Guj. J. Extn. Edu. VIII & IX 1997 & 1998

Identification and Adoption of Indigenous Technical Knowledge (ITKs) by Sugarcane Growers

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INTRODUCTION

Traditional values which are suitable in nature need to be compared with the values of modern technological systems. The modern agricultural science is different and some times contradictory to the traditional agricultural knowledge possessed by the farmers. The traditional practices of agriculture will disappear unless their values are promoted. For destruction in vast storage of traditional agricultural practices modern patterns are largely responsible. As long as we shall follow the western notion that individual greed is more important than community need, we will certainly put ourselves in danger. Now it is the time that we have to think about farmer's right and Dunkel's draft. There is a growing need of the present situation to disseminate the traditional agricultural wisdom of the farmers and to give it due consideration and encouragement, so that farmers could use it as a local resource. This can be done by having a very clear concept of what the traditional knowledge is.

The word "traditional" means transmission of community values and behaviour which are shared by the members of a soiciety which is rooted since long past. Dr. Hasnain defined it as "a part of culture which is being necessarily followed by society and expressed in form of oral, social and physical behaviour".

Reijntjes. *et. al.* (1993) have defined Indigenous knowledge as the knowledge of people living in a certain area, generated by their own and their ancestors' experiences and including knowledge originating from elsewhere which has been internalised by the local people.

With this concept in mind it was thought essential to identify some of the ITKs alongwith its adoption among the farming community of South Gujarat. The South Gujarat having a prominent area of Sugarcane crop, it was thought essential to restrict this study only on the crop of sugarcane only with following specific objectives :

OBJECTIVES

1. To identify indigenous sugarcane technological knowledge prevailing among the farming community of South Gujarat.
2. To study the extent of adoption of ITKs.
3. To know the reasons behind use of ITKs.
4. To know experts' opinion towards ITKs.

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METHODOLOGY

The present study was conducted in the Valsad district of Gujarat State. Ten villages were selected randomly for the purpose of the study. Based on random sampling technique, 80 sugarcane growers from selected villages were setectd as respondents and interviewed personally with the help of a specially structured schedule.

RESULTS AND DISCUSSION

ITKs prevailing among farming community : On the basis of the information collected from the respondents different nine ITKs were identified which are depicted in Table 1.

It is evident from Table 1 that, first three ITKs i.e. burning the trash immediately

Table 1 : Indigenous sugarcane technological knowledge prevailing among the farming community of South Gujarat (N=80)

Sr. No.	Indigenous techniques	Number	Per cent
1.	Burning of trash immediately after cutting	76	95.00
2.	Use of wet method of planting	74	92.50
3.	Preparation of field channel for irrigation	73	91.30
4.	Weed control through hand weeding only	45	56.30
5.	Use of more than three buded sets as seeds	28	35.00
6.	Irrigation to increase sprouting after planting	27	33.80
7.	Removal of leaves after 6 to 8 months	17	21.30
8.	Land cultivation by indigenous plough	14	17.50
9.	Inter cropping of sesamum with sugarcane	03	03.75

Table 2 : Distribution of respondents according to their extent of adoption of ITKs of sugarcane cultivation (N=80)

Sr. No.	Catagory	Number	Per cent
1.	Low extent of adoption	19	23.75
2.	Medium extent of adoption	51	63.75
3.	High extent of adoption	10	12.50
	Total frequency	80	100.00

$\bar{X}$ = 5.54 S. D. = 1.50

Table 3 : Reasons behind use of indigenous techniques practiced by the farmers of South Gujarat.

Sr. No.	Indigenous techniques	Reasons/Purposes	Frequency
1.	Land cultivation by indigenous plough	- Repairing facilities are available	10
		- Availability of implements	48
		- Economically suitable	75
		- Land is stony so in such soil indigenous plough works properly	5
2.	Use of more than three buded sets as seeds	- Contract is given to labour so they want to complete work as early as possible	25
		- Less number of sets are required as seeds	15
		- Obtain good germination	15
		- To put sets at proper depth so as to get uniform and straight germination	10
3.	Preparation of field channel for irrigation	- For easy irrigation	49
		- For giving effective irrigation	33
		- To save water	32
4.	Weed control through hand weeding only	- Good control of grass by hand weeding	42
		- Farmers think that the population of weeds increase when herbicide is used	35
		- Application of herbicide affects the crop adversely	33
		- Economically affordable	29
		- Easy availability of farm labour	15
		- Weed is not controlled by herbicide	12

Contn.

