

SOUTH INDIAN VILLAGE STUDIES

A Preparatory Study of "Villur", Village No. 119, in
Tirumangalam Taluq, Madura District, Madras Province.

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I. Social and General.

Introductory. The Madura ryot is usually a farmer in a very small way owning less than 6 acres of land. The fact that since the famine of 1876-78 no relief works or gratuitous relief have been necessary shows that he is generally industrious. Tirumangalam taluq has hardly any irrigation tanks or channels and possess but few wells, so that it is more at the mercy of adverse seasons than any other part of the district. Of late the number of wells have increased. Eighty to ninety per cent. of the cotton of the district is grown in this taluq. In the north of Villur, the *regar* soil is exclusively found while red sandy loam prevails in the east. These are owned by the Telugu-speaking *Reddis* who are good farmers. The soil to the south and west is much inferior and good farming is rarely found.

Location and administration. The ryotwari village of Villur comprises of four other smaller settlements in close proximity. It is about 20 miles south of Madura, the headquarters of the district. Tirumangalam, the taluq headquarters, is 10 miles to the north, where there are the usual judicial, revenue and police offices. The sub-registrar's office, police and railway stations are at Kalligudi four miles from the place. The establishment at Villur consists of one Village *Munsif* (headman), one *Karnam* (accountant) and eight servants. Besides, there are a *Panchayat* court, a post office and a stamp vendor. Recently a *Panchayat* Board has been organised at Maravarpatti, one of the settlements.

Climate. The village is a level expanse without any hill, forest or river within a radius of 7 or 8 miles. The climate is hot, dry, unhealthy and variable. The temperature for the district ranges between 100.1 and 68.6°F and the annual mean humidity is 70.2. The total annual rainfall for the taluq is 30-40 inches. The daily velocity of the wind varies between 129.6 and 69.6 miles in the year. Dust storms and whirlwinds occur not infrequently and gusty irritating winds blow from various quarters towards the end of March and the beginning of April. Except at these times and during the monsoons the state of air is calm and undisturbed, often to a painful degree. The wind from the north sometimes causes some injury to the crops by blight; but this happens only in exceptional seasons.

Population. (a) Numbers. In the 1931 Census Report of Madras, it is mentioned that "None of the cities can produce a density equal

to that of Villur or Sathangudi in Tirumangalam taluq of Madura. Both are good sized villages of over 3,500 inhabitants, the former almost reaching 5000". The following table shows the population figures of the village from 1891:

Table 1.*

Year.	Males.	Females.	Total.
1891	1657	1790	3447
1901	1646	1780	3426
1911	2018	2192	4210
1931	2470	2530	5000

About 4000 or four-fifths of the whole population are residing at Villur. One settlement is very small having only two houses with a few members in them. The other three have a few hundred people in each. There is always a preponderance by 8 per cent. of the females over the males with a steady increase of population from 1901. This increase is one of the main causes of the fragmentation of holdings and the extreme poverty of the cultivators; the production of food fails to keep pace with the increase in population. The landowning cultivators are slowly turned out of their holdings to swell the ranks of landless labourers and the unemployed. On the other hand the number of non-cultivating proprietors taking rent in money or kind is increasing.

(b) Characteristics of the villagers. People are generally honest and trustworthy. But for the mutual trust and confidence that exist among the majority, the large number of transactions that are being carried on cannot take place. Hospitality is a common feature in every community. The villager is generally respectful; he knows his place in society. He is industrious and thrifty and is content with the barest necessities. The energy and life evinced particularly by the *Ahambadiyas* who constitute more than 50 per cent. of the whole population, is remarkable. This energy unfortunately runs to waste, sometimes into positive mischief. A section of this community has not yet given up their criminal instincts, and are a fear to their own community. The desire to live better is widely prevalent as is evidenced by the preference for a full meal with rice, vegetables and dhal to the cereal porridge with which most of them were content before; the males have begun to use shirts and coats; the number of *pucca* houses is increasing. These improvements are often obtained at the expense of capital, not from surplus income. For the good will does not always find the right way, as the observation, reasoning and intellect necessary are lacking. Though there are about 50 *pattas* paying land-tax over Rs. 30 a year and a dozen over Rs. 50 each, (vide table V) there is hardly one family in the village which can be said to live in ordinary comfort. The estate of the common cultivator, exclusive of land and its produce, is hardly more than Rs. 200 in selling value. The annual

* These and other figures which follow are taken from the Resettlement Register of the village, 1920.

expense of more than 80 per cent. of the families has to be within the cash value of Rs. 100, much less than the charge incurred per head in the prisons. This poverty certainly degrades them. There seems to be a habitual reliance in general upon parochial relief rather than upon their own industry. The labourers are worse. No wonder the villagers are looking, united only in this, backward instead of forward.

