

## **Efficiency measure of crop enterprises on different farm size groups in Rajouri District of J&K**

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### **Abstract**

*The present study is restricted to Rajouri District of J&K. To commensurate with the objective of study multistage stratified random sampling techniques has been used. Maize, wheat, paddy and barseem were the dominant crops of study area. Per hectare cost of cultivation and gross income varies precisely with the farm size but the income did not increase in the same proportion as the cost of cultivation of wheat. In case of maize Net income over cost c1, c2 and c3 increases with the increase in farm size. Cultivation of paddy contributes more gross income as compared to total cost of cultivation per hectare on large farm as compared to small and medium farms. Barseem provides positive returns to the farmers of all farm size groups*

Key words: enterprise, agriculture, economics, farm size and development

### **Introduction**

The significance and predominance of agriculture in the national economy, per capita productivity in agriculture is less than industry, unless there is development in agriculture and increase income in the country as a whole cannot increase. The adoptions of both rational and modern technique are essential for increasing our production to get rid of poverty.

There is no gain saying the fact that with the improved methods of cultivation, application of chemical fertilizers, improved seeds and irrigation facilities we shall get much more from the soil than that we are getting at present. In J&K, agriculture is the main stay of the State economy as more than 75% of the population derives their income directly or indirectly from agriculture sector.

The present study Economics of crop enterprises on different farm size groups attempts to probe deeper to investigate to the resource use efficiency maximize production with limited resources from crop grown in the areas.

This investigation is particularly significant in view of paramount importance of crop production in the future growth of rural economy. The following is the main objective of the study:

To examine the resource use efficiency maximize production with limited resources.

### **Materials and methods**

District Rajouri was selected for the study out of the (07) Tehsils of District three were selected randomly, After preparing the list of the selected

villages (04) villages were drawn randomly from each Tehsil. A pooled list of all the farmers of all (12) selected villages was arranged and stratified into three strata according to three size of operational holdings viz. small (below 2 hectare of land) .A sample of about 50 %farmers from each farm size group was drawn randomly in share to their number in each group. The final sample comprises of 90 small, 60 medium and 30 large farmers.

Since the main prominence is on input output relationship regression and correlation analysis has been undertaken to comprehend the relationship as well as result of important descriptive variables with the output of crops. Standard cost and income techniques were applied to realize the farm efficiency.

### **Results and Discussions**

Table 1 reveals that the overall cost of production of wheat was estimated Rs. 500.26 per quintal being Rs. 509.22, 487.85 and 506.85 on small, medium and large farms respectively. The table further indicates that per hectare gross income increases with the increase in farm size while the reverse trend was observed in case of farm business income and family labour income. Per hectare net income from wheat cultivation over cost c1, c2 and c3 obtained by the medium farmers was the highest followed by large and small farm size groups. Although, per hectare cost of cultivation and gross income varies directly with the farm size but the income did not increase in the same proportion as the cost of cultivation. Therefore

the farm business income, family labour income and net income over cost C1, c2 and c3 were found the highest on medium farms.

Overall output/input ratio was 1:1.14, being 1:1.12, 1:1.17 and 1:1.13 on small, medium and large farms respectively. Thus it can be concluded that with the investment of one rupee in wheat cultivation, small, medium and large farmers earned Rs.1.12, Rs.1.17 and Rs.1.14 respectively.

Table 1: Farm business analysis of Wheat cultivation (Rs.)

Income concept / hectare	Small	Medium	Large	Overall
Gross income	17241.04	19044.44	20115.26	18969.13
Farm business income	6935.79	6703.68	5642.18	6365.08
Family labour income	4833.78	4638.18	3602.14	4301.06
Net income over c1	3813.01	4725.80	4282.95	4325.92
Net income over c2	1813.01	2725.80	2282.95	2327.23
Net income over c3	270.20	1093.94	499.72	663.04
Output/input ratio	1.12	1.17	1.13	1.14
Cost of production(Rs./qt)	509.22	487.85	506.85	500.26

Table 2: Farm business analysis of maize cultivation (Rs)

Income concept / hectare	Small	Medium	Large	Overall
Gross income	21027.87	22430.71	23765.08	22604.44
Farm business income	10797.37	11206.12	10467.89	10841.61
Family business income	8695.36	9140.62	8427.85	8776.31
Net income over c1	7757.72	8565.76	8998.10	8534.33
Net income over c2	5757.72	6565.76	6998.10	6534.33
Net income over c3	4230.71	4979.26	5321.40	4927.32
Output/input ratio	1.38	1.41	1.42	1.41
Cost of production(Rs./qt)	363.09	353.64	352.77	355.46

Table 2 reveals that the overall cost of production of maize was estimated Rs. 355.46 per quintal being Rs. 363.09, 353.64 and 352.77 on small, medium and large farms respectively. The table further indicates that per hectare gross income varies with the size of farm while farm business income and family labour income were found the maximum on medium farms. Net income over cost c1, c2 and c3 increases with the increase in farm size.

