DEPARTMENT OF EXTENSION EDUCATION

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Title of the Thesis	**:**	**"Participation of Rural Youth in Agricultural Activities in Sindhudurg District"**
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ABSTRACT

The present study was conducted in Sindhudurg district of Maharashtra state. From selected district, three tahsils namely, Kudal, Vengurle and Sawantwadi were selected for present study, as RAWE (Rural Agriculture Work Experience) students of college of agriculture Dapoli were placed in these talukas since last three years. Senior B.Sc. (Agri.) students of College of Agriculture, Dapoli, were placed in five villages namely, Walaval (Kudal), Vetore, Palkarwadi and Hodawada (Vengurla) and Talawade (Sawantwadi) in all there were 50 students under RAWE (Rural Agriculture Work Experience) programme for the academic year 2017-2018. These 50 students have been asked for preparation of list of rural youth who actually working in agricultural activities, from the list 105 rural youth were selected randomly for the study. The ex-post-facto research design was used for the present study.

The analysis of data revealed that majority (50.47 per cent) of the rural youth belonged to 'younger' age category and 67.00 per cent 'male', more than one third (37.14 per cent) had 'secondary level' of education. Majority (54.28 per cent) of the rural youth were belonged to 'un-married' category, and 90.47 per cent belonged to 'farmer families', slightly more than half (53.68 per cent) of rural youth had 'marginal' availability of land, more than two-fifth (48.57 per cent) of rural youth were dependent on 'owned farm' as their main source of income, majority (59.05 per cent) of them had availed loan from 'cooperative credit society', 73.33 per cent of them observed in medium level of 'perception', while 65.71 per cent had 'medium' knowledge about agricultural activities and 27.61 per cent pointed out 'business' as a job opportunity.

Large majority (80.95 per cent) of the rural youth had medium to high participation in agricultural activities. Majority of rural youth need training in cashew and mango production (62.86 per cent), identification of pest and diseases (58.09 per cent) post harvest technology (56.19 per cent) and Vermicompost/ compost making (54.28 per cent).

Majority (60.95 per cent) of them suggested 'local market yard facility' should be provided, provision of credit facility (58.09 per cent) and availability of inputs in time and awareness about subsidy and schemes (55.33 per cent).

CHAPTER I

Introduction

Youth are the most potent segment of the population of the country. The youth of today are the hopes of tomorrow. They are backbone of country. The socio-economic development and prosperity of rural areas depends, to a considerable extent, on the type of youth living in rural areas, because the rural youth have abilities to orient themselves to go along the main stream of development process. Youth reflect the national potentiality and represent the life blood of nation development, youth determines the development of community and country as a whole. So the progress of the country lies in their hands, what they will become, what role they will perform in democratic society and they will do, will depend to a greater extent on a period between childhood to adulthood.

Youth have been playing quite a significant role in almost every country of the world as they possess the zeal and vigour necessary to create opportunities for national development. Youth should responsibility for the future development of the country. Therefore, the development and harnessing of talent and energy of youth toward constructive channel has always engaged the attention of a country's planners and policy makers. One of the most effective way of development and challenging the potentials of youth towards creative purpose is through the youth clubs. They help young people to develop themselves physically, mentally, socially and economically prepare them to meet effectively the future challenges of life.

It is an important sector in the economy of the most developing countries in the world. The reliance on agriculture for food production and food security at domestic, regional and global level depends on youth productive force. The role of young people in

the agriculture sector has been debated extensively and for good reasons the food sector is the most important sector in any country and the questions that arise here are who are going to replace the farmers on the fields in the coming years, how to increase youths participation and interest in agriculture, as majority of youths comes from rural areas, they are considered as the nation builders of tomorrow

There is no universally accepted definition of youth, since the age ranges anywhere from 8 to 40 yrs. On the occasion of the International Youth Year in 1985, the United Nations General Assembly for the first time defined youth as people between the ages of 15 and 24 for its work on youth (with under 15s being classed as 'children'). Youth are the national cream and the future crown with full possession of physical built and power. They are the precious human assets who can play an important role in nation building activities, if opportunities are provided. If a country can harness a creative and pervasive force like youth, it can substantially and quickly advance towards modernization. The youth farmer's exhibit high inclination to take up high value agricultural ventures like horticulture, therefore there is need to refocus their energies in enterprises of their interest. A key factor in improving the quality of employment in rural areas would be to increase investments in agricultural value chains and high value enterprises. Rural youths are the most important segment of the country like India where agriculture is the backbone of national economy. Thus, to make our country agriculturally prosperous, it becomes quite essential that the energies and potential of the rural youths are properly moulded and utilized.

In rural areas, the traditional role of youth consists of farm work usually as unpaid family workers, rather than as farmers in their own account. This is often not due to scarcity of arable land,

but rather due to customary rules of land use, which limit access to land for rural youth. Since youth constitute on average one-third of the economically active population of Asia, raising labour productivity will depend to a large degree upon an efficient integration of rural youth into agriculture and other rural-based industries.

Agriculture generally involves five stages viz. production, processing, consumption, storage and marketing. In most of the stages, farmers and their family members including youths and elders are actively involved. Youths are also as a family members participate in most of the agricultural operations like field preparation, sowing of seed, inter-culture operations, weeding and plant protection measures, harvesting, compost making, application of manures and fertilizers. They also involves in cleaning of farm produce and storing of seed and food grains and processing of farm byproduct.

Youths are available for bringing about the development at local, regional and national level. Youths stands for energy and action. Youths symbolizes zest, idealism, dynamism, energy and enthusiasm. India's rural agricultural development will gain a higher momentum if rural youths are participating in farming. More than 300 million youths "the world's best resource" is unable to find job. However their potentialities are being wasted through unemployment and underemployment. So making farming as a major occupation by rural youths can solve the problem of unemployment and achieve our target of food production because agriculture is having self-employment potential.

At present, the youths are having different needs, aspirations, attitudes, and habits and values of life. The development of personal, social, economic and spiritual aspects of rural youth are possible, only when their needs, aspirations, attitudes, habits and

values of life are recognized early and guided properly. They further stressed that youths have high enthusiasm and learn very fast. They are prone to innovativeness, less risk-shy and eager to change. Migration is the one of the factor which is affected in participation of rural youth in agricultural activities.

Better role performances of youths are important for successful implementation of rural development programmes in the villages as well as agriculture as a whole. The performances of youths are pivotal in making the agricultural development programmes and farm activities may be grand success due to their efficient nature of working. Nevertheless, the performance will depend on the various attributes which have a significant bearing on their performance. Keeping this in view, the present study entitled **"Participation of rural youth in agricultural activities in Sindhudurg district"** was undertaken with following objectives.

1.1 Specific objectives of the study

2. To study the socio-economic profile of rural youth.
3. To ascertain the various agricultural activities in which rural youths are involved.
4. To examine the contribution of agricultural activities in meeting the socio-economic needs.
5. To know the training needs of rural youth.
6. To obtain suggestions of rural youth to promote participation in agricultural activities.

1.2 Scope of the study

The study mainly focuses on participation of rural youth in agricultural activities which helps to know the factors behind the shying away from agriculture. This study also examines the contribution of agricultural activities in meeting the socio economic needs and training needs in agricultural programme. This study also contains suggestions of rural youth to promote participation in agricultural activities can be utilized for future research and

development schemes and the investigator who will undertake such studies in future.

1.3 Limitations of the study

The limitations of time and other resources in the present investigation were restricting the selection of locale, sample size and the variables. Hence, the findings have to be viewed in the specific context of the conditions prevailing in the study area and cannot be generalized for a wider geographical area. However, careful and rigorous procedures were considered in carrying out the research as objectively as possible.

CHAPTER II
REVIEW OF LITERATURE

Research is a continuous process for any scientific investigation, previous findings provide basis to the research. The review of literature is one of the important aspects in the research process. It helps the researcher to keep his work going in right and appropriate direction. Hence, an attempt has been made to review the researches and the same have been presented in the following sequence.

2.1 Socio-economic profile of rural youth.
2.2 Participation of rural youth in agricultural activities.
2.3 Contribution of agricultural activities in meeting the socio-economic needs.
2.4 Training Needs of Rural Youth.
2.5 Suggestions of the rural youth to promote participation in agricultural activities.

2.1 Socio-economic profile of rural youth

The socio-economic variables selected for present study were age, gender, education, marital status, family background, availability of land, occupation, rural credit facility, perceptions, agricultural knowledge, and job opportunity. The review related to these variables has been presented, as below.

2.1.1 Age

Furtado (2000) in his study on "Perception and participation of rural youth in Adarsh Gaon Yojana" revealed that nearly half (49.00 per cent) of the rural youth participating in the activities of Adarsh Gaon Yojna belonged to the age group of 18 to 25 years.

Suryawanshi (2002) in his study on "Participation of Bhil youth in agriculture and allied activities and their vocational preference in Sakri tahsil of Dhule district" reported that more than

one-fourth of the Bhil youth belonged to age group of 31 to 35 years (28.00 per cent) and age group of 21 to 25 years 26.00 per cent.

Nale (2003) in his study on "Changing rural youth participation in farming" observed that majority of rural youth (41.66 per cent) were from the age group of 24-29 years, followed by 40.44 per cent and 18.90 per cent in the age group of 30-35 years and 18-23 years, respectively.

Aphunu and Atoma (2010) in their study on "Rural youths' involvement in agricultural production in Delta Central Agricultural Zone Nigeria" revealed that more than 25 years youth were 5.00 per cent, followed by 21-25 years youth were 13.09 per cent , less than 20 years youths were 20.05 per cent respectively.

Adesina *et al.* (2014) in their study on "Determinants of participation in youth in agriculture programme in Ondo state Nigeria" revealed that, 35-39 years youth were 32.08 per cent, followed by 30-34 years youth were 35.02 per cent , 25-29 years youths were 25.08 per cent and 20-24 years were in 6.02 per cent.

Ugwoke *et al.* (2015) in their study on "Youth participation in farming activities in rural areas of Imo state Nigeria" revealed that, 50.00 per cent of youth were in high age group followed by less than half (44.30 per cent) were in middle age group and only (5.70 per cent) were in young age group.

2.1.2 Gender

Ayanwuyi *et al.* (2007) in their study on "Youth participation in rural development projects in Surulere local government area of Oyo state, Nigeria" revealed that 68.00 per cent male and 32.00 per cent female were participate in rural development projects.

Muhammad-Lawal *et al.* (2009) in their study on "Technical efficiency of youth participation in agriculture: A case study of the

youth in agriculture programme in Ondo state, South Western Nigeria" found that 82.73 per cent male and 17.27 per cent female participated in agriculture programme.

Aphunu and Atoma (2010) in their study observed that 53.04 per cent male and 46.06 per cent female were involved in agricultural production in delta central agricultural zone.

Olumuyiwa *et al.* (2011) study on "Perception of rural youth and utilization of agricultural information in Oyo state, Nigeria" revealed that majority 83.70 per cent of the respondents were males and rest 16.30 per cent females involved in agricultural activities.

Adesina *et al.* (2014) observed that more than half (59.04 per cent) male and 40.06 per cent female were participating in agriculture.

Ugwoke *et al* (2015) revealed that 47.10 per cent male and 52.90 per cent female were participating in farming activities.

2.1.3 Education

Hiremath (2000) in his study on "Participation of rural youths in farm and nonfarm activities in Dharwad taluka" reported that, more than 27.00 per cent of the youths had education up to primary school level, 16.67 per cent had education up to SSLC and PUC and 6.67 per cent had education up to degree level.

Nale (2003) observed that 37.50 per cent of the rural youth were educated up to high school level, followed by 26.67 per cent were educated up to middle school level, 15.00 per cent and 10.83 per cent were educated up to college level and primary level, while 8.33 per cent were illiterate and 1.67 per cent up to post graduate level.

Parag (2005) in his study on “Attitude of rural youth towards farming as a major occupation” reported that 34.16 per cent of the respondents were educated up to higher secondary school followed by 23.34 per cent who had U.G. Degree level education, 20.83 and 16.67 per cent were educated up to Diploma level and Secondary school level, respectively. And only The 5.00 per cent of the respondents were found to have P.G. Degree.