(c) The communities. The major portion of the people are *Ahambadiyas*. They have a bad name for crime. They closely resemble the *Maravans*, whose reputation for criminality is also notorious, but in their manners and customs they follow the *Vellalas*. *Ahambadiyas* 'commit but little crime in Madura'. Most of them in this village are farming in earnest and the foremost cultivator at present is one of this class. They have got a strong corporate feeling. About half of them are owner-cultivators and the rest are labourers. In *Maravarpatti* the inhabitants are mostly *Naickans* and *Sanans* who are not criminal and are steady cultivators. There are about a hundred families of *Vellalas* who specialise in the betelvine and do not interest themselves much in other crops. The *Chettis* generally trade in distant cities in such commodities as rubies and pearls. As a rule they get on well in these places, but none of them have any idea of forsaking their village home. Many of them are well off and have purchased the major portion of the lands surrounding *Villur*, while a few have also taken to cultivation. Almost all the *Brahmin* families have decayed leaving a few who are dwindling. They still hold a considerable portion of the lands though their interest in cultivation lags day by day. There are about a hundred members of the untouchable community who are good labourers, and a few families of workmen and village servants.

(d) Managing proprietors. The *Brahmins* (20 houses) and *Chettis* (150 houses), who are generally managing proprietors or absentee landlords, indulge by tradition and custom in rather expensive ceremonies such as marriages. They stick to a better status of living even when their present income does not warrant it. Their womenfolk do not substantially help in any productive manner, but are used to wearing costly jewellery. The extent of land in possession of the *Brahmins* has greatly diminished as many have sold them away and left the place, whereas the other community has acquired a good deal lately. These latter offer obviously enormous prices for the land as this is their sole investment. Moreover, having cash in hand, and being in contact with the *Ahambadiyas* they have maintained a litigant atmosphere in the place.

(e) Owner-cultivators and owner-labourers. The regular owner-cultivators (666 holdings) are generally *Ahambadiyas*, *Vellalas* and other communities. Their holdings vary from 2 to 8 acres each. Their living is the simplest and the man possessing above 5 acres, even

hopes to make a surplus in the favourable year, if the family is not too big. Unfortunately owing to poor agricultural conditions and the rapid increase of population, their number is decreasing. The owner-labourers (361 holdings) are chiefly *Ahambadiyas*. They hold from half to two acres each. The income from this bit of land is supplemented by working for wages. No undesirable habit is to be found among both these classes and when by any chance they get a surplus they go in for a hut or a plot of land.

(f) Labourers. The labourers numbering more than 500 are on the increase. They are mostly *Ahambadiyas* and partly untouchables. They do not get themselves trained for any particular work and there is no organisation to look after their interests. Many of them have gone to the plantations in Ceylon and other places, where permanent work is available. They have mostly stuck on to these places and the number of those who have returned is very few. Even now they go out in batches during the seasons. The work sought outside is preferably agricultural, but sometimes includes woodcutting, stonecutting, cooly work, etc. The *Ahambadiya* is capable of more hard work but is less skilful, and demands more wages. There are three common grades of wages; the adult male gets six annas a day, the female four annas and young boys or girls two to three annas. Rarely does the cost of male labour go up to eight annas. For ordinary agricultural purposes such as planting, weeding, etc. the rate is less and usually paid in kind. Reaping and threshing are paid also in kind as so much per unit of land. Cash is paid for such work as picking groundnuts according to work turned out, while picking cotton is paid for in kind. Cash wages are always preferred. The village is hardly self-sufficing for its labour and a good deal of complaints is made in this respect. Due to rise in the general level of comfort and unfavourable agricultural conditions, the farmer finds the agricultural wages high. As a matter of fact sometimes the labourer is better off than the cultivator.

