GAP ANALYSIS AND CONSTRAINTS IN PADDY PRODUCTION

D.P. Rai[1] & Ashwani Duggal[2]

ABSTRACT

Uttar Pradesh is the largest rice growing state only after West Bengal in country but productivity is rather low. Therefore, there is the urgent need and scope to increase rice productivity in Uttar Pradesh. A study was conducted by Deptt. of Agriculture Extension to analyse the gap and constraints in paddy production during 2000. Low socio-economic status of farmer was identified as a big impediment where as, direct seeding and delayed sowing were two emphatic constraints for low level of production.

Key words : Gap Analysis, Constraints, Paddy Production.

INTRODUCTION

Rice is an important food crop in India as well as in whole world. In India, it is grown on the area of 43.2 m.ha. with 82.3 m.tonnes annual production and 18.7q/ha productivity. It contributes 45 percent of India's cereal production and hold the key to sustain food sufficiency in the country : To sustain the share of rice in total food grain production and thereby sustaining the current level of sufficiency, the minimum production and productivity requirement of rice has been estimated to be about 100 m tonnes and 2454 kg/ha, respectively by the year 2006-07 (Siddiq 1999). The traditional method of crop raising still dominates in paddy cultivation cause low production of paddy. Inspite of agricultural modernization in paddy, farmers are still facing diverse technological gap in cultivation. Keeping these views in mind an attempt was made to analyse those factors which affect the production paddy production with the following specific objectives–

(i) To study the socio-economic profile of the paddy growers.

(ii) To analyse the gap between knowledge and adoption in paddy production practices.

(iii) To find out constraints of low production in paddy.

METHODOLOGY

The study was conducted in 1999-2000 in Banda district of U.P. Two blocks of the district were purposively selected and two villages from each block were selected randomly. A comprehensive list of the rice cultivators prepared separately for all the four villages. Again with the method of random sampling, a group of 20 respondents from each of the comprehensive lists was drawn. A list of 80 farmers were finally chosen for purpose of collecting information in view of the objectives of the study through pre-tested structured schedule. Per cent, score range and $\div 2$ test were used for statistical calculation.

RESULTS AND DISCUSSION

Table 1. Distribution of respondent according to their socio-economic status N = 80

Category	Number	Percentage
Low	34	42.5
Medium	20	25.00
High	26	32.5

Data presented in table1 show that majority of respondent i.e. 42.5 per cent had low socio-economic status, while, 25 per cent had medium socio-economic status and only 32.5 per-cent belonged to high socio-economic status. The data show the majority of the farmers had low socio-economic status and it was big obstacle in adoption of improved practices.

Table 2. Gap analysis between knowledge and adoption in paddy crop

S. No.	Name of practices	Knowledge (%)	Adoption (%)	Knowledge & adoption	χ^2
1.	Field preparation	69.06	69.93	0.87	0.16NS
2.	Improved variety	73.87	55.37	18.50	38.2**
3.	Seed treatment	54.37	36.37	17.50	24.472**
4.	Nursery raising	68.62	67.31	1.31	0.24NS
5.	Transplanting	65.68	53.62	12.06	7.774**
6.	Fertilizer application	76.06	73.62	2.44	3.064NS
7.	Irrigation	69.00	50.37	18.69	29.04**
8.	Sowing time	58.87	53.87	5.00	1.68NS
9.	Method of sowing	53.68	50.37	3.31	33.88**
10.	Weed control	49.56	37.00	12.56	11.55**
11.	Pest management	61.10	51.25	8.87	6.46**

** Significant at 5% level of significance for 2 degree of freedom.

NS–Non-significant

The table 2. shows that the mean gap between the

---

1. Lecturer, Deptt. of Agril Extension, Faculty of Agriculture, M.G.C.G.V.V., Chitrakoot, Satna (M.P.)

2. Lecturer, Deptt. of Agril Engineering, IPST,, M.G.C.G.V.V., Chitrakoot, Satna (M.P)

knowledge and adoption were found 18.69, 18.6, 17.5, 12.56, 12.06, 8.85 and 3.31 in irrigation, variety, seed treatment, weed control, transplanting, pest management and method of sowing, respectively in paddy crop by the paddy growers which were significant at 5% level of significance for 2 degree of freedom. Thus, it can be said that there was much difference between knowledge and adoption possessed by paddy growers in irrigation, improved variety, seed treatment, weed control, transplanting, pest management and method of sowing. Similar finding was also reported by Pandey and Mathur (1983). The above table also indicates that remaining 5.00, 2.44, 1.31 and 0.87 mean gap were found in showing time, fertilizer application, nursery raising and field preparation in which the calculated value of $\div2$ was less than the table value (5.91) at 5% level of significance for 2 degree of freedom. Therefore, it can be said that there was a non-significant difference between the adoption and knowledge possessed by the paddy growers and the adoption of paddy technology in sowing time, fertilizer application and nursery raising.

The table 3 shows that direct seeding was the top most constraint regarding low level of production. This was fallowed by delayed sowing, lack of cash input and problematic and injurious soil. Drought prone area and low temperature environment, disease and pest, water management, lack of suitable high yielding varieties for different situation, low consumption and injudicious use of chemical fertilizers, lack of proper communication of rice technology to farmers were the important constraints responsible for low level of production placed by paddy growers in descending order.

Table 3. Various constraints responsible for low level of production faced by paddy growers

S. No.	Reasons	Agree	Undecided	Disagree	Total mean	Rank order
1.	Water management	40	20	20	2.25	VI
2.	Disease & pest	40	25	15	2.31	V
3.	Delayed sowing	55	20	5	2.62	II
4.	Direct seeding	70	5	5	2.81	I
5.	Low consumption and injudicious use of chemical fertilizer	35	25	20	2.19	VII
6.	Drought prone area and low temperature environment	47	23	10	2.46	IV
7.	Problematic and injurious soil	50	25	5	2.56	III
8.	Lack of cash input	60	10	10	2.62	II
9.	Lack of suitable high yielding varieties for different situation	40	20	20	2.25	VI
10.	Lack of proper communication of rice technology to farmers.	35	25	20	2.19	VII

Thus, it was observed that the direct seeding was found top most problem and communication was the least important problem for paddy growers responsible for low level of production. Similar finding was also reported by Gupta and Sood (1993).

CONCLUSION

On basis of above finding, it may be concluded that majority of paddy growers belonged to low socio-economic status. Non-significant gap between knowledge and adoption for various practices of paddy reflect that if knowledge will improve vice- versa, the level of adoption will also be improved. Direct seeding was identified as top most constraint responsible for low level of paddy production.

REFERENCES

1. **Gupta, Ashok K. and Sood, A. (1993).** Technological gap on production of paddy, Indian J. Ext. Edu. 29 (324): 87-89

2. **Pandey. S.N and Mathur, P.N. (1983).** Differential information gaps under T & V extension system, Indian J. of Ext. Edu. XIX, (3) : 26-28

3. **Siddiq, E.A. (1999).** Rice: Not a distant dream. The Hindu survey of Indian Agriculture 39-46.

■ ■ ■ ■ ■