Overall output/input ratio was 1:1.14, being 1:1.38, 1:1.41 and 1:1.42 on small, medium and large farms

respectively. Thus it can be concluded that with the investment of one rupee in Maize cultivation, small, medium and large farmers earned Rs.1.38, Rs.1.41 and Rs.1.42 respectively.

Table 3: Farm business analysis of Paddy cultivation (Rs)

Income concept / hectare	Small	Medium	Large	Overall
Gross income	12681.50	12827.50	13632.90	13037.90
Farm business income	6206.23	6117.70	6023.08	6179.27
Family labour income	4104.23	4052.20	3983.05	4088.65
Net income over c1	3289.88	3405.24	4113.14	3538.78
Net income over c2	1289.88	1405.23	2113.13	1524.29
Net income over c3	150.72	263.01	961.17	372.93
Output/input ratio	1.11	1.12	1.18	1.13
Cost of production(Rs./qt)	476.09	471.94	447.85	468.04

Table 3 reveals that the overall cost of production of Paddy was estimated Rs. 468.04 per quintal being Rs. 476.09, 471.94 and 447.85 on small, medium and large farms respectively. The table also indicates that although per hectare gross income increase with the increase in farm size but farm business income and family labour income go on decreasing with the increase in farm size. Net income over cost c1, c2 and c3 vary directly with the farm size. As the overall efficiency of the paddy crop is concerned the per hectare output-input ratio came to 1:1.11, 1:1.12 and 1:1.18 on small, medium and large farms respectively which indicate that cultivation of paddy provided more gross income as compared to total cost of cultivation per hectare on large farm as compared to small and medium farms.

Table 4: Farm business analysis of Barseem cultivation (Rs)

Income concept / hectare	Small	Medium	Large	Overall
Gross income	11943.53	12384.00	12936.30	12114.67
Farm business income	10086.54	10292.85	10423.10	10062.92
Family labour income	7984.54	8227.35	8383.06	8022.06
Net income over c1	8172.77	8414.70	8910.10	8283.09
Net income over c2	6172.76	6413.71	6910.11	6316.42
Net income over c3	5595.70	5817.77	6307.48	5736.60
Output/input ratio	2.07	2.07	2.15	2.09
Cost of production(Rs./qt)	38.65	38.56	37.27	38.29

Table 4 reveals that the overall cost of production of barseem was estimated to be about Rs. 38 per quintal being Rs. 39, 39 and 37 on small, medium and large farms respectively. The table further indicates that per hectare gross income, farm business income, family labour income and net income over cost c1, c2 and c3 vary directly with the farm size. So far as family labour income and farm business income are concerned barseem provides positive returns to the farmers of all farm size groups. Overall output/input ratio was 1:2.09, being 1:2.07, 1:2.07 and 1:2.15 on small, medium and large farms respectively. Thus it can be concluded that with the investment of one rupee in barseem cultivation, small, medium and large farmers earned Rs.2.07, Rs.2.07 and Rs.2.15 respectively.

### References

- Pandey H.K. and Duggal, S.C. (1989). Input cost and returns of major crops in Nitabad block of Varanasi Distt. Agriculture situation in India vol.xxiv, 7pp-1099.
- Birthal, P.S. and Singh M.K. (1995). Structure of rural income in quality, a study in western (UP.). Indian J. of agricultural economics 50:2, pp 168-175.
- Kalyankar S.P.S. Fotekar G.M.(1994). An economics analysis of farm business in assured rainfall zone of marathwada journal of Maharashtra Agricultural University 19:2,pp 269-272 2 ref.
- Salik R. and Lal Gupta S.B. (1978). Resource productivity of paddy farms in Chanduali block of Varanasi Distt. Agriculture situation in India vol.xxxiii, pp- 373-374.