

IMPACT OF SHADING ON PERFORMANCE OF LEAFY VEGETABLES.

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Executive Summary

A field experiment was conducted at Sher-e-Bangla Agricultural University, Sher-e-Bangla Nagar, Dhaka, Bangladesh during the period from March, 2019 to June, 2019. The aim of the study was to select best summer leafy vegetables, suitable for holding under different shade condition in agroforestry system. The selected vegetables were also grown in control i.e., open field condition or in full sunlight. The vegetables were Indian Spinach, Stem Amaranth, and Red Amaranth and treatments were T_0 = planting summer leafy vegetables under full sunlight, T_1 = planting summer leafy vegetables under 50% shade condition (reduced light intensity) and suitable for holding under different shade condition in agroforestry systems. The T_2 = planting summer leafy vegetables under 75% shade condition (reduced light intensity). The experiment was laid out following single factor RCBD design. Three replications were used for each treatment for each crop. During the study period maximum light intensity reduction was recorded in Red Amaranth (48.28%) in 75% shade condition and minimum light intensity was reduced in case of Indian Spinach (26.14%) under 50% shade condition. From the experiment, significant result was observed in all morphological characteristics for all leafy vegetables under reduced light intensity. Apart from this, highest yield was found in Stem Amaranth (22.33 ton/ha) and Indian Spinach (13.83 ton/ha) in 75% shade condition. Highest yield of Indian Spinach (19.40 ton/ha), Stem Amaranth (27.25 ton/ha) and Red Amaranth (11.30 ton/ha) was recorded under full sunlight. Considering shade condition, Stem Amaranth and Indian Spinach were best suitable for growing in Agroforestry systems.

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