Chapter-I

INTRODUCTION
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Agriculture has been given high priority in all the five year plans in India. Realising the scope and importance of agriculture, the government has rightly made a policy decision to invest about one-third of its plan allocation for agricultural development. Agriculture and allied activities contributes 25% to the gross domestic product of India and 64% employees of total work force. The average agricultural production in India is very low in comparison to other developed countries. One of the most important factor responsible for the low productivity anywhere in the world is lack of integration to new farm Technology in the farming practices of social system. It can not be denied that there is a tremendous gap between the average productivity levels of different crops demonstrated on the farmer’s field day by scientists as well as the extension functionaries and their production potential at research stations /farms. Similarly, despite the production gap per unit area of cultivable land there also exist a wide gap between the extent of innovations generated by the research system and the extent to which these are transferred to farm consumers. An effective extension system is an important prerequisite for effective transfer of agro-technology for high production per unit area per unit time and also per unit input.

Training has been acclaimed as an affective total to develop, the quality of human resources, to gain confidence and improve capability of individuals in relation to their needs and requirements (Kumar and Fulzele, 1992). The type of personnel, their training and the work environment prevailing in the training institutions are important elements for any training institute established to promote desirable changes in trainees.

Training as activities which essentially aim to provide attitude, Knowledge and skill required for employment in a particular occupation or a group of occupation for exercising a function in any field of economic activity. Training is an instrument to induce change in behaviour of individual for personnel social or organizational effectiveness (Kumar and Hansra. 2000). Training improve a person’s & skill, power of intelligence and develops in him the desired and value required for his work.
During the past five decades, spectacular progress has been achieved in agricultural production in the country, which has been well chronicled and universally recognized. We have achieved a record production of 209 million tones from 50 million tones during 1960s. The food scarcity was best described by 'Sip to Mouth' and today we have a huge buffer stock of food grains. In the oilseed sector, there has been a quantum jump ushering in the Yellow Revolution, increasing production of oilseeds from 11 to 22 million tones during the last one decade. The export of oil meal, oilcake and minor oil has doubled. The dairy sector has likewise witnessed a White Revolution in Inland Fisheries, the country has registered an unprecedented compound growth rate of 10% during the nineties bringing in Blue Revolution. The growth in horticulture and poultry production has been of a high order (Hansra, 2002).

Human resource is the most precious resource for any country. It is however, not the numerical but the qualitative strength of the people which forges a country ahead towards progress and prosperity. It is basically the development of human resources that brings about socio-economic or political-cultural transformation of any society.

The basic problem of a under-developed country like India is not the scarcity of natural resource but the under-development and limited exploitation of human resources. Hence, building up the human resource is one of the major tasks for the country.

Education infrastructure in agriculture and allied fields has been greatly strengthened with the development of agricultural universities. It is, indeed gratifying that a good deal of work has been done in agricultural research during past two decades. But in spite of vast nation-wide extension.
Network, the extension machinery, however, has not been able to cope up with the speedy transfer of scientific advances in the laboratories and technology. The delivery system from research centers to the actual users including small farmers, farmwomen, housewives, and landless labourers. Fisherman is grossly inadequate as compared to the needs. One of the most crucial elements in this process is the practical training to the farmers; both in terms of quality and wide cooperation to embrace all sections of the farming community. A big gap still exists between the productive technologies available and their rapid use by the farmers. Unless this is filled, the productive technologies now available in agriculture and allied fields could remain only harnessed.

