

STUDY OF INTERCROPPING IN PERIWINKLE

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ABSTRACT: *An experiment to study the feasibility of intercropping the short duration agronomical crops in periwinkle was conducted at Nagarjun Medicinal Plants Garden, P.K.V. Akola during 1988 – 89, 89 – 90 and 90 – 91. The highest monetary return of Rs. 15,604/ per hectare was obtained from an intercropping system of periwinkle and groundnut in row proportion of 2:1.*

INTRODUCTION

Periwinkle syn. *Vinca rosea* (Catharanthus sp.) has gained importance as commercial crop because of its alkaloidal content. The foliage, basal stem and roots contain over 65 alkaloids of which vin-cristine and vinblastine are now employed in the treatment of cancer and reserpine and ajmalicine are used in controlling high blood pressure. The foliage is reported to be rich in VLB alkaloids while root and basal stem in ajmalicine group of alkaloids (Chadha *et al.*, 1980). There are references available regarding manuring of periwinkle (Guptha, 1977) but evidences pertaining to other agronomical aspects are meager. Present endeavour was made to study the feasibility of growing periwinkle in an intercropping system with short duration agronomical crops.

MATERIALS AND METHODS

A field experiment was conducted for three consecutive kharif season of 1988 – 89 to 1990 – 91 at Nagarjun Medicinal Plants Garden, P.K.V. Akola.

Trial was arranged in randomized block design with 13 treatments replicated thrice. Treatment consisted of three row proportions 1 : 1, 1 : 2, 2:1 of main (periwinkle) and intercrops (mung, sesame and groundnut) with all the four as sole crops. Gross Plot size was 2.7 x 3.0 m².

White flowered genotype, pucillus of periwinkle was selected for study. The seedlings were transplanted at 45 x 20 cm distance in case of sole crop cm at 30 x 18 cm, 30 x 10 cm and 30 x 20 cm in case of 1 : 1, 1 : 2 and 2 : 1 row proportions, respectively. Transplanting was done on 12.7.88, 27.7.89 and 12.7.90 during 1988 – 89, 1989 – 90 and 1990 – 91 respectively. The crops were raised as per the recommended package of practices. Periwinkle was harvested on 3.3.1989, 19.3.1990 and 11.3.1991 during the respective years.

RESULTS AND DISCUSSION

The year wise data pertaining to foliage and root yield of periwinkle and yields of intercrops with monetary return of a system and presented in Table – 1 and discussed below.

Dry herbage and root yield.

On an average the highest herbage yield was recorded in case of sole crop and it was reduced with intercropping system. Reduction was slight with sesamum but drastic in case of mung and groundnut. This might be due to growth habit of these crops. More or less similar trend was recorded in case of root yield.

Gross monetary return

The data on monetary return was significantly affected during individual years and after pooled analysis. In general, an intercropping system comprising of groundnut recorded a highest monetary return as compared to other intercrops and even sole crop of groundnut and periwinkle. Pooled data also indicated the similar trend and the highest monetary return of 15,604/- was record in case of periwinkle plus groundnut in a row proportion of 2 : 1. In order of merit next best row proportion were 1 : 1 and 1 : 2. This might be due to comparatively increased yields and higher prices of economic products. Similar findings were recorded in report presented at 8th All India Work-shop of M & A P at Faizabad by Akola Centre, Anonymous 1989, pp. 17 – 20.

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