

**CORRELATES OF PERCEPTION OF THE FIELD STAFF
AND FARMERS ABOUT THE EFFECTIVENESS OF
SOIL CONSERVATION PRACTICES**

BY
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1986

DECLARATION

I hereby declare that this thesis, entitled "CORRELATES OF PERCEPTION OF THE FIELD STAFF AND FARMERS ABOUT THE EFFECTIVENESS OF SOIL CONSERVATION PRACTICES" 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 the award to me of any degree, diploma, associateship, fellowship or other similar title of any other University or Society.

Vellayani,

26th December 1986.




A. SUNDARAM

CERTIFICATE

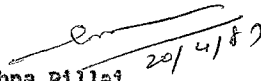
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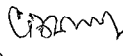

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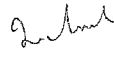

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INTRODUCTION

CHAPTER I
I N T R O D U C T I O N

The increasing pressure of human beings and animals on land results in the cultivation of steep and marginal lands, overgrazing, destruction of forests and hence the destruction of the entire production base. The degradation of the forest lands in the catchment of rivers and unscientific cultivation of steep slopes contribute to floods and silting of reservoirs and paddy fields which pose a great threat to the well being and economy of the country.

Measures which minimize the sediment discharge and peak flow from the watersheds are considered as essential components of any comprehensive approach to the problem of flood. Water scarcity has also become a serious problem facing the farmers. Hence, effective watershed management and soil and water conservation practices assume added significance.

The problem of soil erosion is severe in Kerala since a major portion of the cultivated land has undulating to steep topography and the intensity of the rainfall is also high. Intensification of agriculture on unscientific lines in the cultivated lands also leads to soil erosion causing serious depletion of soil fertility in the State.

The problem is not only economic, but also social in its broader aspects. It is a social problem for the simple

reason that land, soil and water are social assets and wastage of these is a threat to the present and the future society. Exploitation of land for immediate gains, irrespective of future consequences is a practice which a society cannot afford. The gravity of the problem calls for concerted and co-operative efforts of the society and the individual farmers ^{have} to work together in the field of soil and water conservation.

Progress of soil conservation works in Kerala

Till 1964, the formulation and implementation of the soil conservation programmes were governed by the Travancore- Cochin Land Development Act of 1950 and the Madras Land Development Act of 1949. The Kerala Land Development Act number 17 of 1964 assimilated into it the relevant provision^s of the above two enactments. This act has unified and amended the laws and regulations relating to the planning and execution of land development schemes including schemes for soil conservation and development of soil resources, the control and prevention of soil erosion and the reclamation of waste lands in the State.

The soil conservation unit of the Department of Agriculture of Kerala is the implementing agency for soil conservation measures in the State. The soil conservation unit makes payments for the completed soil conservation works to the individual beneficiaries, 25 per cent of which is treated as subsidy and the rest 75 per cent as loan. The loan portion is to be repaid by the beneficiaries in 20 equal half yearly instalments. The existing rate being

is Rs.717/- per 100 m² of stonepitched contour bunds in the soil conservation areas.

In spite of the departmental assistance for soil conservation works, the progress of work is slow in the State. Out of the 15 lakh hectares of land where soil conservation works were urgently required, only an area of about 65,000 hectares has been covered so far, i.e. within the last 30 years.

Need for the Study

In view of the slow progress of implementation of soil conservation programmes in the State and the technological gap existing in the soil conservation scheme areas, a study seemed essential to measure the perception of farmers about the soil conservation programmes. If the farmers had perceived the usefulness of the soil conservation programmes, acceptance of the practice ought to be natural and spontaneous. It is also necessary to study the perception of the Field Staff about the effectiveness of the soil conservation programme since they are associated with the soil conservation programmes at the grass root level.

The great importance accorded to the land improvement works in the State as well as the practical utility of the study to the soil conservation unit of the Department of Agriculture were considered topical and therefore the present study has been designed.

General Objective

The general objective of the study was to find out

the relative perception of the beneficiaries and field staff about the effectiveness of soil conservation practices and the influence of certain variables on the perception of the beneficiaries.

Specific Objectives

The specific objectives of the study were:

1. To develop a scale for measuring the perception of farmers and field staff about the effectiveness of soil conservation practices.
2. To measure the differential perception about the effectiveness of soil conservation practices by field staff and beneficiary farmers in Trivandrum district, and
3. To correlate the socio-psychological, communication and personal characteristics of farmers with their perception.

Limitation of the study

The study had the limitations of time and resources. However, care was exercised in making the study as systematic as possible. Since stone-pitched contour bunding is the only major soil conservation practice implemented in the State, the results naturally may focus on the perception about the benefits of this practice only. Hence, the recommendations that emerge from this study may not be applicable beyond the limits of the state. But, it is hoped that the study would be useful to the agencies and extension workers involved in soil conservation.

Lay out of the Study

The thesis is divided into six chapters. The first chapter deals with the introduction, detailing the need,

objectives, scope and limitations of the study. The second chapter presents the theoretical-orientation and pertains to the review of literature in the subject area. In the third chapter, the methodology used in the research work including the operationalization of the concepts, measurement procedures of the variables, data collection and statistical tools used are given. The fourth chapter deals with the results, based on statistical analysis. The fifth chapter contains the discussions of the results obtained. The sixth and last chapter is devoted to the summary of the study.

The references and appendices are given at the end.

THEORETICAL ORIENTATION

CHAPTER II

THEORETICAL ORIENTATION

A review of the existing literature on a topic helps the researcher to develop the theoretical framework of the study and assess the nature and quantum of research studies already undertaken in the area of his research. Keeping this in view, an attempt was made to review the related literature. The main objective of this chapter was to portray in broad outlines the conceptual frame of reference that has been used for the study. This will provide a theoretical basis for the empirical investigation.

This chapter is divided into three parts. The first part deals with the concept of perception. The second part deals with the concept of soil conservation practices. The third part pertains to the relationship of the independent variables with the dependent variable of the study.

1. Perception

Sergent (1951) defined role perception as a pattern or type of social behaviour which seems situationally appropriate to an action in terms of demands or expectations.

According to Crow and Crow (1936) perception is the meaningful sensation that assumes an important role in the life of an individual.

Attneave (1962) asserted that perception had to do with the input side of the organism, with certain short-term consequences of variations in stimulating conditions.

According to Blalock (1963) perception has the following characteristics.

- i) It is an individual matter. Thus, there may be as many different perception as there are individuals.
- ii) It must be considered that dealt with in terms of what an individual actually experiences.
- iii) It involves not only perceiving stimuli but also interpreting and describing these stimuli in terms of that are meaningful to the individual.
- iv) Various internal and external factors may influence both the interpretation of the stimulus and the response it is likely to provoke, and
- v) It is a dynamic phenomenon that may be continually changing within the individual.

According to Bonner (1966) perception is influenced by an orderly arrangement of physical objects and events but also modified by memory, imagination, needs, opinion and expectations of others. In the technical language, perceptions are determined by structural and functional factors.

According to Pfiffner and Sherwood (1968) accuracy in role perception has a definite impact on effectiveness and efficiency in organization.

Jaiswal and Roy (1960) Found that farmers' perception of all the six characteristics i.e., profitability, cost, physical compatability, cultural compatibility, complexity and communicability, significantly influenced their level of adoption of the agricultural innovations.

Tully (1968) stressed that a farmer does not become interested in any information, if he does not perceive it as relevant to his own farming situations, his resources, and his goals. The farmer's perception will depend on his values, beliefs and attitudes. These are likely to differ somewhat from person to person and between farmers and extension workers.

Bhatia (1969) stated that perception becomes fuller, more accurate and more serviceable as a result of our increasing experience. We learn to supply more detail and to distinguish the nature of subjects when only a slight clue is given. In all cases, limited sensory data provide sufficient clues for us to understand the whole object. Object also becomes more meaningful through experience. He further states that objects which are arranged in an orderly manner or which fall into natural groups are more readily perceived than confused collection of things. Arrangement and organization of objects help perception. Attention, set, type of surrounding, interests and values, mood, social norms and social perception are the major factors influencing perception, he continued.

He further stated that perception is sensation plus meaning, sensation means quality and perception means an object suggested by that quality. Sensation can give us form, shape, colour, taste, smell or sound but perception tells us what they mean and what object they stand for. An element of thought, memory, learning, past experience and motivation enters into perception.

Khorde and Sahay (1970) found that the perception of job was positively related to the performance of role of gramasevaks.

Thakur et al. (1970) while studying the extension personnel's perception of package programme observed that majority of the respondents lacked correct understanding of the concept of package programme.

Guttman (1971) while emphasising the significance of role perception, stated that 'perceiving is behaving'. He stated that concepts of perceiving are systematically interchangeable.

Rogers and Shoemaker (1971) generalised that relative advantage, compatibility, triability and observability of new idea as perceived by members of social system were positively related to its rate of adoption.

According to Puppawamy (1973) perception is a process of becoming aware of objects or events or characteristics by means of sensory operations. Previous experiences influence present perceptions. Thus perception is a highly complex process. A person tends to identify a given situation or object in terms of what is familiar to him. In other words, perception depends not only on the pattern of the stimuli but also on the individual's past experience and his needs.

Arriffin (1975) from his study with Malay peasant farmers, concludes that the farmer is more inclined to accept a recommended agricultural practice if he perceives that the practice is relevant to his situation.

Mitchel (1978) stated that perception is that factor that shapes and produces what we actually experience.

For the purpose of this study, perception of farmers about the effectiveness of soil conservation practices is operationally defined as the meaningful sensation of the beneficiary farmers about the effectiveness of the soil conservation practice.

In the case of field staff, it is operationally defined as the meaningful sensation of the field staff viz., overseers, draftsmen, surveyors and work superintendents of the soil conservation unit of the Department of Agriculture about the effectiveness of soil conservation practice.

2. Concept of Soil Conservation Practice

Reddy (1965) stated that the present concept of soil conservation is comprehensive and includes proper use of land according to its potentiality or capability, and exploiting it without depleting its fertility. Soil conservation therefore stands for good land husbandry.

Tamhane (1968) defined soil conservation as proper land use, protecting the land against all forms of soil deterioration, rebuilding of eroded lands, conserving moisture for crop use, proper use of irrigation water, providing drainage where needed, building up soil fertility and increasing yields and farm income.

As far as Kerala is concerned, the only major soil conservation practice followed in arable lands is contour bunding. Contour bunding is widely recommended in the soil conservation scheme areas of the state. Hence the study is restricted to perception of farmers and field staff about the effectiveness of contour bunding practice.

3. Relationship of the independent variables with the dependent variable of the study

Perception about the effectiveness of soil conservation practices was the dependent variable in this study. The independent variables were educational status, economic motivation, social participation, risk orientation, knowledge about soil conservation practices, innovation-proneness, utilization of personal-locality sources of information and contact with extension agency.

The researcher could not get relevant studies about the relationship of perception about the effectiveness of soil conservation practices with the independent variables. However, studies on the relationship of the independent variables with adoption of improved practices are quoted in order to develop an idea about the importance of those variables in determining adoption and other related areas of change.

