EFFECTIVENESS OF FOUNDATION COURSE TRAINING CONDUCTED BY THE STAFF TRAINING UNIT

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BY

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CERTIFICATE

This is to certify that the thesis entitled "EFFECTIVENESS OF FOUNDATION COURSE TRAINING CONDUCTED BY THE STAFF TRAINING UNIT" Submitted by Ms. ROOPA U. NATAGALL, for the degree of MASTER OF HOME SCIENCE in EXTENSION AND COMMUNICATION MANAGEMENT to the University of Agricultural Sciences, Dharwad is a record of research work done by her during the period of her study in this university under my guidance and the thesis has not previously formed the basis for the award of any degree, diploma, association, fellowship or other similar titles.

DHARWAD **(SHOBHA NAGNUR)**
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DHARWAD
JUNE, 2016 (***ROOPA U NATAGALL***)

CONTENTS

Contd…..

LIST OF TABLES

LIST OF FIGURES

LIST OF PLATES

LIST OF APPENDICES

1. INTRODUCTION

Over the years, agricultural technology has changed rapidly. As a result of research, new ideas and developments are taking place continuously. The dynamic environment and fast changing technology has resulted in shrinking the cycles of learning, applying and relearning. These changes have brought in the necessity for change and improvement in competencies of people in all walks of life. Globalization, liberalization and market-oriented economy have also added a new dimension. Similarly in agriculture, the standards of professional efficiency and competency are constantly rising due to explosion of technology.

In view of the changing scenario, the extension personnel require latest knowledge and skill for educating and training the farmers. Agricultural development today calls for well trained extension personnel who can keep pace with changes. The extension personnel are a vital link between research, organization and farmers. Extension personnel need to update their knowledge and skills continuously so as to effectively serve the clientele. Therefore, the extension service must provide reasonable and regular training opportunity for extension personnel. More and more specialized and flexible training programmes need to be organized by concerned institutions for extension personnel to face the emerging problems and challenges. State Agricultural Universities, Central and other regional institutes have the responsibility of organizing training programmes for extension personnel. (Anonymous, 2003).

Training is the process of improving knowledge, skill and changing attitude of an individual for doing a specific job. As the situation changes people also need to acquire the new knowledge, skill and attitude to cope with changing environment. Therefore, training has continued to be the most important device for developing individuals work efficiency.

Training is an intensive learning activity for a group of selected officials assisted by competent trainers to understand and practice the skills required in adoption of new agriculture technologies at a place where appropriate facility exist and the duration considered suitable by the officials. There are several types of training programmes conducted by different training institutions. The institutional training refers to the training given to participants by the trainers at the institutions such as, Staff Training Unit (STU), Farmers Training Centers (FTC), Krishi Vigyan Kendra (KVKs) of Governments and NGOs. (Singh, 2000).

Training is an important and effective tool for capacity building and for assisting policy makers, government officials, development project personnel, extension experts and agriculturists in the realization of their programme objectives and plans. Often, we are faced with the need to change something or to implement new ways of doing something. Training allows us to orient those who will be involved in and / or affected by the change. Also we may need to provide people with new knowledge or new skills that are necessary to implement a change through training as a potential solution. Training is often an underestimated activity and sometimes experts think that all they must do is communicate to others and change will occur. Development personnel sometimes think they can just hire a technical or subject matter experts to conduct a workshop or a training session. Training however is not that simple. Training is a complex activity and must be carefully planned and implemented.

The design and preparation of training programme is a major activity that usually consumes more time and energy than the process of training.

Curriculum development is an important aspect of training and when taken up systematically, can make training process more effective. For the trainer, a course description and lesson plans can provide a road map for implementing training. This road map will help in keeping the training on course and preventing problems.

The training and development programmes used by organizations may have an effect, direct or indirect on employee motivation, performance, job satisfaction, career development and organizational commitment. It is necessary for the organization to restructure and reinforce the human assets to adapt itself to changes. The training effectiveness is dependent of two considerations, (1) Trainers are fully responsible for training and if the employees do not show results, the trainer should be held accountable. (2) Training effectiveness depends on the kind of atmosphere and culture that is prevalent back at home.

Effectiveness of training

Training is effective only if it produces desired results. When the organization is executing a training programme, there should be an ideal evaluation scheme, to measure the effectiveness of training. Training evaluation is carried out by participant's feedback regarding effectiveness of training programmes. Participant's reaction to the training can be extremely useful in predicting performance after the programme. Training evaluation questions on the importance and relevance of the training to the job have been shown to have a correlation to actual use of skills and knowledge learned on the job.

Mani (1996) says that after liberalization, there is much emphasis on training programmes in Indian organization and suggests the following steps to maximize the effectiveness of training.

Training need identification – Employee must get the training in the area where he needs.

Pre-training activities – Every superior is expected to explain to his subordinate the rationale for nominating him for training.

Planning and organizing the programme- Factors such as location and venue and duration are significant.

The training module must be discussed with either internal or external faculty to suit the participants.

Feedback on faculty- The feedback forms must be got filled from the participants.

Evaluation literally means the assessment of value or worth. It would simply mean the act of judging whether or not the activity to be evaluated is worthwhile in terms of set criteria. Evaluation of training is undertaken for several purposes. Generally they fall into two categories:

(i) To improve the process

(ii) To decide whether or not to continue it.

Philips (1990) gives following reasons for evaluation.

- To determine whether a programme is accomplishing its objective.
- To identify strength and weakness in Human Resource Development (HRD) processes.
- To determine cost/benefit ratio of HRD programmes.

- To decide who should participate in the future programmes.
- To reinforce major points made to participant.
- To identify which participants benefitted the most or the least from the programme
- To gather data to assist in marketing future programmes.

Staff Training Unit

The Staff Training Unit (STU) at UAS, Dharwad was started in 1992 with a view to promote professional competency among the staff of various organizations within and outside the state of Karnataka. The STU is organizing institutional training courses; field oriented training programmes for various personnel of private, government and quasi-government organizations.

The mandates of STU are

- To identify areas where training is needed
- To develop appropriate training programmes in terms of contents, methodology and duration.
- To conduct the training programmes with the help of course directors and trainers.
- To co-ordinate between sponsoring agencies and the University.
- To monitor the effectiveness and redesign the training programmes.

The activities of STU are

- Organizing refresher training programmes for the staff of developmental departments, such as Department of Agriculture, Horticulture, NGO's, Banks and other organizations.
- Organizing off-campus training programmes for the teachers of various colleges and field extension workers.
- Organizing national level model training courses.

The Staff Training Unit has been conducting training since 1992, on various subjects like, agriculture production, capacity building, administration, programme management, Information and Communication Technology (ICTs), foundation course, soil-water conservation technologies, market led extension, integrated farming systems, animal husbandry etc. for concerned officers, mid and field level functionaries. The agriculture minister of Karnataka state, Krishna Bhyregowda personally felt that there was a need to train the staff of the Karnataka State Department of Agriculture to update them with recent technologies developed by the agriculture scientists.

1.1 Number of trainings organized from 2010 – 2015 under STU

Year	Number of training courses	Number of participants
2010 – 2011	19 (13.57)*	310 (10.23)
2011 – 2012	38 (27.14)	712 (23.49)
2012 – 2013	41 (29.28)	791 (26.10)
2013 – 2014	30 (21.42)	848 (27.98)
2014 - 2015	12 (8.57)	369 (12.17)
Total	140 (100.0)	3,030 (100.0)

*Number in parenthesis indicates percentage (Source: STU, UAS, Dharwad secondary data)

This table shows the trainings organized by STU from the period 2010 – 2015. Over a period of five years 140 courses were conducted and 3,030 trainees participated in the same. When observed year wise the maximum (29.28 %) training courses were conducted during the year 2012-13 followed by 27.14 per cent during 2011-12 and 21.42 per cent during 2013-14. About 14 per cent of training courses were conducted during 2010-11 and only a few trainings (8.57 %) were conducted during the 2014-15.

It was observed from the table that out of 3,030 trainees 27.98 per cent participated in the training programmes during the year 2013-14 followed by 26.10 per cent during 2012-13 and 23.49 per cent during 2011-12. Between 10-12 per cent of trainees each participated in training programme during the year 2010-11 and 2014-15 respectively.

With this in view the KSDA during the 2013 – 2014 deputed all the Agricultural Officers and Assistant Directorate of Agriculture (ADAs) to receive one week “Foundation Course Training” at the Agricultural Universities. Accordingly the technical staffs of department of agriculture of the districts under the jurisdictions of UAS Dharwad were deputed to Staff Training Unit Directorate of Extension UAS Dharwad.

The following were the specific objectives of the foundation course.

- To sensitize the staff of the State Department of Agriculture regarding the objectives and vision of the department.
- To enable them to identify the agricultural problems and provide solutions.
- To impart knowledge about sustainable agriculture by efficient management of natural resources like soil and water management.
- To train them in the use of appropriate extension method for transfer of technologies.
- To update their knowledge about improved technologies for transferring to farmers to increase production and productivity.

With this back ground the present study entitled “Effectiveness of Foundation Course Training Conducted by Staff Training Unit, UAS, Dharwad” has been undertaken. The following were the specific objectives of the study.

1. To analyze the training programmes organized by the Staff Training Unit.
2. To measure the satisfaction levels of the trainees with regard to the foundation course.
3. To study the effectiveness of training programmes in terms knowledge level and improvement in job performance of the trainees.

Scope of the study

An analysis of trainings conducted by STU and the influence of the trainings on the trainee’s has not been hitherto studied since its inception. The findings of the study will help the UAS to introspect and rethink as to whether the STU has been able to fulfill the purpose with which it was set up. The study will help to consider ways to cater to the requirement of the trainees and plan trainings in future so as to meet the needs of the trainees.

Limitations of the study

Since the study was undertaken as a part of the requirements for the master's degree programme of the researcher, the concept could not be explored in greater depth, and in a more comprehensive manner due to constraints of time and resources. The researcher also feels that since the investigation was completely based on the expressed opinions of the subjects holding formal positions in the organization, their opinion may not be free from personal bias, though every care has been taken to avoid this and make the study as objective as possible.

2. REVIEW OF LITERATURE

A comprehensive review of literature is an integral part of any investigation, as it not only gives an idea on the work done in the past and assists in delineation of problem area and also provides basis for integration and discussion of findings. It forms the basis for interpretation of findings and provides the basic theoretical framework. An attempt has been made here to review the relevant available literature having a direct and indirect bearing on the present investigation. It is to make special point to note that this study has been a new effort as far as evaluating Staff Training Unit under University of Agricultural Sciences, Dharwad. Literature reviewed is presented under different headings in accordance with the objectives of the study.

2.1 Analysis of training programmes organized by training centers

2.2 Personal and socio-psychological characteristics of trained personnel

2.3 Studies on knowledge level of concerned subject

2.4 Studies on satisfaction of training programme

2.5 Level of job performance

2.6 Relationship between job performance and independent variables

2.7 Relationship between knowledge and independent variables

2.1 Analysis of training programmes organized by training centers

Natikar and Devendrappa (2007) evaluated the training programmes organized by the Staff Training Unit of UAS, Dharwad on a sample of 145 Agricultural Officers. They reported that training programmes were organized on vermiculture, oil seeds, pulse crops, field crops, bee keeping and sericulture horticulture.

Noorazam *et al.* (2009) analyzed training programmes organized by District Agricultural Training Centres (DATCs) in Karnataka and reported that majority of DATCs conducted training programmes mainly on the subjects like, pulse production, oil seed production, maize production techniques, Integrated Nutrient Management, Integrated Pest Management, animal husbandry, horticulture, agri. entrepreneurship development, agriculture implements and plant protection, equipments repair and maintenance. Out of selected ten DATCs, Gulburga conducted maximum number of training programme followed by Bhadravati, Shimoga and Chitradurga.

2.2 Personal and socio-psychological characteristics of extension personnel

2.2.1 Age and Gender

Bosco (2000) conducted a study on job performance and job satisfaction of 82 Assistant Agricultural Officers of Karnataka State Department of Agriculture in Northern Karnataka. They observed that, 51.21 per cent of the AAOs were in the age group of 35-50 years. While 42.68 per cent of them were above 50 years of age and only 6.09 per cent of the AAOs were below 35 years of age.

Manjula (2000) conducted a study on job perception, job performance and job satisfaction of 103 of Assistant Agricultural Officers (Farm Women) from the Karnataka State Department of Agriculture. They observed that, majority (61.2 %) of AAO (FW) belonged to middle age group while 12.6 per cent and 26.2 per cent them were in young and old age groups respectively.

Nagananda *et al*. (2006) studied the profile of sixty Assistant Directors of Agriculture and sixty Agricultural Officers with regard to their perception of the Karnataka State Department of Agriculture. They reported that, comparatively more number of ADAs (40.0 %) belonged to young age group as compared to AOs (28.3 %), whereas in middle age group 50.0 per cent of AOs and 30.0 per cent ADAs were noticed.

Shelar *et al*. (2007) conducted a study in Thane (Mumbai) on knowledge assessment and training needs of fertilizer dealers of Rashtriya Chemical and Fertilizer (RCF) for effective sale of fertilizers. The sample size was 60 RCF dealers. They reported that, most of the dealers (59.78 %) were young, 33.3 per cent were middle age, while 6.65 per cent were older.

Faiz and Narayanaswamy (2011) studied the profile of 35 Agricultural Officers of Karnataka State Department of Agriculture who had undergone training at Staff Training Unit, University of Agricultural Science, Bangalore. They found that, majority (66.00 %) of trainees belonged to middle age group followed by young (28.57 %) and old age (11.43 %). They also reported that, 80 per cent of trainees were male, while female were only 20 per cent.

Halasangi and Narayanswamy (2012) studied the profile of horticultural extension personnel who had undergone training in Karnataka State Department of Horticulture in Bangalore. The sample size was 32. They observed that, cent per cent of the trainees belonged to young age group.

Patel *et al*. (2012) studied the perceived utility of training programme on “Training Management” by extension functionaries in Extension Education Institute (EEI), Anand in Gujarat on a sample of 40. They reported that, 70.00 per cent of the trainees were from the age group of 31 to 50 years. They also reported that, majority (87.50 %) of the trainees were male and only 12.50 per cent were female.

Patel *et al*. (2012) studied the perceived utility of training programme on “Monitoring and Evaluation” by extension functionaries in Extension Education Institute (EEI) Anand in Gujarat on a sample of 40. They reported that, 37.50 per cent trainees were of 41 to 50 years age followed by 29.17 per cent and 25.00 per cent trainees in the age range 21 to 30 years and 31 to 40 years, respectively. Only 8.33 per cent trainees were of the age above 50 years. They also reported that, cent per cent of the trainees were male.

Singh and Pandey (2012) conducted a study on impact of model training course on enhancement of knowledge of extension functionaries in application of Scientific Potato Production Technologies in Himachal Pradesh. The sample size was 32. They reported that majority (53.12 %) of the trainees were from old age category followed by 37.50 per cent of the trainees belonged to middle age category. They also reported that a majority (93.75 %) of trainees were male and only 6.25 per cent of were female.

Meena *et al*. (2013) conducted a study on job satisfaction among seventy technical workers of Indian Veterinary Research Institute at Izatnagar in Uttar Pradesh and revealed that, majority (57.14 %) of the respondents were from the middle age group.

2.2.2 Education and Experience

Bosco (2000) conducted a study on job performance and job satisfaction of 82 Assistant Agricultural Officers of Karnataka State Department of Agriculture in northern Karnataka. They observed that 60.97 per cent of the AAOs had received 10 years of formal education i.e. SSLC, 3.65 per cent had received education up to pre university level, 6.09 per cent were arts / science graduates, 26.83 per cent of the AAOs had bachelors degree in agriculture while, 2.43 per cent had master's degree in agriculture. They also observed that majority (75.60 %) of the AAOs were in the medium category of total experience, while 9.75 per cent in low category of total experience. The remaining 14.63 per cent of the AAOs were found in high category of total experience.

Manjula (2000) conducted a study on job perception, job performance and job satisfaction of 103 of Assistant Agricultural Officers (Farm Women) from the Karnataka State Department of Agriculture. They observed that, majority (61.2 %) of the respondents were graduates in different disciplines of agricultural sciences and the rest of them (38.8 %) were post graduates in various agricultural sciences. They also observed that, more than one-third of respondents (39.8 %) had above 10 years of experience, almost equal number of them were in the range 7 to 10 years (36.0 %) and the rest (24.2 %) had less than seven years of experience.

Nagananda *et al*. (2006) studied profile of sixty Assistant Directors of Agriculture and sixty Agricultural Officers with regard to their perception of organizational climate of the Karnataka State Department of Agriculture and reported that, high per cent of ADAs possessed M.Sc. (Agri.) and Ph.D. degree (70.0 % and 19.7 %, respectively) as compared to AOs (51.7 % and 1.7 %, respectively).

Shelar *et al*. (2007) conducted a study in Thane (Mumbai) on knowledge assessment and training needs of fertilizer dealers of Rashtriya Chemical and Fertilizer (RCF) for effective sale of fertilizers. The sample size was 60 RCF dealers. They reported that only 15 per cent dealers were agricultural graduates while 85 per cent were from non agriculture faculties. They also reported that the majority of the dealers (60.0 %) had experience from 1 to 5 years followed by 25 per cent had experience from 6 to 10 years and remaining 15 per cent had more than 10 years of experience.

Faiz and Narayanaswamy (2011) studied the profile of 35 Agricultural Officers of Karnataka State Department of Agriculture who had undergone training at Staff Training Unit, University of Agricultural Science, Bangalore. They reported that, 45.71 per cent were post graduates followed by Ph.D. (31.43 %) and M. Sc. graduates (22.86 %).

Patel *et al*. (2012) studied the perceived utility of training programme on "Training Management" by extension functionaries in Extension Education Institute (EEI), Anand in Gujarat on a sample of 40. They reported that nearly half of the participants (47.50 %) had post graduate level of education followed by 45.00 per cent participants with graduate level of education. Only 7.50 per cent participants had doctorate level of education. They also reported that, majority (62.50 %) of the trainees had experience up to 10 years while 22.50 and 15.00 per cent of the trainees had experience above 20 years and 11 to 20 years, respectively.

Patel *et al*. (2012) studied the perceived utility of training programme on "Monitoring and Evaluation" by extension functionaries in Extension Education Institute (EEI) Anand in Gujarat on a sample of 40. They reported that half of the participants (50.00%) were post-graduate, 43.75 per cent were participants graduate and only 6.25 per cent participants were doctorate degree. They also reported that, 45.83 per cent of the trainees were had up to 10 years experience, followed by 31.25 per cent and 22.92 per cent were had 11 to 20 years experience and above 20 years experience, respectively.

Singh and Pandey (2012) conducted a study on impact of model training course on enhancement of knowledge of extension functionaries in application of Scientific Potato Production Technologies in Himachal Pradesh. The sample size was 32. They reported that majority (53.12 %) of the trainees were post graduation followed by graduation (40.62 %) and only 6.25 per cent of trainees were Ph.D.

Shankar *et al*. (2014) evaluated the training programmes conducted by Krishi Vigyan Kendra, Tumkur, on a sample of 71 extension functionaries Karnataka State Department of Agriculture. They reported that majority of the respondents (62.0 %) were completed SSLC, 18.30 per cent completed PUC, 7 per cent were educated up to JOC, 9.90 per cent were completed under graduation and only 2.8 per cent were graduated with double degree.

Alarima *et al*. (2012) studied the professional competencies and training needs of extension agents for sustainable development in Nigeria on 120 respondents. Nearly half (49.20%) of respondents had 1-10 years of experience, followed by 23.30 per cent had 11-20 years, 23.30 per cent had 21-30 years and 4.20 per cent had above 31 years of experience.

Meena *et al*. (2013) conducted a study on job satisfaction among 70 technical workers of Indian Veterinary Research Institute at Izatnagar in Utter Pradesh and revealed that, half of the (50.0 %) respondents were had more than 11 years of experience.

2.2.3 Training undergone

Balasubramanian and Perumal (1991) conducted a study on job performance of fisheries extension personnel in Tamil Nadu and observed that, majority (66.0 %) of respondents attended 1-2 trainings, 29 per cent of trainees attended 3-4 trainings and only five per cent of trainees had attended 5-6 trainings.

Manjula (2000) conducted a study on job perception, job performance and job satisfaction of 103 of Assistant Agricultural Officers (Farm Women) from the Karnataka State Department of Agriculture and observed that, majority (81.5 %) of AAO (FW) received more than one training and rest of them had undergone three to four training in their service.

Shelar *et al*. (2007) conducted a study in Thane (Mumbai) on knowledge assessment and training needs of fertilizer dealers of Rashtriya Chemical and Fertilizer (RCF) for effective sale of fertilizers. The sample size was 60 RCF dealers. They reported that 56.66 per cent dealers had not received any training any, while 43.34 per cent dealers had undergone training of one to three days duration.

Meena *et al*. (2013) studied job satisfaction among 70 technical workers of Indian Veterinary Research Institute at Izatnagar in Utter Pradesh and revealed that, majority (80.0 %) of the technicians had undergone the training in their respective field.

Gopika *et al*. (2015) assessed job satisfaction of Assistant Horticultural Officers (AHOs) of Karnataka State Department of Horticulture in Bangalore Rural, Karnataka. They revealed that majority (92.50 %) of the AHO's had undergone medium level of training, 5 per cent respondents had low level of training and 2.50 per cent had high level of training.

2.2.4 Mass media exposure level

Kurbett (2012) studied the job involvement and job satisfaction of 120 women officers and their contributions to the rural women. The study reported that, compared to agriculture women officers, home science women officers were more exposed to the news paper and television regularly.

Gopika *et al*. (2015) assessed job satisfaction of Assistant Horticultural Officers (AHOs) of Karnataka State Department of Horticulture in Bangalore Rural, Karnataka. They reported that fifty per cent of them had medium level of mass media exposure.

2.2.5 Perceived work load

Gopika *et al*. (2015) assessed job satisfaction of Assistant Horticultural Officers (AHOs) of Karnataka State Department of Horticulture in Bangalore Rural, Karnataka. They reported that nearly sixty per cent of the AHO's perceived their workload as medium.

2.2.6 Teaching aids

Natikar and Devendrappa (2007) evaluated the training programmes organized by the Staff Training Unit of UAS, Dharwad on a sample of 145 Agricultural Officers. They reported that 46.90 per cent of the trainees expressed that use of teaching aids during training programme were good.

