Abstract:

Eleven cropping systems of mixing sorghum with cowpea and three levels of nitrogen were compared under irrigation in the Sudan Gezira. Most mixtures showed higher number of tillers, number of main branches, plant height and plant dry weight than that of sole crops. Sorghum monoculture produced total dry matter yield higher than that of most mixtures and quite comparable to the highest yield attained by 45 kg of sorghum/ha +5 kg of cowpea/ha mixture. The total dry matter yield of sole cowpea was inferior to that of all other seeding combinations. Addition of nitrogen significantly increased the yield of sole sorghum and the mixtures and reduced that of pure cowpea. Sole cowpea showed the highest crude protein content and the lowest total crude protein.