1. Educational Status

According to Chamber's Dictionary, 'Education' is the bringing up or training, instructing, strengthening the power of body or mind or culture.

Moulik (1965) observed positive effect of education on the adoption of improved agricultural practices. The percentage of farmers adopting farm practices increased with increase in education.

Jaju (1964) observed that education was found to be associated with adoption. Educated farmers adopted practices earlier as compared to illiterate farmers.

Nandapurkar (1964) observed that as the level of education rose satisfaction of adopting soil conservation practices increased. In the same way, as the level of education decreased, there was gradual fall in satisfaction. Maximum satisfaction was observed among those people who were better in education, i.e., from middle to college group, whereas maximum dissatisfaction was observed among the illiterate and primary group. He finally summarised that education had direct bearing on satisfaction of adopting soil conservation practice.

Holman (1973) viewed education as progressive changes of a person affecting knowledge, attitude and behaviour as a result of formal institution and study. He further stated that it may be a development of a person resulting from experience rather than from maturation.

Makkar and Sohail (1974) identified positive and significant correlation between attitude of farmers and their level of education.

Supre and Salode (1975) reported that formal education was significantly related to level of knowledge of farmers.

Kaleel (1978) and Balachandran (1983) reported significant association between education and level of knowledge while Surendran (1982) observed no significant association between educational level of the farmers and their knowledge level.

Mathew (1980) observed no significant association between education and attitude towards scientific agriculture among the rural youth club members.

But, researchers like Kamarudeen (1981), Naik (1981), Vijayakumar (1983) and Cherian (1984) reported positive and significant association between education and attitude.

Many researchers have established positive and significant relationship of educational status with adoption (Perumal (1970), Viswanathan (1972), Chandrakandan (1973), Kamble (1973), Ramamoorthy (1973), Vellapandian (1974) and Subramanyan (1981))

Prakash (1980) in his study among the tribes of Wynad district, had also brought out the positive relationship between educational status and extent of adoption of improved agricultural practices.

Bhoite and Nikelje (1983) indicated that educated farmers were prone to adopting new technology and hence more and more educated farmers should be induced to take to farming.

Sinha et al. (1984) observed that educated farmers were more conversant with the utility and benefits of the extension programmes.

2. Economic motivation

Economic motivation is the desire to do well not so much for the sake of social recognition, but to attain the maximum profit by adopting a particular practice.

Das and Sarkar (1970) reported that higher the economic motivation possessed by a farmer, the more was his attitude towards improved farm practices.

Rao et al. (1971) concluded that economic motive was the most important factor affecting the adoption of high yielding varieties of wheat.

Reddy and Sahay (1973) found positive and significant relationship between economic motivation and role performance of leaders.

Somasundaram (1976) and Janakiramraju (1978) reported positive association between economic motivation and knowledge about agricultural practices.

Kher and Jha (1978) indicated that the level of economic motivation was directly related to the farmer's attitude. They further stated that none of the farmers having highly favourable attitude had low economic motivation.

Thangavelu (1979) observed that there was positive and significant relationship between attitude and economic motivation of loanees while such relationship could not be identified among the non-loanees.

Viju (1985) stated that economic motivation might be regarded as an indication of the degree of willingness for investment of available potential resources in adopting farm innovations.

The positive and significant association between economic motivation and adoption of improved agricultural practices have been established by many researchers Hobbs (1964), Beal and Sibley (1967), Nair (1969) and Singh and Singh (1970))

3. Social participation

Rahudhkar (1962), Dasgupta (1963) and Bose (1964), in their studies concluded that social participation had positive influence on adoption of practices. However,

Bhatia (1966), Gupta (1966) and Roy et al. (1968) did not support this view.

Brar (1966) and Reddy and Sahay (1973) stated that social participation correlated significantly with role performance of leaders.

Roy et al. (1968), Chandrakandan (1973), Ramamoorthy (1973), Palaniswamy (1978), Sadamate (1978), Segar (1979) Mishra and Singh (1980) Ravichandran (1980) and Sethu (1981) established positive association of social participation with adoption of farm practices.

According to Rogers the Shoemaker (1971), participation is the degree to which the members of social system are involved in the decision-making process. Participation in social activities does not start or stop at any specific age in the life of an individual. However, the intensity of social participation appears to influence the decision-making of the individual.

Lokhande (1973) pointed out to the positive correlation between credit behaviour of the farmers and their social participation in his study among loanees of a nationalised bank.

Kennedy et al. (1975) indicated that there existed relationship between membership in formal groups and the attitude of the farmers.

Balasubramaniam (1977) found significant and strong association in positive direction between attitude and social participation.

Reddy and Reddy (1977) stated that attitude had highly significant association with social participation.

Pillai (1978) reported that social participation had positive association with adoption of soil conservation measures.

Social participation was reported to be negatively and significantly related to technological gap, according to Madamate (1978).

Thangavelu (1979) reported nonsignificant association between attitude and social participation of the loanees of State Bank of India.

Mathew (1980) observed no significant association between social participation and attitude towards agriculture, whereas Das and Sarkar (1970) Vijaya (1982) and Cherian (1984) reported positive association between attitude and social participation.

4. Risk orientation

Heady and Jensen (1954) pointed out that the term 'risk' commonly refers to all outcomes which lead to losses or deviations of realisations from expectation. Farming is characterised by many risk situations, for eg., price, rainfall, insects and diseases.

Beeran (1966) found that sociological, psychological and economic variables were important in explaining farmers' attitude towards new ideas and techniques.

Supé (1969) defined risk orientation (preference) as the degree to which a farmer is oriented towards risk and uncertainty and courage to face problems in farming.

Risk orientation had positive association with adoption of farm practices as reported by Ernest (1973), Singh (1975), Somasundaram (1976), Balasubramonian (1977), Tripathy (1977), and Sethy (1978).

Sinha (1978) in his study on association between characteristics of respondents and their level of adoption, reported that the correlation between risk orientation and level of adoption was nonsignificant.

Kamarud den (1981) observed significant relationship between risk preference and attitude of farmers towards demonstrated cultivation practices.

Naik (1981) and Cherian (1984) reported significant association between risk preference and attitude of farmers.

Philip (1980) found that majority of the farmers had medium level of risk orientation.

Pillai (1983) found that in comparison to both medium and high technological gap categories, the low gap category of farmers had more risk orientation. The three categories were significantly different with respect to risk orientation

5. Knowledge about soil conservation practices

One of the main tasks of extension education in agriculture is to provide knowledge to the people about the improved cultivation practices. Knowledge as a component of behaviour plays an important role in the total behaviour of the individual. Once knowledge is acquired and retained in the mind, it undergoes and produces changes in the thinking process and a sort of 'mental alchemy' will take place.

English and English (1958) defined knowledge as the

body of understood information processed by an individual or by a culture. Knowledge is knowing what to do next, skill is knowing how to do it and virtue is doing it.

Sen and Roy (1967) stated that even the small farmers were well aware of the immense potential of the new farm technology including the high yielding varieties and the use of fertilizers.

Bhadkas (1968) observed that with increase in the educational level of the youth there was significant increase in their levels of knowledge and adoption.

Copal (1974) opined that farmers are mostly lacking adequate knowledge in scientific agriculture. He also found that 60 per cent of the farmers had below average knowledge level. The remaining 40 per cent alone had above average level of knowledge.

Hinjje (1975) found that the farmers' personal and situational characteristics were related to their knowledge level and knowledge level was related to the adoption behaviour of the farmers.

Janakiramraju (1978) reported that knowledge of farmers was positively and significantly associated with their extent of adoption of fertilizers in both irrigated and nonirrigated areas.

Manivannan (1980) stated that majority of the farmers (63.33 per cent) had medium knowledge regarding sunflower cultivation. About 19.17 per cent of the farmers possessed high knowledge and 17.50 per cent had low knowledge in the above aspect.

Kulhari (1981) reported that knowledge of farmers about paddy and wheat technology was about 60 per cent. The contact farmers had significantly high knowledge than other farmers.

Bhandarkar (1983) stated that there was correlation between knowledge and adoption. The variables viz., age, contact with extension agency, extension participation and cosmopolitanness were related to knowledge and adoption. There was significant relationship between annual income, social participation, knowledge and adoption behaviour of farmers.

Pillai (1983) pointed out that the farmers with low technological gap had more knowledge about soil conservation practices.

Rajapandi (1983) reported that majority of the paddy-growers had medium level of knowledge about the water management practices for paddy.

6. Innovation-proneness

Moulik (1965) defined innovation-proneness as the degree of an individual's interest and desire to seek changes in farming techniques and introduce each change into his own operation, as and when found practicable and feasible.

Innovation-proneness was found to be positively associated with adoption of farm practices (Moulik, 1965, Bhilegaonkar, 1976).

Reddy and Reddy (1975) established positive

relationship between innovativeness of farmers and their scientific orientation.

Balasubramaniam (1980) reported that mass media exposure behaviour, extension contact, type of family, perception of cost and profit, education, and social participation significantly contributed towards the innovativeness of farmers.

Singh (1981) reported that adoption was positively correlated with innovation proneness of the small, medium and pooled sample of farmers, but no association was found in the case of marginal farmers.

Pillai (1983) found that innovation-proneness was negatively associated with technological gap in integrated soil conservation practices in the case of low gap category and pooled farmers, whereas there was no such association in the case of medium and high gap categories of farmers. The technological gap in each of the three components of the integrated soil conservation practices was negatively associated with innovation-proneness of the farmers.

7. Utilisation of personal localite sources of information

The personal localite sources of information considered for the present study were neighbours, friends, family members and relatives.

Tripathy (1977) reported that the use of personal localite sources of information was negatively associated with the technological gap of farmers in the adoption of new rice technology.

Pillai (1983) stated that technological gap in each components of the integrated soil conservation practices was negatively associated with utilization of personal localite sources of information.

8. Contact with extension agency

This refers to the individual's contact with extension personnel.

Sinha and Bhasin (1968) found that the village level workers were the most important sources of initial information with respect to all the improved cultivation practices studied. Radio did not play an important role as the source of initial information on the practices.

Subhadra(1979) inferred that the adoption of improved animal husbandry practices was largely influenced by contact with extension agency.

Manivannan (1980) stated that approximately three-fourth of the sunflower growers (71.67 per cent) maintained medium level of contacts with the extension agency, while one-sixth (17.80 per cent) of the remaining had low degree of contact and about one-tenth (10.83 per cent) had high degree of contact with extension agency.

Sridharan (1981) inferred that majority of the sericulturists (61.67 per cent) maintained medium level of contact with the extension agency and one-fifth (20.83 per cent) of respondents had high level of contact with extension agency.

Karangale and Sinha (1982) observed that extension contact had most significant impact on the attitude and

adoption behaviour of farmers.

Senthil (1983) stated that majority (87.73 per cent) of hybrid cotton seed growers had medium level of contact with extension agency. Low level of contact with extension agency was found among only 1.82 per cent of hybrid cotton seed growers.

