

## CROPPING SYSTEM FOR DOUBLE CROP KOLE LANDS

The kole lands of Kerala lie along the coastal strip in the two adjoining districts of Thrissur and Malappuram in Kerala comprising a total area of about 12000 ha. The area is 1 to 2.5 m below msl and remains water-logged for nearly seven months of the year. The kole

lands of Thrissur district are broadly classified in to three zones. In zone I and II, a single crop of rice is taken (punja or summer rice) whereas in zone III, two crops of rice (rabi and summer) are raised. The double cropped area comes approximately 4000 ha.

Table I. Cumulative grain and straw yield of rabi and punja crops as influenced by difference varietal combinations, kg ha<sup>-1</sup>

Treatments	Grain yield				Straw yield			
	1986-87	1989-90	1990-91	Pooled mean	1986-87	1989-90	1990-91	Pooled mean
T1 Culture 24-20, Culture 24-20	4209	713	4284	5402	13575	14726	7182	11828
T2 Culture 24-20, Jyothi	5211	8945	5332	6496	11875	13900	8192	11322
T3 Culture 24-20, Triveni	5445	9001	6299	6915	7413	13319	9251	9994
T4 Culture 24-20, Annapurna	4737	9871	5691	6748	9709	13491	8557	10586
T5 Jyothi, Jyothi	5284	9144	4924	6451	15634	14556	8024	12738
T6 Jyothi, Triveni	6605	10464	5605	7558	13542	15074	8226	12281
T7 Jyothi, Annapurna	6603	10070	6087	7587	9892	13876	4965	9578
T8 Jyothi, Culture 24-20	6820	8218	4099	6379	11092	12621	6770	10161
T9 Triveni, Triveni	5997	10278	8006	8094	16400	13366	10203	13323
T10 Triveni, Annapurna	6638	9769	6813	7740	13050	15093	10500	12881
T11 Triveni, Culture 24-20	6897	9121	6777	7598	11700	14269	7475	11148
T12 Triveni, Jyothi	6440	8758	6813	7337	12658	13861	9162	11894
T13 Annapurna, Annapurna	6181	10139	6481	7600	18050	12995	9826	13624
T14 Annapurna, Culture 24-20	7481	7491	4569	6514	17217	12232	7795	12415
T15 Annapurna, Jyothi	7753	8843	5097	7231	12200	12287	7974	10820
T16 Annapurna, Triveni	6690	9769	6404	7621	12258	13794	8479	11510
CD (0.01)				2391**				NS

The present investigation was undertaken to find out suitable varietal combination for double crop kole lands. The experiment was conducted in kole lands of Thrissur (Kanjani and Manakodi) during the additional crop and punja seasons of 1986-87, 1989-90 and 1990-91. There were 16 treatment combinations in randomized block design with four varieties viz., Jyothi, Annapurna, Triveni and Culture 24-20 replicated twice in plots of 4 m x 3 m. Observations on height of plants, number of productive tillers, grain yield and straw yield were taken at the time of harvest.

The cumulative grain and straw yields of rabi and punja crops for three years experiment period are presented in Table 1. The data reveal that among the different varietal sequences, Triveni-Triveni sequence (8094 kg ha<sup>-1</sup>) is best for double crop kole lands to get maximum grain yield followed by Triveni-Annapurna sequence (7740 kg ha<sup>-1</sup>). The results agree with the superior performance of the short duration varieties reported earlier in kole lands (KAU, 1987). Red Triveni, Triveni, Bhagya and Culture 10-1-1 have recorded the maximum grain yield around 5-7

tonnes during punja 1987-88 (KAU, 1991). In the case of straw yield, though statistically not significant, Annapurna-Annapurna sequence has recorded the highest value of 13624 kg ha<sup>-1</sup> followed by Triveni-Triveni sequence (13,323 kg ha<sup>-1</sup>). The study reveals that a short duration variety during the additional crop

season followed by a short duration variety during punja season contributes maximum yield of grain and straw. Since most of the areas experience scarcity of water during the fag end of the season it is desirable to cultivate high yielding short duration varieties rather than medium duration varieties.

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