Religious features. All the people are Hindus and purely Dravidian in religious sentiment. There is a temple dedicated to Krishna which is run by the *Brahmins* and numerous other small ones here and there belonging to others. Festivals are celebrated almost every month in the big temple and all communities partake in it. The enthusiasm for these however has of late diminished a great deal, mostly for economic reasons. There seems to be no strong attachment to religion prevalent now. Pilgrimages are very rarely undertaken to distant places like Rameswaram or Tirupathi. Religion does not affect the economic life of the people in any way, nor does untouchability.

Health and hygiene. The villagers are ordinarily healthy and seem to have adjusted themselves splendidly to the natural conditions prevailing. The mark of hard work is stamped on every adult, male or female, but poverty and under-nourishment are patent everywhere.

The *Brahmin* and *Chetti* women are not of so robust health as the *Ahambadiyas*, due probably to the fact that they do not work outdoors. Infant mortality is common but by no means high. No trained midwife is available within ten miles. Though it is common for people to go out for treatment, in no case is the help of the midwife sought. The average span of life is between 50 and 60 years.

Fever of more or less malignant types is common. Both intermittent and occasionally remittent forms occur accompanied by rigor or shivering fit. It however yields readily to ordinary treatment. Diseases of the digestive system are more prevalent. Diarrhoea and dysentery are met with frequently at all times in the year. Bad and insufficient food, insufficient clothing, filthy habits of life, irregularity in the hours of taking food and the frequent use of hot condiments seem to be the chief causes. Owing to the presence of unaltered masses of starchy food, there is a sense of weight or fullness in the stomach, or pain and discomfort after eating. This is often the beginning of chronic ailments. Rheumatism, both muscular and neuralgic, is rather prevalent. It occurs in the cold season, and is attributed to sudden chills, consequent on habitual exposure to cold and damp. Otitis is common. Conjunctivitis prevails very generally in the hottest months, especially after long droughts. Small-pox is prevalent as a sporadic disease. Asthma is rare and seldom of an aggravated type; elderly people are occasionally troubled with a chronic cough of an obstinate kind. Itches are very common in children and adults suffer from ringworms and various skin diseases, all due to insanitary surroundings. Due to mishandling of the various instruments, cuts and wounds are frequent. Mosquitoes are plentiful and in certain seasons are a great menace in the nights. Bites due to rats, scorpions, bees, ants, and poisonous snakes are fairly common. There are a few quacks dealing in indigenous medicine in the village or nearby, who are resorted to for the medical needs. There was a rural dispensary at Kallupatti and one now exists at Kalligudi. These are not sufficiently known in the village and few go there for relief.

The sanitary condition of the village is of course deplorable. Every house is no doubt well swept including even the front of houses. But as all the sweepings are thrown in the middle of the street or heaped in the corner, without arrangements for their removal, the dirt spreads immediately and is blown into houses. There are no latrines, not even for women.

Housing. The *Chettis*, whose traditional occupation is to go out to distant places for trade, live generally in *pucca* houses. Though much money is spent on them, they are ill-ventilated, dark and unhygienic. Such houses have increased of late and there are a few two-storied ones also. This increase, we are informed, is due to the fear of incendiarism and is not to be taken as a sign of any real prosperity, at any rate of the cultivators. The other communities

are hardly able to afford anything more than one bed-roomed cottages. Excepting in the lanes meant for the *Brahmins* and *Chettis*, there is a great deal of dearth of dwelling houses and consequent overcrowding. The drainage is very bad, and there is lot of dirt and avoidable disease. None of the lanes are lit at night. The passages are uneven and in a very poor state.

Water-supply. There are six wells situated in different places providing drinking water. Only two of these are well constructed; others require rebuilding and improvement. They are generally used in summer when the ponds dry up. The water found in them is very seldom of really first-rate quality. Though that obtained from the ponds is worse, it is preferred to well water as it saves the lifting and has a sweetish taste. The big pond is rather preserved from much abuse; yet it is so apparently unhygienic that even the villagers themselves hesitate to use it. It is never cleaned properly. Other ponds are used for washing clothes, performing ablutions, bathing or washing animals. The water is stagnant, filled with weeds and the banks are dirty.