Kaur *et al.* (2010) conducted a study on opinion of the extension personnel regarding different aspects of institutional training programme in Punjab Agricultural University on a sample of 148 Agriculture Development Officers (ADOs). They reported that chalk board was the most commonly used non-projected aid as expressed by 94.22 per cent. Among the projected aids overhead projector was the only aid reported to be used always in the training programmes by 34.80 per cent of the respondents. While 73.19 per cent, 68.12 per cent, 62.32 per cent of the respondents opined that display board, graph and photographs respectively, were sometimes used in the training programmes. However, 98.55, 95.65, 85.51, 84.04 and 73.19 per cent of the respondents expressed that magnetic board, computers, flannel board, movies, video cassettes and models respectively were never used in the training programmes.

Halasangi and Narayanswamy (2012) studied the profile of horticultural extension personnel who had undergone training in Karnataka State Department of Horticulture in Bangalore. The sample size was 32. They observed that, majority (90.00 %) of the trainees expressed that chalk board used as a teaching aids in the training programme followed by specimen (60.00 %), transparencies (43.34 %) and charts (30.00 %).

2.2.7 Theory and practical ratio

Kaur *et al.* (2010) conducted a study on opinion of the extension personnel regarding different aspects of institutional training programme in Punjab Agricultural University on a sample of 148 Agriculture Development Officers (ADOs). They reported that 85.87 per cent of the respondents preferred 40:60 theory practical ratio. Only 2.17 per cent of the respondents preferred 50:50 theory practical ratio.

2.2.8 Teaching method

Raza *et al*. (2009) from their study on impact of in-service training on the performance of extension field staff and their problems regarding the training programme in Punjab and reported that lecture, class discussion and questioning and answering were the most prominent methods used during trainings. Demonstration is effective method of teaching whereas this method was less used with only 14.4 per cent of respondents. While field visits, group assignment and class assignment reported by 73.20, 7.20 and 3.10 per cent of respondents respectively, but brain storming activities were not used.

Kaur *et al.* (2010) conducted a study on opinion of the extension personnel regarding different aspects of institutional training programme in Punjab Agricultural University on a sample of 148 Agriculture Development Officers (ADOs). They reported that Cent per cent of the respondents reported that lecture method was always used, whereas 88.42 per cent, 79.72 per cent and 78.26 per cent of them indicated that demonstration, field trip and practical were sometimes used respectively, during training programme.

Faiz and Narayanaswamy (2011) studied the profile of 35 Agricultural Officers of Karnataka State Department of Agriculture who had undergone training at Staff Training Unit, University of Agricultural Science, Bangalore. They reported that, out of seven different combinations of teaching methods, trainees gave first preference to teaching method which involved more combinations of different teaching methods like lecture-cum-teaching aids-cum-demonstration-cum-discussion-cum-assignment, second preference to lecture-cum-teaching aids-cum demonstration and discussion, third preference to lecture followed by individual and group assignment, fourth preference to lecture-cum-teaching aids-cum-demonstration, fifth lecture-cum-discussion, sixth lecture-cum-teaching aids and least preferred teaching method was lecture alone.

Halasangi and Narayanswamy (2012) studied the profile of horticultural extension personnel who had undergone training in Karnataka State Department of Horticulture in Bangalore. The sample size was 32. They observed that, majority of trainees (76.67 %) used Lecture + Discussion + Method demonstration in the field for practical in training programmes, followed by Lecture + Discussion + Method demonstration in the training hall (66.67 %).

Shankar *et al*. (2014) evaluated the training programmes conducted by Krishi Vigyan Kendra, Tumkur, on a sample of 71 extension functionaries Karnataka State Department of Agriculture. They reported that highest number of trainees agreed that the methods used in training programme (95.80 %) such as group discussion, field visits, method demonstration etc.

2.2.9 Duration

Bosco (2000) conducted a study on job performance and job satisfaction of 82 Assistant Agricultural Officers of Karnataka State Department of Agriculture in Northern Karnataka and observed that 14.6 per cent of Assistant Agricultural Officers had received training for more than six months duration. While 17.07, 29.26, 13.41 and 12.19 per cent of them had received in service training for 4 to 6 months, 2 to 4 months, 1 to 2 months and less than 1 month duration respectively.

Manjula (2000) conducted a study on job perception, job performance and job satisfaction of 103 of Assistant Agricultural Officers (Farm Women) from the Karnataka State Department of Agriculture and observed that, majority (62.1 %) of AAO (FW) had undergone induction training for three months, whereas one-fourth (26.2 %) had training for more than six months and remaining one-tenth (11.7 %) had three to six months of training in various subjects.

Natikar and Devendrappa (2007) evaluated the training programmes organized by the Staff Training Unit of UAS, Dharwad on a sample of 145 Agricultural Officers. They expressed that the duration of training should be of 5-7 days.

2.3 Studies on knowledge level

Prasad and Mahipal (1997) conducted a study on impact of training programmes on knowledge gain of 56 Subject Matter Specialists (SMS) organized at Central Research Institute for Dry land Agriculture (CRIDA) Hyderabad. They reported that, majority of the participants had gained medium level (90.00 %) of knowledge on soil and water conservation followed by 63.15 per cent the participants had medium level of knowledge on crop planning and cropping systems under rain fed conditions.

Sharma and Kushwah (2004) studied the knowledge of extension personnel on Integrated Pest Management training and they reported that knowledge index of extension personnel after training programme was higher than their knowledge index before the training.

Shelar *et al*. (2007) conducted a study in Thane (Mumbai) on knowledge assessment and training needs of fertilizer dealers of Rashtriya Chemical and Fertilizer (RCF) for effective sale of fertilizers. The sample size was 60 RCF dealers. They reported that majority of the dealers (60.00 %) was medium knowledge, while 26.65 per cent had high level of knowledge and 13.35 per cent had low level of knowledge about fertilizers. Cent per cent of the dealers had knowledge about soil testing for fertilizers application, type of bacterial fertilizers, mixed and complex fertilizers, nitrogen, phosphorus and potash requirements of different crops.

Srinivas *et al.* (2007) studied the knowledge level of extension personnel on sericulture training programme in Mysore. They reported that knowledge level of the extension personnel ranged from 8 to 93 per cent improved in different technologies.

Dolli *et al*. (2010) conducted a study on impact of training on water resource management in Dharwad under the Karnataka Community Based Tank Management Project on a sample of 45 field functionaries. They reported that, a significant increase in the knowledge level after completion of the training.

Singh *et al*. (2010) studied the impact of training titled “Developing and working with farmer’s groups”, on 19 Agricultural Development Officers of Punjab. The training was conducted by Agricultural Management and Extension Training Institute, Punjab Agriculture University, Ludhiana. They reported that there was a significant increase in knowledge level of trainees after the training.

Faiz and Narayanaswamy (2011) studied the profile of 35 Agricultural Officers of Karnataka State Department of Agriculture who had undergone training at Staff Training Unit, University of Agricultural Science, Bangalore. They reported that, majority (71.43 %) of trainees had high knowledge in post training, whereas, only 20.00 per cent of trainees had high knowledge in pre training. Further, 22.86 per cent of trainees had medium level of knowledge in post training, whereas, 17.14 per cent of trainees had medium knowledge in pre training. However, 5.71 per cent of trainees had low knowledge in post training, whereas, 62.85 per cent of trainees had high knowledge in pre training knowledge test respectively.

Patel *et al*. (2012) studied the perceived utility of training programme on “Monitoring and Evaluation” by extension functionaries in Extension Education Institute (EEI) Anand in Gujarat on a sample of 40. They reported that, majority (91.66%) of the participants had knowledge about reporting meaning and concept of monitoring and evaluation followed by 75.00 per cent of the participants who had knowledge about steps in monitoring and evaluation process and methods of data collection.

Singh and Pandey (2012) conducted a study on impact of model training course on enhancement of knowledge of extension functionaries in application of Scientific Potato Production Technologies in Himachal Pradesh. The sample size was 32. They reported that the maximum knowledge gain was observed in the area of basic knowledge of potato (31.85 %) followed by breeding and biotechnological application in potato (21.35 %), potato physiology and post harvest technology (19.45 %).

Das and Mishra (2013) conducted a study on effectiveness of training programme on “Organization and management of farmer’s organization”, at Extension Education Institute, Maharashtra on a sample of 42 middle level extension functionaries. They reported that, 47.62 per cent of the trainees gained moderate level of knowledge. This was followed by 40.48 per cent of the trainees who gained less knowledge as a result of the training programme.

Gaikwad *et al*. (2013) studied the knowledge of extension personnel about horticultural recommendation on selected fruit crops in Mahatma Phule Krishi Vidyapeeth, Rahuri. The sample consisted of 259 extension personnel. They reported that, the more than half (54.05 %) of the extension personnel belonged to the category of medium knowledge level, whereas, 28.57 per cent of respondents belonged to high knowledge level category and 17.37 per cent of the respondents belonged to the category of low knowledge level on fruit crops.

Madhu *et al*. (2013) conducted a study on capacity building of extension functionaries through training intervention for enhancing job performance. The study was conducted by Extension Education Institute, Rajendranagar. With a sample of 156 respondents from five states viz., Andhra Pradesh, Tamilnadu, Karnataka, Kerala and Orissa. They reported that majority of the respondents in all the states had medium level of knowledge, followed by high and low levels. The areas of knowledge are communication skills, production and use of audio-visual aids, personality development and Human Resource Development.

Shankar *et al*. (2014) evaluated the training programmes conducted by Krishi Vigyan Kendra, Tumkur, on a sample of 71 Bhuchethana facilitators. They reported that Cent per cent of trainees gained knowledge on soil and water sampling methods, improved practices in dry land farming, integrated pest and disease management and Raitha Kshethra Patashale. About 98 per cent of trainees gained knowledge on roles and responsibilities of facilitators, identification of nutrition deficiency at critical stages, importance of bio-fertilizers and seed treatment, and improved practices in horticulture crops, followed by 97.20 per cent of trainees gained knowledge on the mandates of Bhuchethana programme.

2.4 Studies on satisfaction of trainees from training programmes

Ansari and Chandargi (2000) studied the effectiveness of training programme for agriculture officers and reported that many of the respondents were partially satisfied with the training prograamme.

Natikar and Devendrappa (2007) evaluated the training programmes organized by the Staff Training Unit of UAS, Dharwad on a sample of 145 Agricultural Officers. They reported that majority (70.35 %) of the trainees satisfied about training programmes.

Singh and Pandey (2012) conducted a study on impact of model training course on enhancement of knowledge of extension functionaries in application of Scientific Potato Production Technologies in Himachal Pradesh. The sample size was 32. They reported that, most of the trainees were very well satisfied with the training contact and training delivery mechanism. Cent per cent of trainees were well satisfied with quality of audio visual aids used. More than 90 per cent of trainees were very well satisfied with the medium of instruction ‘and ‘timely information on day to day action’ during training.

Shankar *et al*. (2014) evaluated the training programmes conducted by Krishi Vigyan Kendra, Tumkur, on a sample of 71 Bhuchethana facilitators. They reported that, majority of the trainees were happier about the overall arrangement of the training programme.

2.5 Level of job performance

Bosco (2000) conducted a study on job performance of 82 Assistant Agricultural Officers from the Karnataka State Department of Agriculture in Northern Karnataka and observed that, 85.36 per cent of the AAO were in high job performance category, while 14.63 per cent were in medium job performance category and none of the AAO belonged to low job performance category.

Manjula (2000) conducted a study on job perception, job performance and job satisfaction of 103 of Assistant Agricultural Officers (Farm Women) from the Karnataka State Department of Agriculture and observed that, 36 per cent of AAO (FW) belonged to medium job performance category, 34 per cent of them belonged to low category and rest (30 %) of them were in high job performance category.

Panchaksari *et al*. (2001) conducted a study on job performance and satisfaction of sericulture scientists. The total sample size was 100 scientists. They selected 67 scientists from Central Sericultural Research and Training Institute (CSRTI) Mysore and 33 Scientists from Karnataka State Sericulture Research and Development (KSSRD) Bangalore. The study indicated that the sericulture scientists were highly involved in their job and the job performance of CSRTI scientists was 75.70 per cent and that of KISRD scientists was 73.12 per cent.

Kumar *et al*. (2003) studied the job performance of 34 Agricultural Officers in Kasaragod districts of Kerala state. According to them the role of "Administration of Staff" was most effectively performed by the agricultural officers.

Mohan *et al*. (2006) studied the job performance of 150 agricultural graduates working in the department of agriculture and Achary N. G. Ranga Agriculture University (ANGRAU) institutions in Chittor district of Andhra Pradesh. They reported that, 63.33 per cent of respondents had high level of job performance followed by low level job performance (30.67 %) in the department of agriculture whereas 74.67 per cent of respondents had high job performance followed by low performance (25.33 %) in ANGRAU institutions.

Anuadha and Sreedevi (2007) studied the job performance of Integrated Child Development Scheme (ICDS) supervisors in Andhra Pradesh on a sample of 220 supervisors. They found that, majority of supervisors possessed 'high' job performance followed by 'medium' and 'low' job performance.

Sandika *et al*. (2007) studied job performance of Veterinary Officers (VOs) and Veterinary Livestock Inspectors (VLIs) of the Department of Animal Husbandry and Veterinary Services, Karnataka. Thirty five VOs and sixty-five VLIs were selected from Belgaum district. Majority of the respondents (55.00 %) were in medium job performance category followed by 33.00 per cent in high job performance category. Further high level of job performance was observed with 46.00 per cent of VOs and 26.00 per cent of VLIs. On the contrary, low level job performance was noticed with more number of VOs (14.00 %) as compared to VLIs (11.00 %).

Triveni *et al*. (2007) studied the job performance of 30 Veterinary Assistants Surgeons (VASs) in Telangana region of Andhra Pradesh. They reported that, nearly half of the respondents (47.78 %) had medium level of job performance.

Pawar *et al*. (2008) studied the job performance of 58 Agriculture Assistants and 67 Krishi Sevaks in Karnataka State Department of Agriculture Ankola. They reported that, 62.07 per cent Agriculture Assistants had good job performance followed by above average (29.31 %) and below average (8.62 %). Regarding job performance of Krishi Sevakas that more than two third (68.66%) of them had good job performance. Slightly higher than one fifth (22.39 %) and 8.95 per cent Krishi Sevakas had above average and below average job performance respectively.

Aimabde and Manjunatha (2012) studied the job performance of 100 teachers conducted at six campuses of University of Agriculture Sciences, Bangalore. They reported that, 38.00 per cent of the teachers belonged to high level of job performance, followed by 34.00 per cent of the teachers with medium level of job performance and 28.00 per cent of teachers exhibited low level of job performance.

Pounraj (2013) conducted a study on job performance of 150 Fisheries Extension Functionaries in State Department Fisheries, Tamil Nadu. They observed that, nearly half of the respondents (49.34 %) were under high level performance, followed by 26.66 per cent with medium level and the remaining 24 per cent of the respondents were was low level.

Debnath *et al*. (2014) carried out a study on job performance of the extension personnel of the department of agriculture in Tripura state of North- East India. The data was collected from 80 extension personnel (40 Agricultural officers (AOs) and 40 village Level Workers (VLWs). The findings of the study indicated that most of the AOs had high level of job performance whereas, VLWs had medium level of job performance.

Goyal *et al*. (2015) assessed the job performance of Veterinary Surgeons (VSs) in Haryana. Primary data was collected from a sample of 120 (VSs). Majority (55.00 %) of the Veterinary Surgeons were grouped under medium level of job performance.

2.6 Relationship between independent variables and job performance

Factors, authors and year	Respondents	Relationship
Age		
Bosco (2000)	Assistant Agriculture Officers	Non-significant
Manjula (2000)	Assistant Agriculture Officers	Positively significant
Panchaksari *et al*. (2001)	Sericulture Scientists	Non-significant
Mohan *et al*. (2006)	Agriculture Graduates	Non-significant
Triveni *et al*. (2007)	Veterinary Surgeons	Positively highly significant
Aimabde and Manjunatha (2012)	Trained Teachers	Non-significant
Education		
Bosco (2000)	Assistant Agriculture Officers	Non-significant
Manjula (2000)	Assistant Agriculture Officers	Positively significant
Panchaksari *et al*. (2001)	Sericulture Scientists	Positively significant
Mohan *et al*. (2006)	Agriculture Graduates	Positively significant
Triveni *et al*. (2007)	Veterinary Surgeons	Positively significant
Aimabde and Manjunatha (2012)	Trained Teachers	Non-significant
Pounraj (2013)	Fisheries Extension Functionaries	Positively highly significant
Gender		
Mohan *et al*. (2006)	Agriculture Graduates	Non-significant
Aimabde and Manjunatha (2012)	Trained Teachers	Non-significant
Experience		
Bosco (2000)	Assistant Agriculture Officers	Non-significant
Manjula (2000)	Assistant Agriculture Officers	Non-significant
Panchaksari *et al*. (2001)	Sericulture Scientists	Positively significant
Mohan *et al*. (2006)	Agriculture Graduates	Positively significant
Triveni *et al*. (2007)	Veterinary Surgeons	Positively significant
Aimabde and Manjunatha (2012)	Trained Teachers	Non-significant
Pounraj (2013)	Fisheries Extension Functionaries	Positively highly significant
Trainings undergone		
Bosco (2000)	Assistant Agriculture Officers	Non-significant
Manjula (2000)	Assistant Agriculture Officers	Non-significant
Panchaksari *et al*. (2001)	Sericulture Scientists	Non-significant
Mohan *et al*. (2006)	Agriculture Graduates	Positively highly significant
Aimabde and Manjunatha (2012)	Trained Teachers	Non-significant
Pounraj (2013)	Fisheries Extension Functionaries	Non-significant

2.7 Relationship between independent variables and knowledge

Factors, authors and year	Respondents	Relationship
Age		
Faiz (2012)	Extension workers	Non-significant
Halasangi and Narayanaswamy (2012)	Extension personnel	Non-significant
Prajapati *et al*. (2012)	Pesticide dealers	Positively significant
Gaikwad *et al*. (2013)	Extension personnel	Positively significant
Gaparayiprosper and Pillegowda (2013)	Teaching staff	Non-significant
Education		
Faiz (2012)	Extension workers	Positively significant
Halasangi and Narayana swamy (2012)	Extension personnel	Positively significant
Prajapati *et al*. (2012)	Pesticide dealers	Non-significant
Gaikwad *et al*. (2013)	Extension personnel	Positively highly significant
Gaparayiprosper and Pillegowda (2013)	Teaching staff	Non-significant
Gender		
Faiz (2012)	Extension workers	Non-significant
Gaparayiprosper and Pillegowda (2013)	Teaching staff	Non-significant
Experience		
Faiz (2012)	Extension workers	Non-significant
Prajapati *et al*. (2012)	Pesticide dealers	Negatively significant
Gaikwad *et al*. (2013)	Extension personnel	Positively significant
Gaparayiprosper and Pillegowda (2013)	Teaching staff	Non-significant
Training undergone		
Prajapati *et al*. (2012)	Pesticide dealers	Positively significant

3. MATERIAL AND METHODS

This chapter explains the various methods and procedure followed/adopted in carrying out the present research study. A detailed description of these methods and procedures is furnished under the following heads.

3.1 Research design

3.2 Locale of the study

3.3 Selection of respondents

3.4 Selection of variables

3.5 Operationalization and measurement of variables

3.6 Instrument of data collection

3.7 Statistical tools used in the study

3.1 Research design

The research design followed to conduct the study was expost - facto design, since the phenomenon had already occurred. Expost - facto research is a systematic empirical enquiry in which the researcher does not have direct control over independent variables because their manifestation has already been occurred or because they are inherently not manipulated.

3.2 Locale of the study

The study was conducted during 2015 - 2016 in purposefully selected districts under the University of Agricultural Sciences, Dharwad. viz., Dharwad, Gadag, Belagavi, Haveri, Vijayapur, Baglkot and Uttar Kannada of Karnataka state. These districts were selected keeping in view the availability of time, the cost and the convenience of the student researcher.

3.3 Selection of respondents

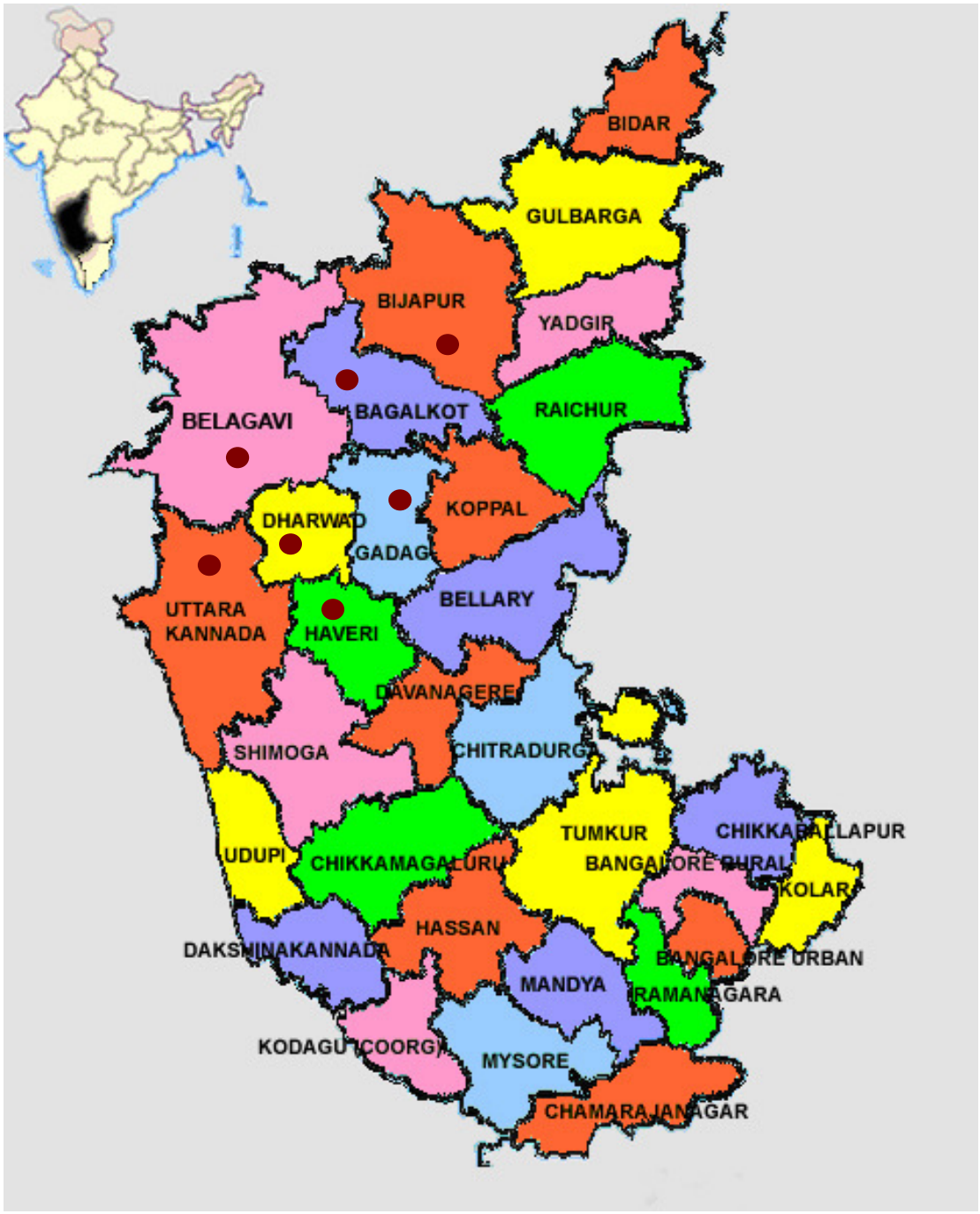
The Staff Training Unit, UAS, Dharwad is organizing different types of training programmes every year for officials of different development departments. The STU organizes trainings for officials from the districts under the jurisdiction of UAS, Dharwad namely, Dharwad, Gadag, Belagavi, Haveri, Vijayapur, Bagalkot and Uttar Kannada. A list of the trainees who had participated in the trainings organized by the STU training for the last five years (2010 – 2015) was prepared. The reasons for selection of trainees from the foundation course training are twofold. Firstly the content and format of the training was the same for all batches. Secondly maximum number of trainees attended the Foundation Course Training during 2013 – 14. Keeping these two aspects in view a total of 848 trainees who had undergone training from the above mentioned districts formed the population for the study.

