

**Employment generation in tribal through KVK in  
Dungarpur district (Rajasthan)**

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THESIS

SUBMITTED TO THE  
MAHARANA PRATAP UNIVERSITY OF AGRICULTURE AND  
TECHNOLOGY, UDAIPUR

In partial fulfilment of the requirement for  
the degree of

Master of Science in Agriculture  
(Extension Education)



By

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**2015**

# **Employment Generation in tribal through KVK in Dungarpur District (Rajasthan)**

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## **ABSTRACT**

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Looking to the importance of employment generation trainings, the present study entitled “Employment Generation in tribal through KVK in Dungarpur District (Rajasthan)” was undertaken with the following specific objectives:

1. To study the personal profile of beneficiary respondents of KVK
2. To assess the knowledge of tribal beneficiaries of Krishi Vigyan Kendra about employment generation activities.
3. To find out the level of participation of tribal in employment generation trainings organized by Krishi Vigyan Kendra.
4. To study the extent of employment generated among tribal beneficiaries through Krishi Vigyan Kendra.
5. To determine the association between selected personnel traits and employment generation activities among respondents.
6. To identify the constraints faced by the tribal farmers in taking up employment generation activities.

The present study was conducted in the purposely selected Dungarpur and Simalwara tehsils of Dungarpur district of Rajasthan. Five villages from each selected tehsil were taken on the basis of maximum tribal population. Thus, total ten villages were selected for the study. For selection of respondents, complete list of vocational training beneficiaries of KVK Dungarpur was prepared and 10 respondents were selected randomly from each selected village. Thus, in all 100 farmers were included in the sample of the study. Data were collected through tailor made interview schedule. Thereafter, data were analyzed and results were interpreted as given below:

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The study revealed that 53.00 per cent of the total respondents belonged to medium age group, 30.00 per cent of the respondents were educated upto primary, 32.00 per cent respondents were labour, 33.00 per cent respondents had annual income from Rs. 10,000 to 1.0 lakh per annum, 30.00 per cent respondents were landless, 59.00 per cent farmers were living in joint family and 29.00 per cent respondents were participant of only one organization.

The study also revealed that 40.00 per cent of the total respondents had medium level of knowledge about employment generation activities of KVK, whereas, 23.00 and 37.00 per cent farmers had low and high level of knowledge about employment generation activities of KVK. Further study revealed that in aspect wise knowledge of KVK trainings, poultry management was ranked first with MPS 89.75. Nursery management with 82.76 MPS was ranked second and organic farming/vermicomposting and preservation of products were ranked equally at third position with MPS 76.85.

Findings revealed that majority of respondents i.e. 56.00 percent of total respondents reported participation in training on dairy management to a great extent, whereas, 63.00 per cent respondents reported participation in training on propagation of plant to some extent. It may be concluded that participation in most of the employment generation trainings of KVK was moderate and more efforts are required to encourage their participation in these training which can provide employment to beneficiary farmers in a real meaning.

The majority i.e. 62.00 per cent of the total respondents reported employment generated by dairy management at great extent. 65.00 per cent respondents reported employment generation through organic farming/vermiculture at some extent and 27.00 per cent respondents reported for income generated by goat rearing.

It was found that family size of the respondents was significantly associated with employment generation activities, whereas, age, education, occupation, income, size of land holding and social participation were not significantly associated with employment generation activities.

Results found that lack of skill about employment generation activities, timely unavailability of seeds, lack of credit facility, lack of training institution for training of farmers/farm women, fatalistic attitude towards employment generation activity *etc.* were important constraints perceived by the tribal farmers in taking up employment generation activities.

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अध्ययन दर्शाता है कि कुल उत्तरदाताओं के 40.00 फीसदी किसानों को कृषि विज्ञान केन्द्र की रोजगार सृजन गतिविधियों के बारे में मध्यम स्तर का ज्ञान पाया गया। जबकि 23.00 प्रतिशत और 37.00 किसानों को कृषि विज्ञान केन्द्र की रोजगार सृजन गतिविधियों के बारे में ज्ञान निम्न और उच्च स्तर पर था। आगे के अध्ययन से ज्ञात होता है कि कृषि विज्ञान केन्द्र के कुक्कुट प्रबंधन प्रशिक्षण के बारे में ज्ञान एमपीएस 89.75 के साथ पहले स्थान पर रहा, पौधशाला प्रबंधन 82.76 एमपीएस के साथ दूसरे और जैविक खेती / कृमि खाद, उत्पादों का परिरक्षण एमपीएस 76.85 के साथ तीसरे स्थान पर रहा।

निष्कर्ष दर्शाते हैं कि कुल 56.00 प्रतिशत उत्तरदाताओं ने काफी हद तक डेयरी प्रबंधन पर प्रशिक्षण में भाग लेना बताया। जबकि 63.00 उत्तरदाताओं ने पौध संवर्धन के प्रशिक्षण में भागीदारी कुछ हद तक बताई और नर्सरी प्रबंधन एवं उत्पाद परिरक्षण पर प्रशिक्षण में 13.00 प्रतिशत उत्तरदाताओं ने भागीदारी बिल्कुल भी नहीं बताई।

यह पाया गया कि कुल 62.00 फीसदी उत्तरदाताओं ने काफी हद तक डेयरी प्रबंधन द्वारा रोजगार उत्पन्न होना बताया। 65.00 प्रतिशत उत्तरदाताओं ने कुछ हद तक ही जैविक खेती / कृमिखाद के माध्यम से रोजगार सृजन की सूचना दी और 27.00 प्रतिशत उत्तरदाताओं के अनुसार बकरी पालन के द्वारा कोई आय उत्पन्न नहीं हुई।

यह पाया गया कि उत्तरदाताओं के परिवार का आकार एवं रोजगार सृजन गतिविधियों में संबंध है जबकि, उम्र, शिक्षा, व्यवसाय, आय, कृषि जोत का आकार, सामाजिक भागीदारी एवं रोजगार सृजन गतिविधियों में कोई संबंध नहीं पाया गया।

परिणामों में यह पाया गया कि रोजगार सृजन गतिविधियों के बारे में कौशलता की कमी, समय पर बीज की अनुपलब्धता, पैसों की व्यवस्था की कमी, कृषको / कृषक महिलाओं के प्रशिक्षण के लिए प्रशिक्षण संस्था की कमी, रोजगार सृजन गतिविधियों के प्रति भाग्यवादी रवैया आदि महत्वपूर्ण बाधाएं पाई गई जो आदिवासी किसानों रोजगार सृजन गतिविधियों को ग्रहण करने में प्रकट हुई।

# 1. INTRODUCTION

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Agriculture being the backbone of Indian economy would continue as the most predominant sector of economy in the early part of the 21<sup>st</sup> century. Country's 57.00 per cent population makes their living through agriculture and its related fields viz, animal husbandry, dairying, fisheries, horticulture, food processing, preservation, sericulture, farm machines etc. The progress of the nation is directly linked with the advancement of agriculture. Government had made a policy decision to invest about 6.0 per cent of the plan allocation for agriculture development. Vocational education contributes to increase productivity of all individuals and ultimately leading to national development. The Department of Agriculture Research and Education (DARE) coordinates research and educational activities in agriculture and its related fields in the country.

Presently, SAUs governing colleges of agriculture, engineering, veterinary, dairy, forestry, horticulture, food and science are imparting scientific education. Based on the recommendation of the Education Commission (1964-66), consideration and review by the Planning Commission and Inter-Ministerial Committee and further recommendation by the committee headed by Dr. Mohan Singh Mehta appointed by ICAR in 1973, the idea of establishment of Farm Science Centre (Krishi Vigyan Kendra) was evolved. The first KVK, on a pilot basis, was established in 1974 at Pondicherry under the administrative control of the Tamil Nadu Agricultural University, Coimbatore. In 1976-77, the Planning Commission approved the proposal of the ICAR to establish 18 KVKs during the Fifth Five Year Plan.

A high level Evaluation Committee on KVKs was constituted by the ICAR in 1984 who after thorough review of the programme, strongly recommended for the establishment of more KVKs in the country. On the occasion of the Independence Day on 15th August, 2005, the Hon'ble Prime Minister of India announced to establish atleast one KVK in each of the rural districts of the country by the end of 2007. This has resulted in establishment of 551 KVKs at the end of Tenth Plan which included 371 under State Agricultural Universities (SAUs) and Central Agricultural University (CAU), 40 under ICAR institute, 88 under NGOs, 33 under State Government, 3 under PSUs and the remaining 16 under other educational institutions. In Twelfth Five Year Plan, the total number of KVKs in India reached to 641.

**Table 1: Zonewise KVKs in India**

**Krishi Vigyan Kendras****Number of Krishi Vigyan Kendras****ZONE 1 - 70 KVKs**

DELHI	1
HARYANA	18
HIMANCHAL PRADESH	12
JAMMU & KASHMIR	19
PUNJAB	20

**ZONE 2 – 83 KVKs**

A&N ISLAND	3
BIHAR	38
JHARKHAND	24
WEST BENGAL	18

**ZONE 3-78 KVKs**

ASSAM	25
ARUNACHAL PRADESH	14
MANIPUR	09
MEGHALAYA	05
MIZORAM	08
NAGALAND	09
SIKKIM	04
TRIPURA	04

**ZONE 4 – 81 KVKs**

UTTAR PRADESH	68
UTTARAKHAND	13

**ZONE 5 – 78 KVKs**

ANDRA PRADESH	34
MAHARASHTRA	44

**ZONE 6 – 70 KVKs**

RAJASTHAN	42
GUJARAT	28

**ZONE 7 – 100 KVKs**

CHATTISGARH	20
MADHYA PRADESH	47
ODISHA	33

**ZONE 8 – 81 KVKs**

KARNATAKA	31
TAMILNADU	30
KERALA	14
GOA	2
PONDICHERRY	3
LAKSHDEEP	1

Total **641**

Source: [www.icar.org.in](http://www.icar.org.in) - website of ICAR,

The first KVK in Rajasthan was Bharatiya Krishi Vigyan Kendra, established at Fatehpur Shekhawati of district Sikar in 1976, At present, 42 KVKs are working in Rajasthan. The Krishi Vigyan Kendra, according to Prasad, Choudhary and Nayar (1987) is designed to impart need-based and skill-oriented vocational trainings to the practicing farmers, inservice field level extension workers and those who wish to take up self-employment.

Krishi Vigyan Kendras, as an innovative science based institutions, were established mainly to impart vocational trainings to the farmers and field level extension workers.

The prime goal of KVK is to impart training as per needs and requirements in agriculture and allied enterprises to all farmers, farm women and farm youth including school drop-outs in the rural area. No formal certificate or diploma is awarded to the farmers for getting such short and long duration vocational training which enhance self employment among them. Vocational trainings help them to sustain themselves through self-employment and to make them self-reliant economically and thus discourages them to migrate to the urban areas. KVKs provide training not only in agriculture and allied vocations but also in other income-generating activities that may supplement the income of farm families. Krishi Vigyan Kendras (KVKs) as institutes of inducing behavioral changes among rural people, are being managed by both government and non-government organizations.

**The objective of KVK includes:**

1. Planning and conducting survey of the operational area in order to prepare the resource inventory with special reference to identifying the training needs of the farming community.
2. Planning and conducting production oriented, need-based short and long duration training courses both on campus as well as in the villages for various target groups with priority on the weaker and the poor.
3. Developing and organizing non-formal educational programmes by way of field days, farm visits, farmers fair, radio talk, farm science clubs etc. as the follow up information support to training courses.



4. Organizing farm science clubs, both in rural schools and in villages in order to induce in younger generation a liking for and an interest for agricultural and allied sciences and scientific farming through supervised projects.
5. Developing and maintaining the campus farms and demonstration units on scientific lines as the facilities for providing work experience to the trainees as also disseminating the latest technical knowhow.
6. Providing practical facilities of the Kendra to the teachers and the students of the vocational agriculture of the higher secondary schools.
7. Imparting some general education to rural illiterate and school drop-outs in order to make them not only good farmers but also better citizens.
8. Providing added training facilities in the areas for home making and nutrition education for rural community.
9. Gradually enlarging the training facilities to encompass other important areas such as home crafts, cottage industries etc. consistent to the requirements of the integrated rural development in collaboration with concerned organization.
10. Implementing all such schemes of the ICAR and other related organizations which intend to strengthen the training programmes of the Kendra.

### **Scope and importance of the study**

The present study is designed to measure the impact of activities of Krishi Vigyan Kendra on beneficiaries in Dungarpur district of Rajasthan. The progress in agriculture depends to a large extent on the quick and effective dissemination of new agricultural technologies among the farmers. But, success of any extension activity depends on the ability and expertise of the KVK extension staff to ensure, deliver and direct a speed flow of information to the farmers at the right time in the most appropriate manner. It is worth while saying that knowledge and attitude of individuals towards any development programme plays a significant role in adoption of the programme by the farmers.

Because, in the way, farmers think, feel and act upon the programme and the type of knowledge they already have and the impediments coming in the way of gaining knowledge about the programme, are the important factors influencing the success of the programme.

Increase in food production is the joint effort of research and extension activities of KVK. It is estimated that if farmers of our country adopt even the available agriculture innovation, then our production may be doubled or even tripled. This emphasizes the importance of extension activities. KVK staff encourages farmers to rapidly adopt new technologies and more efficient practices based on continuously advancing research with the farmer clearly understanding them. KVK staff is required to explain new technologies to farmers and teach them.

Vocational trainings for practicing farmer, farm women and young farmers are critical input for accelerating agriculture production as a long term strategy. The basic aim of KVKs is to improve their technical literacy and they are designed to impart skill oriented training through work experience and “learning by doing”. The residential and non residential courses of varying duration, which are tailor-made and need based, are organized on areas like crop husbandry, live stock production, horticulture, fisheries, forestry, engineering, home economics, post harvest technology, etc. Most of these courses are linked with the ongoing government programmes. Krishi Vigyan Kendra do not award any certificate and diploma.

To the extent possible, the existing man power and infrastructure facilities in the host institution are utilized for this purpose. Even progressive farmers and such other person with specific knowledge and skill are utilized as trainers. In dungarpur district of Rajasthan Krishi Vigyan Kendra was established in 1992. The KVK dungarpur is regularly organizing various vocational training programmes on different aspects of agriculture for farming community of district, especially for the tribal farmers, to generate self employment.

The vocational trainings offered by KVK Dungarpur are practical in nature and provides opportunities to establish self enterprises for livelihood. KVK trainings are well versed in the technology as well as farming pedagogy and they demonstrate the skills effectively to the trainees. These vocational trainings have many dimension but the ultimate goal is employment generation in rural areas. Hence, this aspect is a key indicator to assess the employment generation in tribal through Krishi Vigyan Kendra. Therefore it is the right time to assess the level of employment generation among the tribal through various activities of Krishi Vigyan Kendras.

With this point in view the present study entitled **“Employment generation in tribal through KVK in Dungarpur district (Rajasthan)”** has been undertaken with the following specific objectives.

1. To assess the knowledge of tribal beneficiaries of Krishi Vigyan Kendra about employment generation activities.
2. To find out the level of participation of tribal in employment generation trainings organized by Krishi Vigyan Kendra.
3. To study the extent of employment generated among tribal beneficiaries through Krishi Vigyan Kendra.
4. To determine the association between selected personnel traits and employment generation activities among respondents.
5. To identify the constraints faced by the tribal farmers in taking up employment generation activities.

The result of the study will definitely provide a basis to the programme planners, policy makers, administrator, execution agencies and KVK personnel to work out whether these vocational training offered by KVK are really helpful or not. The results of the study will also help them to revise and reorient the vocational trainings to fulfill the actual needs of beneficiaries. They will be able to restructure the title, course content, practical exposers, duration and other aspects of vocational trainings so that they become more employment generating activity.

The present study also makes an attempt to find out the extent of the knowledge of beneficiary farmers about employment generation activities and efforts have also been made to know the level of participation of tribal in employment generation trainings organized by KVK, Dungarpur. An additional attempt has also been made to determine the association between selected personal traits and employment generation activities in order to work out that which personal factor is significantly associated with the employment generation and how it can be taken care for increasing the employment among tribal.

The study was remain confined to Dungarpur district because of the limitation of the time and resources. This being M.Sc. research, it is sufficient to select one district for exposure of

research methodology, way of conducting research, orientation of research and data analysis to the research scholar.

### **LIMITATIONS OF THE STUDY:**

The study has been conducted by the student as investigator with the under mentioned limitations.

