

A STUDY OF RURAL ECONOMIC PROBLEMS OF GILAN AND MAZANDARAN¹

Introduction

In the year 1954 the Ministry of Agriculture supported by Point 4 and the Ford Foundation conducted a survey on the ratio of rural population to cultivated land. The survey covered more than 30 villages and a report for each was compiled by two American researchers who took part in the survey.

Since the reports could be taken as a firm basis on which comparisons could be made between the past and present conditions of the surveyed villages, the Institute for Economic Research decided on another survey of the villages with the financial support of the Ford Foundation in order to evaluate, as far as possible, the changes brought about during the past ten years. In addition to the population pressure on the cultivated land, which had attracted the attention of the previous researchers, some questionnaires were drawn up and put to use in such a way as to reveal and evaluate the results of the Land Reform Law. Besides, due to the great importance attached to the absorption of the excess rural population by cities as a means of decreasing the population pressure on the cultivated land and bringing about an improvement in the living conditions of the rural inhabitants; a study of the possibilities of the industrial and service sectors and the possibility of providing work for the excess rural population through economic development was carried out by the team who also tried to state, briefly, the main economic problems of each of the two provinces. To give a clear picture of the situation and for comparison purposes, reports prepared during the last ten years have been attached to that prepared by the present research team.

1. The research team for the above two provinces consisted of Dr. Hossein Mahdavi, Dr. Hooshang Saedloo, Dr. Fereidoon Nasseri, and Mr. Jamshid Arjmand.

Following the Khuzistan province, the study of which was published, in the last issue of the Review, the second and third provinces to be surveyed were Mazandaran and Gilan. The survey, which lasted from May 17, to May 29, 1964, covered a vast area in the above two provinces, enabling the research team to visit different part, mountainous regions and fertile plains, and to make a close study of the rural economic potentials and problems of the two provinces. The route taken by the team, except for the two days' stay in Ghazvin and a study of Abdol-tapeh village, (the report of which will appear in the next issue of the Journal in the section dealing with studies on the rural economic problems of Varamin, Ghazvin and Zanjan) was Tehran, Ghazvin, Harzevil. The team also visited the Sefid-rood dam and related installations and the Sefid-rood Water and Electricity supply installations. On the way to Rasht they paid visits to the Fumanat dam and diversion tunnel, and a few days, stay was scheduled in Rasht for the elaboration of necessary reports and also a visit to Gigasar village in the Jomeh-bazar. The team next went from Rasht to Shahsavār in Mazandaran province, where it paid a visit to the village of Ghaleh-gardan. Then they continued on to Sari where an inspection of Zinate -now village near Neka was the next item on the schedule in Mazandaran. But the time being short it was impossible for the team to study all the problems involved which, no doubt, required a longer time.

Such being the case, the team preferred to handle problems of primary importance rather than those of secondary importance, worthy of careful consideration though they were.

The team, during their stays in and visits to locations on their itinerary held interviews with individuals whose social and occupational statuses enabled them to have a fair knowledge about the problems concerned.

The villages and rural districts covered by the survey were the same as those surveyed 10 years before; reports of which are available.

For, considering the large investments, either in private or Government sectors, in constructing the Sefid-rood dam, Fumanat tunnel, the extension of the electricity network, and the construction and extension of irrigation canals; all the changes brought about in the course of the last

ten years would have been overlooked if the study carried out by the team had for its basis the available reports only. Therefore, although the survey covered villages already surveyed, nevertheless in order to make a suitable basis for studies during the next ten years the survey was coupled with studies in other directions, especially concerning the activities of the Sefid-rood Water and Electricity Supply Organization 1.

A STUDY OF THE RURAL STATISTICS OF GILAN 2

The region called Gilan which forms a major part of the province 1 is similar in natural characteristics and geographical conditions to Mazandaran.

The fact that the Gilan region should, together with Arak and Zanjan, form the province, arises purely from administrative necessity as there is otherwise no similarity between the two regions, either from a geographical or an agricultural point of view.

The total area of land under permanent and annual crops in Gilan is about 247,775³ hectares of which 234,504 hectares are under annual crops and the remaining 13,271 hectares are under permanent crops, of which only 486 hectares are irrigated. Of the annual crops about 75 per cent is irrigated and the other 25 per cent is cultivated through dry farming. The scantiness of the land under dry-farmed cultivation in Gilan is due to its special geographical condition reducing the dry-farmed area to the minimum throughout the whole country. The total area of fallowed land in Gilan is about 25,389 hectares, plus some 27,147 hectares of reclaimable lands which, without necessitating great changes, can easily be brought under cultivation. Thus, if by applying suitable methods the fallowed and reclaimable lands are brought under cultivation the total area under cultivation in Gilan can be increased to 300,311 hectares, which means about a 21 per cent increase.

The very fact of Gilan's having 83,232 hectares of natural pastures, on the one hand, explains the non-existence of artificial grosslands, and on

1. These will appear in the coming issues of the Journal.
2. All figures appearing in the course of the study except where explained have been extracted from Iran's Agricultural Statistics Bulletin (1960).
3. Excluding fallowed lands and those under plantations and nurseries, amounting to 34,100 hectares.

the other, led to its becoming the main feeding source for animals from adjacent areas. These pastures, which in comparison with those of other provinces are very extensive, could have a favourable effect on animal farming of the Gilan province and that of the country as well if they are utilized in a proper way.

From the above it follows that most of the land in Gilan is being utilized and that the ratio of the utilized lands there to the other parts of the country is very great indeed. The population of Gilan is 890,466¹ according to the Home Ministry's Statistics, 1956, of which 77 per cent (i.e. 691,603 persons), have been enumerated in rural districts and the remaining 23 per cent in urban areas. The country-wide agricultural census carried out in 1960 designates the number of various type of holders as 884,804 persons consisting of 165,498 households, which the statistical results of the same publication classify as follows:

Number of holder households with land	137,298
Number of non-holder households ²	17,400
Number of holder households without land ³	10,800

The last two classes amount to 28,200 households in number and comprise 17 per cent of the rural households.

They are in fact Gilan's well-to-do rural inhabitants⁴. If we divide the total area of the cultivated land of Gilan, amounting to 247,775 hectares, by the number of the holder households, (137,298 households) then any individual household will have 1.8 hectares on the average. Now, if we assume the average number of any holder household to be 5 persons then there will be 0.36 hectares of land for each member of the household.

1. The aggregate population of the Zanjan and Arak townships, which the country's Administrative Divisions include in the province, has been deducted from the figure.

2. An agricultural holder is a person or body-corporate being directly responsible for the economic and technical management of an agricultural holding which he manages either personally or through an agent (Agricultural Statistics Bulletin 1960).

3. Other agricultural units with no cultivated land yet active in animal breeding or animal farming are considered as agricultural holders.

4. Here special importance is to be attached to the ratio of the well-to-do rural inhabitants to the other rural inhabitants since according to the Land Reform Law they are not entitled to any land, except in exceptional cases.

By taking into account both the holder households with land and those without land we will find the size of the cultivated lands too small and that of the population too large. The problem would still remain insoluble even if we added the 21 per cent reclaimable lands to those already under cultivation. The fact is that Gilan would have been ranked amongst the country's poorest regions if no costly and profitable crops such as tea and rice or some sort of intensive cultivation had not been practised there to make up for the land shortage.

The total area of the holdings with land and their distribution in Gilan are as follows:

Holdings classified by size of land	Number of holdings	Ratio of strata to the total number of holdings (%)	Total area of hol- dings by hectare.	Ratio of the areas to the holding total area (%)
Less than 0.5 hectare	20,850	15	4,616	1.5
From 0.5 to less than 1 hectare	20,550	14	15,161	5
From 1 to less than 2 hectares	46,200	33	66,546	23
From 2 to less than 3 hectares	29,250	21	70,173	24
From 3 to less than 4 hectares	10,050	7	33,182	11
From 4 to less than 5 hectares	2,850	2	12,680	4.4
From 5 to less than 10 hectares	5,874	4	39,325	13
From 10 to less than 20 hectares	600	0.4	9,337	3.3
From 20 to less than 50 hectares	1,064	0.7	28,574	10
From 50 to less than 100 hectares	2	-	124	-
From 100 to less than 500 hectares	6	-	841	-
500 hectares and over	2	-	1,316	-

As it seen from the above figures, holders having less than 0.5 hectare to less than 3 hectares are in an absolute majority; i.e. 83 per cent of the total holders; while here too holders with 1 to less than 2 hectares and comprising 33 per cent of the total holders are in a relative majority.

The major part of the lands cultivation in Gilan i.e. 47 per cent of the holdings' total area, is being cultivated by the two groups of holders with from 1 to less than 3 hectares. Thus the largest group of farmers is composed of holders whose size of land is from 1 to less than 3 hectares which is hardly enough to raise the level of the villagers' income.

Lands with areas of between 3 to less than 10 hectares form 13 per cent of the holdings and 28.4 per cent of the total area, a composition which, in fact, is the average resultant of the more efficient units in Gilan; showing that the size of the arable land, the more economical it will be to operate, so that plots of lands with sizes between 10 to 20 hectares constitute 4 per cent of the holdings and 3.3 per cent of the total area.

The main problem facing Gilan's agriculture is that its patches of lands of insignificant size are sparsely situated—a situation which is a great obstacle to the use of agricultural machinery in holdings. The exceptionally small and widely scattered units (on the average each holding covers two pieces of land with an area of 0.62 hectare) in Gilan are great impediments to the raising of the farmers' level of income. 1

1. In an interesting report prepared on rice and other grains in Gilan by the research team of the Economic Research Institution commissioned to carry out research in cereal, the following has been said about the Gilan farmers' level of income, after calculation of the changes in rial value:

«The Gilan's agricultural income, not taking into account the one earned through animal farming, amounted to Rls. 5,032,642,300 in the year 1960 and to Rls. 2,380,320,433 in the years between 1926 and 1933, i. e. after converting the rial's value into that current nowadays. Thus the excess agricultural income in the year 1960 amounted to Rls. 2,652,321,867. In other words, the Gilan's agricultural income in the year 1960 was twice as much as that earned in the years between 1926 and 1933. And as the farmer's income, which in the year 1926 amounted to about Rls. 479.09; which by converting the value into the one current at present comes to Rls. 15,522.51; has increased to Rls. 26,163.43 in the year 1960, which is about twice as much, we can therefore, say that as a result of the increase in the agricultural income during the recent 35 years a considerable portion has gone to the Gilani farmers.

(See issue nos. 5 and 6 of the Quarterly Journal of Economic Research, pp. 139-140, June 1963).

Number and size of the pieces of holdings with land, in Gilan.

Holdings classified by size of land	Number of holdings	Total area of holdings by hectare	Number of pieces	Average number of pieces in each holding	Average size of each piece by hectare
Total of the holdings with land	137,298	247,775	393,848	2	0.62
Less than 0.5 to less than 1 hectare	41,400	19,777	89,100	2.1	0.22
From 1 to less than 5 hectares	88,350	182,581	263,700	2.9	0.69
From 5 to less than 10 hectares	5,874	39,325	28,320	4.8	0.13
From 10 to less than 20 hectares	600	9,337	5,100	8.5	1.83
From 20 to less than 100 hectares	1,066	28,698	7,536	7	3.8

As is seen from the above figures, size of land in holdings having an area of more than one hectare and embracing only 1 per cent of holders is much larger than that in their holdings with an area less than 20 hectares (more than 3.8 hectares) which difference will help us to distinguish the comparatively large holdings which make a very small figure as compared with the almost absolute majority of holders.

No reliable statistics or information are available about the per capita income of the rural inhabitants. If we take the object of the survey as a sample of Gilans' villages, similar in characteristics, we may then consider the agricultural income of the area to be on the same level as that of the sample villages.

But, owing to comparatively extensive citrus groves and tea plantations a larger per capita income is probable in the eastern parts of the province, while in the western parts it is probable that the per capita income may

not exceed the one obtained by the research team in the surveyed villages, especially as the animal farmers' income, in this part, is not considerable.

