

KNOWLEDGE OF FARMERS ABOUT BITTER GOURD CULTIVATION

It is generally observed that farmers do use improved farm practices scientifically. In view of lack of knowledge on improved farm technology, it is imperative to examine farmers' knowledge about the bitter gourd production towards modern agricultural technology for increasing bitter gourd production. The study was therefore undertaken with the objective to assess the knowledge of specific improved practices of bitter gourd cultivation by the farmers and to analyse the association between knowledge of farmers and their selected characteristics.

The present study was conducted in Kalliyoor panchayat in Thiruvananthapuram district, as this is one of the prime vegetable growing areas in the district. Since the research programme was of exploratory and exhaustive nature involving non-participant observation for data gathering, only an appropriate sample size of farmers cultivating bitter gourd was included as the respondents. Accordingly, 40 farmers were selected as the sample. For this, the Agricultural Officer of Kalliyoor Krishi Bhavan was contacted and got the list of 80 bitter gourd growers who belonged to two Haritha Sangams namely Sasthankovilnada and Eryankode. From this, 40 farmers were selected who had comparatively maximum area and production in discussion with the Technical Officer and Technical Assistants of the Kerala Horticultural Development Programme (KHDP), Agricultural Officer and Agricultural Assistants of the Krishi Bhavan, members of Haritha Sangams, people's representatives and progressive farmers. Only 40 farmers were selected because the technique used for the study was non-participant observation technique. This involved frequent visit to the farmer's field, observation of the practices the farmers did in their field and recording them without their knowledge. For a systematic and scientific study using the non-participant observation technique, the sample size should be concise. The interview schedule was developed to collect the responses.

A teacher-made knowledge test was used to measure the knowledge level of farmers regarding modern agricultural technology. The package of practices recommended by the

Kerala Agricultural University (1996) was made use of to develop the test.

Table 1. Distribution of farmers based on their knowledge about recommended practices in bitter gourd cultivation (n=40)

Category	Knowledge Score	Frequency	%
Low ($<\bar{x}$)	<9.75	17	42.5
High ($>\bar{x}$)	≥ 9.75	23	57.5
Total		40	100

$$\bar{x} = 9.75$$

Table 2. Percentage of knowledge about recommended practices by the farmers

Sl. No.	Items / practices	No.	%
1	Spacing is 2 x 2 m	40	100
2	Varieties are Preethi, Priyanka, Priya, Arka Harit	28	70
3	Seed rate is 5-6 kg ha ⁻¹	31	77.5
4	Pits at a depth of 30-45 cm	40	100
5	Retain 2-3 plants per pit	40	100
5	Top dressing in split doses at fortnightly intervals	40	100
7	Weeding and raking at the time of fertilizer application	40	100
8	Carbaryl 0.2% is sprayed against epilachna beetle	40	100
9	Destroy the affected and decayed fruits	40	100
10	Spray 0.5% nitrophenol against powdery mildew	0	0
11	Destruction of collateral hosts is a must	40	100
12	Harvest the fruits 10 days after fungicide application	26	65

Based on mean knowledge score, the respondents were categorized into two groups viz., low and high knowledge groups. Age, education, main occupation, experience in bitter gourd cultivation, area under bitter gourd cultivation, social participation, extension orientation and economic motivation were the selected characteristics and were measured using appropriate tools.

The table clearly indicated that the recommended practice of spraying 0.5% nitrophenol against powdery mildew was not known by

anybody. Bitter gourd was mainly affected by mosaic in that area and there was no incidence of powdery mildew.

To find out the relationship between the knowledge level of farmers on recommended practices and the selected characteristics, correlation coefficients were computed and the coefficients for different variables reveal that except economic motivation, all other variables have positive relationship with the knowledge of farmers. Education was positively and significantly correlated with knowledge level. Manju (1996) recorded a similar trend in which there was a positive and significant association between knowledge level of coconut farmers and their level of education. The significant relationship between knowledge and level of education highlights the fact that education helps the farmers in acquiring more knowledge about recommended cultivation practices. Education might have enabled these farmers to perceive the importance of the recommended practices in farming.

Age, main occupation, experience in bitter gourd cultivation, area under bitter gourd cultivation, social participation and extension orientation had positive and nonsignificant relationship with knowledge. It was observed from Table 1 that only 57.5 per cent of farmers belonged to the high knowledge category in respect of the knowledge on improved prac-

tices and 42.5 per cent of farmers belonged to low knowledge category. Scientific farming demands a thorough understanding of the package of practices to be followed and indigenous practices in their farming. They are not giving prime importance to recommended practices.

All the respondents were aware of recommended practices coming under seed selection, spacing, land preparation, fertilizer application, intercultural operations and plant protection measures (Table 2). About 77.5 per cent of farmers were having knowledge about the exact seed rate of bitter gourd, 65 per cent of farmers had knowledge about the exact waiting period (i.e., harvesting of the fruits 10 days after fungicidal application). Farmers were unaware of the poisonous nature of chemical pesticides. Probably, this may be the reason for the less popularity of some of the recommended practices. As the farmers grow old, their interest to acquire knowledge about improved recommended cultivation practices is likely to get increased. When the area under cultivation is large, farmers search for new technologies. Social participation especially participation in various farmers' organizations might have made the farmers aware about the recommended practices of bitter gourd. Frequent contact with extension agencies can bring about improvements in the knowledge level of farmers on recommended cultivation practices.

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