Diet. All people who can afford to take rice do so and its consumption has increased greatly. It is boiled and eaten hot or cold with salt, *chatni*, *curry*, etc. Wealthier people mix ghee with it and use pepper water, curds and butter milk in moderation. Rice is also ground into flour from which cakes and sweetmeats are prepared. All available vegetables are freely taken. Milk is rarely used except by babies. The common diet of the poorer classes is a sort of porridge made of *cholam*, *ragi* or *cumbu*. It is usually made very thin and eaten cold, flavoured with salt and a *chatni* made of tamarind, turmeric, chillies and garlic. Salt fish are fondly taken, eggs are rarely used. Now and then some mutton, fresh fish or chicken form part of the curry.

Clothing. In the case of men two pieces of white cloth are used, coarse or fine according to the means of the individual; each from 2 to 5 yards in length and $\frac{3}{4}$ to $1\frac{1}{2}$ yards wide. Of these one is wrapped round the body and the other is used chiefly out of doors as a spare cloth to throw on the shoulders or worn loosely in the form of a turban on the head. Shirts are increasingly worn and there is a tailor in the village. Women wear only one cloth which varies in length from 6 to 9 yards and in width from 1 to $1\frac{1}{2}$ yards. It is usually coloured red. Those of the better classes wear a tight fitting bodice. Young children have scantier clothing or none.

Education. There are three elementary schools, one of which is meant for girls only. Attendance in all of them is very poor and it is difficult to see even one boy in the year continuing his studies after the elementary classes. The girls' school and one boys' school are under the Taluq Board, and the other is run privately with annual

grants from the Educational Department. The former are of recent origin and have trained teachers. The private school is the oldest and has been in existence for over 30 years. The female pupils are mostly *Brahmin* or *Chetti*, and they are sent there to keep away from doing mischief at home. The *Ahambadiya* boy is the greatest sufferer in this respect. His parents think least of education and employ him for their own assistance from very early years. Another elementary school has been under private management for some years in Maravarpatti which, after the establishment of the *Panchayat* Board there, has been taken over by that body. This has the services of a trained teacher.

Literacy is very poor, and nobody with college education lives in the village. Only about 300 individuals know how to read and write the vernacular. About a dozen men who were somewhat educated, have got employed as teachers or clerks outside. Just half a dozen people in the village know English. People show great eagerness to hear news about happenings in the outside world but there is hardly a single person to satisfy their curiosity. Though the desire for education is not absent in any community, yet the general poverty acts as a serious deterrent for them to take active interest in it. Due to absence of any form of literature, whatever literacy is gained is soon lost. There is no library or reading room and no one gets any newspaper even in the vernacular.

Social disturbances. Thefts and cattle-lifting were very common in this place and have not yet abated. The *Ahambadiyas* are the chief perpetrators of crime. About thirty years ago they picked up a trivial quarrel with the *Chettis*, and looted and plundered their houses in daylight. In consequence the whole community was rounded up by a contingent of reserve police and most of them imprisoned. A punitive tax was also imposed for some time. This had the desired effect. A few of them are now educated and some have acquired property. But a number of them who are not able to make a living by honest means, manage to cause considerable annoyance to peaceful cultivators. Cases of murder are not uncommon among this class and the community does not try to check them and others fear to unite against them. Setting fire to haystacks and house-breaking are common. Even those who suffer by them fear to come forward to give direct evidence.

Gambling is carried on to a small extent. The people however are entirely sober and even *tari*-drinking, so common in other parts of the district, is unknown in this village.

Indebtedness. Borrowers are for the most part men driven to this necessity by the pressure of want, and contract debt as a desperate resource without any fair prospect of ability to pay. Not infrequently money is also borrowed for agricultural purposes, e. g., buying bullocks, digging wells &c. Agriculture has not, for various

reasons discussed elsewhere, resulted in any remarkable successes; there is lack of stimulus in this direction. The cultivators usually have no cash in their hands in the cultivating seasons, and the result is a very acute and distressing 'money famine'. At the time of paying taxes also difficulty is felt as all produce are not immediately sold. It is mostly for these reasons that the small cultivator borrows money and the extent of indebtedness due to social habits is comparatively small. There are no professional money-lenders in the village. Loans are obtained by mortgaging movable or immovable property. The current rate of interest is from 12 to 18 per cent. per annum on secured loans and from 18 to 25 per cent. on unsecured loans. Such transactions take place very often as there are 5 or 6 document writers in this place spending their whole time in this work. There are many instances in which people have had to succumb to debts, though not to any viles of their creditors. The main reasons were that the particular debtor was unthrifty or the income from his land continuously fell short of his expectations:

Pastimes. It is very regrettable to note that no pastimes have at any time existed in this locality for men, women or children. People meet on ceremonial occasions such as marriage or death, for a short time, and there is some enjoyment on certain of the auspicious days in the year. The rough sport of bull-baiting was conducted for a few years long ago, but there is not much chance of its revival. Itinerant story-tellers and some local drama troupes visit the village occasionally. The cultivators have few likes and dislikes and their leisure is generally idled away.

