

PERFORMANCE OF COWPEA VARIETIES IN THE SANDY LOAM RICE FALLOWS DURING THIRD CROP SEASON

Pulses form the most important protein source in India. One of the approaches to increase the production of pulses is to introduce pulse crops in multiple cropping programmes. But the main constraint for this is the shortness of gaps between the two crops which are raised in sequence. Cowpea can be successfully raised in the gap of 100-105 days available between *tnemundakan* and *virippu* crops. But different varieties of cowpea respond differently to temperature and day length. If a rainy season cowpea variety is sown in summer, it may give only vegetative growth. Nair (1960) reported that cowpea variety New Era comes up well in red loam soils. Kunju *et al.* (1976) observed that varieties like Calicut-51, Calicut-78, Co-2 etc, are performing well during April-August season in red loam soils. But no work has so far been done on the performance of different cowpea varieties in the sandy loam rice fallows during the third crop season in the Onattukara region in Kerala and the present studies were carried out with the above desideratum, at the Rice Research Station, Kayamkulam during 1977 and 1978. The experiment was laid out in Randomised block design with three replications. Sowing was done in the second fortnight of January. All the treatments received uniform cultural and manurial applications. A basal application of Nitrogen, Phosphorus and Potash was given at the rate 20, 30, 10 Kg/ha in the form of urea, superphosphate and muriate of potash. Hoeing followed by weeding was done on the 15th and 30th day after seeding.

Flowering started in all the Pusa varieties by the 40th day. AM the other varieties flowered from 45th day onwards. Flowering was completed in 74 days for Pusa Phalguni, whereas it extended up to 93 days in the case of Calicut-78. The dried pods were collected periodically, and the grains were separated, dried and weighed.

The data on yield of grain obtained from different varieties for the years 1977 and 1978, third crop seasons are given in Table-1.

Table-1
Yield (kg/ha) of cowpea varieties in rice fallows

Cowpea varieties	1977	1978	Mean
New Era	654	596	625
Culture-1	319	366	343
CLT-51	443	238	340
Kunnamkulam local	478	471	474
Pusa barsathi	400	166	283
Pusa Phalguni	138	177	157
Pusa-do-faslay	344	96	220
P-118	405	103	254
CLT-78	438	299	368
CD (0.01)	96	122	—

From the data it is seen that the variety New Era has given significantly higher yield as compared to all the other varieties during the two years in sandy soils. During the year 1958, Kunnamkulam local also gave significantly higher yield as compared to other varieties. It is also observed that the longer duration varieties give more yield, as compared to short duration types like the Pusa varieties. However, being a catch crop, there is a strong need to compromise on growth duration, as otherwise the planting of the next crop of rice will also be delayed.

From the data it can be concluded that the cowpea varieties New Era and Kunnamkulam local are the best suited for cultivation in the summer rice fallows of the Onattukara region as a catch crop during January-May.

Reference

Mohamed Kunju, J., Sadanandan, N., Ramachandran Nair, Manikantan Nair, P. 1976. Performance of cowpea varieties under varying levels of phosphorus in red loam soils. *Agri. Res, J. Kerala*, **14**, 180-181.

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