1. The present study is confined only to Dungarpur district of Rajasthan.
2. The study is confined to only selected activities which have highest number of tribal beneficiaries under KVK.
3. Under present study, the assessment of improvement in overall quality of life of beneficiaries is restricted to social and economical aspects only.
4. The findings of the study are exclusively based on verbal expression and response of respondents.

### **HYPOTHESES**

NH<sub>0</sub>, 1 there is no significant difference in knowledge of beneficiaries respondent about different aspects of KVK.

NH<sub>1</sub> 1 There is significant difference in knowledge of beneficiaries respondent about different aspects of KVK.

### **DEFINITIONS OF IMPORTANT TERMS USED**

- 1) **Age:** It refers to the age of farmers on the date of interview rounded up to the nearest year.
- 2) **Beneficiaries:** The people of the area under study who have got benefits, profits and advantages through KVK and mainly fulfilling the criteria of KVK.
- 3) **Interview:** Interview is essentially a face to face conversation carried out by the researcher with the respondent for getting his/her response.
- 4) **Knowledge:** Knowledge is a body of understood information possess by an individual. In this study, knowledge is defined as the amount of understood information an individual possess with regard to major aspect of KVK.
- 5) **Schedule:** It refers to a set of questions which are asked and filled by an interviewer in a face to face situation with another person.
- 6) **Vocational training:** [Training](#) designed to teach the skills and knowledge needed for particular kind of work.

## **2. REVIEW OF LITERATURE**

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Comprehensive review of literature is an essential part of any scientific investigation. The review of literature guides the researcher to discuss and conclude his/her findings with reference to past studies. It also guides in conceptualizing the topic and objectives of research. As the literature having direct bearing on different aspects of the present study is limited and hence, the literature having direct or indirect bearing on the title was also reviewed and incorporated. An account of the literature reviewed is being presented in this chapter under the following sub-heads.

2.1 Personal characteristics of respondents

2.2 Knowledge of beneficiaries

2.3 Extent of employment

2.4 Level of participation

2.5 Association between personal traits

2.6 Constraints

### **2.1 Personal characteristics of respondents:-**

#### **2.1.1 Age**

Bevenahalli (2005) reported that majority of the respondents of SGSY were middle age, while 28.33 per cent were of young age and remaining were old.

Charan (2005) in his study on profile of Sujala Watershed Project beneficiary farmers revealed that majority (46.00 %) of respondents was in middle age group.

Devalatha (2005) in his study conducted on women self help groups of Gadag district of North Karnataka reported that majority of the respondents (71.76 %) were young aged, while 25.00 per cent of them were middle age and remaining belonged to old age category (3.33 %).

Joseph and Easwaran (2006) in the study conducted at Aizawl district of Mizoram reported that majority of the respondents were aged between 40 and 60 years, followed by 30.77

per cent who were below 40 years and 15.38 per cent were above 60 years. The mean age of members was found to be 48 years.

Kumar *et al.* (2007) conducted a study on impact of TAR-IVLP crop cultivation and reported that majority (64.67 %) of the IVLP farmer belonged to middle age group, 20 per cent of them were of younger age (less than 28 years only) and 15.33 per cent of the respondents were old aged (above 51 years).

Shanthamani (2007) conducted a study on critical analysis of Mysore Resettlement and Development Agency (MYRADA) NGO programme in Gulbarga district and reported that 46.60 per cent of the respondents belonged to old age group followed by middle age (40.70 %) and young age (12.70 %)

Kumar and Sailaja (2012) reported that majority of the respondents (45.83%) of the Adarsha Rythus were of young age.

Wasihun *et al.* (2014) reported that majority of both male (52.00 %) and female (54.00 %) farmers fall in the age category of 40 to 50 years. Mean age for male and female farmers was 42.31 and 40.77 years, respectively.

Dhodia *et al.* (2014) reported that distributional analysis pertaining to age of the respondent indicated middle age group (38.00 %) followed by old age group (27.00 %) and young age group (35.00 %). It could be stated from the above findings that over whelming majority (73.00 %) of the respondent were found in middle to young age group.

### **2.1.2 Education**

Rao (2003) conducted a study in three districts of Andhra Pradesh and reported that illiterates formed only 11.00 per cent, while 60.00 per cent had formal schooling.

Bharathi (2005) in her study on assessment of entrepreneurial activities promoted under NATP on empowerment of women in agriculture reported that 44.20 per cent of the respondents were illiterate followed by 27.30 per cent who had high school level education, 13.30 per cent had primary and middle school level education and the remaining 15.20 per cent had completed their education upto college level.

Charan (2005) in his study on Profile of Sujala Watershed Project beneficiary farmers in Dharwad district found that 28.00 per cent respondents were educated up to high school followed by 27.33 per cent up to middle and 10.67 per cent illiterate.

Kumar *et al.* (2007) reported that 47.33 per cent of the farmers had education below primary level while 48.00 per cent had up to middle & high school education. None of the farmer under rainfed ecosystem had education above metric, while under irrigation agro ecosystem, 28.00 per cent of the farmers had education up to metric. Still, about 13.00 per cent of the farmers were illiterate in the study area

Shanthamani (2007) after studying Mysore Resettlement and Development Agency (MYRADA) NGO programme in Gulbarga district concluded that the percentage of illiterate were more (46.00 %), followed by the respondents educated up to high school (17.30 %), can read only (11.30 %), can read & write (16.00 %), primary school (6.00 %), middle school (2.70 %) and a meager per cent of the respondents (0.70 %) were graduate.

Khalache and Gaikwad (2011) concluded that relatively higher proportions i.e. 32.00 per cent of the beneficiaries were educated up to primary school level. They also reported that 31.00 per cent respondents were illiterate, 25.00 per cent were educated up to secondary level, 9.00 per cent up to high school and remaining 3.00 per cent were graduate.

Patel *et al.* (2014) reported that nearly less than half (48.33 %) of the farmers educated up to college level followed by 40.00 per cent and 6.66 per cent of the farmers educated up to secondary level and primary level, respectively. whereas, 5.00 per cent farmers were illiterate.

### **2.1.3 Income**

Chavai (2002) in his study found that 74.32 per cent of the TRYSEM beneficiaries had medium social participation, while 14.87 and 10.81 per cent had high and low participation, respectively.

Shridhar (2002) reported that 43.00 per cent of the respondents belonged to income group of Rs.11,001 to 22,000 per annum, whereas only few of them (6.60 %) belonged to higher group of income i.e. Rs.22,001 to 33,000 per annum.

Deepak (2003) in his study on perception of beneficiaries and non-beneficiaries towards WYTEP programme in Dharwad district revealed that 36.00 and 40.00 per cent of the

beneficiaries and non beneficiaries belonged to semi-medium income group, respectively. Nearly 32.00 per cent of the beneficiaries and 29.33 per cent of the non beneficiaries belonged to low income group. An equal per cent (20.00 %) of each of beneficiaries and non beneficiaries belonged to medium income group. Very less per cent of the beneficiaries and non beneficiaries belonged to high income group.

Savitha (2004) revealed that 45.50 per cent of the respondents had low income followed by medium and high income constituting 28.28 per cent and 25.70 per cent, respectively in Dharwad district.

Hari and Kumawat (2006) reported that small farmers who obtained assistance under SGSY for buffalo rearing could be able to increase their annual income by Rs. 15,310 over and above Rs. 14,170 earned by the non-assisted families. In per cent terms, it was about 8.00 per cent higher than that of non-assisted families. The study also revealed that the buffalo rearing activity helped to increase employment by 92 man days (52.79 %) for small farmers and 72 man days (46.15 %) for marginal farmers.

Singh *et al.* (2009) revealed that the increase in crop yield had been recorded in NATP adopted districts as compared to non-adopted districts. Diversified farming system and adoption of improved farming technologies/practices increased the yield of crops and resulted in increase of income.

Singh and Prakash (2010) in their study on socio-economic impact of watershed management project in Manipur revealed that project could marginally increase the income from 77.50 per cent to 78.46 per cent and employment opportunity for the house holders also increased in watershed area.

Upadhyay and Solanki (2010) revealed that the income of member household before becoming a member of dairy cooperative indicated that a majority of respondents (38.00 %) had monthly income ranging from Rs. 1101 to 1400. After becoming member of dairy cooperative, only 22.00 per cent respondents had the annual income in the range of Rs. 1101 to 1400. Majority i.e. 40.00 per cent respondents had monthly income in the range of Rs. 1401-1700 from sale of milk. There was an increase in income level of members after obtaining co-operative membership. Only 10.00 per cent of the respondents, who obtain membership, had monthly



income ranging from Rs. 1701-2000 whereas, before obtaining co-operative membership, none of the respondent had monthly income in the range of Rs. 1701-2000.

#### **2.1.4 Occupation**

Kharb (2000) viewed that majority of respondents belonged to families having farming occupation and majority of them were found growing ber, citrus and guava as their major fruit crop.

Slunkhe (2013) found that majority of the respondents belonged to middle age group and medium family size, having farming occupations.

Dhaka (2014) found that that majority of the respondents belonged to lower middle age group, were illiterate, belonged to low caste, married, with medium family size, from joint family, low family income, landless, agricultural labours and had low material possession.

Soni *et al.* (2014) reported that nearly half (45.71 %) of the subscribers had farming alone as main source of livelihood.

Dhodia *et al.* (2014) found that farming was prime occupation (45.00 %) for the farmers in study area. So far, subsidiary occupation is concerned, 48.00 per cent and 7.00 per cent of the respondents were engaged in farming along with animal husbandry & farming, animal husbandry and service, respectively. During field survey, it was observed that out of every two families, at least one family engaged in farming along with labour work as a supplementary income source.

#### **2.1.5 Land holding**

Rangi *et al.* (2002) in the study conducted at Fetehtarh Sahib in Punjab reported that about two-third of the respondents did not own any land whereas about one third had their own land. The latter comprised only of small and marginal farmers.

Satyanarayana *et al.* (2002) in a study on SGSY beneficiaries revealed that majority of beneficiaries were landless (62.86%) followed by medium farmers (17.14%) and small farmers comprised only 11.43 per cent of beneficiaries.

Devalatha (2005) reported in her study on profile study of women SHGs in Gadag district of North Karnataka that 30.83 per cent of the SHG members were landless, 28.33 per cent were

marginal farmers (<2.5 acres), 20.83 per cent belonged to small farmers *i.e.*, 2.5-5 acres and 20.00 per cent belonged to big farmers category (>5 acres).

Dolli (2006) in his study on sustainability of natural resources management in watershed development project revealed that majority of respondents belonged to the group having large land holdings (7.85 acres).

Bharad (2007) found that 60.50 per cent of the mango growers had a medium size of land holding. Remaining 31.00 per cent and 8.50 per cent had small and big size of land holding, respectively.

Shanthamani (2007) reported that 38.00 per cent of the beneficiaries belonged to medium farmers' category, followed by small farmers (31.30 %), large farmers (20.70 %) and marginal farmers (10.00 %).

Khalache and Gaikwad (2011) revealed that relatively higher per cent of beneficiaries (48.00 %) possessed marginal level of land holding. About 46.00 per cent of the beneficiaries possessed small level of land holding.

Bihari *et al.* (2012) reported that 58.00 per cent had small size (<1 acre) of land holding followed by medium (1-2.5 acre) 31.33 per cent and large (>2.5 acre) only 10.67 per cent while in case of material possession max. 54.67 per cent had medium level of possession.

Sarkar *et al.* (2013) in their study found that marginal and small farms are now efficient in terms of economic value productivity. The size of farm holdings affected the crop pattern. Small farmers gave first priority to food crops because they were more interested to fulfill their food requirements. Against this, the large farmers, with substantial land holdings, devoted a major part of their land for growing cash crops or high value crops.

#### **2.1.6 Family size**

Sengar (2003) reported that majority of the respondents belonged to middle age group, illiterate, medium size family, opting 2-4 occupations.

Verma (2003) found that majority of respondents were from middle age, illiterate, medium educational status and belonged to nuclear families.

Salunkhe (2013) concluded that majority of the Gurjari growers had medium to big size of land holding with poor social participation and had medium to big family.

Dhaka (2014) found that that majority of the respondents belonged to medium family size, from joint family, low family income, landless, agricultural labours.

### **2.1.7 Social participation**

Dahiya (2000) found that majority of the respondents were young, illiterate and low social participation, having medium socio-economic status.

Bordoloi (2002) reported that majority of farmers belonged to middle age group having medium castes, occupation, social participation.

Manhas (2005) found that majority of the respondents belonged to the age group of 39 to 53 years, educated upto middle standard, possessed marginal land holding and had medium level of social participation.

Salunkhe (2013) concluded that the Gurjari growers had poor social participation and had medium to big family categories.

## **2.2 Knowledge of beneficiaries:**

Kadam *et al.* (2001) reported that majority of the beneficiaries had knowledge about the practices like 'dividing the fields with small bunds' (82.00 %) and 'small earthen bunds' (76.66 %), while more than two-fifth of the beneficiaries had knowledge about the practices namely 'stubble and agro waste plucking' (46.00 %), 'drains per trenches' (43.33 %) and 'intercropping' (42.00 %).

Maru (2002) reported that majority (61.66 per cent) of the respondents of progressive village had medium knowledge regarding improved practices of bajra cultivation followed by high (36.67 %) and low (1.67 %) level of knowledge.

Awasthi *et al.* (2002) found that 31 dairy farmers (38.75 %) were having medium level of knowledge, while 27 (33.75 %) and 22 (27.50 %) dairy farmers possessed high and low level of knowledge, respectively towards improved dairy practices.

Meena (2003) reported that more than 70.00 per cent of the respondents were from medium knowledge category, followed by 15.33 per cent respondents who possessed high

knowledge regarding improved cultivation of safed musli. Further, it was observed that only 14.17 per cent of the respondents had low knowledge about scientific cultivation of safed musli.

Kunaujia *et al.* (2003) reported that training imparted by KVK have enhanced knowledge and skill of rural women. Highest change in knowledge and skill over untrained women was observed in many practices.

Kanan *et al.* (2004) revealed that 35.71 per cent of the respondents had high level of knowledge, followed by 37.14 per cent respondents with medium level of knowledge and 27.15 per cent of the respondents with low level of knowledge regarding improved dairy farming practices.

Saini (2005) found 65.63 per cent farmers in medium knowledge, 19.37 per cent in high knowledge and only 15.00 per cent farmers in low knowledge level category about vermitechnology.

Singh *et al.* (2005) found that the level of technical knowledge of wheat growers were found to be highest i.e. 77.00 per cent in case of seed rate and sowing time while 55.78 per cent in case of use of fertilizers in paddy. In case of mango, 65.15 per cent knowledge found in required irrigation methods. For goat rearing, it was 64.29 per cent in breeding etc. Regarding fish farming, the level of knowledge of farmers was found 88.00 per cent in harvesting and production technology of participating farmers under KVK.

Yadav *et al.* (2006) revealed that 82.00 per cent farmers were having knowledge and remaining 18.00 per cent farmers were having no knowledge about soil testing practice.

Deshmukh *et al.* (2007) observed that the majority of the respondents (97.92 %) belonged to the low level of knowledge, while only 2.08 per cent respondents had high level of knowledge and medium level of knowledge about agricultural technology.

Satya Prakash and De (2008) in their study indicated the level of knowledge of ATMA beneficiaries about bee-keeping and reported significant association between knowledge about bee-keeping and age, education, family type, family size and sources of information utilized.

Sharma *et al.* (2009) observed that the maximum (58.75 %) respondents had moderate knowledge level followed by poor (21.25 %) and high (20.00 %) level of knowledge about management practices of buffalo husbandry.

Singh *et al.* (2010) found that the knowledge level of the trainees was found to increase in all areas of contents under study. The overall increase in knowledge over pre-training knowledge level was 69.55 per cent.

Parmar and Sharma (2014) reported that majority (72.00 %) of the respondents had medium level of knowledge about dairy occupation, whereas, 16.00 per cent and 12.00 per cent respondents were having high and low level of knowledge, respectively.

Pandya *et al.* (2014) reported that clear majority of respondents (97.50 %) were having medium level of knowledge. Only 2.50 per cent of them had high level of knowledge. None of the respondent had low knowledge about scientific date palm cultivation.

Bhoi *et al.* (2014) reported that majority of the frontline demonstration beneficiaries (58.33%) had medium level of knowledge about recommended castor production technologies followed by high and low knowledge group with 25.00 per cent and 16.67 per cent respondents, respectively.

