

Kharif season: (June-November)

At 'O' level of N, the varieties which registered higher grain yield were IET 2254, Vijaya, Jaya, RP4-2 and IET 1991. At 50 kg N/ha level, variety CO 36 ranked first in grain yield and it was on par with IET 2254 (RP4-14) and Jaya. IET 1039 and IET 1991, on the other hand, were on par with Jaya. The grain yield of the varieties listed ranged between 4899 to 5129 kg/ha.

Comparing seasonal influence on varieties and nitrogen levels in general, it is seen that in summer, the yield of rice varieties are better compared to *Kharif* season. It is also seen that in

summer, Bhavani, IET 2254, Jaya, IR 20, IET 1991, IET 2295 and IET 2885 registered higher grain yields. At the 50 kg N level, Bhavani, IET 2254, Jaya, Vijaya, IET 1991 and IET 2295 performed well in *kharif* season. The varieties which gave higher yields at 'O' N level were CO 36, IET 2254, Vijaya, Jaya and RP4-2, and at 50 kg N level, CO 36, IET 2254 and Jaya did well.

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Madras agric. J. 62 (4) : 234 — 236, April, 1975.

A Note on Mixed Cropping in Dryland Cotton (Bharathi)

With the object of finding out the most suitable mixed crops for dryland Cambodia cotton, a replicated trial was conducted at Kovilpatti in Tirunelveli District on black cotton soil under the All India Co-ordinated Cotton Improvement Project during 73—74 season. The treatments mentioned below were included for the study:

1. Normal row planting
2. Paired row planting
3. Paired row planting + 1 row of coriander
4. Paired row planting + 1 row of greengram
5. Paired row planting + 1 row of thenai

6. Paired row planting + 2 rows of coriander
7. Paired row planting + 2 rows of greengram
8. Paired row planting + 2 rows of thenai
9. Alternate row (1:1) with coriander
10. Alternate row (1:1) with greengram
11. Alternate row (1:1) with thenai

The varieties included for the studies were: Cotton MCU 6 (Bharathi) Green gram (Hissar), Coriander-CO 1 and Thenai MS 1844/2-1.

TABLE 1. Data on morphological characters of cotton

Treatment	Mean plant height (cm)	Mean number of monopodia/plant	Mean number of bolls/plant
Paired row planting	49.3	1.3	3.6
Paired row + 1 row of coriander	44.6	1.3	3.2
" + " green gram	47.4	2.2	4.4
" + " thenai	44.1	1.8	4.9
" + 2 rows of coriander	48.9	1.2	3.1
" + " green gram	47.1	1.8	3.9
" + " thenai	52.4	1.7	4.0
Alternate rows (1:1) with coriander	43.8	1.5	3.6
" " Green gram	51.4	2.8	5.4
" " thenai	46.0	1.7	3.4
Normal row planting (Cotton)	49.8	2.7	5.4
Significance by 'F' test	No	Yes	Yes
S. E	6.1	0.3	0.5
C. D	NS	0.7	1.0

At the time of sowing, a basal dose of 40 Kg N plus 20 Kg P_2O_5 /ha was applied to cotton while an additional dose of fertilizer at the rate of 40 kg N and 20 kg P_2O_5 for thenai and coriander and 20 kg N Plus 40 kg P_2O_5 /ha for green gram were applied. The spacings adopted are:

Normal row planting—45 cm between rows

Paired row planting—22.5 cm between rows and 67.5 cm between pairs

Alternate rows—45 cm between two rows of cotton and one row of inter crop in between 2 rows of cotton.

The population of cotton was kept uniform in all the treatments.

Biometrical data on cotton presented in Table 1 revealed that there was no significant reduction in plant height due to mixed cropping, but a significant reduction was observed in number of monopodial branches and number of bolls per plant in paired row planting as well as mixtures with thenai and coriander.

Data on yield and income from the crops presented in Table 2 indicated that the cash return was higher from

TABLE 2. Yield and Income from Crop Mixtures

Treatments (1)	Cotton		Inter crops		Total receipts from one hectare (6)	Net profit from one hectare (7)
	Yield of seed cotton kg/ha (2)	Value Rs. P. (3)	Yield of inter crops (kg/ha) (4)	Value Rs. P. (5)		
Paired row planting	684.500	2395.75	—	—	2395.75	1479.25
Paired row + 1 row of coriander	643.000	2250.50	6.000	18.00	2268.50	1341.00
Paired row + 1 row green gram	672.750	2354.63	223.000	535.20	2889.83	1887.33
Paired row + 1 row thenai	747.500	2616.25	89.000	59.63	2675.88	1699.88
Paired row + 2 rows of coriander	685.000	2397.50	5.500	16.50	2414.00	1474.50
Paired row + 2 rows of green gram	658.250	2303.38	319.000	765.60	3068.98	2070.48
Paired row + 2 rows of thenai	795.500	2784.25	96.000	64.32	2848.57	1860.57
Alternate rows (1:1) with coriander	607.750	2197.63	5.500	16.50	2214.13	1290.63
Alternate rows (1:1) with green gram	810.500	2836.75	358.000	859.20	3695.95	2659.45
Alternate rows (1:1) with thenai	673.250	2356.38	144.000	96.48	2452.86	1494.86
Normal row planting	788.000	2758.00	—	—	2758.00	1813.50

Price of Bharathi kapas — Rs. 350—00/Quintal

" coriander — Rs. 300—00 "

" green gram — Rs. 240—00 "

" thenai — Rs. 67—00 "

cotton and green gram mixture sown in alternate rows followed by paired rows of cotton with two rows of green gram. The yield of coriander was very low and thus this crop appears to be unsuitable as a mixture crop in

cotton. Thenai as a mixture crop in cotton is uneconomical due to its low market price.

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