In view of the time limitation of the student researcher the first 150 respondents who responded to the mailed questionnaire become the sample for the study.

3.4 Selection of variables

3.4.1 Dependent variables:

- Trainees Satisfaction
- Job performance
- Knowledge level



Study Areas are ●

1. Dharwad
2. Haveri
3. Gadag
4. Vijayapur
5. Bagalkot
6. Belagavi
7. Uttar Kannada

Fig. 1. Map showing study area

3.4.2 Independent variables:

- Age
- Gender
- Education
- Total experience
- Experience in present post
- Trainings undergone
- Mass media exposure
- Perceived work load

3.5 Operationalization and measurement of variables

Sl. No.	Variables	Procedure followed by
	Dependent variables	
1	Knowledge	Dalavi (2010)
2	Trainees satisfaction	Singh and Pandey (2012)
3	Job performance	Manjula (2000)
	Independent variables	
1	Age	Kharatmol (2006)
2	Gender	Pujar (2006)
3	Education	Bosco (2000)
4	Total experience	Manjula (2000)
5	Experience in the present position	Manjula (2000)
6	Trainings undergone	Ahire and Sontakki (2011)
7	Mass media exposure	Kumar (2000)
8	Perceived work load	Gopika *et al*. (2015)

3.5.1 Dependent variable

3.5.1.1 Knowledge

Knowledge is a body of information possessed by an individual which is in accordance with established facts.

For the present study an operational measure for knowledge was developed by constructing a teacher made knowledge test as suggested by Anastasi (1961). Of the various topics covered in the Foundation Course, five important topics covered during training programme namely, Integrated Pest Management, Information and Communication Technology, Soil-Water-Plant Relationship, Organic farming and Vermiculture and Extension Tools and Methods were selected. Ten multiple choice questions were framed for each selected topics to obtain the response from the respondents. The questions and answers pertaining to knowledge test were carefully designed in consultation with experts, specialist in agriculture and other STU staff. A score of one was given to the right answers and zero to the wrong answer. Therefore the minimum and maximum scores ranged from 0 – 10. For each of the topic the knowledge index for individual respondents was calculated by using the formula as followed by (Dalavi, 2010).

$$\text{Knowledge Index} = \frac{\text{Scores obtained}}{\text{Obtainable scores}} \times 100$$

Further for each of the topic the total knowledge score for individual respondents was calculated by summing up the number of items correctly answered. The respondents were then classified into three categories following the equal distribution method based on class interval as follows: (Manjula, 2000)

$$\frac{\text{Maximum score} - \text{Minimum score}}{3} = \text{Class interval} \qquad \frac{10-0}{3} = 3.3$$

Taking class interval as a 3, the following three categories were made.

Category	Range of scores
Low knowledge level	Less than 3
Medium knowledge level	Between 4 to 6
High knowledge level	Above 6

3.5.1.2 Trainees satisfaction

Satisfaction of trainees about training programme was measured using a scale having 3 point continuum ranging from 'fully satisfied', 'partially satisfied' and 'dissatisfied' and the scores were assigned as follows (Singh and Pandey , 2012).

Level of satisfaction	Score
Fully satisfied	3
Partially satisfied	2
Dissatisfied	1

Based on the total score obtained by all respondents satisfaction index was worked by using the following formula:

$$\text{Satisfaction Index} = \frac{\text{Scores obtained}}{\text{Obtainable scores}} \times 100$$

The minimum and maximum scores ranged from 18 – 54. Further the respondents were grouped into three categories following the equal distribution method based on class interval as follows (Manjula, 2000):

$$\frac{\text{Maximum score} - \text{Minimum score}}{3} = \text{Class interval} \qquad \frac{54-18}{3} = 16$$

Taking class interval as a 16, the following three categories were made.

Category	Range of scores
Low	Less than 30
Medium	Between 31 to 42
High	Above 42

3.5.1.3 Job performance

Chunawalla and Srinivas (1980) defined job performance as the systematic assessment of an employee in terms of the performance, aptitude and other qualities necessary for successfully carrying out his job.

A teacher made job performance scale was developed to measure the performance level of the trainees in their respective jobs. The performance scale consisted of seven statements with respect to the job performance of respondents. The scale ranged on a five point continuum namely

excellent, very good, good, fair and poor with scores of 5, 4, 3, 2, 1, respectively. The job performance scores of all the job items were summated to get the job performance scores of respondents. The minimum and maximum scores ranged from 7 – 35. Further the respondents were grouped into three categories following the equal distribution method based on class interval as followed by Manjula, 2000

$$\frac{\text{Maximum score} - \text{Minimum score}}{3} = \text{Class interval} \qquad \frac{35-7}{3} = 9$$

Taking class interval as a 9, the following three categories were made.

Category	Range of scores
Low	Less than 16
Medium	Between 17 to 25
High	Above 25

3.5.1.4 Usefulness of training topics

A list of all the topics covered in the Foundation Course and the trainees were asked to indicate their usefulness on a three point continuum scale. The procedure followed by (Singh and Pandey, 2011) was used to assign the scores as follows:

Category	Score
Somewhat useful	1
Useful	2
Most useful	3

Based on the total score obtained by all respondents Usefulness Index was worked by using by following formula:

$$\text{Usefulness Index} = \frac{\text{Scores obtained}}{\text{Obtainable scores}} \times 100$$

The minimum and maximum scores ranged from 16 – 48. Further the respondents were grouped into three categories following the equal distribution method based on class interval as follows: (Manjula, 2000).

$$\frac{\text{Maximum score} - \text{Minimum score}}{3} = \text{Class interval} \qquad \frac{48-16}{3} = 10$$

Taking class interval as a 10, the following three categories were made.

Category	Range of scores
Low	Less than 26
Medium	Between 27 to 36
High	Above 36

3.5.2 Independent variables

3.5.2.1 Age

It is referred to the chronological age of the respondent at the time of investigation. The age of the respondents was recorded as mentioned by them in completed years. The respondents were categorized in to three age groups based on the procedure followed by Kharatmol (2006).

Category	Coding
Young (< 30 years)	1
Middle (31 to 50 years)	2
Old (> 51 years	3

3.5.2.2 Gender

According to the gender, the respondents were classified as male and female according to the procedure followed by Pujar (2006).

Category	Coding
Male	1
Female	2

3.5.2.3 Education

Education refers to the number of years of formal education completed by the respondents. The respondents were classified into five categories and scores assigned. The procedure followed by (Bosco, 2000) was used with slight modification.

Category	Coding
SSLC	1
Pre-University level	2
Basic Science / Arts graduates	3
B. Sc. (Agri. and allied) graduates	4
M. Sc. (Agri. and allied) graduates	5

3.5.2.4 Total experience

The experience of trainees refers to total number of completed years in various capacities in the department of agriculture. It was observes that the minimum and maximum years of experience ranged from 3 – 34. Further the respondents were grouped into three categories following the equal distribution method based on class interval per the procedure followed by Manjula, 2000.

Category	Coding
<13 years	1
14 to 23 years	2
>23 years	3

3.5.2.5 Experience in the present position

Here the number of years completed in the present position was considered. It was observed that the minimum and maximum years of experience ranged from 1-18. The respondents were grouped into three categories following the equal distribution method based on class interval as follows: (Manjula, 2000).

Category	Coding
<7 years	1
8 to 13 years	2
>13 years	3

3.5.2.6 Trainings undergone

Refers to trainings received by the respondents in the field of extension or in any other subject matter relevant to their job. The respondents were categorized in to three groups based on the procedure followed by (Ahire and Sontakki, 2011).

Category	Coding
Up to 5 trainings	1
6 -10 trainings	2
>10 trainings	3

3.5.2.7 Mass media exposure level

This refers to the exposure of the respondents to various mass media communication related activities such as listening to radio, viewing television, reading printed materials like newspapers, magazines and using mobile phones and internet. Detailed information about the mass media exposure of the respondents was obtained with respect to listening, viewing and reading habit of the respondents. The quantification of mass media utilization as a source of information was done as per the procedure followed by Kumar, 2000.

Category	Scores
Regularly	3
Occasionally	2
Never	1

The minimum and maximum scores ranged from 7-21. Further the respondents were grouped into three categories following the equal distribution method based on class interval as follows: (Manjula, 2000)

$$\frac{\text{Maximum score} - \text{Minimum score}}{3} = \text{Class interval} \qquad \frac{21-7}{3} = 4$$

Taking class interval as a 4, the following three categories were made.

Category	Scores
Low	Less than 11
Medium	Between 12 to 15
High	Above 15

3.5.2.8 Extent of information used after receiving the training programme

To know the extent of information used after receiving the training programme. The respondents were asked to indicate in percentages the extent of information used by them after completion of training. Based on the response the respondents were grouped into four categories as follow as per the procedure standardized for the study.

Category	Coding
0 – 25 %	1
26 – 50 %	2
51 – 75 %	3
76 – 100 %	4

3.6 Instruments used for data collection

Keeping in view the objectives and the variables under study, a questionnaire was prepared in consultation with experts. The questionnaire was pre-tested on non-sample respondents and based on the pre-test, necessary modifications were made. The secondary data regarding trainings conducted during the previous five years was collected from the Staff Training Unit, UAS, Dharwad. The finalized questionnaire is furnished in Appendix I.

The data were collected from the staff of KSDA by mailed questionnaire method. Documentary data were taken from the STU from the previous five years i.e., 2010-2015.

3.7 Statistical tools used in the study

The collected data from the respondents were scored, tabulated and analyzed using the following statistical tools.

1. Frequency and percentage:

Frequency and percentage were used to interpret the categories of personal and socio-psychological characteristics, knowledge, job performance and satisfaction of training of the respondents.

2. Correlation

Correlation is a measure of intensity or degree of linear relationship between two variables for 'n' pair of observations. Numerical measure of correlation coefficient is given by,

$$r(x,y) = \frac{\Sigma XY - (\Sigma X)(\Sigma Y)/n}{\sqrt{[\Sigma X^2 - (\Sigma X)^2/n)(\Sigma Y^2 - (\Sigma Y)^2/n]}}$$

Where,

r is the correlation coefficient

x and y are two variables

n is the sample size

The significance of the correlation coefficient (r) is tested by using 't' statistics and is given by,

$$t_{(n-2)} = \frac{|r|\sqrt{(n-2)}}{\sqrt{1-r^2}}$$

Where,

r is the correlation coefficient

n is the sample size

Test statistics value is compared with table value for (n-2) degrees of freedom at given level of significance.

4. RESULTS

The findings of the present investigation are presented in this chapter under the following broad headings.

4.1 Socio-psychological characteristics of the trainees

4.2 Satisfaction of trainees regarding different aspects of foundation course training

4.3 Extent usefulness of training topics

4.4 Job performance levels of trainees

4.5 Knowledge level of trainees with regard to different topics

4.6 Extent of information used by trainees after receiving the training

4.7 Relationship between independent and dependent variables

4.1 Socio-psychological characteristics of the trainees

Table 1 depicts the socio-psychological characteristics of the trainees who attended the Foundation Course Training.

Age

It is seen that majority (63.30 %) of the trainees belonged to middle age group (36 – 50 years). About 25 per cent of them belonged to old age group (51 and above) and remaining 11.30 per cent of the trainees were in the young age (18 – 35 years) category.

Gender

The gender distribution of trainees revealed that the trainings were highly dominated by male trainees (80.70 %) and there were only 19.30 per cent females.

Education

The result presented in Table 1 reveals that, 30.70 per cent of the trainees were M.Sc. (Agri. and Allied), 22.70 per cent of them were B.Sc. (Agri. and Allied), 16.70 per cent of them were basic science / arts graduates, 15.30 per cent of them were educated up to SSLC and 14.70 per cent of the trainees had education up to PUC.

Experience

The total experience of the trainees as shown in Table 1 indicates that 35.30 per cent of the trainees had experience between 14 to 23 years. This was followed by 33.30 per cent trainees with less than 13 years experience and 31.30 per cent trainees with more than 23 years of experience.

Results regarding experience in the present post revealed that majority of the trainees (64.00 %) had less than 7 years experience, followed by 27.30 per cent of the trainees who had experience between 8 to 13 years and only 8.70 per cent of the trainees had more than 13 years experience.

Table 1. Socio-psychological characteristics of the trainees

(n=150)

Sl. No	Characteristics	Category	Trainees	
			Frequency	Percentage
1	Age			
		Young age (18-35 years)	17	11.30
		Middle age (36-50 years)	95	63.30
		Old age (51 and above)	38	25.30
2	Gender			
		Male	121	80.70
		Female	29	19.30
3	Education			
		SSLC	23	15.30
		Pre-University level	22	14.70
		Basic Science / Arts graduates	25	16.70
		B. Sc. (Agri. and allied) graduates	34	22.70
		M. Sc. (Agri. and allied) graduates	46	30.70
5	Experience (Years)			
		a) Total experience		
		<13	50	33.30
		14 to 23	53	35.30
		>23	47	31.30
		b) Experience in present post		
		<7	96	64.0
		8 to 13	41	27.30
		>13	13	08.70
6	Trainings undergone			
		Up to 5 trainings	55	36.70
		6 -10 trainings	59	39.30
		>10 trainings	36	24.00

Trainings undergone

It is evident from Table 1 that 39.30 per cent of the trainees had undergone 6-10 training programmes. About 37 per cent had undergone up to 5 trainings and 24 per cent of them had undergone more than 10 trainings.

Mass media exposure

The data of Table 2 indicates that most of the trainees (90.70 %) had high level of mass media exposure, while only 9.30 per cent belonged to medium level of mass media exposure. However there were none in the low category.

Perceived work load

Table 3 and Fig 2 shows that, majority (80.70 %) of the trainees perceived their workload as average, 10.70 per cent of the trainees perceived their workload as light and only 8.70 per cent of the trainees perceived it as heavy. None of them perceived their workload as very light or very heavy.

4.2 Satisfaction of trainees regarding different aspects of training programme

Table 4 shows degree of satisfaction on different aspects of training. More than 90 per cent of trainees were fully satisfied with training atmosphere and break timings during the training. Between 86 - 88 per cent were fully satisfied with facilities provided in the classroom, food and accommodation, preparation of lectures and clarity of presentation. Most of the trainees were partially satisfied with balance of theory-practical ratio (86.00 %) and duration of training (81.30 %). About 50 per cent were partially satisfied with discussion during training programme and speed of presentation. Few of the trainees were dissatisfied with some of the aspects like balance of theory-practical ratio (2.70 %) and field visits (3.30 %). The overall satisfaction index was 90.32.

Table 5 and Fig 3 shows the level of satisfaction. It could be seen that most of the trainees (88.70 %) were highly satisfied with regard to different aspects of training contents. About 11 per cent had medium level of satisfaction and none were in the low satisfaction category.

4.3 Extent of usefulness of training topics

It can be observed from the Table 6 that, majority of the trainees i.e., 66 per cent each expressed that the topics of integrated pest management and Integrated Farming Systems were most useful, followed by Extension Methods and Tools (58.70 %) and use of ICT in agriculture (57.30 %). Whereas trainings on dairying (87.30 %), horticulture crops (85.30%) were perceived as useful, followed by field crops (70.70 %) and oilseed and pulse crops (62.70 %). Further it can be seen from the table that more than 90 per cent of the trainees felt that the trainings on fishery and bee-keeping were somewhat useful, followed by sericulture i.e. (84.00 %). Few of the trainees expressed that the training programmes organized on dry farming practices (3.30 %), bio-fertilizers (3.30 %), extension methods and tools (3.30%) and soil-water-plant relation (3.30 %) were somewhat useful. The overall usefulness index was 70.

Table 2. Mass media exposure level of trainees

(n=150)

Mass media exposure levels	Frequency	Percentage
Low (< 11)	-	-
Medium (12 to 15)	14	9.30
High (> 15)	136	90.70

Table 3. Perceived work load of trainees

(n=150)

Sl. No	Perceived work load	Number	Percentage
1	Very light	-	-
2	Light	16	10.70
3	Average	121	80.70
4	Heavy	13	8.70
5	Very heavy	-	-

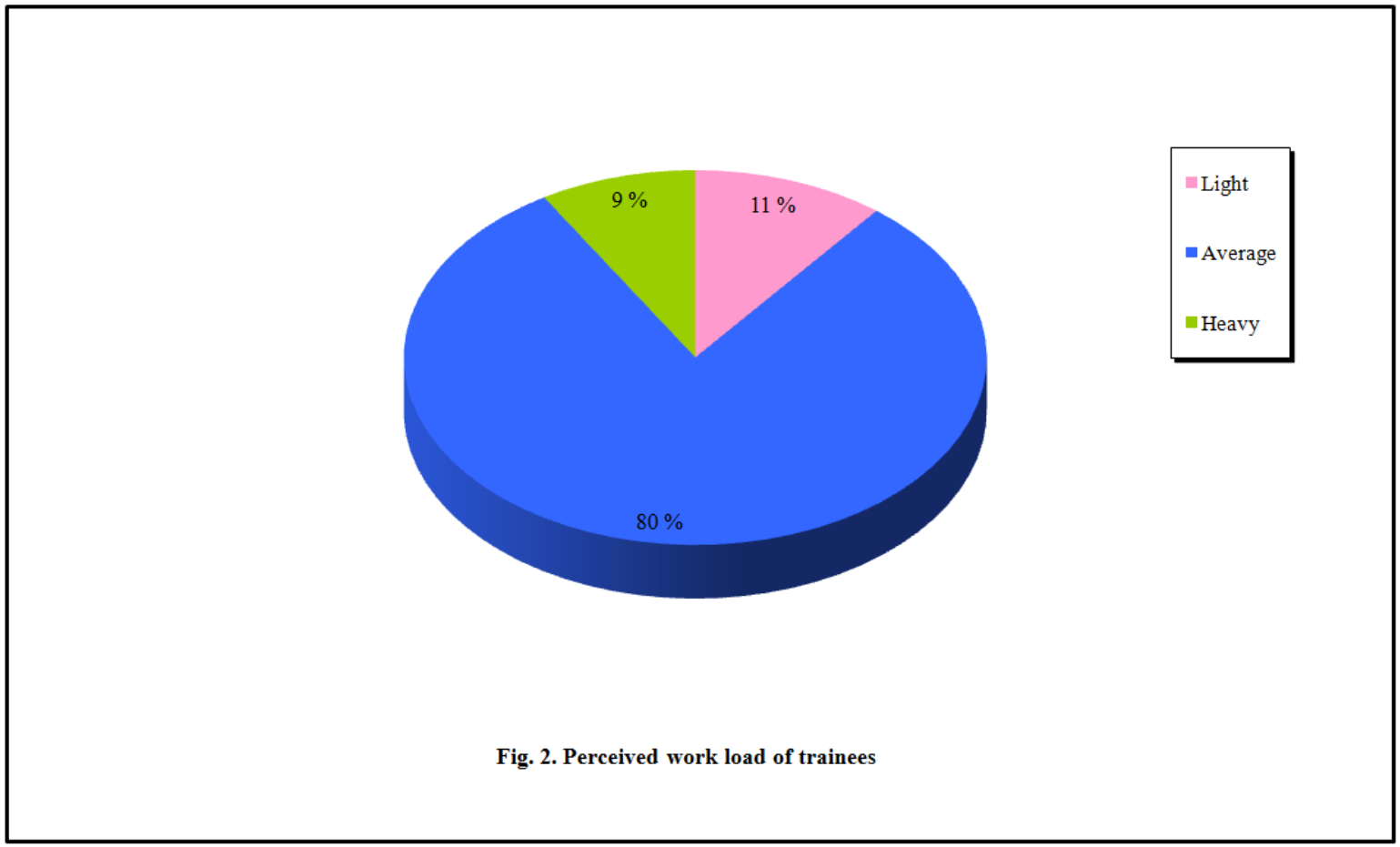


Fig. 2. Perceived work load of trainees

Fig. 2. Perceived work load of trainees

Table 4. Satisfaction of trainees regarding different aspects of foundation course training

(n=150)

