



ISSN (E): 2277-7695
ISSN (P): 2349-8242
NAAS Rating: 5.23
TPI 2023; SP-12(12): 1225-1227
© 2023 TPI
www.thepharmajournal.com
Received: 03-10-2023
Accepted: 09-11-2023

Kale PS

M.Sc. Scholar, Department of Agricultural Economics, College of Agriculture, VNMKV, Parbhani, Maharashtra, India

Metkari PM

M.Sc. Scholar, Department of Agricultural Economics, College of Agriculture, MPKV Rahuri, Maharashtra, India

Bhadre TV

M.Sc. Scholar, College of Agriculture, MPKV, Rahuri, Maharashtra, India

Perke DS

Professor, Department of Agricultural Economics, College of Agriculture, VNMKV Parbhani, Maharashtra

Corresponding Author:

Kale PS

M.Sc. Scholar, Department of Agricultural Economics, College of Agriculture, VNMKV, Parbhani, Maharashtra, India

Existing farm plan and alternative farm plan for large farms in Yavatmal district of Vidarbha region

Kale PS, Metkari PM, Bhadre TV and Perke DS

Abstract

Present study was related to existing farm plan and alternative farm plan for large farms in Yavatmal District of Vidarbha Region. Multistage sampling design was adopted in selection of district, tehsil and villages. The Yavatmal district was selected because this district is having large farming area. Two tehsils were selected from district on the basis of maximum area under large farm, from selected tehsils five villages were selected from each of tehsil on the basis of large farm area. The land holding of large farmers was found to 8.51 hectare. The results revealed that major crops grown by the large farmers were soybean, cotton, groundnut, tur, wheat, gram, safflower, turmeric and orange. The per hectare net profit obtained from tur was maximum i.e. Rs. 55214.58 followed by cotton (Rs. 50053.66) and soybean (Rs. 47862.40). The net profit of buffalo was (Rs. 4958.50) followed by cow enterprise (Rs. 4761.90). There was scope to increase area, bullock labour, machine labour, nitrogen, potassium and irrigation on farm as a whole. Existing farm plan show the present situation of farm business. Alternative farm plan help to increase profitability of farm in future. The net profit obtained alternative farm plan was Rs. 617757.34. It is indicated that profitability from all crops and livestock were more on alternate farm plan.

Keywords: Existing and alternative farm plan, cost and returns, input, output, cropping pattern

Introduction

Agriculture has got a prime role in Indian economy and is the prime source of National income. Agriculture development is the basic and essential for economic development and human welfare. Share of agriculture in Gross Domestic Product is 17.4% in 2016-17. About 65 percent of the total population is directly and indirectly engaged in farming. The agriculture sector provides employment to 58.4 percent of country's work force. Agriculture is the single largest private sector occupation in the country. The geographical area of Maharashtra is 30.37 million hectares, out of which net sown area is 22.25 million hectares. Farm means a piece of land where crop and livestock are taken up under a common management and has specified boundaries. A farm is a socio-economic unit which provides income and profit to the farmer. Land is the major productive assets for agricultural development. The land holding pattern is of a relatively large number of small units. The structure and distribution of land holding pattern normally determine the level of productivity. The overall profitability of farm depends upon the income achieved from overall farm activities. The farm business income gives an idea about the net income received from the various crop enterprises vis-a-vis the expenses incurred on the different crop enterprises taken together. The present study attempt to focus overall income per hectare received from various crop entities on the farm and the profitability over the total cost.

Methodology

Multistage sampling design was adopted in selection of district, tehsil, villages and Cotton, Soybean and Wheat growers. Yavatmal district was purposively selected and two tehsil of Yavatmal district i.e. Digras and Darwha was selected on the basis of highest area under Cotton, Soybean and Wheat production. Total sample size was 60 from ten selected villages. The analytical techniques like tabular analysis, time series analysis, frequency and percentage method were used to analyze the data in the present study.

Results and Discussions

Existing and optimum farm plans

Existing farm plans has been considered after analysis of facts with respect to costs, returns and profits on farm as a whole.

But future expenditure and income could be estimated on the basis of existing plans are known as optimum or alternative plan as described as follows.