Sinha et al. (1984) stated that contact of extension agencies with farmers should be strengthened with regular visits. The contact may be made effective by means of audio-visual aids, field visits, kisan mela etc., which may help in changing the attitude of farmers towards soil conservation programme favourably.

Baghole (1985) observed that the most frequently sought information sources of small farmers were interpersonal sources, followed by extension workers. Among the extension workers, Agricultural Assistants of Training and Visit system and Gramasevaks of Agricultural department were the most sought information sources.

Summing up from the above reviews it could be seen that certain characteristics were influencing the adoption of various farm practices. The inadequacy of relevant studies on perception was also brought to revealed focus, which again brings to light the apparent need for undertaking an indepth study on the perception of farmers and field staff about the effectiveness of the soil conservation practices.

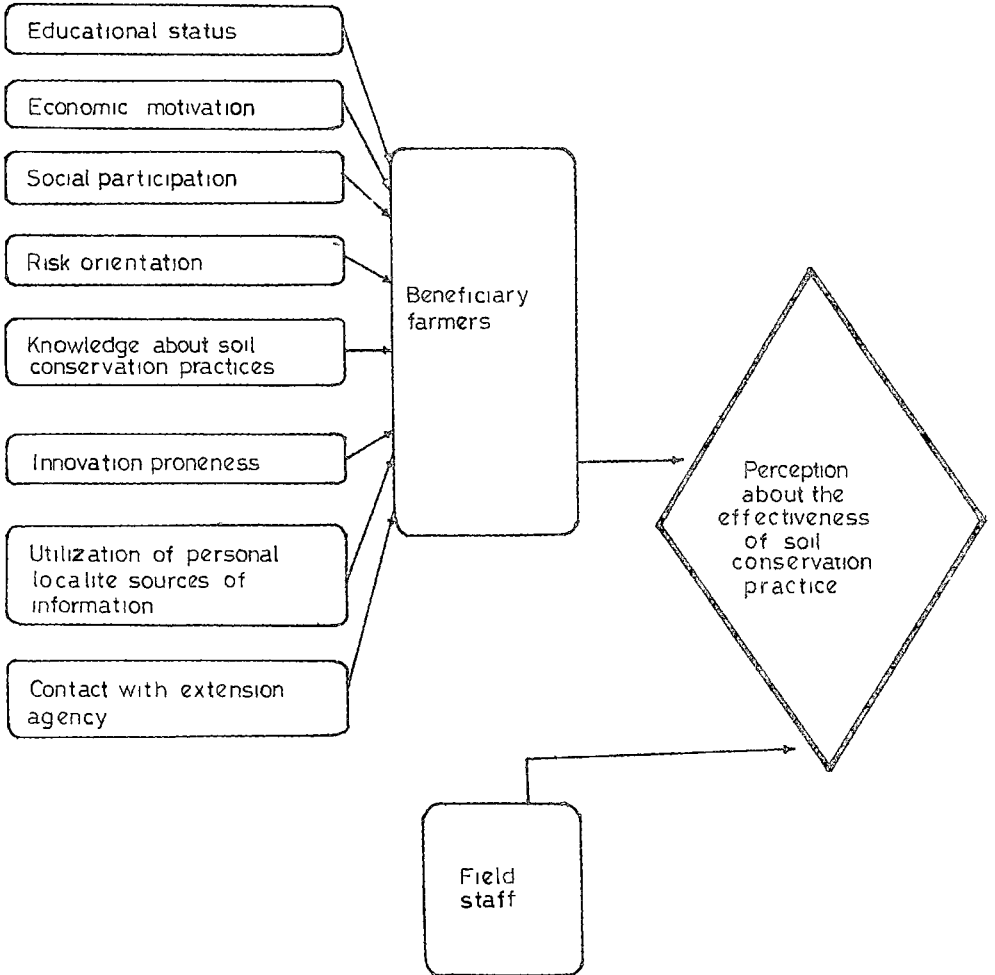
In view of the above, it was hypothesised that the selected independent variables may have some exact in

influencing the perception of the farmers about the effectiveness of soil conservation practices.

The conceptual framework of the study is illustrated in Figure 1.

Figure.1

CONCEPTUAL FRAME WORK OF THE STUDY



METHODOLOGY

CHAPTER III

METHODOLOGY

The research methods and procedures followed in the study are presented in this chapter under the following heads.

- A. Locale of research
- B. Sampling techniques
- C. Selection and empirical measurement of variables
- D. Techniques of data collection
- E. Statistical methods used

- A. Locale of research

- Description of the area

- Trivandrum district is the southern most district of Kerala State and is bounded by the Arabian sea on the west, Quilon district of Kerala on the north and Tirunelveli and Kanniyakumari districts of Tamil Nadu State on the east and south respectively. The geographical area of the district is 2186 sq. km. and the average annual rainfall 2001.4 mm.

- The different soil types found in Trivandrum district are:

- 1) Red loam
 - 2) Laterites
 - 3) Coastal alluvium
 - 4) Riverine alluvium

The major crops cultivated in the District are: Coconut (73727 Ha.) , Tapioca (53733 Ha.), Paddy (29391 Ha.) Plantation crops (12267 Ha.), Pulses (2664 Ha.)

The total area on which soil conservation works were to be done in the District was 16965 Ha. as estimated by the Soil Conservation Unit. Out of this, the progress of coverage by contour bunding work in the District till date is 6007.29 Ha.

B. Sampling Techniques

All the districts in Kerala are vulnerable to the hazards of erosion due to the intensity of rainfall. Even-though the contour bunding programme has wide acceptance of the farmers as reported by the Soil Conservation Unit, the progress of coverage in Trivandrum District is poor when compared to other districts. Hence, Trivandrum district has been selected for the study.

Selection of samples for the study

a. Selection of farmer-respondents

Trivandrum district has four taluks. Only three taluks were included for the study because the number of beneficiaries in Trivandrum taluk was only one and hence it is discarded. Different soil conservation schemes have been completed in the three taluks selected. The details of completed soil conservation schemes in the three taluks of Trivandrum district are given in Table 1. Stratified random sampling procedure was adopted for the study, the strata being the different taluks of Trivandrum district. Three soil

Table 1. Completed soil conservation schemes in Trivandrum District

Sl. No. and name of completed soil conservation scheme	Taluk	Village	Date of completion	Number of Beneficiaries
1 460-Perumpazhuthoor	Neyyattinkara	Perumpazhathoor	30-8-84	200
2 40-Kottukal	Neyyattinkara	Kottukal	1-9-66	1159
3 84-Chenboor	Neyyattinkara	Kilianoor	15-7-65	1143
4 86-Perunkadavila	Neyyattinkara	Perunkadavila	15-11-70	928
5 112-Vezhichal	Neyyattinkara	Ottaseharamangalam	15-6-70	412
6 455-Vilangumala	Neyyattinkara	Ottaseharamangalam	23-12-74	245
7 338-Mylachal	Neyyattinkara	Kishanoor	4-5-75	397
8 334-Thuruthumoola	Neyyattinkara	Vilappil	31-3-85	62
9 335-Puthuvettumuri colony	Neyyattinkara	Ottaseharamangalam	26-7-72	93
10 446-Maranoor	Neyyattinkara	Maranalleor	7-7-84	68
11 449-Vellarada	Neyyattinkara	Kunathukal	31-3-79	52
12 454-Mylakkare	Neyyattinkara	Amboori	2-2-82	598
13 23-Aruvikkara	Nedumangad	Vellaroda	29-6-61	1277
14 15-Karakulam	Nedumangad	Karakulam	29-6-63	127
15 85-Vamanapuram	Nedumangad	Nellanad	21-2-69	536
16 190-Vithura	Nedumangad	Uthamalakhal	28-2-70	55
17 332-perumala	Nedumangad	Pullanpara	11-9-78	140
18 333-Mudakkal	Nedumangad	Pullanpara	30-3-85	197
19 56-Varkala	Chirayinkil	Chennaruthy	31-12-65	74
20 60-Mudakkal	Chirayinkil	Mudakkal	11-10-68	319
21 204-Keezhuvalam	Chirayinkil	Keezhuvalam	11-11-69	23
22 258-Nagaroor	Chirayinkil	Vellalore	19-11-71	20
23 337-Manijappara Haziya colony	Chirayinkil	Pullmath	31-3-71	42

conservation schemes from Neyyattinkara taluk, two from Nedumangad taluk and two from Chiravinkil taluk were selected using random sampling with probability proportionate to the number of beneficiaries in each scheme. *The map of Taluk District with location of scheme areas selected is given in Figure 2*

The list of beneficiaries under the selected schemes were prepared from the records of rights and liabilities available in the office of the Junior Soil Conservation Officers and a total sample of 100 Beneficiaries was selected using the proportional allocation. The details of the schemes selected and the number of beneficiaries included in the sample under each scheme are given in Table 2.

Table 2. Size of sample drawn from the different scheme areas

Sl.No.	Name of Scheme	Beneficiaries
1	Soil conservation scheme No.48 Kottukal	33
2	Soil conservation scheme No.83 Perunkadavilla	25
3	Soil conservation scheme No.112 Vachichal	12
4	Soil conservation scheme No.15 Karakulam	4
5	Soil conservation scheme No.85 Vemonapuram	15
6	Soil conservation scheme No.56 Varkala	2
7	Soil conservation scheme No.60 Pudakkal	9
	Total	100

b. Selection of field staff-respondents

The strength of field staff of the Soil Conservation Unit in the district is given in Table 3. Since there was a total number of only 37 members belonging to all categories posted exclusively for field work, the entire population of 37 is taken as the sample size. They include overseers, draftsmen, surveyors and work superintendents.

Table 3. Field Staff of the Soil Conservation Unit in
Tilvaandrum District.

Sl.No.	Designation of field staff	Strength
1	Overseer	9
2	2 nd grade Draftsmen	5
3	Surveyor	9
4	Work Superintendents	14
Total		37

c. Selection and empirical measurement of variables

The variables selected along with the instruments used for measuring them are given below.

Perception

Perception about the effectiveness of soil conservation practice is the dependent variable in the study.

Contour bunding is the only major practice in the soil conservation scheme areas of the State and, therefore,

the study is restricted to the perception of the effectiveness of the contour bunding practice only.

Perception of farmers about the effectiveness of soil conservation practice is operationally defined as the meaningful sensation of the beneficiary farmers about the effectiveness of the contour bunding practice.

Perception of field staff about the effectiveness of soil conservation practice is operationally defined as the meaningful sensation of the field staff viz., Overseers, Draftsmen, Surveyors and Work Superintendents of the soil conservation unit of the Department of Agriculture about the effectiveness of the contour bunding practice.

Perception was measured by using the scale developed for the purpose.