Uddin *et al.* (2008) in their study on “Attitude of coastal rural youth towards some selected modern agricultural technologies revealed that 24.17 per cent of the rural youth were educated up to primary education, while 5.49 per cent were illiterate.

Ramjiyani (2013) in his study on “Attitude of rural youth towards Agriculture as an occupation” revealed that, less than half (46.00 per cent) of the rural youth had higher secondary level of education followed by slightly more than one fourth (26.00 per cent) and one fifth (20.00 per cent) of them who had graduate and above level of education and secondary level of education, respectively. Only 8.00 per cent of rural youth had primary education. Not a single rural youth was found illiterate.

2.1.4 Marital Status

Ayanwuyi *et al.* (2007) revealed that 39.00 per cent youth were single followed by 61.00 per cent youth were married.

Muhammad-Lawal *et al.* (2009) found that 37.27 per cent youth were single followed by 61.82 per cent youth were married and 00.91 per cent youth were divorced.

Aphunu and Atoma (2010) in their study observed that 47.97 per cent youth were married and 52.03 per cent youth were unmarried.

Adesina *et al.*(2014) found that 61.02 per cent youth were married followed by 39.00 per cent youth were single 0.08 percent youth were divorced.

Ugwoke *et al.* (2015) indicated that 47.01 per cent youth were single followed by same percent youth were married and only 7.08 per cent youth were widowed.

2.1.5 Family Background

Shigwan (2002) in his study entitled 'A study on aspiration of the boys of the College of Agriculture, Dapoli' found that majority (60.00 per cent) of the agricultural students were from urban background and only 40.00 per cent were from rural background.

Srinivas (2003) in their study 'Utility perception of agricultural education and career performance' found that majority (60.00 per cent) of the agricultural student were from urban background and only 40.00 per cent were from rural background.

Jeffrey *et al.* (2010) in their study on "Acceptance and Sustainability of contract farming among youth in Malaysia" found that 75.05 per cent of the youth do not have agriculture background and 24.95 have agriculture background.

Ahire (2011) in his study on 'Perceptive of distance learning of school of agricultural sciences on post graduate research programmes' found that the majority 54.00 per cent of the respondents had rural background followed by 46.00 per cent with urban background.

Tayen (2012) in his study on "Agriculture and rural youth socio-economic needs in Tanzania" revealed that rural youth are informally employed in subsistence agriculture and family based livelihood activities such as handcrafts, fishing and shops.

Kimaro *et al.* (2015) in their study "Determinants of rural youth's participation in agricultural activities: the case of Kahe east ward in Moshi rural district, Tanzania" found that majority of the respondents were attracted to invest more in their own farms rather than being employed as labour or involved in family farms.

Urhe (2015) a study on 'Learning styles of agricultural students of Dr. Balasaheb Sawant Konkan Krishi Vidyapeeth, Dapoli' found that 46.00 per cent of the respondents comes under 'semi-urban' family background followed by 27.33 per cent of the respondents comes under 'rural' background and 26.67 per cent of the respondents comes under 'urban' family background. The average family background of the respondents was semi- urban family background.

2.1.6 Availability of Land

Hiremath (2000) in his study on "Participation of rural youth in farm and non-farm activities in Dharwad taluka" revealed that one-fourth of the respondents (26.00 per cent) and 19.16 per cent of respondents had small and medium land holdings respectively.

Sajjan (2006) in his study on "A comparative profile analysis of rural youth in rainfed and irrigated track of Bagalkot district" reported that 45.00 per cent of respondents had small land holding (2.5 to 5.0 acres) followed by 20.00 per cent of them with marginal land holding (up to 2.5 acres) and semi medium land holding (5 to 10 acres), while 15.00 per cent of them had medium land holding (10 to 15 acres).

Uddin *et al.* (2008) reported that more than two-fifth (43.95 per cent) of the rural youths were small farmers, while rest of them were medium (37.36 per cent), large (12.08 per cent) and marginal (6.59 per cent) farmers.

Deshmukh *et al.* (2009) in their study on "Participation of youth in rural development" revealed that, 28.34 per cent of youths had small land holding followed by 20.83 per cent, 18.33 per cent and 15.83 per cent youths who had medium, semi medium and large land holding, respectively.

Bhosale (2010) in his study on "Participation of rural youth in paddy farming in Anand district of Gujarat state" reported that, about two-fifth (38.33 per cent) of the rural youths were small farmers, whereas rest of them were medium (29.18 per cent), large (23.33 per cent) and marginal (9.16 per cent) farmers.

Suradkar *et al.* (2014) in their study on "Relationship of personal characteristics of youth with their training needs regarding farm activities" revealed that 73.33 per cent of youths had small land holding followed by 15.84 per cent had medium and 10.83 per cent had large land holding respectively.

2.1.7 Occupation

Deshmukh (2000) in his study on "Tribal youth beneficiaries under TRYSEM programme from Ambegaon block of Pune district." reported that two-third (65.45 per cent) of tribal youths parental occupation was farming, while about one-fourth (23.65 per cent) of the tribal youth beneficiaries had both farming and labour as their parental occupation. More than one-tenth (10.90 per cent) of the tribal youth beneficiaries had labour as their parental occupation.

Suryawanshi (2002) found that most of the Bhil youth's family had some other secondary occupations viz.,goat keeping (54.00 per cent), poultry (34.00 per cent), labour (26.67 per cent) and dairy (20.67 per cent).

Kumar *et al.* (2008) in their study on "Socio-personal, Socio-economic and socio psychological attributes of paddy growers in Sitamadhi district of Bihar" concluded that majority 60.95 per cent

of the paddy growers engaged exclusively in agricultural occupation, while 20.45 per cent of the respondent paddy growers followed agriculture along with allied occupations.

Aphunu *et al.* (2010) revealed that majority 52.06 per cent of rural youth were engaged in farming, followed by 18.02 per cent civil service, while 12.05 per cent unemployed, 10.02 per cent engaged in teaching and only 6.08 per cent engaged in wage labour respectively.

Tayade *et al.* (2010) in their study on "Profile and level of aspiration of under graduate students" reported that majority of the respondents the study area were in farming business as the main occupation with semi-medium landholding, landless, area under irrigation with low family annual income respectively.

2.1.8 Rural credit facility

Lolita Poliquit (2006) in his study on "Accessibility of rural credit among small farmers in the Philippines" observed that 31.34 per cent of the respondent's borrowed credit from LGU programme, 13.33 per cent have borrowed from New Corella Rural bank, most of the respondents borrowed from informal credit sources.

Chikezie *et al.* (2012) in their study on "Factors influencing rural youth adoption of cassava recommended production practices in Onu-Imo local government, Nigeria" result indicated that 14.17 per cent of the respondents had access to credit for cassava production and majority 85.83 per cent did not have access to credit facilities.

Mgbakor *et al.* (2014) in their Study on "Sources of agricultural credit to small-scale farmers in EZEAGU local government, Nigeria" noticed that up to 56.00 per cent of the farmers in Ezeagu local government area have never obtained loan, while only 20.00 per cent interviewed farmers got loan whatever

sources that was available, in addition 24.00 per cent applied but did not succeed.

Jatto *et al.* (2015) in their study on "Factors influencing rural youth's involvement in Cassava production in Oyo State" observed that cassava production activities as an enterprise was financed by cooperatives among the respondents (47.10 per cent), 24.30 per cent of the respondents were self-financed, 14.30 per cent of the respondents depend on their family members, 11.40 per cent depend on thrift and 02.90 per cent depend on bank as their sources of finance. This means that majority was financed by cooperatives and as such it has affect their level of involvement.

Kimaro *et al.* (2015) found that 35.60 per cent of the respondents have obtained credit from micro-finance institutions, 24.50 per cent form money lenders, 23.20 per cent from rural banks, and 16.70 per cent from peer.

2.1.9 Perceptions

Furtado (2000) in his study on "Perception and participation of rural youth in the activities of Adarsh Gram Yojana" observed that 76.50 per cent youth had medium level of perception about Adarsh Gram Yojana.

Tanawade (2001) in his study on "Perception and Participation of women in activities of Adarsh Gram Yojana" observed that 70.86 per cent of women had medium level perception regarding Adarsh Gram Yojana while, 17.39 per cent had high and 11.78 had low level of perception.

Baah (2014) in his study on "A study on assessment of the youth in agriculture programme on CEjura-Sekyedumase District" found that 63.70 per cent of the respondents in the study area did not agree with the notion that farming is a career opportunity before joining the youth in agriculture programme, 90.90 per cent

of the respondents in the study area agree with the notion that farming is a career opportunity after joining the youth in agriculture programme.

Kimaro *et al.* (2015) observed that 20.00 per cent of the respondents strongly agree, 31.10per cent agree, 33.10 per cent were uncertain, 10.00 per cent strongly disagree and 5.60 per cent disagree that agriculture can fulfill their socio-economic needs, whereas 43.30 per cent of all respondents strongly agree, 32.20 per cent agree, 18.90 per cent were uncertain and 5.60 per cent strongly agree that agriculture is potentially a major employer to rural youth. Nearly forty per cent (38.90 per cent) respondents strongly agree, 43.30 per cent agree, 16.70 per cent were uncertain and 1.10 per cent strongly disagree that the government support both ideally and materially can influence the rate of youth participation in agricultural activities.

Douglas *et al.* (2017) in their Study on "Perceptions of Swaziland's youth towards farming: A Case of Manzini region" revealed that youth had a negative perception towards farming with less interest caused by lack of knowledge and perceived low attractiveness of the industry.

2.1.10 Agricultural Knowledge

Awasthi *et al.* (2002) in their study on "Knowledge and attitude of dairy farmers towards improved dairy practices" reported that 38.75 percent dairy farmer was having medium level of knowledge toward improved dairy practice.

Nale (2003) in his study on "Changing rural youth participation in farming" observed that majority 95.00 per cent of the rural youth were found in medium knowledge category followed by 5.00 per cent were found in low knowledge about agriculture.

Tripathi (2007) in his study on “Participation of rural women in agriculture activities Gwalior district” concluded that majority of them had medium knowledge about agriculture activities.

Uddin *et al.* (2008) revealed that majority 58.24 per cent of the rural youth were found in medium knowledge category, 26.38 per cent and 15.38 per cent were found in high knowledge towards some selected modern agricultural technologies respectively.

Sarita (2011) A critical study on “participation of rural women in agriculture activities” observed that rural women had medium to low knowledge about agriculture activities.

Manjunath *et al.* (2016) in their study on “Knowledge of rural youth towards agricultural development activities” revealed that, half (50.00 per cent) of the rural youth had more favorable level of knowledge, followed by 44.00 percent and 6.00 percent of the respondents had less favorable level of knowledge and favorable level of knowledge, respectively.

2.1.11 Job Opportunity

Bhanu (2006) in his study on “Aspiration of rural youths and their attitude towards rural development activities in Dharwad district of Karnataka state” observed that majority of rural youth 60.83 per cent aspired to take up farming, followed by 17.50 per cent office work, 9.17 per cent factory work, 6.67 per cent business and the remaining 5.83 per cent of the rural youth aspired to take up ‘others’ as their occupation including driving, tailoring, carpentry and so on.

Setsabi (2008) in his study on “Tackling youth unemployment through adaptation to climate change in Lesotho’s agriculture” indicated that employed youths were engaged in agriculture with 16.50 per cent employed in this sector in urban areas and 71.20 per cent in rural areas.

Kimaro *et al.* (2015) in their study on "Determinants of participation in youth in agriculture programme in Ondo state Nigeria" indicate that 63.03 per cent of the respondents were farmers , 12.02 per cent respondents were small businessman, 10.00 per cent employed in government sector, 5.06 per cent employed in private sector, and 8.09 per cent had other occupations. The finding shows that 63.00 per cent rural youth farmers had farming as their main occupation. Therefore it can be seen that farming is a main occupation for rural youth. Also few of them who are businessman, employees in both public and private sector had farming as their part time job.

Chetani (2016) in his study on "Youth participation in agriculture in the Nkonkobe district municipality, South Africa" found that a total of 33.00 per cent respondents believed that they were self-employed because agriculture gives them an opportunity to be entrepreneurs, followed by a total of 18.00 per cent stated that they had benefit with money since they can sell agriculture products to people, 15.00 per cent believed that participation lead to a permanent job, 13.00 per cent were of the position that agriculture has alleviated poverty in their families.