### **2.3 Extent of employment**

Kaur (2001) found that increase in income of the farmers in optimum plans developed for various categories, varies from 4 to 68 per cent. Similarly, employment can also be increased to a considerable extent with the adoption of optimum plans.

Binujeeth (2004) found that 62.50 per cent of the total respondents had favorable attitude towards Prime Minister's Rozgar Yojana. It was also found that both the category of respondents strongly agreed with the statements like "Debarring from loan facility after interview brings distress to the applicant", "PMRY assistance prevents the unemployed youth from indulging into unlawful activities", "PMRY is highly beneficial programme for educated unemployed youth" etc. Whereas, the statement entitled "the time gap between the application invited and loan sanctioned is considerably low" was considered as least favorable by both the categories of the respondents.

Khajuria (2005) reported that majority of respondents (67.91%) had favourable attitude towards mushroom enterprise and there had not been found any difference in peripheral and distant respondents with regard to attitude towards mushroom enterprise. Both the categories of respondents strongly agreed with the statements like "mushroom cultivation generates

employment avenues for the rural folk`, `mushroom cultivation provides an opportunity for diversification of traditional agriculture` `people have knowledge about nutritive value of mushroom` and `easy availability of raw material enable us to undertake this enterprise`. Further, both the categories of respondents negatively viewed the statements namely `mushroom cultivation is unsuitable for small, marginal and a landless farmer`, `the process of getting loan for this enterprise is tedious`. Whereas, the statement entitled `mushroom is a nonvegetarian food` was considered as least favourable by both the categories of the respondents.

Upadhyay (2005) revealed that among the tribal the average additional employment of 4.70, 4.93 and 4.16 months was generated through stitching, bamboo and dairy trade, respectively. Among non-tribal, maximum additional employment was generated through stitching trade i.e. 7.83 months and it was very less i.e. 1.0 and 0.8 months in case of bamboo and dairy trade, respectively. Majority of the respondents were employed upto 180 man days through DWCRA programme activities. A study of mean monetary gain through selected trades revealed that among tribal, maximum monetary gain was through bamboo trade (Rs. 443.33) followed by dairy work (Rs. 260) and stitching trade (Rs. 156.83). In case of non tribal beneficiaries, the mean monetary gain was maximum through bamboo trade (Rs. 420) followed by stitching trade (Rs. 316.5) and dairy work (Rs. 106.67). The monetary gain was found to be significant in all the three selected trades.

Dhaka (2014) reported the gender wise extent of perceived impact of MGNREGA scheme. Majority of the male respondents perceived high extent on “Increase in market wages”, “Reduction in mental tensions for earning money for the family”, “Increase in self confidence” and “Reduction in the migration of workers from the village for employment” whereas female respondents perceived high extent on “Increase in market wages”, “Reduction in the migration of workers from the village for employment”, “Reduction in domestic violence”, “Duration of unpaid family work declined” and both of the respondents perceived low extent on “Control over resources” and “Loan repayment.” Overall perceived impact of respondents regarding MGNREGA scheme increased on “Basic necessities of life” followed by “Migration back to villages”, “Repayment of loan” and “Food security.”

## **2.4 Level of participation**

Singh (2010) reported that the vocational training programmes have resulted in continued adoption of beekeeping and mushroom cultivation enterprises by 20.00 per cent and 51.00 per cent trained farmers, respectively.

Ahmad *et al.* (2012) in their study indicated that majority of respondents (63.42 %) opined that training programme was fully based on their needs and problems followed by those (23.44 %) reporting that it was partially need based. About 4/5th of the respondents felt that the training courses were balanced as per the proportion of theory and practical are concerned. Almost 3/4th have benefitted from the KVK trainings of which about half (52.29 %) have realized increase in productivity of enterprise followed by generally/domestically useful (37.03 %) and gainful employment (10.68 %).

Tsegaye *et al.* (2012) reported that 98%, 92%, 84%, 82% and 80% of the respondents participated and engaged in weeding, organic fertilizers preparation, inputs transport to farm, fertilizer applications and harvesting, respectively. However, their participation was limited on ploughing (14%) and crop protection activities (34%). The roles of women in final decision making on purchase/sell of farm implements (6%) was quite minimal. Their extent of participation in decision making for most of seed production activities is limited only on consultation. Therefore, serious attention and integrated support should be given for rural women to improve their position in decision making.

Tekale (2012) observed that respondents were only consulted in the area of preparation of land (52.00 %), method of sowing (47.00 %), proper time sowing (44.00 %), selection of crop (36.00 %) and crop varieties to be sown (36.00%). The respondents opinion were considered in decision making in the areas like harvesting of crop (42.00%), followed by storage of farm produce (34.00%) and use of labours (30.00 %). The respondents were actively involved in final decision in area of use of labour (42.00 %), storage farm produce (40.00 %), harvesting of crops (31.00%) and intercultural operations (30.00 %). Nearly equal proportion of respondents i.e. 39.00 and 35.00 per cent had high and medium level of overall participation in decision making process in agriculture. Majority of respondents reported that reasons for non participation in decision making were male dominance (56.00 %), lack of technical knowledge (52.00%), education (39.00%), agricultural development policies (37.00 %) and control over resources (34.00%).

Sharma *et al.* (2013) reported that the exposure of KVK training programmes significantly changed the attitude of farmers in desired direction, which one could obviously expected.

Singh *et al.* (2013) reported that most of the beneficiaries (42.00 %) were found to have high level of opinion for training programme organized by KVK, Tharion and 40.00 per cent beneficiaries found to have medium level of opinion for these trainings.

Jebamary *et al.* (2014) reported that majority (74.09 %) of the respondents had medium level of overall participation, followed by high (17.27 %) and low (8.63 %) levels of overall participation. Attending group meetings (2.90 %), operating commercial ventures (2.70 %) and attending village developmental works (2.50 %) are the major SHG activities, economic activities and social developmental activities, respectively.

Satpute and Wankhade (2015) found that majority of the respondents (98.00%) were having low level of participation in different panchayat activities, followed by 02.00 per cent who were observed under medium level of extent of participation.

## **2.5 Association between personnel traits**

Tara Chand (2001) found that education, size of land holding and socio-economic status of the farmers was significantly associated with their gain in knowledge towards activities of KVK.

Jaitawat (2006) observed that age, education, social participation, training received and economic motivation of the farmers were associated significantly while size of family was associated non-significantly with their knowledge about cumin cultivation.

Kaur and Talukdar (2007) concluded that there was positive and significant correlation of educational level, annual family income, size of operational land holding of the family, social participation, training exposure and level of aspiration for economic independence of farm women with utility of training programme at 0.01 level of probability.

Bairolia (2008) observed that education, social participation, size of land holding, farm mechanization index, extension participation, economic motivation of farmers were associated significantly while occupation and size of family was associated non-significantly with knowledge level of farmers towards the KVK activities.



Dubey *et al.* (2008) concluded that there was significant difference between on and off-campus trainees regarding their socio-economic status.

## **2.6 Constraints**

Kumar and Kumar (2003) found that both small and marginal farmers have expressed 'low price of milk', 'high cost of feeds and fodder, and 'non-availability of land for fodder cultivation' as the major constraints.

Singh *et al.* (2007) found that the main constraints faced by trained farmers were "training method was not effective", "training subject not match with current problems' and 'more distance from the villages to the training centers'.

Chauhan and Singh (2007) found that the major constraints faced by beneficiaries of KVKs were 'lack of publicity of training programme', 'non-availability of required inputs', 'lack of coordination with other agencies', 'needs are not assessed' and lack of transport facilities for field visit during training programmes.

Samantaray *et al.* (2009) found that the major constraints like 'lack of post harvest technologies', 'absence of storage facilities', 'inadequate training programme' and 'inadequate demonstration of new technology' were faced by the vegetable growers.

Narmatha *et al.* (2010) found that majority of the respondents (91.67 %) had medium to high level of constraints about milk vendors.

Khajuria *et al.* (2010) found that the most severe constraint hampering small farmers was 'high cost of chemical input' (72.00%) whereas, in case of medium and big farmers, 'scarcity of irrigation water' was found to hamper most.

Manivannan and Tripathi (2011) concluded that high cost of concentrate feed, non-remunerative price for milk and complexity in the procedure for obtaining loan were reported as the three major constraints impeding the efficient management of the dairy enterprise by majority of the respondents, irrespective of the three localities.

### 3. RESEARCH METHODOLOGY

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This chapter of the study describes the details of the methods and procedures used in the selection of location and sample for the present investigation. This also includes the measuring devices and tools used for data collection and statistical analysis. The detailed methodology has been described under following sections:

- 3.1 Location and sample of the study
- 3.2 Construction of tools for data collection
- 3.3 Measurement of variables
- 3.4 Method of data collection
- 3.5 Analysis of data
- 3.6 Statistical measures used

#### 3.1 LOCATION AND SAMPLE OF THE STUDY

The present investigation was conducted purposely in Rajasthan state. Rajasthan is India's largest state by area. It is located on the western side of the country. The geographic features of Rajasthan are the Thar Desert and the Aravalli range, which runs through the state from southwest to northeast, almost from one end to the other, for more than 850 kilometers. The state lies between 23.55° N latitude and 74.45° E longitude at the elevation of 302 meters (990 ft.) above mean sea level. Most of the rainfall is received from July to September. Sporadic rainfall and its uneven distribution sometimes lead to the conditions of drought and famine. The groundwater level is low (about 10-30 meters). The soil is mainly sandy, loam and silt. The total geographical area of the state is 342,239 sq. km.

##### 3.1.1 Selection of District

The state of Rajasthan consists of thirty three districts. The present investigation was conducted in Dungarpur district of southern Rajasthan. Dungarpur district of Rajasthan is situated at the Southern tip of the State adjoining Gujarat. It extends between 23 and 24.1° North latitude and 73.22° and 74.24° East longitude. The districts Udaipur and Banswara lie in North

and East of Dungarpur district, respectively. On South and West, it is surrounded by the border of the neighboring state of Gujarat. The district has geographical area of 3800 Sq. kms.

The district is surrounded with hills covered with jungle of cactus, jujube trees and salar (*Boswellia Serrata*) a gum producing tree together with several other varieties of shrubs and trees requiring neither deep soil nor moisture. In the north and east, the landscape is rugged and wild but towards the south-west border, the features seem to merge in the topography of Gujrat region. The rainfall varies between 47 cm to 76 cm per annum.

The climate of Dungarpur is quite dry. The summer season is hot, but milder than most of the other Rajasthan cities. The average temperature in summers falls in the range of 43° C (max) to 26° C (min). Climatic conditions of Dungarpur in winters are quite cool. The average temperature ranges between 25° C (max) to 9° C (min). Dungarpur weather experiences average rainfall hovering between 47 cm to 76 cm.

The Dungarpur district was selected purposively for the study. The reasons for selection of the purposed district are

1. The Dungarpur district has maximum concentration of tribal population in the southern Rajasthan.
2. The Training programme for employment of tribal is running in full swing in the district.
3. One KVK under the administrative control of MPUAT is stationed in the Dungarpur district and it is undertaking various training programmes for self employment of tribal population in Dungarpur.
4. Sporadic efforts have been made by the earlier researchers to undertake study in this area.

### **3.1.2 Selection of Tehsils**

Dungarpur district consists of four tehsils namely Dungarpur, Aspur, Sagwara and Simalwara tehsil of which two tehsils *viz.* Dungarpur and Simalwara were selected for the present study on the basis of maximum number of tribal population to draw the sample of villages for inclusion in the study.

**Table 2: Tribal population in four tehsils of Dungarpur district**

S.No.	Name of tehsil	Total tribal population
1.	Dungarpur	447,717
2.	Aspur	224,243
3.	Sagwara	309,086
4.	Simalwara	318,763

Source: (*Census of India- 2011*)

### 3.1.3 Selection of villages

Five villages from each selected tehsil were identified on the basis of maximum population of tribal. Thus, there were ten villages from two tehsils as listed below:

**Table 3: Tribal population in villages of selected tehsil**

S.No.	Name of villages	Name of tehsil	Total tribal population
1.	Amjhara	Dungarpur	2525
2.	Asela	Dungarpur	2936
3	Balota	Dungarpur	3190
4	Balwara	Dungarpur	5560
5	Bokhlapal	Dungarpur	7297
6	Bargama	Simalwara	3639
7	Bhadar	Simalwara	3669
8	Baori	Simalwara	3944
9	Ambara	Simalwara	4818
10	Bedsa	Simalwara	5084

Source: (*Census of India-2011*)

### 3.1.4 Selection of respondents

Keeping in view the nature of the study, only one type of respondents were selected i.e. **Beneficiary's respondents:** The beneficiary respondents were those who obtained vocational trainings on various aspects from Krishi Vigyan Kendra, Dungarpur. To select the beneficiary respondents, a complete list of beneficiaries was prepared from the records available at KVK, Dungarpur. From the list so prepared, ten beneficiaries from each village were selected

randomly. It was planned to have a sample of total 100 respondents for this study. Random sampling technique was employed for the selection of respondents for this study.

### **3.2 CONSTRUCTION OF TOOLS FOR DATA COLLECTION**

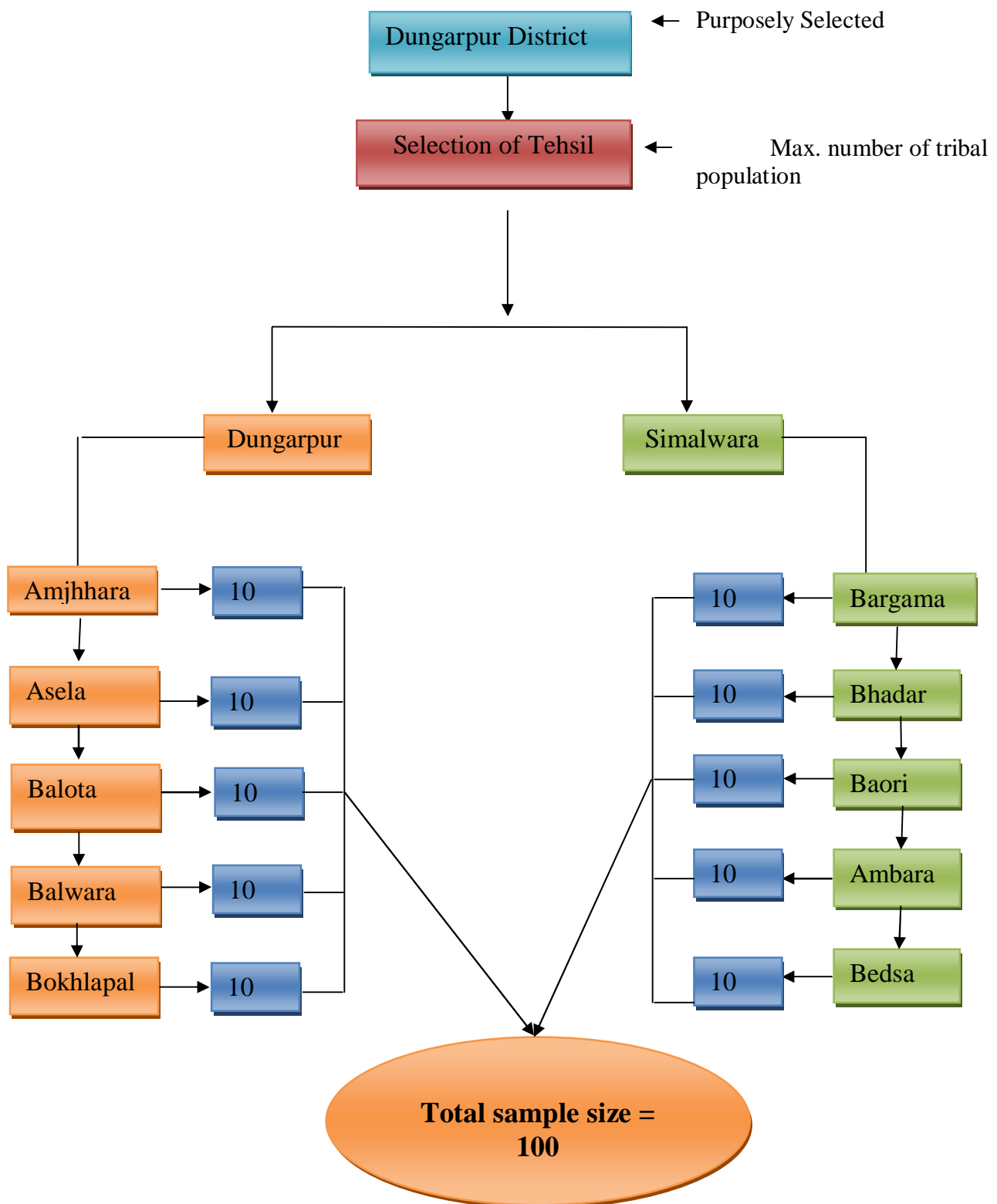
Tailor-made interview schedule in accordance with the specific objectives was prepared by the student researcher and was used for gathering the relevant information. Readymade tools as utilized in previous related studies were also utilized with slight modifications.

