AGRO-MORPHOLOGICAL EVALUATION OF THE NEW SENEGALESE SORGHUM [SORGHUM BICOLOR (L.) MOENCH] COLLECTION IDENTIFIES NEW SOURCES OF RESISTANCE TO GRAIN MOLD AND ANTHRACNOSE RESISTANCE

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Introduction
Sorghum is crop for human and animal food in sub-Saharan Africa. However, its production is negatively affected by biotic and abiotic constraints. Anthracnose and grains mold are among the main biotic constraints affecting not only productivity (50-100%) but also grains quality. Their effect varies with climate change. The most sustainable and effective control method remains the use of host resistance.

The objective of this study is to identify new sources of resistance to grains mold and anthracnose that also combine good yield in sorghum.

Materials and methods
The 244 genotypes were evaluated during the 2020 rainy season at Eastern Senegal in the groundnut basin (Sinthiou Maleme: 13°40’N and 13°54’W) and Upper Casamance (Kolda: 12°88’N and 14°97’W) with five control check under naturel infestation by grain mold and anthracnose using a 16x16 Lattice Design with two replications at each location.

Key results
- High genetic variability for all traits from one site to another except for yield.

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Both fungi and anthracnose negatively affect the yield of our accessions at 77.7% and 75.3% respectively.

Identical effect of mold and anthracnose on our genotypes

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Conclusion
This study revealed the existence of variability within our genotypes. It also showed the negative effect of these constraints on the yield of our accessions. As a result, 15 genotypes of group 1 with good yield and resistance to grain mold and anthracnose can be used as parents in future breeding programs for our elite varieties.

References