Sl. No	Aspects of training	Fully satisfied		Partially satisfied		Dissatisfied	
		F	%	F	%	F	%
1	Training atmosphere	139	92.70	11	7.30	-	-
2	Subject coverage	119	79.30	31	20.70	-	-
3	Use of teaching aids	122	81.30	28	18.70	-	-
4	Facilities provided (class room facilities)	133	88.70	17	11.30	-	-
5	Duration	28	18.70	122	81.30	-	-
6	Break timings	137	91.30	13	8.70	-	-
7	Skill orientation	122	81.30	28	18.70	-	-
8	Balance of theory to practical ratio	17	11.30	129	86.00	04	2.70
9	Training methodology	124	82.70	26	17.30	-	-
10	Organization of content	122	81.30	28	18.70	-	-
11	Preparation of lectures by lecturers	129	86.00	21	14.00	-	-
12	Clarity of presentation	129	86.00	21	14.00	-	-
13	Speed of presentation	70	46.70	80	53.30	-	-
14	Discussion	69	46.00	81	54.00	-	-
15	Interest creation	114	76.00	36	24.00	-	-
16	Fields visits	94	62.70	51	34.00	05	3.30
17	Accommodation and food	130	86.70	20	13.30	-	-
18	Overall rating of the training	127	84.70	23	15.30	-	-
	Overall Satisfaction Index	90.32					

Table 5. Overall satisfaction levels of trainees about foundation course training

(n=150)

Category	Frequency	Percentage
Low (<30)	-	-
Medium (31 to 42)	17	11.30
High (>42)	133	88.70

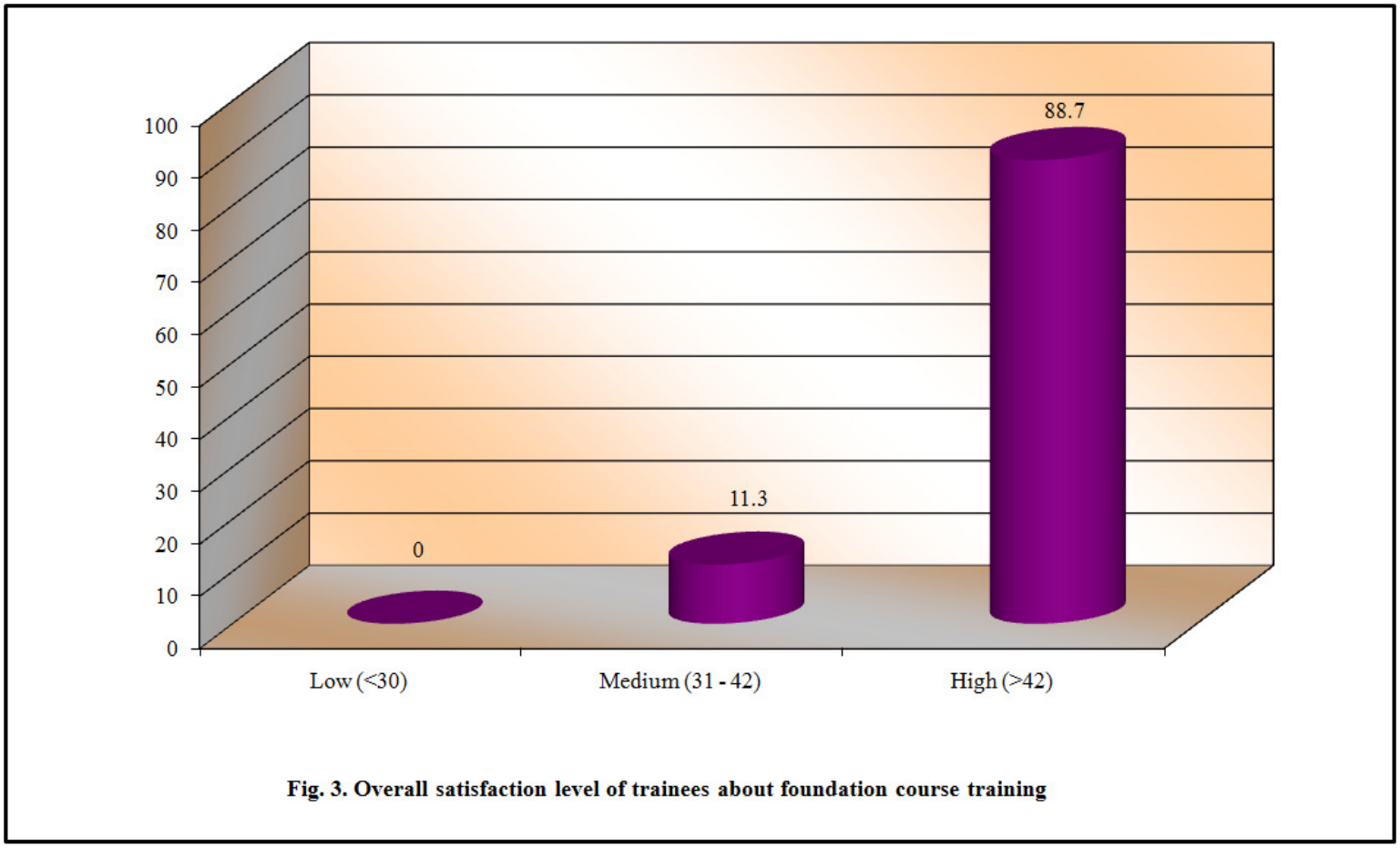


Fig. 3. Overall satisfaction level of trainees about foundation course training

Fig. 3. Overall satisfaction level of trainees about foundation course training

Table 4. Satisfaction of trainees regarding different aspects of foundation course training

(n=150)

Sl. No	Aspects of training	Fully satisfied		Partially satisfied		Dissatisfied	
		F	%	F	%	F	%
1	Training atmosphere	139	92.70	11	7.30	-	-
2	Subject coverage	119	79.30	31	20.70	-	-
3	Use of teaching aids	122	81.30	28	18.70	-	-
4	Facilities provided (class room facilities)	133	88.70	17	11.30	-	-
5	Duration	28	18.70	122	81.30	-	-
6	Break timings	137	91.30	13	8.70	-	-
7	Skill orientation	122	81.30	28	18.70	-	-
8	Balance of theory to practical ratio	17	11.30	129	86.00	04	2.70
9	Training methodology	124	82.70	26	17.30	-	-
10	Organization of content	122	81.30	28	18.70	-	-
11	Preparation of lectures by lecturers	129	86.00	21	14.00	-	-
12	Clarity of presentation	129	86.00	21	14.00	-	-
13	Speed of presentation	70	46.70	80	53.30	-	-
14	Discussion	69	46.00	81	54.00	-	-
15	Interest creation	114	76.00	36	24.00	-	-
16	Fields visits	94	62.70	51	34.00	05	3.30
17	Accommodation and food	130	86.70	20	13.30	-	-
18	Overall rating of the training	127	84.70	23	15.30	-	-
	Overall Satisfaction Index	90.32					

A look at the data in the Table 7 and Fig 4 regarding level of usefulness, it could be seen that, majority of the trainees (75.30 %) felt that the trainings were useful at medium level. About 23 per cent of the trainees felt that the trainings were highly useful and very less per cent (1.30 %) of the trainees felt that the trainings were not so useful.

4.4 Job performance levels of trainees

The data with respect to levels of job performance of trainees is presented in Table 8 and Fig 5. It was found that 70 per cent of the trainees were in high performance category, while 30 per cent were in medium performance category and none of the trainees belonged to low job performance category.

4.5 Knowledge level of trainees with regard to different topics

Integrated Pest Management

It is revealed from Table 9 that the trainees had high knowledge about gundhi bug insect attack on rice during milking stage (91.33 %) followed by control of loose smut by seed treatment (90.66 %) and control of bacterial diseases by use of antibiotics (82.00 %). About 81 per cent of trainees knew about intercropping of pigeon pea with sorghum followed by leaf curl of tomato spread by white fly (79.33 %), IPM relying heavily on economic threshold level was known by 76 per cent. Nearly 60 per cent of trainees had knowledge that early blight of potato is a soil borne disease and that in rice, hopper burn is caused by hopper insects was known by 64.66 per cent. The trainees had very less knowledge about termite being a serious pest in wheat (38.66 %) and flooding of the fields as a means to control white grubs, termites and cut worms (35.33 % each). The overall knowledge index was 69.73 meaning that their knowledge about IPM is to the extent of 69.73 per cent.

Table 10 and Fig 6 shows categorization of trainees based on their knowledge level about Integrated Pest management. It is clear that nearly 61 per cent were in high category, about 37 per cent in medium category and only two per cent in low category.

Information and Communication Technology

It could be noticed from Table 11 that, very high percentage of trainees ranging from 90-100 per cent know that mouse is a computer part (100 %). Agriculture information web sites (99.33 %), agricultural portal services (98.66 %), Google is a search engine (94.66 %), that ICT is Information and Communication Technology (92.00 %) and that communication process must consists of source, message and receiver (90.66 %) is known by most trainees. About 78 per cent of trainees had knowledge of Local Area Network, ICT tools (76.66 %), meaning of communication (76.66 %) and that there is no such network as Back Ward Area Network (73.33 %). The overall knowledge index was 88.00 meaning that their knowledge about ICT is to the extent of 88 per cent.

Categorization of trainees with respect to knowledge level about ICT is presented in Table 12 and Fig 6 revealed that, 92.70 per cent of trainees had high level of knowledge. Only 7.30 per cent of trainees belonged to medium level of knowledge and none of were in the low knowledge category.

Table 7. Overall usefulness of training topics

(n=150)

Category	Frequency	Percentage
High (>36)	35	23.30
Medium (27 to 36)	113	75.30
Low (<26)	02	1.30

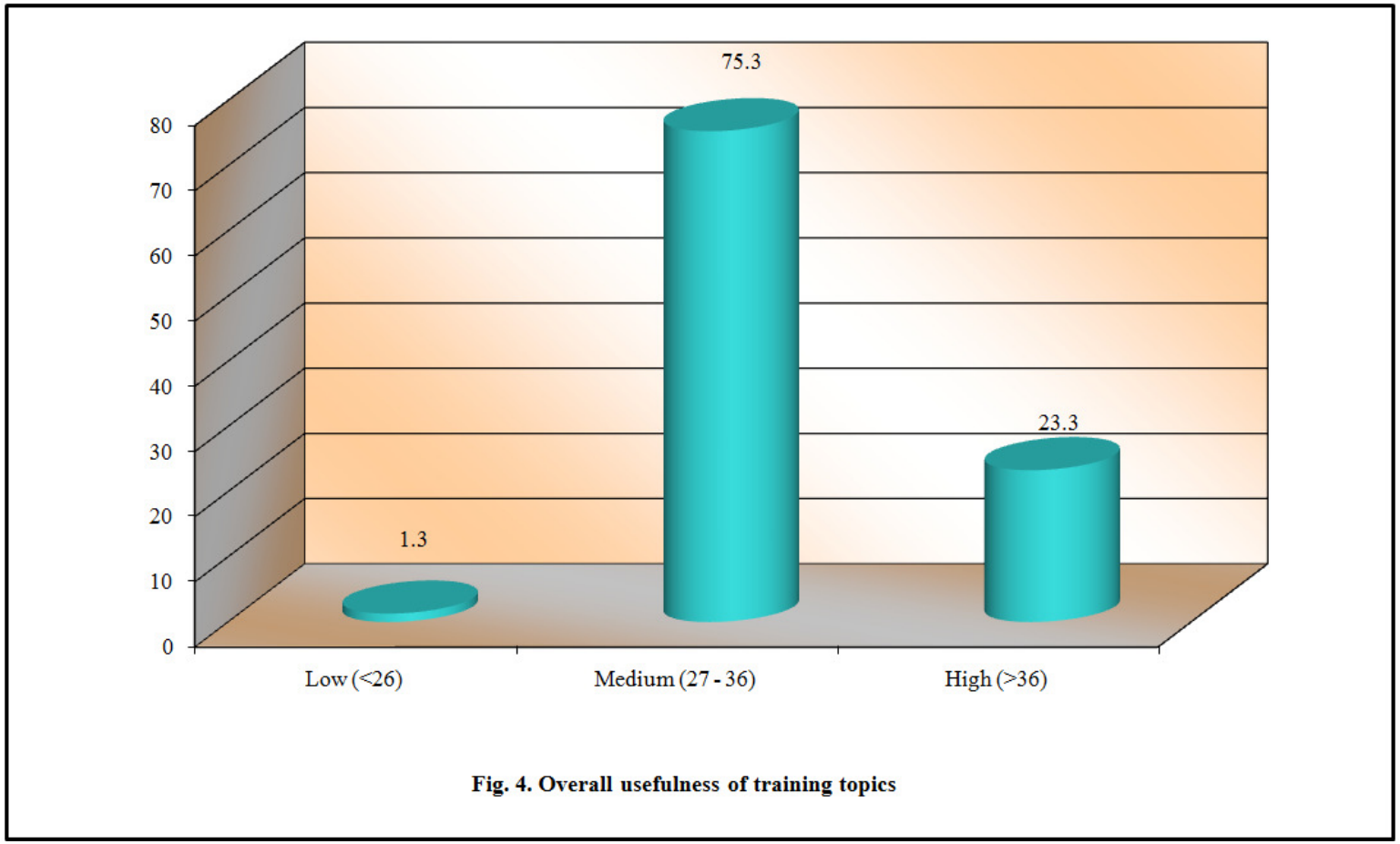


Fig. 4. Overall usefulness of training topics

Fig. 4. Overall usefulness of training topics

Table 8. Job performance levels of trainees

(n=150)

Category	Frequency	Percentage
Low (<16)	-	-
Medium (17 - 25)	45	30.00
High (> 25)	105	70.00

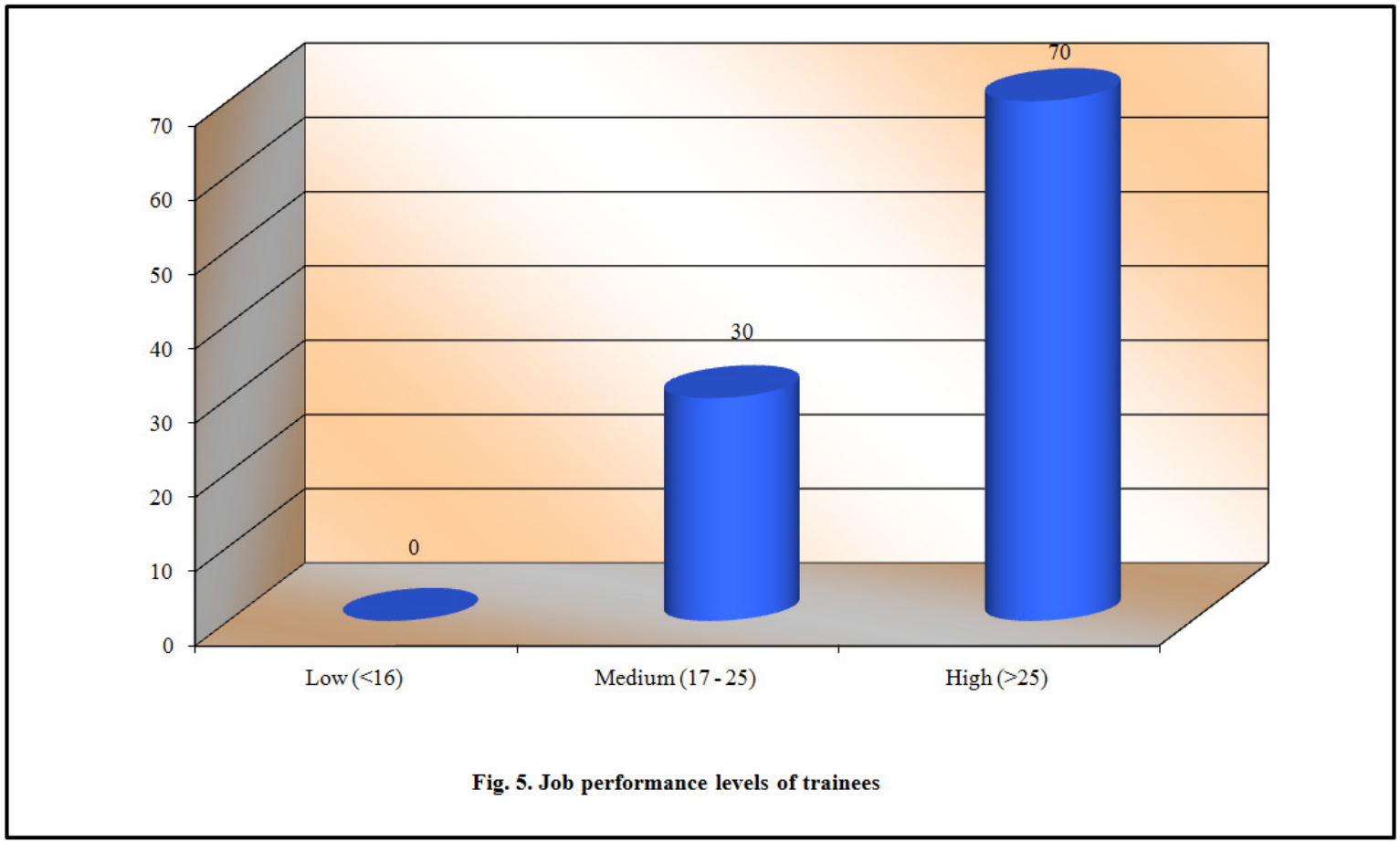


Fig. 5. Job performance levels of trainees

Fig. 5. Job performance levels of trainees

Table 9. Knowledge of trainees with regard to Integrated Pest Management

(n=150)

Sl. No	Statements	Know		Don't know	
		F	%	F	%
1	Integrated Pest Management relies heavily on economic threshold level	114	76.00	36	24.00
2	White backed plant hopper causes hopper burn in rice	97	64.66	53	35.33
3	Flooding of fields controls white grubs, termites and cut worms	53	35.33	97	64.66
4	Termite is the most serious pest in wheat	58	38.66	92	61.33
5	Early blight of potato is a soil borne disease	87	58.00	63	42.00
6	Pigeon pea intercropping with sorghum is an effective wilt control method	122	81.33	28	18.66
7	Loose smut can be controlled by seed treatment	136	90.66	14	9.33
8	Bacterial diseases are controlled by use of antibiotics	123	82.00	27	18.00
9	Gundhi bug insects attack rice during milking stage	137	91.33	13	8.66
10	Leaf curl of tomato is spread by white fly	119	79.33	31	20.66
	Overall Knowledge Index	69.73			

Organic farming and vermiculture

A look at Table 13 reveals that a very high percentage of trainees ranging from 90-100 per cent know that sesbania is green manure (100 %), they are aware of the enemies of earth worms (100 %), the meaning of organic farming (92.00 %) and right method of vermicompost storage (90.66 %). A considerable per cent of trainees ranging from 70-85 per cent had knowledge of major materials used for production of vermicompost (85.33 %), method of harvesting of vermicompost (70.66 %). About 50-60 per cent trainees had knowledge about the right time of introduction of earth worms in the pit (60.66 %), time for harvesting of vermicompost (58.00 %), use of azolla as bio fertilizers (54.00 %) and that amide fertilizers are source of nitrogen to plants (50.00 %). The overall knowledge index was 76.13 meaning that their knowledge about organic farming and vermiculture is to the extent of 76.13 per cent.

Table 14 and Fig 6 depicts the categorization of trainees based on their knowledge level about organic farming and vermiculture. The data reveals that 78.70 per cent of the trainees had high knowledge and 21.30 per cent of them had medium category and none of were in low category.

Soil-water and plant relationship

Table 15 reveals that 97.33 per cent trainees had high knowledge about suitability of different irrigation methods and drip irrigation systems. This was followed by 93.33 per cent trainees having knowledge about Command Area Development Authority. That black soils are rich in organic content and better water holding capacity is known by 84 per cent, border irrigation is known by 78.66 per cent, drip irrigation method for horticulture crops is known by 77.33 per cent, types of sprinklers used for small areas, soil is a three phase matter and knowledge of dams as source of water for major irrigation projects is known by 68.66 and 63.33 per cent respectively. The best method of irrigation of maize crop is known by 54.66 per cent. The overall knowledge index was 78.33 meaning that their knowledge about soil-water and plant relationship is to the extent of 78.33 per cent.

Table 16 and Fig 6 reveals the categorization of trainees according to their knowledge about soil-water-plant relationship. A high percentage of trainees (71.30 %) had high level of knowledge followed by medium (24.00 %) and low (4.70 %) knowledge levels.

Extension methods and tools

A look at Table 17 reveals knowledge of trainees with regard to various extension method and tools. More than 90 per cent of trainees had knowledge about most of the training methods and tools. About 81 per cent know about Participatory Rural Appraisal methods, 77.33 per cent know that effective communication is important to bring about changes. The overall knowledge index was 88.93 meaning that their knowledge about extension method and tools is to the extent of 88.93 per cent.

Table 18 and Fig 6 depicts the categorization of trainees based on the knowledge level about extension methods and tools. The data reveals that more than 90 per cent of the trainees were in high knowledge category. Only 6.70 per cent of them were in the medium category and none were in the low category.