Douglas *et al.* (2017) in their study on "Perceptions of Swaziland's youth towards farming: A case of manzini region" revealed that 74.40 per cent respondents are not employed followed by 15.60 per cent are employed in the agricultural industry and remaining are engaged in activities linked to farming and only 10.00 per cent are self-employed.

2.2 Participation of rural youth in agriculture activities

Hiremath (2000) in his study on revealed that majority of the rural youth (50.83 per cent) were involved in the farm activities,

whereas 36.67 per cent of the youth involved in non-farm activities and 12.50 per cent involved both in farm and non-farm activities.

Ahire *et al.* (2001) in their study on "Participation of rural youth in farm activities" revealed that participation of rural youth in farm activities was varying. The activities in which youth 'always' participated were hoeing 93.42 per cent, irrigation to crop 92.10 per cent, spraying of crop 90.79 per cent, supervision 89.47 per cent, help in harvesting and carting agricultural produce 84.21%, sowing 80.26 per cent, culture treatment to seed 77.63 per cent, supervision of weeding 75.00 per cent and in selection of varieties of different crops 69.73 per cent. The farm activities in which youth participation was 'sometimes' were mixing fertilizers 64.84 per cent, threshing 38.16%, selection of hybrids 30.27 per cent and straight varieties of crops 27.63 per cent, ploughing of land 23.68 per cent, supervision of weeding 22.36 per cent, and sowing 19.74 per cent. The activities in which youths 'never' participated were sowing 92.10 per cent, cleaning of land 52.63 per cent, ploughing 47.37 per cent and spreading of compost 15.79 per cent.

Suryawanshi (2002) in his study on "A study of participation of Bhil youth in agriculture and allied activities and their vocational preference in Sakri Tahsil of Dhule district" revealed that about three-fifth (61.34 per cent) of the Bhil youth had medium level of participation, while 21.33 per cent of them had less participation in agriculture and allied activities.

Nale (2003) reported that majority of the rural youth were engaged in different farm activities like vegetable and fruit farming, poultry, feeding of cattle, cutting of fodder, harvesting, storage of grains, kitchen gardening, plantation of trees, compost making, repairing of farm machinery, irrigation the crop, sowing, feeding and watering the animals, piggery and calf rearing, development

activities, collecting stubble, seed bed preparation, applying fertilizers.

Tripathi (2004) in his study on "A critical study on participation of rural youth in agricultural activities in Ghatigoan block of Gwalior district" found that the majority of the rural youth had medium to high level of participation in Agricultural Activities. Majority of youth participated in all selected main agricultural activities in some sub-activities especially in case of management of farm, plant protection measures and intercultural operations

Auto *et al.* (2010) in their study on "Rural youths' participation in agriculture: prospects, challenges and the implications for policy in Nigeria" reported that 79.00 per cent of the rural youths were involved in farming activities producing various crops for subsistence and sale. About 30.00 per cent were involved in livestock farming, while 13.90 per cent engaged in poultry keeping. All these are forms of agricultural activities on which youths embark to earn a living

Barge *et al* (2011) in their study on "Participation of rural youth in farming" shows that majority (65.00 per cent) of the respondent rural youths had medium level of participation in farming while, 17.50 per cent of respondents had low level of participation in farming and also 17.50 per cent of respondents possessed high level of participation in farming.

Umunnakwe *et al.* (2014) in their study on "Factors influencing involvement in agricultural livelihood activities among rural youth in Jabalpur district of Madhya Pradesh, India" observed that cereal production, pulse production and vegetable production ranked first, second and third, respectively as the most participated agricultural income generating activities among rural dwellers.

2.3 Contribution of agricultural income for meeting socio-economic needs

Sarah *et al.* (2010) in their study on "Rural youths participation in agriculture: Prospects, challenges and the implications for policy in Nigeria" revealed that 79.00 per cent of youth were involved in agricultural activities for subsistence and sale. Over 62.00 per cent of youths earned between N10,000,00 - N50,000,00 per annum (Rs.4,623 – Rs.23,115) from agricultural activities. Only 2.80 per cent youths reported that inputs were readily available in their communities.

Roy (2011) in his study on "Trends and Patterns in consumption expenditure – A review of class and rural-urban disparities, Institutes for studies in industrial development" observed rural areas the share of food expenditure in total consumption expenditure declined by about 10 per cent for all income classes. The share of total expenditure on food for the bottom, middle and upper classes declined in percentage from 73.01 to 60.03, 70.08 to 58.07 and 47.08 to 43.03 respectively during the period 1993-94 to 2006-07.

Sethi *et al.* (2012) in their study on "The patterns of consumption expenditure in rural households of Western Odisha of India: An ratio analysis" reported that the pattern of consumption expenditure of rural households in Western Odisha to show the frequent changes in both food and non-food consumption expenditure due to the changes in income and occupation of the people. Consumption expenditure is increasing due to increase in urbanization, breaking up of the traditional joint family system, desire for quality food, lack of time which translates into an increased need for convenience.

Chandrasekhar *et al.* (2014) in their study on "Short term migration and consumption expenditure of households in rural India, Indira Gandhi Institute of Development Research, Mumbai" observed that higher is the land possessed by the household in rural India, higher is monthly per capita consumption expenditure and monthly per capita consumption expenditure on food. The results also indicate that the primary occupation of the household matters. As compared to households self-employed in non-agriculture, households engaged in agricultural labour or self-employed in agriculture have lower (MPCE) monthly per capita food expenditure, whereas households engaged in other activities have higher MPCE and monthly per capita consumption expenditure on food. An examination of poverty among households of various types reveals that in 2009-10 nearly 50 per cent of agricultural labours and 40 per cent of other labours were living below the poverty line (Government of India 2012).

Show (2016) in his study on "Nature of income and expenditure of rural and urban households: A micro level study in Bankura district of West Bengal", reported that rural person's per capita monthly expenditure of Bankura District of West Bengal on food and nonfood consumption is very low. Non-food consumption expenditure of urban population is very high. The per capita monthly expenditure of rural population is Rs.1195 and their monthly food consumption expenditure is Rs. 745 (62.30 per cent of total expenditure) and non-food consumption expenditure is Rs.434 (36.3 per cent of total expenditure).

2.4 Training Needs of Rural Youth

Saxena *et al.* (2000) in their study on "Participation of youth in rural development activities in Chhindwara district" reported that 67.00 per cent of the youth accepted that training is an essential components for extension of agricultural technology and

they were engaged in rural development activities organized by "Nehru Yuvak Kendra" programme.

Tarde and Nirban (2001) in their study on "Training needs of local leaders in agriculture and allied enterprises and problems faced by them in their role performance" observed that respondents required specific training in the sub areas namely, control measures of disease 100.00 per cent, 82.08 per cent in cattle feeds, 67.16 per cent in care of pregnant animals, 56.17 per cent in care of milch animals and 56.17 per cent in management of calf.

Jha *et al.* (2002) in their study on "Appropriateness of training for rural youth" found that majority 38.64 per cent respondents preferred 10 days duration of training programme, followed by 15 days 24.75 per cent, 30 days 21.78 per cent and 5 days 14.85 per cent, about 33.00 per cent women trainees desired that training programme should preferably be of short duration up to 5 days and maximum up to 10 days. Majority of the trainees were in fovour of 10 days training program. So that they may have sufficient time for theoretical and practical learning

Roy (2003) in his study on "Listening to rural youths determining the training needs of future citizens" revealed that most of the respondents desired training in vegetable cultivation, followed by dairy farming, crop farming, motor repairing, and the use of new information technologies respectively. They also perceived that various instructional methods should be use for imparting training.

2.5 Suggestions of the rural youths

Parag (2005) in his study on "Attitude of rural youth towards farming as a major occupation" observed that majority of the respondents 78.33 per cent suggested that, "organize programmes which attract and change the scenario of farming occupation"

followed by “provide farm machinery at subsidized rates” and the “custom hiring should be facilitated (75.00 per cent), “regular guidance should be provided to get maximum production even in small land holdings” (73.33 per cent), government should fix remunerative prices for agricultural products (72.50 per cent), provide required infrastructure facilities for farming to get sustainable production every year (70.83 per cent), parents and friends should motivate the youths to go for farming as a occupation (69.16 per cent), agriculture education should start from primary schooling (68.33 per cent), minimize the cost of inputs (66.66 per cent), provide detail information of climatic conditions regularly (64.16 per cent), regulate the supply of farming inputs at local level (62.50 per cent), government should improve the agriculture policies (60.83 per cent), respectively.

Sajjan (2006) in his study on “A comparative profile analysis of rural youth in rainfed and irrigated tracts of Bagalkot district” indicated that, about half of the respondents (46.66 per cent) expressed their suggestions “to conduct training programmes related to agriculture and other income generating activities”, followed by more than one-fourth of respondents (38.33 per cent) expressed the ‘need of minimum cost of inputs’ and one-third of the respondents suggested ‘to conduct effective educational activities in their villages to create awareness about education and health’. Regarding suggestions expressed by youths of irrigated tract, majority of the respondents (60.00 per cent) expressed their suggestions ‘to provide agricultural inputs like seeds, fertilizers at minimum cost to the farmers’, followed by more than half of the respondents (53.33 per cent) suggested ‘to conduct training programmes related to agriculture and other self-employment programmes to increase their income level whereas’, more than one fourth of the respondents (30.00 per cent) suggested to conduct

effective educational programmes to create awareness among villagers about health and education.

Bhanu (2006) observed that, cent per cent of the respondents suggested that, 'daily wages have to be given to every individual who participate in the rural developmental activities'. More than three-fourth of the respondents suggested that 'rural developmental activities have to be taken up during off season/summer season' (95.83 per cent), followed by 'leaders who are in front have to be faithful and true to their sole' (90.82 per cent), 'rural developmental activities taken up in the village are to be made known to every individual' (85.00 per cent), 'there should not be any conflicts among people in the village' (85.00 per cent), 'each individual in the village should be made known that, it is their work' (79.16 per cent) and 'leader should be co-operative and take the consensus of all sections of the society'.

Suryawanshi (2008) in his "A study on socio-economic aspects and agricultural development of tribal farmers" reported that majority (81.67 per cent) of the respondents suggested that 'irrigation facilities should be provided', 79.17 per cent of the respondent suggested that 'cost of agriculture inputs should be low', 60.00 per cent of respondents suggested that 'rate of interest on loan should be less' 72.50 per cent, 70.83 per cent and 75.00 per cent of the respondents suggested 'timely availability of the fertilizers', 'pesticide', 'availability of educational facilities' and 'availability of transportation facilities' respectively.

Sikarwar (2009) in his study on "Participation of rural women in agriculture activities Ratlam district" reported the some suggestions to overcome problem faced by rural women during agriculture activities, 'subsidy should be given for seed, fertilizer, pesticide and other inputs', ' loan should be granted for farm

activities', regular training, supply of input through co-operative society at village level.

Ramjiyani (2013) in his study on "Attitude of Rural Youth towards farming as a major occupation." indicated the suggestions as endorsed by the rural youth to overcome their constraints in adopting agriculture as an occupation were price of seed should be minimized (93.00 per cent), low labour consuming technology should be developed (86.00 per cent), chemical fertilizer should be made available in time (82.00 per cent) and proper marketing facility should be established (78.00 per cent). Some other suggestions were sufficient electric power should be provided regularly (71.00 per cent), middle man commission should be avoided (67.00 per cent), procedure of loan should made easy (64.00 per cent) and irrigation water supply should be regulated (37.00 per cent).

CHAPTER III
METHODOLOGY

This chapter deals with research methodology used in the present study. This study was conducted to know the participation of rural youth in agricultural activities. The methodology followed for conducting this investigation is described under the following heads.

3.1 Locale of the study

3.2 Research Design

3.3 Sampling procedure

3.4 Variables and their empirical measurement

3.5 Tools and techniques of data collection

3.6 Statistical analysis

3.1 Locale of the study

The present study was conducted in Sindhudurg district of Konkan region of Maharashtra. This district was purposively selected due to the availability of resources and plentiful land which has high potential for activities. At present many youth in this district are engage in agricultural activities including fruit crop cultivation, vegetable cultivation and post harvest technology, while other youths migrates to urban areas including Mumbai, Pune and Goa.