Per farm physical inputs on large farm for crops and livestock

In farm business, utilization of important inputs in crop production was calculated and is presented in Table 1. It was clear that the land utilization under summer Groundnut was 1.75 hectares. This was highest among all crops on large farms. In next order, Turmeric was grown on 1.34 hectares followed by Orange (1.30 ha.), Gram (0.82 ha.), Soybean (0.82 ha.), Cotton (0.78 ha.), Tur (0.78 ha.), Wheat (0.77 ha.) and Safflower (0.8 ha.). Thus, total cropped area was 8.36 hectares on large farms. It was observed that utilization of hired human labour was the highest of 119.15 man days in Turmeric followed by Orange (57.25 ha.), summer Groundnut (48.10 ha.), Cotton (32.57 ha.), Wheat (26.73 ha.), Tur (25.90 ha.), Gram (25.61 ha.), Soybean (22.26 ha.) and Safflower (15.02 ha.). Total hired human labour employment was 372.59 man days on large farm during the year. In case of

utilization of bullock labour Turmeric, summer Groundnut, Orange, Cotton, Soybean, Wheat and Gram were found important crops. Thus total use of bullock labour was 46.68 pair days. Similarly, use of machine labour was highest in Orange, Turmeric, Cotton, Groundnut, Soybean, Wheat Gram crops. Thus, total machine labour utilization of 41.92 hours on large farm. It inferred that mechanization was observed mostly in cultivation of crops on large farm. Use of total seed of different crop was 2643.43 kg. In case of fertilizers, nitrogen, phosphorus and potash were 709.31 kg, 721.45 kg and 457.05 kg, respectively. At farm level, use of manure, pesticide and irrigation was 71.95 quintals, 22.4 litres and 5336.05 M³, respectively. In case of use of family labour at farm level total family labour employment was 196.04 man days. Main produce and by-produce with respect to various crops were also calculated and presented in Table 1. It was observed that total main produce from all crops was 199.86 quintals and by produce was 34.73 quintals. In the case of livestock family labour was 68.76, main produce and by produce was 985.24 litre and 40.18 quintal, respectively.

Table 1: Per hectare physical inputs on large farm for crops and livestock

SN	Crops	Area (Ha)	Hired human Labour (Mandays)	Bullock Labour (Pair days)	Machine Labours (Hours)	Seeds (Kg)	NPK (Kg)	Manure (qtl)	Pesticide (Lit)	Irrigation (M ³)	Family Labour (Mandays)	Main produce (qtl)	By-produce (qtl)
1	Soybean	0.82	22.26	1.66	1.19	73.71	65.5	2.21	4.90	230.50	10.38	23.57	6.37
2	Cotton	0.78	32.57	2.95	6.83	1.96	162.38	7.04	3.25	413.05	9.56	17.89	6.61
3	Tur	0.78	25.90	2.85	2.68	10.03	45.66	3.65	3.65	200.00	10.38	16.67	7.84
4	Turmeric	1.34	119.15	15.28	10.10	2307.69	328.06	2.86	2.64	188.00	75.18	35.54	-
5	Wheat	0.77	26.73	3.75	5.88	91.81	101.41	9.38	2.86	400.00	8.21	28.56	2.96
6	Gram	0.82	25.61	4.55	4.05	68.80	57.93	4.52	0.84	300.00	10.00	14.43	4.23
7	Safflower	0.8	15.02	7.11	5.67	6.41	38.04	7.91	1.19	00.00	9.40	13.37	2.08
8	Groundnut	1.75	48.10	3.76	5.52	83.02	165.55	12.19	4.01	1652.25	15.25	12.37	4.64
9	Orange	1.30	57.25	4.77	-	-	327.3	3564.81	1.70	1752.25	47.68	18.64	0.00
10	Livestock	-	-	-	-	-	-	-	-	-	68.76	985.24	40.18
	Total	8.36	372.59	46.68	46.68	2643.43	1291.83	3689.02	22.4	5336.05	264.8	1184.92	74.31

Existing farm plan and alternative farm plan for large farm

Per farm costs, returns and profitability in existing condition on large farm with respect to all crops and livestock enterprises were calculated and are presented in Table 2. Results revealed that in all 9 crops were grown are on 8.36 hectares. Total expenditure on all crops in the form of cost-C was Rs. 686972.51. Gross return from all crops found to be Rs. 1264779.97, Net profit on cost-C was Rs. 350894.89. Profitability on cow and buffalo enterprises with their costs and returns were also calculated. It was observed that in existing condition size of cow enterprise was 1.78 while the size of buffalo enterprise was 1.15. Total expenditure on cow enterprise was Rs. 21628.17 followed by buffalo enterprise was Rs. 24679.77. Gross return from cow enterprise was Rs. 26390.07. While the net profit from cow enterprise was Rs. 4761.90 followed by buffalo enterprise was Rs. 4958.50. Total size of livestock enterprise was 2.93 units. Total expenditure on livestock was Rs. 46307.94 and gross return was obtained from livestock enterprise was Rs. 56028.34 and net profit obtained from livestock was Rs. 9720.41. It inferred that buffalo enterprise was most profitable than cow enterprise. In regard to farm as a whole consisted with all crops and livestock enterprises were calculated. The result revealed that expenditure on farm as a whole was found to be Rs. 733334.45 While gross returns was observed to be Rs. 1320808.31. Net profit on farm as a whole was Rs. 360615.3.