Of the total 234,504 hectares of land under annual crops, 74 per cent are allocated to rice, 11 per cent to wheat, about 2.5 per cent to barley and the remaining 12 per cent to other crops such as tobacco, maize, flax, cereals and greens of which tobacco, grown in the 24.5 per cent of the remainder of the land, is of great importance. Cultivation of rice, the only crop raised through irrigation, extends over 74 per cent of Gilan's irrigated land.

Other crops are being cultivated in small pieces of land sparsely situated between larger plots under rice cultivation. Dry-farming is common in patches adjacent to irrigation canals or in non-irrigable lands. Contrary to cereals, rice in Gilan is most often grown in small holdings inasmuch, that holders with less than 5 hectares and constituting 86 per cent of the total holders, operate 83 per cent of the land under rice cultivation with 86 per cent of the total yield. For the very reason and the fact that rice can be grown in a very small area, and also due to its being more profitable as regards output, the small holders' income is considerable. But cereals are most frequently being grown in holdings with more than 5 hectares, to wit only 34 per cent of the lands under cereals belong to holdings with less than 5 hectares and the rest are controlled by holders with 5 hectares and over.

The most important permanent crop of Gilan is tea which extends, over 81 per cent of the land under permanent crops with over 20,000 holdings. Tea growing is more common with holders with from 0.5 to less than 4 hectares and also with those with 5 to less than 10 hectares, whereas the area cultivated by other classes of holders is much less than that cultivated by the above groups. Olives, which are one of the main products of Gilan, are being cultivated in an approximate area of 396 hectares and by 1,050 holders. The olive yield was about 803 tons in 1960. Notwithstanding the importance attached to sericulture, unfortunately no separate statistics on mulberry trees are available. The 1960 census gives a sole figure for pomegranate, fig and mulberry trees combined, amounting to 546, 750 in total and covering an area of 760 hectares. On the whole the yield of various crops in Gilan is small. For instance, the yield of rice which

is the major crop is 2.2 tons per hectare, while in Japan and Italy the yield for the same crop goes up to 4 and about 3 tons per hectare respectively. The yields of other crops in dry lands are also very small, as for example the dry-farmed wheat and barley yield in Gilan does not exceed 380 kgs. per hectare, while in Mazandaran this amounts to 1 ton per hectare.

Among other main factors, crude methods of production account for the scantiness of agricultural output in Gilan. In 1960 about 88 per cent of the holders used animal power exclusively in cultivation, while only 5 per cent of the holdings employed agricultural machinery, 2 per cent mixed mechanical and animal power, and the remaining 9 per cent used manpower only.

But of late, according to personal observations and studies of the team some significant changes seem to have occurred in the area, which is to be ascribed to the use of small hand-operating, oil burning tilling machines capable of being used in small plots of land.

Animal husbandry in Gilan is mainly restricted to cow and buffalo breeding, insomuch that in 1960 over 8 per cent of the country's cows and 7 per cent of the buffaloes were reported to have been in Gilan province while at the same time only 1.5 per cent of the country's sheep were being bred there.

69 per cent of the cows and buffaloes belong to holders with less than 3 hectares of Land. Holders without land have only 4 per cent of the cows and buffaloes. There are a considerable number of horses in Gilan; according to the 1960 census, 10 per cent of the whole country's horses.

It is also customary to hire ploughing animals in Gilan, so that 36.5 per cent of the holders hired them from hirers. This procedure is more common with small holdings and those with 20 to less than 50 hectares than with other types of holdings, to such an extent that 42.5 per cent of the holders with less than 1 hectare hire ploughing animals. This also has been the case with 40 per cent of holders in holdings with less than 2 hectares; 38.5 per cent in holdings with 2 to less than 3 hectares; 35 per cent in holdings with 3 to less than 4 hectares, and 26 per cent in holdings with 4 to less than 5 hectares. The figure once more goes up in the case of holders with 5 to less than 10 hectares, to the extent that 36 per cent of such holders hired ploughing animals, while holdings with 10 to less than 20

hectares did not make use of hired animals, whereas unlike them 43 per cent of holders with 20 to less than 50 hectares hired ploughing animals.

In addition to the expenses to be borne for the hiring of animals, the Gilani farmer is often heavily in debt, and the loan interest constitutes an important item of the holders' expenses, insomuch that of 148,098 holdings, either with or without land, 58 per cent i.e. 88,050 holdings, received loans in 1960, of which 18 per cent or in other words 16,200 holdings, had loans from Government institutions such as the Agricultural Bank or the Rural Fund, and the rest from non-government or private institutions. Loans from non-government sources were as follows:

17.8 per cent from landlords, 2 per cent from animal hirers, and the remaining 80.2 per cent from other sources such as money-lenders and shopkeepers. If we take into consideration the rate of interest, which is about 50 per cent according to individuals interviewed, then we can have a clear idea of the pressure such loans exert upon the farmers, especially as loans from government institutions do not exceed Rls. 102,406,000 in amount, whereas those from non-government sources amount to Rls. 648,015,000; i.e. somewhat less than six times as much. Thus, in 1960 the help rendered to farmers by the government and landlords against the usury of money-lenders and shopkeepers' was of very little significance. The land ownership status in the Gilan holdings, and the relations between landlords and farmers have a special form somewhat different from that prevalent in other parts of the country. Here, the tenancy system is more common; that is to say that the land is leased out to farmers for a period of a year and against payment of fixed rents usually paid in kind—a procedure which in most of the holdings will continue on the same terms at the expiration of the lease period. For this reason, the Land Reform Law, up to the end of its first stage, has in practice been applicable to no more than 15 per cent of the total villages of the area of the 2,284 villages surveyed up to the end of the first stage of the Land Reform Law, 70 whole villages and 287 villages of less than 6 *dangs* had been purchased by the Land Reform Organization and distributed among farmers. The distributed lands are mostly located in Lashtenesha and the surrounding districts, and in some parts of Koochesfahan

as well. The lack of communications between most of the villages and districts is among other causes accounting for the slowness in the implementation of the Land Reform Law. Due to the area's wooded and mountainous nature no sound communications are possible there for over one half of the year, and no means of transport save horses and mules are available.

Agricultural Co-operation and Credits

The first co-operative societies were established in Gilan in the year 1958, previous to which date there were only Rural Funds in Rasht, Talesh, Lahidjan and Roodbar. In the year 1958 about 70, and up to the year 1962, 110 co-operative societies were established in various parts of Gilan by the Agricultural Bank. A further 82 societies have been established there in the period beginning with the implementation of the Land Reform Law upto June 1964, increasing the total number to 192, of which only 24 have been registered. A great number of the distributed villages in Gilan are still without co-operative societies due to their being located in mountainous regions and lacking personnel.

For the whole area there are only 14 supervisors each supervising over 10 to 17 co-operative units. The membership of the co-operative societies during the time covered by the present survey was 47,369 persons. The 192 co-operative societies had a capital of Rls. 33,322,800 plus Rls. 80,000,000 credit granted them by the Iranian Rural Co-operation Organization. Such credits by the organization are given to co-operative societies at 4 per cent interest and paid by the latter to the societies members at 6 per cent interest. The amount paid, as credits, to the Gilan co-operative societies in 1963 was 5 times as much as their combined capital, and it is to be increased by up to 10 times as much in the course of the current year. The reason why the credit figure does not show a sum five times as much as the capital figure is due to the fact that so far a number of societies have not been granted any credits at all and that some of them have large capital.

Up to now about 38,000 members have been paid loans by their

relevant co-operatives. The maximum loan awarded each member was Rls. 10,000. Loanees have to purchase fertilizers from the co-operative lender, a quantity equivalent to at least 10 per cent of their loans. Although co-operatives in Gilan have been announced as multi-purpose in type nevertheless their main activities have not gone beyond granting loans so far.

A small number of co - operatives have rice ponders and agricultural light machinery such as tillers . The point worthy of consideration here is that co - operatives do not exercise full control over the ways in which the loans are to be utilized and that the farmers due to their being heavily in debt , have so not far been able to use them for agricultural purposes . As stated before , the farmers ' total dues to government and non - government sources amount to Rls. 750 million while the total amount of loans extended to them by the co - operatives does not exceed Rls. 113 millions which is only 15 per cent of the total debts. i. e. if the loans are taken as the sum total of the credits and capital. In addition to the co - operative societies , the Agricultural Bank has initiated some credit activities in the area and accepts applications for the kind of loan mentioned here below :

1. Short - term loans (to be paid back in two years) for purchasing of seeds , fertilizers , and farmers ' seasonal necessities . No control whatever is being exercised as to the ways in which the loan is to be utilized . The minimum amount of this type of loan is Rls. 1000 and its maximum Rls. 100,000.

2. Medium - term loans (to be refunded within 6 years) for tree plantation, land reclamation , digging of qanats and canals , boring of deep or semi - deep wells etc. This type of loan varies from Rls. 10,000 to Rls. 1,000,000 in amount.

3. Long - term loans (to be refunded within ten years ' time) for fundamental projects such as dam construction , tunnel boring and creation of citrus groves and olive plantations .

4. Credit in the form of current accounts (short - trem), the main object of which is to prevent farmers or holders from short selling of their products ; in other words it is intended to cover the farmers or

owners' seasonal needs. This loan will not exceed Rls. 500,000 in amount. It should be mentioned that no branch of the Agricultural Bank has, under the above loans, paid more than Rls. 100,000 to farmers or landowners, up to the date of the survey. The total number of loans granted by the Bank in the year 1963 was 29,920 items, amounting to Rls. 164,297,900, of which 937 (546 short-term, 391 medium-term,) amounting to Rls. 25,603,900 have been paid in Rasht township. Here it should be added that a loan of Rls. 5,000,000 provided by the Plan Organisation, has also been distributed among the Gilan farmers of whom 2,355 were in the Rasht township. The loans granted by the Plan Organisation were to be refunded in two years' time. But granting such loans presents many difficulties, both in keeping the account books and in collection of the loans, which necessitates establishing an extensive organisation, - a difficult task in these circumstances.

Agricultural Extension i

Gilan's Agricultural Extension Department was established in 1953 with 13 extensionists assigned to deal with the affairs related to agricultural extension in about 2,284 villages in the area. The present staff of the Department consists of 90 persons including 39 agricultural extensionists and 29 home extension agents. The rest are office clerks working in various departmental sections. The home extension agents started work in 1959, each having for their area of action one or two villages in the area. Of the 39 extensionists placed at the disposal of the Land Reform Organisation at the time when the latter was active in the area, 9 are still with the same organisation.

Extensionists are usually selected from amongst graduates of the third and sixth grades of the secondary school, who are paid a monthly salary of Rls. 5460 and Rls. 4,700 respectively. In practice, an agricultural extensionist cannot take care of more than five villages; a fact showing that the present number is too small to cover the whole area. The Agricultural Extension Departments' budget for the year 1963

i. Information about extension activities has been obtained from the Agricultural Extension Department of Gilan province.

was only Rls. 8,000,000 which, considering the expenditures involved does not warrant engagement of a larger personnel.

Development ²

The total number of village councils in Gilan was 427 by March 1964, distributed in the areas mentioned as follows :

Rasht suburban district	56	Councils
Koochesfahan »	15	»
Lashté-nesha »	28	»
Khomam and Khoshkbijar district	28	»
Lahidjan »	65	»
Hassan kiadch »	8	»
Astaneh »	11	»
Siahkal »	6	»
District attached to Roodsar township	36	»
District attached to Langrood »	43	»
District attached to Astara »	5	»
District attached to Sowmeh-sara »	30	»
District attached to Roodbar »	2	»
District attached to Bandar Pahlavi »	15	»
District attached to Fooman »	30	»
Shaft district	22	»
Talesh suburban district	27	»

At the present time development activities are mainly concentrated in the suburbs of Rasht, Lahidjan and Langrood. In many villages the collected 5 per cent Development tax has not been used in development activities, while in some others the 5 per cent which has been intended for development has not been collected yet.

