Table 3. **Effect of EC_{iw}, Adj. SAR_{iw} and varieties on plant height, tillers, test weight and grain and stover yield of pearl millet**

Treatments	Plant height (cm)	Tillers (per plant)	Test weight (1000-grains)	Grain yield (g pot^{-1})	Stover yield (g pot^{-1})
EC of irrigation water					
EC_{iw} (dsm^{-1})					
3	136.33	2.61	7.07	27.16	95.23
6	125.57	1.94	6.30	24.79	83.53
9	112.14	1.42	5.38	21.51	64.86
SEm±	0.163	0.102	0.045	0.079	0.054
CD at 5%	0.459	0.287	0.126	0.223	0.153
Adjusted SAR					
(Adj. SAR_{iw})					
15	130.42	1.77	6.85	26.22	90.02
30	125.94	1.61	6.37	24.74	82.32
45	122.97	1.36	6.08	23.98	78.31
60	119.38	1.22	5.69	23.00	74.17
SEm±	0.188	0.188	0.052	0.092	0.063
CD at 5%	0.526	0.332	0.146	0.258	0.177
Varieties					
HLBH-10	127.45	2.22	6.66	26.03	90.17
MH-169	125.02	1.97	6.62	24.87	77.81
MBH-130	121.65	1.77	5.86	22.56	75.64
SEm±	0.163	0.102	0.045	0.079	0.054
CD at 5%	0.459	0.287	0.126	0.022	0.153

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Madras Agric. J., 81(12): 675-676 December, 1994

https://doi.org/10.29321/MAJ.10.A01612

SEED YIELD OF *Amaranthus* VAR. KANNARA LOCAL UNDER PARTIAL SHADE

K.KRISHNAKUMARY and K.P.PRADEEP.

Banana Research Station, Kannara P.O., Trichur.

ABSTRACT

Studies on the influence of shade on growth and seed yield of *Amaranthus tricolor* var. *kannara local* indicated that an increase in shade significantly decreased the plant height, spike length and seed yield per plant. Growth and seed yield were highest in plants grown in open condition.

In seed production programme, seed yield per plant is very important. Among several factors affecting the yield, strong dependance on solar radiation was noticed by several workers (Venkateswaralu, 1977 ; Janardhan and Murthy, 1980). However, information on the performance of amaranth under varying degrees of shade is rather meagre. Therefore, an experiment was carried out at the Banana Research Station, Kerala Agricultural University, Kannara, to study the scope of amaranth culture and its yield potential in seed under shade.

Table 1. Effect of shade on growth and seed yield of amaranthus as intercrop under banana

Treat ment (%)	Light availa ble to amaran thus (%)	Light inter cepted by amara nthus (%)	Plant height at harvest (cm)	Spike length/ plant at harvest (cm)	Seed yield/ plant (g)
T1	100.00	51.14	135.71	12.63	22.80
T2	62.70	22.80	73.33	8.14	5.10
T3	28.72	12.03	32.86	3.03	2.90
CD (0.05)			8.54	1.75	6.49

MATERIALS AND METHODS

The experiment was laid out in randomised block design with the popular leaf amaranthus var. *Kannara local* (*Amaranthus tricolor*) during the year 1990-91. Plants were grown as intercrop under banana var. *palayankodan* of different growth stage. They were receiving different intensity of light which was measured by a LI-190SB quantom sensor at flowering stage of amaranth. The treatments included amaranthus grown in open area (T1), amaranthus grown under banana var. *palayankodan* of 4 month age (T2) and amaranthus grown under banana var. *palayankodan* of 8 month age (T3). The treatments were replicated seven times. After attaining proper maturity, the plants along with the spikes were harvested, dried and the seeds were removed and cleaned. Observations on plant height, spike length and seed yield/plant were recorded and analysed.

RESULTS AND DISCUSSION

Results indicated that shading reduced the growth and seed yield of amaranthus (Table 1). Significant difference were observed for the plant height, spike length and seed yield/plant under different intensities of light. In open condition (T1), plant height, spike length and seed yield were maximum and these characters showed a decreasing trend with increase in shade. Height of the plant at the time of harvest was decreased from 135.71cm (T1) to 32.86 cm (T3). Similarly length of spike at harvest significantly decreased from 12.63cm to 3.03cm and seed yield/plant from 22.8g to 2.90g. Similar reduction in growth and yield has been reported in the case of some rainfed vegetable intercrops of coconut (Krishnankutty, 1983).

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Madras Agric. J., 81(12): 676-678 December, 1994

HEAVY METALS, GROWTH REGULATORS AND VITAMINS REQUIREMENTS OF *Phoma sorghina*

B.S.RATHORE and S.M.P. NAIK
A.R.S., Mandore, Jodhpur.

ABSTRACT

Phoma sorghina grew poorly in liquid basal medium without the addition of heavy metals, growth regulators and vitamins. Among trace elements, iron and among growth regulators, Indol- 3 yl- Butyric acid, Indol-3 yl- Acetic acid and 2-Naphthoxy acetic acid were toxic to the fungus as their omission from medium supported good growth while presence of all the vitamins tried supported better growth of fungus.

Phoma sorghina(Sacc.) Boerema, Dorenb. & Kest. causing black dots on sorghum grains in Rajasthan (Rathore *et al.*, 1983) was studied with regards to its requirements of heavy metals, growth regulators and vitamins.

MATERIALS AND METHODS

The pathogen causing black dots of sorghum grains was isolated by adopting blotter technique. For isolation, 500 infected seeds were used. The culture was purified by repeated subculturing and