In regard to alternative farm plan per hectare profitability with respect to all crops, livestock and farm as a whole were calculated and are presented in Table 2. It was observed that all crops were arranged in descending order on the basis of profitability of crops. The result revealed that total expenditure on all crops in the form of cost-C was Rs. 926690.29. Gross returns from all crops were Rs. 1902729.52 net profit on cost-C was Rs. 453653.54. It was observed that in optimum farm plan size of cow enterprise was 2.28 while the size of buffalo enterprise was 2.15. Total expenditure on cow enterprise was Rs. 40839.12 followed by buffalo enterprise was Rs. 44392.38. Gross return from cow enterprise was Rs. 50304.13 while buffalo enterprise was Rs. 55293.30. In case of net profit, it was Rs. 80834.21 in cow enterprises followed by buffalo enterprise was Rs. 83269.59. Total expenditure on livestock was Rs. 85321.5, while the gross return was Rs. 105597.43. In case of net profit it was Rs. 164103.8. It is obvious that buffalo enterprises was most profitable than cow enterprises with respect to farm as a whole total expenditure on farm as a whole was Rs. 1009221.79. While the gross return was Rs. 2008326.93. The net profit on farm as a whole was Rs. 617757.34. In farm as a whole the net profit obtained in existing farm plan was Rs. 360615.3 and in alternative farm plan it was Rs. 617757.34. It means increased share in alternative farm plan was 7.34 percent. It inferred that the profitability on large farm can be increased by giving optimum farm plan.

Table 2: Existing farm plan and alternative farm plan for large farm

S N	Crops	Existing farm plan				Alternative farm plan			
		Area (Ha)	Cost (Ts)	Returns (Rs)	Profit (Rs)	Area (Ha)	Cost (Rs)	Returns (Rs)	Profit (Rs)
1	Soybean	0.82	31966.43	79828.83	47862.4	1.62	80302.11	98324.18	45293.13
2	Cotton	0.78	31372.72	90571.38	59198.66	1.56	50783.29	93322.24	18992.18
3	Tur	0.78	29080.42	84295.00	55214.58	1.48	70345.30	80392.18	35282.11
4	Turmeric	1.34	248490.86	487352.2	23886.34	2.54	426902.48	739323.24	183423.22
5	Wheat	0.77	38928.45	55696.92	16768.47	1.47	45390.94	81392.33	20392.33
6	Gram		26764.52	40532.6	13768.08	1.57	50392.88	75323.18	18832.13
7	Safflower	0.8	29969.9	48054.15	18084.25	0.16	45823.18	50331.90	12325.15
8	S. Groundnut	1.75	40116.7	70787.47	19393.20	2.96	75912.38	80392.14	20634.56
9	Orange	1.30	210342.51	307661.42	97318.91	2.7	80837.78	6039228.13	98478.73
	Total	8.36	686972.51	1264779.97	350894.89	16.06	926690.29	1902729.52	453653.54
Livestock									
10	Cow	1.78	21628.17	26390.07	4761.90	2.28	40839.12	50304.13	80834.21
11	Buffalo	1.15	24679.77	29638.27	4958.50	2.15	44392.38	55293.30	83269.59
	Total livestock	2.93	46361.94	56028.34	9720.41	4.43	85231.5	105597.43	164103.8
	Total farm as a whole		733334.45	1320808.31	360615.3		1009221.97	2008326.93	617757.34

Conclusions

- Existing farm plan can show the present condition of farming business.
- The net profit from cow enterprise was Rs. 4761.90 followed by buffalo enterprise was Rs. 4958.50.
- The net profit obtained in existing farm plan was Rs. 360615.3 and in alternative farm plan it was Rs. 617757.34.

References

- Singh SK, Ramanna R. Potentiality of employment on small and large farms - A study of farms in Eastern Region of Hyderabad district, Andhra Pradesh. *Economic Affairs*. 1982;15(6-8):370-375
- Dubey PP, Sen C. Resource use planning in agriculture - A case study of Chiraigaon block in Eastern Uttar Pradesh. *Agricultural Situation in India*. 1988;63(1):39-41.
- Sharma BL, Sharma RL. Income and employment increasing possibilities at various of technology in Agroclimatic Zone II-A of Rajasthan. *Agricultural Situation in India*. 2004;61(1):13-24.
- Macdonald JM, Onoghue EJ, Willam DM, Richard FN, Curmen LS, Robber M. Profit, costs and the changing structure of dairy farming. *Economic Research Services /USDA erra-47; c2007*.