

**USEFULNESS OF AGRICULTURAL EXTENSION COURSES AND THE
COMPETENCIES OF INSTRUCTORS OF THE COURSES AS PERCEIVED BY
FARMERS, ESFAHAN, IRAN**

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Abstract

The research presented herewith is aimed at supplementing a larger research project to design a competency profile for agricultural extension instructors (AEIs). The subject group chosen consisted of a select group of farmers from 17 different townships in the province of Esfahan, Iran who had attended short-term extension courses in 2004. It was focused on Iranian farmers that primarily comprise a more or less homogenous group of males over the age of 40, married, low educated, smallholders and owners of their farms. The study presents to AEIs the evaluations of their target group, farmers and contributes to the wider debate about the best methods for farmers to receive adequate and practical training. The factors motivating these farmers to attend extension courses were knowledge and skills inquiry, personal interest and socializing with other farmers and extension personnel. It was found that this group was generally positive about extension courses and AEIs who they met in the courses; nevertheless, the survey revealed certain improvements for future courses including the desired competence profile of an AEI. They suggested extension courses to be re-designed in terms of duration, evaluation methods and accessibility to instructional technology during the courses. Additionally, they found that an AEI can enhance his/her competencies in some specific domains such as stimulation skills, implementing proper examination methods, following up skills and using appropriate instructional technology. Respondents believe that a competent AEI should be well-informed, experienced, possess the ability to apply teaching methods and be familiar with farmers' culture, language and problems.

Introduction

Offering agricultural extension to farmers is no longer a new phenomenon. Countries such as Iran have been supporting farmers via extension programs for some 50 years now. The major role of agricultural extension and education is to help farmers to make decisions through which they can realize their own goals with the best methods and also learn from their own

experience (Van den Ban & Hawkins, 1996). Nevertheless, the question that has caused many challenges for extension and education scientists is “which methods of education are more advisable to be best fit with farmers’ situation?” Therefore how does one effectively support farmers in order to provide the benefits that will be evidenced in their work? To address this question, many studies have, and still are, taking place in the area of extension and education in Iran (e.g. Karbasioun, 1998; Chizari, Karbasioun, 1998, Karbasioun, Mulder, Mirzaei, 2005).

Theoretically it is accepted by many extension specialists and educationalists that one can apply the traditional adult education principles in order to achieve effective farmer participation in extension and education programs so that their best means of learning is achieved. Based on these principles, adult learners tend to seek information that matches their societal roles and they go to the places where they feel comfortable, places that are non-intimidating, user friendly, and speak in their language, that of the uninitiated public. Therefore the trend for adult learners is to be in an informal and familiar atmosphere free from the pressures of the formal learning environment (Heimimlich, 1996; Cerf and Hemidy, 1999)

Seaman and Fellenz (1989) also discussed this issue in their book, “Effective strategies for Teaching Adults”. In this book, the authors first express the relationship existing between the teacher and learner and their needs and preferences as they influence the learning transaction. The second major focus presents ways to promote active learner involvement. These concepts support Knowles’ theory of androgogy (1980), which contends that adults are more deeply motivated to learn topics that they see the need to learn. Kilpatrick and Rosenblatt (1998), similarly illustrate that active learning, which causes participants’ willingness is more effective than just taking part in training programs inactively. All of this evidence supports the work of Knowles, Holton, and Swanson (2000), where they introduce an androgogical approach theory to adult learning.

Various extension programs have been carried out by the agricultural extension organization (AEO) in Iran such as farm visits, key farmers, constructional army, Basij (construction) groups, rural councils etc (Heidari, 2000). Along with these programs various extension courses have been provided for farmers and land users by the Ministry of Agricultural-Jihad (MAJ), in co-operation with some other organizations in the field of technical and vocational education such as the Red Cross and youth national organization (Karbasioun, Mirzaei & Mulder, 2005). Although, a great number of studies conducted in Iran showed that extension courses were positive and had added value; nevertheless, a number of obstacles in the implementation process of these extension courses have diminished their effectiveness (e.g. Arabzadeh, 1997; Dashti 1994; Chizari, Karbasioun, 1998; Karbasioun, Mirzaei & Mulder, 2005; Karbasioun, Mulder, 2005; Karbasioun, Chizari, 2004a, 2005; Keshavarz, 1994; Zamani & Talebianpour, 2001; Zarnegar & Farjadnia, 1999; Zavvar, 1993).