Procedure followed for developing the scale:

Discussion with the concerned Officers of the Soil Conservation Unit of the Department of Agriculture, Specialists of the Department of Agronomy and Agricultural Extension of the Kerala Agricultural University and also review of literature enabled the researcher to collect 45 statements which were short descriptions of the farmers' perception about contour bunding practice. The statements related to the perception in the areas of control of soil erosion, control and utilization of running water, raising the fertility status, facilities for cultural operation, economic benefit and social benefits. The 45 statements were edited for discarding ambiguous and

overlapping statements, using the criteria described by Edwards (1969). Thus, after editing 24 statements were retained for the purpose.

The 24 statements were sent to judges comprising of experts from the field of soil conservation, Agronomy and Agricultural Extension for judgement. (Appendix -I) The judges were asked to indicate their judgement regarding the degree of relevance of each statement on a 4 point continuum from most relevant to least relevant.

Out of the 45 judges, 41 responded. Six responses were rejected for carelessness in judging. The remaining 35 responses were taken into consideration for selecting the relevant statements. From the 24 statements, 22 statements with relevancy values above median were selected. These 22 statements were given as the stimuli for rating in a five-point continuum of most effective, effective, undecided, less effective and least effective with scores of 5, 4, 3, 2, and 1, respectively. The scale was tested for its reliability and validity as detailed below:

A test score is called reliable when we have reason to believe the score to be stable and trustworthy. Guilford (1954) defined reliability as "the proportion of the variance in obtained test scores". A scale can be said to be reliable only when it will consistently produce the same result when applied to the sample at any time.

There are three standard procedures known as the split-half, alternate forms and test-retest methods to

estimate reliability . All these are designed to find out the self-correlation of the test. In the case of the split-half method, the Spearman-Brown formula has usually been applied to estimate the reliability of the test of full length from the obtained estimate of correlation of a test of half length.

Split-half method of estimating reliability

The odd-even split-half method was used in the study to find out the reliability of the items. The 22 statements were divided into equal halves with 11 odd-numbered statements in one half and 11 even-numbered statements in another. These two forms of statements were administered to 30 respondents from completed scheme areas outside the area of study, but having identical conditions.

The total scores for each respondent in first and second set were calculated separately. The coefficient of correlation between two sets of scores obtained on half forms of scales were computed. The coefficient of correlation obtained was 0.836 and it was significant at 1 per cent level of probability.

In order to estimate the reliability of the total test, the Spearman-Brown formula was applied.

$$\text{Spearman-Brown Formula: } r' = \frac{2r}{1+r} \quad \text{where}$$

r' is the reliability coefficient

r is the correlation coefficient

$$\text{Substituting the values: } \frac{2 \times 0.836}{1 + 0.836}$$

The obtained value was 0.920 and, therefore, the scale has high reliability.

Validity

Validity refers to the degree to which test scores or other measures predict some practical criterion measures.

Validity by assumption

This means that it is assumed that the scale measures what is intended to be measured.

The contents of the scale were obtained by discussion with experts in soil conservation unit of the State Department of Agriculture and the teachers of the Kerala Agricultural University. A thorough review of literature was also done before the finalisation of statements. The statements represented a broad universe of opinion called from the various credible sources. The statements were finally sent to judges as to the degree of relevance of each statement. Only the statements with relevancy values above median selected for the scale. In these circumstances, it was assumed that the scale possessed content validity.

Intrinsic Validity

The degree to which a test measures what it purports to measure is its intrinsic validity. It is measured by finding the square root of its reliability i.e. the square root of the proportion of true variance. The test indicated that the intrinsic validity was high.

Independent variables

Twenty one independent variables were initially selected after a pilot study in two soil conservation scheme areas in Trivandrum district, discussion with experts and an extensive review of literature. The list of 21 variables, considered to be important for the study based on the above, was circulated among the teachers of Kerala Agricultural University for their judgement. Only eight independent variables, judged to be most relevant to the dependent variable, were selected for detailed investigation. The eight independent variables comprise of the socio-psychological, communication and personal characteristics of farmers.

1. Educational Status

Educational status is operationally defined as the level of education the farmer possessed at the time of interview.

The socio-economic status scale of Trivedi (1963) with slight modification in the scoring procedure, was followed to measure the educational status. According to this, the farmer-respondents were categorised into the groups of illiterates, can read only, can read and write, primary school, middle school, high school and above. The scoring procedure was as follows:

<u>Level</u>		<u>Score</u>
Illiterate	-	0
Read only	-	1
Read and write	-	2
Primary School	-	3
Middle School	-	4
High School & above	-	5

2. Economic motivation

It is operationally defined in terms of profit maximisation and the relative value placed by the farmer on economic ends.

The economic motivation of the farmer who practiced contour bunding was measured with the help of the self-rating economic motivation scale developed by Moulik (1965).

The scale consists of three sets of statements, each set having three short statements with weights 3,2 and 1. The forced choice method was followed to overcome the familiar problem of personal bias and lack of objectivity in self-evaluation. This method forced the respondent to choose from a group of three statements describing a particular personality characteristic, the one which most accurately described the respondent himself and also the one which least accurately portrayed himself.

After obtaining the respondents' 'most - least' choices for each of the three sets of statements, the scoring was done by summing up the ratios of the weight of the 'most -

MEASUREMENT OF VARIABLES

I	DEPENDENT VARIABLE	MEASUREMENT OF VARIABLES
	'PERCEPTION' About the effectiveness of soil conservation practice	Using the perception scale developed for the purpose
II	INDEPENDENT VARIABLES	
1	Educational status	Using the socio-economic status scale of Trivedi (1963) with slight modification in the scoring procedure
2	Economic motivation	Using the scale developed by Moulik (1965)
3	Social participation	The scale developed by Lokhande (1974)
4	Risk orientation	Scale developed by Gupte (1969)
5	Knowledge about soil conservation practices	Using the test developed by Pillai (1963)
6	Innovation proneness	Using the "self rating scale" developed by Moulik (1965)
7	Utilization of personal localite sources of information	Using the schedule developed for the purpose
8	Contact with extension agency	Using the schedule developed for the purpose

like" statement to the weight of "least - like" statements for the economic motivation scale, the sum of the ratios for the three sets was the respondent's self-rating score for economic motivation.

3. Social participation

Social participation in this study refers to the degree to which the farmer was involved in formal organizations as a member or office bearer and also the regularity in his attendance in meetings.

The procedure developed by Lokhande (1974) was used for the purpose of measurement of social participation.

Scoring procedure:

<u>Items</u>	<u>Scores</u>
No membership	0
Membership in one organization	1
Membership in more than one organization	2
Office bearer in one organization	3
Office bearer in more than one organization	4
Distinctive features (MLA, MP, etc.)	6

Attendance in meetings either as a member or as office bearer was considered important. For attending meetings 'regularly' 'occasionally' and 'never' scores of 3,2,1 respectively were given. To obtain the final score of a respondent, the scores obtained as a member or office bearer was multiplied with scores obtained for attendance in meetings and were added up.

4. Risk Orientation

Risk orientation in the study refers to the degree to which the farmer who practiced contour bunding is oriented towards risk in adopting the different methods of farming .

To measure risk orientation, the risk preference scale developed by Supe (1969) was used. This consisted of six statements rated on a five-point continuum ranging from 'strongly agree', 'agree', 'undecided', 'disagree' and 'strongly disagree' with scores of 7,5,4, 3 and 1 respectively, for positive items and scores of 1,3,4,5 and 7 for the negative items, respectively.

5. Knowledge about soil conservation practices

It is operationally defined as the extent of understanding of the farmer as evident from his responses at the time of interview to a set of questions related to soil conservation practices.

The knowledge test developed and standardised by Pillai (1983) in his study on interrelated soil conservation practices in Kerala, was used to measure the variable in the study. The test contained 16 items which were to be answered in dichotomised forms such as 'correct-incorrect' and 'yes-no'. One score each was given for the correct answer and zero for the incorrect answer. The summation of the scores over all the items of a particular respondent indicated his level of knowledge about soil conservation practices.

6. Innovation-proneness

Innovation-proneness refers to the behaviour pattern of the farmers who have interest in and desire to seek changes in farming techniques and to introduce such changes into their farming operations when practical and feasible.

Innovation proneness was measured by the 'self rating scale' developed by Moulík (1965). This scale consists of three sets of statements. The respondents were asked to choose the one amongst three sets of statements which most accurately portrayed (most like) them, and also the one that portrayed (least like) them from each set. The respondent's 'most liked' and 'least liked' choices for each statement were obtained. The three sets in each statement were given the weightage of 3, 2 and 1 denoting high, medium and low degree of innovation-proneness.

The ratio of weightages of the most liked statement to the least liked statement in each set was worked out. Then the ratio for three sets of statements were summed up which give the respondent's self rating score for innovation proneness.

7. Utilisation of personal localite sources

The personal localite sources of information considered for the present study were neighbours, friends, family members and relatives.

A simple schedule was developed and used to measure this variable.

Each respondent was asked to indicate on a four-point continuum as to how often he got information about soil conservation practice from each of the sources. The scoring procedure was 3,2,1 and 0 for the responses 'most often' 'often' 'some times' and 'never' respectively. By adding the score secured by him for the different sources, the score of an individual respondent was obtained.

B. Contact with extension agency

Contact with extension agency is operationally defined as the frequency with which the farmer comes into contact with personnel of the soil conservation unit and other agencies within a fixed period.

In this study, the frequency with which the farmer comes into contact with different personnel of soil conservation unit such as Junior Soil Conservation Officers, Overseers, Draftsmen, Surveyors, Work Superintendents and other agencies was measured. The frequencies of contact were categorised as more than once in a week, once in a week, once in a fortnight, once in a month and never of 4,3,2,1 and 0 respectively. The total score was arrived at by summing up the scores obtained by the respondent for each category of extension personnel.

D. Techniques of data collection

Construction of Schedule

Interview schedule part 'A' was used for collection of data from the farmers. Interview schedule part 'B' was used to study the perception of field staff about soil conservation practice.

The draft interview schedule was finalised after pre-testing and making necessary modifications. While pre-testing, care was taken not to take samples from the scheme areas selected for the study, but from nearby scheme areas having identical conditions.

Interview schedules A & B are given in Appendix-II
Data Collection

The schedule was translated into Malayalam and read out to the farmer-respondents. The data collection work was carried out during October - November 1986.

E. Statistical methods used

Test of significance, correlation analysis and path analysis were used in the study as the statistical methods.

Test of significance was used to measure the differential perception about the effectiveness of the soil conservation practice by the field staff and farmers.

Correlation analysis was used to find out the intensity of association between perception of farmers about the effectiveness of soil conservation practice and their socio-psychological, communication and personal characteristics.

Path analysis was done to find out the direct and indirect effects of the independent variables on perception of the farmer-respondents about the effectiveness of soil conservation practice .

RESULTS

CHAPTER IV
RESULTS

The results of the study, in accordance with the objectives, are presented in this chapter under the following sub-heads.

- A. Perception of farmers and field staff about the effectiveness of soil conservation practices.
- B. Differential perception about the effectiveness of soil conservation practices by field staff and beneficiary farmers.
- C. Correlation between perception of farmers about the effectiveness of soil conservation practices and their socio-psychological, communication and personal characteristics.