Economic Prospects of Gilan

The main problem facing Gilan's rural economy has its roots in the heavy pressure brought to bear on the small cultivated area by a rather large population. This, together with the inefficiency of the production factors, lack of acquaintance with modern agricultural

² Information on development has been obtained from the General Department of Social Affairs and Rural Development, Ministry of Interior.

method, and under - employment, has been considered as obstacles to the increase in the farmers' agricultural income, though farmers in this area have bigger earnings compared with those in other areas. Unemployment will continue to exist in the form of under - employment as long as it is possible to employ human labour in place of agricultural machinery and capital. But if machinery comes to be employed more extensively the pressure on land will automatically ease, inspite of the fact that most of the crops in this region like tea, tobacco and rice, even at a mechanised level, will need considerable manpower.

The majority of Gilan's population consists of farmers, but a great number of the urban inhabitants and government clerks also have parcels of arable land in the area, as the area's conditions provide great possibilities enabling them to operate agricultural holdings and to maintain their main occupations at the same time.

Gilan's rural population, like that of most parts of the country, is very young - insomuch that the majority, or 54.2 per cent belongs to an age group of less than 19 years and 34.7 per cent to an age group of 19 to 50 years. The intensive malaria campaign conducted during recent years accounts for the rejuvenation of the population and its comparatively great rate of increase and it is expected that by drying up the rice ponds the disease will be eradicated and that the rate of population growth will go up still more.

Of Gilan's rural population of 10 years of age and over, which in 1960 amounted to 576,000, only 21.5 per cent were considered as economically inactive, due to their being either too young or too old to participate in economic activities.

Keeping this in view, it may be taken for granted that the rapid rate of population growth and lack of work possibilities in the non - agricultural sector will further aggravate Gilan's economic situation.

Considering the Sefid - rood Dam Organization's objectives and plans which, if implemented, are expected to add some 68,000 hectares to those already under cultivation - according to the estimates made during the

present survey - and also taking into account the vast area now in the form of water reservoirs used by the near - by villages , which can be reclaimed to increase the above figure to 100,000 hectares ; on the average the per capita land of each household will increase by about 0.72 and that of the holder household to 2.5 hectares (now 1.8 hectares) .

Taking into account the area's special conditions it is only natural that such expensive operations can, at best, only postpone for a short period this critical state of affairs from coming to ahead and that they may provide a number of the inhabitants with more openings. But what sort of possibilities can they offer an ever - increasing population and to those who will remain in rural areas either in the capacity of non - holders or holders without land , thus leading to a worsening of the situation ?

Of course by pointing out such matters we do not mean that any efforts at land reclamation and development of intensive mechanized agriculture should be abandoned or that little importance is attached to them; rather, we mean that attention should be paid to the population growth which in the agricultural sector surpasses the absorption possibilities. For, the crisis is sure to continue as long as the population growth has not been surpassed by the population absorption through providing more work possibilities in other sectors. In other words , with the present absorption capacity in the agricultural sector , the best solution is to be found in the development of mining , industry and services.

But in Gilan, there are only 3,624 industrial establishment, of which 17 are state owned and 3 are municipal establishments.

There is also one mixed establishment. The remaining 3,603 are private establishments. 1 The establishments' activities are mostly concentrated in such lines as the manufacture of consumer goods such as shoes, clothing, food, and metal products (excepting machinery and transport facilities).

Besides, there are other industries in Gilan - namely the manufacture

1. Figures and information about this section have been extracted from reports on the National Census of Industry, Ministry of Interior, Public Statistics 1963 .

of wood and related products, transport equipment, repairs, fine arts, the manufacture of textiles and rug weaving .

This sector in all employs 10,829 workers; in addition to the above, known as manufacturing establishments, there are 7,900 others, such as construction, electricity, water, retail and wholesale trades, banks, insurance, real estate, transport, storage, communications and services; employing a total number of 15, 041 workers. Of these about 654 persons are in the employ of electricity, water and construction, and 371 in banks and insurance, mostly classified in the non - private sector. There are others also, working in tea industry. On the whole, there are ¹ 104 tea factories in Gilan, of which 64 are conventionally called technical, being equipped with automatic driers; 31, semi - technical, i. e. equipped with semi - automatic or hand - operationg driers; and the other 31 non technical, as they use primary tools only. Of the above establishments 5 are state establishments and the rest are private establishments .

These establishments employ about 4,000 seasonal workers for 100 days in a year. Fishing ² in Gilan engages more than 1,700 workers in various ports and centres. Of these about 600 are permanent and the rest are seasonal workers engaged by the signing of contracts. Most of the last two types of workers, especially in fishing, are not native but come from other areas, Azerbaijan in particular .

Due to the work being carried out by various contractors who carry out the fishing with hired help no correct figure about such workers can be given. Thus, the total number of workers employed by the non - agricultural, mixed - agricultural and industrial sectors in Gilan amounts to 31,591 which is 3.5 per cent of the total population .

Of course Gilan enjoys many agricultural advantages which she has gained by introducing innovations to the existing agricultural methods, and by reclaiming the waste wooded areas i.e. those covering the

1. Figures and information about this section have been obtained from the Tea Organisation .

2. Information about this section has been obtained from the Iran Shilat (Fishery) Company .

far north mountainous regions and flat land, so it is possible that the area's productive capacity can be increased and can provide work facilities for an even larger population . But by taking the percentage of those employed in agricultural and non - agricultural sectors and the employment differences involved, we may come to the conclusion that unless an immediate and reasonable policy for the creation of activities outside the agricultural sector is adopted the area's future will be somewhat unpromising .

Consideration of the above points will show that in the circumstances neither the private nor the state industries are able to attract the excess rural and urban population or to offer them possibilities for a larger income .

Such being the case, under - employment and disguised unemployment are expected to continue to exist among the bulk of the population despite many favourable conditions existing in the area.

The large amount invested in the construction of the Sefid - rood Dam will shortly reduce in value as the population increases , without its having been able to provide the inhabitants with enough work to enable them to reduce their apparent unemployment for a long period.

Thus, notwithstanding some favourable changes in the agricultural sector, which ensued from the construction of the dam, the best way to increase the inhabitants income seems to be in the extensive development of the industrial sector .

پرتال جامع علوم انسانی

A STUDY OF MAZANDARAN'S RURAL STATISTICS

According to the administrative divisions of the country, and the Agricultural Census divisions, the second province consists of two areas, one is Mazandaran, which together with Gorgan constitutes the province's first zone; the other, including Shahrood, Semnan, Damghan, Kashan and Natanz townships forms the second. Due to similarities in agricultural and climatic conditions the two areas' statistics have been given as combined figure in the agricultural census of 1960. But similar though they seem geographically, there are still many differences between the western and eastern parts of the area, either in the agricultural methods employed or the permanent and annual crops cultivated there.

Nothing has been said in the information released by the Agricultural Census about the second province's total area (including the Mazandaran and Gorgan regions), but the report on the population survey for 1956 puts it as 155,164 square kms., i. e., 15.5 million hectares, of which 771,469 are under cultivation in the first zone, i. e. the Mazandaran region.

In Mazandaran and Gorgan there are 173,934 holdings with land, operating a total area of 771,469 hectares (not including natural pastures, wood and common fallow grounds) constituting 9 per cent of the total holding and 6.8 per cent of the country's total area. The average size of each holding in Mazandaran and Gorgan is about 4.4 hectares. The land under annual crops amounts to 684,978 hectares, of which only 29 per cent is irrigated and the rest dry-farmed.

A comparison with Gilan where about 1/4 of the land is being cultivated through dry-farming will clearly show that here, due to the insufficiency of river water, cultivation of cereals is more prevalent in Gilan than rice. Permanent crops are raised in 10,338 hectares, of

which only 10 per cent are irrigated and the rest are being cultivated through dry - farming. Artificial grasslands are of little significance in size, covering an area of 3,185 hectares only.

In Mazandaran and Gorgan there are about 728,500 hectares of reclaimable lands, now in the form of fallow grounds, woods and nurseries, which if brought under suitable cultivation will increase the size of the arable lands by 95 per cent; i. e., to 1.5 million hectares in total, which speaks well for the high agricultural capacity of the area.

Mazandaran and Gorgan have a population of 1,683,905, (1956 statistics) of which 1,307,479 persons are in the first zone which is the object of the present survey. Of the latter number 1,070,491 are rural inhabitants. The per holding distribution of the first zone's total population (amounting to 1,357,343 persons and consisting of 254,132 households) has been given as follows, as in accordance with the agricultural statistics of 1960.

Land - holders	174,482	households
Non - land holder - households	24,750	»
Non - holders	54,900	»

In Mazandaran and Gorgan, share - croppers (i. e., non - holder and holder - households without land,) are 79,650 or 31 per cent of the total households. Such a large figure in this thickly populated and fertile area seems considerable indeed. But the existence of 31 per cent share - croppers of whom $\frac{2}{3}$ are non - holders, calls for the carrying out of development plans, especially when the area under cultivation can be doubled.

The 771,469 hectares under cultivation, means 4.4 hectares per holder - household, or just under one hectare per individual, if we assume the average household size to be 5 persons.

Of course, the 4.4 hectares is the average size of land allocated to each household. The following figures, however, indicate the large difference between the size of holdings in actual practice.

Holdings by size of land	Number of holdings	per cent of the total holdings	Area of holdings	per cent of the area to holdings
Less than 0.5 hectare	22,812	13.2	6,087	7.8
From 0.5 to less than 1 hectare	24,368	14	17,363	2.8
From 1 » » » 2 hectares	38,666	22.2	54,307	7
From 2 » » » 3 »	27,996	16	66,976	8.6
From 3 » » » 4 »	13,687	7.8	46,053	5.9
From 4 » » » 5 »	13,050	7.8	56,835	7.3
From 5 » » » 10 »	22,782	13	146,255	18.9
From 10 » » » 20 »	6,753	3.8	83,615	10.8
From 20 » » » 50 »	2,983	1.7	91,764	11.8
From 50 » » » 100 »	102		6,709	8
From 100 » » » 500 »	711		158,371	20.5
500 hectares and over	24	0.48	37,134	4.8

As it is seen from the above figures, in the year 1954 about 80 per cent of the holders operating less than 5 hectares of land had only 40 per cent of the land while large holders operating 50 to 500 hectares possessed over 26 per cent of the total land, though they only constitute less than 0.5 per cent of the total holdings.

The remainder of the land is distributed among holders with 5 to 50 hectares. Holders with less than 3 hectares are in a majority.

The average size of land in various groups of holdings are as follows:

Less than 0.5 hectare	0.26	hectares
0.5 to less than 1 hectare	0.7	»
1 to less than 2 hectares	1.4	»
2 » » » 3 »	2.4	»
3 » » » 4 »	3.3	»
4 » » » 5 »	4.3	»
5 » » » 10 »	6	»
10 » » » 20 »	12.3	»
20 » » » 50 »	30.4	»
50 » » » 100 »	65.7	»
100 » » » 500 »	222.7	»
500 hectares and over	1547	»

Here too, as in Gilan, the scattered and fragmented parcels of land, and the smallness in size of agricultural units in holdings of less than 10 hectares, constituting 94 per cent of the total holdings are great obstacles to agricultural development. It is only in holdings of more than 10 hectares that the plots are larger in size and smaller in number, than those of Gilan.

The small and fragmentary plots of land (on the average 3.4 plots, each with a total area of 1.2 hectares) are considered as a handicap to an increase in the farmers' agricultural income.

The most important permanent crops of Mazandaran are citrous and various other fruits, as well as tea. In 1960, the citrous fruit production was 20,574 tons. The number of holders growing citrous fruits was 22,309. This figure not only denotes the importance attached to this crop in Mazandaran but also indicates that although the number of citrous fruits growers here is not any greater than in Gilan, nevertheless the yield as well as the production of this crop in Mazandaran is several times that of Gilan.

In Mazandaran, however, the cultivation of tea is not so widespread as it is in Gilan. Here, tea is cultivated unmixed, and in an area of 1,059 hectares operated by 3,009 holders, a total of 1,910 tons of green tea leaves is produced annually.

The growing ofkerneled fruits such as cherries, peaches, figs, persimmons and pomegranates, is rather extensive, with a production of 5,321 tons in the year 1960.

The major part of the land allocated to permanent crops in Mazandaran is leasehold except for some parts given up to orchards and citrous plantations being operated by petty landowners. Tea is entirely cultivated on land under the tenancy system.

