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Economics of production of Apple in District Budgam in Jammu & Kashmir

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Abstract

The study shows that the cultivation of Apple in Kashmir is remunerative. The investment on apple orchards is profitable and financially viable, it also provides employment to people in the area. Net returns from apple can further be increased if the problems are taken care of proper education and training need to be given to the apple growers with regard to the optimum and desired way of allocating the resources in order to have more profit. The suitability among different input factor has to be seen from the technology and profitability point of view. The orchard of age group of 25-30 years provided. The highest return from bearing orchard.

Key words: orchards, profit, bearing, Net returns

Introduction

Kashmir has been the home of large varieties of fruits and temperate fruits production and has a major share in the economy of the state of Jammu and Kashmir. The fruit in Jammu and Kashmir has shown an upward trend from 16000MT (2000) to 1372973 MT (2010), yet the inherent potential of Horticulture in the State has not been full realized. Thus it is essential to examine the cost and returns in case of apple production.

Methodology

Apple is grown in all the 12 districts of Kashmir province of Jammu and Kashmir state. Multistage random sampling technique was used to select the sample orchardists, district Budgam was selected purposively. The apple growers were selected randomly from 7 villages of Tehsil Budgam. The sample orchardists were classified according to the age of orchards, in all these were six groups i.e. two groups viz (1-4 years) and (4-8 years) in case of non bearing orchard and four groups in hearing orchard viz (9-10), (15-25), (25-30) years and (above 45 years) at least 15 orchardists from each category were selected randomly. The farmers were personally cented and necessary data were collected while the secondary data were collected from appropriate source like revenue department etc.

Results and Discussion

Establishment costs were found to be Rs.63140/ - hec. Of which fencing alone accounted for 69.68 percent (Rs.44000/ hec) of total establishment cost, plant material, manures, fertilizers, training and pruning constituted 20.90, 2.97, 0.66 percent of the total establishment cost respectively.

Maintenance cost of non-bearing orchards

This includes expenditure on labour, manures, fertilizers, interest on working and fixed capital and accumulated establishment cost, land revenue, taxes etc. The results showed that the maintenance cost was low as Rs.13169.92/hec in first year and maximum Rs.40429.6/hec in seventh year, it showed a positive relationship with the age of orchards. The profit of intercrop has been deducted from the maintenance cost of non-bearing orchards. The major item of maintenance cost of non-bearing orchard was interest of accumulated establishment cost (about 46% of total cost).

Table 1: Establishment cost of apple plantation (in Rs./ha)

Gross component	Cost
Layout	400(0.63)
Plant material	13200(20.90)
Pit digging	1000(1.58)
Manures	1880(2.97)
Fertilizers	1040(1.64)
Training and pruning	420(0.66)
Fencing	44000(69.68)
Micellaneous expenditure such as irrigation etc.	800(1.26)
Total	63140(100)

Figures in Parentheses indicate percentage

Maintenance cost of bearing orchards

It includes the cost of labour, fertilizers interest of working and fixed capital, land revenue and taxes

Table 2:Maintenance cost of non-bearing orchards (Rs./ha)

Particulars	Age of orchards (Yrs.)							
	1	2	3	4	5	6	7	8
A. Variable cost								
Labour	2274	2510	3172	3988	4968	6210	7480	8000
Manures	1408	1460	1500	1600	1060	-	-	-
Fertilizers	784	840	1000	1360	2000	3180	3300	3500
Peesticides-	-	-	600	1200	2000	3000	3800	2000
Interest on working capital @12%	535.92	577.20	752.64	978.12	1203.60	1486.80	1749.60	2000
Total	5001.92	5387.20	7024.64	9126.12	11231.60	13876.80	16329.6	15500
B. Fixed cost								
Land revenue and taxes	320	320	320	320	320	320	320	320
Depriciation	240	253	260	268	295	330	369	400
Interest on working capital @12%	67.20	68.76	69.84	70.56	73.80	78.00	82.66	85.50
Total	627.20	641.76	649.84	658.56	688.80	728.00	771.68	805.50
C. Interect on accumulated establishment cost	7540.80	921.20	10939.20	13168.28	15922.64	19264.00	23328.32	25426.00
Total cost	13169.92	15150.16	1861.68	22820.96	27842.40	24478.80	40429.60	28031.50
Deducted return of intercrop (pea)	13350.00	15700.00	25080.00	13310.00	11360.00	12000.00	18100.00	14460.00
Net return	180.08	549.84	6466.32	-9642.6	-164841	-124788	-232908	13371.56

Table 3: Maintenance cost of bearing orchards (Rs./ha)

Particulars	Age of Orchards			
	A	B	C	D
A. variable cost				
Labour	10816.28	16008.80	21290.28	28637.60
Fertilizers	6302.52	8754.64	8637.12	13635.08
Peesticides	9268.08	18194.76	27387.96	9723.92
Total variable cost	55940.16	18077.12	64193.16	81032.62
B. Fixed cost				
Land revenue and taxes	320	320	320	320
Depriciation on implements	2816.32	2430.08	932.40	8620.92
Interest on working capital @12%	423.92	423.68	563.96	1166.76
Total fixed cost	423.92	423.68	563.96	1166.76
Total fixed cost	3956.44	3954.44	2883.60	10889.72
Total cost	59896.60	52031.56	67076.76	91922.32

Orchard of different age groups viz. A = 9-18, B = 18-25, C= 25-30, D= $\geq$ 45 years

Table 4: Return from non bearing orchards (Rs./ha)

Years	Gross Amount	Cost	Net return
1	13335	13169.92	180.08
2	15700	15150.16	549.84
3	25080	18613.68	6466.32
4	13310	22952.96	-9642.96
5	11360	22842.40	-16482.40
6	12000	24478.80	-12478.80
7	18100	40429.60	-22329.60
8	14460	28031.50	-13571.50

and depreciation on buildings, machinery and implements. The maintenance cost of bearing orchards was found in the range of Rs.598966/hec in category A (lowest age group) and highest D (oldest age group), Rs.91922.32/ha, in other words, the maintenance cost increased considerably when the age of the orchard increased from 9 years to 45 years.

Returns from non-bearing orchards

Since bearing is not allowed for first eight years of apple plantation to prolong its bearing life, intercropping was the only source of returns from non-bearing orchards. The orchardists were found to follow intercropping of pea during the entire non-bearing period. A maximum gross returns of Rs.25080

Table 5: Return from bearing orchards (Rs./ha)

Years	Gross Amount	Cost	Net return
A	64820.84	59896.60	4924.24
B	293766.68	52031.56	241735.08
C	370833.32	67076.76	303756.56
D	358379.16	91922.32	266456.84

Orchard of different age groups
A = 9-18, B = 18-25, C= 25-30, D= $\geq$ 45 years

hec. was recorded for orchards of 3 years of age and lowest in 5th years which was Rs.11360/hec from intercropping.

Returns from bearing orchards

The returns from bearing orchards were calculated on per-hectare basis, so as to leave a clear picture about the trend in returns, the results revealed that the orchards of category C (25-30 years old) exhibited highest gross returns (Rs.370833.32) followed by category D (Rs.358379.16/hec). Category A orchards yielded the lowest gross returns (Rs.64820.84/hac). There existed an increasing trend in net returns from orchards varying from Rs.4924.24 in category A, Rs.241735.08 in case of B category, 303756.56 in case of C category and in case of D category the net returns etc. decreased on account of increase in cost.

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