Introduction

In Uganda, average on-farm yields are 600-1000 kg ha⁻¹, while the potential for many of the cultivars in the country is over 3.0 tons ha⁻¹. The low yields are attributed to various factors, many of which are characteristic of farming systems in sub-Saharan African countries. Diseases of groundnut are among the greatest challenges to farmers in Uganda due to limited management options. In addition to reducing yields, diseases also reduce quality of the crop and increase the cost of production.

Objectives

1. Evaluate 76 ICRISAT introductions comprising of accessions from three botanical groups namely: Spanish, Valencia and Virginia for resistance to groundnut rosetta virus and late leaf spot diseases under natural infestations in Uganda.

2. Examine their potential for management of the two diseases in the region.

Materials and Methods

• Three field studies were conducted during 2008 and 2009 growing seasons at Bwera, located in eastern Uganda.

• Severity five accessions were established in a randomized complete block design with two replicates during each of the three growing seasons.

• Each entry consisted of six rows plots measuring 5 m each.

• The plant density was 15 cm interplant spacing with inter row spacing of 45 cm and each botanical group was separated by a 1 m border.

• Groundnut rosetta disease incidences were scored at harvest as count of symptomatic plants per plot and expressed as percentage of plants in the plot.

• Severity of Groundnut rosetta and late leaf spot diseases were scored at harvest using 1 to 9 scale adapted from Subramaniam et al., 1995.

Conclusion

The release and adoption of disease-resistant groundnut cultivars in Uganda is expected to improve the productivity and therefore production of groundnut, ultimately improving incomes and food security among rural households in the country, east and central African countries that have in the past obtained and cultivated improved groundnut cultivars from Uganda.

Resistant line ICGV-SM 2501

Susceptible line JL 24

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