Agricultural and Economical.

Soils (a) Surveys. The first regular survey and settlement of this village was carried out in 1890 and the resurvey and resettlement in 1910. The total area is 4450'87 acres of which the village sites cover 37'44 acres and the poramboke which includes tank-beds, channels, roads, etc. covers 713'85 acres. About 22 acres are unoccupied and the remaining 3677'87 acres are under cultivation. The lands are divided into 552 survey fields which are grouped into 26 blocks according to their being similarly circumstanced.

Classification of soils. The soils of this village fall under the two main series: (i) The regar or black cotton series extending over 1820 acres, underlaid by a basaltic eruptive sheet. They have the character of an alluvial backwater or lake deposit. They are of unusual depth without change of tint; they crack wide open during the dry seasons on account of their high clay content, and the soil is thus partly inverted by the surface soil falling into the cracks. The contents of lime, magnesia and alumina are uniformly high; potash has a wide range-it rises very high (1'14 per cent.) in the maximum while the average is fair; nitrogen content is very low.

The red ferruginous series covering an area of 1860 acres, form underlying dark-coloured mostly eruptive rocks. Some of these are very rich in lime and potash, others very poor. But compared with the regar on the average, the lime, potash, ferric oxide and phosphoric acid content is uniformly low.

The different classes and sorts to which both these soils belong are shown in table II. It will be seen that there are 471.26 acres (12 per cent.) of 'black clay-best', containing more than $\frac{2}{3}$ clay. This soil is best suited for dry cultivation, particularly for cotton. About 58 per cent., i. e., 2164.39 acres comprise of black and red loam, containing from $\frac{1}{2}$ to $\frac{2}{3}$ clay. These are divided into best, good or ordinary according to the amount of organic matter present in them. The rest 1061.59 acres contain less than $\frac{1}{3}$ clay. Much of the lands are above ordinary and very well suited for irrigation. A common feature, however, in both the series is that there is much of saline ingredients (called 'kalar' or 'uvar' in the vernacular) which makes the lands unfit for cultivation till they are neutralised or removed. Diminution of the size of leaves, assumption of cylindrical or spiral forms, dense hairy covering, resinous exudations and general compact growth are found in the trees which grow freely on waste lands. The chief salt met with is the washerman's earth, for removing which no satisfactory methods are known.

Table II.

Showing the classification, description and extent of lands.

Series, class and sort. Vernacular names.	Description.	Wet		Dry		Total.
		Taram	Extent	Taram	Extent	
Regar or black cotton series.	3-1 Best <i>Karisal.</i>	...	...	1	471.26	471.26
	4-1 Best <i>Kakkara.</i>	3	32.43	2	850.99	883.42
	4-2 Good <i>Pottal.</i>	4	145.17	3	243.34	388.51
	4-3 Ordinary <i>Vephal.</i>	5	60.19	4	15.64	75.83
Red ferruginous series.	7-1 Best <i>Sevval.</i>	4	87.92	3	362.89	450.81
	7-2 Good <i>Saralai.</i>	5	246.91	4	96.00	342.91
	7-3 Ordinary <i>Saralai.</i>	6	16.16	5	6.75	22.91
	8-1 Best <i>Manal.</i>	...	...	4	1061.59	1061.59
Total. ...		...	588.78	...	3108.46	3697.24

In the regar tracts the surface soil of black clay exists to a depth of a yard and in the red series it prevails to a shorter depth. Below this for another 3 or 4 feet gravelly or calcareous soil is found and still below, the earth consists mostly of rocks of various kinds or red earth. It will thus be seen that the moisture of the surface soil is readily drained through the subsoil.

(c) Productivity of soils. According to their 'grain values' or productive power, the wet and dry lands have been grouped into *tarams* as shown in table II. The wet lands of the village fall into 4 *tarams*, 3 to 6 (table III).

Table III. Wet lands.