Since independence, a number of developmental programmes have been launched from time to time to educate the farmers in the appropriate use of the latest technical know-how. In 1960, first attempt was made to organise farms training through the project known as “Intensive Agricultural District Programme”. The coincided with the introduction of hybrid maize in the country with the aim to “begin with farms, Farmers and the resources and opportunities available to them”. The training programme followed the motivation widely generated among farmers in district and areas that were found suitable for High Yielding Varieties programme (HYVP). In the late sixties after the emergence of High Yielding Variety (HYV) of major food crops, various extension approaches were followed to train the farmers in the use of new farm practices, which were entirely different from those, used in the cultivation of old varieties. The new scheme of farmers training and education was adopted on the national level during the year 1967-68. Under this scheme, systematic and organised training and education of the farmers was recognized as an important component of agricultural development. The farmers training and functional literacy project aimed at increasing yields per acre in HYVP through imparting them knowledge and skill necessary for the use of production requisites like seeds, fertilizers, pesticides etc in an intensive manner enabling the farmers to keep pace with the changing technologies.
The focal points of farmers education are National Demonstration organized on farmers fields supported by the audio-visual aids, and on-the-spot training conducted by specialists form universities and research centers. Farm broadcasts, farmers discussion groups, field days at the demonstration farms at the time of important crop operations were other steps taken for the purpose of farmer’s education. The programmes were designed to the requirements of the farm family as a whole and endeavors to take the training to the farmer’s doorstep rather than bring the farmers to a formal institutional environment (Ram, 1998.)

The mandate of Indian Council of Agricultural Research (ICAR) includes to plan, undertake, aid, promote and coordinate education, research and its application in agriculture and allied sciences, India’s population has gone up above a billion, the great achievement made in food front due to Green, White, Yellow and Blue Revolution need to be sustained and further increased. This calls for higher production considering the need not only for more food but caloric availability, and food security. The food security is to be considered not only for availability of more food in terms of quantity to the nation as a whole but its availability to every member of the household throughout the year including its health and nutritional perspectives. There is a need for reorientation of both research and extension to function in an appropriate mechanism for greater availability of technology products, services and information without any transmission loss keeping in view both biophysical as well as socio-economic resources of millions of farm families in the country.

The frontline transfer of technology system of the ICAR presently includes a network of 551 Farm Science Centers commonly known as Krishi Vigyan Kendra (KVKs) According to ICAR 78th Annual meeting dated 12 May 2007 and 10 Trainers’ Training Centres (TTCs) and e-linkage to 200 KVKs. The activities of the KVKs, which were initially confined to farmers, training’s and on-farm demonstrations, have been further
extended to cover in-service training of extension personnel so as to upgrade their skills in new technologies and the vocational training of farm youths. At present the activities of KVK include skill training of farmers by providing work experience, following the principles of ‘teaching by doing’ and ‘learning by doing’ in agriculture and allied areas; on-farm testing to identify the location specificity of technologies in various farming systems; in-service training of extension personnel to update their knowledge in frontier areas of agricultural technologies; and organizing frontline demonstrations to establish production potentials on farmer’s fields and provide feedback. These KVKs organize about 13.9 thousand training programmes benefiting 3.59 lakh farmers and farm women. Similarly, three thousand vocational and skill-oriented training courses are also organized for 59.4 thousand rural youth. The popular demand for establishment of more KVKs in the country is a testimony that the institutional mechanism of the KVK has served the society in general and Indian agricultural in particular (Hansra, 2002).

As a result of the adoption of some the scientific farm technologies by the farmers for the successful cultivation of HYV crops. Agricultural production has gone up to a considerable extent during the last two decades. Indian agriculture which occupies a unique position in the country’s economy, is moving very fast from subsistence agriculture to commercial agriculture and from traditional agriculture to agriculture based on science and technology. Recent break-through has given a new concept of “Green Revolution.” This concept has strengthened the country’s economy and simultaneously, it is leading to self-sufficiency in food production with the same rate of progress in agriculture. India is bound to be an exporting country of food grains in near future. Production of ample food grain only is, however not enough. This production should support by milk production associated with entire dairy products as complimentary business.
Today the farmers are responsive to new ideas and are willing take up improved practices. Even then the total production of food and milk production has always been far short of its requirement. Experience with the farmers training centers, showed that by and large, these had failed to have Desired impact. These considerations a case for revision of existing training institutions. The appropriate training of practicing farmers received the attention of various educational institutions in varying degrees. Mahatma Gandhi had suggested, “Education should be revolutionized so as to answer to the wants of the poorest villagers.”

