

Role of community agricultural extension agents of Dir area support project in the development of agriculture sector

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ABSTRACT

This study attempts to assess the role of Community Agricultural Extension Agents (CAEAs') working with Dir Area Support Project (DASP) in the development of agriculture sector of the region. DASP provides two weeks training to the CAEAs to increase their knowledge and maximum utilization of the available potential in agricultural development. Eighty eight (88) extension agents of the DASP were randomly selected as a sample size from a total population of 494. The data were collected through interview schedules and analyzed by using SPSS package. Results of the study revealed that majority of these extension agents were young with an educational background of just matriculation. Awareness about the improved agricultural components was created during the training programs. Short duration of the training and unavailability of farm inputs were the main constraints faced by these CAEAs' in achieving the desirable objectives. Improvement could be brought by increasing the number of CAEAs' along with increasing duration of the training and provision of essential farm inputs.

KEYWORDS: Agricultural Extension; Community Agents; Dir Area Support Project; Farm Inputs; Training Programs.

1 INTRODUCTION

The diffusion of any innovation among the farming community is predominantly dependent on the performance of extension service agents, who not only act as carriers of improved technology from research to the farmers but also communicate their immediate problems with agricultural research. Thus the role of extension agents is to act as a bridge between the research and farming community [1]. Moreover, a smooth agricultural and rural development process demands for adequate participation of farmers in different agricultural support services. Such support services generally comprise of agricultural credit, agricultural marketing, and agricultural extension. The government is keen to provide these services to the farmers. Besides, private sector organizations also play a pivotal role in providing support services to the farmers. The ultimate goal thereby is to increase productivity and improve the living conditions of the farmers through increased income from agriculture sector. In this regard, in Khyber Pakhtunkhwa (KP) province of Pakistan the extension services are the domain of the public sector. Besides, some NGOs' commercial companies, mass media, organizations and farmers' groups are also providing these services [2]. The province is home to more than 20 million people, out of which 83%

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reside in rural areas in a meager situation under tremendous pressures on natural resources. The major crops of the province include wheat, rice, maize, barley, tobacco, sugarcane, rape, mustard, groundnut, pulses, vegetables and fruits [3]. Increasing agricultural production has been one of the major goals of all regimes. Dir Area Support Project (DASP) is one of the initiatives in this connection which basically is a multi sector project working in seven different tehsils of two districts (Dir Upper and Dir Lower) of the province. The overall aim is to alleviate poverty in the area through agriculture and rural development based on community participation. The target group of the project is the population of the area living below poverty line including poor small farmers, landless and rural women. The project is funded by the International Fund for Agricultural Development IFAD which contributes 65% and government of KP sharing 35% with the total project cost of 25.4 million US\$. The duration of the project was 1997-2006. The project is intrusting with the community through village level organizations and has established 607 Village Organizations (VOs) and 207 Women Organizations (WOs) in the existing Government Departments such as Agriculture Extension, On Farm Water Management, Soil Conservation, Livestock and Dairy Development, Forest and Works & Services Department. These departments are mandated to provide technical assistance in the execution of the activities identified by the VOs and WOs [4].

DASP provides two weeks training to the CAEAs in the project area. The main objective of this training is to enable the CAEAs to the maximum utilization of available potential for more production in agriculture. The main focus of these CAEAs is to inform the farming community about agriculture and its importance in national development. They create awareness about different types of fertilizers and their appropriate use along with the application of insecticides, pesticides, weedicides and herbicides. For biological control, they show slides and charts, as these control agents reduce the cost of chemicals and also control environmental pollution.

The purpose of this study was to explore the existing farming system of the project area, techniques and services provided to farmers for the agricultural development of the region by DASP and the role of CAEAs in the development of agricultural practices of the target community. The significance of the study was to analyze the performance of the CAEAs working with DASP in bringing about the change in the socio-economic conditions of the sample population and to make the people aware of the process of agricultural development.