Table 10. Overall knowledge level of trainees with regard to Integrated Pest Management

(n=150)

Category	Frequency	Percentage
Low (< 3)	03	2.00
Medium (4 to 6)	56	37.30
High (> 6)	91	60.70

Table 11. Knowledge of trainees with regard to Information and Communication Technology

(n=150)

Sl. No	Statements	Know		Don't know	
		F	%	F	%
1	Transfer of message from source to receiver is called communication	115	76.66	35	23.33
2	The agriculture information web sites are www.agriwatch.com, www.agricoop.com etc.	149	99.33	01	0.66
3	ICT means Information and Communication Technology	138	92.00	12	8.00
4	Backward Area Network (BAN) is not a computer network	110	73.33	40	26.66
5	Mobile, e-mail, internet etc. are used as ICT tools in the agriculture extension	115	76.66	35	23.33
6	Google is a search engine	142	94.66	08	5.33
7	Mouse is the part of computer	150	100.0	00	0.00
8	Network connection of several PC's within 16km radius is called Local Area Network (LAN)	117	78.00	33	22.00
9	Communication process consists of source, message and receiver	136	90.66	14	9.33
10	Agriculture production, food processing and marketing information are some of the agricultural portal services available to farmers	148	98.66	02	1.33
	Overall Knowledge Index	88.00			

Table 12. Overall knowledge level of trainees with regard to Information and Communication Technology

(n=150)

Category	Frequency	Percentage
Low (< 3)	-	-
Medium (4 to 6)	11	7.30
High (> 6)	139	92.70

Table 13. Knowledge of trainees with regard to organic farming and vermiculture

(n=150)

Sl. No	Statements	Know		Don't know	
		F	%	F	%
1	Organic farming is the technique of raising crops through natural materials	138	92.00	12	8.00
2	Sesbania is a green manure/ bio fertilizer	150	100.0	00	0.00
3	Azolla is used as bio fertilizer as it has cyano bacteria.	81	54.00	69	46.00
4	Amide fertilizers are quick available sources of nitrogen to plants	75	50.00	75	50.00
5	Dry vegetative matter, wet organic waste and dung are major materials used for production of vermicompost	128	85.33	22	14.66
6	Earthworms should be introduced in the pit after 15 days of watering	91	60.66	59	39.33
7	Vermicompost should be stored in polythene bag	136	90.66	14	9.33
8	Vermicompost will be ready for harvesting in 3 month	87	58.00	63	42.00
9	Major enemies of the earthworms are termites, ants and flat worms	150	100.0	00	0.00
10	Before harvesting of vermicompost watering should be stopped in fifteen days	106	70.66	44	29.33
	Overall Knowledge Index	76.13			

Table 14. Overall knowledge level of trainees with regard to organic farming and vermiculture

(n=150)

Category	Frequency	Percentage
Low (< 3)	-	-
Medium (4 to 6)	32	21.30
High (> 6)	118	78.70

Table 15. Knowledge of trainees with regard to soil-water and plant relationship

(n=150)

Sl. No	Statements	Know		Don't know	
		F	%	F	%
1	Dam is the source of irrigation for major irrigation projects	95	63.33	55	36.66
2	CADA stands for Command Area Development Authority	140	93.33	10	6.66
3	Soil is a three phase matter	103	68.66	47	31.33
4	Black soils are rich in organic content and have better water holding capacity	126	84.00	24	16.00
5	Suitability of different irrigation methods depends on soil, available discharge and crop	146	97.33	04	2.66
6	Border irrigation is most commonly used in grain crops, row crops, horticulture crops and vegetable crops	118	78.66	32	21.33
7	For irrigation maize crop planted in rows, the best irrigation method is furrows	82	54.66	68	45.33
8	Perforated types of sprinklers are used for small areas	103	68.66	47	31.33
9	Drip irrigation method is found more suitable for irrigating horticulture crops, vegetable crops and field crops	116	77.33	34	22.66
10	Drip irrigation system consists of pipe line systems, filters and fertilizer tanks	146	97.33	04	2.66
	Overall Knowledge Index	78.33			

Table 16. Overall knowledge level of trainees with regard to soil-water and plant relationship

(n=150)

Category	Frequency	Percentage
Low (< 3)	07	4.70
Medium (4 to 6)	36	24.00
High (> 6)	107	71.30

4.6 Extent of information used by trainees after receiving the training

Table 19 and Fig 7 depicts the extent information used by the trainees after receiving the training. It is evident that 86.70 per cent of the trainees had used the knowledge gained by them to the extent of 76-100 per cent. Ten per cent trainees had used the information ranging from 50-75 per cent and only 3.30 per cent had used the information between 26-50 per cent.

4.7 Relationship between independent and dependent variables

The data pertaining to correlation between personal and socio-psychological characteristics of trainees with their level of job performance is presented in Table 20. The results of the test revealed that the independent variable viz. age, gender, education, total experience, experience in present position, trainings undergone, mass media exposure and knowledge did not show significant relationship with the job performance of the trainees. Only one variable i.e., satisfaction of training exhibited a positive and significant relationship with job performance.

Table 21 explains the relationship between personal and socio-psychological characteristics of trainees with their level of knowledge. The results of the test revealed that the independent variables are viz. age, gender, education, total experience, experience in present position, trainings undergone and job performance did not show significant relationship with the knowledge of trainees. Only one variable i.e., mass media exposure exhibited a significant relationship with knowledge of trainees.

Table 17. Knowledge of trainees with regard to extension methods and tools

(n=150)

Sl. No	Statements	Know		Don't know	
		F	%	F	%
1	Communication is the process used by extension to bring about change	116	77.33	34	22.66
2	Training is a function of knowledge, skill and attitude	150	100.0	00	0.00
3	Foundation training is a inductive training	138	92.00	12	8.00
4	To study a farming system, the best Participatory Rural Appraisal method is resource mapping	121	80.66	29	19.33
5	The full form of A.T.M.A is Agricultural Technology Management Agency	149	99.33	01	0.66
6	Meeting is not a communication process	85	56.66	65	43.33
7	Method demonstration is based on the principle of learning by doing	136	90.66	14	9.33
8	Farmer Field Schools were used mainly for Integrated Pest management	149	99.33	01	0.66
9	Kurukshetra is a monthly magazine concerned with rural development	146	97.33	04	2.66
10	SWOT means Strengths Weakness Opportunities and Threats	144	96.00	06	4.00
	Overall Knowledge Index	88.93			

Table 18. Overall knowledge level of trainees with regard to extension methods and tools

(n=150)

Category	Frequency	Percentage
Low (< 3)	-	-
Medium (4 to 6)	10	6.70
High (> 6)	140	93.30

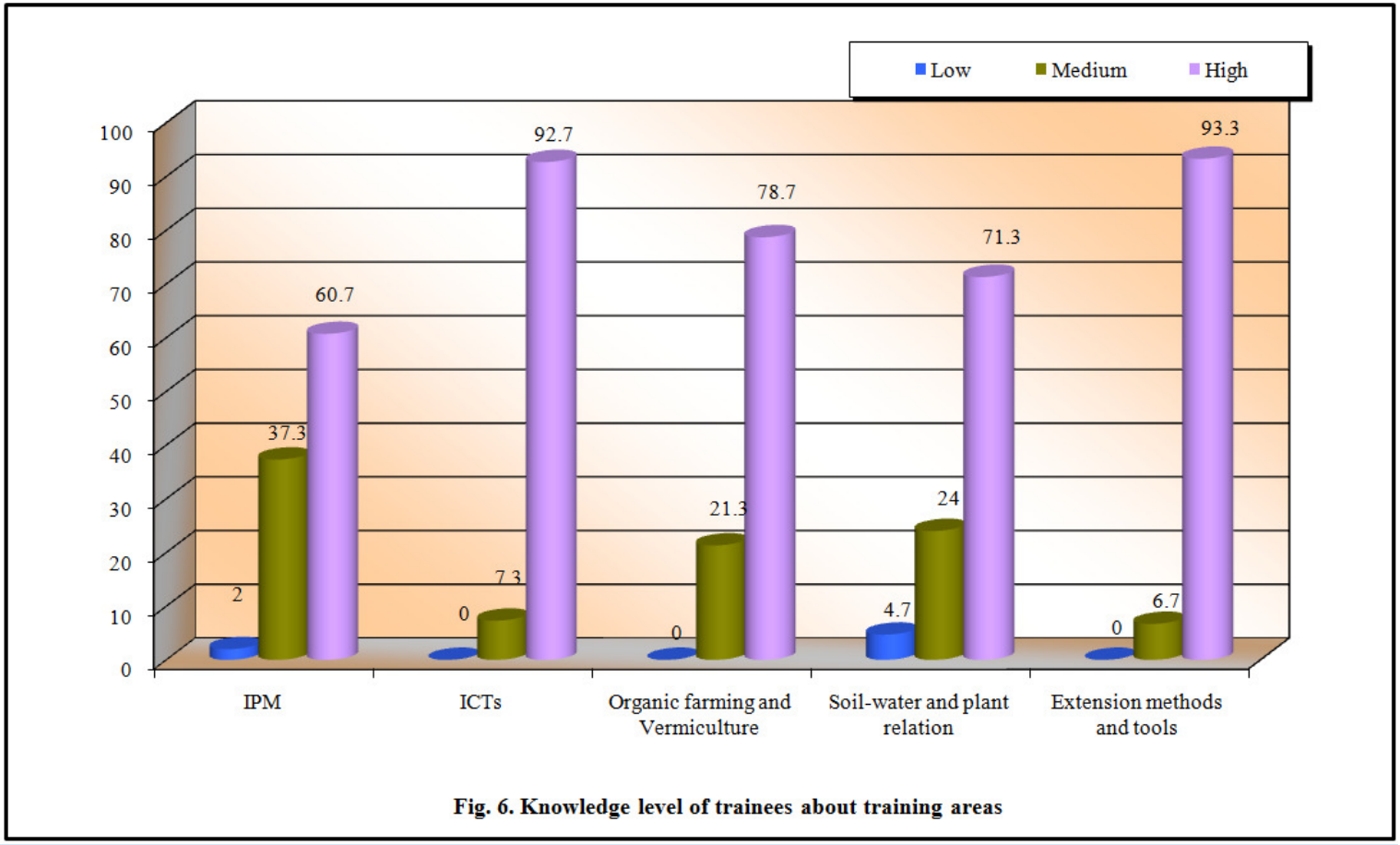


Fig. 6. Knowledge level of trainees about training areas

Fig. 6. Knowledge level of trainees about training areas

Table 19. Extent of information used by trainees after receiving the training

(n=150)

Sl. No	Category	Frequency	Percentage
1	0 - 25%	-	-
2	26- 50%	05	3.30
3	51- 75%	15	10.00
4	76- 100%	130	86.70

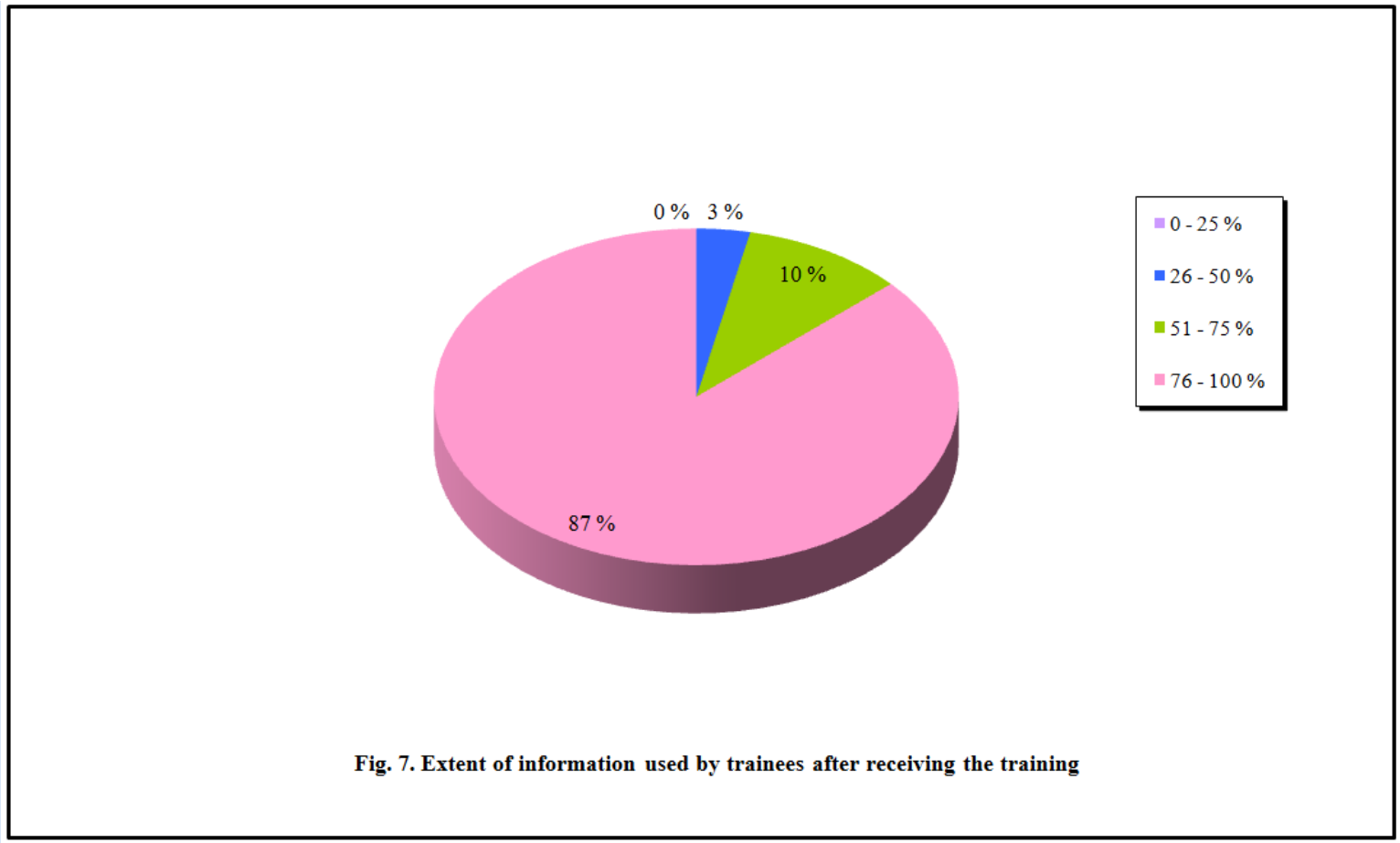


Fig. 7. Extent of information used by trainees after receiving the training

Fig. 7. Extent of information used by trainees after receiving the training

Table 20. Relationship between independent variables and job performance of trainees

Independent variables	Pearson correlation Co-efficient 'r' value
	Trainees (n=150)
Age	-0.005^{NS}
Gender	-0.034^{NS}
Education	0.058^{NS}
Total experience	-0.100^{NS}
Experience in the present position	0.026^{NS}
Trainings undergone	-0.013^{NS}
Mass media exposure	-0.031^{NS}
Knowledge	-0.007^{NS}
Training satisfaction	0.223**

** - Correlation is significant at the 0.01 level
NS – Non-Significant

Table 21. Relationship between independent variables and knowledge of trainees

Independent variables	Pearson correlation Co-efficient 'r' value
	Trainees (n=150)
Age	-0.086^{NS}
Gender	-0.068^{NS}
Education	0.061^{NS}
Total experience	0.065^{NS}
Experience in the present position	-0.097^{NS}
Trainings undergone	-0.093^{NS}
Mass media exposure	0.177*
Job performance	-0.007^{NS}

* - Correlation is significant at the 0.05 level
NS - Non-Significant

5. DISCUSSION

The findings of the present study are discussed in this chapter under the following headings.

5.1 Trainings organised under Staff Training Unit

5.2 Socio-psychological characteristics of the trainees

5.3 Satisfaction of trainees regarding different aspects of training programme

5.4 Extent of usefulness of training topics

5.5 Job performance of trainees

5.6 Knowledge of trainees with regard to different topics

5.7 Extent of information used by trainees after receiving the training

5.1 Trainings organized under Staff Training Unit

The Staff Training Unit (STU), UAS, Dharwad is organizing different types of training programmes every year for officials of different development departments. A list of the trainees who had participated in the trainings organized by STU for the last five years (2010 - 2015) was prepared (Table1.1). Although number of trainings were more in 2012-13(41 trainings and 791 participants), the number of participants during the year 2013-14 was more (30 trainings and 848 participants).

All the trainings conducted during 2013-14 were the “Foundation Course Training” meant for staff of KSDA. The foundation course was the brainchild of the Minister of Agriculture of Karnataka State, Krishna Bhyregouda who felt that there was need to train officers of the KSDA in order to update them with recent technologies developed by the agriculture scientists. Needs of farmers are also changing and it was therefore important that officers of department of agriculture are able to face these challenges by keeping abreast with recent technologies.

Two important reasons for selection of trainees from the “Foundation Course Training” were that firstly the content and format of the training was the same for all batches. This makes it easier for framing question and evaluation. Secondly 848 participants attended the Foundation Course during 2013-14 and so sufficient sample for the study could be got.

As per the direction of the Agriculture Minister the Foundation Course was planned by UAS Dharwad and UAS Bangalore. UAS, Dharwad catered to the staff of the seven districts under the jurisdiction of UAS Dharwad. These 848 trainees were the population for the study. Those who responded i.e.150 became the sample.

5.2 Socio-psychological characteristics of trainees

The socio-psychological characteristics of trainees considered for the study are age, gender, education, total experience, experience in present post and training undergone. Each of the characteristics of the trainees is discussed here under.

5.2.1 Age

As is shown in Table 1, 63.30 and 25.30 per cent of the trainees were in middle (36 - 50 years) age and older age (above 51 years) respectively. More number of trainees in the middle age group could be because majority of them had been promoted to the positions AAOs after putting in a service of 15 to 20 years as Agriculture Assistant. Moreover these employees who are in the mid of their career may have been deputed for these trainings as they need to update their knowledge on recent developments in the field of agriculture. The findings are similar with the findings of Bosco (2000) who reported that most AAOs for his study were in the age range of 35-50 year.

5.2.2 Gender

Table 1 revealed that 80.70 per cent of trainees were male in the training. Until recently agriculture subject was dominated by male and since only boys used to enroll themselves, most employees especially the middle age group are males. Due to this we have seen that more number of trainees were males. The results are in confirmation with the study by Faiz and Narayanaswamy (2011) and Patel *et al*. (2012).

5.2.3 Education

The education level of trainees according to Table 1 revealed that majority (30.70 %) of the trainees had a post graduate degree. This may be due to fact that boys and girls these days do not stop studying at the graduate level. Moreover a higher degree will lead to specialization in particular subjects and will also increase the job prospects. With this in view most of the employees of the KSDA have taken up post graduation. These findings are in line with that of Nagananda *et al*. (2006).

5.2.4 Experience

The total experience of the trainees from the Table 1 indicated that 35.30 per cent of the trainees had 14 to 23 years experience. The long period of experience could be because government employees hardly change jobs. Once they join the State Department of Agriculture they are there till they retire. As has already have seen most trainees were middle aged so their service was also considerable. Similar results reported by Manjula (2000).

Regarding their experience in the present post, most of them (64.0 %) had less than seven years. The probable reason could be because of their promotion into the present post i.e., from AAs to AAOs. Similar results were reported by Manjula (2000).

5.2.5 Trainings undergone

In their long years of service in the department of 14 - 23 years most of the employees of KSDA have attended 6-10 or even more trainings (Table 1). This might be because attending of trainings is mandatory for the employees of the department of agriculture. Another possible reason could be that they need to keep themselves abreast with advancement of knowledge, new skills, and various other related technologies. In order to enhance the efficiency of human resources and to improve the capability of staff members, the agriculture department is providing special attention by arranging various training programmes.

5.2.6 Mass media exposure level

The data presented in the Table 2 revealed that, large majority (90.70 %) of trainees had high level of mass media exposure.

Most of the trainees were exposed to all mass media. As they were post graduates and their quest for knowledge led them to seek information from different sources like radio, television, news papers magazines, journals etc. They also search information from internet. Greater exposure of an individual to mass media helps in getting to know new ideas, different methods and techniques of approaching problems, proper utilization of natural resources as well as to develop community at large. Similar results were reported by Gopika *et al*. (2015).

5.2.7 Perceived work load

Average work load has been reported by majority (80.70 %) of the trainees (Table 3 and Fig 2). This means that employees of the KSDA also attended the trainings are neither overburdened with work nor are they having less work than their capacities. This is a good sign that because employees will be able to perform better when they are not burdened by too much work. The seasonal work load and filling up of all the posts in the department could be other reason for the staff to be in a comfortable position. Similar results reported by Gopika *et al*. (2015).

5.3 Satisfaction of trainees regarding different aspects of training programme

Satisfaction is the act of fulfilling a need desire, or appetite, or the feeling gained from training fulfillment. Satisfaction of trainees regarding different aspects of training are atmosphere, subject coverage, teaching aids, break timings, methodology, field visits, etc. have been covered.

The overall satisfaction index was 90.32 and the data presented from Table 4 showed that 92.70 per cent of trainees were fully satisfied with training atmosphere. The categorization of trainees based on their satisfaction level of training showed that about 89 per cent of trainees were highly satisfied with training aspects (Table 5 and Fig 3). This could be because the Staff Training Unit UAS, Dharwad is well established with good infrastructure facilities like classrooms, good teaching aids, good food and accommodation, transport facility etc. The staff of STU and the subject specialists or the resource person invited to conduct classes are well qualified and knowledgeable. A few of trainees expressed dissatisfied with field visits and theory-practical ratio. Since most of the trainees are basically field level workers in rural areas, they probably felt that more number of practical oriented classes and field visits would have been helpful rather than theory classes. This needs to be noted in future trainings. Similar findings were by Natikar and Devendrappa (2007) on their study of the trainings conducted by STU Dharwad.

5.4 Extent of usefulness of training topics

Usefulness means the quality of having utility and especially practical worth or applicability. The training topics covered in this training were various aspects of field crops, horticulture crops,

sericulture, Integrated Pest Management, Integrated Farming System, organic farming, dairying etc. The overall usefulness index was 70.00 and the results in Table 6 revealed that, 66 per cent of trainees expressed that training programmes organized on Integrated Pest Management and Integrated Farming System were most useful. Between 50-60 per cent felt that ICT, extension methods and tools, soil-water and plant relation and organic farming were most useful. When overall usefulness was considered nearly 99 per cent of the trainees felt that training had high to medium level of usefulness (Table 7 and Fig 4). Some of the possible reasons for this finding could be;

Integrated Pest Management is a management approach that encourages natural control of pest populations by anticipating pest problems and preventing pests from reaching economically damaging levels. Integrated Farming System approach introduces a change in the farming techniques for maximum production in the cropping pattern and takes care of optimal utilization of resources. People are also now going for organic farming because of the harmful effects of pesticides. Organic crop also have good demand in the market and farmers need information on these topics. Topics like ICT tools and extension methods and tools are very useful to the trainees as they were able to learn new information and communication technologies and these technologies are useful to effectively work in the field area.

The knowledge gained through training programmes is very useful because the technologies would be disseminated to the farming community who are the ultimate users of these technologies. Further, IPM, IFS, organic farming and soil-water, plant relation techniques / practices would assist the farmers in rendering crop production system more productive, profitable and sustainable. This might be the possible reasons for such results. The findings are line with Natikar and Devendrappa (2007).

5.5 Job performance of trainees

Job performance assesses whether a person performs a job well. Performance is an important criterion for organizational outcomes and success. Job performance is important for job security, career development advanced opportunity and earning potential.

