TRAINING NEEDS OF PIG FARMERS OF THRISSUR DISTRICT

By

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Thesis submitted in partial fulfilment of the requirement for the degree of

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DECLARATION

I hereby declare that the thesis entitled **"TRAINING NEEDS OF PIG FARMERS OF THRISSUR DISTRICT"** is a bonafide record of research work done by me during the course of research and that the thesis has not previously formed the basis for award to me of any degree, diploma, associateship, fellowship or other similar title, of any other University or Society.

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CERTIFICATE

Certified that the thesis entitled **"TRAINING NEEDS OF PIG FARMERS OF THRISSUR DISTRICT"** is a record of research work done independently by **Dr. Anup R.**, under my guidance and supervision and that it has not previously formed the basis for the award of any degree, fellowship or associateship to him.

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to my father

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Introduction

1. INTRODUCTION

India is blessed with enormous livestock wealth worth Rs.80000 crores, which contributes Rs.183000 crores to the national GDP. This is over one third contribution from agriculture sector. This sector provides employment to more than 70% of the population in rural areas. Income from livestock sector accounts for 15 – 40% of total farm household income. Kerala occupying only 1.18% of the geographic area of the country accommodates over 110 crops and 34 lakh cattle, 1.7 lakh buffaloes, 18.6 lakh goats, 1.4 lakh pigs, 11.9 lakh ducks, 24.6 lakh poultry (Quinquennial cattle census – 1996) which are scattered over 60 lakh small holdings.

Livestock sector of Kerala faces major constraints like increased land pressure, high density of population, scarcity of fodder, increased cost of feed etc. In this context thrust areas like pig production need more emphasis. Pig production is gradually attaining the status of a lucrative occupation in the state. Better economic return, availability of exotic and cross bred pigs, its increased growth rate and feed efficiency, the ability to convert the cheap/ waste materials into good quality meat are its major advantages. Moreover with regard to employment generation the trend in pig rearing in the state is gradually move from subsidiary to self employment venture. It is really a fact that more than 90% of the state's population are non-vegetarians. Increased nutritive value and digestibility make pork consumption more attractive. It is one of the major potential areas, which has to be exploited. Agencies like Kerala Agricultural University, Kerala Livestock

Development Board, and Animal Husbandry Department have done pioneering works in the area of pig production. The increased demand for pork in recent years has made pig farming more attractive. The gap between the requirement and availability of food of animal origin can be filled by up by the development of pig production in rural areas. Since it is a newly emerging enterprise the farmers in the state are not well equipped with regard to scientific practises in the areas like breeding, feeding, management and disease control.

Even though pig production is an important employment venture in the state, majority of the pig farmers are still following traditional methods and unscientific practices. If scientific pig rearing practices are adopted, production potential and profitability can be increased manifold. With regard to breeding, housing, feeding, health care and management pig farmers need more awareness programmes.

In view of the above facts, the study was undertaken with the following objectives

1. To study the profile of pig farmers.
2. To assess the training needs of pig farmers.

This would help the training agencies to identify the major subject matter areas, type, duration, venue and method of training the farmers prefer the most.

Review of Literature

2. REVIEW OF LITERATURE

This chapter is a review of past studies. On reviewing the literature it became evident that studies related to the profile and training needs of pig farmers were scarce.

The relevant and available literature reviewed is presented in the chapter under the following titles.

1. Concept of training
2. Demographic variables
3. Resource availability
4. Socio psychological variables
5. Preference for type, method, duration and venue of training
6. Training need preference in major farm operations

2.1 CONCEPT OF TRAINING

Lynton and Pareek (1967) explained that training aims at a lasting improvement 'on the job'. The kind of education we call training – more of this distinction later – is in truth "not for knowing more but for behaving differently".

Peter (1972) observed that training is a socialization process by which the individual acquires knowledge, attitudes and skills to meet the expectation of those who influence his behaviour.

Arthur Elkins (1980) stated that training usually relates to either a specific skill or a specific job or task.

Singh (1990) defined training as a process by which an individual efficiency and effectiveness in the given context of a job can be maximised. It equips the individual with needed knowledge, attitude and skills with respect to present or expected future roles and responsibilities enabling him to reach a desired level of performance of the job.

Bhatnagar (1987) remarked that in training the focus is on learning by an individual the new ways of doing things, that is better performance and secondly, the transfer of learning in the work situation directed to grater organisational effectiveness.

2.2 DEMOGRAPHIC VARIABLES

Gowda *et al.* (1991) studied the socio economic profile of poultry farmers in Dharwad district of Karnataka and revealed that the average age of the respondents was 39 years. Nearly 92 per cent of the respondents were found to be literate and 59 percent perused poultry as main occupation.

Shreeshailaja (1993) studied the profile of the dairy farm women of Devanahally taluk in Karnataka state and found that nearly fifty percent of farm

women were illiterate. Their education level ranged from primary to high school. None of the farm women were graduates

Sudeepkumar and Subramanian (1995) studied the profile of dairy trainees at Farmers Training Centre Kattupakkam of Tamilnadu with a sample size of 48 respondents and revealed that majority of the respondents were young , had medium level of annual income, with less experience in dairying

Thangavel *et al* (1996) studied the socio economic characteristics of wet and dry land buffaloe farmers and reported that almost half of the respondents belonged to old age group, over one third were educated up to high school level, one half of the respondents had higher experience in dairying and belonged to low income category. Over one third of the respondents had marginal land holding and practiced dairy farming as primary occupation

Chylek *et al.(*1996) conducted a study among women running livestock farms together with their husbands in Eastern and Western Provinces of Poland, revealed that 51.1 per cent had full secondary. 30.8 percent elementary and 6.7 percent higher education.

Pochaih *et al.* (1998) evaluated the entrepreneurial characteristics of vegetable growers of Mangalgiri and Chebrolu mandals of Andra Pradesh and revealed that majority of the respondents had primary education were of middle age group and had medium farming experience.

Venkattakumar and Nanjaiyan (1999) conducted a study in 120 coconut growers in Anamalai block of Tamilnadu and revealed that nearly half of the commercial coconut growers were middle aged and one third were young aged, almost equal percentage of the respondents belonged to low (45.13%) and medium (42.48%) levels of income group whereas one fifth of them (12.39%) belonged to higher level of income group.

Duru *et al.* (1999) revealed that majority of peri urban pig farmers of Zaria, Northam Nigeria were Christians and noted that Muslims did not take up this occupation.He also reported that 73 per cent of the pig farmers were civil servants, students or traders.

Prathap *et al.*(1999) studied the profile characteristics of credit management group under MYRADA Talavadi project with a sample size of 115 ,revealed that majority of farmers belonged to medium category as far as level of income was concerned

Padmaveni and Bave (1999) studied the socio economic status of agricultural farmers in Prakasam district of Andra Pradesh, reported that majority of the small and marginal farmers in dry land agriculture were illiterate.

Meeran and Jayaseelan (1999) studied the socio personal, socio economic and socio psychological profile of shrimp farmers in Tanjavur and South Arcot districts of Tamil Nadu with 50 respondents and revealed that 52 percent and 42 percent of the respondents belonged to young and middle age groups. Forty two percent had undergone collegiate education, 22 percent had higher secondary and

16 percent middle school education. Seventy two percent respondents reported experiences ranging to three years and remaining 28 percent had more than three years of experience.

Thripathi and Kunzru (2000) studied the profile of rural women in Hissar District of Hariyana with a sample size of 50 respondents and revealed that majority of the farm women belonged to middle age group and backward cast.

Jabin and Manoharan (2001) studied the socio-personal characteristics of kitchen garden maintaining urban women in Madurai Corporation of Tamil Nadu and found that 57 per cent of them were college educated .

Maheswaran and Subramanian (2001) studied the socio economic characteristics of sheep farmers in Salem district Tamil Nadu with a sample size of 100 respondents and revealed that 70 percent of the respondents were illiterate. Nearly one third (64%) had medium sheep farming experience while one fifth had high experience

Anasuya and Rajeswari (2001) studied the profile of child labour in Yattiaingudda village of Dharward district of Karnataka with a simple size of 60 and revealed that majority of the child labourers (63.3%) were illiterates and only 36 per cent of children were educated upto primary school.

Harikumar (2001) reported that majority of the pig farmers in Kaiparambu and Kuzhoor panchayaths of Kerala were Christians. Hindu participation in pig farming was also evident in both the panchayaths. It was revealed that in Kuzhoor

panchayath all the pig farmers were engaged in agriculture or allied activities whereas in Kaiparambu panchayath there were only 33 percent farmers engaged in agriculture and the rest were employed personnel.He also observed that 41.67 percent of pig farmers in Kaiparambu and 12.5 percent in Kuzhoor panchayaths had experience between eight to twelve years and 8.33 percent of the pig farmers in Kaiparambu panchayath had attended training on pig husbandry.

Singh and Nande (2001) studied the training needs of fish farmers in Raigarh district of Madhyapradesh with a sample size of 100 respondents and revealed that, for majority of the farmers (70%) the income ranged from Rs. 15,000 to 30,000.

Narmada et al (2001) studied the demography of poultry farm women in Namakkal block of Namakkal district of Tamil Nadu and reported that majority of the farm women were young, educated upto secondary level, had poultry as a subsidiary occupation with medium level of experience, flock size , land holding and income.

2.3 RESOURCE AVAILABILITY

Subbareddy and Channegowda (1982) studied the utilization pattern of communication sources by the dairy farmers of Tumkur district, Andra Pradesh, reported that formal sources of information like route of supervisor, veterinary dispensary, livestock inspector, village extension officer and Dairy extension officer were consulted by most of the dairymen than informal sources of information like other farmers and village elders.

Ravindran *et al.*(1995) revealed that some form of swill feeding was practiced in over 80 percent of the small holder pig farms in Sri Lanka. He also revealed that majority of the pig farmers preferred a combination of slaughter house and kitchen/hotel waste to feed their pigs. Only 8.3 percent used concentrate feed along with other feed According to him majority of the pig farmers preferred to purchase pigs from large private farms and the herd size ranged from 14 to 55 with an average herd strength of 36 in small holder pig farms.

Salehar *et al.* (1997) reported that in Slovenia there were good possibilities for sale of either weaners for fattening, fatteners for slaughter or heavier fattener for sale for home consumption.

Hsieh – ChiaHui *et al.* (1997) reported that the average farm size of pig farms in North Taiwan was 902 pigs and pigs were fed primarily on kitchen waste.

According to Zhang – Xiao Hui and Zhaug (1998) in China the common farmer households raised 2 – 5 pigs and the specialized pig raising farmers had 719.3 pigs per house hold.

Prathap *et al.* (1999) studied the profile characteristics of credit management group in MYRADA Talavadi Project, revealed that majority of farmers belonged to medium category as far as livestock possession was concerned.

Duru *et al.* (1999) studied the booming market for pigs and pig products in the villages of Northern Nigeria and reported that farmers followed sale of pigs on live weight to local butchers.

Meeran and Jayaseelan (1999) studied the socio-personal, socio-economic and socio-psychological profile of shrimp farmers in Tanjavur and South Arcot districts of Tamil Nadu with 50 respondents and revealed that shrimp farming was considered as primary and secondary occupation by 62 percent and 28 percent of the respondents respectively.. A majority of the respondents (62%) used indigenous feeds only to their farms and about one-fourth of the respondents (28 %) used imported feeds only.

Suraj (2000) conducted a study in integrated farming and revealed that rearing pigs on concentrate is uneconomical. To make it profitable low cost feeding has to be incorporated.

Rohilla *et al.* (2000) pointed out that small and marginal farmers of North East hill region of India mostly raised local pigs, while well organized farms produced exotic breeds.

Pradeep (2000) reported that radio was the most frequently utilized communication source, by the dairy entrepreneurs in Ollukkara block of Thrisur district, followed by newspaper, friends television and veterinary hospital.

Harikumar (2001) reported that majority of the pig farmers of Kaiparambu and Kuzhoor panchayaths in Kerala were marginal farmers with herd strength

below 10 and majority of the pig farmers were rearing exotic breeds like large white Yorkshire. Only 16.67 percent of the pig farmers were rearing indigenous pigs.

Singh and Nande (2001) studied the training needs of fish farmers in Raigarh district of Madhyapradesh with a sample size of 100 respondents and revealed that, majority of fish farmers (59%) were getting fisheries related information from fisheries officer. Radio television and newspapers were used rarely by the fish farmers for this purpose.

2.4 SOCIO PSYCHOLOGICAL VARIABLES

Shreeshilaja (1993) studied the profile of the dairy farm women of Devanahally taluk in Karnataka state and found that most of the farm women had medium innovation proneness.

Pochiah, *et al* (1998) reported that 65 percent of farmers had low level of risk taking ability, 40% of the respondents of both medium and big farmers had medium and high level of risk taking ability respectively. He also reported that among small farmers majority (80%) of respondents had only lower order of innovativeness, while there were no respondents with high innovativeness. Low, medium and high order of innovativeness among medium and big farmers was almost the same.

Venkattakumar and Nanjaiyan (1999) revealed that more than half of the respondent, coconut growers had (53.1%) medium level of risk preference, followed by nearly one-fourth of the respondents (26.55%) who had low level of

risk preference, whereas nearly one fifth of the respondents had high level of risk preference. He also reported that nearly equal proportion of the respondents had medium (38.06%) and high level of economic motivation whereas more than one fourth of the respondents had low level of economic motivation.

Meeran and Jayaseelan (1999) studied the socio-personal, socio-economic and socio-psychological profile of shrimp farmers in Tanjavur and South Arcot districts of Tamil Nadu with 50 respondents and revealed that about three-fourths (72%) of the respondents were found to have high levels of risk orientation followed by medium level(26%).

Prathap *et al.* (1999) studied the profile characteristics of credit management group with a sample size of 115, revealed that majority of them belonged to medium category of economic motivation.

Pradeep (2000) revealed that 28.3 percent of the dairy entrepreneurs of Ollukkara block in Trichur district were in high risk preference category, 48.33 percent in medium and 23.33 percent in low risk preference category. 28.33 percent of the respondents had high economic motivation, 43.33 percent and 28.33 percent had medium and low economic motivation respectively. According to him that 40 percent of the respondents were in medium innovation proneness category, 31.67 percent in high and 28.33 percent in low innovation proneness category. He also reported that among the dairy entrepreneurs 40 percent of the respondents were having low marketing orientation, 36.67 were having medium and 23.33 percent were having high marketing orientation.

According to Karthikeyan and Chandrakandan (2000) majority of the cut flower growers of Coonoor, Kotagiri and Ooty taluks in Tamil Nadu had medium level of innovativeness.

2.5 PREFERENCE FOR TYPE, METHOD, DURATION AND VENUE OF TRAINING

2.5.1 Type of Training

Alexander (1985) reported that over 80 per cent small rubber growers in Tamil Nadu preferred peripatetic training while 19.09 per cent of the rubber grower preferred institutional training.

Kanagasabapathi (1988) observed that Irula farmers of Attapady preferred peripatetic training (preference index (PI) 0.94) followed by institutional training by ITDP, Attappady (PI 0.92), institutional training by KVK, Pattambi (PI 0.74), Farm school on AIR (0.40) and correspondence course by KAU (PI 0.39).

Murthy (1989) conducted a study on training needs of black gram growers in Guntur district of Andhra Pradesh involving 117 respondents and found that peripatetic training was preferred to institutional training by majority of farmers

Shreeshailaja (1993) had studied the profile of the dairy farm women of Devanahally taluk in Karnataka state and found that majority of the farm women preferred peripatetic training.

2.5.2 Method of training

Kanagasabhapathi (1988) reported that film show, exhibition, field trip and demonstration were the important methods of training as perceived by Irulas of Attapady.