Krishi Vigyan Kendra (Farm Science Centre) as a Mini agriculture University at operational level of transfer of technology, training, adoptive research and field extension in a specific location has several responsibilities. The clientele includes those directly or indirectly related to the agriculture and allied pursuits from the point of view of the farming system, if KVK are not in position to raise the productivity and income of the farming community, they fault some where lies in the agricultural University where from it draws is technical information and expertise and expertise and represents as a mini University.

Historically speaking, the education Commission (1964-66) recommended that vigorous efforts should be made to establish specialized institutions to provide vocational education in agriculture and allied fields at the pre and post-matriculate level to cater to the training needs of a large number of rural youths.

Krishi Vigyan Kendra are grass root level vocational training institutions designed for bridging the gap between the available technology at one end and allied area as both at institutional ( on campus ) and non institutional level (off campus training ) conducting method and result demonstration at institutional farms as well as on the farmer’s field and also organizing a large number of extension activities for creating and rapid adoption of new agricultural technology among the farmers, farm women and rural youth.
The National Commission on Agriculture (1971-73) while emphasizing the scope and importance of vocational education and training observed. "With a view to meeting the needs of development in agriculture and related activities, we should plan for each district to have ultimately one center to provide for regular short duration training in agriculture and agro industries. Such a center may be a Krishi Vigyan Kendra (KVK). If any existing agricultural education institution has the potentiality, it should be developed into a KVK. It is imperative and desired that by 1985 each district should have at least one KVK and by 2000 A.D. at least 3 KVKs for each district accordingly 412 KVKs should have been established by 1985, and over 1200 KVKs should established by 2000 AD. But Present Situation of KVKs in all over India 551. In UP 62 KVKSanctioned but only 61 KVK are functioning.

The Indian Council of Agricultural Research (ICAR), New Delhi is the apex body which directly governs about 48 research institutions in the filed of agriculture and animal sciences, is unique in having dual responsibility both for promoting agricultural research and education. In view of its active role and leadership in Green Revolution during the later part of sixties, ICAR has been enjoying a place of great respect in terms of the self-sufficiency in food.

The ICAR felt that the present training infrastructure in the country was not sufficient to meet the training needs of the farmers and as a result, the process of transfer of technology had been slow. Accordingly a committee was set up under the chairmanship of Mohan Singh Mehta to consider the probable reasons of failure of farmer Training institutions in transferring the technology, and suggested actions there upon. The Committee submitted its report in 1974 and suggested the establishment of KVK (Krishi Vigyan Kendra). The recommendation was accepted by the ICAR.
In order to make training programme more effective, the ICAR launched the KVK scheme in year 1974. The KVK has been conceived as an institution for vocational training at the grass root level; designed for bridging the gap between the available technologies on the one end and their application for increasing production on the other.

**KVK AN INNOVATIVE SCIENCE BASED INSTITUTION:**

Krishi Vigyan Kendra (KVK) is an innovative science based institution, which undertakes vocational training of farmers, farm women and rural youth, conducts on farm research for technology refinement and frontline demonstrations to promptly demonstrate the latest agricultural technologies to the farmers as well as the extension worker. The KVK function on the principles of collaborative participation of scientists, subject matter specialist, extension workers and farmers.

KVK is based on the recommendation of the education commission (1964-66) and Inter Ministrial committee (1973). ICAR (Indian Council of Agricultural Research) decided to establish KVKs in the country. A high level committee Headed by Mohan Singh Mehta recommended the establishment of KVK to provide skill oriented vocational training support to farmers. The KVK is innovative design to meet the practical training needs of the farmers and farm women; providing skill oriented training for the application of agricultural and allied technologies. The concepts of the KVK was laid by Mohan Singh Mehta Committee (1973-74) are as follows:

1. The Kendra will impart learning through work-experience.
2. The Kendra will impart training to practicing farmers and fishermen including employed and those who wish to be self-employed.
3. There will be no uniform syllabus for a Kendra. The syllabus and programme of each Kendra will be tailored according to the felt needs, natural resources and the potential for agricultural growth in that particular area.
The KVK is based on three fundamental principles:

(i) Agricultural production is the prime goal.