2.METHODOLOGY

The present study was conducted in district Dir lower, of KP province of Pakistan. From the whole district two organizational units i.e., Timergara and Samar Bagh were selected purposely because of favorable agro-ecological conditions and high number of CAEAs in these two organizational units. The total number of CAEAs in these two units was 494 (267 in Timergara and 227 in Samar Bagh) which has been considered as the total population of the study. The results would have been surely more accurate, if data were collected from the whole population. However, using simple random sampling technique and keeping in view the time constraints, availability of the respondents and nature of the study, 18% of population were taken as the sample from both organizational units for the study therefore, the actual sample size reached to 88 respondents, i.e., 48 respondents (18% out of 267 CAEAs population) from Timergara and 40 respondents (18% of 227 CAEAs population) from Samar Bagh were selected for interview schedule with the assumption to represent the whole of population. A comprehensive interview schedule was designed in the light of the given objectives and on the basis of personal observations and literature review to collect the required data. Data were collected through face-to-face meetings of CAEAs using interview schedules. Before actual data collection, interview schedule was pre-tested and modified in the light of the feedback received from the respondents. During filling the interview schedule, efforts were made to explain the questions and their purpose, so that correct and reliable information could be gathered. The collected data were fed and interpreted to the computer through SPSS package. Keeping in view the requirements of the study, descriptive statistical techniques like averages, frequencies, their comparison and percentages were analyzed using SPSS package.

3. RESULTS AND DISCUSSION

The main purpose of the study was to determine the role of CAEAs in agriculture development in lower Dir district of the DASP. The effectiveness of the training program conducted by DASP for CAEAs was also evaluated. For this purpose an effort was made to tabulate, analyze, discuss and interpret the data pertaining to the effectiveness of the training programs. Age is an important factor, which plays a vital role in the achievement of various targets. These targets directly affect the status of the respondents. Age of the respondents is presented in figure1 which reveals that the most (75%) of the respondents were aged from 16-25 years, followed by (21.6%) respondents from 26-35 years and only (3.4%) were above 35 years. Such results imply that compared with the extension agents of the government sector who are usually well above 25 years old and professionally experienced the agents used by DASP are quite young and inexperienced. In a recent study conducted by [5] in which they field surveyed total of 111 agricultural extension agents most of whom (47) were ranged in 46-55 years in comparison with only a frequency of 14 ranging from 25-35.