#### **3.2.1 Personal profile of respondents**

This part of schedule consisted of information related to personal profile of respondents viz., general information about personal profile including age, education, occupation, annual income, size of land holding, family type social participation. The personal profile (antecedent variables or personal characteristics) of the respondents did not play any role as per specific objectives of the study and as far as their relationships with the study variables were concerned.

#### **3.2.2 Knowledge of respondents**

The second section of the schedule was specially developed to measure the extent of knowledge of tribal beneficiaries about employment generation activities of Krishi Vigyan Kendra. To gather the information related to knowledge level of respondent regarding Krishi Vigyan Kendra, some major aspect were included in the schedule viz. Dairy management, organic farming, off season vegetable production, propagation of plants, nursery management, goat rearing, poultry management, stitching, mushroom cultivation, preservation of products, artificial insemination etc. The schedule consists of 44 questions about knowledge of employment generation activities. The questions were dichotomous and of multiple choice type.



**Fig. 2:0 Sampling procedure**



### **3.2.3 Level of participation of respondents**

The third section of the schedule was developed to measure the level of participation of beneficiaries in employment generation trainings organized by KVK. All the training organized by KVK were listed with the help of experts and data available. This section consists 11 aspects related to trainings organized by KVK. The information related to participation was recorded on a three point continuum scale viz. 'Great extent', 'to some extent' and 'not at all' by assigning score 2, 1 and 0, respectively.

### **3.2.4 Extent of Employment generation among tribal beneficiaries**

The fourth section of the schedule made an attempt to measure the extent of employment generation among tribal beneficiaries through KVK activities. All the items/questions related to employment generation were listed with the help of experts and literature available. This part of schedule was meant for beneficiary respondents. The information related to employment generation was recorded on a three point continuum scale viz. 'Great extent', 'to some extent' and 'not at all' by assigning score 2, 1 and 0, respectively.

### **3.2.5 Constraints faced by the tribal farmers in taking up employment generation activities**

This part of the schedule was constructed to measure the constraints faced by the tribal beneficiaries. The section contained queries related to constraints faced by farmers in taking up employment generation activities. The queries were grouped under 5 sub-head viz. technological constraints, service-supply, economic, institutional and general constraints.

### **3.2.6 Association between personal traits and employment generation activities.**

To measure the association between personal traits of respondents viz., general information about personal profile including age, education, occupation, annual income, size of land holding, family type etc, queries of personal profile and queries of employment generation activities were used.

## **3.3 MEASUREMENT OF VARIABLES**

This part of the chapter concerns with details about different variables as selected under the study and their measurement.

### **3.3.1 Measurement of independent variables**



Age, education, annual income, occupation, size of land holding, family type, social participation were the variables included in the personal profile of tribal beneficiaries. The details of these variables with their respective measurements are as follows:

- (i) **Age:** The respondents were categorized into three groups on the basis of their actual age attained by them at the time of data collection.
  - (a) Young age
  - (b) Middle age
  - (c) Old age
- (ii) **Education:** The respondents were distributed into following four categories on the basis of their level of education during interview.
  - (a) Illiterate
  - (b) Up to primary
  - (c) Up to high secondary
  - (d) Graduate or above
- (iii) **Occupation:** All the respondent were classified in to four major categories on the basis of their occupation.
  - (a) Labour
  - (b) Agriculture
  - (c) Business
  - (d) Service
- (iv) **Income:** Based on annual income of the respondents, they were grouped in to following categories.
  - a) Rs. 10,000 to 1.0 lakh per annum
  - b) Rs.1.0 lakh to 2.5 lakh per annum
  - c) Rs.2.5 lakh to 5.0 lakh per annum
  - d) Above Rs. 5.0 lakh per annum

- (v) **Size of land holding:** Considering the size of land holding possessed by the respondents they were put into following four categories:
- (a) Landless
  - (b) Less than 1 ha.
  - (c) 1-2 ha.
  - (d) More than 2 ha.
- (vi) **Type of family:** The respondents were classified into two categories according to their family composition:
- (a) Nuclear (Husband, wife and children)
  - (b) Joint (Husband, wife, children and other closely related members)
- (vii) **Social participation:** Social participation of the farmers was measured as per the scoring procedure given in the 7<sup>th</sup> question of the interview schedule. One score was assigned to “No participation” followed by 2, 3 and 4 to “member of one organization”, “member of more than one organization” and “member of local committees”, respectively. Total score obtained by the individual respondent was computed out.

### 3.3.2 Measurement of dependent variables

Measurement of dependent variables is described as under:

(i) **Measurement of knowledge**

To measure the extent of knowledge of the respondents about different aspect of KVK trainings, a knowledge test was developed for the study purpose. The items included in knowledge test were discussed with the specialist to ensure that no important aspect had been left out.

The total score of the individual member for all items was calculated. The mean and standard deviation of all respondents score were computed for classifying the knowledge level into different categories. Accordingly, the members were categorised into low, medium and high level group based on the knowledge score of the individual respondents.

The knowledge index for each respondent was calculated by using the following formula:

$$K.I. = \frac{K \times 100}{P}$$

Where:

K.I. = Knowledge Index

K = Knowledge Score Obtained

P = Possible Maximum Score

To determine the extent of knowledge, mean percent score for each sub-aspect was worked out.

**(ii) Measurement of level of participation of tribal in employment generation trainings organized by Krishi Vigyan Kendra.**

To measure the participation of tribals in employment generation trainings organized by KVK, frequency and percentage were calculated for all relative aspects *viz.* training on dairy management, poultry rearing, off season vegetable production, organic farming/vermiculture, propagation of plants, nursery management, goat rearing, preservation of products, mushroom cultivation, stitching for women, artificial insemination etc.

**(iii) Measurement of extent of employment generated among tribal beneficiaries through Krishi Vigyan Kendra.**

To measure the employment generated among the tribal beneficiaries through KVK, frequency and percentage were calculated for all relative aspects *viz.* income generation through dairy management, poultry rearing, off season vegetable production, organic farming/vermiculture, propagation of plants, nursery management, goat rearing, preservation of products, mushroom cultivation, stitching for women, artificial insemination etc.

**(iv) Measurement of association between personal traits with employment generation activities.**

To find out the association between personal attributes *viz.* age, education, occupation, family size, size of land holding, social participation and employment generation activities. the calculated chi- square value was compared with table value at 1 and 5 per cent of level of significance to draw the inference.

**(v) Measurement of constraints faced by the tribal farmers in taking up employment generation activities.**

To measure the constraints faced by tribal farmers in taking up employment generation activities, MPS and Rank were calculated for all relative aspects *viz.* technological constraints, service-supply constraints, economic constraints, institutional constraints and general constraints.

### **3.4 Method of data collection**

The information was elicited from the respondents with the help of structured interview schedule. Face to face interview technique was employed for collecting the data from the respondents. This method helped in collecting valid and reliable information. The final schedule was used to gather the information from the respondents by personal interview method. The interview was conducted in Hindi as well as local dialect as and when required.

### **3.5 Analysis of data**

The data so collected were transferred to the tally sheets. They were then scrutinized, processed, tabulated, classified and analyzed for statistical treatments in the light of the objectives of the study. Various hypotheses were formulated and tested by using the appropriate statistics.

### **3.6 Statistical measures used**

In order to answer the research questions mentioned under hypothesis and to achieve the objectives of the study, investigator undertook pertinent statistical analysis. Following statistical methods were used in the present study:

**(i) Percentage and frequency**

The percentage and frequency distribution of respondents were worked out for categorizing them with regards to personal characteristics and independent variables.

**(ii) Mean score**

It was obtained by dividing total score of each statement by total number of respondents.

$$\text{Mean score} = \frac{\text{Total score of each statement}}{\text{Total number of respondents}}$$

**(iii) Mean per cent score (MPS)**

It was calculated by multiplying total obtained score of the respondents by 100 and divided by the maximum obtainable score.

$$\text{MPS} = \frac{\text{Total score obtained by the respondent}}{\text{Maximum obtainable scores}} \times 100$$

**(i) Rank**

Ranks were accorded in the descending order according to the mean per cent scores obtained. This was used to have in depth view of all the items related to the questions under consideration.

**(ii) Standard deviation**

Mean and standard deviation were used for categorizing the respondent into different categories and to find out the variability of the dependent and independent variable involved in the study.

$$S.D. = \sqrt{\frac{1}{n} \sum x_i^2 - \left( \frac{\sum x_i}{n} \right)^2}$$

S.D. = Standard deviation

n = Sample size

$\sum X_i$  = Sum of total scores in sample

$\sum X_i^2$  = Sum of squares of score of each respondent in sample

**(iii) Chi-square test**

The chi-square statistic was used to test the hypothesis of association between two or more groups, populations or criteria.

$$\chi^2 = \sum \frac{(O - E)^2}{E}$$

O = Observed frequency

E = Expected frequency

## 4. RESULTS AND DISCUSSION

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This chapter deals with the findings of the present investigation in the light of specific objectives therein. Keeping in view the following objectives of the study, the required information was collected from the respondents by personal interview technique with the help of structured interview schedule.

1. To assess the knowledge of tribal beneficiaries of Krishi Vigyan Kendra about employment generation activities.
2. To find out the level of participation of tribal in employment generation trainings organized by Krishi Vigyan Kendra.
3. To study the extent of employment generated among tribal beneficiaries through Krishi Vigyan Kendra.
4. To determine the association between selected personnel traits and employment generation activities among respondents.
5. To identify the constraints faced by the tribal farmers in taking up employment generation activities.

The inferences derived after analyzing the data have been presented in different sections given as under:

### 4.1 PERSONAL PROFILE OF THE BENEFICIARIES

In this section, results relating to personal profile (characteristics) of the respondents *viz.* age, education, occupation, annual income, size of land holding, family type and social participation have been presented. The results are being given in subsequent tables.

#### 4.1.1 Age

The age categories of all the respondents were made according to their mean score and standard deviations. Thus, three categories were formed i.e. low (< 28 years), medium (28 to 52

years) and high (> 52 years). The distribution of respondents with respect to their age has been presented in Table 4.

**Table 4: Distribution of the respondents according to their age**

**n =100**

S.NO.	Age (in years)	Dungarpur tehsil		Simalwara tehsil		Total	
		F	%	F	%	F	%
1.	Low (< 28 years)	12	24.00	10	20.00	22	22.00
2.	Medium (28-52 years)	25	50.00	28	56.00	53	53.00
3.	High (> 52 years)	13	26.00	12	24.00	25	25.00
	Total	50	100.00	50	100.00	100	100.00

F= frequency, % = per cent

$n=n_1+n_2$ ,  $n_1$ =Size of sample for respondents of Dungarpur,  $n_2$ = Size of sample for respondents of Simalwara,  $n$ = total size of sample.

Table 4 shows that majority of respondents belonged to middle age group i.e. 28 to 52 years of age. This age group alone constitutes 53.00 per cent of total sample. The respondents in high and low age groups were found to be 25 (25.00 %) and 22 (22.00 %), respectively.

Based on further analysis of Table 4, it was noted that 25 (50.00 %) tribal beneficiary farmers of Dungarpur tehsil and 28 (56.00 %) farmers of Simalwara tehsil belonged to the medium age group, whereas, in low age group, tribal beneficiaries of Dungarpur and Simalwara tehsils were found to be 12 (24.00 %) and 10 (20.00 %), respectively. Likewise, the representation of tribal beneficiaries of Dungarpur and Simalwara respondents in the high age group was 13 (26.00 %) and 12 (24.00 %), respectively. It is therefore, concluded that majority of respondents in both the selected tehsils fell under medium to high age group. It means that majority of beneficiaries of KVK were of the age between 28 years to 52 years and above.

Findings are in agreement with the findings of Charan (2005) who in his study on profile of Sujala Watershed Project beneficiary farmers in Dharwad revealed that majority (46.00 %) of respondents were in middle age group.

#### **4.1.2 Education**

To know the level of education of selected respondents, they were put in to four categories *viz.*, illiterate, upto primary, upto higher secondary and graduate or above. The frequencies were counted and converted into percentage for the respondents. The results have been presented in Table 5.

**Table 5: Distribution of respondents according to their education**

**n=100**

S.NO.	Category	Dungarpur tehsil		Simalwara tehsil		Total	
		F	%	F	%	F	%
1.	Illiterate	8	16.00	20	40.00	28	28.00
2.	Upto primary	20	40.00	12	24.00	32	32.00
3.	Upto higher secondary	12	24.00	10	20.00	22	22.00
4.	Graduate or above	10	20.00	8	16.00	18	18.00
	Total	50	100.00	50	100.00	100	100.00

F = frequency, % = percentage

$n=n_1+n_2$ ,  $n_1$ =Size of sample for respondents of Dungarpur,  $n_2$ = Size of sample for respondents of Simalwara,  $n$ = total size of sample.

The data incorporated in Table 5 clearly shows that out of the total 100 respondents, 28 per cent respondents were not educated, 32.00 per cent respondents were educated upto primary and 22.00 per cent were educated upto higher secondary. A close observation of the table further indicates that maximum 32.00 per cent respondents were educated upto primary, in which 40.00 per cent respondents were tribal beneficiaries of Dungarpur tehsil and 24.00 per cent respondents were of Simalwara tehsil. On other hand, there were 22.00 per cent respondents are educated upto higher secondary. About 28.00 per cent respondents were not educated, out of which 16.00 per cent and 40.00 percent were of Dungarpur and Simalwara tehsil, respectively.

Table 5 further reveals that only 18.00 per cent of total respondents were educated to the level of graduation or above. In this category, 10 (20.00 %) were found to be from Dungarpur tehsil and 8 (16.00 %) were from simalwara tehsil.

It is therefore concluded that majority of the respondents fell under group educated upto primary level. It means the majority of beneficiaries of KVK were educated only upto primary level.



Findings are in agreement with Charan (2005) who in his study on profile of Sujala Watershed Project beneficiary farmers in Dharwad district found that 28.00 per cent respondents were educated upto high school.

#### 4.1.3 Occupation

To find out the occupation of selected respondents of both the selected tehsils, they were categorized into four occupation group viz. labour, agriculture, business and service. The frequency and percentage wise results have been presented in Table 6.

**Table 6: Distribution of respondents according to their occupation**

**n=100**

S.NO.	Category	Dungarpur tehsil		Simalwara tehsil		Total	
		F	%	F	%	F	%
1.	Labour	12	24.00	20	40.00	32	32.00
2.	Agriculture	16	32.00	11	22.00	27	27.00
3.	Business	12	24.00	10	20.00	22	22.00
4.	Service	10	20.00	9	18.00	19	19.00
	Total	50	100.00	50	100.00	100	100.00

F= frequency, % = percentage

$n=n_1+n_2$ ,  $n_1$ =Size of sample for respondents of Dungarpur,  $n_2$ = Size of sample for respondents of Simalwara,  $n$ = total size of sample.

It is evident from Table 6 that maximum number of respondents i.e. 32.00 per cent were engaged as labour for earning their income, while 27.00 per cent of the total respondents were engaged in agriculture. The data in the table further reveals that 22.00 per cent and 19.00 per cent of total respondents were engaged in business and service, respectively.

The data in Table 6 also reveals that 12 (24.00 %) tribal beneficiaries of dungarpur and 20 (40.00 %) beneficiaries of Simalwara tehsil were engaged in agriculture as their main occupation. On the other hand, 12 (24.00 %) beneficiaries of Dungarpur and 10 (20.00 %) of Simalwara tehsil were businessmen. About 10 (20.00 %) of respondents in Dungarpur and 9 (18.00 %) of the respondents in Simalwara tehsil were involved in different kind of services.

From the above analysis of Table 6, it may be concluded that majority of the respondents in the study area were engaged as labour for earning of their livelihood.

Findings are contrast with Soni *et al.* (2014) who reported that nearly half (45.71 %) of the subscribers had farming alone as occupation as main source of livelihood.