(ii) Work experience (learning by doing) is the main method of imparting training and education.

(iii) More stress on weaker sections of rural population.

The idea is to influence the production with social justice, the starting point being the most needy and deserving section of the society, the weaker sections, tribal farmers, small and marginal farmers, agricultural labourers, drought and flood-affected farmers and so on. From these premises, stem the following specific objectives:

1. To organize skill and production oriented short and long term training programmes, both on and off the campus, for practicing farmers, men and women; and field level extension workers on their immediate agricultural problems.

2. To organise training programmes and non-formal educational activities for young farmers specially the school dropouts to develop competence and confidence in them for modern farming either on their own farms or for self employment.

3. To develop and organise informal educational programmes in terms of field days, farm visits, farmers fairs, radio talks, information center, charcha mandals etc. with a view to strengthen the scientific information support to the farmers.

4. To organise functional literacy programmes for the farmers in collaboration with the concerned local agency.

5. To organise farm science clubs both in rural schools and in villages to induce in younger generation a liking for and interest in agricultural and allied sciences and scientific farming.

6. To undertake necessary follow up measures continuously in terms of training and information support to farmers and extension workers.

7. To provide practical training facilities at the KVK for giving work experience to the students of neighbouring rural schools and vocational courses in agriculture and allied areas for the students of vocational stream at the two stages.

8. To develop gradually Practical training facilities in all fields including crafts and cottage industries to meet the requirements of integrated rural development.
The KVK is an educational innovation where most of the elements of training have been incorporated. Some of the salient features of the KVK are:

(i) **Strong technical support:** To have a continuous flow of new technology. Formal linkage with agricultural research institutes is essential. This will provide technical support.

(ii) **Work experience as a training device:** The conduct of training will start from the farm and workshop where trainees will practice skill by doing what they are expected to do on their own farms.

(iii) **Need based courses:** Training courses are based on felt needs of the farmers. These can be identified by conducting survey, group interaction, interview etc.

(iv) **Flexibility with firmness:** On the basis of background, interest, needs, resources and the production potential of the areas, training programmes are fixed and implemented. This may not be fixed for others. Every course will be unique in its content, approach, duration, locale and methodology best suited to the specific training group, the teaching-learning situation and the technology.

(v) **Training without certificate and diploma:** Certificate or diploma discourage the white-collar job seekers and encourage the farmers as they have different education level and different work to do.

(vi) **Concept of composite training:** KVK has to provide training facilities dealing with all aspects of rural life rather than specific one.

(vii) **Field-orientation core staff:** A provision has been made to supplement the existing staff by inviting guests/visiting trainers, progressive farmers, extension workers, university experts etc. on adhoc basis for specific courses. Heavy weightage has to be given on the quality of trainers for the growth and welfare of the learning community.

(viii) **Limited area jurisdiction:** The district is the unit of operation. For a KVK to start with, the coverage in training programme can be done in phased manner but not at the cost of quality. A batch of farmers can be followed through by short and long duration courses for sometime to come till they develop a good background of scientific farming.
(ii) Practical facilities for training: Adequate farm lands both for practical and to show the economic viability of a farming system, has to be developed.

(xi) Strong institutional linkage: The continuation of the local management committee of the government and non-government organisation will help in building the linkage with other related institutions to tap the available training resources.

(xii) Continued follow-up measures: Maintaining close contacts, assessing the benefits of the training. Monitoring the training courses for further and sequential training, giving constant information support and assisting in processing the requisite inputs of the trainees is a must for adequate follow up.

(xii) Frequent interaction and reporting system: A KVK must organise a monthly meeting or seminar for inter and intra-institutional interaction on the KVK programmes and progress. An interaction with ICAR through correspondence, visits and periodic reporting system will be essential. Regional and national work will be desirable.