3.1.1 Topography

The topography of Sindhudurg district is hilly and many villages are situated in remote and interior area. This district is located on the western coast of India and lies between 15^0 37’ to 16^0 40’ north latitude and 73^0 19’ to 74^0 13’ east longitude. The district has an average east-west spread of about 60 km.

3.1.2 Boundaries

The Sindhudurg district is flanked by Arabian sea in the west and Sahyadri hills in the east. The district is bounded by Ratnagiri district in the north and the states of Goa and Karnataka are situated on the south side.

3.1.3 Soils

The soils of Sindhudurg district is lateritic with brownish red colour and are termed as rice soils and *warkas* soil. The pH of the soil ranges from 5.5 to 6.5, which indicate its acidic nature.

3.1.4 Climate

The climate of this district is generally warm and humid. Monsoon rains are usually received during the month of June to September. The average annual precipitation is about 3000 mm to 3500 mm. The intensity of rain is high in the month of July. The temperature of the districts varies from 17^0 C to 36^0 C.

3.1.5 Crops

Rice (*Oryza sativa* L.) is the major staple food of the districts, followed by Nagli (*Eleusine coracana*) and Vari (*Panicum miliaceum*). These crops are mainly grown in *Kharif* season. After the harvest of *kharif* rice, the pulse crops namely Wal (*Dolichus lablab*), Cowpea (*Vigna sinensis*) and Mung (*Vigna radiata*) are grown on residual moisture.

Among the horticultural crops, Mango (*Mangifera indica*), Cashew nut (*Anacardium occidentale L.*), Coconut (*Cocus nucifera*) and Areca nut (*Areca catechu*) are the major fruit crops.

3.2 Research design

Keeping in view the objectives of the study, an ex–post-facto research design was used to investigate the participation of rural youth in agricultural activities**.**

3.3 Sampling procedure

The sampling procedure adopted for this research study is as follows.

3.3.1 Selection of district

The Konkan region comprises of five districts namely, Thane, Raigad, Palghar, Ratnagiri, and Sindhudurg. Sindhudurg district was selected purposively for the present study, as this district is quite away from metropolitan cities like Mumbai and Pune.

3.3.2 Selection of tahsils

Three Tahsils *viz.* Kudal, Vengurle and Sawantwadi were selected from Sindhudurg district for present study, as RAWE (Rural Agriculture Work Experience) students of college of agriculture Dapoli were placed in these talukas since last three years.

3.3.3 Selection of villages and respondents

Senior B.Sc. (Agri) students of College of Agriculture, Dapoli, were placed in five villages namely, Walaval (Kudal), Vetore, palkarwadi and Hodawada (Vengurla) and Talawade (Sawantwadi) in all there were 50 students under RAWE (Rural Agriculture Work Experience) programme for the academic year 2017-2018. These 50 students have been asked for preparation of list of rural youth who actually working in agricultural activities, from the list 105 rural youth were selected randomly for the study**. (Appendix I)**

3.4 Variables and their empirical measurement

Taking into consideration objectives of the study, independent variables such as age, gender, education, marital status, and family background, availability of land, occupation, rural credit facility, perceptions, agricultural knowledge, and job opportunity were included.

3.4.1 Age

The chronological age of the respondent at the time of interview was taken into consideration. The following categories of age were made by using formula mean (26.30) ± SD (5.52).

Sl.No.	Category	Age (yrs.)
1.	Youngest	Up to 21 yrs
2.	Younger	22 to 31
3.	Young	32 yrs and above

3.4.2. Gender

On the basis of rural youth, gender was group into two categories male and female.

Sl. No.	Category
1.	Male
2.	Female

3.4.3. Education

Education is operationally defined as formal schooling completed by respondent from school to university degree.

Following categories were formed on the basis of their educational qualification.

Sl. No.	Category	Standard of Education
1.	Primary	5^{th} to 7^{th}
2.	Secondary	8^{th} to 10^{th}
3.	Higher secondary	11^{th} to 12^{th}
4.	College	13^{th} and above

3.4.4. Marital status

On the basis of marital status, rural youths were group into two categories married and unmarried.

Sl. No.	Category
1.	Married
2.	Unmarried

3.4.5. Family background

On the basis of family background rural youths were group into two categories as farmer and non farmer.

Sl. No.	Category
1.	Farmer
2.	Non-farmer

3.4.6. Availability of land

It is the area of land possessed by an individual family. In present study the categorization of land holding was considered in three categories i.e. marginal, small and semi-medium. The categorization was as follow.

Sl. No.	Category	Land holding (ha)
1.	Marginal	Up to 1.00
2.	Small	1.01 to 2.00
3.	Medium	2.01 and above

3.4.7. Occupation

It refers to the number of occupation in which rural youths were involved as a source of income. The respondents were categorized in to four groups as follows.

Sl. No.	Category
1.	Owned farm
2.	Owned farm + contract labour
3.	Owned farm + processing of fruits
4.	Processing and harvesting of fruits

3.4.8. Rural credit facility

It was operationalised as the rural credit facilities available to rural youths at their home place.

Sl. No.	Category
1.	Cooperative credit society
2.	District central cooperative bank
3.	Nationalize bank
4.	Relatives

3.4.9. Perceptions

Perception of rural youths about agricultural activities was operationalised as the rural youth understanding with respect to agricultural activities.

The study measured perceptions of rural youth towards participation in agricultural activities in order to determine whether rural youth had positive or negative attitude on agriculture. Perception was assumed to be a factor which determined their participation in agriculture. Therefore a set of statements were framed to elicit the perception of youths about agricultural activities. The responses for each statements were rated on a five point continuum namely, Agree (A), Strongly Agree (SA), Undecided (UD), Disagree (DA) and Strongly Disagree (SDA) with the scores of 5, 4, 3, 2 and 1 for positive statements and 1, 2, 3, 4 and 5 for negative statements, respectively. The maximum score an individual could obtain was 40 and minimum was 8. The

respondents were grouped into three categories based on mean (30.65)and S.D. (5.15) as follows.

Sl. No.	Perception	Score
1	Low	(Up to 26)
2	Medium	(26 to 35)
3	High	(36 and above)

3.4.10. Agricultural knowledge

English and English (1958) defined knowledge as a body of understood information possessed by an individual.

The term knowledge was operationalised as 'acquaintance with the facts, truths or principles as from study or investigation' or 'the level to which the respondent correctly answered the questions about the agricultural activities.

The knowledge index developed was administered to the respondents and quantification of the knowledge item answers were made by giving one score and zero score for correct and incorrect answer, respectively. The score of all items were summed to get the knowledge score of respondents. Based on the total score, respondents were classified into three categories namely low, medium and high by using mean (31.4) and standard deviation (14.91) as follows.

Sl.No.	Category	Knowledge
1.	Low	(Up to 16)
2.	Medium	(17 to 45)
3.	High	(46 and above)

3.4.11. Job opportunity

The job opportunities in agriculture were kept open ended. Responses of rural youth about this aspect were recorded. The

frequency and per cent of each job avenues were worked out to identify the major job opportunities perceived by the rural youth.

3.4.12. Participation of rural youth in agricultural activities

The level of participation of rural youth in agricultural activities and allied activities was measured by computing the participation score. The areas of participation of rural youth in different operations were developed in consultation with experts. The rural youth were asked to give their responses according to their extent of participation in the operations of the agriculture and allied activities.

The degree of their participation was measured into three level i.e. regularly participated, occasionally participated and not participated with score 3, 2 and 1 respectively.

On the basis of score obtained, the rural youth were grouped into the following three categories by using mean (103) ± standard deviation (34) as follows.

Sl.No.	**Participation**	**Participation (score)**
1	Low	(Up to 69)
2	Medium	(70 to 135)
3	High	(137 and above)
Total		**105**

3.4.2.13. Contribution of agricultural income for meeting socio-economic needs

Socio-economic needs was operationally defined as rural youths spends some part of amount from their total monthly income for fulfilling their day to day needs. The rural youth were asked to how much amount was spend on the each item in a

month. On the basis of expenditure response obtained from all items, average spends for each item and share of each item from total monthly expenditure was computed.

3.4.2.14. Training needs of rural youth

Training need was operationally defined as an actual and desired performance of rural youth about agricultural activities. The rural youth were asked in which area they need training in order to increase their participation in agricultural activities. Their responses to this effect were recorded to know the training needs of rural youths.

3.4.2.15. Suggestions of rural youth to promote participation in agricultural activities

The rural youth were asked to give valuables suggestions for promoting their participation in agriculture activities. Their responses to this effect were recorded and frequencies, per cent of these suggestions were computed.

3.5 Tools and techniques of data collection

Data were collected by the investigator himself with the help of a structured interview schedule developed for the study.

3.5.1 Construction of interview schedule

The interview schedule was prepared to collect information in line with the objectives of the study. While preparing the schedule, attention was given to make the questions simple, self-explanatory with clarity, so that the respondents could understand the same and give the response more accurately.

3.5.2 Pre-testing of interview schedule

The interview schedule was pretested by interviewing 10 rural youth farmers in non-sample area. This was considered necessary, so that the interview schedule would hold well while interviewing the sample. Necessary modifications were carried out in the

schedule after pretesting. The final format of the schedule used for collection of information is placed in **(Appendix- II).**

3.5.3 Collection of data

Personal interview technique was used for data collection. Before starting an interview, the investigator introduced himself and explained the purpose of his visit to each respondent. During the course of interview, the questions were asked serially to the respondent. Whenever necessary, questions were explained to them to ensure proper understanding. This helped in securing appropriate response from the respondents. The filled-in interview schedule was checked immediately after the closure of the interview for its completion in all respect.

3.6 Statistical analysis

The data were processed and tabulated by using simple frequencies and the parameters like percentage, mean and standard deviation were used according to requirement.

3.6.1 Mean

Mean was calculated by using the following formula.

$$\overline{X} = \frac{\sum Xi}{n}$$

Where,

$\overline{X}$ = Mean,

n = number of observation

Xi = value i^{th} of observation

3.6.2 Standard deviation

It is defined as the square root of the mean of the squares of the deviations taken from arithmetic mean.

$$SD = \sqrt{\frac{\sum (Xi - \bar{X})^2}{n - 1}}$$

Where,

S.D. = standard deviation

Xi = *Individual score*

$\bar{X}$ = *Mean of the sample*

n = Total number of respondents

3.6. Operational definitions

1. **Youth:** Youth is a person having age between 18 to 35 years.
2. **Gender:** Culturally and socially constructed difference between men and women.
3. **Education:** The formal education completed by the rural youths.
4. **Marital status:** The condition of being married or unmarried.
5. **Family background:** Youth originated from farmer families or non-farmer families.
6. **Availability of land:** The total land holding possessed by the parents of the rural youths in hectors.
7. **Rural credit facility:** Credit providing institutions to rural youth for agriculture, non agriculture sector or other purpose.
8. **Perceptions:** It is process recognition and interpretation of sensory information.
9. **Agricultural knowledge:** It acquaintance with the facts and principles about agriculture subjects.
10. **Job opportunity:** It is an occupation by which person earns a living, work and business.
11. **Participation:** The action of taking part in something.
12. **Training needs:** It is process of what is going on now and what should go on now.

CHAPTER IV

RESULT AND DISCUSSION

The data collected for the study have been classified, tabulated and analyzed in the light of the objectives of the study. The results and interpretation thereof are presented under the following heads.

4.1. Socio-economic profile of rural youth.
4.2. Various agricultural activities in which rural youths are involved.
4.3. Contribution of agricultural income for meeting socio-economic needs.
4.4. Training needs of rural youth.
4.5. Suggestions of rural youth to promote participation in agricultural activities.

4.1 To study the socio-economic profile of rural youth.

The data related to the selected personal and socio-economic characteristics of the rural youths are presented and discussed in this part.

4.1.1 Age

Age is meant to refer to the individual age appropriate for agricultural activities. The rate of the age of youth attribute to the increasing of their consciousness and self-realization of the importance of agriculture in development. The distribution of the rural youth according to their age is given in Table 1 and Figure 2.