Preventive factors that have been considered by the above researches are partly physical and partly psychological. For instance, Arabzadeh (1997) notified that although extension training programs (courses) have had positive effects, they are confronted with some difficulties that hinder their success. He enumerated major negative factors such as the inappropriateness of the classroom environment (light, seating, ventilation etc); shortage of instructional technology tools; the existence of incompetent instructors; the lack of scientific visits from successful farms and local manufacturers. Chizari and Karbasioun (1998) in their study also investigated the most crucial obstacles in extension courses. They discovered ten main constraints for the implementation of extension courses such as lack of facilities for practical teaching, incompatibility of participants’ combination in terms of age, sex and career, lack of linkage

between instructors of the courses with research centers and so on. Moreover, they uncovered that AEIs lack various technical and general competencies. The first author et al (2005) in their recent research underlined the considerable positive effects of extension courses on farmers' job statuses and confirmed that these courses suffer from low level farmer motivation; lack of follow up and continuity of training programs for farmers, shortage of funds allocated to the courses, and inadequate attention paid to the demographic traits of farmers in designing extension courses.

There is very little information about the farmers' perception of the ideal and real characteristics of the extension courses and also AEIs. Many researches as the ones mentioned above have concentrated on only one part of that and not the whole. This study is a part of a bigger project that aims at designing a competency job profile for AEIs in Esfahan, Iran. Various respondents including farmers, experts, managers, and AEIs were involved to give valid answers to the research questions. Accordingly, the findings of this research are used to prepare for other related studies. In sum, through this research attention is being paid to the role of extension courses in learning process of farmers, the extent to which farmers are satisfied with extension courses and also competencies of AEIs who are presenting mentioned training programs. Also, farmers' favorite courses and their view about a competent AEI are queried. Recommendations are then presented to improve the effectiveness of extension courses and AEIs in the future.

Purpose and objectives

The main purpose of the current study is: Exploring farmers' view about the fruitfulness of extension courses, their motives for attendance in the courses and the competencies of agricultural extension instructors (AEI).

Following research questions are going to be addressed in this study:

1. What reasons have motivated farmers to attend the extension courses?
2. How appropriate was the most recent extension course the farmers attended?
3. What kinds of extension courses would farmers suggest to be presented in the future?
4. How competent was the agricultural extension instructor (AEI) whom the farmers met in the most recent extension course they attended?
5. What kinds of competencies do farmers think that a competent AEI should possess?

Methods and data sources

In this study interviews and a survey questionnaire were used for data collection. For the pilot study a closed questionnaire was prepared by conducting 27 explorative, semi-structured interviews with farmers in two townships of the province of Esfahan. Based on these results the questionnaire was developed. Subsequently, 102 farmers identified due to their participation in the extension training courses offered by AEO in the province of Esfahan during the year 2004. The numbers of farmers selected from each township varied based on the size of the township and farming population there. The reason for choosing farmers who had participated in extension courses was to focus on the view of farmers who have already received some training via the courses and therefore would be able to express their view about the characteristics and qualifications of those courses and also the AEI. Additionally, since the results of this research are supposed to provide support information for the main project (designing a competency profile for agricultural extension instructors), participant farmers could also provide trustworthy ideas about what is going on in extension courses. Obviously, the results of this study could not

be generalized to all farmers' population in the province of Esfahan due to the characteristics of the target group.

Another issue that was of noticeable importance in data collection was the great diversity of training programs which encompasses different agricultural contexts and deals with various fields. To overcome this problem, a select stratified sampling method was utilized to cover all different areas. The sample was composed of 102 farmers who had participated in agricultural extension training programs and were distributed in 17 townships of Esfahan, Iran. The interview process lasted two months from February till April 2005. The questionnaire included open and closed questions.

In designing the closed questions, a 5 point Likert-type scale was applied. Since the education level of the majority of the farmers was low, experienced experts were selected and taught to interview farmers. The questionnaires were completed during the personal interviews in the farmer's villages (via dropping by their farms or their homes). Inasmuch as farmers were usually busy with their farming activities at the months of interview, suitable times were appointed by getting help from rural council members in the villages. Each interview nearly lasted one to one and half hours. Upon interview, simplification and explanations were given by interviewers in order to prevent any misunderstanding on their part.

