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Technology Utilization Pattern of Cassava Growers on Recommended Cultivation Practices

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ABSTRACT

A study was conducted to assess the Technology Utilization Pattern of cassava growers in Salem district of Tamil Nadu. Farmers were selected based on the area of cultivation of cassava. The technology utilization pattern of cassava growers revealed that they had medium to low level of knowledge about cassava cultivation practices.

Keywords : *Technology utilization pattern; Crop improvement technology; Plant protection technologies; Tamil Nadu.*

Cassava, popularly known as Tapioca, is one of the most important crop in poorer areas, because of its ability to grow well even under drought condition. Cassava supports food security and income for over 800 million people worldwide. (Howeler et al. 2013).

India ranks tenth in the production of cassava cultivation. It is cultivated in many tropical states in India, as an industrial crop (Tamil Nadu and Andhra Pradesh), while in some states (Kerala and North Eastern states) it is being used as food crop. Cassava industry is an agro based seasonal industry with huge employment potential in India. It is mainly processed into starch and sago. There are more than 1000 cassava processing units in India producing starch and sago in cottage and small scale sectors.

In Tamil Nadu, cassava is a major horticulture crop and is ranked first both in its productivity (4344 MT) and processing like sago and starch (800 units approximately) industries. This is the major crop in the districts of Salem, Namakkal, Erode, Tiruvannamalai, Villupuram, Dharmapuri and Karur, and sustains more than three lakh farmers. A significant section of them are tribals. With this background, the study was conducted to measure the technology utilization pattern of cassava growers on the recommended cultivation practices.

Technology Utilization Pattern is the process of making full use of the recommended technologies by the clients. The prime duty of extension functionaries is not only to spread improved farm technologies to the farming community but also to make the innovations adopted by the farmers in order to ensure

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higher productivity. Hence an attempt was made to assess the technology utilization pattern of cassava farmers under four sub heads crop improvement technologies, crop production technologies, crop protection technologies and harvest related technologies.

METHODOLOGY

Salem district was purposefully selected for its maximum area and production (83526 hectares and 2499280 tonnes) in the state of Tamil Nadu. About 80 per cent of country's needs of starch and sago are supplied from Salem and its neighboring districts. The district consists of twenty blocks. Among them three blocks were selected based on the highest area and cultivation (6719 ha) viz., Attur, Gangavalli and Pethanaickenpalayam.

FINDINGS AND DISCUSSION

Technology-wise Technology Utilization Pattern of the Respondents on Cassava cultivation

Technology Utilization Pattern varies from individual to individual and practice to practice. The results of the study are given in Table 1.

Regarding crop improvement technologies, 100 per cent of the respondents adopted the recommended suitable varieties, The suitability of the varieties for different soils and increase in yield were the criteria for the selection.

As regards to crop production technologies, 84.16 per cent of the respondents adopted the recommended FYM application. Sett selection was followed by 80.83 per cent of the respondents and spacing of crops by 80 per cent of the respondents.

Table 1.

Distribution of Respondents according to their Technology wise Technology Utilization Pattern

(n=120)

Sl.No.	Particulars	Technology utilization pattern	
		Number *	Percentage
Crop Improvement Technology			
1.	Varieties H226,Kungumarose, YTP-1, Thailand white, Thailand black, MUD -1, Burma, Sree Athulya, Sree apoorva,CO-1, CO-2, CO-3, CO(TP) 4, CO(TP) 5.	120	100.00
Crop Production Technologies			
2.	Sett selection Setts of 15 cm long with 8-10 nodes from the middle portion of the stem	97	80.83
3.	Sett treatment		