Table 1: Distribution of the rural youth according to their age

Sl.No.	Age (Years)	Respondents (N=105)	
		Number	Percentage
1	Youngest (Up to 21 yrs)	25	23.82
2	Younger (22 to 31 yrs)	55	50.47
3	Young (32 yrs and above)	25	25.71
Average 26.30 yrs	**Total**	**105**	**100.00**

The data in Table 1 indicated that 50.47 per cent rural youth belonged to 'younger' age group whereas 25.71 per cent belonged to 'young' and 23.82 per cent belonged to 'youngest' age group. The analysis of data in this study shows how age was associated with the rate of youth participation in agricultural activities. It was found that the participation of rural youth in agriculture depend on their younger category

Hence, it can be concluded that maximum rural youth belonged to younger age group. This means that the younger aged youth was more energetic and willing to participate in the agricultural activities as compared to the young and youngest age group.

The results of the present study are similar with the results of Furtado (2009) and Ugwoke *et.al.* (2015)

4.1.2 Gender

Gender is one of the indicators for the factors which determining rural youth participation in agriculture. The study analyzed this factor by showing the extent of participation in agricultural activities between male youth and female youth. The

distribution of the rural youth according to their age is given in Table 2 and Figure 3

Table 2: Distribution of the rural youth according to their gender

Sl.No.	Gender	Respondents (N=105)	
		Number	Percentage
1	Male	71	67.00
2	Female	34	33.00
	Total	**105**	**100.00**

It can seen from Table 2 that, about 67.00 per cent rural youth were 'males' and 33.00 rural youth were 'female'.

This indicates that male youth participate more in agricultural activities than female youth. Therefore the analysis shows that gender positively associated with rural youth's participation in agriculture. More male are involved in agriculture programme than females. This is most likely to be due to the fact that men are capable of doing more physical activities than the females as females have to do the household chores along with farming activities. That is why the participation of males is more than females.

The results of the present study are similar with the results of Ayanwuyi *et al.* (2007) and Muhammad-Lawal *et al.* (2009)

4.1.3 Education

The distribution of the rural youth according to their Education is given in Table 3 and Figure 4.

Table 3: Distribution of the rural youth according to Education

Sl.No.	Education status (Std.)	Respondents (N=105)	
		Number	Percentage
1	Primary (5th to 7th)	09	8.58
2	Secondary (8th to 10th)	39	37.14
3	Higher Secondary (11th to 12th)	34	32.38
4	College (13th and above)	23	21.90
Average	**11th Standard** **Total**	**105**	**100.00**

The data in Table 3 observed that, more than one third (37.14 per cent) of the respondents had 'secondary' level of education followed by 32.38 per cent had 'higher secondary', 21.90 per cent had 'college' and 08.58 per cent were educated up to 'primary' level.

Therefore, it may be concluded that, educational profile of rural youth indicates that higher percentage of rural youth belonged to secondary and higher secondary education level. The average educational level was higher secondary school, this was due to the awareness about education in the life of rural youth so that they can learn more about agricultural activities by visiting and approaching different institutions & organization.

The findings of the present study are similar with those of Nale (2003) and Parag (2005).

4.1.4 Marital status

The distribution of the rural youth according to their marital status is given in Table 4 and Figure 5.

Table 4: Distribution of the rural youth according to their marital status

Sl.No.	Marital status	Respondents (N=105)	
		Number	Percentage
1	Married	48	45.72
2	Un-married	57	54.28
	Total	**105**	**100.00**

A critical look Table 4 illustrated that, 54.28 per cent belonged to 'Un-married' category and 45.72 per cent belonged to 'married' category.

This indicates that marriage is well associated with rural youth's participation in agriculture. Married youth had more experience in farming and due to their family needs agriculture become their most important occupation.

Further it was find out that rural youth marital status is well associated with their participation in agricultural activities. For instance, unmarried youth are more likely to participate in agricultural activities than married ones.

The findings of the present study are similar with those of Ayanwuyi *et al.* (2007) and Aphunu *et.al* (2010).

4.1.5 Family background

The distribution of the rural youth according to their family background is given in Table 5 and Figure 6.

Table 5: Distribution of the rural youth according to their family background

Sl.No.	Family background	Respondents (N=105)	
		Number	Percentage
1	Farmer	95	90.47
2	Non-farmer	10	09.53
	Total	**105**	**100.00**

It is evident from Table 5 that, great majority (90.47 per cent) of youth were belonged to the 'farmer families' while nearly equal to one tenth (09.53 per cent) were belonged to the 'non-farmer' families.

This indicates that the family background of rural youth had positive influence on their participation in agriculture. As, majority of the Indian population lives in villages and their primary occupation is agriculture, those youth who belonged to farmer's families were more likely to participate in agriculture activities than those who did not belong to farmer families.

Youths who are originated from farmer families are expected to participate more than those who are originated from non-farmer families. The study found out that the family background of rural youth influence their participation in agricultural activities. For instance the large number of the respondents belonged from farming families.

The findings of the present study are similar with those of Shigwan (2002) and Jeffrey *et al.* (2010)

4.1.6 Availability of land

The predominant rate of rural youth participation in agriculture can be attributed to the availability of farm land and

the dependence of land for existence by rural dwellers. As an important sector, agriculture is the first employment to rural youth which needs to be given the first priority for rural development. The distribution of the rural youth according to their availability of land is given in Table 6 and Figure 7.

Table 6: Distribution of the rural youth according to Availability of land

Sl.No.	Category (ha)	Respondents (N=95)	
		Number	Percentage
1	Marginal (up to 1.00 ha)	51	53.68
2	Small (1.01-2.00 ha)	33	34.74
3	Semi medium (2.01-4.00 ha	11	11.58
Average land 1.18 ha	**Total**	**95**	**100.00**

The data in the Table 6 concluded that slightly more than half (53.68 per cent) of the respondents had 'marginal' availability of land whereas 34.74 per cent and 11.58 per cent of the rural youth had 'small' and 'semi medium' availability of land respectively.

The study found out that, access to farm land by rural youth remains a crucial factor that determines their participation in agriculture. With the availability of fertile land and water for irrigation rural youth are expected to participate more in agricultural activities.

Majority of the rural youth belonged to marginal to small land holding. Nowadays it is notice that more number of nuclear families than joint ones and because of division of land leading to marginal and small land holding of the youth.

The findings of the present study are similar to Deshmukh *et.al.* (2009). and those are dissimilar with that of Hiremath (2000) and Sajjan (2006).

4.1.7 Occupation

Occupation of the rural youth has been considered as one of the important factors that contribute the annual income of the rural youth. It also reflects socio-economic status of an individual in society. The respondents are asked to state their occupation and it is presented in Table 7 and figure 8.

Table 7: Distribution of the rural youth according to their occupation

Sl.No.	Type of occupation	Respondents (N=105)	
		Number	Percentage
1	Owned farm	51	48.57
2	Owned farm + contract labour	30	28.57
3	Owned farm + processing of fruits	14	13.33
4	Processing and harvesting of fruits	10	9.53

It was observed from the Table 7 that, more than 48.57 per cent of the rural youth were dependent on 'owned farm' as their main occupation followed by 28.57 per cent were dependent on 'owned farm and contract labour work, 13.33 per cent were dependent on 'owned farm along with processing of fruits' and only 9.53 per cent were engaged in 'processing and harvesting of fruits'.

It means majority of the rural youth in study area were dependent on owned farm and contract labour work as their main occupation.

The findings of the present study are similar to those of Kumar *et al*. (2008) and those are dissimilar with that of Parmar (2006) and singh (20007).

4.1.8 Rural credit facility

The contributions of rural credit facilities are remarkable on the improvement and development of the agriculture sector in rural areas. They encourage rural youth participation in agricultural activities through providing credits and other assistance. Information with respect to availability of credit facilities is given in Table 8 and Figure 9.

Table 8: Distribution of the rural youth according to their rural credit facility

Sl.No.	Rural credit facility sources	Respondents (N=105)	
		Number	Percentage
1	Cooperative credit Society	62	59.05
2	District central cooperative bank	37	35.24
3	Nationalize bank	5	4.76
4	Relatives	1	0.95
	Total	**105**	**100.00**

It was apparent from the Table 8 that, nearly three fifth (59.05 per cent) of rural youth had availed loan from 'cooperative credit society' while 35.24 of the rural youth availed loan from district central cooperative bank. Very small number (4.76 per cent) and (0.95 per cent) of the rural youth had availed loan from 'nationalize bank' and 'relatives' respectively. The access to cooperative credit societies and district central cooperative bank found to be convenient to youth as compared to the nationalized banks.

The findings of the present study are similar to those of Jatto *et.al* (2015) and Kimaro *et al.* (2015).

4.1.9 Perceptions

The distribution of the rural youth according to their perceptions is given in Table 9(a) and Figure 10.

Table 9(a): Distribution of the rural youth according to their perceptions

Sl.No.	Perception	Respondents (N=105)				
		SA	A	N	DA	SDA
1	Agriculture activities can fulfill rural youth socio economic needs	47 (44.76)	35 (33.33)	-	23 (21.90)	-
2	Agriculture is potentially a major employer of labour for youths	25 (23.81)	59 (56.19)	5 (4.76)	16 (15.24)	-
3	Government support and incentives is a good motivator for youth participation in agriculture	50 (47.62.)	55 (52.38)	-	-	-
4	Inclusion of agriculture in all levels of education can motivate youth participation in agriculture	68 (64.76)	36 (34.29)	1 (0.95)	-	-
5	Agriculture can provide enough incentives to rural youths	20 (19.05)	58 (55.24)	7 (6.67)	20 (19.05)	-
6	Agriculture can produce high profit like other sectors	21 (20.00)	36 (34.29)	4 (3.81)	43 (40.95)	1 (0.95)
7	Availability of alternative income generating activities has no effects in youth participation in agriculture	13 (12.38)	47 (44.76)	10 (9.52)	29 (27.62)	6 (5.71)
8	Youth involvement in agriculture can lead to the improvement of socioeconomic conditions of rural youth	32 (30.48)	58 (55.24)	-	13 (12.38)	2 (1.90)

The study had reflected perceptions of rural youth toward participation in agricultural activities in order to determine whether

rural youth had positive or negative attitude about agriculture. Perception was assumed to be a factor which determined their participation in agriculture.

It could be inferred from the Table 9 (a) that, 64.76 per cent of the rural youth strongly agree with the statement of 'inclusion of agriculture in all levels of education can motivate youth participation in agriculture' followed by 'Government support and incentives is a good motivator for youth participation in agriculture' (47.62 per cent), 'agriculture activities can fulfill rural youth socio economic needs' (44.76 per cent), 'youth involvement in agriculture can lead to the improvement of socio-economic conditions of rural youth (30.48 per cent).

More than half (56.19 per cent)of the respondents agree with the statement of 'agriculture is potentially a major employer of labour for youths' followed by equal number (55.24 per cent) of the rural youth agree with 'agriculture can provide enough incentives to rural youths' and 'youth involvement in agriculture can lead to the improvement of socio-economic conditions of rural youth'

Less than one-tenth (9.52 per cent) of the rural youth perceived as neutral with the statement of 'availability of alternative income generating activities has no effects in youth participation in agriculture, followed by 'agriculture can provide enough incentives to rural youths' (6.67 per cent)

Two fifth of the rural youth disagree with the 'agriculture can produce high profit like other sectors' followed by 'availability of alternative income generating activities has no effects in youth participation in agriculture' (27.62 per cent), 'agriculture activities can fulfill rural youth socio economic needs' (21.90 per cent).

It is also found that 5.71 per cent and 1.90 per cent of the rural youth strongly dis-agree with 'availability of alternative

income generating activities has no effects in youth participation in agriculture' and 'youth involvement in agriculture can lead to the improvement of socioeconomic conditions of rural youth' respectively.

Table 9 (b): Distribution of the rural youth according to their overall perception

Sl.No.	Overall Perception	Respondents (N=105)	
		Number	Percentage
1	Low (up to 26)	17	16.19
2	Medium (27 to 35)	77	73.33
3	High (36 and above)	11	10.48
	Total		**105**

It can be viewed from the Table 9 (b) that, less than three-fourth (73.33 per cent) of the respondents had 'medium' perception, while 16.19 per cent and 10.48 per cent had 'low' and 'high' perception, respectively. This was due to the positive perception about agriculture activities would somehow benefit them as compared to other occupations. As agriculture is the only culture where even if one agricultural enterprise fails there's a chance that subsidiary agriculture enterprise will help to overcome the loss, if any.

