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RESEARCH NOTE

Extent of Adoption of Lime Production Technology by Lime Growers

V. V. Mayani[1] and V. S. Patel[2]

INTRODUCTION

Kagzi lime (citrus aurantifollia) is one of the most important citrus fruits. The total area under lime in India is bout 30,000 hectares and total annual production is about 3.5 lakh lonnes, while in Gujarat State, the total area under lime is about 3600 hectares and total production is about 24000 tonnes (Randhaw and Srivastav, 1986).

In Gujarat the prominent lime growing districts are Kheda, Vadodara, Bhavnagar and Meshana. Per hectare production of lime is low as compared to other states of the country. Probable reasons for low production of lime in this area are adverse effect of climate, wide spread prevalence of diseases particularly, citrus die-back, as well as low adoption of latest technology of lime production. In such a condition adoption of lime production technology is one of the possible ways to raise the production of lime.

It is a general observation of scientists that successful fruit growing requires precise knowledge, skill, accuracy and throughness in production and marketing.

Hence, it was felt necessary to study the adoption of lime production technology by the lime growers with the objective of finding out lime growers' extent of adoption of lime crop production technology.

METHODOLOGY

Bhavnagar and Sihor talukas of Gujarat were selected for the study because these talukas occupied maximum area under lime cultivation. Five villages of each taluka were selected at random (a village having mor than 10 ha. of land under lime). Villagewise list of lime growers was prepared and total 100 lime growers were selected with help of proportionate random sampling technique from each of the selected villages.

A scale to measure the extent of adoption of lime production technology was developed by seeking guidance and suggestions from 34 experts working in the field. The experts had been asked to distribute the 100 scores of adoption among 10 major practices, keeping in mind the importance of each practice. The weightage assigned by the experts to particular practice was summed up and arithmatic mean was calculated and rounded off to nearest integral figure. Practicewise weightage of adoption of lime production technology is shown in Table 1.

The adoption quotient developed by Chattopadhyay (1974) was used with slight modification.

1. P.rofessor and Head, Department of Extension Education BACA, GAU., Anand.
2. P. G. Student (at present sales officer Godrej Ltd. Baroda) College of Agriculture, GAU, Junagadh.

Table 1 : Practicewise weightage of adoption of lime production technology

Sr. No.	Practice of lime production technology	Weightage (Mean score)
1.	Nursery Management	10
2.	Planting (pit making etc.)	7
3.	Spacing	9
4.	Organic Manures	11
5.	Fertilizer Management	12
6.	Water Management	15
7.	Micro Nutrients	6
8.	Growth Regulators	11
9.	Insect control	11
10.	Discase Control	14
	Total	100

$$AQ = \frac{\frac{E1}{P1} \times W1 + \frac{E2}{P2} \times W2 + \text{--------} + \frac{En}{Pn} \times Wn}{W.\ N.} \times 100$$

AQ = Adoption Quotient

$E_1 \ldots E_n$ = Extent of Adoption in terms of score obtained by the farmers for particular pracite.

$P_1 \ldots P_n$ = Potentiality of adoption by the farmers in terms of score to be obtained for the particular practice.

$W_1 \ldots W_n$ = Weightage of particular practice

W = Summation of Weightages of all the practice included

N = Number of years for which adoption Quotient was calculated.

RESULTS AND DISCUSSION

To ascertain practice wise adoption of lime production technology by lime growers, the recommeded practices of lime production technology were grouped under 10 major groups (as shown in methodology). Practicewise mean score and adoption quotient

Table 2 : Practicewise extent of adoption of lime production technology by lime growers

Sr. No.	Practice of lime production Technology	Practicewise potential score	Mean score obtained	Per cent (AQ)	Rank
1.	Nursery Management	10	9.00	90.00	II
2.	Planting	7	2.69	38.43	VIII
3.	Spacing	9	8.71	96.78	I
4.	Organic manuress	11	9.74	88.55	IV
5.	Fertilizer Management	12	4.83	40.25	VII
6.	Water Management	15	13.45	89.67	III
7.	Micro nutrients	5	0.00	0.00	X
8.	Growth regulators	6	1.24	20.67	IX
9.	Insect control	11	5.07	46.00	VI
10.	Disease control	14	9.71	69.36	V

were calculated and presented in Table 2 with their ranks.

A look on data of Table 2 indicated that the lime growers adopted highest the recommended practice of spacing (96.78 percent) with first rank followed by nursery management (90.00 per cent) and water management (89.67 per cent) with second and third ranks respectively.

The use of organic manures and disease control were adopted by 88.55 per cent and 69.36 per cent respectively with fourth and fifth ranks. The poor adoption was found in practices of insected contral, fertilizers management, planting and growth regulators. None of the lime growers adopted the micronutrients for lime production. This might have happened due to the fact that they were not aware of the micronutrients and growth regulators and complexity in use.

Most of the lime growers believed that the application of fertilizers increased the disease problems, like; gummosis due to bending of branches with heavy bearing. In case of planting they didn't feel any importance. In case of insect control, there was no significant damage in lime crop. Hence, adoptions were found poor.

IMPLICATIONS

Thus, to raise the extent of adoption of lime production technology, the extension workers should concentrate their efforts on creating awareness about the importance of micronutrients, growth regulators, planting, and fertilizer management in lime crop. They should organise the result demonstration on farmers' field, for showing the importance of such practices.