Jondhale and Chole (1989) reported that demonstration combined with lecture was perceived to be the most effective by respondents (73%). The next effective method mentioned was lecture (37%),. About 27 per cent and 15 per cent mentioned lecture and group discussion respectively.

According to Shreeshailaja (1993) majority of farm women preferred combination of lecture + group discussion + method demonstration as the most preferred combination of method of training, followed by lecture + slide show and result demonstration.

2.5.3 Duration of Training

Savarimuthu (1981), conducted a study in farm women in Tamil Nadu and found that majority of the farm women (70.83%) preferred 2 -3 days' training programme.

Kanagasabhapathi (1988) observed that majority of *Irulas* of Attappady preferred a training programme of 2 days' duration.

Jondhale and Chole (1989) reported that one week's duration was suggested to be most convenient followed by less than one week.

Murthy (1989) reported that the duration of one day training was preferred by 42 per cent of the black gram growers and 8 to 10 days duration and above was opined by none. The respondents opted for 2 days. 3 days and 4 to 7 days training programme were 34 per cent, 14 per cent and 8 per cent, respectively.

Sawant and Dalvi (1989) studied the training need of dairy farmers in Parbhani district of Maharashtra and reported that with regard to duration of training, majority of the farm women (71 per cent) desired to have training of 3 to 4 days duration, while about one fourth of them desired to have training of 5 to 7 days duration.

Meeran and Menon (1990) reported that more than half of the fish farmers preferred changes in duration of training. Among those who preferred changes in duration, a majority (60 – 80 percent) wanted training for 30 days duration of training.

Shreeshailaja (1993) had studied the profile of the dairy farm women of Devanahally taluk in Karnataka state and found that majority of the farm women preferred three days duration of training.

Ahamed *et al.* (2000) studied the training need of farm women trainees in KVK Port Blair reported that majority of the farm women trainees preferred four days to be the apt duration for training.

2.5.4 Venue of Training

Kanagasabapathi (1988) reported that ITDP Headquarters at Agali was the most preferred venue for training in agriculture by the *Irulas* of Attappady.

Johndhale and Chole (1989) conducted a study on training needs of dairy farmers in Parbhani district involving 84 respondents. They reported that majority of the respondents (60 per cent) suggested to organise training at their resident village and the alternative for resident village suggested was University Research Centre (22%). Place of training at Veterinary Key Village Centre, Panchayat Samithi, and Zilla Parishad was suggested by only a negligible number of respondents.

Shreeshailaja (1993) had studied the profile of the dairy farm women of Devanahally taluk in Karnataka state and found that majority of the farm women preferred their own village as suitable placer for training.

Ahamed *et al* (2000) studied the training need of farm women trainees in KVK Port Blair with a sample size of 40 farm women and reported that the trainees preferred both KVK and the farmers field as the venue of training

2.6 TRAINING NEED PREFERENCE IN MAJOR FARM OPERATIONS

Lakshmikanth *et al.* (1986) identified the important training need areas of dairy farmers of Rangareddy district, as selection of dairy animals, feeding of pregnant animals, care of newly born calf, varieties of fodder crop and cleanliness of cattle shed.

Mathiyazhagan and Singh(1986) studied the training needs of banana growers in Trichirappalli district of Tamil Nadu with a sample size of 100 respondents and revealed that the training programme should primarily include manures and fertilizers propagation, pruning and desuckering and plant protection .

Kanagasabapathi (1988) conducted a study in training needs in agriculture of *Irulas* of Attapady and found that training needs in the order of importance were plant protection, cultural operations, manuring, seeds and sowing and land preparation.

Sawant and Dalvi (1989) in their study on 'knowledge status and training needs of farm women' conducted in the Development Blocks of College of Agriculture, Dapoli revealed as follows. A large majority of farm women (88.35%) desired to have training in the subject of food production followed by 36 per cent of them with a liking for training in poultry farming. Some respondents (26%) had also desired to have training in the subject of professional skills and 20 per cent of them desired to have training in dairy farming, preservation of fruits and vegetables and cultivation of fruits and vegetable crops.

Anantharaman and Ramanathan (1990) conducted a study on impact of training programme on tuber crops in Trichirapalli district and recommended that the training programme should be well organized taking into consideration the local needs and problems and applicability of new techniques. He further stated that it should primarily include manures and fertilizers, propagation, pruning and

desuckering, plant protection, improved varieties of banana and storage in relation to banana cultivation.

Prasad and Mrutyunjayan (1992) conducted a study on training needs of tribal farmers on paddy cultivation in Khanmam district of Andra Pradesh with 100 respondents and found that Land preparation, seeds and sowing, post harvest technology and weed control were important areas of training for tribal farmers.

Seema and Hirevenkanagoudar (1992) conducted a study on training needs of farm women in Dharward district of Karnataka with 110 respondents and reported that majority of farm women (62%) suggested to make training programme more practical oriented.

Pushpa *et al.*,(1995) conducted a study on training needs of rural women in poultry farming in Namakkal and Salem district Tamil Nadu with 100 respondents and found that Disease management and feeding for growing state of birds were the important areas of training for farm women.

Sushamakumari and Bhaskaran (1995) conducted a study to assess the training needs in agriculture of paddy and coconut farmers in Trichur district of Kerala with 60 respondents and revealed that the majority of farmers (68.32%) perceived a medium to high training need. Weed control an plant protection in rice and seeding section and plant protection in coconut ranked high in the training need hierarchy.

Fulezle and Meena (1995) studied the training needs of tribal women in dairying in Jaipur district of Rajasthan and reported that selection of breeds and knowledge about balanced feeding, castration of bull, deworming of young stock, vaccination and fodder production and their variety as most needed areas of training.

Metha and Malaviya (1997) conducted a study to assess training needs of farm women of Hariyana with a sample of 300 women and reported that grain storage, insect/disease control and mushroom cultivation were the most preferred training needs of the respondents.

Sudeepkumar and Subramanian (1998) conducted a study on dairy trainees of Farmers Training Centre Kattupakkam, Tamil Nadu and reported that dairy trainees preferred subject matter areas like disease control measures, calf management, balanced feeding, identification of heat signs, artificial breeding and care of pregnant animal to be emphasised in the training curriculum.

Mathiyalagan and Subramanian (1998) studied the training needs of poultry farmers in scientific poultry management in Namakkal Taluk of Salem district with a sample size of 75 farmers revealed that poultry diseases and management, disinfection of the shed, disposal of dead birds, vaccination floor space and housing were the important areas in which the poultry farmers needed training.

Mathiyalagan and Subramanian (1999) studied the training needs of poultry farmers in Namakkal district of Tamil Nadu and revealed that disinfection of

poultry shed, design of poultry shed, marketing, litter management and feeding were the important areas in which the poultry farmers needed training.

Shailaja and Reddy (1999) conducted a study on training needs of farm women in paddy and additional activities in Reddy district of Andra Pradesh with 30 respondents and found that Cropping System, land preparation and water management were the important area of training for farm women.

Sujathas and Nanjaiyan (1999) studied the training needs of farmers and farm women in Coimbatore and Periyar districts of Tamil Nadu with 240 respondents and found that storage weeding, transplanting and seed treatment practices required as training needs as perceived by the respondents.

Bonny and Prasad (1999) conducted a study to assess training in Kerala with 100 respondents and revealed that majority of the farmers (70%) belonged to the medium training need category. Among various aspects considered plant protection recorded the highest training need index of 74.48 and 79.32 for knowledge and skills respectively.

Anandan and Vasanthakumar (1999) conducted a study on training needs of irrigated groundnut growers in Ariyalur block of Villupuram districts of Tamil Nadu with a sample size of 120 respondents and revealed that the respondent needed training in the major subject matter areas of fertilizer management , plant protection , seeds and sowing and weed management.

Ghuman *et al.* (1999) studied the training needs of farm woman in agriculture. The study was conducted in Punjab with a sample size of 185 respondents revealed that in case of cattle management the respondents needed training in the major subject matter areas of quantity of green fodder and concentrate required and hay making.

Ravichandran *et al.* (2000) conducted a study on training needs of farm women in rice cultivation in Madurai district of Tamil Nadu with 120 respondents and found that information on symptoms of blast disease was the most needed item for knowledge training in plant protection, and techniques in application of poison bait for rat control is the most needed for skill training.

Suseelamary et al., (2000) studied the training needs of agriculturists in Kanyakumari District of Tamil Nadu with 100 respondents and revealed that pests and diseases, honey bees and pesticides symptoms, apiculture appliances and management were the important areas of training for the apiculturists.

Rajpravin *et al* (2000) studied the training needs of *Uzhavar santhai* farmers at Annanagar in Madurai district revealed that majority of the farmers (73%) needed training on market oriented gardening, selling on second grade produce and selling of value added produce.

Krishnamurthy *et al* (2000) studied the training needs of cashew growers in Dakshina Kannada district of Karnataka with a sample size of 120 respondents and revealed that top working technology, propagation techniques, pruning plant

protection and fertilizer application were the important areas in which the cashew growers required training.

Palaniswami and Sriram (2001) studied the training needs of sugarcane growers in Coimbatore district of Tamil Nadu with a sample size of 147 respondents and revealed that knowledge about manures, fertilizers control of pests and diseases and knowledge about seed material obtained first, second and third respectively. So these were felt on the most important major package of practices on which sugarcane growers needed training.

Materials and Methods

3. MATERIALS AND METHODS

The research procedures used in this study were presented under the following headings:

3.1 Sampling Design

3.2 Selection & Measurement of Variable

3.3 Data Collection

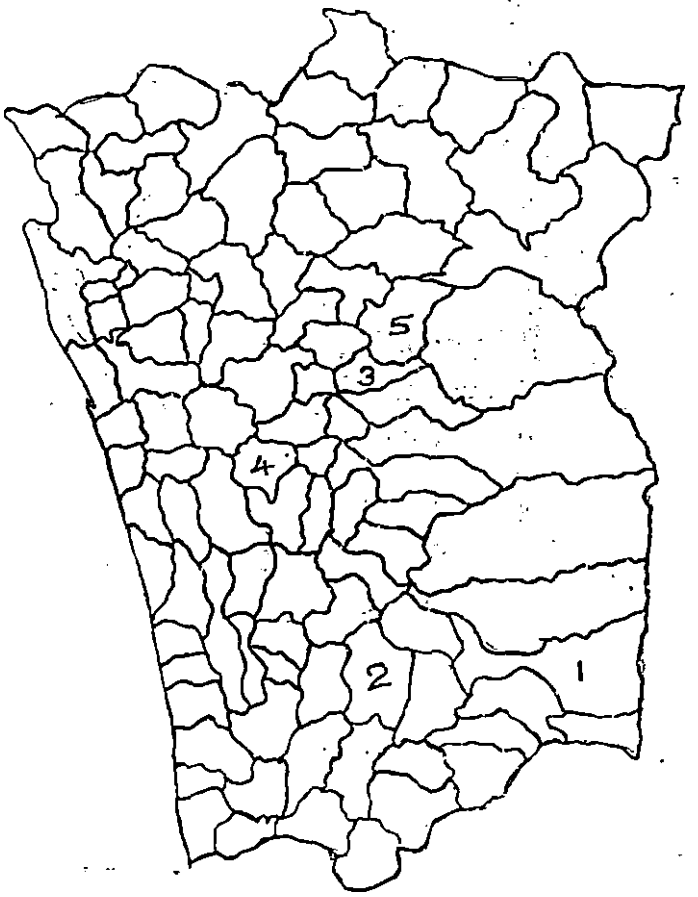
3.4 Statistical Analysis

3.1 SAMPLING DESIGN

The study was conducted in Thrissur District. The five panchayaths of Thrissur District viz Aloor, Ollukkara, Kodassery, Madakkathara and Paralam were purposively selected as these were reported to have the highest pig population, as per Kerala XV Quinqunnial Census 1996. It was assumed that the number of pig farmers will also be more in these panchayaths. The list of pig farmers of each panchayath was prepared with the help of local Veterinary Surgeons, Livestock Inspectors, Local bodies, Key informants etc. From the list a proportionate random sample of 60 pig farmers was selected.

The map of the study area with five selected panchayaths is provided (Fig.1).

Fig. 1. THRISSUR DISTRICT – SELECTED PANCHAYATHS



1. Kodassery
2. Aloor
3. Ollukkara
4. Paralam
5. Madakkathara

Table 1 Number of pig farmers selected from the panchayaths

S No.	Panchayath	Population of pig farmers	Sample selected
1.	Kodassery	40	24
2.	Aloor	38	22
3.	Ollukara	10	6
4.	Paralam	7	4
5.	Madakkathara	6	4
	Total	101	60

3.1.1 Concept of Pig Farmer

For the purpose of the study a pig farmer was operationally defined as a farmer who rears pigs on a commercial basis.

The preconditions stipulated were as follows.

1. One who keeps at least one pig throughout the year.
2. One who keeps the pigs confined in a cage.
3. One who is literate.

3.2 SELECTION AND MEASUREMENT OF VARIABLE

3.2.1 Selection of Variables

A detailed review of literature vis-à-vis a detailed discussion was held with selected pig farmers of Kuzhoor panchayath to develop insight regarding the variables to be studied. The variables selected for the study were the following.

3.2.1.1 Demographic variables

1. Age
2. Sex
3. Religion
4. Education
5. Occupation
6. Land holding
7. Income
8. Training participation
9. Experience in pig farming

3.2.1.2 Resource Availability

1. Location of farm
2. Type of feed
3. Availability of feed
4. Source of information
5. Source of capital
6. Breed of pig reared

7. Source of piglets

8. Herd Size

9. Marketing channels

3.2.1.3 Socio Psychological Variables

1. Risk preference

2. Innovation proneness

3. Economic motivation

4. Marketing orientation

3.2.1.4 Preference for type, method, duration and venue of training

3.2.1.5 Training need with respect to various major farm operations

1. Housing

2. Breeding

3. Management

4. Diseases and prevention

5. Economics of pig farming

6. Feeding

7. Marketing

8. Integrated farming

3.3 MEASUREMENT OF VARIABLES

3.3.1 Demographic variables

3.3.1.1 *Age*

Age of the respondent was operationally defined as the number of years completed by the respondent at the time of interview. Accordingly the respondents were classified as follows:

Category		Age groups
(a) Young	-	Below 30 years
(b) Middle aged	-	30 – 50 years
(c) Old	-	Above 50 years

3.3.1.2 *Religion*

It denoted the different religions to which the pig farmers belonged to and scores were assigned as follows.

Category	Score
Christian	1
Hindu	2
Muslim	3

3.3.1.3 *Sex*

It indicated whether the pig farmer was male or female and scoring was done as follows.

Category	Score
Male	0
Female	1

3.3.1.4 *Education*

This denoted the level of formal education of the respondents and were classified into four categories and scores were assigned.

Category	Score
Primary School	1
Middle School	2
High School	3
College	4

3.3.1.5 *Occupation*

This indicated the primary job of the respondent and the scoring was done as follows.

Category	Score
Government Servant	1
Private Sector	2
Farmer	3
Business	4
Agricultural labourer	5
Jobless	6

3.3.1.6 *Land Holding*

This indicated the area of cultivable land available to the respondent. Accordingly the respondents were classified as follows:

Category	Land holding
Large farmer	Above 2 hectares
Small farmer	1 – 2 hectares
Marginal farmer	Below 1 hectare
Agricultural labourer	10 cents and below

3.3.1.7 *Income*

It referred to the annual income obtained by the respondent from all the sources and the respondents were classified into following three categories based on mean(X) and standard deviation(S.D.).

