Nutritional variations and economics of jute mallow when intercropped with commonly grown cereal crops in Tanzania

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Abstract

In Tanzania, farmers harvest Jute mallow for granted when it grows without being cultivated. This limits its potential production and possibilities for exploiting its full benefit in nutrition and market. This study was conducted to find a better intercropping combination which is agronomically viable with higher yield advantages by integrating Jute mallow in commonly grown cereals in Tanzania. Field experiment was conducted at Hombolo Agricultural Research Centre in Dodoma and the Nelson Mandela African Institution of Science and Technology (NM-AIST) farm in Arusha to assess the growth and yield performance of jute mallow when intercropped with either maize, sorghum or finger millet. The experiment was set in a randomized complete block design (RCBD) with three replications. Results showed that growth parameters of Jute mallow with sorghum and jute mallow with finger millet intercrops such as plant height, number of branches and number of leaves were not affected by intercropping. Jute mallow intercropped with maize suppressed growth and yield performance of Jute mallow. Among intercropped stands, Jute mallow intercropped with sorghum and with finger millet was not affected by intercropping on fresh leaf yield. However, all intercropped stands had yield advantages over monocropped stands, jute mallow-sorghum intercrop had the highest yield advantage with a LER of 1.7 and 1.53 in Dodoma and Arusha respectively. If farmers opt for intercropping and maximizing land use, this study recommends jute mallow to be intercropped with sorghum and with finger millet for better yields and sustainable growth.