

Effectiveness of Training Methodologies on Mango Postharvest Technologies among Mango Growers in San Isidro, Davao Oriental

Jessie V. ALZATE¹ and Emma C. BORDIOS²

¹Instructor, Agriculture and Rural Development Department, ²BS Development Communication Graduate Davao Oriental State College of Science and Technology, Mati, Davao Oriental

Abstract

This study aimed to find out the effectiveness of training methodologies on mango postharvest technologies among 70 mango growers in San Isidro, Davao Oriental. The 70-mango grower-respondents were exposed to trainings on mango postharvest management technologies jointly conducted by the Southern Davao Development Corporation (SODACO) and the Department of Agriculture (DA). Five methods of training such as lecture, demonstration, guided tours, seminar and workshop were used. Demonstration was the most effective method followed by lecture and guided tour. The respondents claimed that these methods were the most effective since they gave real firsthand experience. Problems encountered during the training include the lack of patience in sharing skill by the trainers, lack of management skills of the facilitators, and poorly ventilated and poorly lighted training venues. More than 50% of the respondents either belong to moderate or high level of postharvest management knowledge after the conduct of training. On the average, the respondents had a moderate knowledge level on postharvest technologies. Results of the Z and t tests showed that those who belonged to the 36-45 age bracket had higher knowledge level on the technologies over those who belonged to the 26-33 age bracket. However, the knowledge levels between the age brackets 46-55 and 56-65 did not vary. Other socio-demographic characteristics included in the analysis like tribe, occupation, marital status, sex and religion did not affect the respondents' knowledge of postharvest technologies.

Keywords: knowledge level, training problems, training methodologies

Introduction

Since the country has participated in a competitive economy characterized by open trade system, there is a need to improve the products of the farmers for global excellence that would bring about an improved quality of life for every Filipino.

As an answer to this call, the province of Davao Oriental supported the thrust of the Department of Agriculture in developing the mango industry under the Key Commercial Crops Development Program (KCCDP).

One of these activities provided for the conduct of training on postharvest technologies for mango jointly launched by the Department of Agriculture (DA) and the Southern Davao Development Corporation (SODACO).

The series of trainings in mango postharvest technologies spanned from 1994 to 1996. The participants of the trainings were mango growers who were willing to develop their agricultural lands into mango farms.

Training is one of the most popular strategies in the implementation of an extension program. Coordinating with other agencies and action research are also important strategies (Librero, 1986).

Training is a persuasive activity through which human resources can be developed to meet the dynamic needs of the society. At the macro level, training is concerned with individual development through cognitive and behavioral changes (Buendia, 1989). Thus, this is a shift from the traditional methods of education which involve the mere transfer of knowledge of an expert trainer to the learner-trainee (Jacobsen, 1985). It is in this context that the knowledge levels of the respondents on postharvest management are acquired through training.

However, the effectiveness of training and the amount of knowledge that participants can acquire greatly depends on the methodologies employed, hence this study.

Figure 1 shows the relationship between the independent variable and the dependent variables. It also shows that the knowledge of an individual will depend on their exposure to the different training methodologies.

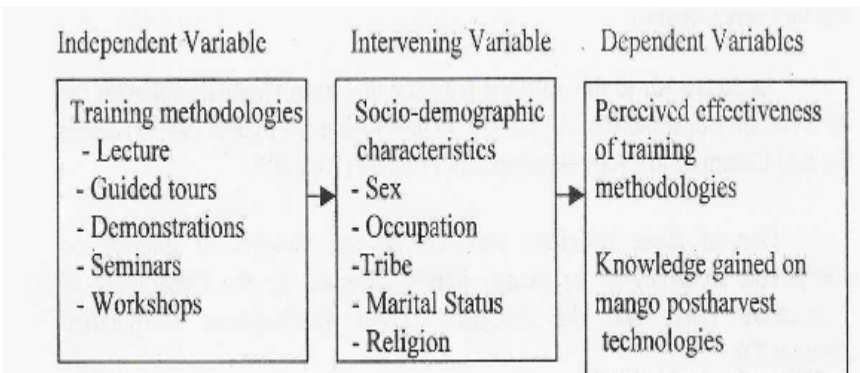


Figure 1. Conceptual framework

Methodology

This study was conducted in the municipality of San Isidro, Davao Oriental where SODACO and DA extended trainings on postharvest technologies among mango growers. Trainings took place between 1994 to 1996. This evaluation was conducted from August 1998 to March 1999, a few years after the exposure of the respondents to the different training methodologies.