Category	Score
Low (below X – S.D.)	1
Medium (X – S.D. to X + S.D.)	2
High (Above X + S.D.)	3

3.3.1.8 *Training participation*

This referred whether the pig farmer was trained or not and if trained the institute from where the farmer had received training in pig farming. The scoring was done as follows:

Category	Score
Not trained	0
Animal Husbandry Department training centres	1
Kerala Livestock Development Board pig farm	2
Veterinary College	3
Private farms	4

3.3.1.9 *Experience in pig farming*

It meant the number of years the pig farmer has been carrying out the pig farming. The respondents were arbitrarily classified into four categories.

Category	Score
Less than 1 year	1
1 – 5 years	2
5 – 10 years	3
Above 10 years	4

3.3.2 Resource availability

3.3.2 .1 *Location of farm*

This indicated the location where the farm is established. The categories were as follows.

Category	Score
Attached to the house	1
Home stead	2
Remote area	3

3.3.2.2 Type of feed

This indicated the type of feed given to the pigs and were categorised as follows.

Category	Score
Concentrated feed	1
Compound feed	2
Hotel/Kitchen waste	3
Butchery waste	4

3.3.2.3 *Availability of feed*

This indicated the extend of availability of feed materials for the pigs. The categories and scoring patterns were as follows:

Category	Score
Available in plenty	1
Available in quantities just to meet the requirement	2
Scarce	3

3.3.2.4 *Source of information*

It meant the major source from which the pig farmer has got the required information and guidance regarding pig farming. Based on these scores were assigned to six categories as follows:

Category	Score
Veterinary Hospital	1
Training Centres	2
Newspaper	3
Television	4
Radio	5
Other farmers	6

3.3.2.5 *Source of Capital*

It meant the primary source of money to start the pig farming. Following scoring procedure was used for the study.

Category	Score
Own savings	1
Bank Loan	2
Loan from private firms	3
Financial aid from local bodies	4

3.3.2.6 *Breed of pigs reared*

This indicated the breeds of pigs the farmers were rearing. Respondents were classified into three categories and scored as follows.

Category	Score
Local breed	1
Exotic	2
Cross breed	3

3.3.2.7 *Source of Piglets*

It meant the place from where the farmers were procuring piglets. Scores were assigned to the categories as follows:

Category	Score
Produced in the farm	1
University farm	2
Animal Husbandry Department farms	3
Private farms	4

3.3.2.8 *Herd Size*

It meant the number of pigs the pig farmer has been rearing in his farm. The respondents were arbitrarily classified into three categories as follows:

Herd size	Score
Below 10	1
10 to 50	2
Above 50	3

3.3.2 .9 *Marketing channels*

It meant the mode of marketing of pigs or pork resorted by the pig farmers. Scoring was done as follows.

Category	Score
Sale of pork	1
Sale of pigs to Kerala Agricultural University Meant Plant / Meat Products of India Ltd.	2
Sale of pigs directly to the private butchers	3
Sale of pigs to the middle man	4

3.3.3. Socio psychological variables

3.3.3.1 *Risk Preference*

Risk preference of pig farmers was defined as the degree to which the respondent is oriented towards uncertainty and has the courage to face the problems in pig farming.

In this study the risk preference was measured with the help of the scale developed by Supe (1969). The scale consisted of six statements out of which four were positive and two were negative. The respondents were asked to indicate their agreement or disagreement towards the statements. Accordingly, the statements were rated on a three point continuum viz. agree, undecided and disagree with scores 3, 2 and 1 respectively for positive statements. The scoring pattern was reversed for negative statements. The Risk preference score for each respondent was the sum of the scores assigned to all the statements by the respondent.

Based on the scores obtained the respondents were categorised as follows:

Category	Score
High	15-18
Medium	11-14
Low	6-10

3.3.3.2 *Innovation Proneness*

Innovation proneness in this study was defined as the readiness to accept and orient towards new scientific practices in pig farming.

In this study Innovation proneness of the pig farmer was measured with the help of the self rating scale developed by Moulik and Rao (1965). This scale consisted of three sets of statements. Each set contains 3 statements, each of scores 3, 2 and 1 indicating high, medium and low degree of innovation process

respectively. Out of the three statements in each set,respondents were asked to select one statement to which they agree the most and also another statement to which they disagree the most. The ratio of the scores of most agreed and least agreed statements of all the 3 sets were summed up to get the innovation proneness score of the respondent.

Based on the scores obtained the respondents were categorised as follows:

Category	Score
High	6.34 – 9
Medium	3.68 – 6.33
Low	1 – 3.67

3.3.3.3 *Economic motivation*

It was defined as an indication of the degree of willingness, for investment in adopting the farm innovation.

In this study the economic motivation was measured with the help of the scale developed by Supe (1969). The scale consisted of six statements out of which five were positive and one was negative. The positive statements were rated in a three point continuum viz. agree, undecided and disagree with scores of 3 , 2 and 1 respectively. The scoring pattern was reversed for negative statements. The sum of scores of all the statements obtained by a respondent was taken as his score for economic motivation.

The categories and scoring patterns were as follows

Category	Score
High	15-18
Medium	11-14
Low	6-10

3.3.3.4 *Marketing orientation*

Marketing orientation was defined as the degree to which a pig farmer is oriented towards market information and manipulation in marketing strategies so as to achieve maximum price for the produce.

It was measured using the scale developed by Samanta (1977). The scale consisted of six statements of which three were positive and three were negative. A score of one was given for the agreement and zero for disagreement for the positive statements. The scoring pattern was reversed in the case of negative statements. The sum of the scores for all the statements by an individual was taken as his score for marketing orientation.

On the basis of scores obtained the three categories and scoring pattern were as follows

Category	Score
High	5-6
Medium	3-4
Low	1-2

3.3.4 Preference for type, method, duration and venue of training

3.3.4.1 *Preference for type of training*

This referred to the choice of the respondents for the type of training. A list of different types of training was provided to the respondents and they were asked to rate the types on a three point continuum ranging from most preferred to least preferred.

The different types of training were scored as:

Category	Score
Most preferred	3
Somewhat preferred	2
Least preferred	1

Different types of training were ranked based on the total scores obtained.

3.3.4.2 *Preference for method of training*

It meant the choice of respondents for the method of training. The respondents were asked to rate the various methods of training on a three point continuum ranging from most preferred to least preferred.The different types of training were scored as

Category	Score
Most preferred	3
Somewhat preferred	2
Least preferred	1

Different methods of training were ranked based on the total scores obtained.

3.3.4.3 *Preference for duration of training*

It referred to the period of time for a training programme preferred by the respondents. The respondents were asked to indicate their choice for various durations by rating them on a three-point continuum as follows:

Category	Score
Most preferred	3
Somewhat preferred	2
Least preferred	1

Different durations of training were ranked based on total scores obtained.

3.3.4.4 *Preference for venue of training*

It referred to the venues of training preferred by the pig farmersout of the three choices of training institutes were given. The venues were scored on a three point continuum viz. most preferred, somewhat preferred and least preferred.

Category	Score
Most preferred	3
Somewhat preferred	2
Least preferred	1

Different venues were ranked based on the total scores obtained.

3.3.5 Training need with respect to major farm operations

In this study the training needs was operationally defined as the perceived training needs of the pig farmers in the operations connected with pig farming. To measure the training needs of pig farmers a questionnaire was developed which consisted of eight major farm operations (domains) related to pig farming. Under each domain several minor operations (items) were included. The relevancy rating of the items were done by 15 experts in the field of pig husbandry, for knowledge and skill aspects separately. The items which received percentage scores below 80 were discarded for both the knowledge and skill aspects.

The major operations and number of minor operations included in the questionnaire were given as follows:

Major farm operations	Minor farm operations	
	Knowledge	Skill
Housing	5	4
Breeds and breeding	6	4
Feeding	5	3
Diseases and its prevention	11	9
Management	8	7
Economics of pig farming	5	5
Marketing	3	1
Integrated farming	3	3

The finalised questionnaire was administered to the respondents who were asked to rate the items for their knowledge and skill needs on a three point continuum viz. most preferred, somewhat preferred and least preferred to which scores of 3, 2 and 1 were assigned respectively.

The training need index for each item was calculated using the formula

$$\text{Training Need Index for an item (TNI)} = \frac{\text{Total training need score for each item}}{\text{Maximum possible score for the item}} \times 100$$

The Training Need Index was calculated separately for both knowledge and skill needs. Then the items were ranked on the basis of the training need indices.

The TNI of each of the major domains was found out using the formula

$$\text{Training Need Index for the major domain} = \frac{\text{Sum of training need scores for all items in that domain}}{\text{Sum of maximum possible scores for all the items}} \times 100$$

The TNI for the major domains were also calculated separately for both knowledge and skill needs and were ranked accordingly.

3.4 DATA COLLECTION

The data collection was carried out during Jan 01 to May 01. The respondents were individually contacted and data were collected through personal interview of respondents using an interview schedule. The assistance of Veterinary

Surgeons, Livestock Inspectors, attendants were availed for locating and interviewing the pig farmers.

3.5 STATISTICAL ANALYSIS

Simple mathematical calculations like frequency, percentage, mean, and standard deviation were used to analyse the data

Results

4. RESULTS

The results of the investigations are given in this chapter under the following headings.

4.1 DEMOGRAPHIC VARIABLES

4.1.1 Age

Table 2. Distribution of respondents based on Age

*n= 60

Sl.No	Age Group	Frequency	Percentage
1	Young (Below 30 years)	8	13
2	Middle (30 - 50 years)	36	60
3	Old (above 50 years)	16	27
	Total	60	100

* sample size

The analysis revealed that majority of the respondents (60%) were of middle age group, 27 percent of old age group and 13 percent of young age group.

4.1.2 Sex

Table 3. Distribution of respondents based on Sex

n= 60

S.No	Sex Group	Frequency	Percentage
1	Male	54	90
2	Female	6	10
	Total	60	100

Majority of the pig farmers were male (90 %) and 10 per cent were female

4.1.3 Religion

Table 4.Distribution of respondents based on Religion

n= 60

Sl. No.	Religion	Frequency	Percentage
1	Christian	52	87
2	Hindu	8	13
3	Muslim	0	0
	Total	60	100

Data in table 4 revealed that majority of the pig farmers (87%) were Christians, while 13% were Hindus and none from the Muslim community was found to rear pigs.

4.1.4 Education

Table 5.Distribution of respondents based on Education

n= 60

Sl. No.	Category	Frequency	Percentage
1	Primary School (I – IV)	15	25
2	Middle School (V – VII)	36	60
3	High School (VIII – X)	8	13
4	College (Above class X)	1	2
	Total	60	100

Majority of the pig farmers (60%) had middle school education. Twenty five percentage had primary school education, 13 per cent had high school education and 2 per cent had college education.

4.1.5 Occupation

Table 6 Distribution of respondents based on occupation

n= 60

Sl.No.	Category	Frequency	Percentage
1	Government Servant	0	0
2	Private Sector	12	20
3	Farmer	12	20
4	Business	23	38
5	Agricultural labourer	9	15
6	Jobless	4	7
	Total	60	100

Data in table 6 revealed that majority of the pig farmers were doing some business (38%). Twenty per cent of them were employed in private sector 20 per cent were farmers, 15 percent were agriculture labourers, and seven percent were jobless.

4.1.6 Land holding

Table 7 Distribution of respondents based on land holding.

n= 60

Sl. No.	Category	Frequency	Percentage
1	Large farmer (Above 2 hect)	3	5
2	Small farmer (1 – 2 hect)	4	7
3	Marginal farmer (below 1 hect)	50	83
4	Agricultural labourer (10 cents and below)	3	5
	Total	60	100

Table 7 revealed that majority of the pig farmers (83%) were marginal farmers. Large farmers and Agricultural labourers were 5 per cent each and small farmers were 7 per cent.

4.1. 7 Income

Table 8. Distribution of respondents based on income

n= 60

Sl. No.	Category	Frequency	Percentage
1	High >Rs.95325	7	11.7
2	Medium (22876 – 95324)	47	78.3
3	Low (<22875)	6	10
	Total	60	100

Mean 59100. S.D. 36224

Analysis of data in the table 8 revealed that majority (78.3%) of the respondents were of medium income group, and a few (11.7%) belonged to high income group and 10 percent low income groups.

4.1.8 Training participation

Table 9(a).Distribution of respondents based on whether they obtained training or not

n= 60

Sl. No.	Category	Frequency	percentage
1	Training obtained	10	17
2	Training not obtained	50	83
	Total	60	100

Table 9(b).Distribution of respondents based on place from which training is obtained

n= 10

Sl. No.	Category	Frequency	Percentage
1	Training obtained from Animal Husbandry Department training centres	2	20
2	Training obtained from Kerala Livestock Development Board pig farm	0	0
3	Training obtained from Veterinary College	7	70
4	Training obtained from private farms	1	10
	Total	10	100

Table 9(a) revealed that majority (83%) of pig farmers were not obtained any training regarding pig farming. Table 9(b) showed that out of the pig farmers who attended training 20 percent had obtained training from Animal Husbandry Department training centres, 70 per cent from

Veterinary College, 10 per cent from Private farms and nobody had undergone training in Kerala Livestock Development Board pig farm.

4.1.9 Experience in pig farming

Table 10.Distribution of respondents based on experience in pig farming

n= 60

Sl. No.	Category	Frequency	Percentage
1	Less than 1 year	9	15
2	1 – 5 years	19	32
3	5 – 10 years	17	28
4	Above 10 years	15	25
	Total	60	100

Table 10 revealed that 32 per cent of pig farmers had 1 - 5 years of experience, 28 per cent had 5 – 10years of experience, 25 per cent had above 10 y ears and 15 per cent less than 1 year of experience

4.2 RESOURCE AVAILABILITY

4.2.1 Location of farm

Table 11.Distribution of pig farmers based on location of farm

n= 60

Sl. No.	Category	Frequency	Percentage
1	Attached to the house	10	17
2	In house premises	42	70
3	Remote area	8	13
	Total	60	100

The data in table 11 showed that 70 per cent of pig farmers were maintaining the farm in the homestead, 17 per cent constructed the farm attached to their house, and 13 per cent in a remote area away from house.

4.1.2 Type of feed

Table 12. Distribution of pig farmers based on type of feed.

n= 60

Sl. No.	Category	Frequency	Percentage
1	Concentrate feed	0	0
2	Compound feed	3	5
3	Hotel /Kitchen waste	25	42
4	Butchery waste	32	53
	Total	60	100

The data in Table 12 revealed that no one was rearing pigs with concentrate feeds. Only 5 per cent was maintaining their stock by compound feed. Majority of the pig farmers (53%) were maintaining their pig stock by butchery waste and 42 per cent by Hotel/Kitchen waste.

4.2.3 Availability of feed

Table 13 - Distribution of respondents based on availability of feed.

n= 60

Sl. No	Category	Frequency	Percentage
1	Available in plenty	26	43
2	Available in quantities just to meet the requirement	24	40
3	Scarce	10	17
	Total	60	100

Analysis of the data in table 13 revealed that 43 per cent of pig farmers were getting feed in plenty, 40 per cent getting it just to meet the requirements and 17 per cent getting it in scarce quantity.

4.2.4 Source of information about pig farming

Table 14.Distribution of pig farmers according to the source of information

n= 60

Sl. No.	Source	Frequency	percentage
1	Veterinary Hospital	7	12
2	Training Institutes	7	12
3	Newspapers	16	27
4	Television	4	6
5	Radio	2	3
6	Other farmers	24	40
	Total	60	100

Table 14 showed that majority of the pig farmers (40%) obtained information from other farmers whereas 27 per cent obtained information from news papers, 12 per cent each from Veterinary Hospitals and training institutes, 6 per cent from Television and 3 per cent from radio.