To test the validity of the questionnaire, 13 copies were provided and distributed among four professors and academic staff of the University of Wageningen and nine agricultural experts from Iran (the Ministry of Agriculture-Jihad and also Ministry of Research, Science and Technology) using email and personal contact. Also for assuring the reliability of the questionnaire, it was pilot-tested amongst a group of 22 farmers who were in similar conditions as the target population. Finally, based on the expert appraisal and pilot-test with farmers, the questionnaire was amended where necessary. The data was analyzed using SPSS software and applying descriptive statistical analysis. The structure and content of the questionnaire is as follows (number of questions for each topic is mentioned between brackets).

Demographic profile of respondents (8); agricultural and animal products produced in the farm (7); reasons for participating in extension courses presented in the village by the agricultural extension organization (AEO) (11); extent to which extension courses were relevance for real problems and difficulties in the farm (1); benefits, if any, gained from participation in most recent extension course (3); characteristics of the last extension course taken (11); topics for future extension courses (1); competence of AEIs involved (16); What makes a competent AEI (1).

Results

Analysis of personal traits of farmers displays that only 4% of farmers are uneducated; 39.6% are in primary school level; 21.8% are in secondary school level; about 30% of them have diploma from high school or have higher degree; 83% are male; 86% are married and nearly 60% of the farmers have more than 40 years of age. Also a considerable number of respondents (43.6 %) possess from 1 to 5 hectare lands under cultivation and 21.3% of farmers have bigger than 10 hectare lands. Additionally, around 80% of them have personal lands (irrigated or dry-land) but 79.8% of farmers have no dry-land under cultivation. In addition, the inter-relationship of farmers' personal traits were measured via using Kendal tau (KtC) test and showed that older farmers are mainly low educated (KtC= -.436**, Sig. = .000, N= 100); also, married farmers (men or women), are generally older (KtC=.454**, Sig. = .000, N= 100) and less educated (KtC= -.384**, Sig. = .000, N= 100) comparing single farmers. The vast majority of farmers

(87%) are involved in crop production and thereafter they produce mainly animal products (57%), fruits (48%) and vegetable (21%). The flower-growing sector is non-existent and there are negligible fishing (6%) and local handcrafts (3%) sections. These personal characteristics of the target group are very similar to the characteristics of the target populations in previous studies of the researcher et al in Iran (see: Karbasioun & Mulder, 2004; Karbasioun, Mirzaei & Mulder, 2005).

Table (1) illustrates a number of motives for farmer participation in the extension courses. Four most important motives were perceived by farmers as acquiring new knowledge (M= 3.5, sd= .74); acquiring skills and experiences (M= 3.4, sd= .82); personal interest (M= 3.1, sd= .85); becoming more familiar with other farmers and extension employees (M= 2.9, sd= .78). On the contrary, the reasons cited least were (Ranks= 9, 10 and 11) getting the certificate at the end of the course (M= 1.0, sd= 1.26); occupying free time and being amused (M=0.6, sd= 1.10); and the insistence of friends (M= 0.4, sd= .98). In other words, results show that the main motives for farmer participation are knowledge and skill acquisition, personal interest and socializing; whereas, other incentives such as receiving a certificate or spending free time are not crucial factors for their attendance. The ranks 5 to 8 ($1.7 \geq M \geq 1.4$ & $1.52 \geq sd \geq 1.16$) display that relevant motives somewhat influencing the decision to take part in the courses but they are not of significant importance.

Table 1. Distribution of the motives for farmers' attendance in extension courses according to their view.

Motives for participation in extension courses	N ¹	R ²	M ³	Sd ⁴
1. Acquiring new information	101	1	3.5	.74
2. Acquiring new skills and experiences	99	2	3.4	.82
3. Personal interest	101	3	3.1	.85
4. Becoming more socialise with other farmers and extension employees	100	4	2.9	.78
5. As a matter of curiosity	98	5	1.7	1.21
6. Extension agent' request	99	6	1.6	1.16
7. Due to a nice feeling of readiness and youthfulness via attendance at these courses	100	7	1.5	1.52
8. To get access to more facilities and services provided by extension centre after passing the course	99	8	1.4	1.24
9. For getting a certificate at the end of course	101	9	1.0	1.26
10. For filling the free times and being amused	101	10	.6	1.10
11. Friends' insisting	99	11	.4	.98