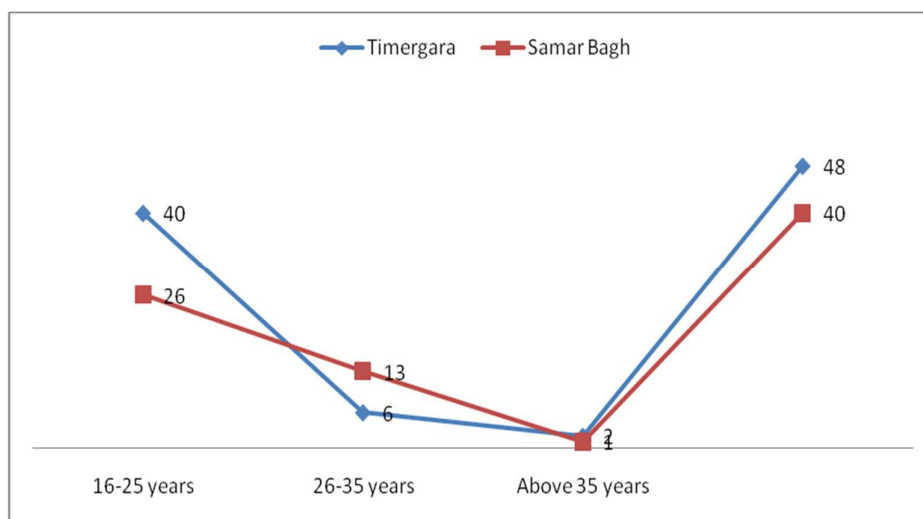


Figure 1 Age group of the respondents

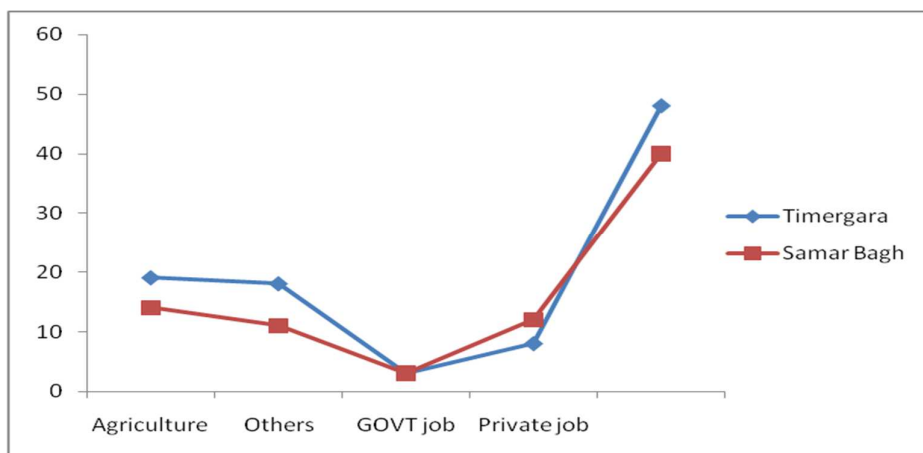


Figure 2 Source of income of CAEAs

Agricultural development implies shift from traditional to new science based methods of production via a variety of tools. The foremost role of extension agents is to inform, teach and work with people involved in farming through workshops, seminars and other community events to benefit them effectively [8]. In this regard, DASP provides training on different aspects of agriculture to the CAEAs in the project area like vegetable production, agronomic crop husbandry, fertilizer use, orchard management and integrated pest management. The main focus of these trainings is to enable the farming community so that they can exploit maximum utilization of available potential for more production in agriculture. Figure 3 shows that majority of the respondents (33%) used training as a medium/tool for agricultural extension services to farming community. Some respondents 17% and 20.5% were using field days and workshops respectively, for agricultural extension services to farming community of the project area. In addition, 22.7% of respondents used other tools like personal meetings and discussions while 6.8% of them were of the opinion that all the given services were used to improve agricultural production in the project area. These results were in contrast with [9], who collected data from 300 farmers at farm level and found that demonstration is extremely useful tool for extension agents working in agricultural development of the community.

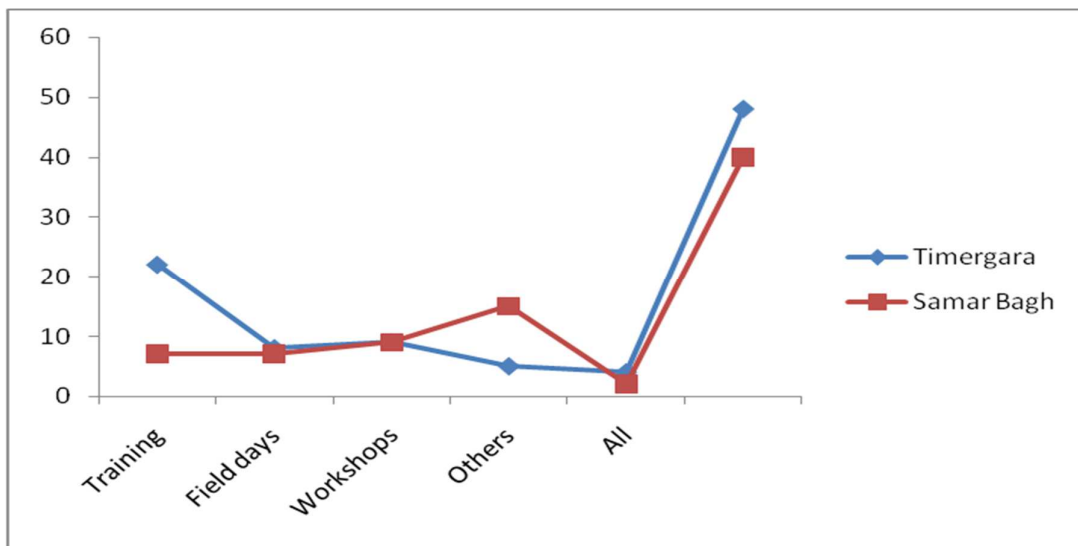


Figure 3 Agricultural extension services provided by CAEAs

The diffusion of technology has remained a powerful tool for changing the economic status of generations [10]. Figure 4 indicates that 11.4% respondents stated that vegetable is focused by DASP in training and 9.1% claimed that agronomic crop husbandry was mainly focused in the training. Majority of the respondents 53.4% stated that all components (vegetables, agronomic crop husbandry, fertilizer usage, orchard management and integrated pest management) were focused while 25% respondents said that vegetable, agronomic crop husbandry and fertilizer use were fully discussed in training by CAEAs.

