Guj. J. Extn., Edn. VI & VII, 1995 & 1996.

Technological Gap Between The Farmers Getting Above And Below State Average Yield in Castor Production Technology

S. M. Patel[1] and D. N. Pandya[2]

INTRODUCTION

Castor is an important cash crop of India general and Gujarat in particular. Castor is widely grown in all disticts of Gujarat State except the part of Dang district. The Banaskantha is one of the main castor seed producing district in Gujarat State.

Unless the new technology developed by Agricultural Universities and research institutes is transfered to the cultivators' fields and converted into production, it is wasteful expenditure. At present, there is wide gap between what is achieved at research stations and Agricultural Universities and what a farmer gets in his field. This has been proved beyond doubt, through the National Demonstration Project in case of almost all major crops. The technological gap is a major problem in the effort of increasing agricultural production in the country.

It was, therefore, necessary to find out the technologycal gap in the adoption of the recommended practices for castor cultivation. The present study was under taken in that direction.

METHODOLOGY

The present study was undertaken in Deesa and Palanpur talukas of Banaskantha district of North Gujarat. These talukas were having the highest average area under castor cultivation since last three year so, Deesa and Palanpur talukas were selected purposively. Five villages were randomly selected from each of the taluka and from each of the selected villages, 8 farmers getting abouve state average yield and 8 getting below state average yield were randomly selected, making a sample of 80 farmers getting above state average yield and 80 getting below state average yield. The data were collected with the help of well structured and pretested interview schedule incorporating all the items on which information were required.

Technological gap was operationalised as difference between technology adopted and specific technology recommended. The technological gap index for each of the selected practices was calculated using the below stated formula

$$T.G. = \frac{R - A}{R} \times 100$$

Where

T. G. = Technological gap

R = Recommended package score

A =Adopted score of relative package

1. P.G. Student, Deptt. of Extn. Education, College of Agriculture, G.A.U., S. K. Nagar.
2. Ex. DIrector of Extn. Education, G.A.U., Ahmedabad.

The average technological gap for each respondent was calculated as follow :

$$A.T.G. = \frac{\sum_{i=i}^{P} GIJ}{p}$$

Where.

G I J = Gap index of j^{th} respondent

p = Total number of major practices

$\sum_{i=i}^{P}$ = Summation of gap index of each practices of j^{th} respondent.

Afterwards, overall technological gap was calculated by the following formula :

$$\text{Overall technological gap} = \frac{\sum_{i=i}^{r} \sum_{i=i}^{P} GIJP}{rp}$$

Where,

GIJP : Gap index of j^{th} respondent for P^{th} practice

r = Total number of respondents

P = Total numver of practices

Table 1 : Average technological gaps in adoption of different components of castor Production technology in farmers getting above and below state average yield.

Sr. No.	Different components	Average technological gap			
		Farmers getting above state average yield		Farmers getting below state average yield	
		Gap	Ranking	Gap	Ranking
1.	High yielding/Hybrid variety	8.75	VIII	16.25	VIII
2.	Seed rate	63.75	VI	80.00	VI
3.	Sowing time	3.75	IX	10.00	IX
4.	Spacing	72.50	IV	88.13	IV
5.	Fertilizers application	70.00	V	94.38	III
6.	Irrigation	72.91	III	87.49	V
7.	Weeding and Interculturing	40.83	VII	35.41	VII
8.	Inter-cropping	97.50	I	98.75	II
9.	Plant protection measures	86.07	II	99.65	I
	Overall gap	57.34		67.78	
	Mean sum of square	109.07		134.61	
	'Z' value		6.0**		

** Significant at 0.01 level of probability

RESULTS AND DISCUSSION

Data presented in Table-1 revealed that the average technological gap in different components varied from component to component. The extent of average technological gap in all components in case of the farmers getting above state average yield, ranged from 3.75 percent to 97.50 per cent, while in case of the farmers getting below state average yield, it ranged from 10.00 per cent to 99.65 per cent.

In respect of the farmers getting above state average yield, the maximum gap was observed in inter-cropping followed by plant protection, irrigation, spacing, fertilizer application, seed rate, weeding and interculturing, high yielding/ hybrid veriety and sowing time. It could be further inferred that there was a high technological gap (above 66 per cent) in inter-cropping, plant protection, irrigation, spacing and fertilizer application. A medium technological gap (34 to 66 per cent) was observed in seed rate and weeding and interculturing. A low technological gap (0 to 33 per cent) was found in high yielding/hybrid variety and sowing time. The overall technological gap against recommended castor technology was found 57.34 per cent in case of the farmers getting above state average yield.

In case of the farmers getting below state avaerage yield, high technological gap (above 66 per cent) was observed in plant protection, intercropping, fertilizer application, spacing, irrigation and seed rate. The medium technological gap (34 to 66 per cent) was observed in weeding and interculturing. A low technological gap (0 to 33 per cent) was found in case of high yielding hybride variety and sowing time. Overall gap against recommended castor technology was found to be 67.78 per cent in case of the farmers getting below state average yield.

From the above discussion, it could be concluded that overall gap in farmers getting below state average yield was high as compared to that of the farmers getting above state average yield.

The 'Z' test was applied to know whether the farmers getting above and below state average yield differ significantly in respect of their overall technological gap. The caluculated 'Z' value was found to be significant at 0.01 level of probability indicating thereby that the overall technological gap in adoption of castor production practice among the farmers getting below state average yield was found to be significantly higher than that of the farmers getting above state average yield.

IMPLICATIONS

There was a wide gap in the production potential and actual realization. In order to narrow the gap, speedy diffusion of technology and services needs to be geared up. The ways for a speedy transfer of technology are, to organise more block demostrations, to plan and

organise a special correspondence course on scientific castor cultivation and to make intensive use of mass media in communicating production message to the farmers to facilitate the castor growers to adopt recommended production technology, the production inputs need to be supplied timely should attend the fortnightly training programme regularly. This may help to ensure a strong linkage between extension and inputs supply agencies.

REFERENCES

Dobey, V. K.; Singh, S. D.; Saini R. and Saini S.P.S. 1981. Gap and Constraint Analysis of wheat Production, "Indian Journal of Agric. Res." 15(1) : 17

It is only when we forget all our learning that we begin to know.

- HENRY DAVID THOREAU

It is best to read the weather forecasts before we pray for rain.

- MARK TWAIN