The KVK, an educational institution, offers a very real opportunity by organizing training to work closely with trainees in developing a more skilled and educated work force. KVK has to develop and adopt both on campus and off campus training. The training programme of KVK is a multipurpose one to cover not only the varied needs of a person but also the entire needs of village and community. It covers agricultural technology, home crafts, child care, family welfare, cooperation, animal rearing and management, fisheries, bee-keeping and cottage industries, depending upon the needs of area and people (Ram, 1998).

The KVK project is sponsored by the ICAR and is implemented by the following organizations.

1. Registration reported non-government organization having experience in agriculture and rural development.

2. State agricultural universities.

3. Selected ICAR institutes.

4. State government where ever needed.
5. Central universities having agricultural faculty.
6. Selected well-established colleges.
7. Deemed universities.

The KVK functions under the over all umbrell of the host institutions (implementing agencies) or in some cases fairly independently as desired and by the host institutions in consultation with ICAR. The rules and norms of the host institutions applying in administering the KVK's together with agreed memorandum of understanding between the host institution and the ICAR. The KVK is headed by the senior scientist in the field of agronomy, Extension, Horticulture, Animal sciences and home sciences etc. As also technical staff supporting each discipline. A dozen office staff is also provided under the scheme.

The local management committee (Scientific Advisory Committee) in each KVK is an important instrument of management this committee is devoted to constantly review the progress of the KVKs provide guidance for organizing training programmes and follow up extension activities, redress the problems where ever possible this is a strong mechanism for functional linkage with sister organization/institution.

Each KVK has been provided with a training organizers about a dozen scientific/technical staff and on equal number of office and supporting staff. The discipline of Agricultural Extension, Agronomy, Horticulture, Veterinary / Animal science, Home science and plant protection are normally represented in the KVKs.

Monitoring and evaluation of KVK activities are done at three levels viz. KVK level, Zonal level and Central level. Strong monitoring and evaluation mechanism have been developed for this purpose including performance evaluation by quinninmill review team (QRT).

The KVK is required to prepare its annual action plan and submit periodic reports of various activities to the zonal coordinator and the ICAR head quarter. Periodic workshops and training programmes are organized by state level and at a zonal level, so that proper annual action plans are prepared by the KVKs after through discussions. Thus the KVK is one of the potential first line transfers of
technology institutions at the district level has to act as a lighthouse of knowledge in the district.

The first Krishi Vigyan Kendra was established in 1974 at Pondicherry under administrative control the Tamilnadu Agricultural University, Coimbatore (T.N). In Uttar Pradesh the KVK at Sultanpur district was established in the year 1976 by the ICAR under local supervision of the Kamla Nehru Memorial Trust, Sultanpur (U.P).

In the battle of liberalization from poverty to improvement, the technology has become an important weapon and KVK is the means to the target groups. There are 551 KVKs (According to ICAR 78th annual meeting dated 12 May-2007) spread all over the states and union territories of the country.

In VIIIth five year plan, its mandate has been widened into four broad functions, viz;

1. Collaborate with subject matter specialists of the State Agricultural Universities/Scientist of the Regional Research Station (NARP) and the state extension personal in “On Farming Testing” refining and documenting technologies for developing region specific sustainable land use system.

2. Organise to update the extension personnel within the area of operation with emerging advances in agricultural research on regular basis.

3. Organise long term vocational training courses in agricultural and allied vocations for rural youths with emphasis on “Learning by Doing” for generating self employment through institutional financing.

4. Organise Front Line Demonstration in various crops to generate production data and feedback information.

To meet the changing needs, it is essential to create a cadre of “Technology Agents” from among unemployed youth, who are better trained, equipped and committed to serve our farming community, while generating self employment of themselves. Some KVKs of Maharashtra have already trained unemployed youth in vocational activities such as sericulture, mushroom production, poultry production, vermicompost farming, fruits and vegetable processing, sheep and goat rearing, nursery management, etc. It is believed that integration of science with rural development activities would enhance the functional
ability and required impact of extension activities. Hence, the integration of the KVKs, both for human resource development and frontline demonstration of technologies, with other rural development activities at the district level would add value to the process of technology transfer on a system mode. The KVK should not function as an independent agency, rather, other programmes in the district must integrate to make it more useful and holistic. In this endeavor, the initiative of the Government of Uttar Pradesh through its 'Diversified Agricultural Support Project' to strengthen the activities of 13 KVKs in the state is a welcome development.