Sr. No.	Indigenous techniguues	Reasons/Purposes	Frequency
5.	Heavy irrigation to increase sprouting after planting	- Good and speedy germination	15
		- After planting, heavy irrigation necessary	13
		- For increasing moisture holding capacity of soil	10
6.	Removal of leaves after 6 to 8 month	- Trash are used as manure in soil	15
		- Sunlight reaches to the soil	13
		- To control insect-pest	13
		- Sugarcane sets gain good nutrients so girth of sets increase	9
		- Use as food to animal	3
7.	Burning of trash immediately after cutting	- Easy removal of leaves	57
		- Soil become loose and friable	48
		- Due to burning heat, growth of lam crop becomes speedy.	35
		- To control insect-pest/diseases	27
		- To reduce weed population	25
		- To increase nutrient status of soil by ash	24
		- Economically suitable	17
		- To carry out tillage operation easily for next crop	10
8.	Intercropping of sesamum with sugarcane	- For reducing cost of production	2
		- Sesamum seeds should be produced for house Consumption	1

after cutting, use wet method of planting and preparation of field channel for irrigation were the important indigenous techniques encountered by 95.00, 92.50 and 91.30 per cent of the respondents as first, second and third rank respectively. The less important ITKs were : (1) Intercropping of seasamum with sugarcane, (ii) cultivation of land by indigenous plough and (iii) removal of leaves after 6 to 8 months.

Extent of adoption of ITKs : The extent of adoption was also one of the objectives and the data received are presented in Table 2.

The data presented in Table 2 reveal that the majority (63.75 per cent) of the respondents had medium extent of adoption followed by low (23.75 per cent) and high (12.50 per cent) extent of adoption of ITKs in sugarcane crop.

Reasons behind the use of ITKs : Regarding reasons for adoption of such ITKs, the responses of the farmers were recorded and are presented in Table 3. The

Table 4 : Experts' opinion towards ITKs in sugarcane crop **(N=5)**

Sr. No.	ITKs	Opinion		
		Practically true	Scientifically true	Not true
1.	Burning of trash immediately after cutting	2 (40.00)	2 (40.00)	1 (20.00)
2.	Use of wet methods of planting	3 (60.00)	2 (40.00)	0 (0.00)
3.	Preparation of field channel for irrigation	3 (60.00)	2 (40.00)	0 (0.00)
4.	Weed control through hand weeding only	2 (40.00)	0 (0.00)	3 (60.00)
5.	Use of more than three buded sets as seeds	3 (60.00)	1 (20.00)	1 (20.00)
6.	Heavy irrigation to increase sprouting after planting	0 (0.00)	3 (60.00)	2 (40.00)
7.	Removal of leaves after 6 to 8 months	0 (0.00))	3 (60.00)	2 (40.00)
8.	Land cultivation by indigenous plough	1 (20..00)	0 (0.00)	4 (80.00)
9.	Intercropping of sesamum with sugarcane	0 (0.00)	1 (20.00)	4 (80.00)
	Total frequency	14 (31.11)	14 (31.11)	17 (37.78)

reasons for each ITK is presented in the table which is self explanatory, hence, no detail discussion of this table is given.

Generally it is believed that the scientists do not believe all the ITKs adopted by farmers as true or having a scientific base. But some of the ITKs are tested by the scientists and they found some truth behind it. Keeping this in mind expert's opinion regarding ITKs was sought for and are presented in Table 4.

It is evident from the Table 4 that majority (37.78 per cent) scientists said that ITKs in sugarcane crop were not true followed by practically true and scientifically true (31.11 per cent).

CONCLUSION

The findings of the study indicate that majority of the farmers adopting the ITKs in sugarcane cultivation were : (i) burning of trash immediately after cutting, (ii) use of wet method of planting and (iii) preparation of field channel for irrigation. Also there is the medium extent of adoption of ITKs of sugarcane cultivation.

IMPLICATION

Farmers believe in their own techniques. So necessary modification be made in this ITKs which give higher yield and suitable to their existing situation. Also extension machinery should arrange training programme, demonstration on such ITKs and spread it over other farming community.

REFERENCES

Gupta, S. L. : Singh, S. P. and Dubey, V. K. (1994). "Traditional wisdom : A conceptual Exploration" Interaction, XXII (1) : p. 3-25

- An abstract style is always bad. Your sentences should be full of stones, metals, chairs, tables, animals, men and women.
  - A LAIN
- No man's credit is as good as his money
  - E. W. HOWE
- Nobody minds having what is too good for them