SCREENING FOR STRIGA RESISTANCE IN NIGER

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**Introduction**

*Striga hermonthica* is cited as one of the major constraint causing impediment to sorghum cultivation in Niger. Thus with the increase of striga impact around the world coupled to races variability, there are some genotypes that can better performed under high striga infestation by giving good yield than others. The best way to fight the weed is to develop resistant genotypes through resistant gene introgression. So for a better result there is a need to screen and select the best genotypes for a reliable hybridation program.

The main objective of this study was to assess different sorghum genotypes for their resistance to striga through a screening process at Konni station (Niger).

**Materials and Methods**

- Twenty (20) sorghum genotypes for diversified country were used in the screening process to select the best lines, resistant to striga and giving good yield.

To compute the result, a principal component analysis (PCA) was used in SAS on the following items:

- 50% Flowering date (Flo)
- Sorghum plant vigor (Vig)
- Sorghum 1000 grains weight (PoiGR)
- Sorghum height (HTR),
- Sorghum yield (Yield)
- The number of panicle (NPANI),
- Striga numbers in 45days (NS45), 60 days (NS60) and 90 days (NS90) and the striga incidence (EMR)

**Results**

The PCA analysis used, grouped the different variables according to their correlation and their respective component groups. So through the three components divided in dimension (Dim1, Dim2, Dim3 and Dim4) we found that the variety 3 (P9401), 4(P9403), 5 (Brhan), 6 (S35), 8 (CE 151-262), 14 (P406), and 16 (TXN13 BC3F5-41) are highly resistant with a high grain yield capability and medium sizes. Those lines can be used for a reliable hybridation program.

**Conclusion**

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