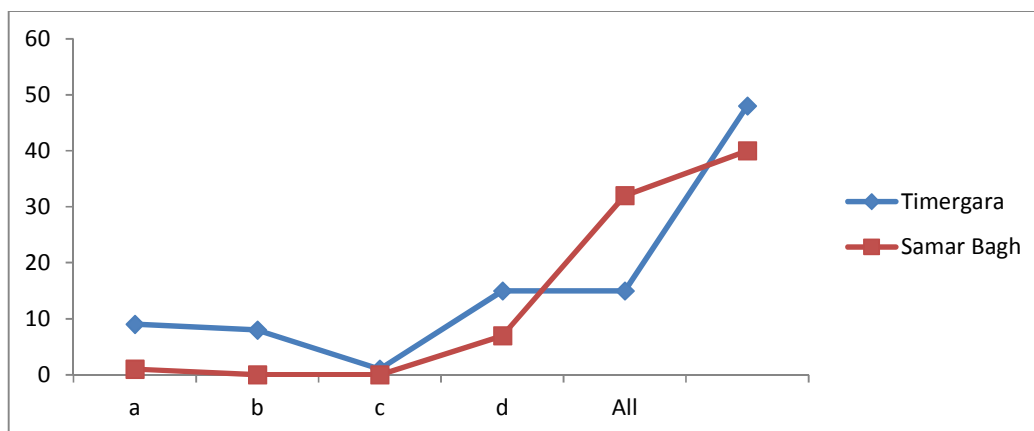


Figure 4 Main agricultural components focused by DASP

^avegetable production ^bagronomic crop husbandry ^cfertilizer use ^d vegetable, agronomic crop husbandry and fertilizer use

[11] determined the framework outlining farmers' demand for information, the public goods character of extension services and the organizational and political attributes affecting the performance of extension systems. Land preparation and sowing time are the most important factors affecting growth, quality and yield of the crops. Similarly, good quality seed, timely irrigation and proper fertilizer can improve productivity. Figure 5 explains that 35.2% of the respondents pointed out that good quality seeds, time of sowing and proper irrigation are main components which are focused in CAEAs training while 34.1% respondents indicated that preparation of land, seed quality and balance use of fertilizer are the main components in agronomic crop husbandry in trainings of CAEAs, 9.1% of the respondents viewed that either seed quality, proper fertilizer or sowing time and proper fertilizer are main components of agronomic crop husbandry focused in CAEAs trainings.