In the present study it was seen that, 70 per cent of the trainees were in high job performance category (Table 8 and Fig 5). This means that trainees felt that they were performing their job well. The reasons for good job performance might be their commitment to the organization and the farming community. The Agriculture Officers are well aware of the mandatory activities of department of agriculture and more over majority of them have vast experience in the department of agriculture. Another reason might be the job performance was measured using the self rating scale. It is a well known fact that in self rating a person tends to rates himself high and so the present finding. The relationship between the independent variables and job performance (Table 20) revealed that, only one variable i.e. satisfaction of training exhibited a positive and significant relationship with job performance. This might be due to the training atmosphere especially physical and infrastructural facilities. The training topics covered and training by experts in the most recent and emerging topics could have led to satisfaction and this in turn has helped them to perform well. The rest of the

variables that age, gender, education, total experience, experience in present position, training undergone, mass media exposure and knowledge are not significant related with job performance because most of the activities are mandatory and they have to do it compulsorily irrespective of other factors affecting their work. The findings are line with Bosco (2000).

5.6 Knowledge of trainees with regard to different topics

5.6.1 Integrated Pest Management

Integrated Pest Management is a sustainable approach to managing pests by combining biological, cultural, physical and chemical tools in a way that minimizes economic, health and environmental risks. The training of Agriculture Officers on IPM was specifically aimed to improving the capabilities and skills of the participants to become more able to facilitate IPM technology and process to the farmers.

The overall knowledge index of 69.73 regarding IPM was quite good (Table 9). This could be due to the fact that most trainees developed a good understanding of the subject. As IPM is the need of the hour to overcome the ill effects of the indiscrimination use of chemical pesticides. Farmers also demand IPM technology to save costs, and protect land, animals and human health.

Good knowledge of IPM is also exhibited in the results of Table 10 and Fig 6 which showed 98 per cent trainees were in the high to medium category of knowledge level. Similar findings are reported by Sharma *et al*. (2013).

5.6.2 Information and Communication Technology (ICT)

The knowledge of trainees regarding ICTs with an overall knowledge index 88 (Table 11) was good. More than 90 per cent of trainees knew about ICT. Information and Communication Technology has become the most important and present the era is most rightly called the era of ICT.

India is considered the hub of ICT and the areas of ICTs are manifold and in many fields. In agriculture ICTs can be used right from trying to convince farmers for adoption, to planning for land utilization, maintaining of pest / insect attack, analysis of agricultural data to explore markets. The ICTs could range from radio to satellite imagery to hand held devices like mobile phones with various crops. Tele-centers have been established in villages where farmers can tap these resources and access information using new ICTs, such as e-mail, the World Wide Web, electronic networks, teleconferencing and distance learning tools. Information helps farmers to participate in decision-making, exchange ideas with others and improves the quality of life of the people. Every day new ICT tools are developed and therefore it is very important that the agriculture officers keep themselves updated with relevant knowledge.

Table 12 and Fig 6, showed 99 per cent trainees were in the high to medium category of knowledge level. This could be because of repeated trainings attended in different institutions or departments or universities due to this increased their knowledge on ICTs. The knowledge index of 88 could reflect that knowledge about ICT is to the extent of 88 per cent. The results are in line with results of Swaminathan and Sujatha (2013).





Plate 1. Field visits

Plate 2. Training on ICT

5.6.3 Organic farming and vermiculture

The data in Table 13 showed that, the overall knowledge index of the trainees with regard to organic farming and vermiculture is as high as 76.13. Organic farming is a production system that avoids or largely excludes the use of synthetically compounded fertilizer, pesticides, growth regulates and livestock feed additives. Organic manure is of paramount importance not only in augmenting the crop production but also for making the agriculture sustainable as an eco-friendly means of soil health management. Vermicompost is one of the important components of organic farming. It is a simple technology of converting organic wastes into organic compost with the help of earthworms. Vermicompost improves the physical and biological condition of soil, improves soil fertility and pulverizes it through their churning and turning action in addition to contributing plant nutrients, improves aeration and water holding capacity.

Table 14 and Fig 6 revealed 99 per cent trainees were in the high to medium category of knowledge level. The probable reasons for processing high knowledge about organic farming and vermiculture could be exposure to these concepts whether through mass media or by the way of repeated trainings attended in different training centers / institutions / universities. Since vermicompost is strongly being recommended by scientists and vermicomposting is being propogated in a big way by Intensive awareness campaigns organized by department of agriculture.

5.6.4 Soil-water and plant relationship

The results presented in the Table 15 indicated knowledge of trainees about soil-water and plant relationship. It was seen that the overall knowledge index was 78.33, which was quite good. Soil and water are like the heart soul of agriculture. One cannot think of agriculture without these two elements. Faulty agricultural practices and indiscriminate use of have chemicals have led to deterioration of soil and depletion of water. If agriculture needs to be sustained for future generation then the need of the hour is soil and water conservation. Soil conservation is the combination of different approaches with disciplines like forestry, agronomy, engineering and soil science. Soil and water conservation go hand in hand. If water run-off s checked soil is conserved and if soil erosion is controlled water is conserved. Maintaining soil-water and plant relationship is therefore very important.

Good knowledge of soil-water and plant relationship is also exhibited in results of Table 16 and Fig 6 which showed that more than 95 per cent of trainees were with high to medium category of knowledge level. This might due to the reason that the extension personnel of the department disseminate innovative practices regarding soil-water and plant relationship through programmes like Krishi Honda Bhagya, Bhuchetan, Jalanayan Abhivruddhi Yojana, etc. Such trainings and awareness campaigns on various schemes and mass media exposure might have increased their knowledge on soil-water and plant relationship.

Plate 4. Training on soil-water and plant relation

Plate 5. Classrom teaching

Plate 6. Group activities

Plate 7. Fitness activities

5.6.5 Extension methods and tools

The overall knowledge index regarding extension methods and tools was as high as 88.93 (Table 17). Effective communications is one of the most important life skills to imporove their social life as well as express their ideas better at work. Uses of appropriate extension methods and tools have profound influence in increasing the knowledge and adoption of any idea by the individuals in a social system. Use of extension methods like method and result demonstration, farmer's field schools, study tours etc. are based on the principle of learning by doing, if properly included during training programmes would increase the knowledge of trainees. Participatory Rural Appraisal and Rapid Rural Appraisal methods are new techniques which will help extension personnel to build rapport with rural folk and collect information about the village in quick manner. The trainees seem to have grasped this topic well. Trainees also learnt about various farm magazines which would help them in their work.

Good knowledge of extension methods and tools is also exhibited in results of Table 18 and Fig 6 which showed that more than 99 per cent of trainees were with high to medium category of knowledge level. The relationship between the independent variables and knowledge of trainees with regard to training topics (Table 21) revealed that, only one variable i.e., mass media exposure exhibited a significant relationship with knowledge of trainees. This could be because majority of them might have regularly listened and viewed various mass media programmes. Greater exposure of an individual to mass media helps in knowing new ideas, different methods and techniques of approaching problems, proper utilization of natural resources.

It is evident that the knowledge of trainees on the selected five topics of IPM, ICTs, organic farming and vermiculture, soil-water and plant relationship and extension methods and tools was very good. This could be not only because of the course content but also because of the effective delivery by the knowledge and experienced staff of the university who have imparted this knowledge. The STU has proved that it has been able to fulfill the promise with which it was established.

5.8 Extent of information used by trainees after receiving the training

It is heartening that nearly 87 per cent of the trainees are using 76 – 100 per cent of the information in the day to day work. The other 13 per cent are using between 26 – 75 per cent (Table 19 and Fig 7).

The first and foremost reason why the trainees are using the information is that the content of the trainings was planned keeping in view the needs of the trainees and their job mandates. These positive results could be not only because of the course content but also because of the effective delivery by the knowledge and experienced staff of the university who have imparted this knowledge. All in all it means that the trainees have not only gained the knowledge but effectively used this knowledge to perform their jobs well in serving the farming community.

6. SUMMARY AND CONCLUSIONS

In view of the changing scenario, the extension personnel require latest knowledge and skill for educating and training the farmers. Agricultural development today calls for well trained extension personnel to keep pace with changes. The extension personnel are a vital link between research, organization and farmers.

The Staff Training Unit, UAS, Dharwad was started in 1992 with a view to promote professional competency among the staff of various organizations within and outside the state of Karnataka. The STU is organizing institutional field oriented training programmes for various personnel of private, government and quasi-government organizations. The “Foundation Course Training” is one such course where the agricultural officers of the Karnataka State Department of Agriculture are trained.

The present study was taken up with the following the specific objectives.

- To analyze the training programmes organized by the Staff Training Unit.
- To measure the satisfaction levels of the trainees with regard to the foundation course.
- To study the effectiveness of training programmes in terms knowledge level and job performance of the trainees.

The study was conducted during 2015-16 by ex-post facto research design in purposively selected districts under the University of Agricultural Sciences, Dharwad. viz., Dharwad, Gadag, Belagavi, Haveri, Vijayapur, Bagalkota and Uttar Kannada of Karnataka state.

The Staff Training Unit, UAS, Dharwad is organizing different types of training programmes every year to officials of different development departments. The sample for the study consisted of 150 officials of the State Department of Agriculture who had attended the “Foundation Course Training” during 2013-14.

In the light of objectives set for the study, variables such as knowledge, job performance and satisfaction of training were studied as the dependent variables and variables such as age, gender, education, total experience, experience in the present post and trainings undergone were the independent variables.

A questionnaire was developed to collect information and documentary data were taken from the STU form the previous five years i.e., 2010-2015. The questionnaire contained statement to measure knowledge, job performance and satisfaction. Teacher made knowledge and job performance scales were developed to study the knowledge of trainees about different training areas and the job performance in their respective jobs. To study satisfaction of training a scale developed by Singh and Pandey (2012) was used. The questionnaire was developed in local language in Kannada because not all trainees were well versed in English. After pre-testing the questionnaire and based on the pre-test, necessary modifications were made. The questionnaire was used to collect the data from the respondents by surface mail. The collected data was tabulated and analyzed using frequency, percentage, class interval and correlation. The major findings of the study are as follows:

1. Over a period of five years from 2010 – 2015, 140 training courses were conducted in which 3030 trainees participated. It was seen that during 2013-2014, 21.42 per cent of training courses were conducted and 27.98 per cent of trainees had participated.

2. Majority (63.30 %) of the trainees belonged to middle age group (36 – 50 years). About 25 per cent of them belonged to old age group (51 and above) and remaining 11.30 per cent of the trainees were in the young age group of 18 – 35 years. About 31 per cent of the trainees had M.Sc. (Agri. and Allied) degree and 22.70 per cent of them were B.Sc. (Agri. and Allied) graduates.
3. The trainings were highly dominated by male trainees (80.70 %) with only 19.30 per cent female trainees.
4. The study indicated that 35.30 per cent of the trainees had between 14 to 23 years of total experience whereas in the present post majority of the trainees (64.00 %) had less than 7 years experience. About 39 per cent of the trainees had undergone 6-10 training programmes.
5. A large majority of the trainees (90.70 %) had high level of mass media exposure.
6. Majority (80.70 %) of the trainees perceived their workload as average.
7. More than 90 per cent of trainees were fully satisfied with training atmosphere and break trainings during the training. Between 86 – 88 per cent were fully satisfied with facilities provided in the classroom, food and accommodation, preparation of lectures and clarity of presentation. About 86 per cent of trainees were partially satisfied with balance of theory-practical ratio followed by duration of training (81.30 %).
8. Majority of the trainees (66.00 %) expressed that training programmes organized on Integrated Pest Management and Integrated Farming Systems were most useful.
9. Seventy per cent of the trainees were in high job performance category, while 30 per cent were in medium performance category.
10. Nearly 61 per cent had high knowledge level about Integrated Pest Management, 92.70 per cent had high knowledge about ICTs, 78.70 per cent of the trainees had high knowledge about organic farming and vermiculture, 71.30 per cent had high level of knowledge of soil-water and plant relationship and more than 90 per cent of the trainees had high knowledge about extension methods and tools.
11. Majority (86.70 %) of the trainees had put into practice the knowledge gained by them to the extent of 76-100 per cent.
12. No significant relationship was found between the age, gender, education, total experience, experience in the present post, mass media exposure level and trainings undergone with knowledge and job performance. Only satisfaction of trainees about training aspects showed positive and significant relationship with job performance and mass media exposure level showed significant relationship with knowledge.

Implications

- The higher level of knowledge of the trainees with regard to IPM, ICTs, Organic farming and vermiculture, Soil-water and plant relationship and Extension methods and tools implied that, the training was highly effective for the extension personnel of KSDA. Such trainings could also be planned for the staff of other development line departments of Karnataka.

- The findings of the study indicated the need for more practical oriented teaching rather than class room teaching. This will help the UAS to assess itself and consider ways to overcome this lacuna so as to cater to the requirement of the trainees and plan trainings in future.

Suggestions

1. The present study was conducted with reference to the Foundation Course only. Similar studies on other trainings conducted by STU can also be studied.
2. Due to the limitation of time and recourses of the student researcher, the study was conducted only in seven districts under jurisdiction of UAS Dharwad. A comparison of trainings organized by UAS Bangalore could be made.
3. The present study was conducted taking into consideration only a few selected training topics. Hence a study can be undertaken to know the effect of all training topics covered in STU.
4. Effectiveness of STU trainings on farmers may be studied.
5. A comparison between on and off campus training programme conducted by STU may also be studied.

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APPENDIX
QUESTIONNAIRE

"Effectiveness of Foundation Course Training Conducted by Staff Training Unit"

1. General information :

i. Name of the respondent :
ii. Designation :
iii. Place of working :
iv. District :
v. Taluk :
vi. Experience :
(Including service other than department of agriculture)

a) Total service in the department of agriculture/institute? _____
b) Number of years completed in the present post? _____

2. Personal characteristics :

i. Age :
ii. Gender :
iii. Education :
iv. Mobile :
v. E-mail :

3. Mass media exposure level :

Please give particulars of sources from which you obtain information related to your job and the usefulness of such information.

R – Regular O – Occasional N – Never

Sl. No	Mass media	Frequency of use		
		Regular	Occasional	Never
1	Newspaper			
2	Radio			
3	Television			
4	Magazine			
5	Superiors in the department			
6	Web/Internet resources			
7	Professional Colleagues			

4. Perceived work load

i) How do you perceive your workload?

a) Very light b) Light c) Average d) Heavy e)Very heavy

5. Trainings attended:

Sl. No	Name of the Training Programme	Dates	Duration
1			
2			
3			
4			
5			

6. Satisfaction of trainees regarding different aspects of foundation course training

Sl. No	Aspects of training	Fully satisfied	Partially satisfied	Dissatisfied
1	Training atmosphere			
2	Subject coverage			
3	Use of teaching aids			
4	Facilities provided (class room facilities)			
5	Duration			
6	Break timings			
7	Skill orientation			
8	Balance of theory to practical ratio			
9	Training methodology			
10	Organization of content			
11	Preparation of lectures by lecturers			
12	Clarity of presentation			
13	Speed of presentation			
14	Discussion			
15	Interest creation			
16	Fields visits			
17	Accommodation and food			
18	Overall rating of the training			

7. Usefulness of training topics

Sl. No	Training topics	Most useful	Useful	Somewhat useful
1	Field crops			
2	Oilseed and pulse crops			
3	Horticulture crops			
4	Dry farming practices			
5	Bio-fertilizers			
6	Sericulture			
7	Integrated Pest Management			
8	Integrated Farming System			
9	Dairying			
10	Fishery			
11	Bee-keeping			
12	Earthworm cultivation			
13	Use of ICT in agriculture			
14	Extension methods and tools			
15	Soil, water and plant relation			
16	Organic farming			

8. Job performance:

The following are the items describing your job, each item is provided with five response category namely. Excellent (E), Good (G), Satisfactory (S), Poor (P), Very Poor (VP). Please indicate your response against each category by putting (√) mark against it

Sl. No	Statements	E	G	S	P	VP
1	Conducting on farm testing to identify the location specificity of agricultural technologies under various farming system.					
2	Organizing frontline demonstrations to establish production potential of various crops and enterprises on the farmer's fields.					
3	Organizing need based training for farmers to update their knowledge and skills in modern agricultural technologies.					
4	Training of extension personnel to orient them in the frontier areas of technology development.					
5	Creating awareness about improved agricultural technologies among various clienteles through an appropriate extension programmes.					
6	Production of quality seeds, planting materials, livestock breeds, animal products, bio-products etc. as per the demand and supply of the same to different clienteles.					
7	Work as knowledge and resource Centre of agricultural technology to support the initiatives of public, private and voluntary sectors for improving the agricultural economy of the district.					

9. Statements to test knowledge (give right mark to the correct answers)

Integrated Pest Management

1. Integrated Pest Management relies heavily on

a) Economic threshold level b) Total loss of crops
c) Resistant pest d) Susceptible pest

2. In rice, which of the following insect causes hopper burn?

a) Brown plant hopper b) White backed plant hopper
c) Gundhi bug d) Both a and b

3. Flooding of the fields will help in control of

a) White grubs b) Termites
c) Cut worms d) All of these

4. Most serious pest of wheat is

a) Termite b) Thrips
c) Leaf hopper d) Grass hopper

5. Early blight of potato is

a) Soil borne disease b) Air borne
c) Seed borne d) All of the above

6. For the effective control of wilt, pigeon pea should be intercropped with

a) Maize b) Pearl millet
c) Sorghum d) Mung

7. Loose smut is controlled by

a) Soil treatment b) Seed treatment
c) Chemical spray d) None of these

8. Bacterial diseases are controlled by use of chemicals

a) Antibiotics b) Insecticides
c) Fungicide d) Pesticide

9. Gundhi bug insect attacks rice during

a) Germination b) Flowering
c) Milking stage d) Harvesting stage

10. Leaf curl of tomato is spread by

a) Jassids b) White fly
c) Aphids d) Nematodes

Information and Communication Technology

1. Transfer of message from source to receiver is called

a) Communication b) Verbal communication
c) Mass communication d) Non-verbal communication

2. Which of the following web sites are agriculture information web sites?

a) www.agriwatch.com b) http://raitamitra.kar.nic.in
c) www.agricoop.nic.in d) All the above

3. ICT means

a) Information and Communication Technology b) Information for Compute Transfer
c) Information Computing Technology d) Information Computer Technology

4. One of the following is not a computer network

a) Local Area Network (LAN) b) Wide Area Network (WAN)
c) Metropolitan Area Network (MAN) d) Backward Area Network (BAN)

5. Which are the following ICT tools are used in the agriculture extension?

a) Mobile b) E-mail
c) Internet d) All the above

6. Which of the following is a search engine?

a) Google b) Yahoo.com
c) Gmail.com d) Radiffmail.com

7. One of the following is not a part of the computer

a) Monitor b) CPU
c) Keyboard d) Rat

8. Network connection of several PC's within 16km radius is called as

a) Local Area Network (LAN) b) Metropolitan Area Network (MAN)
c) Wide Area Network (WAN) d) Backward Area Network (BAN)

9. Communication process consists of

a) Message b) Source
c) Receiver d) a, b and c

10. Agricultural portal services available to farmers is/are

a) Agriculture production information
b) Food processing and marketing information
c) Weather information and experts suggestions
d) All the above

Organic Farming and Vermiculture

1. Organic farming is the technique of raising crops through uses of

a) Manures only
b) Bio fertilizers only
c) Chemicals only
d) Natural materials

2. Which of the following is green manure/ bio fertilizer?

a) Sesbania
b) Rice
c) Oat
d) Maize

3. Azolla is used as bio fertilizer as it has

a) Cyano bacteria
b) Mycorrhiza
c) Rhizobium
d) Large quantity of humus

4. The most quickly available source of nitrogen to plants are

a) Amide fertilizers
b) Ammonia fertilizers
c) Nitrate fertilizers
d) Ammonia nitrate fertilizers

5. The major materials used for production of vermicompost

a) Weeds and grass
b) Any dry vegetative matter
c) Dry vegetative matter, wet organic waste and dung
d) Only dung

6. Earthworms should be introduced in the pit

a) Immediately after filling
b) After one month
c) After 15 days of watering
d) After six months

7. Vermicompost should be stored in

a) Gunny bag
b) Polythene bag
c) Piled in open space
d) Earthen pot

8. Vermicompost will be ready for harvesting in

a) 2 month
b) 3 month
c) 4 month
d) 6 month

9. Major enemies of the earthworms are

a) Butterflies
b) Grubs
c) Nematodes
d) Termites, ants and flat worms

10. Before harvesting of vermicompost watering should be stopped

a) One month prior to harvesting
b) Fifteen days prior to harvesting
c) A week
d) No idea

Soil-Water and Plant Relationship

1. Dam is the source of irrigation for

a) Major irrigation projects
b) Minor irrigation projects
c) Medium irrigation projects
d) None of these

2. CADA stands for

a) Command Area Development Authority
b) Chambal Area Development Agencies
c) Critical Area Development Agencies
d) Command Area Distribution Authority

3. Soil is a

a) Three phase matter b) Two phase matter
c) Single phase matter d) Four phase matter

4. Black soils are rich in

a) Organic content b) Water holding capacity
c) Both a and b d) Inorganic content

5. Suitability of different irrigation methods depends on

a) Crop b) Soil
c) Available discharge d) All the above

6. Border irrigation is most commonly used in

a) All close growing grain crops b) Row crops
c) Horticulture crops d) Vegetable crops

7. For irrigation maize crop planted in rows, the best irrigation method is

a) Borders b) Check basins
c) Furrows d) Sprinkler

8. Perforated types of sprinklers are used for

a) Small areas b) Large areas
c) Flat areas d) Only valley lands

9. Drip irrigation method is found more suitable for irrigating

a) Horticulture crops b) Vegetables
c) Field crops d) All the above

10. Drip irrigation system consist of

a) Pipe line systems b) Filters
c) Fertilizer tanks d) All the above

Extension Methods and Tools

1. The method used by extension to bring change

a) Communication b) Teaching
c) Learning d) Adoption

2. Training is function of

a) Knowledge only b) Attitude only
c) Skill only d) Knowledge, skill and attitude

3. Foundation training is known as

a) Portal b) Visible
c) Inductive d) All the above

4. For a study of farming system, the best Participatory Rural Appraisal (PRA) is

a) Transect work b) Resource mapping
c) Time line d) Chapter diagram

5. The full form of A.T.M.A is

a) Agricultural Technology Management Association b) Agricultural Technology Management Agency
c) Agricultural Technology Mission Agency d) Agricultural Transfer Mission Association

6. Which of the following is not an element of communication process?

a) Source b) Encoding
c) Transmission d) Meeting

7. Method demonstration is based on the principle of

a) Learning is believing
b) Learning by teaching
c) Seeing and doing
d) Learning by doing

8. Farmers Field Schools are used mainly for

a) Integrated Pest Management
b) Watershed management
c) Dairy Development
d) Poultry development

9. Kurukshetra is a monthly magazine concerned with

a) Planning
b) Rural development
c) Cottage industries
d) Conflicts resolution

10. SWOT means

a) Strategy Working Opinion Tactical
b) Strengths Weakness Opportunities Threats
c) Strength Work Openness Toughness
d) Strength Working Opinion Tactical

10. What extent of information have you used after receiving the training? Please indicate in percentage (%).

ಸಿಬ್ಬಂದಿ ತರಬೇತಿ ಘಟಕ ನಡೆಸಿದ ಬುನಾದಿ ತರಬೇತಿಗಳ ಪರಿಣಾಮ

ಭಾಗ–1

1. ಸಾಮಾನ್ಯ ಮಾಹಿತಿ
   1. ಹೆಸರು:
   2. ಹುದ್ದೆ:
   3. ಪ್ರಸ್ತುತ ಕೆಲಸದ ಸ್ಥಳ:
   4. ಜಿಲ್ಲೆ:
   5. ತಾಲ್ಲೂಕ:
   6. ಅನುಭವ (ವರ್ಷಗಳಲ್ಲಿ):
   7. ಕೃಷಿ/ ಸಂಸ್ಥೆಯ ಇಲಾಖೆಯಲ್ಲಿನ ಒಟ್ಟು ಸೇವೆ? _____
   8. ನಿಮ್ಮ ಪ್ರಸ್ತುತ ಕೆಲಸದಲ್ಲಿ ಎಷ್ಟು ವರ್ಷಗಳಿಂದ ಸೇವೆ ಸಲ್ಲಿಸುತ್ತಿದ್ದಿರಿ? _____

2. ವಯಕ್ತಿಕ ಗುಣಲಕ್ಷಣಗಳು
   1. ವಯಸ್ಸು:
   2. ಲಿಂಗ:
   3. ಶಿಕ್ಷಣ:
   4. ಮೊಬೈಲ್ ನಂಬರ್:
   5. ಇ–ಮೇಲ್:

3. ಮಾಹಿತಿಯ ಆವರ್ತನ
   (ನಿಮ್ಮ ಕೆಲಸ ಮತ್ತು ಮಾಹಿತಿ ಉಪಯುಕ್ತತೆಗೆ ಸಂಬಂಧಿಸಿದ ಮಾಹಿತಿಯನ್ನು ಪಡೆಯಲು ಈ ಕೆಳಗಿನ ಯಾವ ಮೂಲಗಳಿಂದ ಪಡೆಯುತ್ತೀರಿ ಎಂದು ಯಾವುದಾದರು ಒಂದನ್ನು ಗುರುತಿಸಿರಿ).

