B-42 Effect of groundnut cultivars on the competitive balance and productivity of maize/ groundnut intercropping system

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Identification of more competitive legume genotypes in dual stand is important in improving the p of intercropping systems. Hence a field experiment was conducted to study the above aspects of M *mays)*, sorghum *(Sorghum vulgaris)*, groundnut (*Arachis hypogaea* L.) intercropping systen genotypes of groundnut, X-14 and Red Spanish. The experiment was arranged in a Randomized Block Design with 4 replicates. In this experiment, the same population pressure was maintai crops and intercrops by replacing one cereal row by 3 rows of groundnut in intercropping trea number of plants/ha from the component crops was different in sole crops and intercrops.

Results showed that yield (cob/grain, stover and total biomass) of intercropped maize and sor suppressed by groundnut and yield suppression was greater in association with X-14 than with Red but intercropped maize/sorghum yield was greater than that 'expected' from its sown proportion (i. the sole crop). Yield (pod, stover and total biomass) of intercropped groundnut decreased compar crop groundnut. X-14 gave higher yield compared to Red Spanish which was not affected by system. Moreover both groundnut genotypes (X-14 and Red Spanish) gave higher yield when inte with maize than intercropped with sorghum. The combined biomass yield was significantly h maize/groundnut association compared to sorghum/groundnut association which was not affecte groundnut genotype. When LERs were considered, maize/groundnut was found to be bet sorghum/groundnut and the groundnut genotype of X-14 was found to be better than Red Spahish.

Therefore maize/X-14 association is the most productive intercropping system compared to the associations which were considered.