4.2.5 Source of Capital

Table15. Distribution of respondents based on source of capital.

n= 60

Sl. No.	Category	Frequency	Percentage
1	Own savings	48	80
2	Bank Loan	8	13
3	Loan from private firms	0	0
4	Financial aid from local bodies	4	7
	Total	60	100

Table 15 revealed that majority (80%) of the pig farmers started the pig farms with their own personal savings, 13 per cent obtained bank loans and 7 per cent got the financial aid from local bodies. No body received loan from private firms.

4.2.6 Breed of pigs reared

Table - 16- Distribution of respondents based on breed of pigs reared

n= 60

Sl. No.	Category	Frequency	Percentage
1	Local breed	1	2
2	Exotic	35	58
3	Cross breed	24	40
	Total	60	100

Data in table 16 revealed that majority of the pig farmers (58%) were rearing exotic breed, 40 per cent were rearing crossbreed pigs and only 2 per cent were rearing local breed.

4.2.7 Source of piglets

Table 17 - Distribution of respondents based on source of piglets

n= 60

Sl. No.	Category	Frequency	percentage
1	Produced in own farm	9	15
2	University farm	23	38
3	Animal Husbandry Department farms	0	0
4	Private farms	28	47
	Total	60	100

Table 17 revealed that majority of the pig farmers (47%) were getting piglets from private farms, 38 per cent were getting from University pig breeding farm, and 15 per cent were producing piglets in their own farms.

4.2.8 Herd size

Table 18 Distribution of respondents based on size of the herd they are holding

n=60

Sl.No.	Category	Frequency	Percentage
1	Small farm (below 10)	46	78
2	Medium farm(10-50)	9	15
3	Large farm (Above 50)	5	7
	Total	60	100

The data in table 18 revealed that majority of the farmers (78%) were rearing less than 10 animals, 15 percent were running medium farm and seven percent were running large farms.

4.2.9 Marketing channels

Table 19.Distribution of respondents based on the mode of marketing of pig or pork n=60

Sl. No.	Category	Frequency	Percentage
1	Sale of pork	15	25
2	Sale of pigs to Kerala Agricultural University meat plant / Meat Product of India	2	3
3	Sale of pigs directly to private butchers	41	69
4	Sale of pigs to the middle men	2	3
	Total	60	100

Data in table 19 revealed that majority (69%) were selling their pigs to the local private butchers directly. Twenty five per cent slaughtered their pigs and sold pork in the local market, 3 per cent each sold pigs to Kerala Agricultural University meat plant / Meat Product of India and to middle men.

4.3 SOCIO PSYCHOLOGICAL VARIABLES

4.3.1 Risk preference

Table 20. Distribution of respondents based on risk preference n= 60

Sl. No.	Category	Frequency	percentage
1	High (15 – 18)	2	3
2	Medium (11 – 14)	30	50
3	Low (6 – 10)	28	47
	Total	60	100

Data revealed in table 20 that 3% of respondents had high risk preference, 50 per cent and 47 per cent had medium and low risk preference respectively.

4.3.2 Economic motivation

Table 21 - Distribution of respondents based on economic motivation

n= 60

Sl. No	Category	Frequency	Percentage
1	High (15 – 18)	40	67
2	Medium (11 – 14)	20	33
3	Low (6 – 10)	0	0
	Total	60	100

The data revealed that majority of the respondents (67%) were in high economic motivation category, 33 per cent were in medium and no one was in low economic motivation category.

4.3.3 Innovation Proneness

Table 22 - Distribution of respondents based on innovation proneness.

n= 60

Sl. No.	Category	Frequency	Percentage
1	High (6.34 – 9)	14	23
2	Medium (3.68 – 6.33)	34	57
3	Low (1 – 3.67)	12	20
	Total	60	100

The data in table 22 revealed that most of the pig farmers (57%) had medium innovation proneness, 23 per cent had high and 20 per cent low innovation proneness

4.3.4 Marketing Orientation

Table 23 - Distribution of respondents based on marketing orientation

n= 60

Sl. No	Category	Frequency	Percentage
1	High (5 – 6)	25	42
2	Medium (3 – 4)	33	55
3	Low (1 – 2)	2	3
	Total	60	100

The data in table 23 showed that 42 per cent of pig farmers were in high marketing orientation category, 55 per cent and 3% were in medium and low marketing orientation category respectively.

4.4 PREFERENCE FOR TYPE, METHOD, DURATION AND VENUE OF TRAINING

4.4.1 Types of training preferred by the respondents

Table 24 - Types of training preferred by respondents

Sl. No	Type	Training Need Score	Rank
1.	Newspaper	149	1
2.	Television	147	2
3.	Kerala Agricultural University training programmes	137	3
4.	Farm magazines	137	3
5.	Radio	136	4
6.	Animal Husbandry Department training programmes	126	5
7.	Postal training	125	6

Analysis of the data in Table 24 news paper was the most preferred type of training(Training Need Score TNS - 147). Next in the order of preference was

television (TNS- 147), farm magazines (TNS- 137), Kerala Agricultural University training programmes (TNS - 137), radio (TNS - 136), Animal Husbandry Department training programmes (TNS - 126) and postal Training (TNS - 125).

4.4.2 Method of training preferred by the pig farmers

Table25 - Methods of training preferred by the respondents

Sl. No	Method	TNS	Rank
1.	Farm Visit	175	1
2.	Lecture	159	2
3.	Exhibition	150	3
4.	Study tour	134	4
5.	Demonstration	132	5
6.	Group discussion	120	6
7.	Film show	115	7
8.	Documentary	103	8
9.	Campaign	101	9
10.	Feature	100	10
11.	Interview	90	11
12.	Success stories	88	12

The data in Table 25 revealed that farm visit was the most preferred method of training. This was followed by lecture (TNS - 159), Exhibition (TNS -150), study tour (TNS - 134), demonstration (TNS - 132), group discussion (TNS - 120), film show (TNS - 115), documentary (TNS - 103), campaign (TNS 101), feature (TNS 100), interview (TNS 90) and success stories (TNS - 88).

4.4.3 Duration of training preferred by pig farmers

Table 26 - Preference of the training duration by the respondents

Sl. No.	Duration	Training Need Score	Rank
1.	1 day	161	1
2.	1 week	129	2
3.	2 weeks	98	3
4.	1 month	77	4
5.	2 months	75	5

Table 26 pointed out that 1-day duration training was preferred the most by the respondents (TNS - 161). This was followed by 1-week training (TNS - 129), 2-weeks (TNS - 98), 1-month (TNS - 77) and 2-months (TNS - 75).

4.4.4 Venue of training preferred by the respondents

Table 27 - Preference of Respondents regarding venue of training

Sl. No.	Venue	TNS	Rank
1.	Veterinary College, Mannuthy	165	1
2.	Kerala Livestock Development Board Pig Farm, Puthur	143	2
3.	Animal Husbandry Department Training Centres	125	3

It was seen from the table 27 that Veterinary College, Mannuthy was the venue of training most preferred by the pig farmers (TNS - 165). This was followed by Kerala Livestock Development Board Pig Farm, Puthur (TNS - 143) and Animal Husbandry Department Training Centres (TNS - 125).

4.5 TRAINING NEEDS

4.5.1 Training needs pertaining to the major farm operations.

Table 28(a). Knowledge oriented training needs of pig farmers in major farm operations

Sl. No	Major farm operations	TNI	Rank
1.	Diseases and prevention	84.8	1
2.	Housing	80.4	2
3.	Breeding	78.9	3
4.	Feeding	78.8	4
5.	Management	78.1	5
6.	Integrated farming	72.6	6
7.	Marketing	69.4	7
8.	Economics of pig farming	66.1	8

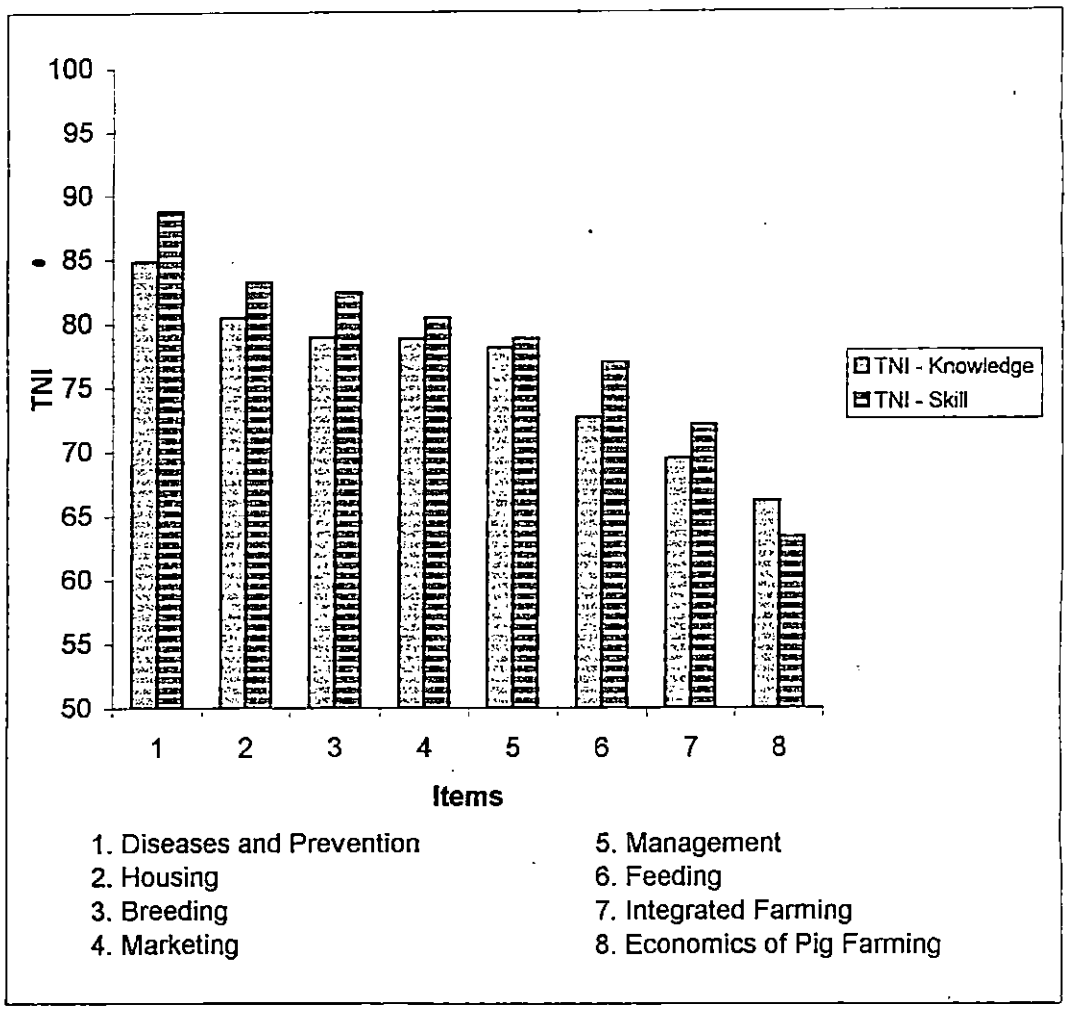
Out of the eight major farm operations, the highest training need with respect to knowledge aspect, perceived by the pig farmers was recorded in the case of Diseases and prevention (TNI - 84.8). This was followed by training needs in Housing (TNI - 80.4), Breeding (TNI-78.9), Feeding (TNI - 78.8), Management (TNI - 78.1), Integrated farming (TNI - 72.6), Marketing (TNI-69.4) and Economics of pig farming (TNI - 66.1).

Table 28 (b). Skill oriented training needs of pig farmers in major farm operations

Sl. No	Major farm operations	TNI	Rank
1	Diseases and prevention	88.7	1
2	Housing	83.2	2
3	Breeding	82.4	3
4.	Marketing	80.4	4
5	Management	78.8	5
6	Feeding	76.9	6
7	Integrated farming	72.0	7
8	Economics of pig farming	63.3	8

The data in table 22(b) revealed that the highest training need with respect to skill need perceived by the pig farmers was recorded for diseases and prevention (TNI-88.7).This was followed by training needs in housing (TNI- 83.2), breeding (TNI – 82.8) Marketing (TNI – 80.4) management (TNI – 79.8), feeding (TNI – 76.9) integrated farming (TNI – 72) and economics of pig farming (TNI-63.3).

Fig.2 Training Need Index for the Knowledge and Skill Aspects of the Major Farm Operations



4.5.2 Knowledge and Skill oriented Training needs of pig farmers under Diseases and Prevention

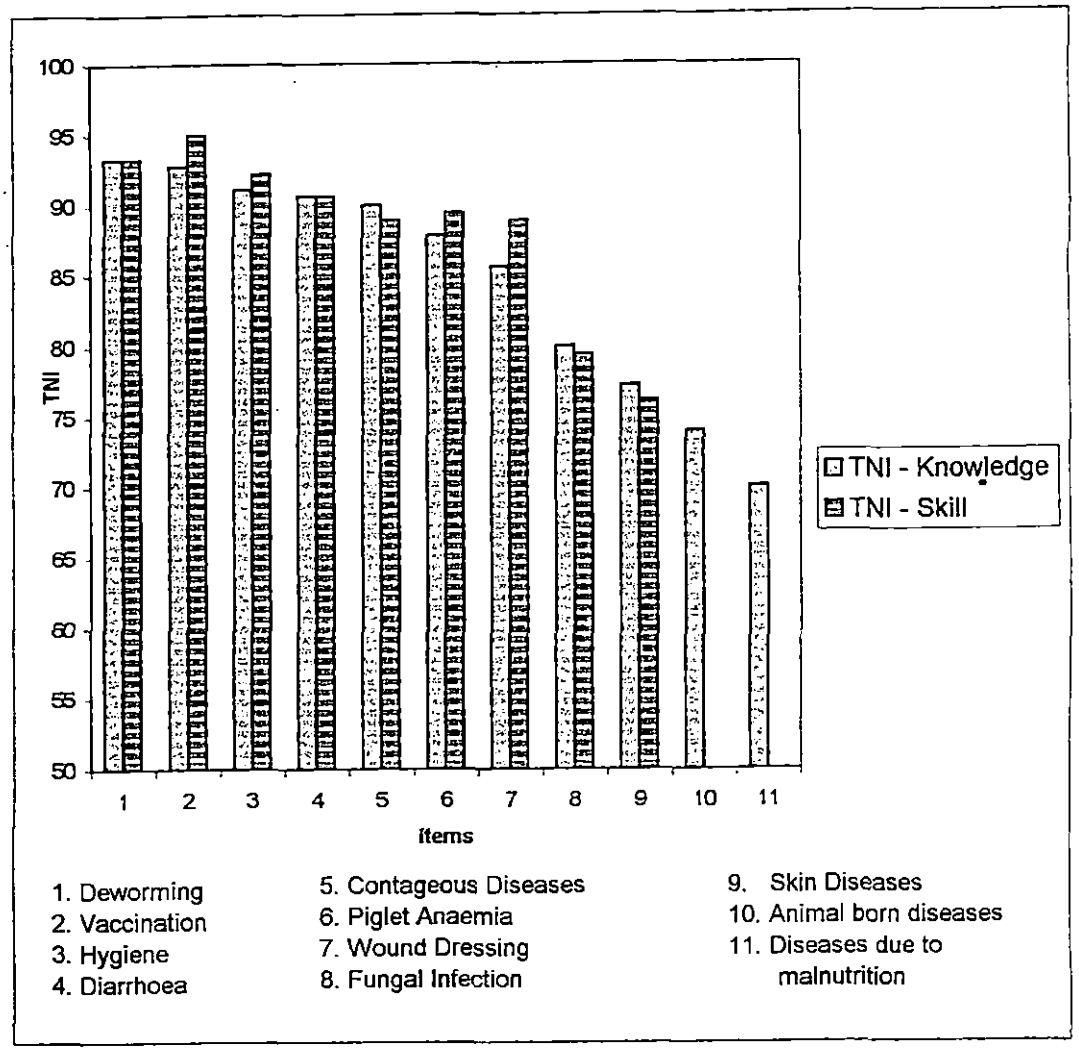
Table 29 (a) Knowledge oriented Training Need Index – Diseases and prevention