¹Total number of respondents out of 102

²Rank

³Mean: 0= nothing; 1= a little; 2= moderately; 3= very; 4= very

⁴Standard deviation

Farmers were asked about the rate of linkage between the courses and their real problems, as well as the appropriateness of delivering extension courses in general. Farmers stated both issues notably high. More than 84% of farmers believed that the courses they attended (235 courses up to the time if interview) were "very and very much" related to their actual difficulties on the farm. The average (M) of 3.15 (sd= .82) was found on the 5-pointscale

(1= not at all; 2= a little; 3= moderately; 4= very; 5= very much). In addition, more than 95% of farmers perceived the courses to be “good and excellent” in terms of the quality of implementation. Here the average (M) of 3.6 was measured (sd= 6.27) on the 4-pointscale (1=weak; 2= moderate; 3= good; 4= excellent). This question has been divided into 11 minor elements in table (2) and will be discussed later. These findings agree with previous studies (e.g. Arabzadeh, 1997; Dashti 1994; Karbasioun, Mirzaei & Mulder, 2005; Karbasioun, Mulder, 2005; Karbasioun, Chizari, 2004a, 2005; Keshavarz, 1994; Zamani & Talebianpour, 2001).

Table (2) indicates that in general farmers have assigned extension courses to be “moderate and good” ($3.2 \geq M \geq 1.7$ & $1.48 \geq sd \geq .58$). Thus, it can be inferred that they generally have a positive opinion about the different areas of these courses. They are pleased with the time of establishment (M= 3.2, sd= .70), applicability and feasibility of the contents of courses (M= 3.2, sd= .61), contact with staff members of the course (M= 3.1, sd= .63), location of the course (M= 3.0, sd= .64), and quality of the meals and entertainment during the course (M= 3.0, sd= .58).

Nevertheless, the aspects of the courses that could be improved were examination methods (M= 1.7, sd= 1.48), instructional technology and use of audio-visual instruments during the course (M= 2.0, sd= 1.15). According to these results, the farmers surveyed found that extension courses are helpful but they need to be re-designed in some aspects such as the examination methods and using instructional technology. Likewise, strategies for registering participants (Item 8, M= 2.6, sd= .74) and length of the courses (Item 9, M= 2.6, sd= .94) must be changed to some extent.

Table 2. Distribution of farmers’ view about the characteristics of most recent extension course that they took part.

Characteristic of the extension courses	N ¹	R ²	M ³	Sd ⁴
1. Suitability of the timing of the course	100	1	3.2	.70
2. Applicability and feasibility of the content of course in the real situation	98	1	3.2	.61
3. Contact with staff members of the course	98	2	3.1	.63
4. Course location (easy to access)	100	3	3.0	.64
5. Quality of the meals and entertainment during the course	99	3	3.0	.58
6. Quality of transportation to the class	97	4	2.8	.71
7. Appropriateness of learning environment (seating, light, ventilation etc)	98	4	2.8	.89
8. Equivalence of group of participants (in terms of age, sex, occupation and experience)	98	5	2.6	.74
9. Suitability of the course’ duration	100	5	2.6	.94
10. Quality of teaching facilities and materials such as audio-visual tools	99	6	2.0	1.15
11. Examination methods used during and at the end of the course	85	7	1.7	1.48

¹Total number of respondents out of 102

²Rank

³Mean: 0= very weak; 1= weak; 2= moderate; 3= good; 4= very good

⁴Standard deviation

Farmers were asked to highlight the type of extension courses they would like to be given by the Ministry of Agricultural-Jihad (MAJ) in the future. To do so, an open-ended question was embedded in the questionnaire and asked during the interview stage. Thereafter, the answers were coded and categorized. According to the results, farmers prefer to receive courses about

