

Crop intensification for enhancing the profitability in *bidi* tobacco under middle Gujarat agro- climatic zone

Complete Details of Technology:

Experiments were conducted during 2015-17 in bidi tobacco growing areas of middle Gujarat to find out the profitable cropping sequence. The experiment was conducted with six treatments viz., Tobacco (Kharif-Rabi) alone, Ground nut (Kharif) - Potato (Rabi), Maize (Kharif) - Potato (Rabi), Pigeon pea + Pearl millet (Kharif) – Cluster bean (Summer), Sesamum (Kharif) – Potato (Rabi) and Tobacco (Kharif-Rabi) – Pearl millet (Summer) and replicated four times under RBD design on Goredu soils during Kharif and Rabi soils.

Details of the varieties used in respective crops along with their spacing, fertilizer dosage and the season in which they are cultivated are given below

No.	Crop Variety	Spacing (cm)	Fertilizer (NPK, kg/ha)	Season
C1	Tobacco MRGTH 1	90 x 75	220 – 0 – 0	Kharif
C2	Groundnut GG 2	45 x 15	25 – 50 – 0	Kharif
C3	Potato KufriBadshah	45 x 25	180 - 80 - 40	Rabi
C4	Maize HQPM 1	45 x 30	100 - 50 - 40	Kharif
C5	Pigeon pea GT 1	90 x 30	25 – 50 – 0	Kharif
C6	Pearl millet GHB558	45 x 15	80 - 40 - 0	Kharif
C7	SesamumGujTill 1	45 x 15	37.5 - 25 - 0	Kharif
C8	ClusterbeanGuj Guar 1	30 x 15	25 – 50 – 0	Summer

Observations were collected on different yield parameters and the economics was calculated accordingly to find out the profitable cropping sequence

Brief Description of Technology Including Salient Features:

Tobacco – Pearl millet cropping system showed significantly higher tobacco equivalent yield in the individual years of the study i.e., 2015-17 (3610, 3902 and 3565 kg/ha) and also in pooled analysis (3692 kg/ha). Tobacco – Pearl millet cropping system recorded higher gross returns (149579 Rs. /ha) as well as net profit (81240 Rs. /ha). Based on the three years study, by taking into account the yield of different crops and also the economics, Tobacco – Pearl millet cropping sequence was recommended for bidi tobacco growing areas of middle Gujarat.

Benefits/Utility

Tobacco – Pearl millet cropping system recorded higher values of tobacco equivalent yield (3692 kg/ha), gross returns (149579 Rs./ha) as well as net profit (81240 Rs./ha). Hence growing pearl millet was recommended as a succeeding summer crop to bidi tobacco for getting additional income in middle Gujarat