ಕ್ರ. ಸಂ	ಸಮೂಹ ಮಾಧ್ಯಮ	ಯಾವಾಗಲೂ	ಯಾವಾಗಲಾದರು	ಇಲ್ಲವೆ ಇಲ್ಲ
1	ಪತ್ರಿಕೆ			
2	ರೇಡಿಯೋ			
3	ಟಿ. ವ್ಹಿ.			
4	ಮಾಸ ಪತ್ರಿಕೆ			
5	ವಿಭಾಗದಲ್ಲಿನ ಮೇಲುಅಧಿಕಾರಿಗಳಿಂದ			
6	ವೆಬ್/ ಅಂತರ್ಜಾಲ ಸಂಪನ್ಮೂಲ್			
7	ವೃತ್ತಿಪರ ಸಹದ್ಯೋಗಿಗಳಿಂದ			

4. ಕೆಲಸದ ಹೊರೆ
   1. ನೀವು ನಿಮ್ಮ ಕೆಲಸವನ್ನು ಯಾವ ರೀತಿ ತೆಗೆದುಕೊಳ್ಳುತ್ತೀರಿ?
      ಅ) ತುಂಬಾ ಹಗುರ ಬ) ಹಗುರ ಸಿ) ಸರಾಸರಿ ಡಿ) ಭಾರವಗಿ ಇ) ತುಂಬಾ ಭಾರವಾಗಿ

5. ಸಿಬ್ಬಂದಿ ತರಬೇತಿ ಘಟಕ ಧಾರವಾಡದಲ್ಲಿ ತೆಗೆದುಕೊಂಡ ತರಬೇತಿಗಳು

ಕ್ರ. ಸಂ.	ತರಬೇತಿ ಕಾರ್ಯಕ್ರಮದ ಹೆಸರು	ದಿನಾಂಕ	ಅವಧಿ
1			
2			
3			
4			
5			

6. ಸಿಬ್ಬಂದಿ ತರಬೇತಿ ಘಟಕದಲ್ಲಿ ತರಬೇತಿ ಕಾರ್ಯಕ್ರಮದ ಬಗ್ಗೆ ತರಬೇತಿ ತೆಗೆದುಕೊಂಡವರ ತೃಪ್ತಿಕರ ಮಟ್ಟ (ಯಾವುದಾದರು ಒಂದನ್ನು ಗುರುತಿಸಿ).

ಕ್ರ. ಸಂ.	ತರಬೇತಿಯ ಅಂಶಗಳು	ಸಂಪೂರ್ಣ ತೃಪ್ತಿ	ಭಾಗಶ: ತೃಪ್ತಿ	ಅತೃಪ್ತಿ
1	ತರಬೇತಿಯ ವಾತಾವರಣ			
2	ವಿಷಯದ ವ್ಯಾಪ್ತಿ			
3	ಬೋದನಾ ಮಾಧ್ಯಮಗಳು			
4	ತರಬೇತಿಯ ಕೊಠಡಿಯಲ್ಲಿ ಒದಗಿಸಿದ ಸೌಲಭ್ಯಗಳು			
5	ತರಬೇತಿಯ ಅವಧಿ			
6	ವಿಶ್ರಾಂತಿಯ ಸಮಯ			
7	ತರಬೇತಿಯ ಕೌಶಲ್ಯತೆ			
8	ತೆರಿ ಮತ್ತು ಪ್ರ್ಯಾಕ್ಟಿಕಲ್ ಗಳ ಅನುಪಾತ(ಬ್ಯಾಲೆನ್ಸ್)			
9	ತರಬೇತಿಯ ವಿಧಾನ			
10	ವಿಷಯಗಳ ಹಂಚಿಕೆ			
11	ಉಪನ್ಯಾಸಕರಿಂದ ಉಪನ್ಯಾಸಗಳ ತಯಾರಿ			
12	ವಿಷಯಗಳ ಸ್ಪಷ್ಟತೆ			
13	ವಿಷಯಗಳನ್ನು ಹೇಳುವ ವೇಗ			
14	ತರಬೇತಿಯಲ್ಲಿನ ಚರ್ಚೆ			
15	ಆಸಕ್ತಿಯನ್ನು ಸೃಷ್ಟಿಸುವಿಕೆ			
16	ಕ್ಷೇತ್ರ ಭೇಟಿ			
17	ವಸತಿ ಮತ್ತು ಊಟ			
18	ಒಟ್ಟಾರೆ ತರಬೇತಿಯ ಅನಿಸಿಕೆ			

7. ತರಬೇತಿಯ ಉಪಯುಕ್ತತೆ (ಯಾವುದಾದರು ಒಂದನ್ನು ಗುರುತಿಸಿರಿ)

ಕ್ರ. ಸಂ.	ತರಬೇತಿಯ ವಿಷಯಗಳು	ಅತ್ಯಂತ ಉಪಯುಕ್ತ	ಉಪಯುಕ್ತ	ಸ್ವಲ್ಪ ಉಪಯುಕ್ತ	ಇಲ್ಲವೆ ಇಲ್ಲಾ
1	ಕ್ಷೇತ್ರ ಬೆಳೆಗಳು				
2	ಖಾದ್ಯ ಎಣ್ಣೆಬೀಜ ಮತ್ತು ದ್ವಿದಳ ಬೆಳೆಗಳು				
3	ತೋಟಗಾರಿಕೆ ಬೆಳೆಗಳು				
4	ಒಣ ಬೇಸಾಯ ಪದ್ಧತಿ				
5	ಜೈವಿಕ ಗೊಬ್ಬರಗಳು				
6	ರೇಷ್ಮೆಹುಳು ಸಾಕಾಣಿಕೆ				
7	ಸಮಗ್ರ ಕೀಟ ನಿರ್ವಹಣೆ				
8	ಸಮಗ್ರ ಬೇಸಾಯ ಪದ್ಧತಿ				

9	ಹೈನುಗಾರಿಕೆ				
10	ಮೀನುಗಾರಿಕೆ				
11	ಜೇನುಹುಳು ಸಾಕಾಣಿಕೆ				
12	ಎರೆಹುಳು ಸಂಸ್ಕರಣೆ				
13	ಮಾಹಿತಿ & ಸಂವಹನ ತಂತ್ರಜ್ಞಾನಗಳ ಬಳಕೆ				
14	ವಿಸ್ತರಣೆ ವಿಧಾನಗಳು & ಸಲಕರಣೆಗಳು				
15	ಮಣ್ಣು, ನೀರು & ಸಸ್ಯಗಳ ಸಂಬಂಧ				
16	ಸಾವಯವ ಗೊಬ್ಬರ				

8. ಕೆಲಸದ ನಿರ್ವಹಣೆ

ನಿಮ್ಮ ಕೆಲಸದ ನಿರ್ವಹಣೆ ಕುರಿತು ಸಂಬಂಧಿಸಿದ ಈ ಕೆಳಕಂಡ ಹೇಳಿಕೆಗಳಲ್ಲಿ ಯಾವದಾದರು ಒಂದನ್ನು ಗುರುತಿಸಿರಿ. ಅದ್ಭುತವಾಗಿ–5, ಒಳ್ಳೆಯದಾಗಿ –4, ತೃಪ್ತಿಕರವಾಗಿ –3, ದುರ್ಬಲವಾಗಿ –2, ಅತೀ ದುರ್ಬಲವಾಗಿ –1

ಕ್ರ. ಸಂ.	ಹೇಳಿಕೆಗಳು	5	4	3	2	1
1	ವಿವಿಧ ಬೇಸಾಯ ಪದ್ಧತಿಗಳಲ್ಲಿ ಸ್ಥಳ ನಿರ್ದಿಷ್ಟವಾದ ಕೃಷಿ ತಂತ್ರಜ್ಞಾನಗಳನ್ನು ಗುರುತಿಸಲು ಬೇಸಾಯ ಪರೀಕ್ಷೆಗಳನ್ನು ನಡೆಸುವುದು.					
2	ರೈತರ ಹೊಲಗಳಲ್ಲಿ ವಿವಿಧ ಬೆಳೆಗಳು ಮತ್ತು ಸಹದ್ಯೋಮಿಗಳ ಉತ್ಪಾದನಾ ಸಾಮರ್ಥ್ಯವನ್ನು ಸ್ಥಾಪಿಸಲು ಮಂಚೂಣಿ ಪ್ರಾತ್ಯಕ್ಷಿತೆಗಳನ್ನು ಹಮ್ಮಿಕೊಳ್ಳುವುದು.					
3	ಆಧುನಿಕ ಕೃಷಿ ತಂತ್ರಜ್ಞಾನದಲ್ಲಿ ರೈತರ ತಿಳುವಳಿಕೆ ಮತ್ತು ಕೌಶಲ್ಯಗಳನ್ನು ಆಯಾಕಾಲಕ್ಕೆ ಅನುಗುಣವಾಗಿಡಲು ಅವಶ್ಯಕತೆಗಳ ಆಧಾರದ ಮೇಲೆ ತರಬೇತಿಗಳನ್ನು ಏರ್ಪಡಿಸುವುದು.					
4	ಗಡಿನಾಡು ಪ್ರದೇಶಗಳಲ್ಲಿ ತಂತ್ರಜ್ಞಾನ ಅಭಿವೃಧ್ಧಿಗೆ ವಿಸ್ತರಣಾ ಸಿಬ್ಬಂದಿಗೆ ತಿಳುವಳಿಕೆ ನೀಡಲು ತರಬೇತಿ ನೀಡುವುದು.					
5	ವಿವಿಧ ರೈತರಿಗೆ ಆಧುನಿಕ ಕೃಷಿ ತಂತ್ರಜ್ಞಾನಗಳ ಕುರಿತು ವಿಸ್ತರಣಾಧಿಕಾರಿಗಳ ಮೂಲಕ ಅರಿವನ್ನು ಹೆಚ್ಚಿಸುವುದು.					
6	ರೈತರ ಬೇಡಿಕೆ ಮತ್ತು ಪೂರೈಕೆಗಣಗುನವಾಗಿ ಒಳ್ಳೆಯ ಗುಣ ಮಟ್ಟ ಬೀಜಗಳು, ನೆಡುವ ಸಾಮಗ್ರಿಗಳು, ಜಾನುವಾರ ತಳಿಗಳು, ಜೈವಿಕ ಉತ್ಪನ್ನಗಳು ಇತ್ಯಾದಿಗಳನ್ನು ಒದಗಿಸುವಿಕೆ.					
7	ಜಿಲ್ಲಾ ಕೃಷಿ ಆರ್ಥಿಕತೆಯನ್ನು ಸುಧಾರಿಸಲು ಮತ್ತು ಸಾರ್ವಜನಿಕ, ಖಾಸಗಿ, ಸ್ವಯಂ ಸೇವಾ ಕ್ಷೇತ್ರಗಳಚಾಲನೆಗಳನ್ನು ಬೆಂಬಲಿಸಲು ಕೃಷಿ ತಂತ್ರಜ್ಞಾನದ ತಿಳುವಳಿಕೆ ಮತ್ತು ಸಂಪನ್ಮೂಲ ಕೇಂದ್ರದಂತೆ ಕಾರ್ಯ ನಿರ್ವಹಿಸುವುದು.					

9. ಹೇಳಿಕೆಗಳು (ನಿಮಗೆ ಗೊತ್ತಿರುವ ಸರಿಯಾದ ಉತ್ತರವನ್ನು ಗುರುತಿಸಿರಿ)

ಸಮಗ್ರ ಪೀಡೆ ನಿರ್ವಹಣೆ

1. ಸಮಗ್ರ ಪೀಡೆ ನಿರ್ವಹಣೆ ಅತೀ ಹೆಚ್ಚು ಅವಲಂಬಿಸಿರುವ ಅಂಶ

ಅ) ಆರ್ಥಿಕ ಗರಿಷ್ಟದ ಮಟ್ಟ ಬ) ಬೆಳೆಗಳ ನಷ್ಟ

ಡ) ಕೀಟ ನಿರೋಧಕ ಕ) ಪರಿಣಾಮಕಾರಿ ಕೀಟ

2. ಭತ್ತದಲ್ಲಿ ಕಂಡು ಬರುವ ಬೆಂಕಿ ರೋಗಗಕ್ಕೆ ಕಾರಣವಾಗುವ ಕೀಟ

ಅ) ಕಂದು ಜಿಗಿ ಹುಳು
ಬ) ಬಿಳಿ ಬೆನ್ನಿನ ಜಿಗಿ ಹುಳು
ಡ) ನುಸಿ
ಕ) ಅ ಮತ್ತು ಬ ಎರಡು

3. ಪ್ರವಾಹದಿಂದ ಇಳುವರಿ ಭೂಮಿಯಲ್ಲಿ ಇವುಗಳನ್ನು ನಿಯಂತ್ರಿಸಬಹುದು

ಅ) ಬಿಳಿ ಉಣ್ಣೆ
ಬ) ಗೆದ್ದಲು
ಡ) ತುಂಡು ಹುಳುಗಳು
ಕ) ಮೇಲಿನ ಎಲ್ಲವೂ

4. ಗೋಧಿಯಲ್ಲಿ ಕಂಡುಬರುವ ಗಂಭೀರ ಕೀಟ

ಅ) ಗೆದ್ದಲು
ಬ) ನುಸಿ
ಡ) ಎಲೆ ಹಾರುವ ಕೀಟ
ಕ) ಮಿಡತೆ

5. ಆಲೂಗಡ್ಡೆ ಬೆಳೆಯಲ್ಲಿ ಆರಂಭಿಕ ರೊಗ

ಅ) ಮಣ್ಣಿನಿಂದ ಹರಡುವುದು
ಬ) ಗಾಳಿಯಿಂದ ಹರಡುವುದು
ಡ) ಬೀಜದಿಂದ ಹರಡುವುದು
ಕ) ಮೇಲಿನ ಎಲ್ಲವೂ

6. ತೊಗರಿ ಬೆಳೆ ಬಾಡುವುದನ್ನು ತಡೆಗಟ್ಟಲು ಪರಿಣಾಮಕಾರಿಯಾಗಿ ಈ ಕೆಳಗಿನ ಯಾವ ಬೆಳೆಯನ್ನು ಅಂತರ ಬೆಳೆಯಾಗಿ ಬೆಳೆಯುತ್ತಾರೆ.

ಅ) ಗೋವಿನ ಜೋಳ
ಬ) ನವಣೆ
ಡ) ಜೋಳ
ಕ) ಹೆಸರು ಕಾಳು

7. ಈ ಕೆಳಗಿನ ವಿಧಾನದಿಂದ ಕಾಡಿಗೆ ರೋಗವನ್ನು ನಿಯಂತ್ರಿಸಬಹುದು.

ಅ) ಮಣ್ಣಿನ ಉಪಚಾರ
ಬ) ಬೀಜೋಪಚಾರ
ಡ) ರಾಸಾಯನಿಕ ಸಿಂಪಡಣೆ
ಕ) ಯಾವುದು ಅಲ್ಲಾ

8. ಬ್ಯಾಕ್ಟೀರಿಯಾ ರೋಗಗಳನ್ನು ಈ ಕೆಳಗಿನ ಯಾವ ರಾಸಾಯನಿಕಗಳ ಮೂಲಕ ನಿಯಂತ್ರಿಸಬಹುದು.

ಅ) ಪ್ರತಿಜೀವಕಗಳು
ಬ) ಕೀಟನಾಶಕಗಳು
ಡ) ಶಿಲೀಂಧ್ರನಾಶಕ
ಕ) ಕ್ರೀಮಿನಾಶಕ

9. ಭತ್ತದ ಬೆಳೆಯಲ್ಲಿ ತೆನೆ ತಿಗಣೆ ಯಾವ ಸಂದಂರ್ಭದಲ್ಲಿ ದಾಳಿ ಮಾಡುತ್ತದೆ.

ಅ) ಮೊಲಕೆಯ ಸಮಯದಲ್ಲಿ
ಬ) ಹೂವು ಬಿಡುವ ಸಮಯದಲ್ಲಿ
ಡ) ಹಾಲುಗಾಳು ಸಮಯದಲ್ಲಿ
ಕ) ಕೊಯ್ಲುತ್ತರ ಸಮಯದಲ್ಲಿ

10. ಟೋಮ್ಯಾಟೊ ಬೆಳೆಯಲ್ಲಿ ಎಲೆ ಸುರುಳಿ ರೋಗ ಯಾವ ಕೀಟದಿಂದ ಹರಡುತ್ತದೆ.

ಅ) ಜಿಗಣೆ
ಬ) ಬಿಳಿ ನೋಣ
ಡ) ಗಿಡ ಹೇನು
ಕ) ದುಂಡಾಕಾರದ ಹುಳು

ಮಾಹಿತಿ ಮತ್ತು ಸಂವಹನ ತಂತ್ರಜ್ಞಾನ

1. ಒಂದು ವಿಚಾರವನ್ನು, ಯೋಚನೆಯನ್ನು ಅಥವಾ ಅನುಭವವನ್ನು ಒಬ್ಬ ವ್ಯಕ್ತಿ ಅಥವಾ ಸಮುದಾಯದೊಂದಿಗೆ ಹಂಚಿಕೊಳ್ಳುವುದೆ

ಅ) ಸಂವಹನ
ಬ) ಶಾಬ್ದಿಕ ಸಂವಹನ
ಡ) ಮಾಧ್ಯಮ ಸಂವಹನ
ಕ) ಆಂಗಿಕ ಸಂವಹನ

2. ಕೃಷಿ ಮಾಹಿತಿಯ ತಾಣಗಳು

ಅ) www.agriwatch.com
ಬ) http://raitamitra.kar.nic.in
ಡ) www.agricoop.nic.in
ಕ) ಮೇಲಿನ ಎಲ್ಲವೂ

3. ಐ.ಸಿ.ಟಿ ಇದರ ಸಂಕ್ಷಿಪ್ತ ರೂಪ.

ಅ) ಮಾಹಿತಿ ಮತ್ತು ಸಂವಹನ ತಂತ್ರಜ್ಞಾನ
ಬ) ಮಾಹಿತಿ ಕಂಪ್ಯೂಟ್ ಟ್ರಾನ್ಸ್ಫರ್
ಡ) ಮಾಹಿತಿ ಕಂಪ್ಯೂಟಿಂಗ್ ತಂತ್ರಜ್ಞಾನ
ಕ) ಮಾಹಿತಿ ಕಂಪ್ಯೂಟರ್ ತಂತ್ರಜ್ಞಾನ

4. ಈ ಕೆಳಗಿನವುಗಳಲ್ಲಿ ಯಾವುದು ಕಂಪ್ಯೂಟರ್ ನೆಟ್ ವರ್ಕ ಅಲ್ಲಾ

ಅ) ಸ್ಥಳೀಯ ನೆಟ್ ವರ್ಕ
ಬ) ಬೃಹತ್ ನೆಟ್ ವರ್ಕ
ಡ) ನಗರ ಪ್ರದೇಶಗಳ ನೆಟ್ ವರ್ಕ
ಕ) ಹಿಂದಿನ ಪ್ರದೇಶದ ನೆಟ್ ವರ್ಕ

5. ಕೃಷಿ ವಿಸ್ತರಣೆಯಲ್ಲಿ ಬಳಸುವ ಸಾಧನೆಗಳು

ಅ) ಮೊಬೈಲ್
ಬ) ಇ–ಮೇಲ್
ಡ) ಇಂಟರನೆಟ್(ಅಂತರ್ಜಾಲ)
ಕ) ಮೇಲಿನ ಎಲ್ಲವೂ

6. ಈ ಕೆಳಗಿನವುಗಳಲ್ಲಿ ಯಾವುದು ಮಾಹಿತಿಯನ್ನು ಹುಡುಕಾಟದ ಸಾಧನವಾಗಿದೆ?

