

Impact of midge damage on new guinea sorghum lines performance in eastern part of Burkina Faso

Nofou Ouedraogo¹ (nofou2008@yahoo.fr), Louis-Marie Raboin², Ibie Gilles Thio¹, Inoussa Drabo¹, Issouf Kouraogo¹, Armel Prisca Sawadogo¹, Vernon Gracen^{3,4}

Presented by Ardaly Ousseini

¹ *Laboratory of Genetique and Crop Improvement, INERA, Ouaga, Kadiogo, Burkina Faso* ; ² *AGAP, Cirad-INERA, Ouaga, Kadiogo, Burkina Faso* ; ³ *Laboratory of Genetique and Crop Improvement, Corneil University, Kansas, USA*; ⁴ *Corneil University, Kansas, USA*,

Sorghum is the most grown cereal crop in Burkina Faso, however, its production is low due to biotic constraints. This investigation was conducted in a midge hot-spot site (Fada) and a not hot-spot site (Kamboinse). The study objective was to determine impact of midge on the performance of newly developed guinea sorghum lines. Field trials were conducted over two years and twenty sorghum lines including checks were evaluated in a randomized complete bloc design. Agro-morphological parameters and midge damage were evaluated in all sites with emphasis on grain yield and midge damage in order of importance to determine lines' performance and level of tolerance to midge. According to heading characteristics, seven lines (Kouria, PR3009B, ICSB176003, Fambe B, Lata//Grin-9-14-1-1, ICSB176008, 12B) were well adapted to the sudano-sahelian zone and majority of tested lines were susceptible to midge with a yield loss ranged from 50% to 80% compared to yield in not hot spot site. Only, five lines (ICSB 176002, Kapelga, Kouria, Lata//DouaG-4-27-1-1 and Lata//Grin-9-14-1-1) performed well in a midge hot-spot site. These lines exhibited a high level of tolerance to midge damage and could be promoted for large cultivation in the eastern part of the country to mitigate midge impact.

References:

1. Ouedraogo Nofou et Al, Agricultural Science Research Journal 2022, Vol 12 (5), pp84-92.