#### 4.1.4 Annual Income

The data included in Table 7 visualizes that out of the total 100 respondents, 33.00 per cent had annual income from Rs. 10,000 to 1.0 lakh per annum from all sources, 25.00 per cent respondents had income between Rs. 1.0 lakh to 2.5 lakh per annum and 22.00 per cent had annual income between Rs. 2.5 lakh to 5.0 lakh, while remaining 20.00 per cent of the respondents earned more than Rs. 5.0 lakh per annum. Therefore, it is concluded that majority of respondent of both the tehsils earned an income between Rs. 10,000 to 1.0 lakh per annum.

Table 7 further indicates that majority of the beneficiary farmers in Simalwara tehsil (36.00 %) earned an annual income between Rs. 1.0 lakh to 2.5 lakh while in Dungarpur tehsil, 30.00 per cent earned income only between Rs. 10,000 to 1.0 lakh per annum. It means that majority of KVK tribal beneficiaries were earning income between Rs. 10,000 to 1.0 lac.

**Table 7: Distribution of respondents according to their annual income**

**n=100**

S.NO.	Category	Dungarpur tehsil		Simalwara tehsil		Total	
		F	%	F	%	F	%
1.	Rs. 10,000 to 1.0 lakh per annum	15	30.00	18	36.00	33	33.00
2.	Rs. 1.0 lakh to 2.5 lakh per annum	12	24.00	13	26.00	25	25.00
3.	Rs. 2.5 lakh to 5.0 lakh per annum	12	24.00	10	20.00	22	22.00
4.	Above Rs. 5.0 lakh per annum.	11	22.00	9	18.00	20	20.00
	Total	50	100.00	50	100.00	100	100.00

F = frequency, % = percentage

$n=n_1+n_2$ ,  $n_1$ =Size of sample for respondents of Dungarpur,  $n_2$ = Size of sample for respondents of Simalwara,  $n$ = total size of sample.

The findings are in agreement with Savitha (2004) who revealed that 45.50 per cent of the respondents had low income followed by medium and high income constituting 28.28 per cent and 25.70 per cent respondents, respectively in Dharwad district.

#### 4.1.5 Land holding

To know the size of land holding of selected respondents, they were put into four categories on the basis of possession of land *viz.*, landless, less than 1 ha., 1-2 ha. and more than 2 ha. The frequencies counted and converted into percentage for drawing the results and they have been presented in Table 8.

The data in Table 8 indicates that out of 100 respondents, 30.00 per cent were landless, while 28.00 per cent, 22.00 per cent and 20.00 per cent respondents possessing less than 1 hac., 1-2 hac. and more than 2 hac. land, respectively. Table 8 further indicates that majority of respondents i.e. 12.00 per cent tribal beneficiaries of Dungarpur and 18.00 per cent tribal beneficiaries of Simalwara tehsil were landless. Therefore, conclusion is drawn that majority of respondents belonged to landless category.

**Table 8: Distribution of respondents according to their size of land holding**

**n=100**

S.NO.	Category	Dungarpur tehsil		Simalwara tehsil		Total	
		F	%	F	%	F	%
1.	Landless	12	24.00	18	36.00	30	30.00
2.	Less than 1.0 hac.	15	30.00	13	26.00	28	28.00
3.	1.0–2.0 hac.	12	24.00	10	20.00	22	22.00
4.	More than 2.0 hac.	11	22.00	9	18.00	20	20.00
	Total	50	100.00	50	100.00	100	100.00

F = frequency, % = percentage

$n=n_1+n_2$ ,  $n_1$ =Size of sample for respondents of Dungarpur,  $n_2$ = Size of sample for respondents of Simalwara,  $n$ = total size of sample.

These findings are supported by the findings of Satyanarayana *et al.* (2002) who in their study on SGSY beneficiaries revealed that majority of beneficiaries were landless (62.86 %) followed by medium farmers (17.14 %) and small farmers. (11.43 %).

#### 4.1.6 Family type

To develop an understanding about the family type of selected respondents, they were classified in to two categories, i.e. nuclear and joint family. The results about family type have been presented in Table 9.

The data presented in Table 9 indicates that 41.00 per cent respondents belonged to nuclear families and remaining 59.00 per cent respondents belonged to joint family. Table 9 further indicates that majority of tribal respondents i.e., 56.00 per cent beneficiaries of Dungarpur and 62.00 per cent beneficiaries of Simalwara had joint family, while 44.00 per cent and 38.00 per cent beneficiary respondents had nuclear family in Dungarpur and Simalwara, respectively. Therefore, it may be concluded that majority of the respondents belonged to joint family.

**Table 9: Distribution of respondents according to their family type**

**n=100**

S.No.	Category	Dungarpur tehsil		Simalwara tehsil		Total	
		F	%	F	%	F	%
1	Nuclear	22	44.00	19	38.00	41	41.00
2.	Joint	28	56.00	31	62.00	59	59.00
	Total	50	100.00	50	100.00	100	100.00

F= frequency, % = percentage

$n=n_1+n_2$ ,  $n_1$ =Size of sample for respondents of Dungarpur,  $n_2$ = Size of sample for respondents of Simalwara,  $n$ = total size of sample.

Findings are in agreement with the findings of Dhaka (2014) who found majority of the respondents belonged to joint family.

#### 4.1.7 Social participation

Observation of Table 10 shows that majority of respondents in the study sample i.e. 29.00 per cent were the member of one organization, 27.00 per cent were not the member of any

organization, 25.00 per cent were the member of more than one organizations and only 19.00 per cent respondents possessed the position in local committees.

Critical analysis of Table 10 shows that 12 (24.00 %) tribal beneficiary of Dungarpur and 15 (30.00 %) tribal beneficiary respondents of Simalwara were not the member of any organization. It was also found that 15 (30.00 %) tribal beneficiary of Dungarpur and 14 (28.00 %) tribal beneficiary respondents of Simalwara were the member of only one organization. Similarly, 13 (26.00 %) tribal beneficiaries of Dungarpur and 12 (24.00 %) tribal beneficiaries of Simalwara belonged to more than one organizations, while only 10 (20.00 %) tribal beneficiaries of Dungarpur and 9 (18.00 %) tribal beneficiaries of Simalwara were member of local committees. This clearly implies that majority of the respondents in both the tehsils were member of one organization.

**Table 10: Distribution of respondents according to their social participation**

**n=100**

S. NO.	Category	Dungarpur tehsil		Simalwara tehsil		Total	
		F	%	F	%	F	%
1.	No participation	12	24.00	15	30.00	27	27.00
2.	Member of one organization	15	30.00	14	28.00	29	29.00
3.	Member of more than one organizations	13	26.00	12	24.00	25	25.00
4.	Member of local committees	10	20.00	9	18.00	19	19.00
	Total	50	100.00	50	100.00	100	100.00

F = frequency, % = percentage

$n=n_1+n_2$ ,  $n_1$ =Size of sample for respondents of Dungarpur,  $n_2$ = Size of sample for respondents of Simalwara,  $n$ = total size of sample.

Findings are in line with the findings of Manhas (2005) who found that majority of the respondents belonged to the medium level of social participation.

#### **4.2 KNOWLEDGE OF TRIBAL BENEFICIARIES OF KRISHI VIGYAN KENDRA ABOUT EMPLOYMENT GENERATION ACTIVITIES**

Knowledge, as a body of understood information possessed by an individual is one of the important components of his behavioral aspects and plays an important role in effective implementation of any training programme organised by KVKs. To get maximum benefit from such training programmes, it is necessary that rural people must be aware about objectives, activities, funds and works of the training programmes being operated in their area. On this ground, it is imperative to examine the extent of knowledge of beneficiaries about employment generation trainings organised by Krishi Vigyan Kendra, Dungarpur, so as to draw a picture about impact of the KVK training programmes. The present investigation was carried out with one of its objectives as to assess the knowledge of tribal beneficiaries of Krishi Vigyan Kendra about employment generation activities.

#### **4.2.1 Distribution of respondents according to their knowledge about employment generation activities**

To get an overview of the knowledge level, the respondents were categorized in to low, medium and high level knowledge group on the basis of calculated mean score of the knowledge score obtained by the respondents.

**Table 11: Distribution of respondents on the basis of their level of knowledge about employment generation activities**

**n=100**

S. NO.	Category	Dungarpur tehsil		Simalwara tehsil		Total	
		F	%	F	%	F	%
1.	Low (< 98)	12	24.00	11	22.00	23	23.00
2.	Medium (98-117)	18	36.00	22	44.00	40	40.00
3	High (> 117)	20	40.00	17	34.00	37	37.00
	Total	50	100.00	50	100.00	100	100.00

F = frequency, % = percentage

$n=n_1+n_2$ ,  $n_1$ =Size of sample for respondents of Dungarpur,  $n_2$ = Size of sample for respondents of Simalwara,  $n$ = total size of sample.

The data presented in Table 11 reveals that 23.00 per cent respondents had low level of knowledge, while 40.00 per cent of the respondents possessed medium level of knowledge about employment generation activities of KVK. A considerable number of respondents i.e. 37.00 per cent were observed in high level knowledge group. Further observation of data makes it clear that maximum number of tribal beneficiaries of Dungarpur i.e. 40.00 per cent had high level of

knowledge, followed by 36.00 per cent with medium level of knowledge about various employment generation activities of KVK. On the other hand, 22.00 per cent tribal beneficiary respondents of Simalwara tehsil were reported to have low level of knowledge, 44.00 per cent had medium level of knowledge and 34.00 per cent tribal beneficiaries of Simalwara had high level of knowledge. It is interesting to note that only 12.00 per cent tribal beneficiary respondents of Dungarpur possessed low level of knowledge about employment generation activities of KVK. Since majority of the beneficiaries of Dungarpur fall under high level knowledge group and majority of beneficiaries of Simalwara fall under medium level knowledge group, it implies that tribal farmers of Dungarpur defiantly had a good exposure of various training programmes organised by KVK and they are located near to KVK, and hence, scored higher in knowledge test as compared to Simalwara. These results promote the fact that more number of beneficiaries of Simalwara tehsil must be associated with KVK training programme for better knowledge and higher avenues of employment generation.

Findings are supported by the findings of Awasthi *et al.* (2002) who found that 31 dairy farmers (38.75 %) were having medium level of knowledge, while 27 (33.75 %) and 22 (27.50 %) dairy farmers possessed high and low level of knowledge, respectively, towards improved dairy practices.

#### **4.2.2 Aspect wise extent of knowledge of tribal respondents**

Individual aspect wise knowledge of tribal beneficiaries was also worked out for drawing a picture about the areas of training where tribal beneficiaries had good knowledge and where they are lacking, so that aspects with low knowledge can be given more importance in future.

For working out the knowledge of respondents (both Dungarpur and Simalwara) toward different aspects of Krishi Vigyan Kendra, in all 11 statements related to knowledge of KVK were considered. The mean per cent score (M.P.S.) was calculated for each statement and rank was assigned accordingly. The results have been present in Table 12.

From the data incorporated in Table 12, it is clearly evident that most of the tribal beneficiaries strongly agreed to have high knowledge about poultry management with MPS 89.75 and ranked first. Further analysis of table clearly indicates that nursery management activity was positively considered by tribal beneficiaries with MPS 82.76 and was ranked second.

Table 12 further shows that statement “preservation of products” and “organic farming/vermicompost” was considered by beneficiaries respondents with MPS 76.85 and ranked third. Likewise, tribal beneficiary respondents strongly knew “dairy management” with MPS 67.37 and ranked fourth.



**Table 12: Aspects wise knowledge of tribal respondents**

S.NO.	Aspects	Beneficiaries	
		MPS	Rank
1.	Dairy management	67.37	IV
2.	Organic farming/ vermicomposting	76.85	III
3.	Off season vegetable production	67.25	V
4.	Propagation of plants	58.05	VIII
5.	Nursery management	82.76	II
6.	Goat rearing	63.29	VI
7.	Poultry management	89.75	I
8.	Stitching for women	58.05	VIII
9.	Mushroom cultivation	67.25	V
10.	Preservation of products	76.85	III
11.	Artificial insemination	61.47	VII
	Average	68.69	

MPS = Mean per cent score

The knowledge about “off season vegetable production” and “mushroom cultivation” was noted and tribal beneficiary respondents had knowledge of these facts with MPS 67.25 and ranked fifth. Further analysis of table shows that the tribal beneficiary respondents had knowledge about “goat rearing” with MPS 63.29 ranked sixth.

The data presented in Table 12 shows that tribal beneficiary respondents of the study area possessed knowledge about “artificial insemination” with MPS 61.47 and ranked seventh. Regarding the knowledge about “propagation of plants” and “stitching for women”, tribal beneficiary respondents recorded MPS of 58.05 and ranked eighth.

From the above results it may be concluded that majority of tribal beneficiaries of KVK Dungarpur possessed maximum knowledge about poultry management and nursery management. These are the area where they not only acquired trainings from Krishi Vigyan Kendra, Dungarpur but also they are engaged in poultry and nursery management activities to a high extent. Hence, they possessed high knowledge about these aspects while their poor knowledge about artificial insemination, propagation of plants and stitching for women indicates that they

have less involvement in these areas of employment generation activities because of poor trainings organised by KVKs on these aspects.

Findings are in contrast with those of Kanan *et al.* (2004) who revealed that 35.71 per cent of the respondents had high level of knowledge, followed by 37.14 per cent respondents with medium level of knowledge and 27.15 per cent of the respondents with low level of knowledge regarding improved dairy farming practices.

#### **4.3 LEVEL OF PARTICIPATION OF TRIBAL IN EMPLOYMENT GENERATION TRAININGS ORGANIZED BY KRISHI VIGYAN KENDRA.**

To measure the participation of the tribal beneficiaries in employment generation activities of KVK, frequency and percentage was calculated for all relative aspects *viz.* dairy management, poultry rearing, off season vegetable production, organic farming, propagation of plants, nursery management, goat rearing, preservation of products, mushroom cultivation, stitching for women and artificial insemination. The tribal beneficiaries were divided into three categories on the basis of their level of participation i.e. to great extent, to some extent and not at all.

Table 13 intends to depict the data related to participation of tribal in employment generation trainings organized by KVK. The data evidently shows that participation in dairy management increased to a great extent as it was reported by 56.00 per cent beneficiary respondents. On the other hand, 29.00 per cent respondents reported their participation to some extent in training of dairy management after becoming KVK beneficiaries. A small number of respondents (15.00 %) reported no participation in training of dairy management. Further analysis of table shows that 51.00 per cent tribal beneficiaries reported participation to a great extent in training on organic farming/vermiculture, whereas only 23.00 per cent respondents didn't participated in trainings on this aspect and 26.00 per cent respondents viewed participation to some extent. Likewise, majority of tribal beneficiaries (44.00 %) agreed that they had participated in the training of KVK on off season vegetable production to some extent, whereas 38.00 per cent tribal beneficiaries reported participation to a great extent for off season vegetable production training organized by KVK. About 18.00 per cent tribal beneficiary respondents reported not at all for off season vegetable production training. Above results implies that KVK had a direct impact on increasing the participation in dairy management, organic

farming/vermiculture and off season vegetable production of the majority of tribal beneficiaries from moderate to remarkable extent.

**Table 13: Participation of tribal in employment generation trainings organized by Krishi Vigyan Kendra**

**n= 100**

S.NO.	Aspects	Participation in employment generation trainings					
		Great Extent		Some Extent		Not at all	
		F	%	F	%	F	%
1.	Training on Dairy management	56	56	29	29	15	15
2.	Training on organic farming/ Vermicomposting	51	51	26	26	23	23
3.	Training on off season vegetable Production	38	38	44	44	18	18
4.	Training on propagation of plants	18	18	63	63	19	19
5.	Training on nursery management	34	34	53	53	13	13
6.	Training on goat rearing	55	55	21	21	24	24
7.	Training on poultry management	56	56	17	17	27	27
8.	Training on stitching for womens	32	32	59	59	9	9
9.	Training on mushroom cultivation	23	23	60	60	17	17
10.	Training on preservation of products	32	32	55	55	13	13
11.	Training on Artificial insemination	42	42	22	22	36	36

F = frequency, % = percentage

Regarding participation in training on propagation of plants, it was found that 63.00 per cent tribal beneficiaries agreed to some extent, whereas only 18.00 per cent tribal beneficiaries agreed to a great extent after becoming the participant of trainings on propagation of plants and only 19.00 per cent tribal beneficiaries found not at all for training on propagation of plants in KVK. The participation of beneficiaries in training on nursery management organized by KVK was found to some extent by majority of respondents (53.00 %), whereas 34.00 per cent and 13.00 per cent tribal beneficiaries reported the participation to a great extent and not at all, respectively in the training on propagation of plants. The participation to a great extent was

reported by 55.00 per cent tribal beneficiaries with respect to training on goat rearing organized by KVK, while 21.00 per cent and 24.00 per cent tribal beneficiaries reported the participation to some extent and not at all about this aspect, respectively.