Of the 684,978 hectares under annual crops, constituting 88 per cent of the total area of holdings, over 85 per cent are allocated to wheat and barley, 15 per cent to rice, and the rest to other crops like cotton, millet, potatoes, vegetables, summer crops and so forth.

As can be seen, in this area the cultivation of mainly dry-farmed wheat is practised far more than any other crop. The wheat yield is

The following figures show the manner in which holdings are divided into plots indicating their sizes as well :

Holdings by size of land	Number of holdings	Holdings area in hectares	Number of parcels	Average number of parcels in a holding	Average size of each parcel per hectare
Total number of holdings	173,934	771,469	601,469	3.4	1.2
Holdings of less than 0.5 hectare to less than 1 hectare	47,180	23,450	94,085	2	0.25
1 to less than 5 hectares	93,399	224,171	334,783	3.5	0.66
5 » » » 10 »	22,782	146,255	117,297	5.1	1.2
10 » » » 20 »	6,753	83,615	27,737	4.1	3
20 » » » 100 »	3,085	98,473	13,282	4.3	7.4

No reliable information is available about the farmers level of income in Mazandaran.

The villages surveyed by the team, however could be regarded as a representative sample of the farmers' level of income in the province, though allowances should be made for the western areas where as the result of tea and citrus plantations the level of income is probably higher than that in the eastern parts (this is true only in mazandaran and not in the plain of Gorgan).

around one ton per hectare, that of barley, which is also dry-farmed, is somewhat over one ton, and that of rice more than 2 tons per hectare .

In this connection, it should be noted that 74 per cent of wheat growers are those with less than 5 hectares of land, operating only 20 per cent of the total land (86,236 hectares) contributing 20 per cent of the total output; a fact showing that in the year 1960 the greater part of area under wheat was operated by large landowners . As for the rice, 70 per cent of the total production of paddy-fields (74,136 hectares) with 72 per cent of the total production (16,554 tons) are being operated by holders with less than 5 hectares of land, constituting 83 per cent of the rice - growing holdings (68,961).

The cotton cultivation in Mazandaran is mostly dry - farmed. The area under cotton is much more extensive than that under other crops . The yield is also greater in the case of cotton - so much so that cotton - growing holders with less than 5 hectares farming 79 per cent of the holding (67,187) and operating only 35 per cent of the land under cotton (608,999 hectares) , produce about 25 per cent of the total cotton yield (i. e. 2,688 tons) .

However, rice is Mazandaran's only major irrigated crop. Other crops except for a small quantity of millet, cereals, potatoes, cotton, tobacco and vegetables, are raised through dry - farming. More advanced agricultural methods are practiced here than in Gilan. Fertilizers are used in about 27,000 hectares, mainly in paddy and cotton fields. As regards power, machinery is employed in this area more extensively than elsewhere in the country; inasmuch as 14 per cent of the holdings employ mechanical power and 17.5 per cent mechanical and animal power combined, while 66 per cent of the holdings use animal power and only 2.5 per cent manpower.

However, it should be noted that the smaller the size of the holdings, the more manpower or animal power they employ. In other words, mechanical power is mainly used by larger holdings.

In view of the 1,896,770 hectares of natural pastures , Mazandaran and Gorgan are considered as being among the country's most important

livestock breeding centres, particularly for cows and buffaloes¹. The area's animal breeding potential capacity is considered to be much higher than it is at present. According to the 1960 agricultural statistics, out of the country's total number of buffaloes, 34.7 per cent (129,560) are being bred in this area. Besides, there are 730,132 bulls and cows in the area, - somewhat more than 13 per cent of the country's total number for the same animals, half of them being cows. Out of the total number of Iran's horses, sheep, cows, goats and poultry, 30 per cent, 5 per cent, 1.8 per cent and 12 per cent respectively are raised in Gorgan and Mazandaran. These figures speak quite well for the area's high capacity for animal breeding. Ten per cent of the cows here belong to holders without land and 52.4 per cent to holdings of less than 5 hectares. Holdings with 10 to 50 hectares have 34.2 per cent of the cows - which figure shows that mechanized agriculture is more practiced in large holdings where animal breeding is somewhat over - looked. Hiring of ploughing animals is usual in Mazandaran and Gorgan. About 44 per cent of the holders hire ploughing animals from hirers, most of whom (72 per cent) are holders operating less than three hectares of land. Hiring of animals is less customary with higher classes of holders, as they either have animals of their own or they employ mechanical power in cultivating their lands.

Besides because of the expense of animal hire, the farmers in the area are often in debt and therefore also have to pay loan interests at comparatively high rates. The 1960 census gives the number of borrowers as 53.5 per cent of the total number of farmers in the area of which 12.7 per cent had borrowed from government sources such as the Agricultural Bank, and the rest from private institutions in the order indicated hereunder:

5.1 per cent from landlords

2.2 per cent from work - animal holders

94 per cent from other sources such as moneylenders, etc.

The pressure on the farmers can be understood best if the rate of interest mentioned by persons interviewed are taken into consideration.

1. However it should be noted that due to the recent introduction of commercial crops such as cotton and tobacco to which a great part of the grassland has been allotted, animal breeding has lost its importance at least in the Gorgan plain.

The total amount paid to farmers as loans by government organizations in the year 1960 was Rls. 101,190,000, whereas those granted by private institutions amounted to Rls. 1,139,000,000, which is about 11 times as much.

Of the loans granted by non-government sources more than Rls. 1,095,000,000, i. e. 90 per cent of the total loans, had been obtained from moneylenders and such sources other than landlords and hire-animal holders.

As is seen from the above, here too, government aid to the holders constitutes a quite insignificant figure as compared to that borrowed from non-government sources. In other words the government and landlords' contribution in assisting the farmers against exploitation by moneylenders has been of very little importance.

As to the ownership, 21 per cent of the holders were in the possession of 30 per cent of the total land, while 29 per cent of the land constituting 19.6 per cent of the holdings' total area, was being operated by tenant farmers.

Needless to say that with changes in the ownership system brought about by the implementation of the Land Reform Law the above ratios are no longer true.

Land Reform 1

The information obtained from the Mazandaran Land Reform Organization does not include any figures about Shahsavari and Gorgan. In the Land Reform Administrative Divisions, Shahsavari has been considered as a part of the Gilan area, while the Gorgan Plain is treated as an independent region.

In Mazandaran due to land registration difficulties, the purchase and division of villages presented some problem for the implementation of the Land Reform Law. The lack of communication between various parts of the rural areas has also been among the obstacles to the implementation of the law, as it renders it difficult and sometimes impossible to have access to villages in the rainy seasons.

1. Information about Land Reform has been obtained from the Land Reform Organisation and its publications. In this section only Mazandaran has been dealt with; that of Gorgan which requires a separate study will be published in the future issue of the Journal.

During the period beginning from the time when the Land Reform Law was put into effect up to August 1963, only 65 whole villages had been purchased from landlords for division among farmers. Twenty one other whole villages, had been purchased from September 1963 up to April 1964, i. e. the period covered by the present survey. The number of villages partly owned that were purchased during the above two periods was 473 and 60 respectively. Out of a total of 86 whole villages purchased up to the time when the team began its survey 70 had been divided and sold to farmers; while, of the 533 partly owned villages only 164 had been divided and the rest were left undivided due to the difficulties already mentioned.

The total amount paid by the Mazandaran Land Reform Organization for the villages purchased up to the end of the period by the present survey¹ was Rs. 89,921,345. By keeping in mind the fact that in Mazandaran there exist only about 2,000 villages, we come to the conclusion that the Land Reform Organisation has been able to purchase only 26 per cent of the existing villages and that, only 38 per cent of this have been handed over to the local farmers.

Agricultural Cooperation and Credit²

Before the Land Reform was introduced there were only 10 co-operative societies in Mazandaran, whereas 62 others were established in the period beginning with the implementation of the law up to the year 1963. Thus, the number of cooperatives in the period covered by the survey amounted to 72.

The first ten societies had 1,800 members, and 8,202 other members were added with the creation of the new ones. The above societies' total capital amounted to Rs. 6,500,000, in addition to

1. The amount has for its origin the sum total of the two items: i. e. one for Rs. 42, 284, 222 quoted from the report on the activities of the Land Reform Organization up to the end of September 1963 and the other for Rs. 47, 637, 123, being the total prices of the villages purchased as from September 1963 to April 1964, obtained from Mazandaran Land Reform Organisation.

2. Information about agricultural cooperation and credits have been obtained from the Rural Cooperative Organisation, and the Agricultural Bank, Mazandaran Branch.

which there is a capital credit for Rls. 15,750,000 given by the Plan Organisation but this has not been given to all the 72 cooperatives.

Up to now, out of the cooperatives' capital and credit a sum of Rls. 11,800,000 has been paid to farmers as loans to be paid back in one year's time. No single loan would exceed 10,000 in amount. Granting loans has nothing to do with the number of shares bought from the relevant cooperatives, and it so happens that Rls. 10,000 is granted as loan, to shareholders - holding a share of Rls. 500.

The cooperatives are managed by supervisors each supervising 10 to 5 cooperatives; 23 other cooperatives were about to be established at the time when the team was busy carrying out the present survey.

In spite of their being defined as multi - purpose societies having for their objectives: (1) granting of loans, (2) furnishing primary productive materials and (3) consumers' goods, nevertheless in practice their domains of action have been limited to loan granting only and the other objects have been ignored for various reasons. Besides, the Agricultural Bank has also been granting loans with 6 per cent interest, to be spent on agricultural activities. Three types of loans are being granted by the Bank's branches in Sari and Bchshar, to wit:

Short - term loans (to be refunded in 2 years' time)

Medium - term loans (to be refunded in 6 years' time)

Long - term loans (to be refunded in 10 years' time)

Loans granted by the Bank to the farmers up to the period covered by the survey were as follows:

Short - term loans : 7,222 items in number (varying in amount from Rls. 2,000 to Rls. 100,000) for Rls. 42,428,500 plus 5 other items for Rls. 10,070,000, in the form of Current Account Credit .

Medium - term loans : (up to Rls. 1,000,000) 49 items in number and for Rls. 4,410,000.

Long - term loans; 2 items amounting to Rls . 280,000. Loans up to Rls . 20,000 are entered in the Bank's relevant account books, but those of more than Rls. 20,000 require accomplishment of some legal formalities by notaries. Thus borrowers of small amounts are exempt

from payment of registration charges.

No control by the Bank is being exercised as to the way in which short - term loans are spent. But the long - term loans have to be allocated to the following purposes:

production - 50 per cent,

personal needs - 20 per cent,

purchase of production means - 30 per cent.

The total of the loans given to farmers and cooperatives, up to the period covered by the survey, is Rls. 55,988,500.

Extension I

The Mazandaran Extension Department has been established now for ten years. Gorgan has a separate Extension Department of its own. The Mazandaran Extension Department personnel, in the period covered by the survey, consisted of 35 extensionists of whom, as in other provinces, some 10 persons have been transferred to the Land Reform Organization . In addition to the above number there is one supervisor for agricultural extension and one for home extension in each one of the 9 subordinate townships. The home extension agents are 18 in number to whom 12 others are to join in the near future.

The personnel of the Mazandaran Extension Department in all consists of 80 persons, with an annual budget of Rls. 6,842,248 for the year 1963 and Rls. 7,489,246 for the year 1964.

Each extensionist has for his domain of action 5 to 10 villages, which, when taking into consideration the number of the area's total villages seems to be quite limited.

Due to the area's climatic conditions and the lack of communication the extensionists are able to perform their duties only in summer time. Therefore, if the extension activities are to be done constantly and throughout the whole year the Mazandaran Extension Department has to have at its service at least 100 agricultural extensionists and 100 home extension agents.

The personnel expert in extension affairs consisted of 6 agricultural

1. Information about extension has been obtained from the Agricultural Extension Department of the Mazandaran province.

engineers and one veterinary surgeon, at the time covered by the survey.

Development 1

The Mazandaran Development Department not including Gorgan, which has one of its own, has for its domain of activities an area extending from Galoogah to Sorkh Kola, located between Shahi and Sari, and embracing 373 villages; the area is covered by 16 village agents (graduates of the secondary school) and 12 assistants to the village agents, having as their field of action 3 to 7 villages.