A. Perception of farmers and field staff about the effectiveness of soil conservation practices

Perception of farmers and field staff about the effectiveness of soil conservation practice was measured by using the scale developed for the purpose as detailed in the methodology.

1. Perception of farmers: The perception scores for the sample of farmers about the effectiveness of soil conservation practice are given in Table 4.

Table 4. Distribution of the farmer-respondents according to their perception about the effectiveness of soil conservation practice

Perception scores	Category	Frequency	n=100 Percentage
Below 72.614	Low level	14	14
Between 72.614 & 89.446	Medium level	75	75
Above 89.446	High level	11	11
Total		100	100

$$\bar{X} = 81.030 \quad SD = 8.416$$

The sample of farmers were grouped into three categories taking into account the mean value of the characteristic and the extent of spread. Assuming the distribution of characters to be approximately normal, the interval between mean - SD and mean + SD should include 68 per cent of the total population. Thus, grouping of the respondents into the three categories could be done.

<u>Categories</u>	<u>Description</u>
Low	: Below mean - SD
Medium	: Between mean - SD and mean + SD
High	: Above mean + SD

A farmer with perception score below 72.614 is considered to have a low level of perception, whereas one

with perception score above 89.446 was considered to have a high level of perception. A farmer having score in between 72.614 and 89.446 is considered to have a medium level of perception about the effectiveness of soil conservation practice .

An appraisal of Table 4 revealed that 14 per cent of the farmers had low level of perception about the effectiveness of soil conservation practice . Majority of the farmers (75 per cent) had medium level of perception. Only 11 per cent of the farmers had a high level of perception about the effectiveness of soil conservation practice .

The results showed that the distribution of perception scores were approximately normal. This is diagrammatically presented in Figure 5.

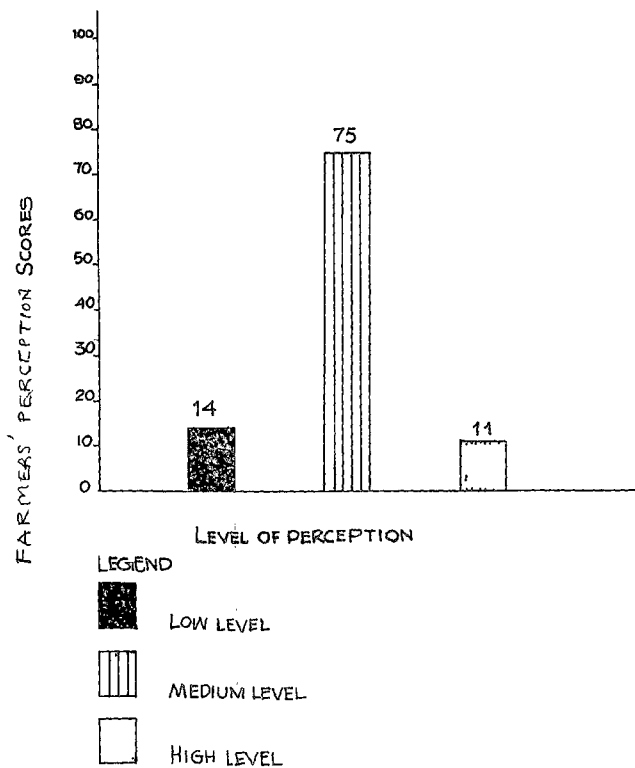
2. Perception of field staff

The perception scores for the sample of field staff about the effectiveness of soil conservation practice are given in Table 5.

Table 5. Distribution of the field staff-respondents according to their perception about the effectiveness of soil conservation practice .

Perception scores	Category	Frequency	n=37 Percentage
Below 76.041	Low level	5	13.51
Above 76.041 & 94.553	Medium level	25	67.57
Above 94.553	High level	7	18.92
	Total	37	100.00
		$X = 83.2972$	$SD = 9.2557$

Fig.3 DIAGRAMS SHOWING THE LEVEL OF PERCEPTION OF FARMERS-
ABOUT THE EFFECTIVENESS OF SOIL CONSERVATION PRACTICE



The field staff were categorised into three viz. with low level perception, with medium level perception and with high level perception about the effectiveness of soil conservation practice, based on the mean and SD of the perception scores. A field staff with perception score below 76.041 is considered to have low level of perception whereas one with perception score above 94.553 is considered to have high level of perception. A field staff having score in between 76.041 and 94.553 is considered to have medium level of perception about the effectiveness of soil conservation practice.

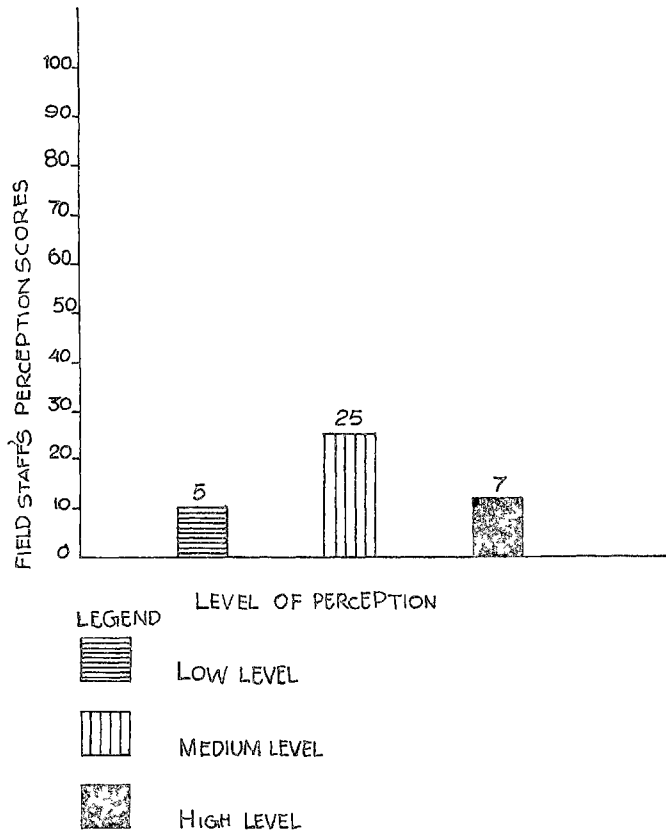
As appraisal of Table 5 revealed that 13.51 per cent had a low level of perception about the effectiveness of soil conservation practices. Majority of the field staff (67.57 per cent) had medium level of perception. Only 18.92 per cent of the field staff had high level of perception about the effectiveness of soil conservation practice.

In the case of perception of the field staff also, the distribution of perception scores was approximately normal. The results are diagrammatically presented in Figure 4.

8. Differential perception about the effectiveness of Soil conservation practice, by field staff and beneficiary farmers

The mean perception score of the farmers was 81.03, whereas the mean perception score of the field staff was

Fig.4 DIAGRAM SHOWING THE LEVEL OF PERCEPTION OF
FIELD STAFF ABOUT THE EFFECTIVENES OF -
SOIL CONSERVATION PRACTICE



85.30. The 't' value (2.55) indicated that there was significant difference in the perception of farmers and perception of the field staff about the effectiveness of soil conservation practice. Mean perception of field staff was significantly higher than that of the farmers.

C. Correlation between the perception of farmers about the effectiveness of soil conservation practice and their socio-psychological, communication and personal characteristics

The zero - order correlation between perception of the farmer- respondents about the effectiveness of soil conservation practice and the independent variables is given in Table 6.

Table 6. Correlation between perception of farmer respondents effectiveness of soil conservation practice and the independent variables

Independent variables	Zero-order correlation	n=100
Educational status	0.5814	**
Economic motivation	0.2848	**
Social participation	0.6964	**
Risk orientation	0.7208	**
Knowledge about soil conservation practices	0.5506	**
Innovation proneness	0.5051	**
Utilization of personal localite sources	0.1733	N.S.
Contact with extension agency	0.7233	**

** : Significant at 0.01 level of probability.

N.S. : Not significant

Table 6 revealed that all the socio-psychological characteristics of farmers viz. economic motivation, social participation, risk orientation and innovation proneness were positively correlated with their perception about the effectiveness of soil conservation practice at 0.01 per cent level of probability. The personal variables viz. educational status and knowledge about soil conservation practices were also positively correlated with perception at 0.01 per cent level of probability. Out of the two communication characteristics studied, perception was found to have positive correlation with contact with extension agency at 0.01 per cent level of probability. Utilisation of personal localite sources was not correlated with the farmers' perception about the effectiveness of soil conservation practice.

Among the independent variables, contact with extension agency recorded the highest correlation value with perception.

D. Direct and indirect effects of the independent variables on the dependent variable

To get a clear picture of the direct and indirect effects of the independent variables on the perception of farmers about the effectiveness of soil conservation practice, path analysis was done. Variables through which substantial indirect effects were channelled could also be found out by doing path analysis.

Table 7 presents the indirect and total correlation and effects of the eight independent variables. Table 8

Table 7. Direct and indirect effects of the independent variables on perception of farmers about the effectiveness of soil conservation practice

X_1	X_2	X_3	X_4	X_5	X_6	X_7	X_8	Total in- direct effect	Total correlation with Y
<u>0.34946</u>	-0.19777	0.11359	0.10649	0.06480	0.06567	-0.02338	0.10254	0.23194	0.5814
0.28467	<u>-0.24278</u>	0.6821	0.05652	0.03074	0.04772	-0.01178	0.05150	0.52758	0.2840
0.19479	-0.08126	<u>0.20378</u>	0.13123	0.03660	0.03046	-0.1067	0.14837	0.49262	0.6964
0.21932	-0.00007	0.15773	<u>0.16968</u>	0.09381	0.03675	-0.02614	0.15152	0.55112	0.7208
0.12413	-0.04091	0.09003	0.06725	<u>0.10244</u>	0.02217	-0.01929	0.10478	0.36816	0.5506
0.26789	-0.13525	0.09148	0.07279	0.04722	<u>0.03567</u>	-0.01268	0.08790	0.41943	0.5051
0.09649	-0.03377	0.04734	0.05236	0.04136	0.01282	<u>-0.08470</u>	0.04019	0.09360	0.1783
0.10710	-0.06928	0.15787	0.13335	0.00981	0.03935	-0.02043	<u>0.19152</u>	0.53177	0.7233

RESIDUE = 5784464

X_1 = Educational status
 X_2 = Economic motivation
 X_3 = Social participation
 X_4 = Risk orientation

X_5 = Knowledge about soil conservation practices
 X_6 = Innovation proneness
 X_7 = Utilization of personal localite sources
 X_8 = Contact with extension agency

Table 8. Substantial effects of the independent variables on perception of farmers about the effectiveness of soil conservation practice

Variable No.	Name of the variable	Direct effect	Total indirect effect	Substantial effect through the crucial variable according to the rank		
				First	Second	Third
1	Educational status	0.34946	0.23194	-0.19777 (X_2)	0.11359 (X_3)	0.10649 (X_4)
2	Economic motivation	-0.24278	0.52758	0.28467 (X_1)	0.06821 (X_3)	0.05692 (X_4)
3	Social participation	0.20378	0.49262	0.19479 (X_1)	0.14837 (X_2)	0.13133 (X_4)
4	Risk orientation	0.16968	0.55112	0.21932 (X_1)	0.15773 (X_3)	0.18052 (X_2)
5	Knowledge about soil conservation practices	0.18244	0.35816	0.12413 (X_1)	0.10478 (X_3)	0.09003 (X_2)
6	Innovation proneness	0.08567	0.41943	0.26789 (X_1)	0.13325 (X_2)	0.09148 (X_3)
7	Utilization of personal localite sources	-0.02470	0.09360	0.09649 (X_1)	0.03236 (X_4)	0.04734 (X_3)
8	Contact with extension agency	0.19152	0.53178	0.18710 (X_1)	0.15787 (X_3)	0.13335 (X_4)

Out of the 24 substantial indirect effects, 7 were routed through X_1 , 7 were routed through X_3 , 5 were routed through X_4 , 3 were routed through X_2 and 2 were routed through X_2 .

shows the substantial indirect effects through the crucial variables.