The data incorporated in Table 13 further shows that the majority of respondents (56.00 %) found participation in the training on poultry management to a great extent, whereas 17.00 per cent of respondents reported their participation in poultry management to some extent and 27.00 per cent tribal beneficiary respondents reported not at all for this training of KVK. Regarding training on stitching for women, 59.00 per cent tribal beneficiaries reported participation to some extent, whereas 32.00 per cent tribal beneficiaries had participated to a great extent and only 9.00 per cent tribal beneficiary respondents reported not at all on this aspect of training. Likewise, participation in training on mushroom cultivation to a great extent was viewed by 23.00 per cent tribal beneficiaries, whereas participation to some extent in this aspect was reported by 60.00 per cent tribal beneficiaries. Only 17.00 per cent respondents reported no participation at all in training on mushroom cultivation.

The data in Table 13 apparently reveals that the majority of tribal beneficiaries (55.00 %) reported that their participation in training on preservation of products was to some extent, whereas 32.00 per cent tribal beneficiaries reported the participation to great extent and only 13.00 per cent respondents reported no participation in training on preservation of products after becoming beneficiary KVK. Similarly, participation in training on artificial insemination was viewed by majority of respondents (42.00 %) to great extent, whereas to some extent about this aspect was reported by 22.00 per cent respondents. Only 36.00 per cent tribal beneficiaries reported not at all participation in training on artificial insemination after affiliation with KVK.

From the above result regarding level of participation of tribal beneficiaries in employment generation trainings organized by Krishi Vigyan Kendra, it can be said that change to a great extent was reported by respondents in the aspects like training on dairy management, training on organic farming/vermiculture, training on goat rearing, poultry rearing and artificial insemination. Regarding other aspects like training on off season vegetable production, training on propagation of plants, training on nursery management, training on stitching for women, training on mushroom cultivation, training on preservation of products, the majority of tribal beneficiary respondents had reported participation to some extent which implies that majority of beneficiary respondents have observed some improvement due to KVK training programmes. Hence, it may be concluded that participation in

most of the employment generation trainings of KVK was moderate and more efforts are required to encourage their participation in these training which can provide employment to beneficiary farmers in a real meaning.

Findings are in line with those of Satpute and Wankhade (2015) who found that majority of the respondents (98.00%) were having low level of participation in different panchayat activities, followed by 02.00 per cent who were observed under medium level of extent of participation.

#### **4.4 EXTENT OF EMPLOYMENT GENERATION AMONG TRIBAL BENEFICIARIES**

To measure the employment generation among the tribal beneficiaries through KVK, frequency and percentage was calculated for all relative aspects *viz.* income generation by dairy management, poultry rearing, off season vegetable production, organic farming, propagation of plants, nursery management, goat rearing, preservation of products, mushroom cultivation, stitching for women and artificial insemination.

The Table 14 intends to depict the data related to employment generation in tribal beneficiaries through KVK. The data evidently shows that dairy management increased the employment generation to a great extent as it was reported by 62.00 per cent beneficiary respondents. On the other hand, 25.00 per cent respondents reported the increase to some extent by dairy management after becoming KVK beneficiaries. A small number of respondents (13.00 %) reported no change in their income by dairy management. Further analysis of table shows that 55.00 per cent tribal beneficiaries reported a remarkable change in income generated by poultry rearing after becoming KVK beneficiaries, whereas only 22.00 per cent respondents reported no change at all in this aspect and 23.00 per cent respondent viewed change to some extent due to profit earned from poultry after becoming KVK beneficiaries. Likewise, majority of tribal beneficiaries (43.00 %) agreed that off season vegetable production improved their employment to some extent due to KVK, whereas 34.00 per cent tribal beneficiaries reported remarkable improvement in their income by off season vegetable production after becoming KVK beneficiaries. About 23.00 per cent tribal beneficiary respondents reported no change in their income through off season vegetable production after becoming KVK beneficiaries. Above results implies that KVK had a direct impact on increasing the income generation from dairy

management, poultry rearing and off season vegetable production of the majority of tribal beneficiary from moderate to remarkable extent.

**Table 14: Extent of employment generation among tribal beneficiaries under selected activities of KVK**

**n=100**

S.NO.	Aspects	Extent of employment generated					
		Great Extent		Some Extent		Not at all	
		F	%	F	%	F	%
1.	Employment generated by dairy management	62	62	25	25	13	13
2.	Income generated by poultry rearing	55	55	23	23	22	22
3.	Off season vegetable production generated income	34	34	43	43	23	23
4.	Employment through organic farming/vermiculture	16	16	65	65	19	19
5.	Employment generated by propagation of plants	38	38	46	46	16	16
6.	Income generated through nursery management	52	52	26	26	22	22
7.	Income generated by goat rearing	50	50	23	23	27	27
8.	Preservation of products generated employment	38	38	54	54	8	8
9.	Employment generated through mushroom cultivation	23	23	60	60	17	17
10.	Generation of income through stitching for women	29	29	58	58	13	13
11.	Income generation through artificial insemination	41	41	18	18	41	41

F = frequency, % = percentage

Regarding employment generation through organic farming/vermiculture, it was found that 65.00 per cent tribal beneficiaries agreed the change to some extent, whereas only 16.00 per cent tribal beneficiaries agreed the change to a great extent after becoming KVK beneficiaries and only 19.00 per cent tribal beneficiaries found no change in income through organic farming/vermiculture. The employment generated by propagation of plant improved to some extent as reported by majority of respondents (46.00 %), whereas 38.00 per cent and 16.00 per cent tribal beneficiaries reported the change to remarkable extent and no change at all, respectively in the employment generated through propagation of plants. The change to a great extent was reported by 52.00 per cent tribal beneficiaries with respect to nursery management after becoming KVK beneficiaries, while 26.00 per cent and 22.00 per cent tribal beneficiaries reported the change to some extent and no change at all about this aspect, respectively after participation in KVK activities.

The data incorporated in Table 14 further shows that the majority of respondents (50.00 %) found that income generated by goat rearing improved to great extent, whereas 23.00 per cent of respondents reported improvement to some extent in their income generation through goat rearing and 27.00 per cent tribal beneficiary respondents reported no change in their income through this activity after becoming KVK beneficiaries. Regarding employment generation through preservation of products, 54.00 per cent tribal beneficiaries reported it to some extent, whereas 38.00 per cent tribal beneficiaries expressed that preservation of products had improved income to a remarkable extent and only 8.00 per cent tribal beneficiary respondents reported no change at all through this aspect after becoming KVK beneficiaries. Likewise, employment generated through mushroom cultivation to remarkable extent was viewed by 23.00 per cent tribal beneficiaries, whereas an improvement to some extent in this aspect was reported by 60.00 per cent tribal beneficiaries and 17.00 per cent respondents reported no change at all in employment generation through mushroom cultivation after becoming KVK beneficiaries.

The data in Table 14 apparently reveals that the majority of tribal beneficiaries (58.00 %) reported the generation of income through stitching for women to some extent, whereas 23.00 per cent tribal beneficiaries reported the change to great extent and only 17.00 per cent respondents reported that no change occurred in generation of income through stitching for women after affiliation with KVK. Similarly, income generation through artificial insemination to great extent was viewed by majority of respondents i.e. 41.00 per cent tribal beneficiaries,

while change to some extent about this aspect was reported by 18.00 per cent respondent and 41.00 per cent tribal beneficiaries reported no change in income generation through artificial insemination after affiliation with KVK.

From the above results regarding employment generation among tribal beneficiaries through selected activities of KVK, it can be concluded that change to a great extent was reported by majority of respondents in the aspects like 'employment generated by dairy management, income generated by poultry rearing, income generated through nursery management, income generated through goat rearing and income generation through artificial insemination. Regarding other aspects like the 'off season vegetable production generated income, employment generated through organic farming/vermiculture, employment generated through propagation of plants, preservation of products generated employment, employment generated through mushroom cultivation and generation of income through stitching for women the majority of tribal beneficiary respondents had reported a moderate change i.e. to some extent which implies that majority of beneficiary respondents have observed improvement in their employment due to KVK activities. Hence, it may be concluded that improvement in employment generation through most of the activities of KVK was highly encouraging. Further inference can be drawn that impact of KVK in employment generation of its tribal beneficiaries was positive in the study area.

Findings are in line with Khajuria (2005) who reported that majority of respondents (67.91%) had favourable attitude towards mushroom enterprise and there had not been found any difference in peripheral and distant respondents with regard to attitude towards mushroom enterprise. Both the categories of respondents strongly agreed with the statements like 'mushroom cultivation generates employment avenues for the rural folk', 'mushroom cultivation provides an opportunity for diversification of traditional agriculture'.

#### **4.5 ASSOCIATIONS OF SELECTED PERSONAL TRAITS WITH EMPLOYMENT GENERATION ACTIVITIES AMONG RESPONDENTS**

This section deals with the association between employment generation activities and selected personal variables viz. age, education, occupation, annual income, size of land holding, family type and social participation. To find out the association between these personal characteristics and employment generation activities, chi-square test was applied. The score of



employment generation through KVK activities was categorized into three categories on the basis of mean score and standard deviation of the scores obtained by the respondents. The results of association have been presented in subsequent Tables.

#### **4.5.1 Association between age of the respondents and employment generation activities**

##### **Hypotheses**

NH<sub>02</sub> : There is no association between age of respondents and employment generation activities.

RH<sub>02</sub> : There is an association between age of respondents and employment generation activities among respondents.

An observation of data in Table 15 shows that out of total 22 from young age group, 6 (27.27%) had viewed in category of high level of employment generation activities, while 9 (40.91 %) and 7 (31.82 %) beneficiaries were found in the group of medium and low level of employment generation activities, respectively.

In the middle age group, 26, 8 and 19 farmers possessed medium, high and low category of employment generation activity, respectively. In case of old age group, out of 25 respondents, 24.00 per cent, 40.00 per cent and 36.00 per cent farmers had low, medium and high category of employment generation activities.

**Table 15: Association between age of respondents and employment generation activities****n=100**

Age category	Employment generation activities			Total	X <sup>2</sup> value
	Low	Medium	High		
< 28 yeas	7 (31.82) <sup>1</sup> (21.87) <sup>2</sup>	9 (40.91) (20.00)	6 (27.27) (26.08)	22 (100) (22.0)	<b>4.60<sup>NS</sup></b>
28-52 yeas	19 (35.84) (59.37)	26 (49.05) (57.78)	8 (15.09) (34.78)	53 (100) (53.00)	
Above 52 years	6 (24.00) (18.75)	10 (40.00) (22.22)	9 (23.33) (35)	25 (100) (25.00)	
<b>Total</b>	32 (32.00) (100)	45 (42.00) (100)	23 (23.00) (100)	100 (100)	

1 = Percentage of row

2 = Percentage of column

NS- Non Significant

Further analysis of Table 15 clearly indicates that the calculated chi-square value (4.60) was less than tabulated value. Therefore, the null hypothesis (NH<sub>02</sub>) was accepted. This reveals that there existed no association between age of respondents and employment generation activities.

Findings are in contrast with findings of Jaitawat (2006) who observed that age of the farmers was associated significantly with their knowledge about cumin cultivation.

#### **4.5.2 Association between education and employment generation activities**

##### **Hypothesis**

NH<sub>03</sub> : There is no association between education of respondents and employment generation activities.

RH<sub>03</sub> : There is an association between education of respondents and employment generation activities.

The results in Table 16 indicates that out of total 32 respondents in up to primary group, 40.63 per cent, 21.88 per cent and 37.50 per cent had medium, high and low category of employment generation activities. In the group of illiterate, out of 28 respondents, 57.14 per cent,

17.86 per cent and 25.00 per cent respondents were in medium, high and low category of employment generation activities.

Out of 22 respondents in up to high secondary group, 7 respondents (31.81 %) were in low, 9 respondents (40.91 %) were in medium and 6 (27.27 %) respondents were in high employment generation activity category. In graduate or above group, out of 18 respondents, 33.33 per cent were in low level, 38.89 percent and 27.78 per cent were in medium and high category of employment generation activity, respectively.

**Table 16: Association between education of respondents and employment generation activities**

**n=100**

Education level	Employment generation activities			Total	X <sup>2</sup> value
	Low	Medium	High		
Illiterate	7 (25.00) <sup>1</sup> (21.88) <sup>2</sup>	16 (57.14) (35.56)	5 (17.86) (21.74)	28 (100) (28.00)	<b>2.479<sup>NS</sup></b>
Up to Primary	12 (37.50) (37.50)	13 (40.63) (28.89)	7 (21.88) (30.43)	32 (100) (32.00)	
Up to higher secondary	7 (31.81) (21.88)	9 (40.91) (20.00)	6 (27.27) (26.09)	22 (100) (22.00)	
Graduate or above	6 (33.33) (18.75)	7 (38.89) (15.56)	5 (27.78) (21.74)	18 (100) (18.00)	
<b>Total</b>	32 (32.00) (100)	45 (45) (100)	23 (23) (100)	100(100)	

1 = Percentage of row

2 = Percentage of column

NS= Non significant

A further observation of Table 16 clearly shows that calculated chi-square value (2.749) was lower than tabulated value at 1% level of significance. Therefore, the null hypothesis (NH<sub>03</sub>) was accepted and (RH<sub>03</sub>) was rejected. This means that there is no association between education of respondents and employment generation activities. It inferred that education did not played any significant role in employment generation among the beneficiaries.

Findings are in contrast with the findings of Tara Chand (2001) who found that education of the farmers was significantly associated with their gain in knowledge towards activities of KVK.

#### 4.5.3 Association between occupation and employment generation activities

##### Hypothesis

NH<sub>04</sub> : There is no association between occupation of respondents and employment generation activities

RH<sub>04</sub> : There is an association between occupation of respondents and employment generation activities

**Table 17: Association between occupation of respondents and employment generation activities**

**n=100**

Occupation level	Employment generation activities			Total	X <sup>2</sup> value
	Low	Medium	High		
Labour	11 (34.38) <sup>1</sup> (34.38) <sup>2</sup>	14 (43.75) (31.11)	7 (21.87) (30.43)	32 (100) (32.00)	<b>1.969<sup>NS</sup></b>
Agriculture	9 (33.33) (28.12)	13 (48.15) (28.88)	5 (18.52) (21.73)	27 (100) (27.00)	
Business	6 (27.27) (18.75)	10 (45.45) (22.22)	6 (27.27) (26.08)	22 (100) (22.00)	
Service	6 (31.58) (18.75)	8 (42.10) (17.78)	5 (27.25) (21.74)	19 (100) (19.00)	
<b>Total</b>	32 (32.00) (100)	45 (45.00) (100)	23 (23.00) (100)	100(100)	

1= Percentage of row

2= Percentage of column

NS= non significant

An observation of data in Table 17 shows that out of total 32 beneficiaries from labour group, 7 (21.87 %) had viewed in category of high level of employment generation activities, while 14 (43.75 %) and 11 (34.38 %) farmers were found in the group of medium and low level

of employment generation activities, respectively. In the agriculture group, 13, 5 and 9 farmers possessed medium, high and low category of employment generation activity, respectively. In case of business group, out of 22 respondents, 27.27 per cent, 45.45 per cent and 27.27 per cent farmers were in low, medium and high category of employment generation activities. The group of service possessed 19 respondents, out of which 6 (31.58 %) respondents were in low category, 8 (42.10 %) and 5 (27.25 %) respondents were in medium and high category, respectively.

Further analysis of Table 17 clearly indicates that the calculated chi-square value (1.969) was less than tabulated value therefore, the null hypothesis ( $NH_{04}$ ) was accepted. This reveals that there existed no association between occupation of respondents and employment generation activities.

Findings are supported by the findings of Bairolia (2008) who observed that occupation was associated non-significantly with knowledge level of farmers towards the KVK activities.

#### **4.5.4 Association between annual income of respondents and employment generation activities.**

##### **Hypotheses**

$NH_{05}$  : There is no association between annual income of respondents and employment generation activities.