crop products (56%) and then using different inputs in the farm secondly (43%). They gave third and fourth preference to orchards, vegetables (34%) and animal production (29%) respectively. Other presented topics for extension courses are significantly less important according to the survey population. Irrigation methods (7%), healthy production of milk (3%) and packing of agricultural and animal products (1%) were cited as least preferable in terms of course content. The preferences mentioned outline by the farmers surveyed influence the type of trainer required, and possibly the AEI competence profile, as various technical requirements are essential for the disciplines highlighted above. Farmers mostly assessed extension instructors (AEI) to be “good or moderately good” ($2.3 \geq M \geq 3.3$) and they perceived that AEIs are generally acceptable in terms of carrying out their roles during the courses. It can be concluded that according to the survey population the AEIs whom farmers experienced have rather adequate level of the practical and technical knowledge and skills to provide a training course. The AEIs are capable of communicating the ideas in a comprehensible manner and listening to queries presented by the trainees. They seem sufficiently experienced in the subjects they teach, class management and communication skills (Ranks 1 to 3, $3.3 \geq M \geq 3.1$ & $.79 \geq sd \geq .57$). However the farmers expressed the least satisfaction with the evaluation skills (Rank= 7, $M= 2.6$, $sd= .86$); post-course follow-up (Rank= 8, $M= 2.4$, $sd= 1.01$); and the use of appropriate instructional methods during the courses (Rank= 9, $M= 2.3$, $sd= 1.19$). Therefore, in the experiences of these farmers the AEIs are adequate but there is room for improvement in a number of areas such as ways to encourage and stimulate farmers, examination methods, and post-course follow-up and instructional technology skills (see table 3).

Table 3. Distribution of farmers’ view about the AEI whom they met in the most recent extension course they attended.

Farmer Views about AEI whom they met in the most recent course	N¹	R²	M³	Sd⁴
1. Having up to date, practical information, knowledge and skills	98	1	3.3	.65
2. Capability of communicating clearly, comprehensibly and preferably in local farmers’ language	98	2	3.2	.71
3. On a whole being a successful trainer	91	2	3.2	.57
4. Listening effectively to the farmers’ questions and suggestions	98	2	3.2	.69
5. Being experienced in the subject that is taught	94	2	3.2	.79
6. Managing the class appropriately so that a good environment for learning is prepared	98	3	3.1	.56
7. Being able to establish a friendly and cordial communication with farmers	96	3	3.1	.70
8. Understanding farmers’ problems and expectations and the ability to put him/herself in farmers’ situation	98	4	3.0	.59
9. Being reliable, self-confident and respecting confidentiality	92	5	2.9	.53
10. Using diverse teaching methods during the course according to the farmers’ situation	94	5	2.9	.69
11. Making farmers aware of their capabilities and stimulating them to use those capabilities	95	5	2.9	.87
12. Assuring farmers’ satisfaction of teaching program	96	6	2.8	.66
13. Making farmers enthusiastic and motivated to follow the course until	96	6	2.8	.80

the end willingly				
14. Being able to continuously evaluate him/her work and also farmers' improvement and performance	92	7	2.6	.86
15. Following up the training programs to make sure that new information and skills are used practically by farmers	94	8	2.4	1.01
16. Using instructional (audio-visual) instruments in effective way	97	9	2.3	1.19

¹Total number of respondents out of 102

²Rank

³Mean: 0= very weak; 1= weak; 2= moderate; 3= good; 4= very good

⁴Standard deviation

In relation to the previous question, farmers were asked to enumerate and describe the traits of a competent AEI via an open-ended question. The results were coded, classified in different categories and listed in table (4). The intention of designing this open question was to give the farmers the opportunity to explain their answers freely. However, a great number of respondents believe that a competent AEI should be knowledgeable and have up-date information (42%) and be experienced (42%). A smaller percentage of them indicated that AEIs should behave in an appropriate manner (27%), be competent in applying teaching methods (23%), be familiar with farmers' culture and language (20%) and finally be aware of farmers' actual problems (23%).

The items are indicators of the farmers' impressions about competencies of the AEIs in general therefore the categories are not the same as those used in table 3.

Table 4. Distribution of farmers' preference about the characteristics of a competent AEI (agricultural extension instructor).

The proposed characteristics of a competent AEI	Frequency ¹	Percent ²
1. Knowledgeable in his/her field of training	43	42
2. Experienced in his/her field of training	43	42
3. behave appropriately	28	27
4. Capable of using teaching methods appropriate to the farmer's needs	24	23
5. Being familiar with farmers' culture and local language	21	20
6. Being aware of farmers' real problems and difficulties	17	16
7. Being able to use instructional technology that fits with farmer's requirements	7	7
8. Willingness to teach farmers	5	5
9. Being interested in agriculture in general	2	2
10. No response	24	23
Total	214	207

^{1&2}: total number (percents) of farmers is 102(100) but the sum up of the frequencies (percents) is 214 (207) and this is due to the fact that the majority of farmers have proposed more than one characteristic for a good AEI.