The village agents' activities shall proceed along the following four lines:

1. Education, encouraging local people in founding new schools and organizing night classes for adults.
2. Agriculture, Giving advice on the question of cultivation and pest control.
3. Health, encouraging local people in providing hygienic facilities and in setting up health centres.
4. Development, Road and bridge construction, etc.

The total amount allocated to the province for Development activities is Rls. 2,200,000. An engineering section set up in the head-office in Neka, will study developmental projects and programs submitted by the village agents and estimate their costs. Money for the expenses to be effected for the realization of projects will be collected and spent with the guidance of the village agent.

Until 1962 about 50 per cent of the budget for development activities used to be paid by the Iran - U. S. Joint Commission and therefore the procedure for carrying out development projects was as follows:

After having made an estimate of the cost of the project, a promissory note for the amount would be obtained from the villagers and a bank deposit of one-tenth of that amount would be required as well; this would be released in the process of implementation of the project, and the promissory note would be cancelled gradually in proportion to the amount of work done. To supervise the operations

1. Information on this topic has been secured from the Rural Development Dept. of Mazandaran.

a project manager would be selected from amongst the inhabitants. At present, however, due to hudget shortage, the above procedure has been abandoned, and the actual process varies according to the amount of funds available and the consent of the farmers. The development budget is secured from the 5 per cent ownership share or the 2 per cent contributed by farmers for development.

Economic Prospects of Mazandaran

These economic prospects depend largely on how the farmers' aspirations are fulfilled and their interests are protected. In other words steps should be taken to protect them against the urban bourgeoisie and other individuals who, with little money but much influence, are grabbing lands. For this purpose development plans should be implemented in a harmonized manner and at the same time, government organizations must be made to protect the farmers and petty landowners' interests rather than those of the influential urban middle class minority and others.

Government organizations must be made to protect the farmers and petty-landowners' interests rather than those of the influential urban middle-class minority and others.

Taking into consideration the area's favourable conditions, one can readily perceive that the farmers' agricultural income can easily be increased through the introduction of modern agricultural methods such as seed improvement and mechanization, and also by setting up suitable industrial units to absorb the excess rural population, and this, in turn, will help to promote agricultural production and a subsequent increase in the farmers' income.

To attain this objective, urban capitalists and local influential individuals should be encouraged and offered possibilities to invest their capital in the industrial sector preferably in such lines as are directly related to local agricultural products.

This process will not only boost the country's industrial capacity but will also provide the rural inhabitants with more employment opportunities. The farmers at present lack sufficient capital and are not in a position to organize large-scale mechanization so would not benefit by being offered financial aid through co-operatives and banks.

In Mazandaran and Gorgan 81 per cent of the population are rural inhabitants. This rural population is very young, in as much as 54.5 per cent of it belongs to the age group of 19 years old and under, of which 57 per cent are under 9 years of age and 37.5 per cent of the population over 10 years of age are considered as economically inactive.

This unemployment both disguised and apparent, due to the high proportion of the rural population unable to find work in the non-agricultural sector, will attract the attention of the urban upper middle-class to the rural areas, to take advantage of the cheap and abundant manpower there.

But by providing possibilities for work in the industrial sector, the excess population with a more economic productivity will undergo a suitable transformation and subsequently will enjoy better living standards, and this in its turn will have a favourable effect on the national economy.

Most of the Mazandaran and Gorgan crops are produced through dry-farming. The amount of rain-fall within the area is less than that of Gilan and so is the amount of river water.

That being the case, the only way to improve the area's agricultural production seems to lie in the introduction of modern farming techniques and mechanization. Notwithstanding this, Mazandaran's share in the development plans has not been big enough and most of the anticipated projects have not yet been realized. The continued stay of the majority of the population in the agricultural sector and the parcelling out of lands either as the result of the land reform or by inheritance, will emphasize the area's acute agricultural problem and the need for the expansion of the industrial sector.

There are 3,570 industrial establishments in the Mazandaran region; of which 11 are publicly owned, two are under mixed (i.e., public and private) ownership, four others belong to the municipality and the remaining 3,553 are owned by the private sector ¹.

The above establishments are engaged in industries connected primarily with textiles, manufacture of food stuff, metal products (not to include

1. Information on industrial establishments and workersyed thereby has been obtained from the: "Report on the Industrial Survey of Iran., Aug. 1963. by the G. D. P. S., Ministry of the Interior.

machinery and transport vehicles), mining¹ and manufacture of wood products.

In addition to the above establishments there are 739 others' according to the Industrial Statistics publication, that include construction, electricity and water, wholesale and retail trade, banking and insurance, real estate, transport, warehousing and services; engaging a total of 16,085 persons including proprietors, employers and workers.

Besides, there is the Fishery Company of Mazandaran divided into the Babolsar and Gorgan sections employing a total of 1, 102 persons, either in the form of permanent or seasonal workers or those engaged by contract. The number of seasonal workers is several times larger than that of the other two groups combined.

Then there is the tea industry which consists of 13 factories, three public and ten private:

Some important lines of industrial activity in Mazandaran have come to a standstill through the closing down of the Chaloos silk factory, and the railway sleeper manufacturing factory. Thus, from the above it follows that in case no prompt action is taken in developing the industrial sector in Mazandaran, not only will the agricultural income decrease in amount due to a variety of reasons especially due to the growing rural population, but also the now existing possibilities for carrying out development projects will gradually vanish, causing aggravation of the area's economic and social problems.

1. Coal mines have not been included in the statistics related to the mining industry.

Province: Gilan
Township: Rasht
Village : Gigasar

Date of survey : May 21, 1964

Gigasar is located 22 kilometres to the west of the city of Rasht on the road from Joméh Bazar to Fooman, and is one of a group of villages: Allahsar, Moghsar, Khorrambisheh, and khatib Goorab; all of which are administered by one headman *Kad Khoda*. It consists of 535 hectares of cultivated land, 100 hectares of water -pools¹ and about a hundred hectares under orchards and forests. Gigasar has a population of 2,000 forming 250 households. Two hundred of the households are holders of land and, in this way, there is an average of 2.7 hectares per household in the village, but this amount of land unless extraordinarily productive, cannot provide for the subsistence of a large -size household. The average size of household in this village ten years ago was estimated at ten people and today it should be around 8 or 9, which is rather large as compared to an average of five for other rural areas of Iran.

This is generally the case all over Gilan where in addition to the men folk, women and even children work to help the income of the family. That is why the men do not usually favour birth control and frequently they indulge in polygamy. Thus, families in this village live a comparatively better life than they could on a 2.7 hectares parcel of land. This situation is tolerated as long as the old system of farming is in practice in the area whereby the shortage of capital is overcome by hiring extra hands. If, however, one day agricultural machinery comes to take the place of human labour, then the problem of population pressure on farm land will be felt

1. It is customary in Gilan and Mazandaran to store water in large pools during the rainy season, to be used for irrigation in dry seasons of the year.

more seriously - though the type of crops grown in this region (rice, tobacco, tea, citrus fruit and so on) when mechanized may even need more manpower.

Social conditions of this region are also different from those in other rural areas of the country. Since ancient times land has been tilled by the tenancy system. That is to say, official lease agreement is exchanged between the land owner and tenant farmer. The fixed amount of rental (usually in kind) is specified in this agreement which in the old days was drawn up for a period of three years. In practice, however, the agreement is not renewed and farmers continue to pay the same rental as mentioned in the agreement after the expiry of the three years. In some instances they have even been able to obtain discounts over the nominal amount of rent. This state of affairs has caused the farmers not to consider themselves as peasants working for a landlord. After the land reform, farmers refused to pay the landlord's share and when the government tried to intervene they put up a firm resistance. It is the conviction of members of the Group that so long as the economic pressure of the population is not eased and means of subsistence is provided in sectors other than agriculture there will be very little likelihood of co-existence between farmers and landlords.

The following is a picture of the economic situation of the village of Gigasar : out of a total of 535 hectares of cultivated land in the village; 75 hectares are under rice paddies, and 100 hectares under cotton cultivation. However, due to repeated damage caused by pests on the cotton fields in recent years, growers no longer show any interest in this crop, the cultivation of which may cease altogether. Tea plantations occupies another ten hectares -these are almost entirely owned by large holders. A particular feature of Gigasar is that its inhabitants, farmers, crop-sharers or landlords all have a small or large garden around their house, where they grow melons, greens and fruits for household consumption and occasionally for sale. When the Group enquired about the area of such gardens from the inhabitants they reported one hundred hectares as a rough estimate. No farmer in the village owns more than five hectares and in fact holdings of over three hectares are very rare. Most of the holdings range from half to two and a half hectares in size. The population of Gigasar which was 1500 consisting of 150 households ten years ago has now reached 2,000 composed

of 250 households. The increased population pressure on land and the inappropriate size of holdings has kept the farmers' income at a low level.

By using chemical fertilizer farmers have managed to raise the productivity of the land slightly while they have been helped to some extent by the increase in the price of rice. Despite all these, because of the rapid pace of population growth, the living standard has remained almost at the same level as ten years ago. However, when the Sefidrood water is brought to Gigasar via the Fooman tunnel, at least one hundred hectares of land presently used for water pools and reservoirs will go under cultivation and probably another 100 hectares covered by forests and unproductive gardens will be improved and become arable, and in this way the pressure on the existing cultivated land may be reduced.

The per capita income from various crops in the village as computed below is not, of course, comparable with that of ten years ago. An item was not included in the computations ten years ago and on which we also failed to obtain a sound estimate is the earnings of the villagers working as farmhands on various crops.

The average daily wage of a farm - worker is somewhere between 50 and 70 rials.

The gross income from one hectare of rice paddy is as follows :

Land under cultivation	475 hectares
Seeds (used per hectare)	150 kgs.
Coefficient of rice yield	13
Production per hectare	1,950 kgs.
Price of one kg. for 80 per cent of the crop:	10 rials
for 20 per cent of crop:	15 rials
Owner's share	660 kgs.
Farmer's share (in rials per hectare)	14,190 rials
Owner's share (in rials per hectare)	7,260 rials

Of the farmer's 14,190 rials gross income from one hectare of rice cultivation, 900 rials should be deducted for seeds and 500 for fertilizer and thus the farmer's net income from one hectare of paddy field will be reduced to 12,790 rials. The net income from one hectare of tobacco is around

18,000 rials of which a fixed sum of one thousand rials is paid to the landlord.

Livestock breeding in Gigasar is limited to the raising of cows. There were 300 cows in the village before one hundred of them died as the result of the cold spell last year. The average income from a cow in the village is about 3,000 rials and the net income of the whole village from livestock is somewhere around Rls. 600,000. The net income of the villagers from poultry is estimated at Rls. 500,000, and from the one hundred hectares under summer crops and trees is approximately two million rials.

Another source of income for the inhabitants is handicrafts such as the weaving of about 1,600 straw mats and about the same number of baskets annually, bringing a total income of nearly 112,000 rials. Furthermore, they have some income from the sale of woods and logs they collect from the forest around the village, but they refused to report any figure of their income from this source. Thus, the total agricultural income of the holders is as follows :

1. Net income from 475 hectares of paddy fields at Rls. 12,790 per hectare	Rls. 6,075,250
2. Net income from 50 hectares of tobacco at Rls. 17,000 per hectare	Rls. 850,000
3. Net income from fruit and summer crops	Rls. 2,000,000
Total	Rls. 8,925,250

Labour cost have not been included in this calculation. According to statements made by village elders, however the total labour cost to holders and farmers was estimated to be around Rls. 567,000. Therefore, the farmers' real net income (after deduction of labour cost) will be around Rls. 8,358,250, which when divided between the 1,600 members of the households, will give a farming per capita income of 5,224 rials or the equivalent of \$ 70.