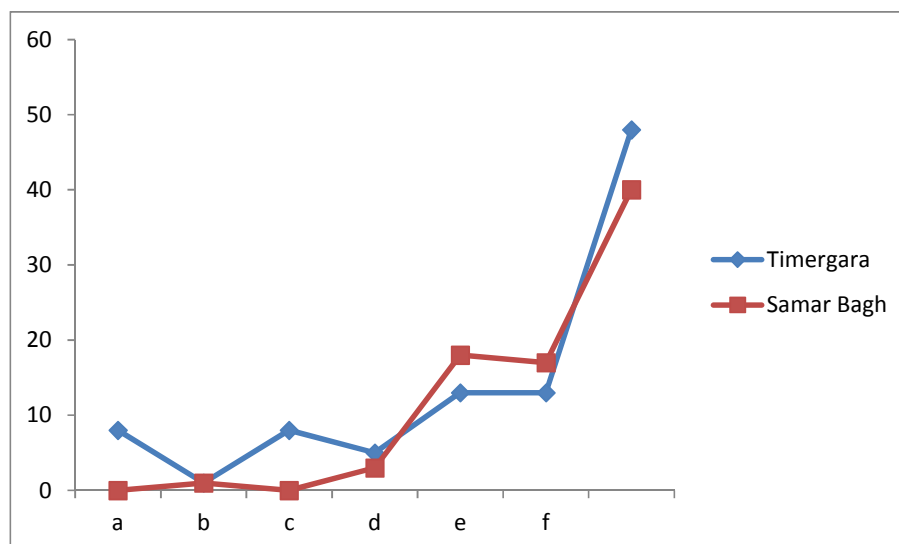


Figure 5 Distribution of respondents regarding agronomic crop husbandry

^aseed quality ^bsowing time ^cproper fertilizer use ^dsowing time & proper fertilizer ^e seed quality, sowing time and irrigation ^f land preparation, good seed and fertilizer.

In Pakistan, like any other country the farmers are exposed to the menace of attacking insects, pests and diseases on crops and reduced crop productivity [12]. Thus, there is an immense need for the implementation of integrated pest management (IPM) which is vital for agricultural sustainability [13] and [14]. It was reported by [15] that the use of natural enemies for insect pest population is receiving greater attention recently and are comparatively more beneficial as compared to the use of insecticides. Figure 6 shows that 25% of respondents used proper chemicals/fertilizer in integrated pest management, 11.4% respondents reported that hand weeding was important in IPM, 17% respondents said that both hand weeding & proper use of chemicals were used in IPM, 14.18% of the respondents emphasized that first of all biological control method should be applied and chemical or spray of pesticides is the last weapon for IPM, 12.5% respondents suggested that protection from insects and proper use of chemicals is the best tool of IPM while 11.4% of the respondents were agreed with hand weeding and use of surf, soda and oil etc in IPM program.

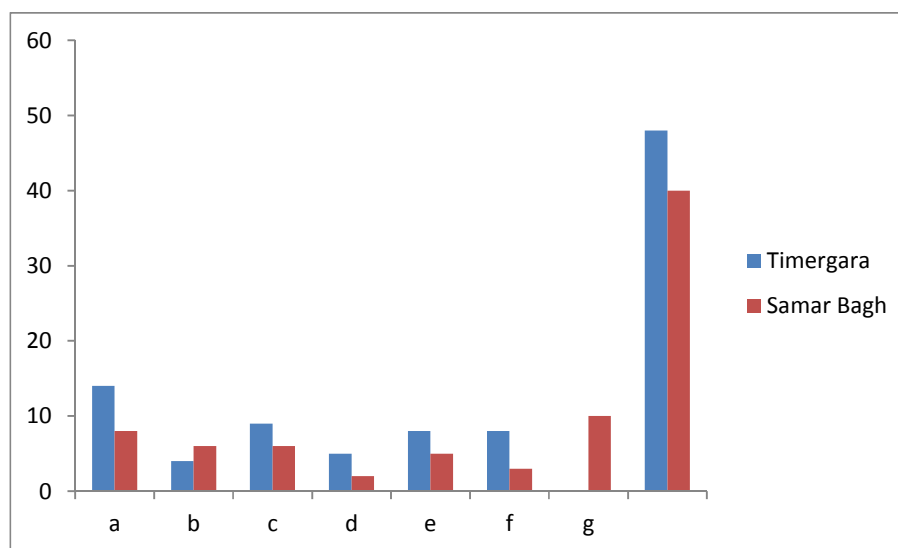


Figure 6 Distribution of main components by CAEAs regarding IPM

^achemical/fertilizer proper use ^b hand weeding ^c chemical fertilizer proper use and weeding ^d proper fertilizer and time of application ^e biological control and last option is pesticides ^f chemical fertilizer proper use and insect protection ^g weeding and use of surf, soda and oil etc.

Provision of farm inputs

Agricultural farm inputs are the major requirements for high production. It becomes more important when the land for the crop production is limited to win the confidence of the farmers, towards the desired results for high crop yield, the in time supply of inputs always be a possessive step. To improve the farm productivity, is also an objective of DASP. In this regards the CAEAs serves as a bridge between the farming community and the DASP for the supply of agricultural inputs. Research studies indicate that availability of inputs increase the yield [9] and [10]. DASP does not provide any farm inputs like certified seeds, fertilizers, insecticides and pesticides, 88.6% respondents reported that there is no availability of farm inputs to CAEAs in training duration, but 2.3% and 1.1% respondents got insecticides, pesticides and fertilizer respectively while 8% satisfied with the provision of certified seeds.