$RH_{05}$  : There is an association between annual income of respondents and employment generation activities.

The data accorded in Table 18 shows that out of 33 respondents, 15 (45.46%) respondents of Rs.10, 000 to 1.0 lakh annual income group were viewed in medium category of employment generation activities. Whereas, out of 25 farmers from Rs. 1.0 lakh to 2.5 lakh annual income group, 8 (32.00 %), 12 (48.00 %) and 5 (18.52 %) were in low, medium and high category of employment generation activities, respectively. In case of Rs. 2.5 lakh to 5.0 lakh annual income group, out of 22 respondents, 6 (27.27 %), 10 (45.46 %) and 6 (27.27 %) farmers were observed in low, medium and high category of employment generation activities. With regards to above Rs. 5.0 lakh annual income group, out of 20 beneficiaries 8 (40.00 %) were in medium, 7 (35.00 %) were in low and 5 (27.25 %) were in high category of employment generation activities.



**Table 18: Association between annual income of respondents and employment generation activities**

**n=100**

Income level	Employment generation activities			Total	X <sup>2</sup> value
	Low	Medium	High		
Rs. 10,000 to 1.0 lakh per annum	11 (33.33) <sup>1</sup> (34.38) <sup>2</sup>	15 (45.46) (33.33)	7 (21.21) (30.44)	33 (100) (33.00)	<b>0.74<sup>NS</sup></b>
Rs. 1.0 lakh to 2.5 lakh per annum	8 (32.00) (25.00)	12 (48.00) (26.67)	5 (18.52) (21.73)	25 (100) (25.00)	
Rs. 2.5 to 5.0 lakh per annum	6 (27.27) (18.75)	10 (45.46) (22.22)	6 (27.27) (26.08)	22 (100) (22.00)	
Above Rs. 5.0 lakh per annum	7 (35.00) (21.88)	8 (40.00) (17.78)	5 (27.25) (21.74)	20 (100) (20.00)	
<b>Total</b>	32 (32.00) (100)	45 (45.00) (100)	23 (23.00) (100)	100 (100)	

1 = Percentage of row

2 = Percentage of column

NS= Non- significant

The data further shows that calculated chi-square value (0.74) was less than tabulated value. Thus, the null hypothesis (NH<sub>05</sub>) was accepted and research hypothesis was rejected. This non significant value shows that there was no association between income level and employment generation activities. Hence, it is concluded that annual income did not play any significant role in employment generation activities in the study area.

Findings are in contrast with the findings of Kaur and Talukdar (2007) who concluded that there was positive and significant correlation of annual family income of farm women with utility of training programme at 0.01 level of probability.

#### **4.5.5 Association between size of land holding of respondents and employment generation activities**

##### **Hypotheses**

NH<sub>06</sub> : There is no association between size of land holding of respondents and employment generation activities.

RH<sub>06</sub> : There is an association between size of land holding of respondents and employment generation activities.

**Table 19: Association between size of land holding of respondents and employment generation activities**

**n=100**

Land holding	Employment generation activities			Total	X <sup>2</sup> value
	Low	Medium	High		
Landless	8 (26.67) <sup>1</sup> (25.00) <sup>2</sup>	15 (50.00) (33.33)	7 (23.33) (30.43)	30 (100) (30.00)	<b>1.781<sup>NS</sup></b>
Less than 1 hac.	11 (39.29) (34.38)	12 (42.86) (26.67)	5 (17.86) (21.74)	28 (100) (28.00)	
1 – 2 hac.	7 (31.81) (21.88)	10 (45.46) (22.22)	5 (22.72) (21.74)	22 (100) (22.00)	
More than 2 hac.	6 (30.58) (18.75)	8 (40.00) (17.78)	6 (30.00) (26.09)	20 (100) (20.00)	
<b>Total</b>	32 (32.00) (100)	45 (45.00) (100)	23 (23.00) (100)	100 (100)	

1 = Percentage of row

2 = Percentage of column

NS= Non significant

The data recorded in Table 19 shows that out of 30 landless farmers 26.67 per cent, 50.00 per cent and 23.33 per cent were in low, medium and high category. Whereas, out of 28 farmers who had less than 1 hac land 11 (39.29 %), 12 (42.86 %) and 5 (17.86 %) were in low, medium and high category of employment generation activities. In case of 1-2 hac land group, out of 22 respondents, 7 (31.81 %), 10 (45.46 %) and 5 (22.72 %) had low, medium and high employment generation activities and in more than 2.0 hac. land group, out of 20 respondents, 6 (30.58 %), 8 (40.00 %) and 6 (30.00 %) had low, medium and high employment generation activities, respectively.

The data further shows that calculated chi-square value (1.781) was less than tabulated value. Thus, the null hypothesis (NH<sub>06</sub>) was accepted and research hypothesis was rejected. This non significant value shows that there is no association between size of land holding and



employment generation activities. Hence, it is concluded that land holding did not play any significant role in employment generation in the study area.

Findings are in contrast with findings of Tara Chand (2001) who found that size of land holding of the farmers was significantly associated with their gain in knowledge towards activities of KVK.

#### 4.5.6 Association between family size and employment generation activities

##### Hypotheses

$NH_{07}$  : There is no association between family size of respondents and employment generation activities.

$RH_{07}$  : There is an association between family size of respondents and employment generation activities.

The results in Table 20 indicates that out of total 41 respondents in nuclear family group, 48.78 per cent, 26.83 per cent and 24.39 per cent were in low, medium and high category of employment generation activities, respectively. In joint family group, out of 59 respondents, 57.63 per cent, 22.03 per cent and 20.34 per cent respondents were in medium, high and low category of employment generation activities, respectively.

**Table 20: Association between family size and employment generation activities**

**n=100**

Family size	Employment generation activities			Total	X <sup>2</sup> value
	Low	Medium	High		
Nuclear	20 (48.78) <sup>1</sup> (62.50) <sup>2</sup>	11 (26.83) (24.44)	10 (24.39) (43.48)	41 (100) (41.00)	<b>11.714*</b>
Joint	12 (20.34) (37.50)	34 (57.63) (75.56)	13 (22.03) (56.52)	59 (100) (59.00)	
<b>Total</b>	32 (32.00) (100)	45 (45.00) (100)	23 (23.00) (100)	100 (100)	

1 = Percentage of row

2 = Percentage of column

\* Significant

Further observation of Table 20 clearly shows that calculated chi-square value (11.71) was higher than tabulated value at 1% level of significance. Therefore, the null hypothesis ( $NH_{07}$ ) was rejected and research hypothesis ( $RH_{07}$ ) was accepted. This means that there is a significant association between family size of respondents and employment generation activities.

It inferred that family size did play a significant role in employment generation among the farmers because in joint family one or two member were earning for family and other members who were unemployed were participating in trainings in KVK and they had started their own entrepreneur or business and earning good income from their business in which family was involved.

Findings are in contrast with the findings of Jaitawat (2006) who observed that size of family was associated non-significantly with their knowledge about cumin cultivation.

#### **4.5.7 Association between social participation and employment generation activities**

##### **Hypotheses**

$NH_{08}$  : There is no association between social participation of respondents and employment generation activities.

$RH_{08}$  : There is an association between social participation of respondents and employment generation activities.

The data recorded in Table 21 shows that out of 27 farmers who had not participated in any organizations, 37.04 per cent, 44.44 per cent and 18.52 per cent were in low, medium and high category, whereas, out of 29 farmers who were member of one organization, 9 (31.02 %), 13 (44.83 %) and 7 (24.14 %) respondents were in low, medium and high category of employment generation activities. In case of member of more than one organizations participant group, out of 25 respondents, 8 (32.00 %), 11 (44.00 %) and 6 (24.00 %) were in the category of low, medium and high employment generation activities and out of 29 respondents in the group of member of local committees, 5 (30.58 %), 9 (47.37 %) and 5 (26.32 %) were in low, medium and high group of employment generation activities.

**Table 21: Association between social participation and employment generation activities**

n=100

Social participation	Employment generation activities			Total	X <sup>2</sup> value
	Low	Medium	High		
No participation	10 (37.04) <sup>1</sup> (31.25) <sup>2</sup>	12 (44.44) (26.67)	5 (18.52) (21.74)	27 (100) (27.00)	<b>0.793<sup>NS</sup></b>
Member of one organization	9 (31.02) (28.13)	13 (44.83) (28.89)	7 (24.14) (30.43)	29 (100) (29.00)	
Member of more than one organizations	8 (32.00) (25.00)	11 (44.00) (24.44)	6 (24.00) (26.08)	25 (100) (25.00)	
Member of local committees	5 (30.58) (18.75)	9 (47.37) (20.00)	5 (26.32) (21.74)	29 (100) (29.00)	
<b>Total</b>	32 (32.00) (100)	45 (45.00) (100)	23 (23.00) (100)	100 (100)	

1 = Percentage of row

2 = Percentage of column

NS= Non significant

The data further shows that calculated chi-square value (0.793) was less than tabulated value. Thus, the null hypothesis (NH<sub>08</sub>) was accepted and research hypothesis was rejected. This non significant value shows that there is no association between social participation and employment generation activities. Hence, it is concluded that social participation did not play a significant role in employment generation in the study area.

Findings are in contrast with the findings of Kaur and Talukdar (2007) who concluded that there was positive and significant correlation of social participation of farm women with utility of training programme at 0.01 level of probability.

#### **4.6 CONSTRAINTS FACED BY THE TRIBAL FARMERS IN TAKING UP EMPLOYMENT GENERATION ACTIVITIES**

The findings of the constraints faced by the tribal beneficiaries in taking up the employment generation activities are presented in following sub headings. Individual aspect wise constraints faced by tribal beneficiaries were worked out. For this, mean per cent score were calculated.

#### **4.6.1 Technological constraints faced by the tribal farmers in taking up employment generation activities**

For working out the technological constraints faced by respondents in taking up employment generation activities organised by Krishi Vigyan Kendra, in all 5 aspects related to technological constraint were considered. The mean per cent score (M.P.S.) was calculated for each statement and rank was assigned accordingly. The results of technological constraints have been present in Table 22.

Table 22 reveals that among technical constraints ‘lack of skill about employment generation activities’ was ranked first with MPS 74 by majority of tribal farmers. ‘Lack of training facilities for acquiring new technology’ with MPS 68 was ranked second. Likewise ‘Inadequate knowledge about symptoms of various diseases’ with MPS 60, ‘Unsuitable hybrids for polyhouse’ with MPS 57 and ‘poor yields of hybrids’ with MPS 49 were ranked III, IV and V, respectively.

**Table 22: Technological constraints faced by the tribal farmers in taking up employment generation activities**

n= 100			
S.NO.	Technological constraints	MPS	Rank
(a)	Lack of skill about employment generation activities	74	I
(b)	Lack of training facilities for acquiring new technology	68	II
(c)	Inadequate knowledge about symptoms of various diseases	60	III
(d)	Unsuitable hybrids for polyhouse	57	IV
(e)	Poor yield of hybrids	49	V

MPS = Mean per cent score

It is concluded that the main technical constraints for farmers in taking up employment generation activities were lack of skill about employment generation activities and lack of training facilities for acquiring new technology. The inferences may be drawn from the findings that the most important constraint was “lack of skill about employment generation activities”

Findings are in contrast with findings of Singh *et al.* (2007) who found that the main constraints faced by trained farmers were “training method was not effective”, “training subject not matches with current problems’ and ‘more distance from the villages to the training centers.’

#### **4.6.2 Service–Supply constraints faced by the tribal farmers in taking up employment generation activities.**

For working out the service–supply constraints faced by respondents in taking up employment generation activities organised by Krishi Vigyan Kendra, in all 5 statements related to service–supply constraints faced by farmers were considered. The mean per cent score (M.P.S.) was calculated for each statement and rank was assigned accordingly. The results of service–supply constraints have been present in Table 23

Table 23 shows that in the service–supply constraints ‘timely unavailability of seeds’ was ranked first with MPS 69 and ‘non availability of labour’ was ranked second with MPS 63. Table 23 further shows that ‘non-availability of improved implements’ with MPS 60, ‘hybrid seeds are not available in time’ and ‘high cost of farm implements’ with MPS 49 and MPS 48 were ranked III, IV and V, respectively.

**Table 23: Service – Supply constraints faced by the tribal farmers in taking up employment generation activities**

n= 100			
<b>S.NO.</b>	<b>Service – Supply constraints</b>	<b>MPS</b>	<b>Rank</b>
(a)	Timely unavailability of seeds	69	I
(b)	Non availability of labour.	63	II
(c)	Non-availability of improved implements.	60	III
(d)	Hybrid seeds are not available in time.	49	IV
(e)	High cost of farm implements.	48	V

MPS= Mean per cent score

It is concluded that major service-supply constraints faced by farmers in taking up employment generation activities were ‘timely unavailability of seeds and ‘non availability of labour.

Findings are in contrast with findings of Kumar and Kumar (2003) who found that both small and marginal farmers have expressed ‘low price of milk’, ‘high cost of feeds and fodder’ and ‘non-availability of land for fodder cultivation’ as the major constraints.

#### **4.6.3 Economic constraints faced by the tribal farmers in taking up employment generation activities.**

To work out the economic constraints faced by respondents in taking up employment generation activities organised by Krishi Vigyan Kendra, in all 5 statements related to economic constraints were considered. The mean per cent score (M.P.S.) was calculated for each statement and rank was assigned accordingly. The results of economic constraints have been present in Table 24

The data of Table 24 shows that in the economic constraints ‘lack of credit facility’ was ranked first with MPS 75, ‘non-availability of money in time’ with MPS 69.5 was ranked second and rank III was further given to ‘high price of agricultural inputs’ with MPS 61.5. The fourth rank was given to ‘high labour charges’ with MPS 59. ‘Lack of awareness towards financial agencies’ with MPS 46.5 was ranked fifth.

It is concluded that main economic constraint for farmers in taking up employment generation activities was ‘lack of credit facilities.

**Table 24: Economic constraints faced by the tribal farmers in taking up employment generation activities**

n= 100			
<b>S.No.</b>	<b>Economic Constraints</b>	<b>MPS</b>	<b>Rank</b>
(a)	Lack of credit facility	75	I
(b)	Non-availability of money in time.	69.5	II
(c)	High price of agricultural inputs	61.5	III
(d)	High Labour charges	59	IV
(e)	Lack of awareness towards financial agencies	46.5	V

MPS= Mean per cent score

Findings are in contrast with the findings of Manivannan and Tripathi (2011) who concluded that high cost of concentrate feed, non-remunerative price for milk and complexity in the procedure for obtaining loan were reported as the three major constraints impeding the

efficient management of the dairy enterprise by majority of the respondents, irrespective of the three localities.

#### **4.6.4 Institutional constraints faced by the tribal farmers in taking up employment generation activities**

The Institutional constraints faced by respondents in taking up employment generation activities organised by Krishi Vigyan Kendra were worked out with the help of 6 statements related to institutional constraints faced by farmers. The mean per cent score (M.P.S.) was calculated for each statement and rank was assigned accordingly. The results of institutional constraints have been present in Table 25

The table 25 shows the data of the institutional constraint where ‘lack of training institution for training of farmers/farm women’ was ranked first with MPS 74 ‘Lack of training to the agricultural supervisors’ with MPS 66.5 was ranked second. Rank III further given to ‘inadequate number of training for farmers’ with MPS 65.5 and IV rank was given to ‘lack of women extension personnel at village level’ with MPS 63. ‘Lack of adequate technical guidance to farmers’ with MPS 55 was ranked fifth and ‘poor participation of SMS in training programmes’ was ranked sixth with 49 MPS.

**Table 25: Institutional constraints faced by the tribal farmers in taking up employment generation activities**

			<b>n= 100</b>
<b>S.NO.</b>	<b>Institutional constraints:-</b>	<b>MPS</b>	<b>Rank</b>
(a)	Lack of training institution for training of farmers/farm women	74	I
(b)	Lack of training to the agricultural supervisors.	66.5	II
(c)	Inadequate number of training for farmers.	65.5	III
(d)	Lack of women extension personnel at village level.	63	IV
(e)	Lack of adequate technical guidance to farmers.	55	V
(f)	Poor participation of SMS in training programmes.	49	VI

MPS= Mean per cent score

It can concluded from above results that majority of the respondents perceived ‘lack of training institution for training of farmers/farm women’ and ‘lack of training to the agricultural supervisors’ as major institutional constraints.

