer was used to check the quality of total genomic DNA extracted.

Results & Discussion

Table 1: DNA quality test result

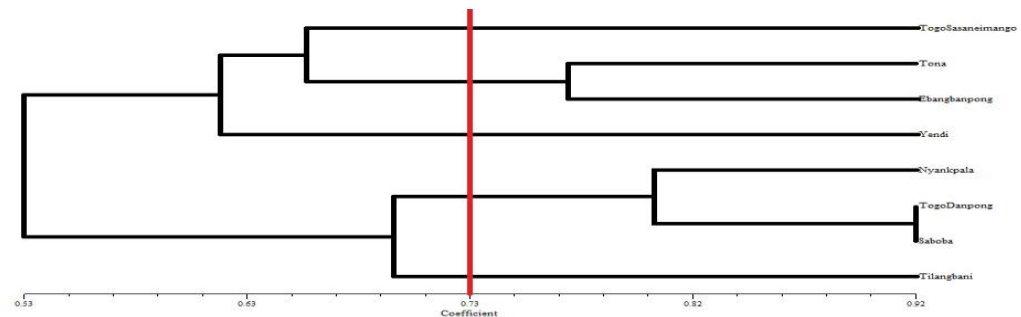
Samples	TS	YEN	TON	GBP	NYK	TD	TLG	SBB
260/280	1.54	1.48	1.53	1.66	1.60	1.76	1.38	1.55

impure DNA < 1.8 > impure DNA

Figure 1 : DNA PCR result



Dendrogram



Conclusion

- ❖ From the result, it is evident that there is diversity among the accessions giving us five clusters.