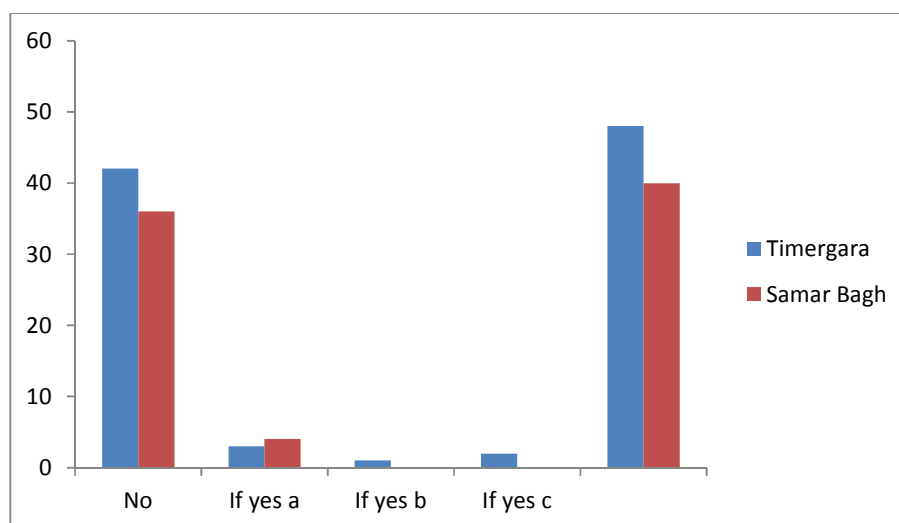


Figure 7 Distribution of farm inputs provided by DASP

^acertified seeds ^b fertilizer ^c insecticides/pesticides

[18] pointed out that the foremost obstacles in extension work are that these extension programs and agricultural policies are mostly formulated without due consideration of the farmer's opinion along with poor coordination between research and extension. Figure 8 shows that 25% respondents did not face any problem in the training program of DASP, 21.6% respondents were disappointed from two weeks training duration of DASP being less than their requirement, 38.6% respondents interested in financial support from the project. Different research indicates that provision of basic infrastructure along with good sitting arrangement increase the learning process [17]. Minority (1.1%) respondents were facing problems of poor communication while 11.4% respondents faced other problems like transportation, training method, place of training or infrastructure etc. This study further reveals that the number of extension worker is insufficient and some of them are involved in different activities which are not related to their normal duties.

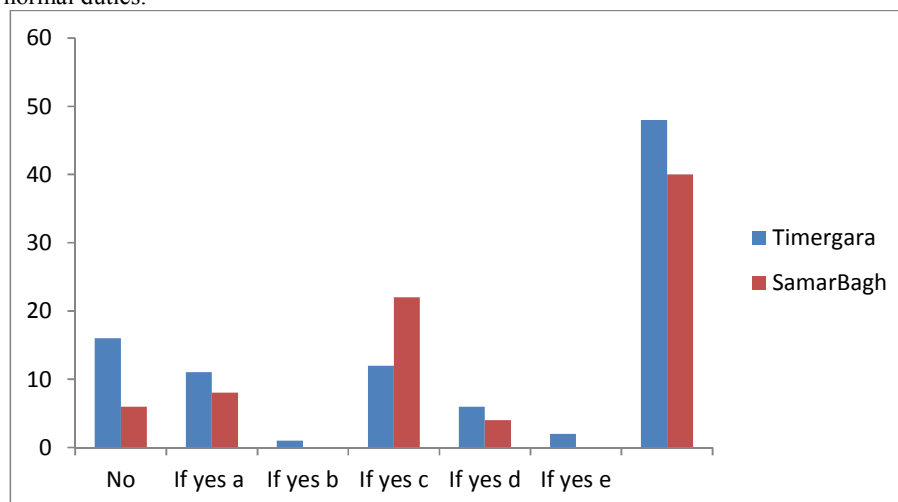


Figure 8 Distribution of main problems faced during training of CAEAs

^ainsufficient training ^b poor communication ^c financial support ^d other ^e insufficient duration and financial problem