ಅ) ಗೂಗಲ್
ಬ) Yahoo.com
ಡ) Gmail.com
ಕ) Radiffmail.com

7. ಈ ಕೆಳಗಿನವುಗಳಲ್ಲಿ ಯಾವುದು ಕಂಪ್ಯೂಟರ್‌ನ ಭಾಗವಲ್ಲಾ.

ಅ) ಮಾನಿಟರ್
ಬ) ಸಿಪಿಯು
ಡ) ಕೀ ಬೋರ್ಡ
ಕ) ರ್ಯಾಟ್

8. ಸ್ಥಳೀಯ ಕಂಪ್ಯೂಟರ್‌ಗಳ ಜೋಡಣೆಗಳಿಗೆ ಏನೆಂದು ಕರೆಯುತ್ತಾರೆ?

ಅ) ಸ್ಥಳೀಯ ನೆಟ್ ವರ್ಕ
ಬ) ನಗರಗಳ ನೆಟ್ ವರ್ಕ
ಡ) ಬೃಹತ್ ನೆಟ್ ವರ್ಕ
ಕ) ಹಿಂದಿನ ನೆಟ್ ವರ್ಕ

9. ಸಂವಹನ ಕ್ರಿಯೆ ಈ ಕೆಳಗಿನ ಯಾವುದನ್ನು ಒಳಗೊಂಡಿದೆ.

ಅ) ಸಂದೇಶ
ಬ) ಮಾಹಿತಿಯ ಮೂಲ
ಡ) ಗ್ರಾಹಕ(ಸಂದೇಶವನ್ನು ಗ್ರಹಿಸುವವ)
ಕ) ಮೇಲಿನ ಎಲ್ಲವೂ

10. ಈ ಕೆಳಗಿನವುಗಳಲ್ಲಿ ಕೃಷಿ ಪೊರ್ಟಲ್ ಸೇವೆಗಳು ಯಾವುವು?

ಅ) ಕೃಷಿ ಉತ್ಪಾದನೆಯ ಮಾಹಿತಿ
ಬ) ಆಹಾರ ಸಂಸ್ಕರಣೆ ಮತ್ತು ಮಾರುಕಟ್ಟೆ ಮಾಹಿತಿ
ಡ) ಹವಾಮಾನ ಮಾಹಿತಿ & ತಜ್ಞರ ಸಲಹೆಗಳು
ಕ) ಮೇಲಿನ ಎಲ್ಲವೂ

ಸಾವಯವ ಕೃಷಿ ಮತ್ತು ಎರೆಹುಳು

1. ಸಾವಯವ ಕೃಷಿಯಲ್ಲಿ ಬೆಳೆಯ ಇಳುವರಿಯನ್ನು ಹೆಚ್ಚಿಸಲು ಈ ಕೆಳಗಿನವುಗಳಲ್ಲಿ ಯಾವುದನ್ನು ಬಳಸುತ್ತಾರೆ?

ಅ) ಗೊಬ್ಬರ ಮಾತ್ರ
ಬ) ಜೈವಿಕ ಗೊಬ್ಬರ ಮಾತ್ರ
ಡ) ರಾಸಾಯನಿಕ ಮಾತ್ರ
ಕ) ನೈಸರ್ಗಿಕ ವಸ್ತುಗಳು

2. ಈ ಕೆಳಗಿನವುಗಳಲ್ಲಿ ಯಾವುದು ಹಸಿರು ಗೊಬ್ಬರ / ಜೈವಿಕ ಗೊಬ್ಬರ

ಅ) ಸೆಸಬಾನಿಯಾ
ಬ) ಭತ್ತ
ಡ) ತೋಕೆಗೋಧಿ
ಕ) ಮೆಕ್ಕೆ ಜೋಳ

3. ಅಜೋಲ್ಲಾ ಜೈವಿಕ ಗೊಬ್ಬರವನ್ನಾಗಿ ಬಳಸಲಾಗುತ್ತದೆ ಏಕೆಂದರೆ ಇದರಲ್ಲಿ

ಅ) ಸೈನೊ ಬ್ಯಾಕ್ಟೀರಿಯಾ ಬ) ಶಿಲೀಂಧ್ರಮೂಲ

ಡ) ರೈಜೊಬಿಯಂ ಕ) ಕೊಳೆತ ವಸ್ತುಗಳು

4. ಸಸ್ಯಗಳಿಗೆ ಬಹಳ ಬೇಗನೆ ಲಭ್ಯವಿರುವ ಸಾರಜನಕದ ಮೂಲ

ಅ) ಅಮೈಡ ಗೊಬ್ಬರಗಳು ಬ) ಅಮೋನಿಯಾ ಗೊಬ್ಬರಗಳು

ಡ) ನೈಟ್ರೇಟ್ ಗೊಬ್ಬರಗಳು ಕ) ಅಮೋನಿಯಾ ನೈಟ್ರೇಟ್ ಗೊಬ್ಬರಗಳು

5. ಎರೆಹುಳು ಗೊಬ್ಬರಕ್ಕೆ ಬೇಕಾದ ಪ್ರಮುಖ ವಸ್ತುಗಳು

ಅ) ಬೀಜಗಳು ಮತ್ತು ಹುಲ್ಲು ಬ) ಒಣಗಿದ ತರಕಾರಿಗಳು

ಡ) ಒಣಗಿದ ತರಕಾರಿಗಳು, ಸಾವಯವ ತ್ಯಾಜ್ಯ & ಸಗಣಿ ಕ) ಸಗಣಿ ಮಾತ್ರ

6. ಎರೆಹುಳುಗಳನ್ನು ಯಾವ ಸಮಯದಲ್ಲಿ ಗೊಬ್ಬರ ಗುಂಡಿಯಲ್ಲಿ ಹಾಕಬೇಕು.

ಅ) ಗೊಬ್ಬರ ಹಾಕಿದ ತಕ್ಷಣ ಬ) ಒಂದು ತಿಂಗಳ ನಂತರ

ಡ) ನೀರು ಹಾಕಿದ 15 ದಿನಗಳ ನಂತರ ಕ) ಆರು ತಿಂಗಳ ನಂತರ

7. ಎರೆಹುಳುಗೊಬ್ಬರವನ್ನು ಯಾವುದರಲ್ಲಿ ಸಂಗ್ರಹಿಸಲಾಗುವುದು.

ಅ) ಗೋಣಿ ಚೀಲ ಬ) ಪ್ಲಾಸ್ಟಿಕ ಬ್ಯಾಗ್

ಡ) ಹೊರಗಡೆ ಹಾಕುವುದು ಕ) ಮಣ್ಣಿನ ಮಡಿಕೆಯಲ್ಲಿ

8. ಎರೆಹುಳುಗೊಬ್ಬರವನ್ನುಯಾವ ಸಮಯದಲ್ಲಿ ತೆಗೆಯಬೇಕು

ಅ) 2 ತಿಂಗಳ ನಂತರ ಬ) 3 ತಿಂಗಳ ನಂತರ

ಡ) 4 ತಿಂಗಳ ನಂತರ ಕ) 6 ತಿಂಗಳ ನಂತರ

9. ಎರೆಹುಳುಗಳ ಪ್ರಮುಖ ವೈರಿಗಳು

ಅ) ಚಿಟ್ಟೆಗಳು ಬ) ಉಣ್ಣೆಗಳು

ಡ) ದುಂಡಾಕಾರದ ಹುಳುಗಳು ಕ) ಗೆದ್ದಲುಗಳು, ಇರುವೆ & ಮಳೆಹುಳುಗಳು

10. ಎರೆಗೊಬ್ಬರವನ್ನು ತೆಗೆವುದಕ್ಕಿಂತ ಮುಂಚೆ ನೀರು ಹಾಕುವುದನ್ನು ಯಾವಾಗ ನಿಲ್ಲಿಸಬೇಕು

ಅ) ಒಂದು ತಿಂಗಳ ಮುಂಚೆ ಬ) 15 ದಿನಗಳ ಮುಂಚೆ

ಡ) ಒಂದು ವಾರಕ್ಕೆ ಮುಂಚೆ ಕ) ಗೊತ್ತಿಲ್ಲಾ

ಮಣ್ಣು, ನೀರು ಮತ್ತು ಸಸ್ಯಗಳ ಸಂಬಂಧ

1. ಅಣೆಕಟ್ಟು ನೀರಾವರಿ ಯಾವ ಯೋಜನೆಗಳಿಗೆ ಸಂಬಂಧಿಸಿದೆ

ಅ) ದೊಡ್ಡ ನೀರಾವರಿ ಯೋಜನೆ ಬ) ಸಣ್ಣ ನೀರಾವರಿ ಯೋಜನೆ

ಡ) ಮಧ್ಯಮ ನೀರಾವರಿ ಯೋಜನೆ ಕ) ಯಾವುದು ಅಲ್ಲಾ

2. ಸಿಎಡಿಎ ಅಂದರೆ ಸಂಕ್ಷಿಪ್ತ ರೂಪ (CADA)

ಅ) ಕಮಾಂಡ್ ಪ್ರದೇಶ ಅಭಿವೃದ್ಧಿ ಪ್ರಾಧಿಕಾರ ಬ) ಚಂಬಲ ಪ್ರದೇಶ ಅಭಿವೃದ್ಧಿ ಏಜೆನ್ಸೀಸ್

ಡ) ಕ್ರಿಟಿಕಲ್ ಪ್ರದೇಶ ಅಭಿವೃದ್ಧಿ ಏಜೆನ್ಸೀಸ್ ಕ) ಕಮಾಂಡ್ ಪ್ರದೇಶ ವಿತರಣೆ ಪ್ರಾಧಿಕಾರ

3. ಮಣ್ಣು ಒಂದು

ಅ) 3 ಹಂತದ ಬ) 2 ಹಂತದ

ಡ) 1 ಹಂತದ ಕ) 4 ಹಂತದ

4. ಕಪ್ಪು ಮಣ್ಣು ಯಾವುದರಲ್ಲಿ ಸಮೃದ್ಧವಾಗಿದೆ

ಅ) ಸಾವಯುವ ವಸ್ತುಗಳು ಬ) ನೀರು ಹಿಡಿದಿಡುವ ಸಾಮರ್ಥ್ಯ

ಡ) ಅ ಮತ್ತು ಬ ಎರಡೂ ಕ) ಅಜೈವಿಕ ವಸ್ತುಗಳು

5. ವಿವಿಧ ನೀರಾವರಿ ಪದ್ಧತಿಗಳು ಯಾವುದನ್ನು ಅವಲಂಬಿಸಿರುತ್ತದೆ

ಅ) ಬೆಳೆ
ಬ) ಮಣ್ಣು
ಡ) ಲಭ್ಯವಿರುವ ವಿಸರ್ಜನೆ
ಕ) ಮೇಲಿನ ಎಲ್ಲವೂ

6. ಬಾರ್ಡರ್ ನೀರಾವರಿ ಸಾಮಾನ್ಯವಾಗಿ ಎಲ್ಲಿ ಬಳಸಲಾಗುತ್ತದೆ.

ಅ) ಎಲ್ಲಾ ಧಾನ್ಯ ಬೆಳೆಗಳಲ್ಲಿ
ಬ) ಅಡ್ಡ ಬೆಳೆಗಳಲ್ಲಿ
ಡ) ತೋಟಗಾರಿಕೆ ಬೆಳೆಗಳಲ್ಲಿ
ಕ) ತರಕಾರಿ ಬೆಳೆಗಳಲ್ಲಿ

7. ಗೋವಿನ ಜೋಳ ಬೆಳೆಯಲ್ಲಿ ಯಾವ ನೀರಾವರಿ ವಿಧಾನ ಬಳಸುತ್ತಾರೆ.

ಅ) ಬಾರ್ಡರ್ಸ ನೀರಾವರಿ
ಬ) ಚೆಕ್ ಬೆಸಿನ್
ಡ) ಕಾಲುವೆ ನೀರಾವರಿ
ಕ) ಸಿಂಪಡಣೆ ನೀರಾವರಿ

8. ರಂಧ್ರ ಸಹಿತ ಸಿಂಪರಣಾ ನೀರಾವರಿಯನ್ನು ಎಲ್ಲಿ ಬಳಸುತ್ತಾರೆ.

ಅ) ಸಣ್ಣ ಪ್ರದೇಶಗಳಲ್ಲಿ
ಬ) ದೊಡ್ಡ ಪ್ರದೇಶಗಳಲ್ಲಿ
ಡ) ಸಮತಟ್ಟಾದ ಪ್ರದೇಶಗಳಲ್ಲಿ
ಕ) ಕಣಿವೆ ಭೂಮಿಯಲ್ಲಿ ಮಾತ್ರ

9. ಹನಿ ನೀರಾವರಿ ವಿಧಾನ ಹೆಚ್ಚು ಯಾವ ಬೆಳೆಗಳಿಗೆ ಸೂಕ್ತವಾಗುತ್ತದೆ.

ಅ) ತೋಟಗಾರಿಕೆ ಬೆಳೆಗಳಿಗೆ
ಬ) ತರಕಾರಿ ಬೆಳೆಗಳಿಗೆ
ಡ) ಧಾನ್ಯ ಬೆಳೆಗಳಿಗೆ
ಕ) ಮೇಲಿನ ಎಲ್ಲಾ ಬೆಳೆಗಳಿಗೆ

10. ಹನಿ ನೀರಾವರಿ ಒಳಗೊಂಡಿರುವ ವ್ಯವಸ್ಥೆಗಳು

ಅ) ಪೈಪ್ ಲೈನ್
ಬ) ಶೋಧಕಗಳು
ಡ) ರಸಗೊಬ್ಬರ್ ಟ್ಯಾಂಕ್
ಕ) ಮೇಲಿನ ಎಲ್ಲವೂ

ವಿಸ್ತರಣೆ ವಿಧಾನಗಳು ಮತ್ತು ಸಲಕರಣೆಗಳು

1. ವಿಸ್ತರಣೆಯಿಂದ ಬಳಸುವ ಯಾವ ಒಂದು ಉಪಕರಣ ಬದಲಾವಣೆಯನ್ನು ತರುತ್ತದೆ.

ಅ) ಸಂವಹನ
ಬ) ಬೋಧನೆ
ಡ) ಕಲಿಕೆ
ಕ) ಅಳವಡಿಸುವಿಕೆ

2. ತರಬೇತಿ ಕಾರ್ಯಕ್ರಮ ಇದು ಒಂದು

ಅ) ಜ್ಞಾನ ಮಾತ್ರ
ಬ) ವರ್ತನೆ ಮಾತ್ರ
ಡ) ಕೌಶಲ್ಯ ಮಾತ್ರ
ಕ) ಜ್ಞಾನ, ಕೌಶಲ್ಯ ಮತ್ತು ವರ್ತನೆ

3. ಬುನಾದಿ ತರಬೇತಿ ಅಂದರೆ

ಅ) ಪೋರ್ಟಲ್
ಬ) ಗೋಚರಿಸುವಿಕೆ
ಡ) ಕಾಂತ ಚೋದಕವಾಗಿ
ಕ) ಮೇಲಿನ ಎಲ್ಲವೂ

4. ಕೃಷಿ ಬೇಸಾಯ ಅಧ್ಯಯನಕ್ಕೆ ಈ ಕೆಳಗಿನ ಯಾವ ತರಹದ ನಕ್ಷೆಯನ್ನು ಬಳಸುತ್ತಾರೆ.

ಅ) ಹಳ್ಳಿಯಲ್ಲಿ ನಡೆದಾಡುವಿಕೆ ನಕ್ಷೆ
ಬ) ಸಂಪನ್ಮೂಲ ನಕ್ಷೆ
ಡ) ವೇಳಾ ಪಟ್ಟಿ ನಕ್ಷೆ
ಕ) ಚಪಾತಿ ನಕ್ಷೆ

5. ಎ.ಟಿ.ಎಮ್.ಎ (ATMA) ಇದರ ಸಂಕ್ಷಿಪ್ತ ರೂಪ

ಅ) ಅಗ್ರಿಕಲ್ಚರ್ ಟೆಕ್ನಾಲಜಿ ಮ್ಯಾನೇಜಮೆಂಟ್ ಅಸೋಸಿಯೆಶನ್
ಬ) ಅಗ್ರಿಕಲ್ಚರ್ ಟೆಕ್ನಾಲಜಿ ಮ್ಯಾನೇಜಮೆಂಟ್ ಏಜೆನ್ಸಿ
ಡ) ಅಗ್ರಿಕಲ್ಚರ್ ಟೆಕ್ನಾಲಜಿ ಮಿಶನ್ ಏಜೆನ್ಸಿ
ಕ) ಅಗ್ರಿಕಲ್ಚರ್ ಟ್ರಾನ್ಸ್ಫರ್ ಮಿಶನ್ ಅಸೋಸಿಯೆಶನ್

6. ಈ ಕೆಳಗಿನವುಗಳಲ್ಲಿ ಯಾವುದು ಸಂವಹನ ಕ್ರಿಯೆ ಅಲ್ಲಾ

ಅ) ಮೂಲ ಬ) ಎನಕೊಡಿಂಗ

ಡ) ಪ್ರಸರಣ ಕ) ಸಭೆ

7. ಪ್ರದರ್ಶನ ವಿಧಾನ ಈ ಕೆಳಗಿನ ಯಾವ ತತ್ವದ ಮೇಲೆ ಆವರಿಸಿದೆ.

ಅ) ಕಲಿಕೆಯೆ ನಂಬಿಕೆ ಬ) ಬೋದನೆಯಿಂದ ಕಲಿಯುವುದು

ಡ) ನೋಡುವುದು ಮತ್ತು ಮಾಡುವುದು ಕ) ಮಾಡುವುದರಿಂದ ಕಲಿಯುವುದು

8. ರೈತ ಕ್ಷೇತ್ರ ಪಾಠ ಶಾಲೆಯಲ್ಲಿ ಈ ಕೆಳಗಿನವುಗಳಲ್ಲಿ ಯಾವುದನ್ನು ಉಪಯೋಗಿಸುತ್ತಾರೆ.

ಅ) ಸಮಗ್ರ ಪೀಡೆ ನಿರ್ವಹನೆ ಬ) ಜಲಾಯನ ನಿರ್ವಹನೆ

ಡ) ಹೈನುಗಾರಿಕೆ ಅಭಿವೃದ್ಧಿ ಕ) ಕೋಳಿ ಸಾಕಾಣಿಕೆ ಅಭಿವೃದ್ಧಿ

9. ಕುರುಕ್ಷೇತ್ರ ಇದು ಮಾಸಿಕ ಪತ್ರಿಕೆ ಇದನ್ನು ಯಾವುದಕ್ಕಾಗಿ ಉಪಯೋಗಿಸುತ್ತಾರೆ.

ಅ) ಯೊಜನೆಗಳಿಗೆ ಬ) ಗ್ರಾಮೀಣ ಅಭಿವೃದ್ಧಿಗೆ

ಡ) ಸಣ್ಣ ಕೈಗಾರಿಕೆಗಳಿಗೆ ಕ) ಘರ್ಷಣೆಗಳ ನಿರ್ಧಾರಕ್ಕಾಗಿ

10. ಸ್ವಾಟ್ (SWOT) ಇದರ ಸಂಕ್ಷಿಪ್ತ ರೂಪ

ಅ) ತಂತ್ರ ಕೆಲಸದ ಅಭಿಪ್ರಾಯ ಚಮತ್ಕಾರ ಬ) ಸಾಮರ್ಥ್ಯಗಳು ಕೊರತೆಗಳು ಅವಕಾಶಗಳು ಬೆದರಿಕೆಗಳು

ಡ) ಸಾಮರ್ಥ್ಯ ಕೆಲಸ ಮುಕ್ತತೆ ಗಟ್ಟಿತನ ಕ) ಸಾಮರ್ಥ್ಯ ಕೆಲಸದ ಅಭಿಪ್ರಾಯ ಚಮತ್ಕಾರ

10. ತರಬೇತಿಯಲ್ಲಿ ಕಲಿತ ಮಾಹಿತಿಯನ್ನು ನೀವು ಎಷ್ಟರ ಮಟ್ಟಿಗೆ ಉಪಯೋಗಿಸಿದ್ದಿರಿ? ಅದರ ಪ್ರಮಾಣವನ್ನು (ಶೇಕಡಾವಾರುವಲ್ಲಿ) ತಿಳಿಸಿ.

EFFECTIVENESS OF FOUNDATION COURSE TRAINING CONDUCTED BY THE STAFF TRAINING UNIT

ROOPA U. NATAGALL **2016** **DR. SHOBHA NAGNUR**
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ABSTRACT

The Staff Training Unit (STU), Directorate of Extension, University of Agricultural Sciences (UAS), Dharwad is organizing institutional, field oriented training programmes for various personnel of private, government and quasi-government organizations. The Foundation Course Training is one such course where the Agricultural Officers of the Karnataka State Department of Agriculture (KSDA) are trained. The present investigation was undertaken to study the effectiveness of foundation course organized by STU of UAS, Dharwad. The study was conducted in seven districts viz. Dharwad, Gadag, Belagavi, Haveri, Vijayapur, Baglakot and Uttar Kannada under the jurisdiction of UAS, Dharwad. The sample for the study consisted of 150 officials of the KSDA who had attended the foundation course training during 2013-14. Mailed questionnaire method was used to collect the data and data were analysed using correlation, frequencies and percentages. The study revealed that, 92.70 per cent of trainees were fully satisfied with training atmosphere and break timings during the training. Between 86 – 88 per cent were fully satisfied with facilities provided in the classroom, food and accommodation, preparation of lectures and clarity of presentation. About 86 per cent of trainees were partially satisfied with balance of theory-practical ratio followed by duration of training (81.30 %). Majority of the trainees (66.00 %) expressed that training programmes organized on Integrated Pest Management and Integrated Farming Systems were most useful. Seventy per cent of the trainees were in high job performance category, while 30 per cent were in medium performance category. Nearly 93 per cent of trainees had high knowledge about Information and Communication Technology, 90 per cent had high knowledge about extension methods and tools, 78.70 per cent had high knowledge about organic farming and vermiculture, 71.30 per cent had high level of knowledge of soil-water and plant relationship and 61 per cent had high knowledge level about Integrated Pest Management. Majority (86.70 %) of the trainees had put into practice the knowledge gained by them to the extent of 76 -100 per cent.