In an 'Information age', the role of appropriate information package and its dissemination is equally important. It is not enough to generate information but also to see that the required information is delivered to the end users at the earliest and with least dissemination loss. The establishment of Agricultural Technology Information Centre (ATIC) will provide such mechanism beyond individual units of research institution in contribution towards the dissemination of information. This will serve as a single window system with an objective to help the farmers and other stakeholders both to provide solution to their problems and make available all technological information along with technology products for their testing and use. The ICAR has established so far 44 ATIC centers in various ICAR Institutes and SAUs. This project is also funded by NATP. Also, information networking of all KVKs, ICAR institutes and SAUs through Agricultural Research Information System (ARIS) under NATP, would provide access to the best technologies in future and helping undertaking distance education programmes for the benefit of our farming community.

In this direction, the Department of Agriculture and Cooperation, Government of India and the ICAR intend to try a new model through establishment of Agriculture Technology Management Agencies (ATMA) in 24 districts involving six states, viz Andhra Pradesh, Bihar, Punjab, Maharashtra, Himachal Pradesh and Orissa under the National Agricultural Technology Project (NATP). The ATMA would operate as a society at the
district level, would ensure active integration and partnership by sharing both the resources and responsibilities among all agencies related with agriculture and rural development. Another model, which the Council plans to experiment, is by creating 72 KVKs at those Zonal Agricultural Research Stations of SAUs located in the districts which could work hand in hand for technology generation, assessment and refinement and transfer. In our diverse and varying conditions, no static model is likely to serve effectively for all the stakeholders. Thus, new dimensions and partnerships will have to be experimented upon to improve our delivery mechanism.

The farmers in the world have a tradition of experimentation and developing indigenous knowledge for solution to many of their agricultural problems in harmony with nature. However, such indigenous knowledge in the past were often not made use of and the technological solutions suggested were not found to be economically feasible and culturally acceptable. The researchers, policymakers and development professionals began recognizing the value to such knowledge. The key features of such indigenous knowledge are reducing risks, affordability, ready availability, compatibility with current practices, visible results within a reasonable amount of time and overall satisfying multiple needs. More and more documentation of such indigenous knowledge resources will provide a base to the agricultural researchers and extensionists for appropriate blending with the research information (Hansra, 2002).

The transfer of technology priorities today should include:

(a) Enhancement and utilization of agro-biodiversity;
(b) Enhancing productivity through introduction of high yielding hybrids/varieties;
(c) Diversification of agriculture;
(d) Use of Integrated Pest Management and Integrated Nutrient Management for sustainable agriculture;
(e) Introduction of technologies for promoting equity among regions, sectors of society and gender; and
(f) Promotion of Agricultural Human Resource Development.
STATEMENT OF THE PROBLEM:

The number of KVK has been growing continuously since its inception in 1974. It has now reached 551 (According to ICAR 78th Annual meeting dated 12 may 2007) (489 KVK and 62 ZARS, KVK). However, their quality of work and its impact needs to be given some attention. Some efforts have been made to study their functioning and impact but more needs to be done in this direction. With this background, the present study was planned to study the following objectives.

Objectives:

1. To determine and compare the socio-economic and psychological profile of trainees and non-trainees.

2. To determine and compare the knowledge and attitude of trainees and non-trainees towards KVK training programmes.

3. To assess the impact of training programmes on the adoption of farm technologies.

4. To examine the relationship between socio-economic personal profiles of the respondents and adoption of farm technologies.

