



STUDY THE PRODUCTIVITY AND BENEFIT COST RATIO OF ARHAR (REDGRAM) IN VARIOUS FARM SIZE GROUPS

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Abstract

The main aim of the present study was to find out the productivity and benefit cost ratio of Arhar Variety Narendra Arhar-2 on randomly selected various farms size groups in randomly selected village Lahurapur of Berno Block in Ghazipur district of Uttar Pradesh during 2011-12. It was found that yield and net return was increased in each size group, percentage of yield increases in comparison to local cheque also. The result of productivity clearly shows that the norms of advance package of practices not properly followed. It shows that result will all be better in future when the cultivation process of red gram has in a good farm planning manner along with the application of better fertilizer irrigation, interculture and insect pest management resulting better yield and more net returns.

Key Words : Crop, yield, groups, increasing trends.

Introduction

The crop can be grown on almost all types of soils, ranging from alluvial soil, well drained light to medium soils, moist and deep enough to permit a free development of roots. The crop can be grown both in dry and moist hot climate. Bright sunny weather is needed during flowering, and the ripening of pods. The plants cannot with stand frost; the crop is sometimes irrigated late in December or early in January to protect it against frost. Extra-early and early types, maturing in 4-5 months, however, can be harvested before frost normally occurs. Good drainage is an essential requirement, as the crop cannot stand water lodging. Where subsurface drainage is poor, ridge planting is effective. In the case of mixed crops, the preparatory tillage for the major crop in the mixture is considered adequate for redgram. The mixed crop receives the interculture usual for the principal crops. The plants make slow growth until the cereal are other major crop is harvested. There after the plants of the Arhar branch freely and flower profusely. Sowing of the crop is on timely is better for growth and yield. Inter-row spacing at optimum space resulted maximum branches

and pods. Sowing times and inter row spacing caused significant difference in branches, plant and pod, delayed sowings, giving lowest grain yield Ahuja, K.N. (1984). Late sowing affects seed germination due to higher existing soil moisture resulting decrease in pod numbers, grain yield goes down due to lower temperature with higher attack of pest at flowering times, quality of crop will be decreases Sukhadia, M.M. *et al.* (1990). The heavy shafting of leaves adds considerable organic matter to the soil. It is also often grown as a cover crop in plantations. The yield of redgram in intercropping system was generally reduced depending on nature of inter crops. Inter cropping cereals, pulses and oil seeds reduced the yield of red gram in many demonstrations might be seem to 30% to 40% respectively. In intercropping system groundnut proved to be most compatible inter crop with redgram probably because groundnut utilizes early-season resources efficiently Roysharma, R.P. *et al.* (1981). The maximum net return can be formed from intercropping of groundnut with redgram an upland areas.

Materials and Methods

The present study was conducted through farmers

scientist collaborations in randomly selected village Lahurapur of Berno Block in Ghazipur district of Uttar Pradesh during the year 2011-12, in demonstrated groups like small, medium and large farmers. Selected randomly, six farmers from each groups. Narandra Arhar-2 variety has been suggested along with seed rate 15 Kg. per hectare of the area. For better yield advised NPK @ 15:40:0 along with 20 kg sulphur per hectare. Duration of this variety is 250 to 260 days. The crop has been taken on the field during second fortnight of July. Line sowing has been suggested on ridges for better yield. All advance package of practices has been specify for timely application or whenever it needed. Survey method has been used to collect the data and tabular analysis was being used. Family schedule has been used to collect the date from the selected farmers according to their size of holdings, family size, area of the production and income of the crop etc. The economics of the redgram was work out at current price rate all other requirements of the crop has been supplied whenever it needed. This studies has also been compared with local cheque to find out the advantage and disadvantages and other cultivational differences.

Results and Discussion

Table-1 shows that yield Qt. per hectare was 10.00, 11.00 and 12.00 in small, medium and large size groups

Table 1: Productivity of Arhar (Narendra Arhar-2) under different farm size groups during 2011–12.

Farm Size Groups	No. of Farms	Area ha.	Seed Rate Kg./ha.	Fertilizer (Kg./ha.)				Duration of Crop Days	Yield (Qt./ha.)		% increase in yield
				N	P	K	Sulphur		Demo	Local	
Small	6	1	15	15	40	0	20	250-260	10.00	8.00	25.00
Medium	6	1	15	15	40	0	20	250-260	11.00	8.50	29.41
Large	6	1	15	15	40	0	20	250-260	12.00	9.00	33.33

Table 2 : Economic Analysis of Arhar (Narendra Arhar-2) under different farm size groups during 2011 – 12

Level of Farms	No. of Farms	Economics of Demo (₹/ha.)			Economics of Local Check (₹/ha.)			Benefit Cost Ratio	
		Gross Cost	Gross Income	Net Income	Gross Cost	Gross Income	Net Income	Demo	Local
Small	6	12,500	48,450	35,950	9,770	36,700	26,930	3.88	3.76
Medium	6	13,800	50,900	37,100	11,150	42,380	31,230	3.69	3.80
Large	6	16,200	56,170	39,970	15,300	48,860	33,560	3.47	3.19

exhibits increasing trends along with in local cheque it was 8.00, 8.50 and 9.00 Qt. per hectare ranging also increasing trends in small medium and in larger size groups percentage in yield was formed 25% in small, 29.41% in medium and lastly 33.33% in larger groups ranges increasing trends. It is very clear that the advance package of practices may not be used properly, there is a

chance to increase their yield in future apply all recommended practices properly, throughly and timely with a good form planning basis than percentages of yield will be increase more in each groups. Table-2 shows gross cost ₹/ha was 12,500/-, 13,800/- and 16,200/- along with net return ₹/ha was 35,950/-, 37,100/- and 39,970/- in small, medium and larger size groups ranging increasing trends from smaller to larger ones. Gross cost ₹/ha in local cheque was 9,770/-, 11,150/- and 15,300/- along with net return was ₹/ha was 26,930/-, 31,230/- and 33,560/- in small, medium and larger size groups ranging increasing trends. Benefit cost ratio in demonstrated was formed 3.88, 3.69 and 3.47 along with local ones was 3.76, 3.80 and 3.19 in small, medium and larger range shows that no specific trends has been formed. Lastly the study concludes that formers of each size group has to aware about advance package of practices apply throughly to increase the yield with low cost along with a good farm planning regarding better crop management.

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