This study used the one-shot survey design. All the mango growers who had attended the trainings on postharvest technologies served as respondents.

A questionnaire was used in gathering the data. It was divided into four parts, namely: the socio-demographic characteristics of the respondents and their perception towards the methodologies; the training methodologies availed by the respondents the problems encountered by the respondents during the training; and knowledge level of the respondents on postharvest management technologies for mango.

Data were analyzed through simple frequencies, percentages and averages.

In order to establish the difference between some of the sociodemographic characteristics of the respondents and their knowledge level, the Z and t tests were employed.

Results and Discussion

The respondents. Majority (52.86%) of the respondents were middle-aged (36 to 55 years old) with an average age of 48 years. Most (81.43%) of the respondents were males. Most mango growers either have received some primary or secondary education with a minority (18.57%) who either have started or finished a college degree. Catholic was the more prevalent religion and majority (85.71%) claimed belonging to the Visayan tribe. Only a few were Mandayans (14.28%). Most (54.28%) have planted less than one hectare of their land to mango and had been mango growers for the last 3 to 4 years. Moreover, not all mango growers were full-time farmers since 10% were businessmen while 9% were employees. Mango growing then was regarded by some respondents as additional source of income. The respondents had an average monthly income of P2,528.57.

Training methods. There were five methods of training which the respondents -were exposed to. Table 1 shows that lecture was ranked as the most attended method (28.25%). Other methods used were demonstration (20.90%), guided tour (19.21 %), workshop (16.95%) and seminar (14.69%), respectively. Out of these five identified methods, the respondents perceived that the most effective methods were demonstration (39.13%), lecture (32.61%) and guided tour (28.26%). They reasoned out that these first three methods were the most effective since these gave firsthand

experience (52), was an organized and systematic way of learning (34.72%), and it clarified difficult points (29.17%).

Table 1. Training methodologies to which the respondents were exposed to, their perceived most effective training methods and reasons

Method	Frequency	Percentage
Lecture	50	28.25
Demonstration	37	20.90
Guided tour	34	19.21
Workshop	30	16.95
Seminar	26	14.69
Total	177*	100
Most effective method		
Demonstration	54	39.13
Lecture	45	32.61
Guide tours	39	28.26
Total	138*	100
Reasons for effectivity		
It gives real first hand experience	52	36.11
It presents an organized and systematic way of learning	50	34.72
It clarifies difficult points	42	29.17
Total	144*	100

*Multiple responses

Training problems. Some problems are usually encountered during trainings. These problems are generally classified as trainer, venue and facilitator problems. On the trainer problem, respondents claimed that some trainers were not patient in- sharing their skills. The venues were not well ventilated and lighted. Hence, the venues were not conducive for learning skills. As for the facilitators, many (48.96%) claimed that some facilitators lacked the skills in managing trainings; while others perceived that the facilitators were not ready to supplement what have been missed by the trainers (44-79%). Some respondents answered that some facilitators were not supportive; and that the materials for training were not prepared and available (Table 2).

Table 2. Respondents' perceived training problems

Trainer problem	Frequency	Percentage
Trainer was not patient in sharing their skills	64	54.24
Trainer cannot explain the procedure very well	48	40.68
Trainer has no expertise of the skill he is handling	4	3.39
Trainer is not approachable	1	0.85
Over-all performance of the trainer is not efficient	1	0.85
Voice of the trainer cannot be heard	0	0
Total	118*	100
Venue problem		
Venue was not well ventilated and lighted	51	36.69
Venue was not conducive for learning the skill	46	33.09
Area was not spacious	23	16.55
Venue was not the best place for training	19	13.67
Total	139*	100
Facilitator problem		
Conduct of the training was not well managed	47	48.96
Facilitator was not ready to supplement what have been missed by the trainers	43	44.79
Facilitator was not supportive	4	4.17
All of the materials needed were not prepared	2	2.08
Total	96*	100

* Multiple responses

Knowledge level. The knowledge -levels of the respondents were classified into five categories which corresponded to their scores obtained from the test about postharvest technologies (Table 3). These categories were the following: very low (1-2), low (3-4), moderate (5-6), high (7-8), and very high (9-10).

Out of the 70 respondents, a considerable number (44.29%) have moderate knowledge on mango postharvest technologies. This number did not however reach the majority. Twenty-six (37.14%) respondents had a high level of knowledge, while 2.86% had a very low level of knowledge. Only 6% showed very high knowledge level. The mean knowledge of the respondents was 6.07 or moderate level of knowledge.