If we add to the above the sum of Rls. 600,000, - the annual income obtained from livestock raising, - Rls. 500,000 from poultry, Rls. 112,000 from straw basket and mat - making, and Rls. 600,000, - the earning of 30 house

holds working as farm hands: then the total income of the 2,000 inhabitants will amount to Rls. 10,170,250 per annum; that is to say a per capita income of Rls. 5,085 or approximately \$ 68. In this calculation the income of several local shop - keepers, the barber, the tea - house owner, and those individuals working in the city outside the village has been excluded, otherwise the per capita income would have been higher, which is to be expected, because, as observed by the Group, the standard of clothing , food and housing and the existence of certain comparative luxury items like radios, clocks, bicycles, carpets and so forth in the households was not commensurate with such an income.

Farming methods are not advanced in Gigasar and there is ample room for improvement and increased productivity by the use of chemical fertilizer and agricultural machinery. There is no doubt that the Tehran and Rasht markets will, in the near future, influence the type of crops and methods of cultivation in this village. The Sefidrood water brought via the Fooman tunnel will also help the local agricultural. There is one six - grade school with 100 students of whom 20 are girls and the rest are boys.

This school had been closed down some time ago but it re - opened with the coming of three teachers. However, they have not yet been able to set up night classes for the men and women of the village. One Literacy Corpsman had arrived in the village three days before the day of our visit for inspection. The farmers thought it would have been better to have a physician rather than a corpsman as 15 children had died in the previous year.

The village has no public bath and the inhabitants are compelled to wash with water they heat themselves, otherwise they have to go to Rasht or Someh - sara. Their drinking water comes from shallow wells dug in their houses. There is only one deep well and that belongs to the major landowner of the village.

Medical requirements of the inhabitants are provide for by a physician sent by the Tobacco Growers Union, who resides at Joinehbazar. The doctor's fee is deducted from the crop share of the person concerned, at the time of harvest. There are no other medical facilities, physician, clinic or health centre available.

There are no more than a couple of persons who can drive, and Rasht is the nearest place where a workshop for the repair of agricultural machinery can be found. An interesting matter we came across in the villages was that bicycles were used as taxis for taking people from Gigasar to Joméh-bazar or the neighbouring villages and back, against the payment of a few rials.

The fuel used is mostly kerosen but the inhabitants complained that their children were taken ill by fumes caused by humidity. The village has no council though the village agent occasionally calls at the village. We were told by respondents that the 5 per cent owners' development fee had been collected a few years ago but was still lying in the Bank and no action had been taken for utilizing the funds for development purposes.

A cooperative society ; established in 1959 has already been registered. For the formation of this cooperative each farmer had contributed funds according to his financial ability and inclination. Its membership had reached 105. In the year 1962 the government loaned about Rls. 360,000 to the Society. However, in 1963, the managing director had a cash deficit and although the Society still had a capital of Rls. 90,000, its activities have come to a virtual standstill. This society was only a credit institution and the supervisor of the Cooperative Societies Association continues to call at the village from time to time.

The village of Ladmokh, which is 2 kilometres from Gigasar and has as one of its owners one of the major land-holders of Gigasar, has fallen under the Land Reform Law and has been divided among the farmers. However, the law has not yet been enforced in the village of Gigasar as it has not, in principle, been subject to the first stage of the Reform.

We were told that there is a total of 37 landowners, the biggest one having about 65 hectares of land. All of them are the heirs of one person and are relatives. The smallest holder, who owned 6 hectares of land, died some time ago. His land was divided among his three sons and two daughters.

One of the landowners with 11 hectares of land supports a family of 5, comprising three sons and two daughters. One of his sons is married and with his family of 2 still lives with his parents.

As a result of heirship land is parcelled out and the petty land - owners can no longer subsist just on the ownership share they receive and should find other means of livelihood. The creation of opportunities outside the agricultural section, which would engage the capital and managerial talent of these petty land - owners, could serve as a means of converting a number of inactive talents into efficient managers in the sectors of industry and services.

For carrying out the second stage of the Land Reform, either the petty landowners should buy the farmers rights to the land (*Nasagh*) and send them to other villages or cities, or else lease the land out to the farmers for a period of 30 years, with the right of revision every 5 years. Another alternative is to retain land for themselves, in proportion to their ownership share, and sell the remainder to the farmers or from a joint - stock partnership with them. However, as land has for a long time been rented to farmers by landlords, all of whom hold an official deed of lease, it is most probable that the second stage of the Land Reform will not produce much change in this district and that the landlords will renew the lease as before. The farmers may try to get a reduction in the rentals at the end of every five - year period. On the other hand, the landlords may have their lands resurveyed to see if the farmers hold a larger area of land than stipulated in their lease - deed, as is often the case, so that they may raise the rental.

During the last 10 years, the farmers and landlords have had frequent disagreements over the question of ownership share, with the result that in several cases a number of farmers have been put in prison. At present, landlords hope to collect the entire ownership share with the help of government agencies. But the farmers of this district have decided to introduce certain reforms in their relations with the landlords, and they have made some headway towards this goal.

A question that may arise in Gigasar and other similar areas is the problem of converting land hitherto under paddies or tobacco cultivation, into citrus groves and other fruit orchards.

In such cases, the planting of trees creates right of roots for the

farmers. Hence, landowners may not agree to a change in cultivation, thus preventing any agricultural development. One of the most urgent and important problems of this district is to find an economical solution for developments of this nature.

Comparison of the Present Condition of Gigasar With That of 10 Years Ago

1. The population has increased from 1,500 in 150 households to the present 2,000 in 250 households; i.e., an increase of about 33 per cent.

2. Against the cultivation of 350 hectares paddy - lands and 50 under tobacco, the present area has increased to 535 hectares; i.e., 475 hectares under rice, 50 hectares under tobacco and 10 under tea cultivation, all belonging to the landlords.

3. No change has taken place in the land under tobacco cultivation but rice cultivation has increased by 125 hectares. Tea cultivation, which was no more than 5 hectares 10 years ago, now covers 10 hectares and keeps increasing.

4. Breeding of silkworms has been completely abandoned and former groves of mulberries are under tea cultivation.

Thus, farmers who have been deprived of their income from silkworms are compelled to compensate by increasing non-farming activities such as making reed mats and baskets.

5. The per capita income of the 1,500 farming households of 10 years ago earned from rice and tobacco growing, was Rls. 2,830 or \$ 38, without deduction of farming expenses. However, according to the present report, the net income from rice and tobacco cultivation of the 1,600 farming households amounts to Rls. 5,224 or about \$ 70, after deducting the pertinent expenses. The above increase in income is firstly because of an increase in rice cultivation and secondly the rise in price of crops.

6. In the calculation of per capita income reported 10 years ago, no mention was made of income from fruit growing and summer crops, which cover 100 hectares. At present, if we account for incomes from fruit growing, summer crops growing and non-farming activities of the village, the per capita income is Rls. 5,068, or about 68.

7. In the present report, no mention has been made of the free settlers' income, due to the diversity of their occupations and incomes.

However, rural families, including the free settlers, enjoy greater comforts by virtue of the large size of household and the fact that there is usually more than one working member in the households. There is also the opportunity for them to work in rice and plantations and to be numerous non - farming jobs, such as: saw-milling, rice cleaning and polishing and livestock herding.

8. Under - employment is still a serious problem in the village. The comparative diversity of occupations, owing to overpopulation, has had no effect on eliminating the widespread unemployment, in its hidden or apparent form.



پښتو ژبې د علومو او مطالعاتو مرکز
پرتال جامع علوم انساني

Province : Mazandaran
Township : Shahsavar
Village : Ghaleh-gardan

Ghaleh-gardan, situated eight kilometers south of Shahsavar, and considered the most famous center of cultivation of citrus fruit, is made up of 4 villages, namely: Ghaleh-gardan, Upper Balade, Lower Balade and Karajooob Kenar, which are together called Ghaleh-gardan. There are altogether 250 families making up a population of 2000. Every year some 80 families from the districts of Alamoot and Taleghan move to Ghaleh-gardan for seasonal work between the months of October and June and rent premises for their dwellings in the farmers' homes.

In the case of agricultural work they receive a daily wage of Rs. 70, plus their food, which is provided by the employer. Ten years ago, one-third of the village belonged to the Crown Lands and two-thirds to petty landowners. However, in the year 1956 (1335), the greater part of the Crown Lands were returned to the former owners, and at present the Domains Department holds no more than 12 hectares rented by the farmers. On the other hand, about 20 hectares of the land of this region has fallen under the Land Reform Act and been divided among the 32 households which have been working there.

Although no new land has been cultivated during the last 10 years and the total area under cultivation has remained the same, i.e., 500 hectares, because of the high income from citrus fruit the area under this crop has been considerably expanded at the expense of the tea plantations.

There is no unused land in Ghaleh-gardan, and practically all the land is farmed. Second sowing is not practised, and this, as stated by the farmers,

is not possible except in the case of summer crops. However, some tea is planted in the new citrus groves which have small trees and yield no fruit during the first 6 years, i.e. the same land is utilized for two different crops. But when the trees grow up and overshadow the tea shrubs, the yield of tea decreases, and its cultivation is abandoned.

The land under cultivation can be divided as follows:

Citrus fruit	350 hectares
Rice	100 »
Tea	100 » (50 hectares of which are combined with young citrus trees)

The sizes of cultivation units vary widely. A number of capital holders of Teheran have taken over groves of citrus trees, of 5 to 20 hectares in Ghaleh-gardan, and have appointed an overseer with several laborers to work their land. This procedure is also practised by some well-to-do local petty landowners, but on the whole the number of landowners does not exceed 50. According to a local custom, land owners who employ no farm hands sometimes work their land with the help of farmers, or in some cases, lease the land out to the farmers under an official deed.

The land held by the farmers is usually between 0.5 and 3 hectares in area, mostly 1 to 2 hectares.

If the farmers had to cultivate such small plots of land or had to exist on cereals or crops other than tea and citrus fruit, Ghaleh-gardan would certainly have been one of the poorest villages in Iran.

Owing to the diversified forms of ownership in this village, all the farmers do not have the same status. Last year, the farmers who were engaged in cultivation for others refused to pay the owner's share. But this year the landowners not only received their share, but some of them even succeeded in taking back from the farmers the land leased out to them during recent years.

We were told by a farmer who had come into possession of some land that a number of farmers who have been given land through the Land Reform Act or the Royal Domains Department, have had a greater income

during this period (owing to the fact that the owner's share paid by them is one-fourth of the former amount). However, as the owners' share was Rs. 10,000 per hectare while the land instalment is now Rs. 2,250, there is practically no great real difference. But as loans can be obtained from banks only against title-deeds as security the Land Reform Act has indeed improved the farmers' conditions.

In fact the farmer interviewed by us had even succeeded in sending his son to study in Tehran.

Naturally, the prevalence of these two different farming systems in the village has caused a distinct difference in levels, both from the standpoint of agricultural income and from that of divergence of opinion among the farmers themselves and between the landowners and farmers as well. Farmers who pay the owners' share are not sure on whose side the government is, and with due regard to the land owners' efforts and their probable success in driving the farmers out of the village, the two-year long quarrel between the land owners and farmers, will in all probability inhibit the future development of this settlement.

As a result of the betterment of the landowners' condition brought about by the support given them by government agencies, one of them had the intention of charging for the use of the village spring (situated on his land).

The farmers who have come into possession of land, have succeeded in obtaining a loan for Rs. 5,000, by paying Rs. 200 membership fee to the co-operative society in Khorramabad (4 kilometers from their village). They explained that this loan would be spent on the creation of gardens and tree plantations.

According to the inhabitants, Ghaleh-gardan has achieved greater advances during the last 10 years. In addition to the tea-processing factory, which was already there, a sawmill and a rice cleaning and polishing factory have also been erected.

The motors of these factories supply the central part of the village with part of its electric power requirements. There has even been talk of establishing a municipality and town council. The inhabitants claim that Ghaleh-gardan is

one of the richest villages of Iran. This was confirmed by what we actually observed. It was the only village where we heard the inhabitants say they had no water supply problem.

In this village with a population of 2,000, there were 300 boys and 140 girls studying in its secondary school, and also a great number went to the Khorramabad secondary school (4 kilometers away). Besides, we were told that 4 young men are studying in Europe and 10 at Teheran University. A group of 10 are working in some government agencies in the neighbourhood and some others in factories. Besides the shopkeepers, some of the inhabitants are engaged in forage-selling and have a good income from their substantial transactions with the city.