Therefore the analysis of the results in Table 9 (b) shows that, rural youth who participated in agricultural activities had positive attitude towards agriculture. This implies that the factor of attitude have the highest significant relationship with youth participation in agricultural activities.

The findings of the present study are similar to those of Furtado (2000) and Tanawade (2001).

4.1.10 Agricultural knowledge

The distribution of the rural youth according to their age is given in Table 10 and Figure 11.

Table 10 (a): Distribution of the rural youth according to their overall agricultural knowledge

Sl.No.	Agricultural knowledge	Respondents (N=105)	
		Number	Percentage
1	Low (Up to 17)	20	19.05
2	Medium (17 to 46)	69	65.71
3	High (47 and above)	16	15.24
	Total	**105**	**100.00**

It is clear from the Table 10 (a) that, the majority (65.71 per cent) of the rural youth had 'medium' knowledge about agricultural activities followed by 19.05 per cent had 'low' knowledge and 15.24 per cent of rural youth had 'high' knowledge about agricultural activities.

It can be concluded that maximum rural youth have medium to low knowledge about agriculture.

The findings of the present study are similar to those of Nale (2003) and Uddin *et al.* (2008).

4.1.10.1 The detail practice wise knowledge possess by rural youth is depicted in the Table 10 (b) to Table 10 (f).

Table 10(b): Distribution of the respondents according to their knowledge about various agricultural activities.

Sl.No.	Statements	Respondents (N=105)	
		Yes	No
I	**Land improvement**		
1	Leveling of land and plotting	84 (80.00)	21 (20.00)
2	Biological bunds	84 (80.00)	21 (20.00)
3	Methods of water conservation	86 (81.90)	19 (18.10)
II	**Irrigation**		
1	Motor pump	68 (64.76)	37 (35.24)
2	PVC pipeline	60 (57.14)	45 (42.86)
3	Drip irrigation	50 (47.62)	55 (52.38)
4	Sprinkler irrigation	49 (46.67)	56 (53.33)
5	Micro sprinkler	48 (45.71)	57 (54.29)
III	**Pre farming practices**		
1	Ploughing after harvesting	92 (87.62)	13 (12.38)
2	Ploughing by tractor/power tiller	92 (87.62)	13 (12.38)
3	Application of cow dung/compost before ploughing	93 (88.57)	12 (11.43)

IV	**Seeds/variety**		
1	Hybrid seed / improved variety that give excess yield	70 (66.67)	35 (33.33)
2	Recommended seed rate	65 (61.90)	40 (38.10)
3	Seed treatment	68 (64.76)	37 (35.24)
V	**Transplanting**		
1	Age of seedling for planting	80 (76.19)	25 (23.81)
2	Row to row and plant to plant distance as recommended	80 (76.19)	25 (23.81)
3	Method of planting	81 (77.14)	24 (22.86)
VI	**Fertilizers management**		
1	Recommended dose quantity of nitrogen, phosphorous and potassium	65 (61.90)	40 (38.10)
2	Green manure	69 (65.71)	36 (34.29)
3	Organic manure	68 (64.76)	37 (35.24)
4	Vermicompost	72 (68.57)	33 (31.42)
VII	**Plant protection**		
1	Recommended dose of pesticides	57 (54.28)	48 (45.71)
2	Recommended dose of fungicides	57 (54.28)	50 (47.62)
3	Spraying/dusting machine	57 (54.28)	48 (45.71)
4	Pest and disease resistance variety	45 (42.86)	60 (57.14)

VIII	**Crop harvesting and threshing**		
1	Right time of harvesting	88 (83.80)	17 (16.19)
2	Improved implements for harvesting	89 (84.76)	16 (15.24)
3	Threshing machine	89 (84.76)	16 (15.24)

A perusal Table 10 (b) observed that, more than four fifth (81.90 per cent) of the respondents had knowledge about methods of water conservation, followed by equal number (80.00 per cent) had knowledge about levelling of land, plotting and biological bunds.

It can be viewed from the Table 10 (b) that, 64.74 per cent youth had knowledge about motor pump, followed by 57.14 per cent had PVC pipeline, 47.62 per cent had drip irrigation, 46.67 per cent had sprinkler irrigation and 45.71 per cent had knowledge about micro sprinkler. It was noticed that youth had good knowledge about irrigation components.

It was clear from the Table 10 (b) that, large majority (88.57 per cent) had knowledge about application of cow dung/compost before ploughing, followed by 87.62 per cent each of them knowledge about ploughing after harvesting and ploughing by tractor/power tiller. This indicates that majority of rural youth had very good knowledge about pre-farming practices.

It could be inferred from the Table 10 (b) that, majority (66.67 per cent) had knowledge about hybrid seed / improved variety that give excess yield, followed by 64.76 per cent known seed treatment and 61.90 per cent had knowledge about recommended seed rate. This indicates that majority of youth had knowledge with respect to seeds/variety and its application.

It can seen from Table 10 (b) 77.14 per cent had knowledge about method of planting, followed by 76.19 per cent each of them had a knowledge about age of seeding for planting of and row to row and plant to plant distance as recommended. This indicates that majority of youth had good knowledge planting of various crops.

With respect to knowledge of youth regarding fertilizer management majority (68.57 per cent) had knowledge about vermicompost, followed by 65.71 per cent had green manure, 64.76 per cent had knowledge about organic manure and 61.90 per cent had knowledge about recommended dose i.e. quantity of nitrogen, phosphorous and potassium. This indicates that majority of youth had very good knowledge about fertilizer management.

It can be viewed from the Table 10 (b) that, 54.28 per cent each of rural youth had knowledge about recommended dose of pesticides and fungicide and also knowledge about spraying/dusting machine, while 42.86 per cent had knowledge about Pest and disease resistance variety. This indicates that majority of youth had sufficient knowledge about plant protection practices.

With regard to crop harvesting and threshing Table 10 (b) revealed that majority (84.76 per cent) had knowledge about improved implements for harvesting, followed by 84.76 per cent were aware about threshing machine and 83.80 per cent had knowledge about right time of harvesting. This indicates that majority of youth had a very good knowledge about crop harvesting and Threshing.

Table 10(c): Distribution of the respondents according to their Knowledge about Orchard improvement

SI.NO	Statement	Respondents (N=105)	
	Orchard improvement	**Yes**	**No**
1	Rejuvenation and pruning of trees	45 (42.86)	60 (57.14)
2	Management of old orchard	53 (50.48)	52 (49.52)
3	Planting methods	55 (52.38)	50 (47.62)
4	Identification of pest and diseases and their control	39 (37.14)	66 (62.86)
5	Recommended dose of fertilizer	47 (44.76)	58 (55.24)
6	Mango blossom protection	85 (80.95)	20 (19.05)
7	Mango harvester	84 (80.00)	21 (20.00)

It could be inferred from the Table 11(c) that, majority (80.95 per cent) had knowledge about mango blossom protection, followed by 80.00 per cent of them were aware about mango harvester. More than half (52.38 per cent) had knowledge about planting methods, and (50.48 per cent) management of old orchard. Whereas 44.76 per cent had knowledge about recommended dose of fertilizer and 42.86 per cent were aware about rejuvenation and pruning of trees. Only 37.14 per cent had knowledge about identification of pest and diseases. This implies that rural youth had a good knowledge about orchard improvement.

Table 10(d): Distribution of the respondents according to their Knowledge about Animal husbandry

SI.NO	Statement	Respondents (N=105)	
	Animal husbandry	**Yes**	**No**
1	Improved breeds of cows and buffaloes	38 (36.19)	67 (63.81)
2	Improved poultry birds	42 (40.00)	63 (60.00)
3	Cattle /poultry shed	35 (33.33)	60 (57.14)
4	Vaccination of animal	31 (29.52)	74 (70.48)
5	Methods of milking	49 (46.66)	56 (53.33)
6	Use of Urea processed paddy	40 (38.09)	65 (61.90)
7	Green fodder	47 (44.76)	58 (55.23)
8	Grass storage	34 (32.38)	71 (67.61)
9	Grass choper machine	24 (22.85)	81 (77.14)

It was clear from the Table 12(d) that, majority (46.66 per cent) of the rural youth had knowledge about methods of milking followed by green fodder (44.76 per cent). Further it was noticed that they had a knowledge about improved poultry birds (40.00 per cent), use of urea processed paddy (38.09 per cent), improved breeds of cows and buffaloes (36.19 per cent), cattle /poultry shed (33.33 per cent), grass storage (32.38 per cent), vaccination of animal (29.52 per cent) and grass choper machine (22.85 per cent). This implies that animal husbandry may not be subsidiary enterprise, hence their participationand knowledge in animal husbandry practices found to be limited.

Table 10(e): Distribution of the respondents according to their Knowledge about Post harvest practices.

SI.NO	Statement	Respondents (N=105)	
	Post harvest practices	**Yes**	**No**
1	Preparation of processed fruit products	24 (22.86)	81 (77.14)
2	Use of preservatives in processing of product	22 (20.95)	83 (79.05)
3	Improved methods for drying of fruits	25 (23.81)	80 (76.19)
4	Cashew apple juice machine	24 (22.86)	81 (77.14)
5	Machine of separation of seeds from fruit	20 (19.05)	85 (80.95)
6	Machine of separation of juice from fruit	24 (22.86)	81 (77.14)

It could be inferred from the Table 10(e) that, 23.81 per cent had knowledge about improved methods for drying of fruits, followed by 22.86 per cent each of them had knowledge about preparation of processed fruit products, cashew apple juice machine 22.86 per cent and machine of separation of juice from fruit 19.05 per cent. Only 20.95 per cent had knowledge regarding use of preservatives in processed products and machine of separation of seeds from fruit (19.05 per cent). This indicates that of youth had a sufficient knowledge about post harvest practices.

Table 10(f): Distribution of the respondents according to their Knowledge about Improved marketing methods

SI.NO	Statement	Respondents (N=105)	
	Improved marketing methods	**Yes**	**No**
1	Cooperative marketing organization	57 (54.29)	48 (45.71)
2	Grading of farm produce	61 (58.10)	44 (41.90)
3	Storage of farm produce by improved method	60 (57.14)	45 (42.86)

Table 10(f) revealed that, 58.10 per cent had knowledge about grading of farm produce, followed by 57.14 per cent were aware about Storage of farm produce by improved method and 54.29 per cent had knowledge about cooperative marketing organization.

4.1.11 Job opportunity

The Majority of youth migrate from rural areas to urban areas to seek employment. However youth in rural areas remain with a final option of investing in agricultural activities especially those who did not go for higher education or school drop outs. The information pertaining to job opportunities available in their district itself is given in Table 11 and Figure 12.

Table 11: Distribution of the rural youth according to their job opportunity

Sl.No..	Job areas	Respondents (N=105)	
		Number	**Percentage**
1	Nursery	11	10.47
2	Cashew factory	14	13.33
3	Agri. University Research station	7	6.66

4	Processing centre	27	25.71
5	Orchard management	28	26.66
6	Organic vegetable production	3	2.85
7	Business	29	27.61
8	Contract labour	13	12.38
9	Goat farming	6	5.71
10	Dairy / Poultry	12	11.42
11	SHGs	12	11.42
12	Krishi Seva Kendra	4	3.80

It quite clear from the Table 11 that, more than one forth (27.61 per cent) of the respondents pointed out 'business' as a job opportunity followed by orchard management (26.66 per cent) and processing centre (25.71 per cent). Whereas more than one-tenth pointed out job in cashew factory (13.33 per cent) as a contract labours (12.38 per cent) dairy/poultry units and SHG's (11.42 per cent) and nursery (10.47 per cent) were the job opportunities for them. Only 06.66 per cent, 05.71 per cent and 03.80 per cent of rural youth stated job at agri. University Research Station, Goat farming unit, & Krishi Seva Kendra respectively.

Therefore, the lack of alternative jobs among rural youth is also associated with their participation in agricultural activities. Most of rural youth have low level of education whereby majority of them had attended basic education; this limits them to be employed in other sectors which need them to be professionals. Three youth who engaged in vegetable cultivation claimed that agriculture was his final alternative because they had only standard fifth educations so they can't get other job than being involved in agriculture. Other claimed that agriculture is the most income generating activity for youth in rural areas as there are very few opportunities in rural areas. Rainfed farming, fragmented land

holding and low income group becomes difficult to mobilize resources for engaging in other livelihood activities.