Sl. No	Items	TNI	Rank
1.	Deworming	93.3	1
2.	Vaccination	92.8	2
3.	Hygiene	91.1	3
4.	Diarrhoea	90.6	4
5.	Contagious diseases	90.0	5
6.	Piglet anaemia	87.8	6
7.	Wound dressing	85.6	7
8.	Fungal infection	80.0	8
9.	Skin diseases	77.2	9
10.	Animal born diseases	73.9	10
11.	Diseases due to Malnutrition	70.0	11

Table 29(b) – Skill oriented Training need Index - Diseases and prevention

Sl. No.	Major Farm Operations	TNI	Rank
1.	Vaccination	95.0	1
2.	Deworming	93.3	2
3.	Hygiene	92.2	3
4.	Diarrhoea	90.6	4
5.	Piglet anaemia	89.4	5
6.	Contagious diseases	88.9	6
7.	Wound dressing	88.9	6
8.	Fungal infection	79.4	7
9.	Skin diseases	76.1	8

Fig.3 Training Need Index for the Knowledge and Skill Aspects of the items under diseases and prevention



An observation of the data presented in table 29(a) and 29(b) revealed the training need perception for knowledge and skill needs with respect to various operations of Diseases and prevention. With respect to the knowledge need the highest training need was recorded in case of deworming, (TNI - 93.3). While with respect to the skill highest training need was in case of vaccination (TNI - 95). For the knowledge need deworming was followed by vaccination (TNI - 92.8), hygiene (TNI - 91.1), diarrhoea (TNI - 90.6), contagious diseases (TNI - 90) , piglet anaemia (TNI 87.8) wound dressing (TNI - 85.6), fungal infection (TNI - 80), skin diseases (TNI - 77.2), animal born diseases (TNI - 73.9) and diseases due to malnutrition (TNI - 70).Whereas for the skill need, vaccination was followed by deworming (TNI-93.3), hygiene(TNI - 92.2), diarrhoea (TNI - 90.6), piglet anaemia (89.4), contagious diseases (TNI - 88.9) wound dressing (TNI - 79.4), fungal infection (TNI - 79.4) and skin diseases (TNI - 76.1).

4.5.3 Knowledge and Skill oriented Training needs of pig farmers under Housing

Table 30 (a) Knowledge Oriented Training Need Index – Housing

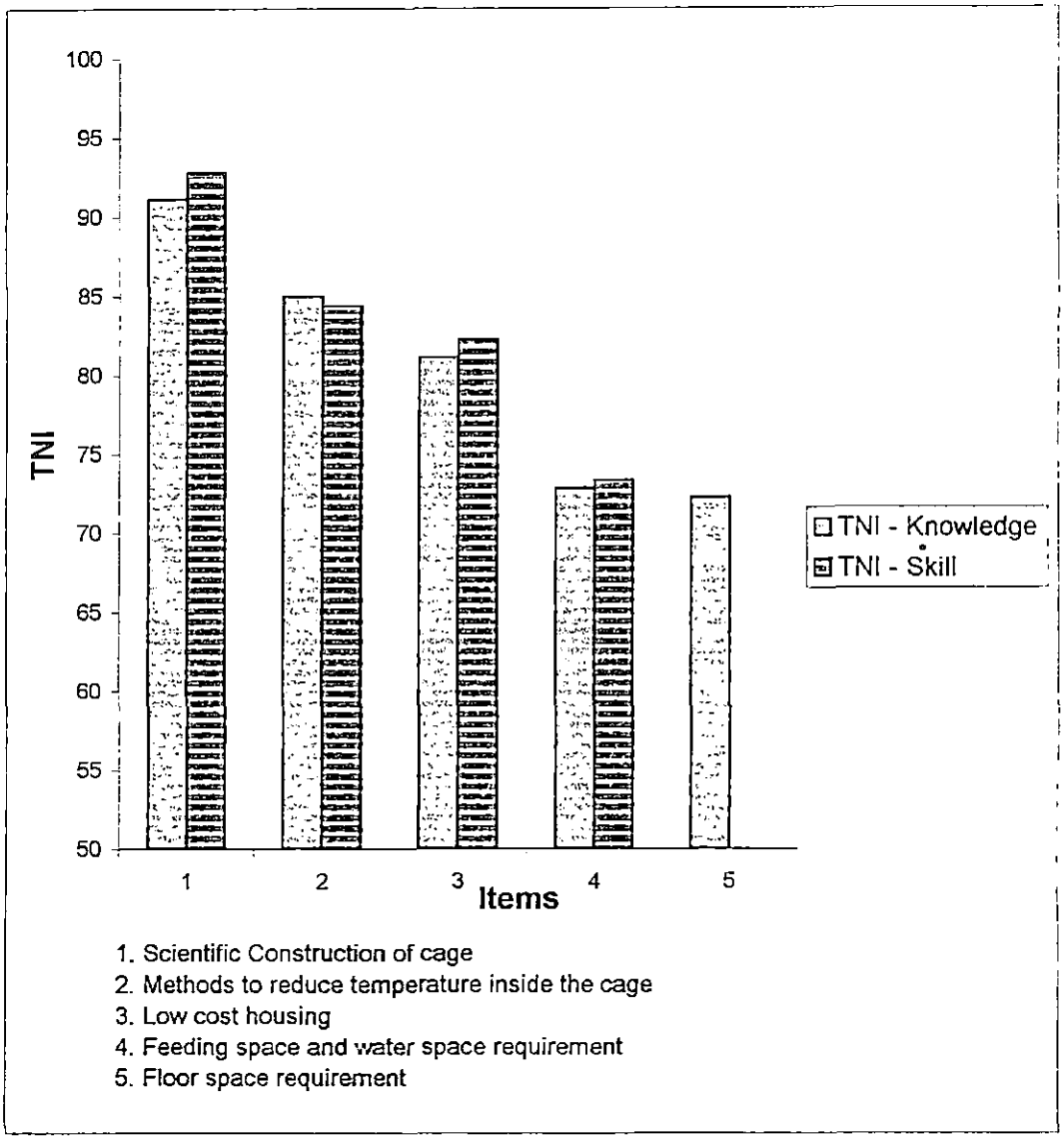
Sl. No	Items	TNI	Rank
1.	Scientific construction of cage	91.1	1
2.	Methods to reduce the temperature inside the cage	85.0	2
3.	Low cost housing	81.1	3
4.	Feeding space & water space requirement	72.8	4
5.	Floor Space requirement of various groups of animals	72.2	5

Table 30 (b) Skill oriented Training need Index - Housing

Sl. No.	Items	TNI	Rank
1.	Scientific construction of cage	92.8	1
2.	Methods to reduce temp inside the cage	84.4	2
3.	Low cost housing	82.2	3
4.	Feeding space and water space requirement	73.3	4

A perusal of the data presented in the table 30(a) and table 30(b) indicated that there was highest need for training for both knowledge and skill need in scientific construction of cage with respect to Housing. (TNI - 91.1 and TNI-92.8). For the knowledge need this was followed by methods to reduce the temperature inside the cage (TNI - 85.0) low cost housing (TNI - 81.1), feeding space water space requirement (TNI - 72.8) and floor space requirement for various groups of animals (TNI - 72.2). For the skill need scientific construction of cage was followed by methods to reduce the temp inside the cage (TNI - 84.4)low cost housing (TNI - 82.2) and feeding space and water space requirement (TNI -73.3).

Fig.4 Training Need Index for the Knowledge and Skill Aspects of the items under Housing



1. Scientific Construction of cage
2. Methods to reduce temperature inside the cage
3. Low cost housing
4. Feeding space and water space requirement
5. Floor space requirement

4.5.4 Knowledge and Skill oriented Training needs of pig farmers under Breeding

Table 31(a) Knowledge oriented Training need Index - Breeding

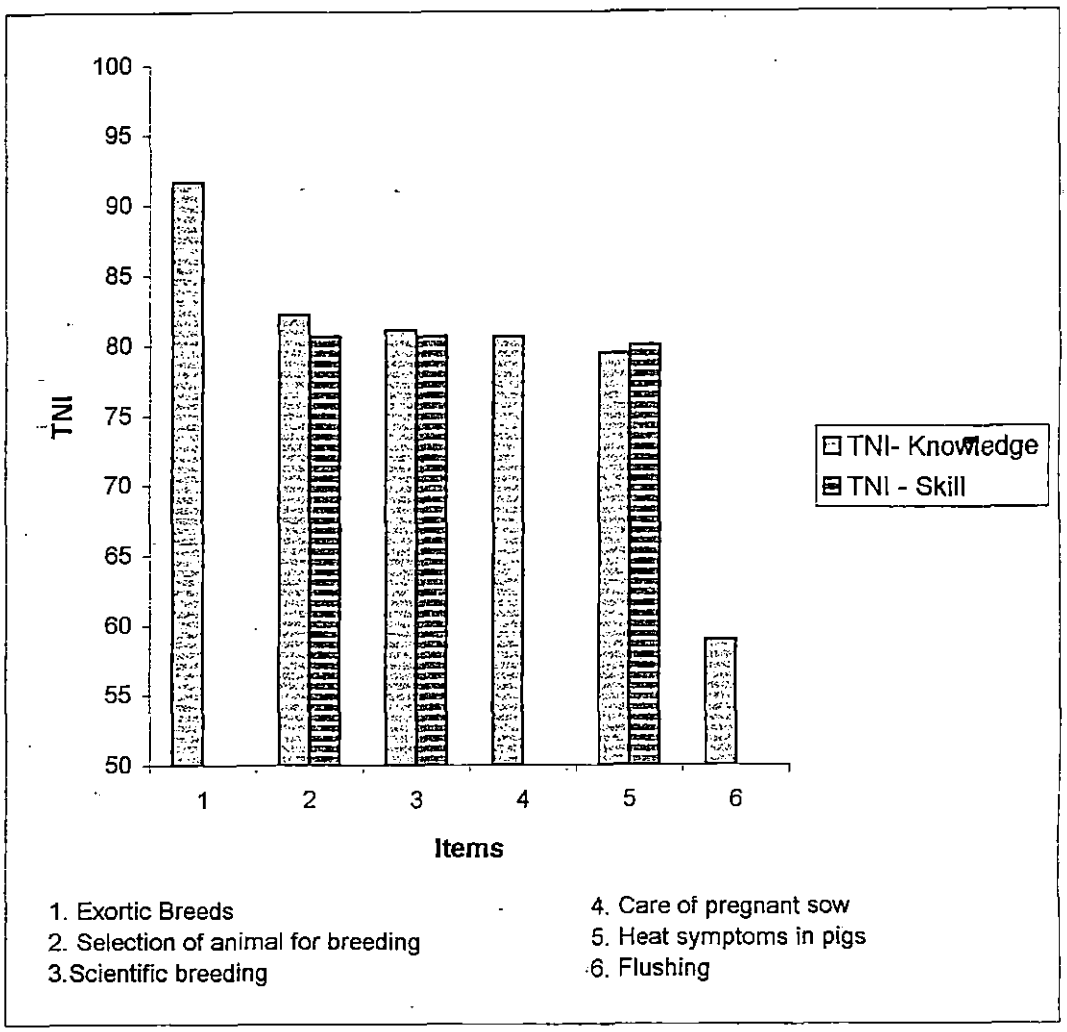
Sl. No.	Items	TNI	Rank
1.	Exotic breeds	91.7	1
2.	Selection of animals for breeding	82.2	2
3.	Scientific breeding	81.1	3
4.	Care of pregnant sow	80.6	4
5.	Heat symptoms in pig	79.4	5
6.	Flushing	58.9	6

Table 31(b) Skill oriented Training Need Index - Breeding

Sl. No.	Items	TNI	Rank
1.	Selection of pigs for breeding	80.6	1
2.	Scientific breeding	80.6	1
3.	Heat symptoms in pigs	80.0	2

An observation of the data presented in table 31(a) and table 31(b) revealed the training need perception under major domain Housing. With respect to the knowledge aspect the exotic breeds was the area in which there was more training need perception (TNI -91.7). It was followed by selection of animals for breeding (TNI - 82.2) scientific breeding (TNI - 81.1) care of pregnant sow (TNI - 80.6). heat symptoms in pigs (TNI - 79.4) and flushing (TNI - 58.9). Whereas with respect to the skill need, selection of pigs for breeding (TNI-80.6) and scientific breeding (TNI - 80.6) came first ,followed by heat symptoms in pigs (TNI - 80.0).

Fig.5 Training Need Index for the Knowledge and Skill Aspects of the items under Breeding



4.5.5 Knowledge and Skill oriented Training needs of pig farmers under Feeding

Table 32 (a) Knowledge oriented Training Need Index - Feeding

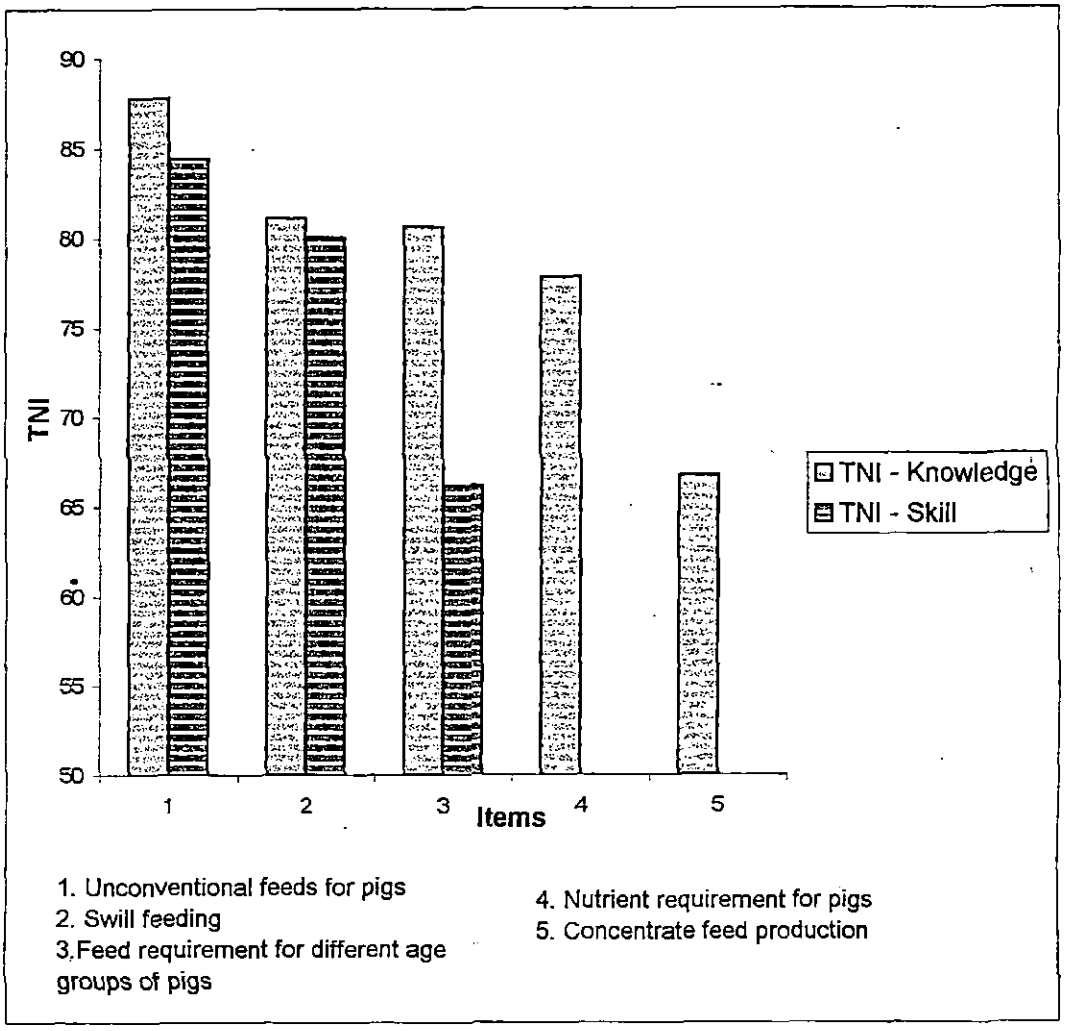
Sl. No.	Items	TNI	Rank
1.	Unconventional feeds for pigs	87.8	1
2.	Swill feeding	81.1	2
3.	Feed requirement for different age groups of pigs	80.6	3
4.	Nutrient requirement for pigs	77.8	4
5.	Concentrate feed production	66.7	5

Table 32(b) Skill oriented Training need Index - Feeding

Sl. No.	Items	TNI	Rank
1.	Unconventional feed for pigs	84.4	1
2.	Swill feeding	80.0	2
3.	Feed requirement for different age groups of pigs	66.1	3

The data in Table 32(a) and 32(b) revealed that the highest training need requirement with respect to feeding for both knowledge need and skill need was for unconventional feed for pigs (TNI 87.8 and TNI-84.4). For the knowledge need it was followed by swill feeding (TNI - 80.6), feed requirement for different age group of pigs (TNI - 77.8), nutrient requirement of pigs (TNI – 77.8) and concentrate feed production (TNI - 66.7). With respect to the skill need also unconventional feed for pigs was followed by swill feeding (TNI - 80) and feed requirement for different age groups of pigs (TNI - 66.1).