Conclusion

The farmers in this study are mainly low educated, married, and elderly, smallholder (owners of less than 5 hectare irrigated land and no dry land) and personal owners. These findings support previous studies of the researcher et al (Karbasioun, Mirzaei & Mulder, 2005;

Karbasioun, Mulder, 2004; Karbasioun, Chizari, 1998, 2004b). The 4% illiteracy level of the survey population can be attributed to the fact that they have all participated in extension courses and as a rule for taking part in these courses, participants are asked to have a basic education level; although this rule is neglected occasionally because of the shortage of the number of farmers who were available and willing to participate in training programs. The main motives for farmers' attendance in extension courses are knowledge and skills acquisition, personal interest and socializing with other farmers and extension personnel; whereas some other incentives such as getting a certificate or occupying spare times are not decisive factors for them to take part in the courses. This could account for the number of participants rapidly decreasing by the end of some unqualified courses as indicated by some farmers in the pilot study (Karbasioun, Mulder, 2004) and farmers simply ignore the courses that do not satisfactorily provide them with useful information and have no perceived added value for them.

Farmers basically feel that extension courses are helpful but they underline that the courses need to be re-designed in some aspects such as duration of the course, examination methods and accessibility of instructional technology. Strategies for registering participants and length of the courses need to be changed to some extent. Farmers commented during interviews that there is no examination at the end of the course or that extant examinations are only theoretical therefore not very useful to them. Also many farmers accentuated the fact that duration of the courses is too short to be effective and should be prolonged if they are to actually provide the type of training they claim.

The target group prefers to receive courses firstly about crop production and then courses to help them to using the various inputs in the farm. Their third and fourth priorities lean towards orchards, vegetables and animal production courses respectively. This preference may indicate the fact that farmers perceive many obstacles with their primary product and attach a secondary importance to courses pertaining to their other product outputs. They do not feel that agricultural machinery, irrigation methods and packaging of their products are of notable importance. This might be due to financial limitations to provide the relevant technologies and tools that are essential in the first place. Another inference would be that farmers are not adequately aware of the extent of the positive effects of the aforementioned courses to their farm-work and income.

The farmers under consideration in this research found that AEIs are adequately qualified but they need to be empowered in some aspects such as motivational skills, implementing examination methods, following up the lessons and using instructional technology. These findings are in line with previous studies (e.g. Chizari and Karbasioun, 1998; Karbasioun, Mulder, 2004). Farmers expect AEIs to be more sensitive towards the real problems they face and to tailor the course content accordingly. Simply participation in these short-term courses is not enough to enable them to apply the knowledge gained. As such, they expect the AEIs to provide a more practical teaching approach that includes a proper follow up and appropriate evaluation method. Respondents believe that a competent AEI should be well-informed (having up-date knowledge), experienced, competent in applying the most relevant and up to date teaching methods, familiar with farming culture and language and, finally, be aware of the problems farmers actually face.

Recommendations

- Low level of education and old age are two crucial traits of the majority of farmers in Iran as well as in this study. Since, these two specifications are rather serious barriers for farmers to develop their situations, it is excessively important that policy makers address

them in the future. Considering the fruitfulness of extension training programs, these courses should be extended and delivered more frequently to cover as many farmer requirements as possible. As a result, changes must be made in terms of the duration of the courses, the combination of participants, and the evaluation methods used. More funds are needed to provide better instruction facilities and to support farmers' learning process.

- Farmers in this study stressed that they are motivated to participate by real incentives as well as knowledge and skill acquisition and the social aspects of participation. Therefore attention must be paid to ways of enriching the current extension programs and more specifically the extension courses. The courses must include more concrete plans to address the inherent difficulties and interests of farmers and to encourage them to attend. Likewise, it is suggested that more comprehensive information about the title, importance and contents of the courses be given to farmers before starting the course to create a greater level of participation. Furthermore, it is proposed that the courses are integrated with some other practical programs such as field trips and workshops to enhance the practicality and attractiveness of the courses for participants.
- With respect to the view the farmers hold regarding the AEIs, the more successful extension instructors should be invited for future courses. Rewards must be assigned to those AEIs who have been able to fulfill the major objectives of the course and have provided a remarkable added value for farmers. Additionally, a continuous pre-service and in-service program for developing following up skills, motivational skills, examination skills and AEI's competency in using instructional technology is strongly recommended.

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