The findings of the present study are similar to those of Bhanu (2006) and Kimaro *et.al.* (2015).

4.2 To ascertain the various agricultural activities in which rural youths are involved.

Participation means the act of involving oneself in any kind of operations. It is an activity by which the rural youth participate in agriculture activities. Participation can be both active and passive such as being present as transformation of knowledge, skill contributing labour, material, decision making and motivating. In this case participation is an activity by which the rural youth contributes in agricultural activities by involving himself.

The data regarding participation of the rural youth in agriculture activities were collected and they were grouped into three categories on the basis of participation score obtained by them. The distribution of the rural youth according to their level of participation in agriculture activities is given in Table 12(a) and Figure 13.

Table 12(a): Distribution of the rural youth according to their level of participation in agricultural activities

Sl. No.	Level of Participation	Respondents (N=105)	
		Number	Percentage
1	Low (69 up to)	20	19.05
2	Medium (70 to 135)	34	32.38
3	High (136 and above)	51	48.57
	Total	**105**	**100.00**

It can be seen from table 12(a) that, nearly half (48.57 per cent) of the rural youth had high participation, followed by 32.38 per cent had medium level of participation and only 19.05 per cent had low participation in agricultural activities.

This indicates that the rural youth had high to medium level of participation in agricultural activities.

The findings of the present study are similar to those of Ahire *et al.* (2001) and Nale (2003).

4.2.1 Participation of rural youth in different agricultural activities is given below in Table 12(b) to Table 12(f).

Table 12(b): Participation of rural youth in pre farming operations.

Sl.No.	Statements	Respondents (N=105)		
		Regularly	Occasionally	Not participated
A	**Pre farming**			
1	Ploughing	45 (42.85)	37 (35.24)	23 (21.90)
2	Clod crushing	39 (37.14)	44 (41.90)	22 (20.95)
3	Cleaning	29 (27.62)	50 (47.62)	26 (24.76)
4	Land levelling	43 (40.95)	37 (35.24)	25 (23.81)
5	Application of cow dung and compost	36 (34.29)	41 (39.05)	28 (26.67)

It was observed from Table 12(b) that, 42.85 per cent of the rural youth are regularly participated in tillage operation like ploughing followed by land levelling (40.95 per cent), clod crushing (37.14 per cent), application of cow dung and compost (34.29 per cent) and cleaning (27.62 per cent).

More than two-fifth (47.62 per cent) of the rural youth occasionally participated in cleaning followed by clod crushing (41.90 per cent), application of cow dung and compost (39.05 per cent), while equal 35.24 per cent each of them were participated in ploughing and land leveling, occasionally.

Further, 26.67 per cent of the respondents had not participated in application of cow dung and compost followed by cleaning (24.76 per cent), land leveling (23.81), ploughing (21.90 per cent) and clod crushing (20.95 per cent).

Table 12(c): Participation of rural youth in sowing operations

Sl.No.	Statements	Respondents (N=105)		
B.	**Sowing**	**Regularly**	**Occasionally**	**Not participated**
1	Seed treatment	26 (24.76)	26 (24.76)	53 (50.48)
2	Sowing of seed	25 (23.81)	26 (24.76)	54 (51.43)
3	Seed dibbling	17 (16.19)	34 (32.38)	54 (51.43)
4	Tree planting	21 (20.00)	32 (30.48)	52 (49.52)
5	Application of chemical fertilizer	29 (27.62)	29 (27.62)	47 (44.76)

It quite clear from the Table 12(c) that, majority of (51.43 per cent) rural youth are not participated in sowing of seed and seed dibbling, followed by Seed treatment (50.48 per cent), tree planting (49.52 per cent) and application of chemical fertilizer (44.76 per cent).

Further, 32.38 per cent youth were occasionally participated in seed dibbling, followed by tree planting (30.48 per cent), application of chemical fertilizer (27.62 per cent) and Seed treatment/Sowing of seed (24.76 per cent).

Only 27.62 per cent youth regularly participated in application of chemical fertilizer, followed by seed treatment operation (24.76 per cent) and sowing of seed operations (23.81 per cent). only 20.00 per cent of them regularly participated in tree planting.

Table 12(d): Participation of rural youth in intercultural operations.

Sl.No.	Statements	Respondents (N=105)		
C	Intercultural operation	Regularly	Occasionally	Not participated
1	Weeding/Hoeing	27 (25.71)	42 (40.00)	36 (34.29)
2	Support to plant	23 (21.90)	33 (31.43)	49 (46.67)
3	Thinning	32 (30.48)	36 (34.29)	37 (35.24)
4	Preparation of chemicals for disease control	37 (35.24)	32 (30.48)	36 (34.29)
5	Spraying of chemicals	28 (26.67)	39 (37.14)	38 (36.19)

It was observed from Table 12(d) that, more than one third (35.24 per cent) of youth were regularly participated in preparation of chemicals for disease control followed by thinning (30.48 per cent), spraying of chemicals (26.67 per cent), weeding/hoeing (25.71 per cent), support of plant (21.90 per cent).

Two fifth (40.00 per cent) of the rural youth were occasionally participated in weeding followed by spraying of chemicals (37.14 per cent), thinning (34.29 per cent), support of plant (21.90 per cent), preparation of chemicals for disease control (30.48 per cent)

Further, less than half (46.67 per cent) were not participated in support to plant, followed by spraying of chemicals (36.19 per cent), thinning (35.24 per cent), equal number (34.29 per cent) of

the rural youth did not participated in weeding and preparation of chemicals for disease control.

Table 12(e): Participation of rural youth in crop cutting and harvesting operations.

Sl.No.	Statements	Respondents (N=105)		
D	**Crop cutting and harvesting**	**Regularly**	**Occasionally**	**Not participated**
1	Harvesting	21 (20.00)	32 (30.48)	52 (49.52)
2	Harvesting of fruits and vegetables	23 (21.90)	33 (31.43)	49 (46.67)
3	Grading of fruits	29 (27.62)	25 (23.81)	51 (48.57)
4	Threshing operation	27 (25.71)	26 (24.76)	52 (49.52)
5	Drying and storage of farm produce	26 (24.76)	27 (25.71)	52 (49.52)
6	Selling of farm produce	34 (32.38)	22 (20.95)	49 (46.67)
7	Processing of farm produce	38 (36.19)	22 (20.95)	49 (46.67)

It was evident from Table 12(**e**) that, less than half (49.52 per cent) of rural youth were not participated in harvesting, followed by threshing operation, drying and storage of farm produce, grading of fruits (48.57 per cent), harvesting of fruits and vegetables (46.67 per cent), selling of farm produce. (46.67 per cent) and processing of farm produce (46.67 per cent).

In case of regularly participation 36.19 per cent of youth participated in processing of farm produce, followed by selling of farm produce (32.38). Whereas one-fourth of them regularly participated in grading of fruits, threshing operation, and drying and storage of farm produce.

Further 31.43 per cent of youth were occasionally participated cutting operations, followed by harvesting of fruits and vegetable (31.43 per cent), drying and storage of farm produce (25.71 per cent), threshing operation (24.76 per cent), grading of fruits (23.81 per cent) and 20.95 per cent selling/processing of farm produce.

This indicates that participation of rural youth crop cutting and harvesting operations found to be at lower level.

Table 12(f): Participation of rural youth in animal husbandry and dairy practices

Sl.No.	Statements	Respondents (N=105)		
E	**Animal husbandry and dairy practices**	**Regularly**	**Occasionally**	**Not participated**
1	Caring of animals	38 (36.19)	30 (28.57)	37 (35.24)
2	Arrangement of fodder for animals	40 (38.10)	29 (27.62)	36 (34.29)
3	Preparation of feed for animals	42 (40.00)	30 (28.57)	33 (31.43)
4	Milking	41 (39.05)	26 (24.76)	38 (36.19)
5	Selling of milk / milk products	43 (40.95)	26 (22.86)	38 (36.19)

A perusal Table 12(f) revealed that, majority of (40.95 per cent) of rural youth were regularly participated in selling of milk and milk products, followed by preparation of feed for animals (40.00 per cent), milking operations (39.05 per cent) caring of animal (36.19 per cent).

Further 28.57 per cent of youth were occasionally participated in caring of animals and preparation of feed for animals followed by arrangement of fodder for animals (27.62 per cent), milking (24.76 per cent) and (22.86 per cent) Selling of milk/milk products(22.86 per cent).

Whereas one-third of the rural youth did not participated in animal husbandry and dairy practices mainly because of they did not posses animals.

Result shows that participation of rural youth in animal husbandry and dairy practices was of satisfactory level.

Table 12(g): Participation of rural youth in orchard management operations

No.	Statements	Respondents (N=105)		
F	**Orchard Management**	**Regularly**	**occasionally**	**Not participated**
1	Buying of grafts	34 (32.38)	28 (26.67)	43 (40.95)
2	Digging	38 (36.19)	29 (27.62)	38 (36.19)
3	Intercultural operations in orchard	36 (34.29)	30 (28.57)	39 (37.14)
4	Irrigating fruit crops	27 (25.71)	33 (31.43)	45 (42.86)
5	Selection of fertilizers and use	40 (38.10)	25 (23.81)	40 (38.10)
6	Spraying of pesticide / fungicide/weedicide	43 (40.95)	22 (20.95)	40 (38.10)
7	Pruning of diseased plant	36 (34.29)	29 (27.62)	40 (38.10)
8	Protecting flowering	40 (38.10)	26 (24.76)	39 (37.14)
9	Harvesting of fruits	28 (26.67)	36 (34.29)	41 (39.05)
10	Grading of fruits	39 (37.14)	25 (23.81)	41 (39.05)
11	Packing of fruits	39 (37.14)	24 (22.86)	42 (40.00)
12	Marketing of fruits	39 (37.14)	22 (20.95)	44 (41.90)

It could be inferred from the Table 12(g) that, majority (42.86 per cent) of rural youth were not participated in irrigating of fruits

crops, followed by marketing of fruits (41.90 per cent), buying of grafts (40.95 per cent) and packing of fruits (40.00 per cent). Further, less than forty per cent of rural youth did not participated in other orchard management practices like grading and packing of fruits, fertilizer use, spraying of pesticides/fungicides/weedicides, pruning of diseased plant and intercultural operations.

Majority (40.95 per cent) of rural youth were regularly participated in spraying of pesticide/fungicide/weedicide, followed by selection of fertilizer and their use and protecting flower (38.10 per cent). While more than thirty per cent of them regularly participated in grading, packing, marketing of fruits, digging operation, intercultural operation in orchard, pruning of diseased plant and buying of grafts.

In case of occasionally participation 34.29 per cent of youth were participated in harvesting of fruits, followed by irrigating fruits crops (31.43 per cent). More than one forth had also occasionally participated in digging operation, pruning of diseased plant, buying of grafts and protecting flowering.

It indicates that participation of rural youth in orchard management operations was limited.

Table 12(h): Participation of rural youth in field management operations

Sl.No.	Statements	Respondents (N=105)		
G	**Field management**	**Regularly**	**Occasionally**	**Not participated**
1	Hiering of labour for field work	40 (38.10)	21 (20.00)	44 (41.90)
2	Supervision	42 (40.00)	20 (19.05)	43 (40.95)
3	Paying wages	44 (41.90)	21 (20.00)	40 (38.09)
4	Keeping record of field work	40 (38.10)	24 (22.85)	41 (39.05)
5	Buying of seeds	42 (40.00)	23 (21.90)	40 (38.09)

It could be noticed from the Table 12(h) that, nearly forty per cent rural youth did not participated in field management practices like hiering of labour for field work, supervision, keeping record of field work, paying wages, and buying of inputs.

While of 41.90 per cent of them rural youth were regularly participated in paying wages, followed by supervision, and buying of inputs (40.00 per cent). Only 38.10 per cent youth were regularly participated in hiering of labour for field work operation.

Further nearly twenty per cent of rural youth were occasionally participated in keeping record of field work, buying of seeds, hiering of labour for field work, paying wages and in supervision.

It indicates that majority of rural youth regularly participated in field management operations.