The owners of citrus groves recently intended to form a union for the sale of their products, so as to do away with the brokers who make a tremendous profit in this line, but this was not realized and was postponed due to last years' spell of cold weather which to a great extent destroyed the crops. Although they use some chemical fertilizers and have means of controlling plant pests, they are not yet well acquainted with modern agricultural techniques. Only a few landlords use agricultural machinery on their farms. The Agricultural Extension and Rural Development Departments do not play an important part in Ghaleh-gardan, and it is only the profit-seeking motive of the owners of farms that has induced them to utilize chemical fertilizers and pest-control methods.

In our opinion, if technical information and sufficient funds for providing mechanized agricultural equipment are placed at the farmers' disposal by the government, Ghaleh-gardan will certainly achieve great prosperity.

Economic Status

350 hectares of citrus groves (only 300 hectares yield fruit), at a net income of Rls. 150,000 per hectare = Rls. 45,000,000

100 hectares paddy fields, with a net

yield of 2000 kgs. per hectare, at

Rls. 12 per kg.

= Rls. 24,000,000

100 hectares tea plantations, yielding		
300 kilos tea per hectare, at Rls. 80		
per kilo	=	2,400,000
Total	Rls.	49,800,000

The ownership share in Ghaleh-gardan is as follows:

Against rice	330 kilos per hectare.
» citrus fruit	Rials 7,000 flat or of the crop per hectare, according to agreement.
» tea	Rls. 2,500 per hectare.

As the above ownership share is not, on the whole, so great, and many of the petty landowners are personally engaged in farming, they have dispensed with the deduction of ownership share from the net income. And as there were no means for an accurate calculation of the income of shopkeepers, forage-sellers, workers and employees residing in Ghaleh-gardan, the said income was not taken into account. The income from livestock raising in Ghaleh-gardan, owing to lack of pastures, is quite insignificant. Also the farmers' secondary incomes from poultry, log-gathering etc, as compared to their main income, is small. In view of the above, the per capita income of the 2,000 inhabitants of Ghaleh-gardan is about Rls. 24,900 or \$ 332. This income is approximately twice the average per capita income in Iran

As the above computation of income was found to be too generally we interviewed several farmer households, the economic condition of one of them being shown here. The man was the village headman Hojatollah Saidi, who is a worker himself and supports a family of 8. His income was:

1 hectare paddy-land yields 2,500 kilos		
rice, at Rials 12	=	Rls. 30,000
$\frac{1}{2}$ hectare citrus fruit, at		
Rls. 150,000 per hectare	=	Rls. 75,000
$\frac{1}{10}$ hectare tea, yielding		
30 kilos dried tea, at Rls. 80		
per kilo	=	Rls. 2,400
Total	=	Rls. 107,400

Mr. Saidi is not engaged in livestock raising but has an annual income of about Rls. 2, 000 from poultry keeping. Thus, Mr. Saidi's total income, including that from poultry, is Rls. 119, 400. He must pay, or ownership interest, Rls. 6,000 for rice, Rls. 5,000 for citrus fruit, and Rls. 250 for tea; totalling Rls. 11, 250.

The production expenses of Mr. Saidi are as follows:

For one laborer he has to pay Rls. 10,000 in cash per year, and provide his food which, if taken to be Rls. 5,000 = Rls. 15,000 per laborer.

Chemical fertilizer (the price is Rls. 8 per kilo, but as he buys only 2 bags he pays Rls. 12.5)	=	R's. 6, 250
150 kilos seeds, at Rls. 8 per kilo	=	1, 200
Insecticide spraying (for pest control)	»	7,000
Cost of cultings and weeding	=	» 5,000
Total	=	» 34,450

(As he ploughs with oxen, we dispensed with the cost of their keep).

Therefore, Mr. Saidi's net income, i.e. his gross income less ownership share and cost of production, amounts to Rls. 62, 590.

By dividing his income among his family of 8, each one's share amounts to Rls. 7, 824 or \$ 104.

But his condition is actually better than what his income would lead one to believe. When we considered his living expenses, he admitted that this was at least twice that shown by his income figures. He explained that he provided the deficit from his headman's salary by such works as forage-selling and purchase and sale of oranges.

In the study of 10 years ago, income was calculated (the per-capita) at about \$ 259. whereas perhaps it should have been considered less, because the rice crop had been taken as gathered at 5,200 kilos per hectare. But under the present conditions, even by using chemical fertilizers, the crop

does not exceed 3,500 kilos per hectare. This quantity, less cost of production, leaves an average of 2,000 kilos net per hectare, at Rls. 12 per kilo.

Should we even take the \$ 259 per-capita of 10 years ago as a base income, it will be noticed that despite the 66 per cent increase in population, the per-capita income has, during the past 10 years, gone up by 28 per cent.

This rapid increase in income is to be accounted for by the development of citrus fruit orchards and the rise in the price of their crops. But in spite of the said economic progress, the sanitary conditions of Ghaleh-gardan are not so satisfactory. There is neither a health department nor clinic and the two bath houses are both old and nnsanitary.

The lack of a village council and co-operative society prove the disharmony between economic and social advances, and if special measures were to be taken to unify this rural community against the discord that exists there, Ghaleh-gardan would be converted into one of the most happy and financially prosperous «little cities» of Iran.

Study of the 10 Year Changes in Ghaleh-gardan.

1. The population of the 4 villages of Ghaleh-gardan, according to the 1956 census, was 1,726 distributed as follows:

Ghaleh-gardan 58

Kerajooob Kenar 291

Upper and Lower Baladeh 1,377

Research workers 10 years ago, estimated the population at 1,200 consisting of 300 households. The present population is 2,000 made up of 250 households. Should we consider the number of households of ten years ago as 300, the household size would be 4, whereas the average size in this district is 5, and it seems that the present study which estimates the household as consisting of 8 members, is sounder.

2. The present cultivated area is the same 500 hectares as before, but the area under various cultivations has undergone some changes. Ten years ago the major portion of land under cultivation (200 hectares) was used for cultivation of rice. This has now been reduced to 100 hectares, while the area of citrus groves has expanded from 146 to 350 hectares, 50 hectares

of which have recently been created within the tea plantations. This also applies to land under tea cultivation which has gone up from 36 to 100 hectares. It should be pointed out that in the case of the 50 hectares at present utilized for the combined cultivation of tea and citrus fruit, the cultivation of tea will have to be discontinued, upon the fruition of the citrus trees, the tea cultivation will have to be discontinued, and then the total tea cultivation area will be reduced to only 50 hectares.

3. With the change in the village's annual to permanent crops, the concept of size of the units has also changed, and this will eventually affect the inhabitants' income. Besides, under the present conditions, the sizes of the existing farming units are still capable of accepting this change.

4. The Royal Domains Department which formerly owned one-third of the village land returned the greater part of these to the former owners in 1956, and the remaining 12 hectares was leased out to 15 households of the village. About 20 hectares of the land have, as the result of land reform, been distributed among 32 households working on this land. The rest of the land of the village is owned by smallholders. It is to be noted that only the distributed parcels have official title-deeds.

5. The per capita income of the 1,200 inhabitants from the total cultivation of rice, tea and citrus fruit ten years ago was estimated at Rls. 19,439 or over \$ 259. According to an estimate made by the Group, the per capita income of the 2,000 inhabitants of the village, despite its population increase, has gone up to Rls. 24,900 or \$ 332. The main reasons for such an increase are:

(a) Change of cultivation to more profitable agricultural activities, like fruit growing; (b) Rise in price of various agricultural products.

6. As regards the productivity of one hectare of rice, tea and citrus fruit, there is a great difference between the present report and that of 10 years ago.

However, the data obtained in 1960 by the State Tea Organization and the results of the Agricultural Survey of Iran show that the present study can be considered more reliable.

It is to be noted that the report of ten years ago mentions the seed-carrying capacity for one hectare of rice field as 200 Kilograms, which, with a

coefficient of production of 26 would yield 5,200 kilos per hectare. According to the Agricultural Survey of 1960, however, in District 1 of the First Province, (Shahsavari and Ghaleh-gardan being included) the seeding capacity of one hectare under this crop was 125 kilos, the coefficient of production 18, and the yield of one hectare about 2,220 kilos.

It therefore appears that the Rs. 24, 000, the net income from one hectare of rice estimated in the present study, is closer to the real figure.

In the previous report, the gross income from one hectare of tea plantation was reported as Rs. 55, 000. whereas, according to local farmers, the net income from one hectare is Rs. 24, 000 i.e. 300 kilos of dried tea at Rs. 80 per kilo.

According to the information obtained from the State Tea Organization, the present productivity per hectare in the Ghaleh-gardan district is, on an average, about 500 to 600 kilos of dried tea, at Rs. 20 to 25 per kilo, or Rs. 50, 000.

But with due regard to the rise in the price of tea, and the increase in productivity during the past 10 years, it should be concluded that the gross income from one hectare of tea at the time covered by the previous report was much less than the estimated Rs. 55, 000.

Therefore, if the farmers are not mistaken in their statement, and if we are to account for the difference between the gross income from tea per hectare furnished by the Tea Organization and the net income from one hectare reported by the farmers, the cost of production of one hectare of tea plantation should be assumed to be about Rs. 25, 000. With regard to citrus fruit, too, it appears that the difference between the two reports is, more than any other factor, to be attributed to a rise in the price of citrus fruit and the increase in the productivity per hectare.

During the past 10 years, the number of students in the six-grade (primary) village school has risen from 200 to the present 440 (300 boys, 140 girls) and the teachers from 6 to 8 (5 men and 3 women.)

Province : Mazandaran

Township : Sari

Date of survey : May 28, 1964

Village : Zeytno

Zeytno, now made up of the two small villages of Shahabad and Shahriar Kandi, is situated 22 kilometers to the East of Sari. It covers a cultivated area of 400 hectares, sold since 1959 to 80 families from Sarakhs who were settled there as migrants in the year 1953.

This village is in fact part of a larger village called Zeyt, comprising 4,000 hectares of land which used to be owned by the Royal Domains Department. All the land had formerly been covered by forests, but after being graded up, 1,000 hectares were turned over to the natives of Zeyt, 2,600 hectares came under private ownership and the remaining 400 hectares were divided in parcels of 5 hectares and sold to 80 of the migrant households from Sarakhs who had already been engaged in farming in the plain of Gonbad and had applied for land to the Domains Department.

A number of the said migrants from Sarakhs who had arrived later were left without land and resided in Zeytno as «free-settlers». The population of this village is now 150 households, consisting of 80 land-holders and 70 free-settlers.

No uncultivated land exists in the village at present and the total area of cultivated land is 400 hectares, of which 200 is under mixed cultivation of cotton and summer crops while double sowing is practised on 20 hectares.

The size of household in the village is quite large as in other localities of the district. Most of the households interviewed by us had 7 to 9 members. Therefore, if the total cultivated land is divided among the landholder households - assuming the average household size to be 8 - every individual will get about 0.6 hectare. and if we add the 70 free-settlers to the

total number of households, the figure will be reduced by half. Every year the inhabitants cultivate the entire 400 hectares, i. e., 200 hectares are utilized for the cultivation of wheat and the other 200 for cotton.

The summer crop, consisting of water-melons, is planted on the same 200 hectares in rows and parallel to the cotton bushes. Ploughing and harvesting of crops is mechanised. Households owning land rent 3 tractors and 3 combines and plough their lands in about 20 days. They reap the crops in approximately 12 to 15 days and every household cultivates all the three main crops of the village on his own plot.

The village land is all dry-farmed and neither irrigated nor fallow land exists there. All land is under cultivation every year, and as all land is still fertile by nature (not having been under cultivation for more than 5 years since their grading) it yields quite well without the help of fertilizers, with have so far not been used at all.