Fig.6 Training Need Index for the Knowledge and Skill Aspects of the items under Feeding



1. Unconventional feeds for pigs
2. Swill feeding
3. Feed requirement for different age groups of pigs
4. Nutrient requirement for pigs
5. Concentrate feed production

4.5.6 Knowledge and Skill oriented Training needs of pig farmers with respect to Management

Table 33(a) Knowledge Oriented Training need Index - Management

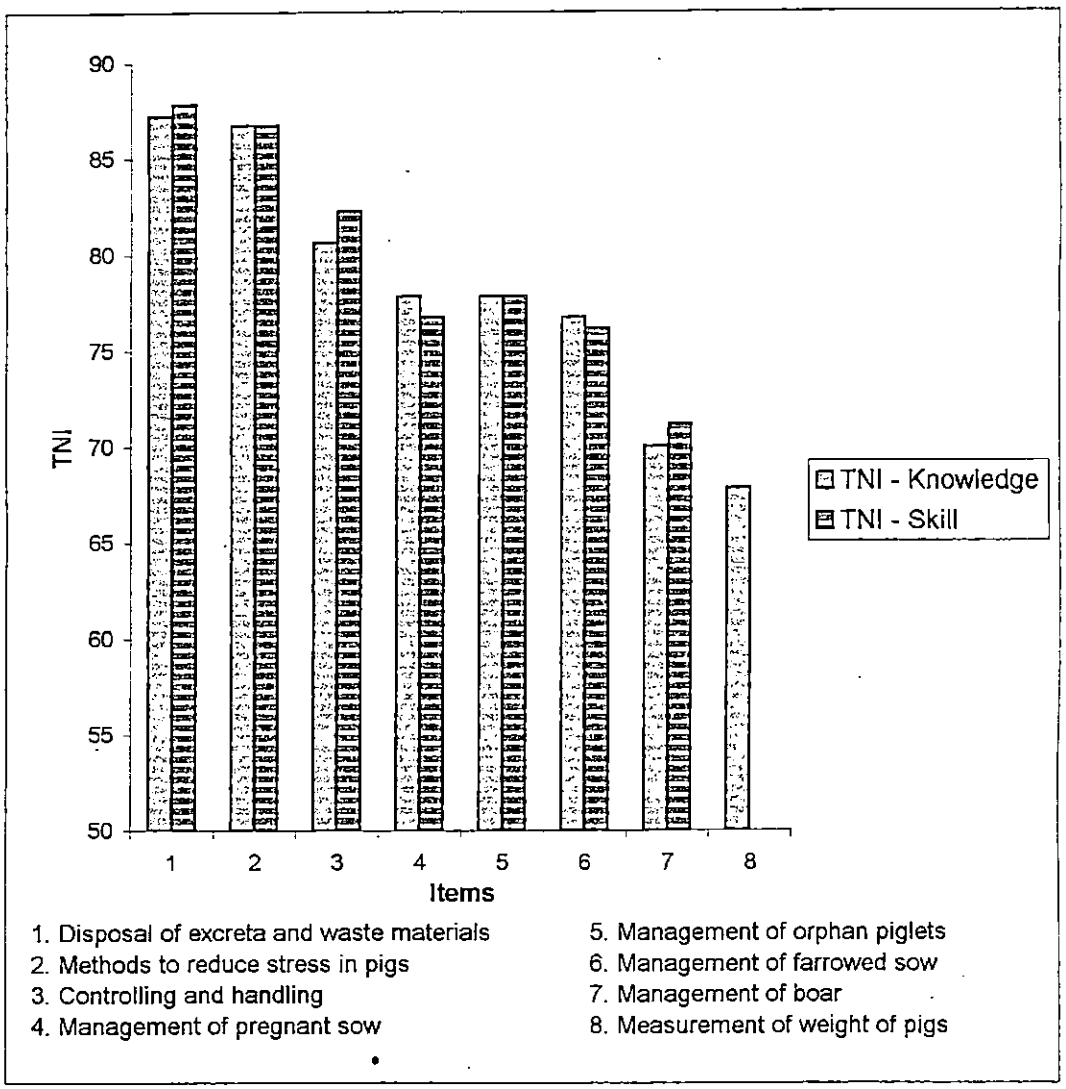
Sl. No.	Items	TNI	Rank
1.	Disposal of excreta and waste materials	87.2	I
2.	Methods to reduce stress in pigs	86.7	2
3.	Controlling and Handling	80.6	3
4.	Management of pregnant sow	77.8	4
5.	Management of orphan piglets	77.8	4
6.	Management of farrowed sow	76.7	5
7.	Management of boar	70	6
8.	Measurement of weight of pigs	67.8	7

Table 33(b) Skill oriented Training Need Index - Management

Sl. No	Items	TNI	Rank
1.	Disposal of excreta and waste materials	87.8	1
2.	Methods to reduce stress in pigs	86.7	2
3.	Controlling and handling	82.2	3
4.	Management of orphan piglets	77.8	4
5.	Management of pregnant sow	76.7	5
6.	Management of farrowed sow	76.1	6
7.	Management of boar	71.1	7

Table 33(a) and 33(b) revealed the perception of training need with respect to the management aspect. Disposal of excreta and waste materials was ranked as the first item for both knowledge and skill. For the knowledge need aspect it was followed by methods to reduce stress in pigs (TNI - 86.7) controlling and handling (TNI- 80.6), management of pregnant sow (TNI - 76.8), management of farrowed

Fig.7 Training Need Index for the Knowledge and Skill Aspects of the items under Management



1. Disposal of excreta and waste materials
2. Methods to reduce stress in pigs
3. Controlling and handling
4. Management of pregnant sow
5. Management of orphan piglets
6. Management of farrowed sow
7. Management of boar
8. Measurement of weight of pigs

sow (TNI - 76.7), management of boar (TNI - 70) and measurement of weight of pigs (TNI - 67.8). With respect to the skill need aspect, disposal of excreta and waste materials was followed by methods to reduce stress in pigs (TNI - 86.7), controlling and handling (TNI - 82.2) management of orphan piglets (TNI - 77.8), management of pregnant sow (TNI - 76.7), management of farrowed sow (TNI - 76.1), and management of boar (TNI - 71.1).

4.5.7 Knowledge and Skill oriented Training needs of pig farmers with respect to integrated farming

Table 34 (a) Knowledge oriented Training Need Index : Integrated Farming

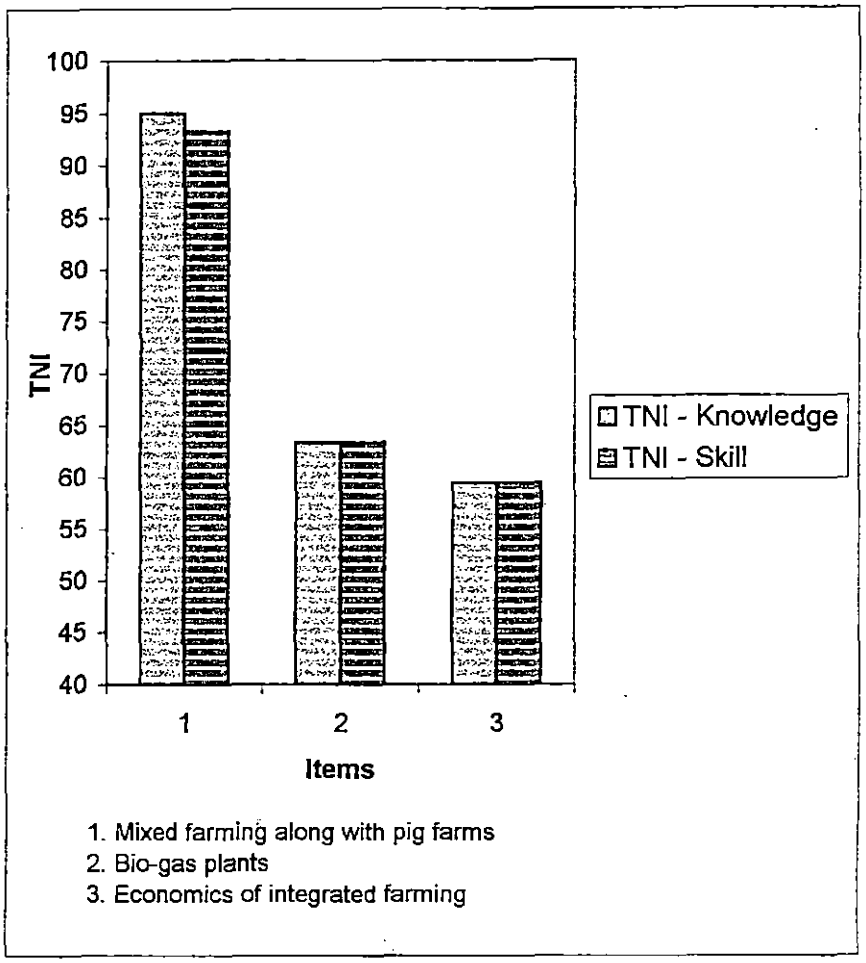
Sl. No.	Items	TNI	Rank
1.	Mixed farming along with pig farming	95	1
2.	Biogas plant	63.3	2
3.	Economics of integrated farming	59.4	3

Table 34(b) Skill oriented Training Need Index : Integrated Farming

Sl. No.	Items	TNI	Rank
1.	Mixed farming along with pig farming	93.3	1
2.	Biogas plant	63.3	2
3.	Economics of integrated farming	59.4	3

The perusal of the data in Table 34(a) and Table 34(b) revealed that the highest training need requirement with respect to integrated farming for both knowledge and skill need was for mixed farming along with pig farming (TNI - 95.0 and TNI-93.3). Which was followed by biogas plant (TNI - 63.3) and economics of integrated farming (TNI - 59.4)

Fig.8 Training Need Index for the Knowledge and Skill Aspects of the items under Integrated Farming



4.5.8 Knowledge and Skill oriented Training needs of pig farmers under Marketing

Table 35 (a) Knowledge oriented Training Need Index : Marketing

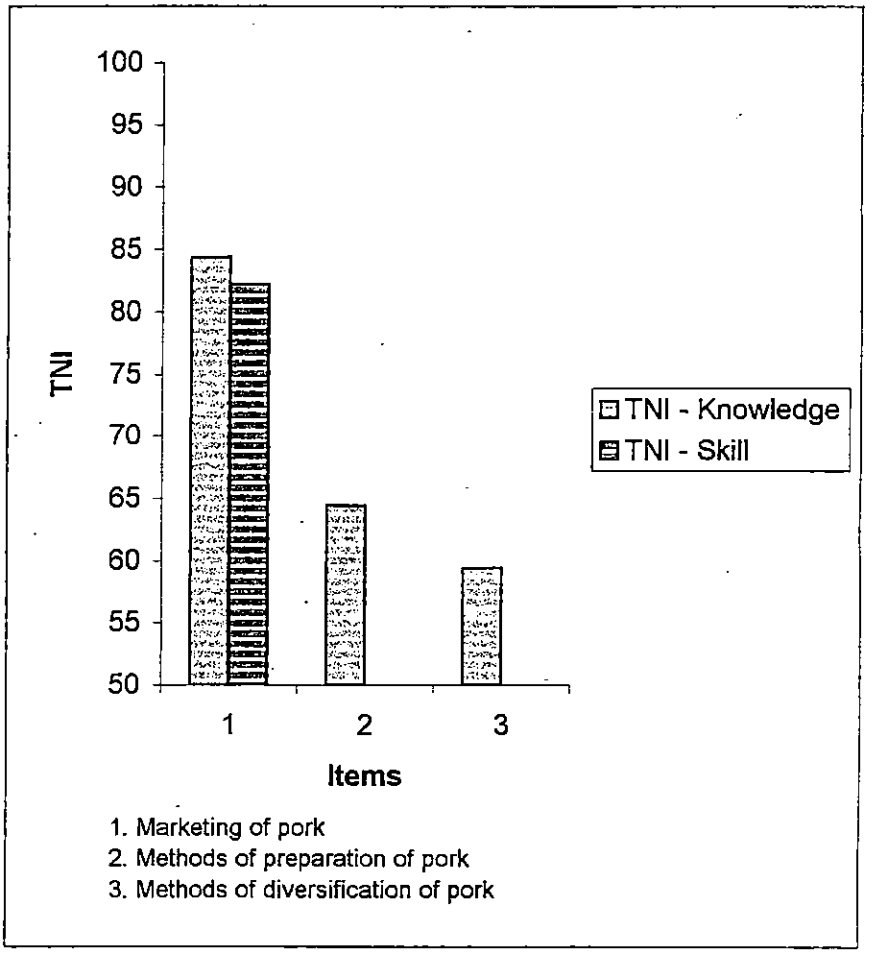
Sl. No.	Items	TNI	Rank
1.	Marketing of pork	84.4	1
2.	Methods of preparation of pork	64.4	2
3.	Methods of diversification of pork	59.4	3

Table 35 (b) Skill oriented Training Need Index : Marketing

Sl. No.	Items	TNI	Rank
1.	Marketing of pork	82.8	1

From the data in Table 35(a) and Table 35(b), it could be observed that marketing of pork has the highest training need perception for both knowledge and skill need. For the knowledge aspect it was followed by method of preparation of pork (TNI - 64.4) and methods of diversification of pork (TNI - 59.4)

Fig.9 Training Need Index for the Knowledge and Skill Aspects of the items under Marketing