Respondents were also asked to give suggestions as a room of improvement for further help in better designing of trainings. Data collected were recorded and their suggestions compiled in figure 9 draws the picture of respondent's suggestions. Figure 9 reveals that 17% of CAEAs want to improve the duration of training to one month, 15.9% of the respondents suggested that increase in the duration and more practical work should be included in the training, 14.8% respondents proposed financial support to CAEAs. Majority of the respondents 28.4% pointed out that increase in training duration and financial support to farming communities are necessary for project's success, while some respondents were of the view that increase in number of CAEAs with increase in training duration are important. Information of local farmers from training and continue training will also improve the project, said some of the respondents. These results were in conformity with [2], who reported that better education and proper training is necessary for an agent to change the behaviors of traditional farmers towards modern agriculture. [19] also documented that through trained Extension Agents new agricultural technology can easily and favorably be transferred to clientele. Furthermore, in traditional extension system the extension agents' educational level, communicative skills and training capacity was not enough to perform the required task [2]. Thus stronger linkages must be developed between agriculture extension agents and researchers in order to know the latest development in the field of agriculture and conduct/design research on the basis of farmer's problems [20].

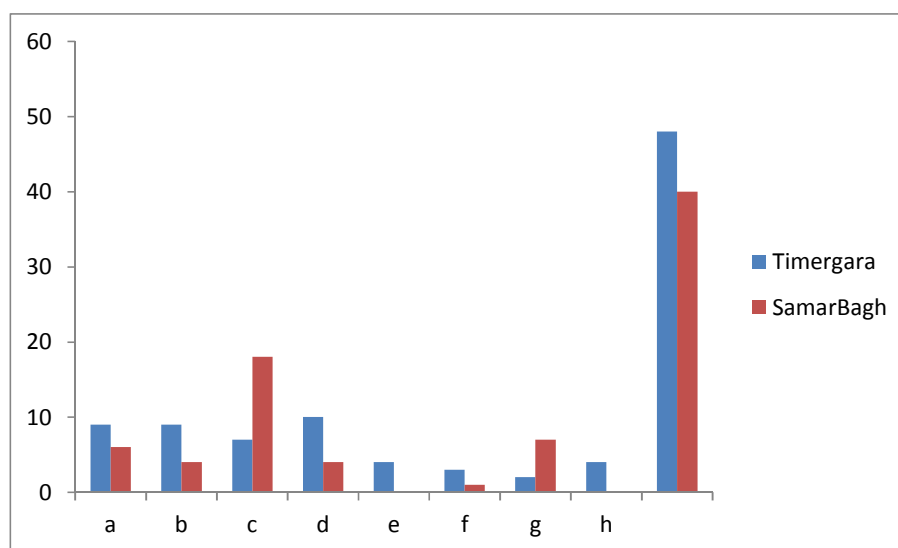


Figure 9 distribution of measure suggest regarding further improvement

^aincrease training duration ^b financial support ^c increase and financial support ^d increase duration and practical work ^e inform people from training ^f more arrangement of training and workshops ^g increase duration and number of CAEAs ^h continuous training

4. Conclusion.

The aim of DASP is to reduce poverty by striving for the improvement of the living standards of the farmers in the target area. Most of CAEAs are quite young and educated whose source of income is mainly dependent agricultural activities. However the major constraint as has been also highlighted by this study is the lack of inputs availability not only for the farmers but also for these CAEAs themselves. It seems logical to conclude that in order to achieve its desirable objectives and enhance the capability and performance of CAEAs, DASP should provide agricultural farm inputs during training. In addition, inclusion and exposure of practical skills regarding agronomic crop husbandry and integrated pest management practices in training will help the cause. For creating more awareness about modern

agriculture the number of CAEAs should be increased plus the existing agents should be motivated to transfer their acquired knowledge and skill to their fellow farmers.

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