A perusal of Table 7 indicated that the independent variable, educational status (X₁) had the highest substantial direct effect (0.34946) on perception. The total indirect effect ranged from 0.04202 in the case of economic motivation to 0.55112 in the case of risk orientation.

The variable-wise results are presented below:

X₁. Educational status

Educational status had highest direct effect on perception (0.34946). The total indirect effect of this variable was positive and substantial (6.23194). The indirect effects were routed through economic motivation (X₂), Social participation (X₃) and risk orientation (X₄).

X₂. Economic motivation

The direct effect of the variable was negative and substantial (-0.24278). The indirect effect of this variable was positive and substantial (0.52758). The substantial effects were routed through educational status, social participation and risk orientation.

X₃. Social Participation

The direct effect of this variable was positive and substantial (0.20378). The indirect effect of social participation was positive and substantial (0.49262). The substantial effects were routed through educational status, contact with extension agency and risk orientation.

X₄. Risk orientation

The direct effect of the variable was positive and substantial (0.16968). The indirect effect of risk orientation was very high and positive (0.55112). The substantial effects were routed through educational status, social participation and contact with extension agency.

X₅. Knowledge about soil conservation practices

The direct effect of this variable on perception of the effectiveness of soil conservation practice was positive and substantial (0.18244). The indirect effect of knowledge on perception was also positive and substantial (0.36816). The indirect effects were routed mainly through educational status, contact with extension agency and social participation.

X₆. Innovation proneness

The direct effect of innovation proneness was positive (0.30567). The indirect effect was positive and substantial, (0.41943). The indirect effects were routed through educational status, economic motivation and social participation.

X₇. Utilization of personal localite sources

The direct effect of this variable was negative (-0.06470), whereas the indirect effect was positive (0.0936). The indirect effects were routed through educational status, risk orientation and social participation.

Kg. Contact with extension agency

The direct effect of this variable was positive and substantial (0.19152). The indirect effect was quite high and positive (0.53178). The indirect effects were routed through educational status, social participation and risk orientation.

DISCUSSION

CHAPTER V

D I S C U S S I O N

The results obtained in this study are discussed and interpreted in this chapter under the following heads.

1. Perception of farmers about the effectiveness of soil conservation practice .
 2. Perception of field staff about the effectiveness of soil conservation practice .
 3. Differences in perception of farmers and field staff.
 4. Relationship between perception of farmers about the effectiveness of soil conservation practice and their socio-psychological, communication and personal characteristics.
 5. Direct and indirect effects of the socio-psychological, communication and personal characteristics of farmers on perception about the effectiveness of soil conservation practice .
1. Perception of farmers about the effectiveness of soil conservation practice

The perception scores of the farmers ranged from 60 to 105, the maximum possible score being 110. The results given in Table 4 revealed that majority of the farmers in the soil conservation scheme areas (75 per cent) had average level of perception about the effectiveness of soil conservation practice . This evidently showed

that the distribution of scores on perception was approximately normal as far as the groups of farmers was concerned. The reason for this phenomenon could be their lack of exposure to the information about the advantages of the soil conservation technology. If more attention is paid to training the farmers on the techniques and advantages of the innovation, more number of farmers could have been brought to the high level of perception category.

The farmers with low level perception (14 per cent) and high level of perception (11 per cent) were comparatively lesser. Since the soil conservation unit of the Department of Agriculture is making full payment for the contour bunding works by way of 75 per cent as loan ^{and} 25 per cent as subsidy, certain farmers might have been motivated to complete the soil conservation works to avail the financial benefits. This might be sometimes without understanding the full benefits of the soil conservation practice. Once they get the financial benefits, they may not be bothered to learn the effectiveness of the programme in terms of land improvement. This may be the reason for the low level of perception of 14 per cent of farmers in the scheme areas.

Farmers with more of social participation and educational status might be getting more knowledge about the benefits of the programme. They after availing the financial benefits from the programme might be evaluating the usefulness of the practices. Their increased

knowledge might have definitely contributed to a higher level of perception about the effectiveness of soil conservation practice .

2. Perception of field staff about the effectiveness of the soil conservation practice

Majority of field staff have medium level of perception about the effectiveness of the soil conservation practice (67.57 per cent). The field staff include overseers, surveyors, draftsmen and work superintendents. They are more aware of the benefits of the programme as they are educated. They have more expertise on the soil conservation works and naturally know more about the advantages of the soil conservation practices. Because they are responsible to transfer the technology to the farmers, they apparently learn about the different aspects of the usefulness of the programme. This increased awareness has led to the average level of perception about the effectiveness of soil conservation practice among the majority of the field staff respondents.

More than 18 per cent of the field staff are with high level of perception. At least a minority of the staff has more faith in the programme and they may be more dedicated in transferring the technology as a result of their greater exposure to the technology. This minority may be more aware about the different aspects of the benefits of the programme such as improvement in soil fertility, soil structure, water holding capacity etc. They may be getting more technical information from

the Soil Conservation Officers and hence their perception also naturally falls in the high level.

Over 13 per cent of the field staff are with lower level of perception about the soil conservation practices. This is a very sad state of affairs. Due to lack of awareness or lack of knowledge or negative attitude towards the soil conservation programme, they show lesser interest in soil conservation extension. Such people may not have any faith in the soil conservation programme and because their perception about the effectiveness of the soil conservation practice is low, they may not be able to educate the farmers effectively on the advantages of the soil conservation practices. Inadequate training facilities to educate the field staff might have contributed to this low level of perception.

3. Differences in perception of farmers and field staff

There was difference in the perception of field staff and that of the perception of farmers about the effectiveness of soil conservation practices. The mean value of perception scores of the farmers was only 81.03, whereas the mean perception score of the field staff was 85.03. The perception of the field staff about the effectiveness of soil conservation practice, was higher. It is quite natural that the educated field staff, especially with experiences in implementing soil conservation works have higher perception about the benefits of the programme. They might be more studied about the effectiveness of the contour bunding practice .

But the results indicate that only about 19 per cent of the field staff have the high level of perception. This is quite inadequate. For more serious extension works in soil conservation, educating the field staff is a pre-requisite as the change agents should have proper faith in the programme. Hence, while educating on the effectiveness of the soil conservation programmes, the first priority is to convince the field staff. For persuading the farmers to maintain the soil conservation works, concerted extension effort is required. This has to be achieved by motivating the staff first to understand and internalise the effectiveness of the soil conservation practice.

4. Relationship between perception of farmers about the effectiveness of soil conservation practice and the socio-psychological, communication and personal characteristics

1. Educational status

There was positive relationship between perception about the effectiveness of soil conservation practice and educational status of the farmers. The effectiveness of soil conservation practice was significant at 0.01 per cent level of probability.

Many researchers have established positive relationship between educational status of the farmers and their adoption of farm practices. Pillel (1978) reported that educational status of the farmer was positively correlated with adoption of soil conservation practices. Educational

status of the farmer might have raised the awareness of the farmer about the benefits of the programme. His power of perception about the effectiveness of soil conservation practice might have been favourably influenced by the educational status and hence the positive relationship.

2. Economic motivation

Economic motivation of the farmers was positively correlated with their perception about the effectiveness of the soil conservation practice at 0.01 per cent level of probability. A farmer seeking more monetary gains is likely to invest more money on production inputs. The soil conservation unit is disbursing the cost of the contour bunds to the beneficiaries. Once this departmental assistance has been availed, the farmer is likely to develop a positive attitude towards the soil conservation programme. Naturally, he may be more inquisitive about the other benefits of the programme. This would lead to more awareness and perception about the effectiveness of the soil conservation practice.

3. Social participation

Social participation was found to have positive relationship with the perception of the farmer respondents. This might be due to the fact that as social participation increases the farmers establish more contacts with other people. This might have resulted in improving their awareness about the technology

and its merits, thereby creating a favourable change of attitude. This might have resulted in a better perception about the effectiveness of the soil conservation practice .

4. Risk orientation

Risk orientation was found to have positive and significant relationship with the perception of the farmers about the effectiveness of soil conservation practice . In adopting any new technology, certain amount of risk will be involved. When he takes up such risk and experiments new ideas or practices, he may develop a favourable attitude towards the practice as a result of his better chance of success. This chance of success might induce the farmer to have better perception about the effectiveness of soil conservation practice .

5. Knowledge about soil conservation practices

Knowledge of the farmer about soil conservation practices was found to have positive correlation with their perception about the effectiveness of soil conservation practices .

Positive relationship of knowledge with adoption of soil conservation practices was reported by Pillai (1979). The negative association between technological gap in integrated soil conservation practices and knowledge about soil conservation practice was also reported by Pillai (1983). It is quite logical to expect that higher level of knowledge about the soil conservation practices would lead the farmers to develop

better perception about the effectiveness of soil conservation practice .

6. Innovation-proneness

There was positive and significant correlation between innovation-proneness and perception of the farmers about the effectiveness of soil conservation practice .

Many researchers have established that innovation-proneness was positively related with adoption of farm practices. Pillai (1983) has reported negative association between technological gap in integrated soil conservation practices and innovation-proneness of the farmers. Interest and desire of farmers to seek changes in farming techniques and to introduce such changes leading to their farm-operations will affect the behaviour pattern of the farmer. The farmers who are innovation-prone are more eager to understand the merits and demerits of innovations. Hence innovation-prone farmers will have better perception about the effectiveness of the soil conservation practice .

7. Utilization of personal localite sources of information

The results of the study indicated that the relationship of this variable with perception about the effectiveness of soil conservation practice was not significant.

Friends and relatives of the farmers of the study area mostly were either employed or in business. When

they meet, discussions might be centred round politics and other issues. Farmers, by and large, do not get much information about the attributes of the innovation from family members, friends, neighbours and relatives and hence the non-significant relationship of this variable with perception.