5. To study the constraints experienced by the trainees for adoption of farm technologies.

6. To study the constraints experienced by the trainers of KVK for organizing training programmes.

JUSTIFICATION AND IMPORTANCE OF THE STUDY;

The study will have a definite bearing on future development of agriculture as a whole. It attempts to different categories of trainees involvement under Krishi Vigyan Kendra. The study will help in identifying the factors which make for differences in involvement level of different categories of trainees participating in the Krishi Vigyan
Kendra. This study is important from the point of view of the organization, because of the need of achieving greater productivity of its agricultural scientists as well as the necessity. Above all, the findings of the study could be of great value to the management authority in shaping the training programmes to achieve the organizational goals more efficiently. The present study besides of having direct utility to the Krishi Vigyan Kendra under the investigation, Will help the Krishi Vigyan Kendra administration of similar nature in redesigning the trainees’ management policy. The research approach may be of value to the future research as in this or similar area.

The findings of study will provide useful information for the planners organisers and N.G.O.'s chairman of the KVK. The assessment of impact and analysis of training programme as perceived by the trained farmers and trainers may give the whole scenario of planning, organizing and conducting the training programme for the training organizer and trainers of KVK.

The results of the present study would be useful for other KVKs working in U.P. and India for improving their training performance. Finally, the study will have for reaching implication for trainees, trainers, planners, policy makers and for further development of agriculture.

LIMITATION OF THE STUDY;

The present study has been conducted by single student-investigator, who faced the limitation of time and financial resources. As the data depend upon interview, the responses may not be completely free from the individual basis and prejudices, though all efforts and precautions have been taken to maintain the objectivity of research.
Since the research has been conducted in a single KVK, the result can not be
generalized for the KVKs as a whole in the entire country; but nevertheless it will be a
strong data base for the planning in the region of the study.

All the possible efforts were made to make the findings of the study most reliable
and comprehensive as far as possible with available time and resources.

HYPOTHESES:

Based on studies and the objectives of the study the following hypotheses were
set up for testing their validity.

(1) **Null hypotheses (H₀):**

There is no difference in the socio-economic status of trainees and non-trainees.

**Research hypotheses (H₁):**

Trainees have higher socio-economic status than the non-trainees.

(2) **Null hypotheses (H₀):**

There is no difference between trainees and non-trainees in knowledge about the
KVK training programme.

**Research hypotheses (H₂):**

Trainees possess more knowledge about KVK training programme than the non-
trainees.

(3) **Null hypotheses (H₀):**

There is no difference between trainees and non-trainees in knowledge about
paddy crop.

**Research hypotheses (H₃):**

Trainees have more knowledge about paddy crop than the non-trainees.

(4) **Null hypotheses (H₀):**

There is no difference between trainees and non-trainees in knowledge about wheat
crop.

**Research hypotheses (H₄):**

Trainees have more knowledge about wheat crop than the non trainees.
(5) **Null hypotheses (H₀):**
There is no difference between trainees and non-trainees in knowledge about tomato crop.

**Research hypotheses (H₁):**
Trainees possess more knowledge about tomato crop than the non-trainees.

(6) **Null hypotheses (H₀):**
There is no difference between trainees and non-trainees in knowledge about brinjal crop.

**Research hypotheses (H₂):**
Trainees have more knowledge about brinjal crop than the non-trainees.

(7) **Null hypotheses (H₀):**
There is no difference between trainees and non-trainees in knowledge about kitchen gardening.

**Research hypotheses (H₃):**
Trainees have more knowledge about kitchen gardening than the non-trainees.

(8) **Null hypotheses (H₀):**
There is no difference between trainees and non-trainees in knowledge about fish farming.

**Research hypotheses (H₄):**
Trainees possess more knowledge about fish farming than the non-trainees.

(9) **Null hypotheses (H₀):**
There is no difference in the attitude of trainees and non-trainees towards KVK training programme.

**Research hypotheses (H₅):**
Trainees have more favorable attitude towards KVK training programme than the non-trainees.

(10) **Null hypotheses (H₀):**
There is no difference between trainees and non-trainees regarding their extent of adoption of package of practices of paddy crop.
Research hypotheses ($H_{10}$):
Trainees have more extent of adoption of package of practices of paddy crop than the non-trainees.

(11) Null hypotheses ($H_0$):
There is no difference between trainees and non-trainees regarding their extent of adoption of package of practices of wheat crop.