The inferences may be drawn from the findings that the most important institutional constraint was “lack of training institution for training of farmers/farm women”.

Findings are in contrast with the findings of Chauhan and Singh (2007) who found that the major constraints faced by beneficiaries of KVKs were ‘lack of publicity of training programme’, ‘lack of coordination with other agencies’, ‘needs are not assessed’ and ‘lack of transport facilities for field visit during training programmes’.

#### **4.6.5 General constraints faced by the tribal farmers in taking up employment generation activities.**

For working out general constraints faced by respondents in taking up employment generation activities organised by Krishi Vigyan Kendra, in all 5 statements related to general constraints were considered. The mean per cent score (M.P.S.) was calculated for each statement and rank was assigned accordingly. The results of general constraints have been present in Table 26.

The table 26 reveals that ‘fatalistic attitude towards employment generation activity’ was ranked as first most serious constraint with MPS 64.5. ‘The poor communication component of instructor during training programme’ with MPS 63, ‘lack of guidance during initiation of activities’ with MPS 61 and ‘less use of local language in training programme’ with MPS 58.5 were found serious constraints and were ranked II, III and IV, respectively. The fifth important constraint was ‘Lack of motivation’ with MPS 52.

**Table 26: General constraints faced by the tribal farmers in taking up employment generation activities**

n= 100			
<b>S.NO.</b>	<b>General Constraints</b>	<b>MPS</b>	<b>Rank</b>
(a)	Fatalistic attitude towards employment generation activity	64.5	I
(b)	Poor communication component of instructor during training programme	63	II
(c)	Lack of guidance during initiation of activities	61	III
(d)	Less use of local language in training programme	58.5	IV
(e)	Lack of motivation	52	V

MPS = Mean per cent score



It was concluded that among majority of the general constraints as perceived by farmers in taking up employment generation activities, 'fatalistic attitude towards employment generation activity', and 'poor communication component of instructor during training programme' were serious constraints.

The inferences may be drawn from the findings that the most important constraint was 'fatalistic attitude towards employment generation activity'.

Findings are in line with Singh *et al.* (2007) who found that the main constraints faced by trained farmers were "training method was not effective", "training subject not match with current problems' and 'more distance from the villages to the training centers'.

## 5. SUMMARY AND CONCLUSION

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The inferences of the present study “Employment generation in tribal through KVK in Dungarpur district (Rajasthan)” are presented in the form of summary and conclusion in this chapter.

### INTRODUCTION

Agriculture being the backbone of Indian economy would continue as the most predominant sector of economy in the early part of the 21<sup>st</sup> century. Country's 57.00 per cent population makes their living through agriculture and its related fields viz, animal husbandry, dairying, fisheries, horticulture, food processing, preservation, sericulture, farm machines etc. The progress of the nation is directly linked with the advancement of agriculture. Government had made a policy decision to invest about 6.0 per cent of the plan allocation for agriculture development. The Department of Agriculture Research and Education (DARE) coordinates research and educational activities in agriculture and its related fields in the country.

Based on the recommendation of the Education Commission (1964-66), consideration and review by the Planning Commission and Inter-Ministerial Committee and further recommendation by the committee headed by Dr. Mohan Singh Mehta appointed by ICAR in 1973, the idea of establishment of Farm Science Centre (Krishi Vigyan Kendra) was evolved. On the occasion of the Independence Day on 15<sup>th</sup> August, 2005, the Hon'ble Prime Minister of India announced to establish atleast one KVK in each of the rural districts of the country by the end of 2007. This has resulted in establishment of 551 KVKs at the end of Tenth Plan. In twelfth five year plan, the total number of KVKs in India reached to 641 in India.

The vocational trainings offered by KVK Dungarpur are practical in nature and provides opportunities to establish self enterprises for livelihood. These vocational training have many dimension but the ultimate goal is employment generation in rural areas. With this point in view the present study entitled “Employment generation in tribal through KVK in Dungarpur district (Rajasthan)” has been undertaken with the following specific objectives.

1. To assess the knowledge of tribal beneficiaries of Krishi Vigyan Kendra about employment generation activities.

2. To find out the level of participation of tribal in employment generation trainings organized by Krishi Vigyan Kendra.
3. To study the extent of employment generated among tribal beneficiaries through Krishi Vigyan Kendra.
4. To determine the association between selected personnel traits and employment generation activities among respondents.
5. To identify the constraints faced by the tribal farmers in taking up employment generation activities.

## **RESEARCH METHODOLOGY**

The present study was conducted in purposely selected Dungarpur district of Rajasthan. There are total four tehsils in Dungarpur district of Rajasthan, out of which, two tehsils namely Dungarpur and Simalwara were selected on the basis of maximum tribal population. Further, a comprehensive list of villages was prepared on the basis of maximum tribal population. Five villages from each selected tehsil were taken on the basis of maximum tribal population. Thus, total ten villages were selected for the present investigation from both the tehsils. For selection of respondents, a complete list of the beneficiaries of KVK Dungarpur was prepared from the records available at KVK, Dungarpur. From the list so prepared, ten beneficiaries from each village were selected randomly. Total 100 respondents were selected for this study. Random sampling technique was employed for the selection of respondents for this study.

## **CONSTRUCTION OF INTERVIEW SCHEDULE**

Keeping in mind the objectives of the study, a comprehensive interview schedule was developed covering all the aspects of defined objectives of the study. The developed schedule was divided into following five sections:

- A. First section of the schedule comprised general information of the respondents i.e. age, education, occupation, annual income, size of land holding, family type and social participation.
- B. Second section was meant to assess the knowledge of tribal beneficiaries of Krishi Vigyan Kendra about employment generation activities

- C. The third section of the schedule was developed to measure the level of participation of beneficiaries in employment generation trainings organized by KVK, Dungarpur.
- D. Fourth section of schedule was developed to find out the extent of employment generation among tribal beneficiaries through Krishi Vigyan Kendra.
- E. Fifth section was devoted to determine the constraints faced by tribal farmers in taking up employment generation activities.

## **DATA COLLECTION AND STATISTICAL ANALYSIS**

Face to face interview technique was used to collect data from the selected beneficiary respondents. Thereafter, hypotheses were formulated and appropriate statistical tests were used to arrive at specific conclusions. The statistical measures used were percentage, mean score, rank, MPS, standard deviation, chi-square test, etc.

## **MAJOR FINDINGS**

The major findings emanated out of the study are as follow:

### **I. General information of the respondents**

1. The study revealed that 53.00 per cent respondents were in the middle age (28-52 year) whereas 25.00 per cent respondents belonged to old (above 52 year) age group and remaining 22.00 per cent respondents belonged to young (up to 28 year) age group.
2. The study clearly showed that 32.00 per cent respondents of the total sample were educated up to primary level, while 18.00 per cent respondents were graduate or educated above and remaining 28.00 per cent and 22.00 per cent were illiterate and educated up to high secondary level, respectively.
3. It was evident that 32.00 per cent respondents of the total sample were labour, while 27.00 per cent and 22.00 per cent respondents were engaged in agriculture occupation and business, respectively and remaining 19.00 per cent were employed in service.
4. It was found that majority of respondents (33.00 %) were from income group of Rs. 10,000 to 1.0 lakh per annum, while 25.00 per cent and 22.00 per cent respondents belonged to income group from Rs. 1.0 lakh to 2.5 lakh per annum and Rs. 2.5 lakh

to 5.0 lakh per annum, respectively. Only 20.00 per cent respondents were having income above Rs. 5.0 lakh per annum.

5. The study revealed that majority 30.00 per cent respondents were landless, while 22.00 per cent and 20.00 per cent respondents were having land from 1 to 2 hac. and more than 2 hac., respectively. The study clearly showed that 28.00 per cent of the respondents belonged to the category of farmers who have less than 1.0 hac. land.
6. The study clearly showed that majority of respondents i.e. 59.00 per cent belonged to joint family and remaining 41.00 per cent respondents belonged to nuclear family.
7. The study indicated that majority i.e. 29.00 per cent of the respondents had participation in one organization, 27.00 per cent respondents had no participation in any organization 25.00 per cent were member of more than one organizations and only 19.00 per cent of the respondents were member of local committees.

## **II. Aspect wise knowledge of tribal beneficiaries about employment generation activities of Krishi Vigyan Kendra**

1. It was found that 40.00 per cent respondents of the total sample possessed medium level of knowledge about employment generation activities of KVK, while a considerable number of respondents (37.00%) possessed high level of knowledge. Only 23.00 per cent respondents possessed poor knowledge about employment generation activities of KVK.
2. It was remarked that the extent of knowledge of tribal beneficiary respondents about various aspects viz. 'dairy management', 'organic farming/ vermicomposting', 'off season vegetable production' 'propagation of plants', 'nursery management', 'goat rearing', 'poultry management', 'stitching for women', 'mushroom cultivation', 'preservation of products' and 'artificial insemination' was medium.

## **III. Level of participation of tribal beneficiaries in employment generation trainings organized by Krishi vigyan Kendra**

The study revealed that change to a great extent was reported by majority of respondents in the aspects like 'training on dairy management', 'training on organic farming / vermicomposting', 'training on goat rearing', 'training on poultry rearing', 'training on artificial

insemination’. On the other hand, participation in the aspects like ‘training on off season vegetable production’, ‘training on propagation of plants’, ‘training on nursery management’, ‘training on stitching for women’, ‘training on mushroom cultivation’ and ‘training on preservation of products’ was reported to some extent by majority of respondents.

#### **IV      Extent of employment generation among tribal beneficiaries through Krishi Vigyan Kendra under selected activities**

The study revealed that change to a great extent was reported by majority of respondents in the aspects like ‘employment generated by dairy management’, ‘income generated by poultry rearing’, ‘income generated through nursery management’, ‘income generated by goat rearing’ and ‘income generation through artificial insemination’ whereas majority of respondents reported the change to some extent in aspects like ‘off season vegetable production generated income’, ‘employment through organic farming/vermiculture’, ‘employment generated by propagation of plants’, ‘preservation of products generated employment’, ‘employment generated through mushroom cultivation’ and ‘generation of income through stitching for women’.

#### **V        Association of selected personal variables with employment generation activities**

It was found that family size of the respondents was significantly associated with employment generation activities, whereas, age, education, annual income, occupation, size of land holding and social participation were not significantly associated with employment generation activities.

#### **VI      Constraints perceived by the farmers in taking up employment generation activities**

1. The study revealed that ‘lack of skill about employment generation activities’ was reported by majority of the respondents as most serious constraint so it was ranked first with MPS 74.
2. It was found that ‘Timely unavailability of seeds’ was reported by majority of the respondents as most important constraint with MPS 69 so it was ranked first in service – supply constraints.

3. The study of economic constraints clearly shows that 'Lack of credit facility' was reported by most of the respondents as very important constraint with MPS 75 and it was ranked first among all economic constraints.
4. The study of institutional constraints indicated that 'Lack of training institution for training of farmers/farm women' among all constraints of this aspect was reported by most of the respondents with MPS 74 so it was ranked first in institutional constraints.
5. It was evident that in general constraints 'fatalistic attitude towards employment generation activity' was reported by most of farmers among all general aspects so it got MPS 64.5 and it was assigned rank first.

## **RECOMMENDATIONS**

On the basis of the results obtained from the present study and observations made during investigation, the following recommendations are given for making the training programme more employment generating organized by KVK.

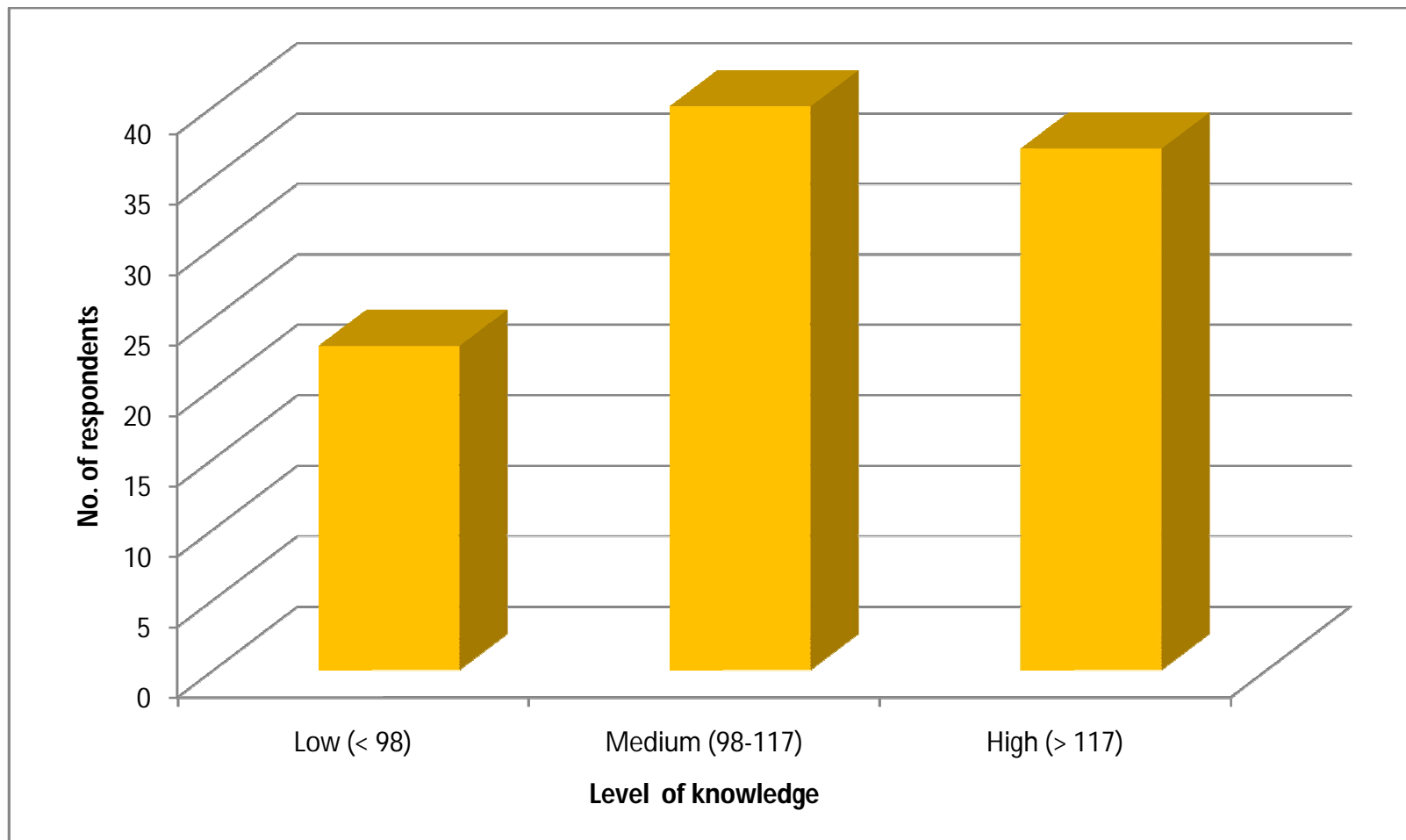
1. To get the best results from the trainings programme organized by KVK, it is recommended that maximum tribal people, for whom the trainings programme is meant for, should be fully informed and acquainted with all aspects and benefits of the programme, so that maximum potential benefits of the training programmes may reach to all the tribal farmers.
2. It is a fact that success of any training programmes directly depends upon knowledge of the client system toward that programme. It is therefore, recommended that maximum number of people should be involved, so that benefits of the training programmes can reach to all of them.
3. Similarly, those aspects which can play a significant role in improving the employment generation among the farmers should be evaluated in light of peoples' need and be given due importance with increasing motivation among farmers to actively participate in various training programmes organized by KVK.

4. On the basis of research in the study area, it is recommended that to make the training programmes more effective and successful, a strict and periodic supervision, monitoring and evaluation of programme should be done by the higher officials.
5. The constraints as perceived by respondents in employment generation should be taken in consideration one by one and efforts must be made to remove them so that employment generation can be increase through KVK trainings.

#### **Suggestions for future studies**

1. As the present study was limited to the particular area of one district, so similar studies should be conducted in other areas of Rajasthan to highlight the overall picture of the present status of employment generation through KVK in the state.
2. Comparative study related to employment generation trainings should be taken up by involving non-beneficiary and other categories of farmers of the district.
3. The results of the present study were drawn on the basis of verbal response of respondents. Participatory investigation can be conducted for verifying and better accuracy of results.





**Fig.3: Distribution of respondents according to their knowledge level about employment generation activities**

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