8. Contact with extension agency

Contact with extension agency showed positive relationship with perception of the effectiveness of soil conservation practice. Soil conservation unit, which is responsible for implementing soil conservation programmes in the scheme areas employ various extension techniques to persuade the farmers to adopt soil conservation practice. In this endeavour, the field staff try to make the farmers convinced about the effectiveness of soil conservation works. As a consequence of their dissemination of knowledge to the farmers, the level of perception of the farmers about the effectiveness of soil conservation programme might have increased.

5. Direct and indirect effects of the socio-psychological, communication and personal characteristics of the farmers on perception

1. Educational status

Among the independent variables, educational status was found to have maximum direct effect on perception about the effectiveness of soil conservation practices.

The direct effect was more than the total indirect effects. The indirect effects were mainly channelled through economic motivation, social participation and risk orientation.

Due to the substantial direct effect of this variable, educational status of the farmer emerged as important in influencing the perception of farmers about the effectiveness of soil conservation practice .

2. Economic motivation

The direct effect of this variable was negative and substantial, the value being -0.24275 . The total indirect effect was more than the direct effect (0.52758). The substantial effects of economic motivation were channelled through educational status, social participation and risk-orientation. The significant correlation between economic motivation and perception was due to its indirect effects on educational status, social participation and risk orientation.

3. Social participation

The direct and indirect effects of this variable were 0.20378 and 0.49262 respectively, both being high in magnitude. The indirect effects were channelled through educational status, contact with extension agency and risk orientation. The seemingly high correlation between perception and social participation could thus be generated by the indirect effects of educational status, contact with extension agency and risk orientation on perception.

4. Risk orientation

The direct and indirect effects of this variable were high being 0.16968 and 0.55112 respectively. The indirect effects were channelled through educational status, social participation and contact with extension agency. It is seen that, risk orientation exercised considerable indirect effect on the perception of farmers.

5. Knowledge about soil conservation practices

The direct effect of this variable was 0.18244. The indirect effect was almost double being 0.36816. The indirect effects were routed through educational status, contact with extension agency and social participation.

6. Innovation proneness

Even though the direct effect of this variable was negligibly small (0.0856) the total indirect effect was substantial, being 0.41943. The direct effect of this variable was routed through educational status, economic motivation and social participation. The high correlation of innovation proneness with perception was mainly due to its indirect effect through educational status, economic motivation and social participation.

7. Utilization of personal localite sources of information

The direct and total indirect effects of this variable were -0.08470 and 0.09360 respectively, both being relatively low in magnitude. The direct effect

of utilization of personal localite sources of information on perception was negligibly small but negative. This indicates the low effect of this variable on determining the perception of the farmers about the effectiveness of soil conservation practice. The indirect effects were routed through educational status, risk orientation and social participation, but none of this was substantial. Because the direct and indirect effects were negligible, utilization of personal localite sources of information was found to be not important in deciding the level of perception of farmers.

8. Contact with extension agency

The direct effect of this variable was 0.19152. The indirect effect was very high, being 0.53178. The indirect effects were routed through educational status, social participation and risk orientation.

The highest direct effect towards the perception about the effectiveness of soil conservation practices was due to the variable educational status of the farmer, followed by economic motivation and social participation. The highest total indirect effect towards perception was due to the variable risk orientation followed by contact with extension agency and the economic motivation.

Due to the substantial direct and indirect effects, all the independent variables selected for the study, except utilization of personal localite sources, emerged as important in influencing the perception of farmers about the effectiveness of soil conservation practice.

SUMMARY

CHAPTER VI

S U M M A R Y

The problem of soil erosion is severe in Kerala due to the prevalence of unscientific agricultural practices on the hill slopes, unscientific management of the watersheds and high intensity of the rainfall. The progress of implementation of soil conservation programmes in the state by the soil conservation unit of the Department of Agriculture has not been satisfactory. Had the farmers perceived the advantages of the soil conservation practice, the progress would have been more.

The present study is an attempt to understand the level of perception of the farmers and also the field staff of the implementing agency about the effectiveness of the soil conservation practice.

The specific objectives of the study were:

1. To develop a scale for measuring the perception of farmers and field staff about the effectiveness of soil conservation practices.
2. To measure the differential perception about the effectiveness of soil conservation practices by field staff and beneficiary farmers in Trivandrum District.
3. To correlate the socio-psychological, communication and personal characteristics of farmers with their perception.

The investigation was carried out in Trivandrum district where the progress of coverage of soil conservation works is relatively poor. Stratified random sampling has been used in the study. Three soil conservation schemes from Neyyattinkara taluk, two from Nedumangad taluk and two from Chirayinkil taluk were selected by using random sampling with probability proportionate to the number of beneficiaries in each scheme. A sample of 100 beneficiaries was selected using proportionate allocation.

Since there were only 37 members belonging to field staff, the entire population of 37 was selected as the sample for studying the perception of field staff.

Perception of farmers about the effectiveness of soil conservation practice was the dependent variable in the study. The independent variables were: educational status, economic motivation, social participation, risk orientation, knowledge about soil conservation practices, innovation-proneness, utilization of personal local sources of information and contact with extension agency.

Perception about the effectiveness of soil conservation practice of farmers and field staff was measured using the perception scale developed for the purpose. Forty five statements which were short descriptions of the perception about contour bunding practice were initially collected based on discussion with experts. The statements were edited and finally, only 24 statements were sent to judges

for their judgement regarding the relevance of each statement on a four-point continuum from most relevant to least relevant. From the 24 statements, only 22 statements with values above median were selected. The final statements were given as the stimuli for rating in a five-point continuum of most effective, effective, undecided, less effective and least effective with scores of 5,4,3,2,1, respectively. The reliability and validity were tested and the scale was found to have both reliability and validity.

Educational status was measured by using the socio-economic scale of Trivedi (1963) with slight modification in the scoring procedure. Economic motivation was measured using the scale developed by Moulík (1965). Social participation was measured using the scale developed by Lokhande (1974). Risk orientation was measured by using the scale developed by Supé (1969). Knowledge about soil conservation practices was measured by using the test developed by Pillai (1983). Innovation proneness was measured by using the self rating scale developed by Moulík (1965). Utilization of personal localite sources of information was measured by using the schedule developed for the purpose. Contact with extension agency was measured using the schedule developed for the purpose.

An interview schedule finalised after pre-testing was used for data collection. The schedule was translated into Malayalam for use in the field. The data were

collected by interviewing the respondents individually. The data were subjected to correlation analysis, 't' test and path analysis.

The salient findings of the study are summarised and presented below:

1. The study revealed that majority of the farmers had average level of perception about the effectiveness of soil conservation practice (75 per cent). Only 11 per cent of the farmers had high level of perception.
2. Majority of the field staff had only average level of perception about the effectiveness of soil conservation practice (67.57 per cent). Only 18.92 per cent of the field staff had high level of perception.
3. There was significant difference in the perception of farmers and field staff about the effectiveness of soil conservation practice. The mean perception score of field staff was significantly higher than that of the farmers.
4. Educational status, economic motivation, social participation, risk orientation, knowledge about soil conservation practice, innovation-proneness and contact with extension agency were found to be the important variables having positive correlation with the perception of farmers about the effectiveness of soil conservation practice at 0.01 per cent level of probability. Utilization of personal localite sources of information was not found to be significantly related to perception.

5. Results of path analysis indicated that educational status had the maximum direct effect on the perception about the effectiveness of soil conservation practice. The direct effects of educational status, social participation, contact with extension agency, knowledge about soil conservation practices and risk orientation were positive and relatively high. So these variables were found to be important in deciding the level of perception.

6. The indirect effects of risk orientation, contact with extension agency, economic motivation, social participation and innovation-proneness on perception of farmers about the effectiveness of soil conservation practice were substantial and more than their direct effects are found to be important in deciding the level of perception.

In conclusion, it was revealed that the socio-psychological, communication and personal characteristics of farmers influenced their perception about the effectiveness of soil conservation practice. Majority of the farmers and also field staff had only average level of perception about the effectiveness of soil conservation practice. As only about 19 per cent of the field staff had a high level of perception about the effectiveness of the soil conservation practice, it was found necessary to educate them on the advantages of the technology.

The study points out to the urgent need of training the farmers on the techniques and advantages of soil conservation practice . Field staff of the soil conservation unit, being the extension agents, it is high time to impart in-service training to them to improve their perception about the different aspects of the soil conservation practice.

Suggestions for future research

1. The study reveals the perception of farmers and field staff about the effectiveness of the soil conservation practices only. Soil conservation practices form only one aspect of watershed management. Since the planners now-a-days are more concerned about watershed management in all its dimensions, studies on perception of the Agricultural and Soil Conservation Officers on the benefits of the watershed management may be conducted.
2. Studies on the suitability of the contour bunding practice as followed in all districts of Kerala may be conducted with respect to its feasibility on high slopes and places where inadequacy of stones is experienced.

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APPENDICES

APPENDIX I

From

Dr.G.Balakrishna Pillai,
Associate Professor,
Dept. of Agril. Extension,
College of Agriculture,
Vellore, Trivandrum.

To

Dr/Sri.

Sir,

In connection with the Post graduate Research Programme of Sri A.Jundaran, who is working under my Supervision, a scale is being prepared for measuring the perception of farmers and field staff about the effectiveness of the Soil Conservation practices. Contour bunding, being the only major practice, the study is on the effectiveness of the contour bunding programme.

Perception has been operationally defined in this study as the meaningful sensation of the farmer/field staff about the effectiveness of the contour bunding work.

Enclosed please find 24 statements relating to the effectiveness of contour bunding programme. I request you to please indicate your judgment regarding the Degree of relevance of each of these statements by ticking (✓) in the appropriate column. I reiterate that we are interested to get your judgement only in terms of the degree of relevance of each of the statements and "N.F" your own perception of the effectiveness against each statement. I request you to kindly co-operate in this regard.

Vellore,
24-7-1966.

Yours faithfully,
Sd/-
(DR.G.PNANPITHA PILLAI)

Sl.
No.

STATEMENTS

	Most relevant	Less relevant	Least relevant
1. To prevent formation of gullies in the land contour bunding is effective
2. To control damages to the basins and ridges of crops, contour bunding is effective
3. To prevent the loss of surface soil, contour bunding is effective
4. In the conversion of uncultivable slopyland in to cultivable land, contour bunding is effective
5. To control the velocity of running water contour bunding is effective
6. To store and utilize the excess water contour bunding is effective
7. To improve the moisture retention capacity of soil, contour bunding is effective
8. To raise the water table in the land, contour bunding is effective
9. To check the loss of fertilizer from the soil due to orcedion, contour bunding is effective
10. To preserve the fertility status of the land, contour bunding is effective
11. To maintain uniform fertility status in the plots at different levels of slope, contour bunding is effective.
12. To permit timely application of fertilizers, contour bunding is effective.
13. To enable the adoption of calendar of operations, contour bunding is effective
14. To promote systematic planting, contour bunding is effective
15. For the promotion of Plant protection practices, Contour bunding is effective
16. To facilitate intensive cultivation, contour bunding is effective
17. To raise the land value of the slopy plot contour bunding is effective

Sl. No.	STATEMENTS	Most relevant	Relevant	Less relevant	Not relevant
18.	To increase the returns from unit land, contour bunding is effective	..	..	..	..
19.	To reduce the total cost of cultivation, contour bunding is effective	..	..	..	..
20.	For availing various crop loans, contour bunding is effective	..	..	..	..
21.	To check the silting of reservoirs, contour bunding is effective	..	..	..	..
22.	To control the deposition of soil in the paddy fields, contour bunding is effective	..	..	..	..
23.	To check the occurrence of flood in the watershed area, contour bunding is effective	..	..	..	..
24.	To prevent land slides, contour bunding is effective	..	..	..	..