Sl.No.	Particulars	Technology utilization pattern	
		Number *	Percentage
a.	Fungicides : Dipping setts in dimethoate @ 2ml/litre of water + carbendezim 2g/l for 15 minutes before planting	30	25.00
b.	Biofertilizer : Dipping setts (30g azospirillum + 30g phospho bacteria solution 1lit. of water for 15 minutes	14	11.67
4.	Planting method: Ridges and furrows	87	72.50
5.	Depth of planting: 4-6 cm	95	79.16
6.	Sett rate; 17,700 setts/ ha or 14,800 setts/ ha	93	77.50
7.	Spacing; 90 x 90 cm(12,345 setts/ha)	96	80.00
8.	Irrigation; Once in 7-10 days up to 3rd month and once in 20 days from 4th month to 8th month	88	73.33
9.	Intercropping: Aggregatum onion, coriander, black gram, Bengal gram, Bengal gram, tomato, brinjal.	55	45.83
10.	Manures and fertilizers		
a.	25t/ha	101	84.16
b.	Basal- 30:60:75 kg NPK/ha	39	32.50
c.	Top dressing-30:75 kg NK/ ha	90	75.00
d.	Neem blended urea-Urea : neem cake (5:1)	21	17.50
11.	Micronutrient treatment; 0.5 % ZnSO4 + 1% FeSO4 solutions sprayed on 60th, 75th and 90th day of planting. drip- 90:90:240 kg of NPK/ha @ once in every three days	38	31.67

Sl.No.	Particulars	Technology utilization pattern	
		Number *	Percentage
Plant Protection technologies			
1.	White fly(Neem oil 5ml/ lit. or methyl demeton 35 EC 2ml/ lit.)	50	41.67
2.	Papaya mealy bug(Release of mealy bug parasitoid(*Acerophagus papaya)@ 100 NOs./acre)*	99	82.5
3.	Scales(Dimethoate (2ml/lit.) or malathion (2ml/lit. or methyl dementon (2ml/lit.))	22	18.33
4.	Red spider mite-Wettable sulphur (2g/lit) or dicofol (2.5ml/lit.)	14	11.67
5.	Mosaic- Dimethoate(2ml/lit.) or methyl dematon (2ml/lit.)	59	49.17
6.	Tuber rot(Copper oxychloride 2.5g/ lit.)	23	19.17
7.	Concentric ring leaf spot (or) phomadisease (Carbendazim 250g or mancozeb 625g or coc 625g per ha)	41	34.17
8.	Cercospora leaf spot(Mancozeb @ 2g/ lit.)	15	12.50
9.	Herbicide Application(Pendemethylin @ 1kg a.i/ha)	77	64.17
Harvesting			
1.	Correct time of harvesting(Harvesting at correct time by pulling the stem up)	86	71.67

(*) Multiple Responses Obtained

In general, it could be concluded that medium level of adoption was followed by the respondents. Medium level of risk orientation and economic motivation might be the contributing factors for the medium level of technology adoption among the cassava growers.

Overall Technology Utilization Pattern of the Respondents

The cumulative frequency distribution of Technological Utilization Pattern obtained from the analysis is presented in Table 2.

Table 2.
Distribution of Respondents according to their Overall Technological utilization pattern.

(n=120)

Sl.No.	Category	Technology utilization pattern	
		Number	Percentage
1.	Low	20	16.67
2.	Medium	69	57.50
3.	High	31	25.83
Total		**120**	**100.00**

It could be observed from the table that the majority of the respondents(57.50%) had medium level of technology utilization pattern in cassava cultivation, followed by high level (25.83%) and low level (16.67%) of technology utilization pattern.

The medium to high level of technology utilization pattern of the respondents might be due to their high level of knowledge on recommended practices, medium level of risk orientation and medium level of economic motivation. Further, the agricultural scientists from Tapioca and Castor Research Station, Yethapur, Tamil Nadu in the study area might have also played an important role in the dissemination of technologies on cassava cultivation.

However low knowledge on biofertilizer application and plant protection measures for certain pests and diseases would have contributed for the low level of technology utilization.

Among the 120 cassava growers, even though high number of farmers were aware of the technologies like crop improvement, crop protection, crop production and harvesting they were not adopting some of the technologies due to the fear of economic loss since cassava is a long duration crop and it affects income. Hence, intensive efforts like organizing training cum demonstrations, distributing extension literature and arranging exhibitions are to be undertaken by the extension personnel of Department of horticulture to improve the technology utilization pattern of cassava growers.

REFERENCES

Howeler, R., Lutaladio, N., & Thomas, G. (2013). *Save and grow: Cassava. A guide to sustainable production intensification:* FAO.