4.5.9 Knowledge and Skill oriented Training needs of pig farmers with respect to Economics

Table 36 (a) Knowledge oriented Training Need Index : Economics

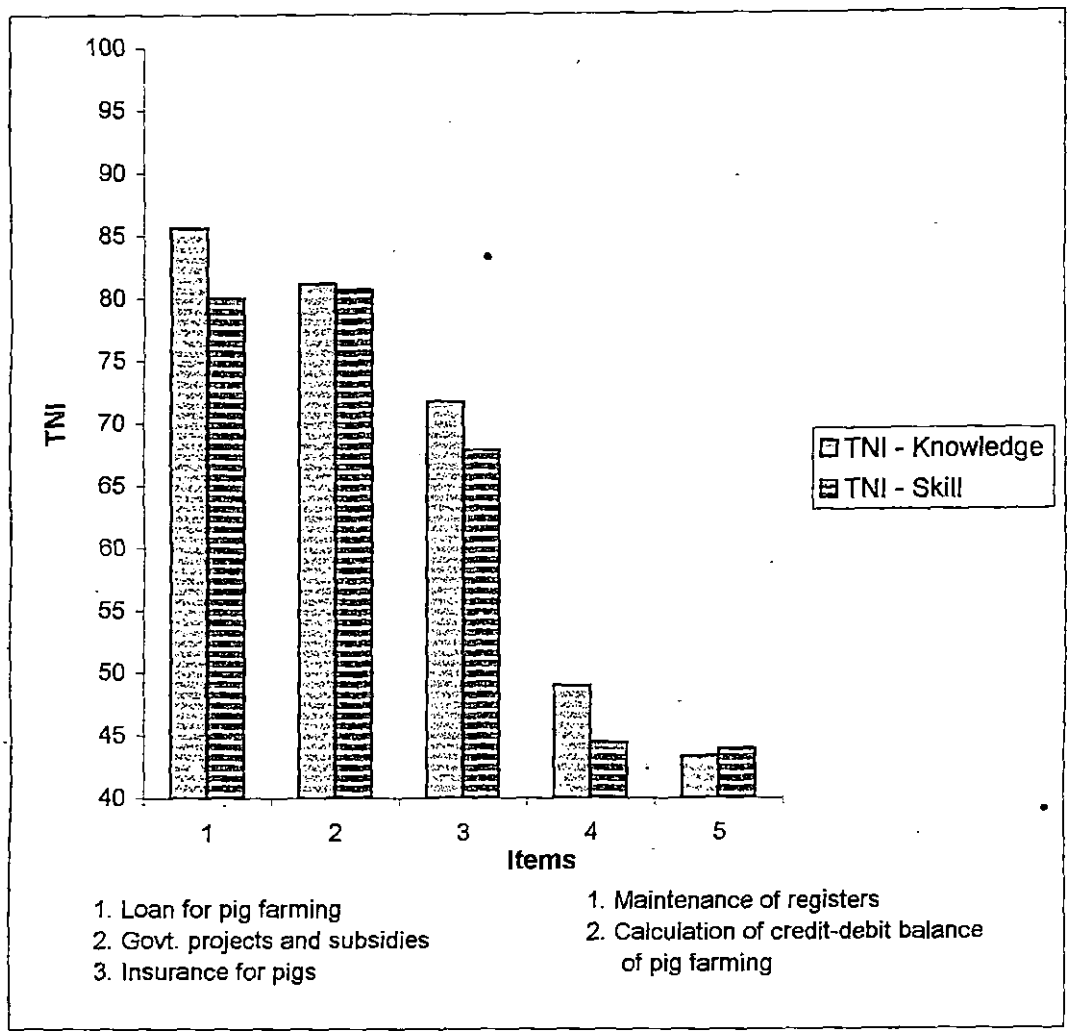
Sl. No.	Items	TNI	Rank
1.	Loan for pig farming	85.6	1
2.	Govt. projects and subsidies for pig farming	81.1	2
3.	Insurance for pigs	71.7	3
4.	Maintenance of registers	48.9	4
5.	Calculation of credit - debit balance in pig farming	43.3	5

Table 36 (b) Skill oriented Training Need Index : Economics

Sl. No.	Items	TNI	Rank
1.	Government projects and subsidies for pig farming	80.6	1
2.	Loan for pig farming	80.0	2
3.	Insurance for pigs	67.8	3
4.	Maintenance of registers	44.4	4
5.	Calculation of credit - debit balance in pig farming	43.9	5

An observation of the data in Table 36(a) and 36(b) revealed that with respect to knowledge aspect, loan for pig farming showed the highest rank (TNI - 85.6) which was followed by government projects and subsidies (TNI - 81.1), insurance for pigs (TNI - 71.7), maintenance of registers (TNI - 48.9) and calculation of credit - debit balance in pig farms (TNI - 43.3). With respect to skill needs, government projects and subsidies came first (TNI - 80.6) followed by loan for pig farming (TNI - 80) insurance for pigs (TNI - 67.8) maintenance of registers (TNI - 44.4) and calculation of credit -debit balance (TNI 43.9).

Fig.10 Training Need Index for the Knowledge and Skill Aspects of the items under Economics



Discussion

5. DISCUSSION

The results of the present study are discussed in the following sequence.

5.1 Demographic variables

5.2 Resource availability

5.3 Socio psychological variables

5.4 Preference for type, method, duration and venue of training

5.5 Training need preference in major areas of pig farming

5.1 DEMOGRAPHIC VARIABLES

5.1.1 Age

Majority of the pig farmers were of middle age group, between 30 – 50 years. This would obviously due to the need for earning livelihood for the family and there fore they had opted pig farming as one of the sources of income and employment. The findings of this study is in accordance with the studies of Gowda et al (1991) who reported that the average age of poultry farmers in his area of study was 39.

5.1.2 Sex

Majority of the pig farmers were male. This might be due to the difficulties for the women for procurement of hotel/butchery waste and management of animals.

5.1.3 Religion

Christian population dominated among pig farmers. Hindu participation was also evident. This observation is in consonance with that of Duru et al., (1999) and Harikumar (2001)..

5.1.4 Education

Education status of pig farmers was higher. Majority of them (60%) were middle school (V – VII) educated. This observation is in agreement with the findings of Chylek *et al.*, (1996) and in contrast with the findings of Meeran and Jayaseelan (1999) who reported that 42 per cent of the shrimp farmers were college educated.. The high literacy rate of the state might be the reason for higher education status of the pig farmers.

5.1.5 Occupation

Many of the pig farmers were engaged in some business. Some were occupied in private sector and some were farmers and agricultural labourers. This finding is in consonance with that of Daru et al (1999) who observed that 73.33 percent of pig farmers in Northern Zaria were civil servants, students or trades. Poultry farm, kitchen and hotel waste could be used as feed for pigs. This might be the reason that more small scale business personnel were interested in pig farming.

5.1.6 Land Holding

Majority of the pig farmers (83%) were marginal farmers having below one hectare of land. The observation in the present study is in agreement with the observation of Thangavel et al.,(1996) who reported that over one third of the buffalloe farmers were having marginal land holding. Inspite of low percapita land

availability and high population density of Kerala the land available to the pig farmers observed to have marginal land holding.

5.1.7 Income

Most of the pig farmers belonged to medium income category. The result of the study is in agreement with that of Sudeepkumar and Subramanian (1995), who reported that majority of the dairy trainees of Krishi Vighyan Kendra had medium level of annual income.

5.1.8 Training Participation

Most of the pig farmers were untrained. This might be due to the fact that training for pig farmers is not so common in training centres as compared to the training in other sectors. The result obtained is in agreement with the observation of Harikumar (2001) who reported that only 8.33 percent of pig farmers had attended training on pig husbandry.

5.1.9 Experience in pig farming

With regard to experience in pig farming the result finding revealed that nearly one third of the pig farmers were having 1 – 5 years of experience and another one third having 5 – 10 years experience. The findings that almost one fourth of the pig farmers studied have been rearing pigs for nearly 10 years, points to the presence of stabilized farmers in this sector proving that pig farming could be sustainable enterprise. This necessitates importance of training programmes for those who are having less than one year experience (15%). This result is in agreement with the findings of Maheswaran and Subramanian(2001)in sheep farmers in their area of study.

5.2 RESOURCE AVAILABILITY

5.2.1 Location of farm

Seventy percent of the pig farmers have constructed the pig sties in their homesteads. The reason behind this is that majority of the pig farmers were having less than one hector of land and hence they could not keep the animal away from house due to lack of sufficient land. Another reason might be due to their conviction that they would be able to pay more attention to the feeding and management of pigs.

5.2.2 Type of feed

Most of the pig farmers depended upon kitchen/hotel waste and slaughter house waste because this is the most cheap and easily available unconventional feed. Feeding based on commercial concentrate feed is not economically feasible. The observations of Ravindran (1995) Hsieh-chia Hui (1997) and Suraj (2000) agree with those of present study.

5.2.3 Availability of feed

Most of the pig farmers were of the opinion that availability of feed was not a problem. Even though the location of the pig farms are in the rural area, proximity to the nearby towns is there in Kerala, so that they could easily collect the hotel/butchery waste from those towns. Moreover, most of the hotel owners were not in a position to dispose their wastes. So it was really convenient for them to dispose the waste in that way.

5.2.4 Source of information

The research finding revealed that pig farmers were getting more information from experienced farmers (40%) and from farm feature pages of news papers. These findings are in agreement with the findings of Pradeep (2000). His study revealed that print media could play a key role in dissemination of information than electronic media. It was found that institutional agencies like veterinary hospitals and training institutions imparted nearly one fourth of the information. Since the experienced farmers imparted 40 percent of information, awareness programmes for the pig farmers need more emphasis.

5.2.5 Source of capital

It was observed that many of the bankers were reluctant to give loans to start or expand pig farming since the pig farming is a newly emerging enterprise in the state. The fear of environmental pollution due to pig farming was another reason behind that. More over Local bodies had more interest in dairy and poultry farming. Hence 80 percent of the pig farmers had started their pig farm with their own savings.

5.2.6 Breed of pigs

Majority of the pig farmers were rearing exotic or cross bred pigs. The number of local breed was negligible. This observation is in agreement with the observations of Ravindran et al (1995) and Harikumar (2001), but in contrast to the reports of Rohilla et al (2000). This obviously due the fact that exotic breeds have better growth rate and feed conversion efficiency compared to indigenous pigs. Moreover, agencies like Kerala Agricultural University, Kerala Livestock

Development Board and Animal Husbandry Department are promoting rearing of exotic piglets for cost effective pork production rather than rearing local pigs.

5.2.7 Sources of piglets

The study revealed that the pig farmers mainly depended on local private farms and University pig farm for obtaining piglets. This indicates that there is great scope for starting pig-breeding units that can supply the required pig lets to the nearby farmers

5.2.8 Herd size

Majority of the pig farmers were small farmers with herd size below 10.This observation is in accordance with the studies of Salehar et al.,(1997) Zhang Xiao Hui and Zang (1998) and in contrast to the observations of Hsiesh Chia Hui et al.,(1997).The reason behind this might be the pig farming is a subsidiary occupation for majority of the farmers. Hence they could not maintain a big farm

5.2.9 Marketing of pigs

Majority of the pig farmers (69%) were selling their pigs directly to butchers. Twenty five percent were slaughtering the animal and selling pork to the local market. The result is in agreement with Duru et al., (1999) who observed that the pig farmers of Northern Nigeria usually sold pigs on live weight to local butchers. Only three percent of farmers were relaying middlemen for marketing. This revealed that exploitation by middlemen were comparatively less in pig farming.

5.3 SOCIO PSYCHOLOGICAL VARIABLES

5.3.1 Risk Preference

Most of the pig farmers had medium and low risk preference. This observation is in agreement with the findings of Pradeep (2000), who reported that majority of the dairy entrepreneurs were in medium risk preference category. It could be due to the fact that pig farming was only a subsidiary occupation for them. So they were not interested to take more risk in pig farming.

5.3.2 Economic motivation

It was observed that majority of the pig farmers had high economic motivation. This might be the reason behind the farmers to invest in a newly emerging enterprise like pig farming which is comparatively more lucrative than many other livestock enterprises.

5.3.3 Innovation Proneness

It was found that 57 percent of the pig farmers had medium innovation proneness. This result is in agreement with the observation of Pradeep (2000) in dairy entrepreneurs. This might be due to the fact that pig farmers were looking for low cost technologies rather than those which need more costly inputs like modern sty and equipments.

5.3.4 Marketing Orientation

Ninety per cent of the pig farmers had medium to high marketing orientation. The farmers were interested in slaughtering and sale of pork for getting more profit. They were interested to sell these products directly to the consumers

rather than to middle men. Only Three percent of pig farmers were depending middle men for marketing. Increased marketing orientation reveals that profitability margin is comparatively higher in this sector.

5.4 PREFERENCE FOR TYPE, METHOD, DURATION AND VENUE OF TRAINING

The pig farmers had preferred training through print media and electronic media than institutional training. It might be due to the fact that for majority of farmers, pig farming is only a subsidiary occupation. Their main earning was from job or business so that they could not go for institutional training for days together, sacrificing the earning from their primary occupation. The institutional training of Kerala agricultural university was preferred over that of Animal Husbandry Department training programmes, might be because of farmers preference for a research institution of a university than government department.

It was quite natural that farmers preferred to get more practical training. This might be the reason why the farmers preferred farm visit, exhibitions and study tours. Such occasions provide them an opportunity to see and learn what fellow farmers were doing. Next to farm visit the farmers preferred exhibitions, study tours and lecture. This might be due to the fact that all the pig farmers were educated.

Majority of the farmers preferred a training of one day duration, which was followed by training that of a week duration. The result obtained is in agreement with Savarimuthu (1981) in farm women, Kanagasabhapathi (1988) in Irulas and Murthy(1989) in black gram growers. It was quite natural that those who were

preoccupied did not prefer a long duration training. Very few had preferred one month and two months training.

The veterinary college is a well known research institute and training centre of Kerala. This might be the reason why the college was preferred the first as a venue of training. Next preferences were accorded to Kerala Livestock Development Board pig farm and Animal Husbandry Department training centres. The findings are in contrast to the observations of Shreeshailaja (1993). In her study majority of the farmwomen preferred their own village as suitable place for training. Proximity to the station and attitude of people towards staff of the station also could have influenced for selection of venue.

5.5 TRAINING NEEDS IN MAJOR FARM OPERATIONS.

The pig farmers had showed higher preference for training in the major farm operations of Diseases and prevention, Housing and Breeding for both the knowledge and skill aspects.

The result obtained in the present study is in agreement with findings of Sudeepkumar and Subramanian (1993) and Fulzele and Meena (1995) on dairying. In the livestock farming diseases to the animals are causing great loss to the farmers. This might be the reason for the farmers preferring diseases and prevention as important training area. Next preference was given to housing, and breeding. This might be due to the fact that for keeping the breeding stock, scientifically made cages are essential. Availability of the good quality piglets are less in the market as mentioned elsewhere would be the reason for which farmers

were more interested to attain knowledge about breeding so that they can generate piglets in their own farm.

5.5.1 Diseases and prevention

Deworming, vaccination, hygiene and diarrhoea were the major areas under Diseases and Prevention preferred most by the pig farmers for both knowledge and skill aspects. Deworming and the vaccination were the most important management aspects in which the pig farmers needed the advice of the veterinary practitioners. There fore the farmers were interested to be proficient in such areas. According to Harikumar (2001), 25% of the pig farmers were facing environmental problems. Proper hygiene is the only remedy for this problem. It might be the reason for according a higher preference for training in hygiene aspect.

5.5.2 Housing

Under Housing, scientific construction of cage, methods to reduce temperature inside the cage, and low cost housing were assigned comparatively higher priority by the pig farmers as far as the training needs were concerned. This might be because most of the pig farmers were constructed the pig sty in the homestead with locally available materials as convenient to them. Due to the high environmental temperature and humidity prevailing in Kerala, there is stress to the animals. This might be the reason behind the preference of pig farmers to get training in that aspect. Since the pig farming is a subsidiary occupation, the farmers would not be interested to invest more in the farm. There fore they would be willing to construct low cost sheds with locally available materials.