APPENDIX II

DEPARTMENT OF AGRIL. EXTENSION
COLLEGE OF AGRICULTURE, VELLAYANI
TRIVANDRUM

"Correlates of perception of the field staff and farmers
about the effectiveness of soil conservation practices"

Interview Schedule - A

(For farmer respondents)

Respondent No.

Date:

- | | | |
|--|---|---------|
| 1. Name and address of the respondent | Y | |
| 2. Name of Taluk | Y | |
| 3. Name of Scheme Area | Y | |
| 4. Have you adopted contour bunding in your plot | Y | YES/ NO |
| 5. Educational Status | Y | |
| Illiterate | Y | |
| Can read only | Y | |
| Can read and write | Y | |
| Primary school | Y | |
| Middle school | Y | |
| High school and above | Y | |

6. ECONOMIC MOTIVATION

Sl. No.	Statement	Most Like	Least Like
A	a) All I want from my farm is to make just reasonable living, for the family (1)		
	b) In addition to making reasonable amount of profit, the enjoyments in farming life is also important for me (2)		
	c) I would invest in farming to the maximum to gain large profit (3)		
D	a) I would not hesitate to borrow any amount of money in order to run the farm properly (3)		
	b) Instead of growing new cash crops which cost more money I follow the routine farming practices (1)		
	c) It is not only monetary profit, but also the enjoyment of work done, which gives me satisfaction for my hard work on the farming (1)		
C	a) I hate to borrow money on principle even when it is necessary for properly running the farm (1)		
	b) My main aim is maximising monetary profit in farming by growing cash crops in comparison to growing of crops which are simply consumed by my family (3)		
	c) I avoid excessive borrowing of money for farm investment (2)		

7. SOCIAL PARTICIPATION

Please indicate whether you are a member or office bearer in the following organization and if so, how frequently you attend the meeting

Sl. No.	As a Member	An Office bearer	Attend Meetings		
			Regularly	Occasionally	Never
1.	Panchayat				
2.	Co-operative Society				
3.	Radio Rural Forum				
4.	Youth Club				
5.	Distinctive Features (MLA, MP, etc)				
6.	Any other				

8. RISK ORIENTATION

Kindly give your agreement or disagreement about each of the following statements

Sl. No.	Statements	S/A	A	U D	D A	S/D A
a	A farmer should grow larger number of crops to avoid greater risk involved in growing one or two crops					
b	A farmer should take more of a chance in making a big profit than to be content with a smaller but less risky profit					
c	A farmer who is willing to take greater risk than the average farmer usually does better financially					
d	It is good for a farmer to take risk when he knows his chance of success is fairly high					
e	It is better for a farmer not to try new farming method unless most others in the locality have used it with success					
f	Trying entirely a new method in farming by a farmer involves risk but is worth it					

9. KNOWLEDGE ABOUT SOIL CONSERVATION PRACTICES

1. What is the most important cause of soil erosion	Correct	Incorrect
2. Name a method by which soil erosion can be prevented	Correct	Incorrect
3. What is the important principle involved in soil conservation	Correct	Incorrect
4. By simply checking soil erosion alone, soil conservation will be achieved	Yes	No
5. Name a crop that can be grown in coconut plantation as mixed cropping which will promote soil conservation	Correct	Incorrect
6. Tapioca cultivated on mounds on slopy land will check erosion	Yes	No
7. Name a cover crop used in soil conservation	Correct	Incorrect
8. Tillage operations should be done along with the slope for conserving soil	Yes	No
9. Name one soil binding grass used for soil conservation	Correct	Incorrect
10. Name one fodder crop suitable for growing on the top of bunds as well as used for soil stabilization	Correct	Incorrect
11. Which is the appropriate time for planting grasses for soil cover?	Correct	Incorrect
12. What is the spacing recommended for planting guinea grass on the top of contour bunds	Correct	Incorrect
13. Name one soil conservation engineering practice useful under Kerala condition	Correct	Incorrect
14. Earthen contour bund is more durable than stone pitched bunds	Yes	No
15. What is the economic height of stone pitched contour bunds for areas with 11 to 35 per cent slope?	Correct	Incorrect
16. What should be the size of stone used for pitching on contour bunds?	Correct	Incorrect

10. INNOVATION PROMENESS

Sl. No.	Statements	Most Like	Least Like
A	a) I try to keep myself up to date with information on new farm practices but that does not mean that I try out all the new methods on my farms (2)		
	b) I feel restless till I try out a new farm practice, I have heard about (3)		
	c) They talk of many new farm practices these days, but who knows if they are better than the old one (1)		
B	a) From time to time I have heard several new farm practices and I have tried out most of them in the last few years (3)		
	b) I usually want to see what results my neighbours obtain before I try out new farm practices (2)		
	c) Some how I believe that the traditional ways of farming are the best (1)		
C	a) I am cautious about trying a new practice (2)		
	b) After all, our forefathers were wise in their farming practices and I do not see any reason for changing these old methods (1)		
	c) Often new practices are not successful, however they are promising I would surely like to adopt them (3)		

11. UTILIZATION OF PERSONAL LOCALITY SOURCES

Sl. No.	Information Source	More Often (3)	Often (2)	Some time (1)	Never (0)
a)	Neighbours				
b)	Friends				
c)	Family members				
d)	Relatives				

CONTACT WITH EXTENSIVE AGENCY

How often do you come in contact with following personnel of the soil conservation unit and other agencies

Personnel	Frequency				
	More than once a week	Once in a week	Once in a fortnight	Once in a month	Never
1. Junior Soil Conservation Officer					
2. Overseer					
3. Foreman					
4. Surveyor					
5. Work Superintendent					
6. Others (specify)					

Please indicate the extent of effectiveness of Contour-bunding by making (✓) against each statement in the appropriate column

Sl. No.	STATEMENTS	Most effective	Effective	Undecided	Less effective	Least effective
1.	To prevent formation of gullies in the land contour bunding is					
2.	To control damages to the basins and ridges of crops, contour bunding is					
3.	To prevent the loss of surface soil, contour bunding is					
4.	In the conversion of uncultivable slopy land in to cultivable land, contour bunding is					
5.	To control the velocity of running water contour bunding is					
6.	To store and utilize the excess water contour bunding is					
7.	To improve the moisture retention capacity of soil, contour bunding is					
8.	To raise the water table in the land, contour bunding is					
9.	To check the loss of fertilizer from the soil due to erosion, contour bunding is					
10.	To preserve the fertility status of the land, contour bunding is					
11.	To maintain uniform fertility status in the plots at different levels of slope, contour bunding is					
12.	To permit timely application of fertilizers, contour bunding is					

Sl. No.	STATEMENTS	Most effective	Effective	Undecided	Less effective	Least effective
15.	To facilitate intensive cultivation contour bunding is					
16.	To raise the land value of the slopy plot contour bunding is					
17.	To increase the returns from unit land, contour bunding is					
18.	For availing various crop loans, contour bunding is					
19.	To check the silting of reservoirs, contour bunding is					
20.	To control the deposition of soil in the paddy fields, contour bunding is					
21.	To check the occurrence of flood in the watershed area, contour bunding is					
22.	To prevent land slides, contour bunding is					

INTERVIEW SCHEDULE - B

(Field staff respondents)

1. Name :
2. Designation :
3. Number of completed years of service in: the soil conservation Department :

Please indicate the extent of effectiveness of contour-bundling by marking (✓) against each statement in the appropriate column

Sl. No.	STATEMENT	Most effective	Effective	Undecided	Less effective	Least effective
1.	To prevent formation of gullies in the land contour bunding is					
2.	To control damages to the basins and ridges of creps, contour bunding is					
3.	To prevent the loss of surface soil, contour bunding is					
4.	In the conversion of uncultivable slopy land in to cultivable land, contour bunding is					
5.	To control the velocity of running water contour bunding is					
6.	To store and utilize the excess water contour bunding is					
7.	To improve the moisture retention capacity of soil, contour bunding is					
8.	To raise the water table in the land, contour bunding is					
9.	To check the loss of fertilizers from the soil due to erosion, contour bunding is					

Sl. No.	STATEMENTS	Most effective	Effective	Undecided	Less effective	Least effective
10.	To preserve the fertility status of the land, contour bunding is					
11.	To maintain uniform fertility status in the plots at different levels of slope, contour bunding is					
12.	To permit timely application of fertilizers, contour bunding is					
13.	To enable the adoption or calendar of operations, contour bunding is					
14.	To promote systematic planting, contour bunding is					
15.	To facilitate intensive cultivation contour bunding is					
16.	To raise the land value of the slope, plot contour bunding is					
17.	To increase the returns from unit land, contour bunding is					
18.	For availing various crop loans, contour bunding is					
19.	To check the silting of reservoirs, contour bunding is					
20.	To control the deposition of soil in the paddy fields, contour bunding is					
21.	To check the occurrence of flood in the watershed area, contour bunding is					
22.	To prevent land slides, contour bunding is					

A B S T R A C T

The research was conducted in Trivandrum district of Kerala State to study the perception of farmers and field staff about the effectiveness of soil conservation practice.

The method of ~~probability proportional to size~~ stratified ^{and probability proportional to size} random sampling [^] were followed for selecting 100 farmers from the soil conservation scheme areas. All the field staff of the soil conservation units of Trivandrum district comprised of only 37 so that the entire population was selected as the sample for studying the field staff. The perception of the farmers as well as the field staff about the effectiveness of the soil conservation practice was measured, using the perception scale developed for the purpose. The data were collected by interviewing the respondents using the interview schedule developed and pre-tested.

The study revealed the following:

Majority of the farmers had an average level of perception about the effectiveness of the soil conservation practice.

Majority of the field staff also had only an average level of perception about the effectiveness of soil conservation practice. Mean perception of the field staff was significantly higher than that of the farmers.

Educational status, economic motivation, social participation, risk orientation, knowledge about soil conservation practices, innovation-proneness and contact with extension agency were found to be positively associated with the perception of the farmers.

Educational status had the maximum direct effect on perception. The indirect effects of risk orientation, contact with extension agency, economic motivation, social participation and innovation-proneness on the perception of the farmers about the effectiveness of soil conservation practice were substantial.