Taram.	Extent in acres.	Grain value in Madras measures* of paddy per acre.	Assessment in Rs. per acre.
3	32.43	815	8-2-0
4	233.09	723	6-14-0
5	317.1	631	5-10-0
6	16.16	540	4-6-0

The dry lands belong to the first 5 *tarams* in the district (table IV).

Table IV. Dry lands.

Taram.	Extent in acres.	Grain value in Madras measures* of cholam and cumbu each half, per acre.	Assessment in Rs. per acre.
1	471.26	211	2-12-0
2	850.99	178	2-0-0
3	606.23	162	1-8-0
4	1173.23	146	1-2-0
5	6.75	130	0-14-0

Those dry lands which have a well in them are called garden lands. There are on the whole 600 acres of wet lands (irrigated), about 600 acres of garden lands and 2500 acres of dry lands (unirrigated). The assessment per acre on wet lands varies from Rs. 8-2-0 to 4-10-0; on dry lands from Rs 2-12-0 to 0-14-0; garden lands are classed as dry and no special rate is levied.

(d) *Soil improvement.* Hundreds of cartloads of tank silt are applied every year to the inferior kinds of red soils in dry or garden lands. Black silt is mostly used, red silt being less available. In wet lands the level has to be lowered from time to time to facilitate irrigation. The earth thus removed is also applied to dry lands. Where saline ingredients occur a special crop is rarely grown. Nothing is done for dry saline soils, and they are simply left uncultivated.

(e) *Location of the settlements with reference to soils.* All types of soil and all the tanks are accessible within a mile of Villur. The roads and markets are also nearer. Hence it is most favourably situated so far as agricultural purposes are concerned. The two settlements in the south have little wet lands near them and there are few wells for irrigation. But they possess the better dry soils and cotton is their

* One Madras measure of paddy weighs 2.5 lbs. of cholam weighs 3.1 lbs. and of cumbu weighs 2.7 lbs.

valuable crop. This is one of the reasons for the slightly higher prices for lands in Villur than for the corresponding ones in the settlements.

(f) *Relation between soil fertility and welfare of the cultivator.* The sole source of income is agriculture in this locality, no other handicraft being found in any of these places. But the villages to the north and east of Villur, which possess exclusively the regar or red soil of the best sort, are certainly much better off. The black soil being very retentive of moisture, does not depend so much on the rains, the out-turn of the crops is steadier and larger in quantity. In the case of Villur and other villages to the south and west, the soil is mixed, inferior kinds of black and red series, which though very well suited to irrigation, produce practically nothing in the absence of proper rains. Though the people have tried to make the best of the situation as far as their knowledge and facilities permitted them, the results are far from satisfactory.

(To be continued)

Proceedings of the first meeting of the Crops and Soils wing of the Board of Agriculture and Animal Husbandry in India.

25th February to 2nd March 1935.

Sixty-seven members including officials and non-officials from the different Provinces and States attended the meeting besides three visitors. On the first day when the full board met Diwan Bahadur Sir T. Vijayaraghavachari, chairman, welcomed the members and gave a brief outline of the features in the agricultural development of the country since the previous Board met in 1929.

Of the ten subjects on the agenda, the first six were referred to sub-committees which met on the 25th afternoon, 26th and 27th and submitted their reports to the General Board which met for 3 days, 28th February, 1st and 2nd March. The other subjects were discussed by the full Board directly.

The subjects and the reports of the sub-committees adopted by the Board are given below:—

Subject I.—*The planning, technique, and interpretation of field experiments and the technique of cultivation.*

(a) To review the methods of experimentation and interpretation at present in use and to consider their suitability to the varying soils, crops and climatic conditions in India. (b) To consider to what extent the standardisation of field plot technique throughout India is possible; also the standardisation of methods of statistical analysis. (c) The need for experimental work on field plot technique so as to permit refined methods of statistical analysis to be applied to the results and to reduce avoidable experimental error to the minimum. (d) The methods of testing new varieties of sugarcane in vogue at different experiment stations and the possibility of securing greater uniformity. (e) To discuss the conditions under which the inter-culture of rain-fed crops is beneficial. (f) The effect of the speed of various cultural implements on the tilth of the soil.

The committee reported that the modern methods of experimentation and interpretation of the results were being followed in all provinces. Fisher's analysis of variance was commonly used. Very little information was, however,