4.3 To examine the contribution of agricultural income for meeting socio-economic needs.

An analysis with respect to contribution of agriculture income for meeting socio-economic needs of rural youth revealed that all the respondents were aware that income from agricultural activities can provide them with basic socio-economic needs. The details regarding their monthly average expenditure on meeting socio-economic needs is given in table 13(a) and 13(b) and Figure 14(a) and 14(b).

Table 13(a): Average expenditure on meeting socio-economic needs

Sl.No.	Meeting socio economic needs	Respondents (N=105)		
		Number	Percentage	Monthly Average (Rs.)
1	Food items	105	100.00	4368.07
2	Housing	54	51.42	1368.51
3	Education	55	52.38	3123.63
4	Clothing	74	70.47	970.95
5	Health	94	89.52	968.08
6	Social attachment	81	77.14	994.41
7	Cosmetic	87	82.85	356.89
8	Festival	92	87.61	520.96
9	Entertainment/traveling	72.	68.57	606.25
10	Invest in own farm	92	87.61	2318.91

A perusal of table 13 (a) revealed that, average monthly expenditure of all rural youth on food was Rs. 4368.07. The majority (89.52 per cent) of them spending on an average Rs. 968.08/- on health, while 87.61 per cent each of them were found spending on an average Rs. 2318.91/- and Rs. 520.96/- on

investment in their own farm and festivals respectively. Whereas 82.85 per cent and 77.14 per cent of them were spending Rs.356.89/- and 994.41/- on cosmetic and social attachment. Further more than seventy per cent made expenditure of Rs. 970.95/- and Rs. 668.08/- on clothing and entertainment. The average monthly expenditure of Rs. 3123.63/- and 1368.51/- was spend by more than half rural youth on education and housing respectively.

This indicates that rural youth in study area meet their socio-economic needs satisfactorily in their day to day life.

Table 13(b): Percent share of income of rural youth in meeting the socio economic needs

Sl. No.	Category	Respondents (N=105)
		Share (%)
1	Food and housing	40.00
2	Education	18.00
3	Clothing and health	17.00
4	Social attachment	15.00
5	Other	10.00
	Total	**100.00**

It could be inferred from the Table 13(b) that, the proportion of expenditure on food and housing was the highest (40.00 per cent) followed by 18.00 per cent on education and 17.00 per cent on clothing and health. Whereas proportion of expenditure on social attachment was noticed 15.00 per cent and on other day to day activities was 10.00 per cent of from their monthly income.

From above result it is cleared that among the different items of expenditure the food and housing shared 40.00 per cent of the total expenditure. It also seen that the rural youth in study area

spends sizable share of expenditure on education, clothing, health and social attachment.

The findings of the present study are similar to Roy (2011) and Chandrasekhar *et al.* (2014) However, those are dissimilar with that Sarah *et al.* (2010).

4.4 To know the training needs of rural youth

Looking to the participation of rural youth in different agricultural activities they were asked about their training needs. So they can able to carry out farm operations efficiently and to earn more income from agriculture sector. The area wise training needs as reported by the rural youth is given in Table 14 and Figure 16.

Table 14: Training needs of rural youth

Sl. No.	Training needs areas	Respondents (N=105)	
		Number	Percentage
1	Organic vegetable production	54	51.42
2	Vermicompost / compost making	57	54.28
3	Nursery management	42	40.00
4	Poultry / dairy	47	44.77
5	Goat farming	45	42.86
6	Identification of pest and diseases and their management	61	58.09
7	Post harvest technology	59	56.19
8	Mixed farming	53	50.47
9	Mechanization in agriculture	49	46.66
10	Integrated nutrients management	55	52.38
11	Cashew and mango production	66	62.86
12	Fodder production	44	41.90
13	Mushroom production	43	40.95
14	Intercropping	50	47.68
15	Spices and medicinal plant	52	49.52

It is noticed from the Table 14 that, majority (62.86 per cent) of rural youth need training in cashew and mango production, followed by identification of pest and diseases (58.09 per cent) and post harvest technology (56.19 per cent). Further majority of them also need training in vermicompost/compost making (54.28 per cent), integrated nutrients management (52.38 per cent), organic vegetable production (51.42 per cent) and mixed farming (50.47 per cent), while less than half of them suggested to impart training in spices and medicinal plant (49.52 per cent), intercropping (47.68 per cent), mechanization in agriculture (46.66 per cent), poultry/dairy (44.77 per cent), goat farming (42.86 per cent), mushroom production (40.95 per cent) and Nursery management (40.00 per cent).

The findings of the present study are similar to those of Tarde and Nirban (2001) and Roy (2003).

4.5 To obtain suggestions of rural youth to promote participation in agricultural activities.

An attempt was also made to ascertain suggestions from the rural youths to promote participation in agriculture activities. The suggestions given by the rural youths were collected, summarized and presented in Table 15.

Table 15: Suggestions of rural youth to promote participation in agricultural activities

Sl. No.	Suggestions	Respondents (N=105)	
		Number	Percentage
1	Availability of inputs in time	58	55.23
2	Provision of credit facility	61	58.09
3	Awareness about subsidy and schemes	58	55.23
4	Local market yard facility should be provided	64	60.95
5	Government should promote organic as well as group farming	54	51.42
6	Proper rate to farm produce	53	50.47

It was observed from Table 15 that, majority (60.95 per cent) of the respondents suggested "local market yard facility" should be provided, and 58.09 per cent of the respondents suggested "provision of credit facility". Whereas; 55.23 per cent each of them suggested for "availability of inputs in time" and "awareness about subsidy and schemes". Further more than half of the respondents suggested government should promote organic as well as group farming (51.42 per cent) and proper rate to farm produce (50.47 per cent).

The findings of the present study are similar to those of Parag (2005) and Sajjan (2006).

CHAPTER V
SUMMARY

The present research project entitled 'Participation of rural youth in agricultural activities' was undertaken with the following specific objectives.

1. To study the socio-economic profile of rural youth.
2. To ascertain the various agricultural activities in which rural youths are involved.
3. To examine the contribution of agricultural income for meeting socio-economic needs.
4. To know the training needs of rural youth
5. To obtain suggestions of rural youth to promote participation in agricultural activities.

The present study was conducted in Sindhudurg district of the Konkan region. An 'ex-post facto' research design was used for data collection. Three Tahsils *viz.* Kudal, Vengurle and Sawantwadi were selected from Sindhudurg district for present study, as RAWE (Rural Agriculture Work Experience) students of college of agriculture Dapoli were placed in these talukas since last three years. Senior B.Sc. (Agri) students of College of Agriculture, Dapoli, were placed in five villages namely, Walaval (Kudal), Vetore, Palkarwadi and Hodawada (Vengurla) and Talawade (Sawantwadi) in all there were 50 students under RAWE (Rural Agriculture Work Experience) programme for the academic year 2017-2018. These 50 students have been asked for preparation of list of rural youth who actually working in agricultural activities, from the list 105 rural youth were selected randomly for the study**.** An interview schedule was specially designed, in line with the objectives set forth to collect the needed information. Statistical tools such as frequency,

percentage, mean and standard deviation were used for interpretation of data. The findings of the study are summarized below.

1. Socio-economic profile of rural youth.

It was noticed that 50.47 per cent rural youth belonged to 'younger' age, while majority of them (67.00 per cent) were 'males' youth, While more than one third 37.14 per cent of the rural youth had 'secondary' level of education, more than half 57.00 per cent were belonged to 'Un-married'..Majority 95.00 per cent of youth were belonged to the 'farmer families', 53.68 per cent of the rural youths had 'marginal' land (up to 1.00 ha). Nearly half (48.57 per cent) of the rural youths were dependent on their 'owned farm' as their main occupation. More than half (59.05 per cent) of rural youths had availed loan from 'cooperative credit society'. Large majority (73.33 per cent) of the rural youths had 'medium' perception and (65.71 per cent) of the rural youth had 'medium' knowledge level about agricultural activities. More than one-fourth (27.61 per cent) of the rural youths perceived 'business' as a area for their job opportunity followed by orchard management (26.66 per cent), processing centre (25.71 per cent), cashew factory (13.33 per cent), contract labour (12.38 per cent).

2. Various agricultural activities in which rural youths are involved.

Nearly half (48.57 per cent) of the rural youth had high participation in agricultural activities, followed by 32.38 per cent had medium level of participation and only 19.05 per cent had low participation in agricultural activities.

3. Contribution of agricultural income for meeting socio-economic needs.

Average monthly expenditure of all rural youth on food was Rs. 4368.07, while majority (89.52 per cent) of them spending on an average Rs. 968.08/- on health, and 87.61 per cent each of them were found spending on an average Rs. 2318.91/- and Rs. 520.96/- on investment in their own farm and festivals respectively. Whereas 82.85 per cent and 77.14 per cent of them were spending Rs.356.89/- and 994.41/- on cosmetic and social attachment. It is cleared that proportion of expenditure on food and housing was 40.00 per cent, while expenditure on education, clothing and health was noticed 35.00 per cent.

4. Training needs of rural youth.

Majority (62.86 per cent) of rural youth need training in cashew and mango production while 58.09 per cent and 56.19 per cent identification of pest and diseases and post harvest technology respectively. Further 54.28 per cent of them also need training on vermicompost/compost making. More than half per cent of rural youth dominated training on integrated nutrients management (52.38 per cent), organic vegetable production (51.42 per cent) and mixed farming (50.47 per cent).

5. Suggestions of rural youth to promote participation in agricultural activities.

Majority of the rural youths suggested for that (60.95 per cent) local market yard facility, provision of credit facility (58.09), availability of inputs in time and awareness about subsidy and schemes (55.23 per cent). Further more than half of rural youth suggested government should promote organic (51.42 per cent) as well as group farming and proper rate to farm produce (50.47 per cent).

CHAPTER VI
IMPLICATIONS

The present study assessed the Participation of rural youth in agricultural activities in Sindhudurg district. The findings of this research has brought out some important implications, those are listed here under.

1. Rural youth are the potential labour force who are characterized by innovative behavior, less conservativeness, greater physical strength and a fast rate of learning which are all being perceived as the significant engine for agriculture development. Extension agent, government agency and NGOs should consider socio-economic profile of rural youth emerged out from this study for identifying future young farmer for agriculture as well as rural development.
2. The study found that rural youth were involved in different type of agricultural activities including fruit cultivation, vegetable cultivation, post harvest technology, rice, nagli, cowpea, and ground nut cultivation. But their perception towards agriculture and knowledge about agriculture was at moderate level, so it is recommended that youth should be properly guided and motivated on these two parameter, which ultimately intensify their interest in farming activities.
3. It was noticed that nearly half of the rural youths had high level of participation in agriculture. This inclination can be enhanced properly by integrated efforts to be done by Agriculture University, State Department of Agriculture, Industrial Corporation and NGOs to organize technical and motivational programmes to develop agro-preneur youths and provide all support to them until success of their agri-

entrepreneurship. Such programmes should be widely and intensively organized in the rural areas to seek maximum participation of rural youths in agriculture.

4. The study also found out that agriculture plays an important role in satisfying socio-economic needs to rural youth at some extent. This includes food and housing as a major socio-economic need which forces most rural youth to embark on agricultural activities. Others include education, clothing and health services, and social attachment. Youth get these socio-economic needs through selling their labour power in agriculture, investing in their own farms and working in their family farms. For this there is need to upgrade rural youth in production-processing-marketing to increase the profit from agriculture that ultimately would help to increase their socio-economic condition and livelihood in rural areas.
5. Training is important practice which is helpful for youth to make their working operation more effective and time saving. In Konkan region mango, cashew, coconut and arecanut are major fruit crops so that Extension Agent, Krishi Vigyan Kendra, and Government should impart various training programmes on post harvest management and subsidiary enterprises to make rural youth more effective.
6. The study has brought out major suggestions around input supply, credit supply, subsidy and schemes, local market yard facility and group farming. The government and concerned supply agencies may take suitable steps to fulfill these needs of rural youths.

Therefore, it is hoped that this study can act as guideline or explore new ideas for future researchers to conduct studies in

similar issues. The findings will also help to enlighten the related authorities in their efforts to have more youth in agriculture field. All in all agriculture based activities is the future to a more self-reliance nation.

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