5.5.3 Breeding

Majority of the pig farmers were rearing only large white Yorkshire and its cross breeds in the state. It might be the reason for the farmers preferring training in the knowledge aspect about the other exotic breeds. Selection of animals and scientific breeding also highly preferred by the pig farmers. The difficulty in getting good quality piglets in the market might have motivated the pig farmers to think about scientific breeding and production of good quality pig lets for the farm and for sale as stated earlier.

5.5.4 Feeding

Most of the pig farmers depended on kitchen /hotel waste and slaughter house waste feeding. This might be the reason behind the pig farmers had shown interest in training on unconventional feeds and swill feeding.

5.5.5 Management

Under Management, disposal of excreta and waste materials was most preferred by the pig farmers as far as training needs were concerned. This might be because the farmers were aware about the environmental problems due to pig farming. Proper disposal of excreta and waste materials could reduce the foul smell in the farm and thereby environmental pollution and complaints from the neighbours. Further the importance was given to reduction of stress in pigs and controlling and handling; could be because due to the high temperature and humidity, it is necessary to reduce the temperature inside the sty and thereby stress. As the methods used to control other animals could not be applied in case of pigs,

the farmers were interested to know the proper methods of controlling and handling.

5.5.6 Integrated Farming

Training on other farming activities, which could be done along with pig farming, was highly preferred by pig farmers. The scope for recycling the waste materials including the excreta and running other enterprises such as crops, fishes, ducks could be the attraction for opting a training on integrated farming. The training need index for the Biogas plant was low, possibly because more convenient alternative energy sources might have been available to the farmers.

5.5.7 Marketing

It was found that the pig farmers preferred marketing channels for pigs. This might be due to the fact that they wish to earn more profit. Further the importance was given to slaughtering and preparation of pork for sale might be because only a few of the farmers knew the slaughtering techniques and hygienic preparation of pork.

5.5.8 Economics

Majority of the pig farmers were keen to know about the loan, subsidies and government projects for pig farming. It might be because only a few had got loans or subsidies for their farming activities. The farmers also might be interested to expand their farm with the help of banks or local bodies. Further the importance was given to insurance for pigs. Even though the mortality and morbidity is less in pig farming compared to other livestock farming, the farmers did not want to take any risk.

IMPLICATIONS OF THE STUDY

The results of the study lead to draw some of the following implications.

1. The major farm operations in which pig farmers needed training were Diseases, Housing, Breeding, Feeding, Management, Integrated farming, and Economics of pig farming. These areas have to be given more emphasis in the training curriculum.

2. Training through print media and electronic media should be given more emphasis

3. Pig farmers should be given opportunity to visit the well organised farms.

4. Training programme should be made more practical oriented and the pig farmers should be given sufficient time to acquire skills.

5. Finding of the study would be of much use for training institutes conducting training programmes. This is also helpful for the planners and policy makers for planning and providing appropriate training for the pig farmers.

Summary

6. SUMMARY

The present study on training needs for pig farmers was conducted in Thrissur district. The five panchayaths having highest pig population were purposively selected. The list of pig farmers was prepared and from the list a proportionate random sample of 60 pig farmers was selected. The objective of the study were to find out the profile of pig farmers and to assess their training needs as well as their preferences with regard to type, method, duration and venue of training. The data were collected through interview method.

The variables studied were demographic variable, resource availability, socio-psychological variables, preference for type, method, duration and venue of training and training need preference in major farm operations. The results obtained were analysed using suitable statistical techniques. The preference in major farm operations were measured using Training Need Index and were ranked accordingly.

It was found that majority of the pig farmers belonged to middle age group and 90 percent of them were male. Christian population dominated among them while Hindu participation was also evident. More than half of the pig farmers were middle-school educated and occupied in private sector or in own business. Nearly one third of the pig farmers were having 1 to 5 years and 5 to 10 years of experience. Only 17 percent of them had undergone training. Most of them belonged to medium income category and started their farm with their own savings.

Majority of the pig farmers used to sell the pigs directly to the butchers while some were slaughtering the animal and were selling pork in the local market.

The location of the pig farm was in the home stead and animals were mainly fed with butchery waste and hotel/kitchen waste. Availability of feed was not a problem for the farmers. More than 90 percent of the pig farmers were rearing exotic or cross-bred pigs and were procuring piglets from the private farms. Most of the farmers were having medium risk preference, innovation proneness, marketing orientation and high economic motivation.

Majority of the pig farmers preferred training through newspaper and television. They preferred farm visit, lecture and exhibitions as methods of training and duration preferred the most for training was for one day. The Veterinary College, Mannuthy was the most preferred venue of training.

The major farm operations in which the pig farmers need higher knowledge and skill oriented training in the order of preference were diseases and prevention, housing, breeding, feeding, management, integrated farming and economics of pig farming. Under each major farm operations the minor farm operations identified by the respondents were deworming, vaccination, scientific construction of cage, methods to reduce temperature inside the cage, exotic breeds, selection of animals for breeding, unconventional feeds for pigs, swill feeding, disposal of excreta and waste material, methods to reduce stress in pigs, controlling and handling, mixed farming along with pig farming, bio-gas plant, marketing of pork, methods of preparation of pork, loan for pig farming, government projects and subsidies and insurance for pigs.

From the present study we could conclude that the training institute should take into account to the profile of the pig farmers and emphasise to be given to the major farm operations, types, method, duration and venue preferred by them while planning a training strategy.

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Appendix

Questionnaire

1. Name:

   a. Address:

   b. Religion: c. Sex: ☐

2. Age:

3. Education
   - 1 Primary ☐
   - 2 Middle School ☐
   - 3 High School ☐
   - 4 College ☐

4Occupation :
   - 1 Govt. Job ☐
   - 2 Private Job ☐
   - 3 Farmer ☐
   - 4 Business ☐
   - 5 Agricultural Labourer ☐
   - 6 Jobless ☐

5 Income

6 Land Holding

7 Experience in Pig Farming
   - 1 Less than One year ☐
   - 2 One - Five years ☐
   - 3 Five - Ten years ☐
   - 4 More than Ten years ☐

8 Source of Capital
   - 1. Own savings ☐
   - 2. Bank loan ☐
   - 3. Loan from private funds ☐
   - 4. Financial aid from local bodies ☐

9. Herd Size: Boar: Sow: Piglets Total

10. Location of farm
   - 1. Attached to home ☐
   - 2. Home stead ☐
   - 3. Remote area ☐

11. Type of feed

1. Concentrate feed ☐
2. Compound feed ☐
3. Hotel / Kitchen waste ☐
4. Butchery waste ☐

12. Availability old feed

1. Available in plenty ☐
2. Available in quantities just to need the requirement ☐
3. Scarce ☐

13. Source of piglets

1. Produced in the farms ☐
2. University farm ☐
3. Animal husbandry dept. farms ☐
4. Private farms ☐

14. Breeds of pigs raced

1. Local breed ☐
2. Exotic ☐
3. Cross breed ☐

15. Marketing

1. Sale of Pork ☐
2. Sale of pigs to Kerala Agricultural University Meat plant / Meat products of India ☐
3. Sale of pigs directly to private butchers ☐
4. Sale of pig to middle men ☐

16. Source of information about pig farming

1. Vetcinary hospital ☐
2. Training institutes ☐
3. News papers ☐
4. Television ☐
5. Radio ☐
6. Other farmers ☐

17. Training participation ? Training obtained / Training not obtained. If training obtained, place of training

1. Animal husbandry department training centers ☐
2. Kerala Livestock department board training centre Puthur. ☐
3. Vetinery college ☐
4. Private farms ☐

18. Risk Orientation

Given are a set of Statements, you may kindly go through the statements and express your opinion in any response category given along with.

Serial No.	Statements	Agree	Undecided	Disagree
1.	A pig farmer should rather take more chance in making a big profit than to be content with a small but less risky profit.			
2.	A pig farmer who is willing to take greater risk than the average farmer, usually do better financially.			
3.	It is good for a pig farmer to take risk when he knows his chance of success is fairly high.			
4.	Trying an entirely new method is animal husbandry by a pig farmer involve risk, but, its is worth it.			
5.	A pig farmer should rear one or two animals to avoid greater risks involved us dealing large number of animals.			
6.	It is better for a pig farmer not to try new methods unless most others have used them.			

19. Innovation Proneness

Three sets of statements are given below. Each of the sets contains three statements. You may kindly go through the statements and indicate the most likely and the least likely statement from each set.

Serial No.	Statements	Most likely statement	Least likely statement
1a.	I try to keep myself up to date with information on new farm practices but that does not mean that I try out all new methods on my farm		
b.	They talk of many new farm practices these days, but who knows whether they are better than the old ones.		
c.	I feel restless till I try out a new farm practice that I have heard about.		
2a.	From time to time I have heard of several new farm practices and I have tried out most of them in the last few years.		

b.	Usually I want to see the result my neighbours obtained before I try out new farm practices.		
c.	Some how I believe that the traditional ways of farming are the best.		
3a.	I am cautious about trying a new farm practice.		
b.	After all our forefathers were wise in their farming practices and I don't see any reason for changing those old methods		
c.	Quiet often new farm practices are not successful, however, if they are promising. I would surely like to adopt them.		

20. Economic Motivation

Given are a set of statements, you may kindly go through the statements and express your opinion in any of the response category given along with.

Serial No.	Statements	Agree	Undecided	Disagree
1.	A pig farmer should work towards more meat production and more profit			
2.	A most successful pig farmer is the one who makes most profit.			
3.	A pig farmer should try new scientific practices in animal husbandry which may earn him more profit.			
4.	A pig farmer should rear exotic breeds of pigs to produce maximum quantity of meat to increase monetary profits.			
5.	It is difficult for the pig farmers children to make a good start unless provided them with economic assistance.			
6.	A pig farmer must earn his living but the most important thing in life cannot be defined in economic terms.			

21. Marketing Orientation

Kindly indicate your opinion with each of the statement given below.

Serial No.	Statements	Agree	Disagree
1.	Market news is not so useful to a farmer .		
2.	A farmer can obtain good price by grading his produce.		
3.	Cold storage facilities can help a farmer to get better price for his produce.		
4.	One should sell his produce to the nearest market irrespective of the price.		
5.	One should purchase inputs from the shops where his relatives purchase.		
6.	One should grow those crops which have more market demand.		

22. Types of Training

Sl.No.	Types of Training	Most Preferred	Somewhat Preferred	Least Preferred
1.	Animal Husbandry Training Programmes.			
2.	Kerala Agricultural Training Programmes.			
3.	Radio.			
4.	Television.			
5.	Postal Training.			
6.	News Papers.			
7.	Farm Magazine			

23. Methods of Training

S.No	Methods of Training	Most preferred	Some what preferred	Least preferred
1.	Lecture.			
2.	Group discussion.			
3.	Exhibition.			
4.	Farm visiting.			
5.	Study tour.			
6.	Campaigns.			
7.	Film show.			
8.	Feature.			
9.	Demonstration.			
10.	Documentary.			
11.	Interview.			
12.	Success stories.			

24. Duration of Training

S. No	Duration	Most preferred	Somewhat Preferred	Least Preferred
1.	1 Day			
2.	1 Week			
3.	2 Weeks			
4.	1 Month			
5.	2 Months			

25. Venue of Training

S. No	Venue	Most preferred	Somewhat Preferred	Least Preferred
1.	Veterinary College, Mannuthy			
2.	K.L.D. Board Pig Farm, Puthur			
3.	Animal Husbandry Department Training Centres (Mundayad, Aluva, Kudappanakkunnu)			

Sl. No	Training Needs	Knowledge			Skill		
		Most Preferred	Somewhat Preferred	Least Preferred	Most Preferred	Somewhat Preferred	Least Preferre
1.	Housing						
	1. Scientific construction of cage.						
	2. Low cost housing.						
	3. Floor space requirement for various groups of animals.						
	4. Feeding space, water space requirements.						
	5. Methods to reduce temperature inside the cage.						
2.	Breeding.						
	1. Exotic breeds.						
	2. Selection of animals for breeding.						
	3. Heat symptoms in pigs.						
	4. Scientific breeding.						
	5. Flushing.						
	6. Care of Pregnent sow						
3.	Feeding.						
	1. Concentrate feeding						
	2. Swill feeding						

Sl. No		Knowledge			Skill		
		Most Preferred	Somewhat Preferred	Least Preferred	Most Preferred	Somewhat Preferred	Least Preferre
	3. Feed requirement for different age groups of pigs.						
	4. Nutrient requirement for Pigs.						
	5. Unconventional feeds for pigs.						
4.	Diseases and Preventation.						
	1. Hygiene						
	2. Contagious diseases.						
	3. Animal born diseases.						
	4. Vaccinations						
	5. Piglet anemia.						
	6. Deworming.						
	7. Fungal infection.						
	8. Diarrhoea						
	9. Wound dressing.						
	10. Skin diseases.						
	11. Diseases due to malnutrition.						

Sl. No		Knowledge			Skill		
		Most Preferred	Somewhat Preferred	Least Preferred	Most Preferred	Somewhat Preferred	Least Preferre
5.	Management.						
	1. Controlling and Handling.						
	2. Measurement of weight of pigs.						
	3. Disposal of excreta and waste materials.						
	4. Management of Orphan pigs.						
	5. Management of pregnant sow.						
	6. Management of farrowed sow.						
	7. Management of boar						
	8. Methods to reduce stress in pigs.						
6.	Economics of Pig farming.						
	1. Loan for pig farming.						
	2. Insurance for pigs.						
	3. Govt. projects and subsidies for pig farming.						
	4. Maintenance of registers						
	5. Calculation of credit-debit balance in pig farming.						

Sl. No		Knowledge			Skill		
		Most Preferred	Somewhat Preferred	Least Preferred	Most Preferred	Somewhat Preferred	Least Preferre
7.	Marketing.						
	1. Marketing of Pork.						
	2. Methods of preparations of pork.						
	3. Methods of preparation of pork products.						
8.	Integrated farming.						
	1. Mixed farming along with pig farming.						
	2. Biogas plant.						
	3. Economics of integrated farming.						

TRAINING NEEDS OF PIG FARMERS OF THRISSUR DISTRICT

By

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ABSTRACT OF THE THESIS

Submitted in partial fulfilment of the requirement for the degree of

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ABSTRACT

The objective of the study was to identify the profile and training needs of pig farmers of Thrissur district. The study was conducted in five panchayaths having highest pig population. A proportionate random sample of 60 pig farmers was selected for the study. The data were collected by interview method using a structured schedule.

The study revealed that majority of the pig farmers were middle aged, Christians, middle school educated, 1 -5 years experience in pig farming and not undergone any training. They were mainly marginal farmers having less than 1 hectare of land holding and of medium income group. Most of the pig sties were located in the homestead, and hotel or butchery waste feeding was given to the pigs. It was also noted that exotic breeds were reared by them, and pig farmers depended on other farmers for information about pig farming. Most of them had medium risk preference, innovation proneness, marketing orientation and high economic motivation.

Diseases and prevention was most preferred major subject matter area for training for both the knowledge and skill aspects among the eight studied. This was followed by housing, breeding, feeding, management, integrated farming, marketing and economic of pig farming. Under the eight major domains studied, the minor farm operations preferred by the respondents for training were

deworming, vaccination, scientific construction of cage, exotic breeds, selection of animals for breeding, unconventional feeds for pigs, swill feeding, disposal of excreta and waste materials, mixed farming, marketing and loan for pig farming

The pig farmers preferred training through print media and electronic media. For the institutional training they preferred training of one day duration. According to them farm visit was the best method of training where as the Veterinary College was the most preferred venue of training.