Research hypotheses ($H_{11}$):
Trainees possess more extent of adoption of package of practices of wheat crop than the non-trainees.

(12) Null hypotheses ($H_0$):
There is no difference between trainees and non-trainees regarding their extent of adoption of package of practices of tomato crop.

Research hypotheses ($H_{12}$):
Trainees have more extent of adoption of package of practices of tomato crop than the non-trainees.

(13) Null hypotheses ($H_0$):
There is no difference between trainees and non-trainees and non-trainees regarding their extent of adoption of package of practices of brinjal crop.

Research hypotheses ($H_{13}$):
Trainees have more extent of adoption of package of practices of brinjal crop than the non-trainees.

(14) Null hypotheses ($H_0$):
There is no difference between trainees and non-trainees and non-trainees regarding their extent of adoption of package of kitchen gardening.

Research hypotheses ($H_{14}$):
Trainees have more extent of adoption of package of practices of kitchen gardening than the non-trainees.

(15) Null hypotheses ($H_0$):
There is no difference between trainees and non-trainees and non-trainees regarding their extent of adoption of package of fish farming.
Research hypotheses ($H_{12}$):
Trainees have more extent of adoption of package of practices of fish farming than the non-trainees.

(16) Null hypotheses ($H_0$):
There is no relationship between socio-economic personal profiles of the respondents (trainees and non-trainees) and extent of adoption of farm technologies, package of practices of Paddy crop.

Research hypotheses ($H_{16}$):
There is positive relationship between extent of adoption of farm technologies, package of practices of Paddy crop and socio-economic personal profile of the respondents (trainees and non-trainees).

(17) Null hypotheses ($H_0$):
There is no relationship between socio-economic personal profiles of the respondents (trainees and non-trainees) and extent of adoption of farm technologies, package of practices of wheat crop.

Research hypotheses ($H_{17}$):
There is positive relationship between extent of adoption of farm technologies, package of practices of wheat crop and socio-economic personal profile of the respondents (trainees and non-trainees).

(18) Null hypotheses ($H_0$):
There is no relationship between socio-economic personal profiles of the respondents (trainees and non-trainees) and extent of adoption of farm technologies, package of practices of tomato crop.

Research hypotheses ($H_{18}$):
There is positive relationship between extent of adoption of farm technologies, package of practices of tomato crop and socio-economic personal profile of the respondents (trainees and non-trainees).
(19) Null hypotheses (H₀):

There is no relationship between socio-economic personal profiles of the respondents (trainees and non-trainees) and extent of adoption of farm technologies, package of practices of brinjal crop.

Research hypotheses (H₁₉):

There is positive relationship between extent of adoption of farm technologies, package of practices of brinjal crop and socio-economic personal profile of the respondents (trainees and non-trainees).

(20) Null hypotheses (H₀):

There is no relationship between socio-economic personal profiles of the respondents (trainees and non-trainees) and extent of adoption of farm technologies, package of practices of Kitchen gardening.

Research hypotheses (H₂₀):

There is positive relationship between extent of adoption of farm technologies, package of practices of kitchen gardening and socio-economic personal profile of the respondents (trainees and non-trainees).

(21) Null hypotheses (H₀):

There is no relationship between socio-economic personal profiles of the respondents (trainees and non-trainees) and extent of adoption of farm technologies, package of practices of fish farming.

Research hypotheses (H₂₁):

There is positive relationship between extent of adoption of farm technologies, package of practices of fish farming and socio-economic personal profile of the respondents (trainees and non-trainees).
LAYOUT OF THE THESIS:

The thesis has been presented in five chapters, starting with First chapter ‘Introduction’, which deals ‘the problem’ along with its objectives, scope and limitations. The second chapter has been devoted to ‘Review of literature’; the third chapter ‘Research Methodology’, with details of locale of study, sample and sampling procedure and operationalization and measurement of variables with statistical techniques used. ‘Results and Discussion’ have been presented in fourth chapter and finally the fifth chapter corresponds to ‘Summary and Conclusions’.

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