Table 3. The respondents' level of knowledge on mango postharvest technologies

Category	Frequency	Percentage
Very low (1-2)	2	2.86
Low (3-4)	7	10.00
Moderate (5-6)	31	44.29
High (7-8)	26	37.14
Very high (9-10)	4	5.71
Total	70	100

Mean knowledge = 6.07

The t test results showed that the knowledge level of the respondents under the age brackets 26-35 and 36-45 were significantly different from each other (Table 4). This implies that the younger adult respondents had lower knowledge level on postharvest management technologies compared to the slightly older respondents (i.e., 36 to 45 years old). There was no difference however with the knowledge levels of slightly older respondents (i.e., 46-55 and 56-65 years old).

On the other hand, results of the Z test showed that the knowledge 'level between male and female mango farmer- respondents did not vary.

There was also no significant difference on the knowledge level between a Visayan and a non-Visayan; between farmers and non-farmers, between the married and singles, and between Catholic and non-Catholic respondents (Table 4).

Table 4. Some socio-demographic characteristics of the respondents and their knowledge levels on mango postharvest technologies, using t and Z tests

Variable	Mean Score		Computed		Significance
	X ₁	X ₂	t	Z	
1. Age 26-35 vs. 36-45	5.07	6.53	-2.599		*
46-55 vs. 56-65	6.23	6.42	-0.560		ns
2. Sex Female vs. Male	5.77	6.12		-0.754	ns
3. Tribe Visayan vs. Non-visayan	5.08	5.62		0.965	ns
4. Occupation Farmers vs. Non-farmers	5.96	5.54		0.662	ns
5. Religion Catholic vs. non-Catholic	6.29	5.12		1.550	ns

* = significant; ns = not significant

Results of the study showed that most of the mango grower-respondents belonged to the 36-55 age bracket. Majority of the respondents were male and married. Majority were Roman Catholics, with most having received either primary or secondary schooling. Farming was the main occupation of the respondents. Most have less than one (1) hectare planted to mango and have grown the crop for the last 3 to 4 years.

The most frequently used methods during the trainings were the lecture, demonstration, guided tour, workshop and the seminar. Respondents determined that the demonstration method was the most effective, followed by the lecture and the guided tour, respectively.

These three methods were effective since it gave them real firsthand experience, it presented an organized and systematic way of learning and it clarified difficult points.

On the other hand, most of the respondents perceived that. one of their problems was the trainers. They pointed out that some trainers were not patient in sharing their skills. They added that the venues were not well ventilated and lighted. Some facilitators also did not know how to manage the training.

The knowledge level of the respondents on postharvest technologies showed that more than 50% of the respondents either belonged to moderate or high levels of knowledge—They had an average knowledge level of 6.07 which fell under the moderate knowledge level.

The knowledge level between the 36-45 age brackets was higher than the

knowledge level of those who belonged to the 26-35 age bracket. The knowledge level between the 46-55 and 56-65 age brackets did not vary. The same was noted between the knowledge levels of farmers and non-farmers, male and female, Visayan and non-Visayan, Catholic and non-Catholic respondents.

Conclusions and Recommendations

The most effective method of training used was the demonstration method. Lecture and guided tour ranked second and third, respectively.

These methods were effective since it gave real firsthand experience, it was an organized and systematic way of learning and it clarified difficult points.

However, some problems encountered during the trainings included trainer, venue, and facilitator problems. It was pointed out that the trainers were not patient in sharing their skills. Venues were not well-ventilated nor well-lighted. They also revealed that some of the facilitators did not know how to manage the training.

The knowledge level of the respondents on mango postharvest management fall under the moderate level.

Hence, based on these findings, this study recommends the following:

1. That trainers should be patient in sharing their skills to their participants, with sufficient consideration on the highest education attained by the trainees in order to ensure that the trainees benefit from training.
2. That the venue should be conducive to learning.
3. The facilitators should have enhanced skills in training management.
4. Those trainers on trainings in mango postharvest technologies should continue to use demonstration, lecture and guided tour methods.

Literature Cited

Buendia, R. 1989. The Comprehensive and Integrated Delivery of Social Services: An Appraisal of a Strategy in Social Development, *Phil. Journal of Public Administration*, 39: 377-403.

Jacobsen, D. 1985. *A Method of Teaching: Skill Approach*. Princeton University Press XVI, New Jersey. pp. 365-380.

Librero, F. 1986. *Extension and Communication Research*. Philippine Council for Agriculture Resources Research and Development (PCARRD), Los Baños, Laguna. 93 pp.