The gross income of the village from 200 hectares of wheat, 200 hectares of cotton and summer crops, and 20 hectares of lettuce, farming the maincrops of the village, is as follows:

Type of crop and yield (in kg. -hec)	Seeds per hectare	Yield factor	Price of 1 kg.	Cultivated area	Gross value (in rials)
Wheat 2,808	156	18	7	200	3,931,200
Cotton 1,600	52	-	10	200	3,200,000
Lettuce 3,000	-	-	2	20	120,000
Summer crops	-	-	-	200	400,000
Total gross income					Rls. 7,651,200

The cost of production of 200 hectares of wheat and 200 hectares of cotton and garden crops are as follows :

Products	Cost of seeds	Cost of labour	Cost of ploughing	Cost of reaping	Cost per hectare	Cultivated area	Total cost
Wheat	1,092	-	800	1,960	3,852	200	770,400
Cotton	520	1,000	800	-	2,320	200	469,000
Summer crops	250	-	-	-	-	200	50,000
Lettuce	200	-	800	-	-	20	20,000
Total expenditure							Rls. 1,304,400

Now if we deduct Rls. 1,304,400, - the cost of production, - from the gross agricultural income (Rls. 7,651,200), the net income of Zeytno will amount to Rls. 300,000 accrued from livestock - keeping, including 500 sheep and over 30 cows, plus Rls. 9,000,000 non - agricultural income, including that of handicrafts. As a result, the net income of Zeytno's 80 land - owning households, earned from agricultural activities, livestock raising and handicrafts, is Rls. 7,546,800 or \$ 100,624.

But every year each land - owning farmer should pay Rls. 4,875 as an instalment for the price of his land the house he has been given by the **Development Bank**.

On account of this, every year the 80 households pay the Bank Rls. 390,000 of their income.

If we deduct this sum from the farmers' net income, the real income of the 80 household - owning lands will amount to Rls. 7,156,800 or 95,424.

If we divide this income by 80, the number of households, the net income of every household will amount to Rls. 89,460 or about 1,272. Thus the per capita income of the 640 members of the 80 farmer household of Zeytno will amount to Rls. 11,182 or \$ 149.

By adding Rls. 200,000, the earning of the farm laborers' of the village, to Rls. 7,156,800 - the income obtained from agricultural activities, livestock keeping and handicrafts - we get Rls. 7,356,800 as the overall income of the village.

By dividing this among the village population of 1,200, we get a per capita income of Rls. 6,130 or \$ 82. It should be pointed out that the income of the 70 non - holder households is not confined to Rls. 200,000, this is only their earning from agricultural work in Zeytno.

The above calculations exclude the income of several shop - keepers who are mostly land - owning farmers. They also exclude the earnings of about half the 70 non - holder households working as laborers on the road between Sari and Gorgan, which is almost equal to a daily farm wage.

For a better acquaintance with the nature of the agricultural income of the village, we called on a certain Mr. Marzban who owns one of the

5 hectare parcels of land into which the village was divided, and who is a good representative of the village, as the other households also hold 5 hectares of land.

He is also the manager of the village, supports a family of 9, and is engaged in dry - farming on his 5 hectares plot with wheat on 2.5 hectares and cotton on the remainder. Like other farmers in Zeytno, he grows summer crops on the 2.5 hectares under cotton cultivation. He told us that he had also been engaged in farming on rented land during the past 2 years, and therefore his income used to be higher, but owing to certain administrative problems in the current year, his present activity is confined to the cultivation of his parcel of 5 hectares.

The following data shows Mr. Mazban's net agricultural income :

	Wheat	Cotton	Summer crops
Gross income from 1 hectare	19,656	16,000	4,000 rials
Cost of ploughing	800	800	- »
Cost of seeds	1,092	520	250 »
Cost of labor	-	800	200 »
Cost of reaping by combine	1,968	-	- »
Total cost of production on 1 hectare	3,860	2,120	450 »
Net income of 1 hectare	15,796	13,880	3,550 »
Hectares under cultivation	2.5	2.5	2.5 »
Net income of area under cultivation	395,10	34,700	8,875 »
Total Rls.		83,085	

In addition, Mr. Marzban owns one mileh cow and 15 to 20 head of poultry which bring him a net income of about Rls. 3,000 a year. If we add this to his farming income of Rls. 83,085, his total net annual income will amount to Rls. 86,085.

Against the free land and house given to Mr. Marzban, he has to pay Rls. 4,875 to the Bank every year, which, if deducted from his net income would leave him Rls. 81,210 or about \$ 1,083 per annum.

Hence, the per capita income of the Marzban family of 9 is Rls. 9,023 or \$ 120. Meanwhile, 3 sons of Mr. Marzban work on his land, so that he is not in need of taking on farm hands - except in the rush of cotton cultivation when for only 50 days he employs a laborer at Rls. 50 per day. Mr. Marzban's living conditions, taken at a rural level, are quite satisfactory.

During the last few years he has saved some money and is building a two-roomed house for his elder son who is going to be married soon.

In view of the fact that in practice some of the 5 hectare farm owners are found to operate additional plots of land, either on rental or crop sharing basis we selected also a sample, from among such farmers, namely Mr. Mohammad Hossein Gedai who cultivates 9 hectares, to find out how this additional land affects his agricultural income.

Mohammad Hossein Gedai grows cotton and summer crops by dry farming on the 9 hectares, of which 5 hectares belong to him and the rest has been rented. All the 9 hectares are under combined cultivation of cotton and summer crops but no wheat is grown.

This gives him a gross annual income of Rls. 180,000 of which Rls. 24,000 is paid as rent for the 4 hectares, and Rls. 23,350 is to be deducted as cost of production from the remaining Rls. 156,000.

This leaves him a net income of Rls. 132,650. To this amount should be added Rls. 6500 being his net income from 15 sheep and poultry, less Rls. 4875 that he pays to the Bank every year as installment on his land and house. As a result, his net income boils down to Rls. 134,275 or \$ 1790.

Thus the per capita income of his household of 9 amounts to Rls. 14,920 or about \$ 199.

It is noteworthy that the per capita income of Gedai, who owns 4 hectares more than Marzban, even after deducting Rls. 24000 paid by him as rental, is \$79 that is to say 66 per cent more than that of the latter. It follows that if they had, at the beginning of the Zeytuo project, allowed immigrant farmers a larger area than 5 hectares, their economic condition would have been considerably better than what presently is.

Under the present conditions, and considering the over population, the

smallness of non - agricultural income and that of livestock raising - caused by lack of pastures, and the existence of fenced lands obstructing the passage of livestock from one area to another. Zeytno's source of income is virtually confined to that obtained from cultivation on a limited area of land.

By taking a number of the inhabitants and setting them to work in factories to be erected in Neka and Sari, it may be possible to retain the present income level in Zeytno for several years. According to the report of 10 years ago the net income of a household with 5 hectares of land assuming it allocated 2 hectares to wheat, 2 hectares to cotton and one hectare to summer crops, was estimated to be Rls. 29005 or \$ 338. But the present average income of a household having 5 hectares, after the lapse of 10 years, is Rls. 79,335 or \$ 1,058.

Let us see what factors have raised the income of an average household to about three times that estimated 10 years ago.

1. At present, instead of dividing their 5. hectare lands on the above assumed proportions, the farmers have divided them into 2.5 hectares for wheat and 2.5 hectares for cotton, summer crops being grown on the lands under cotton. Some of them grow lettuce on a part of their land under cotton. Cultivation after the crop has been gathered.

In this way they utilize the 5 hectares much more than what could be anticipated 10 years ago.

2. Although the present market price of cotton is the same as that of 10 years ago, and there has been very little change in ox hire fee and other production costs, the price of wheat has risen from last years Rls. 3 per kilo to the present Rls. 7. As a result, one of the major products of the village is sold at a price much higher than what was previously estimated.

3. Although the output of cotton has not greatly differed since then- heing 1600 kgs. as against 1500 kgs. per hectare, the production ratio of wheat is now 1 to 18, as compared with 1 to 10 estimated 10 years ago which means every 100 kgs. of seeds yield 1800 kgs.

This has raised the level of production by 80 per cent over the expected amount.

Research workers in the past had foreseen that owing to the lack of fallow

lands, the productivity of the lands would be considerably diminished in 3 years if chemical fertilizers were not widely used. However, after a period of 6 years, one wheat seed yield 18 to 20 while 12000 shrubs of cotton are grown per hectare. Besides the summer crops grown parallel to cotton shrubs, second sowing is practiced on some lands, and the farmers use absolutely no chemical fertilizers.

Naturally, the above condition, which is due to the richness of the newly graded lands, will sooner or later change, and a decrease in the crop yields and subsequent fall in income will follow.

Should the farmers want to stop the descending tendency of the productivity of lands by using chemical fertilizers and modern farming methods, they will need considerable capital and technical know-how not available at present.

The breaking up of lands resulting from inheritance, as considered in the report of 10 years ago, has created no major problem, due to the fact that not a long time has yet elapsed since the beginning of the operation of lands (1959).

But in several instances when the problem has come up, the heirs have tried to avoid the excessive breaking up of agricultural units by selecting one of the elders as head of the household.

So far, 35 households have branched off from the original 80 households owning 5 hectares each, and we were told that another 25 new households will be formed until next year. Therefore, the problem of breaking up of holdings through inheritance shall become more critical.

Instead, crop sharing, leasing out or even unofficial sale of land have become prevalent, and as a result there are persons in the village who own more than 5 hectares.

Working with heavy agricultural machinery on small plots is not economical and it raises the problem of the expanse of farms for operation with agricultural machinery in Zeytino.

We asked the farmers whether, in view of the high cost of hiring tractors and combines and, the long time taken to plough, sow and reap on the scattered lands separated by a boundry, it would not be better for them to convert their lands under wheat and cotton into plots of 50 to 100

hectares and thus help to increase their income collectively. But with their new feeling of ownership all of them said they preferred to cultivate on an enclosed privately owned land, and would not work on some one else's land.

The present survey Group, like that of the past, is of the opinion that, although programs as those of Zeytno are, from a human stand - point , worthy of consideration, the division of land into such small units is not , from an economical standpoint, correct.

The advisability of extending this system throughout Iran, is quite doubtful and should not be considered a sound device for raising the level of rural income.

Those who drew up the Zeytno project have, no doubt, had the intention of strengthening the sense of self - help in the farmers by possessing land, having a dwelling quarter and such facilities as public bath, drinking water well, clinic and school.

We saw however, no indication of this evolution, in our interviews with the farmers. In the opinion of the Group, after the introduction of every reform program in the village, farmers should be supervised and guided by some sort of economic and social protective network until they reach a stage when they can stand on their feet.

The farmers of Zeytno have a cooperative society, with a capital of Rls. 120,000 in which all the 80 households are members. In answer to our question as to what measures had been adopted by the said society for improving the conditions of the village, they said that no such measures had been taken as yet and, all it had done was to give two or three-year loans to those farmers going broke.

They expected the Development Bank and the government to buy tractors and agricultural machinery and dig well for providing water for their farmers. Farmers are usually in need of found in precarious stages of cultivation, especially at the time of weeding. In such instances frequently a landlord of the neighborhood with a holding of 60 hectares, offers them loans on the condition that at harvest time they should sell their crops exclusively to him. Shortage of income is often a cause of renting the lands to others or even work on a crop - sharing basis.

One of the farmers who had been unable to cultivate his land had sold it

and set up a shop in the village and later remarried. Also, lack of supervision and guidance of the farmers on the manner of spending their newly earned money has caused unnecessary expenditures incurred by individuals of low income, such as going on pilgrimage or practicing polygamy.

In recent years, all the heads of households have gone on pilgrimage and 6 of them have remarried. The management of the village has been intrusted to a Board of Directors who have elected one from among themselves as chairman managing director and one as chairman of the Board who also occupies the position of village headman. This Board also acts as a village council. The clinic, public bathhouse and school are the same that were built by the Development Bank and Domains Department, at the time of creatin of Zeytno. They stated the total number studying in their school as 100 and almost all their children of 7 to 14 years of age study within the village. These young men study at the secondary school of Sari but you can rarely find one able to read and write among the grown ups.

Comparison of the present condition of Zeytno with that of 10 years ago

1. The number of petty landowners who had been reported as 70 households previously has actually been 80 to which 70 households of free settlers have been added, forming the total population of 1200. About 35 households of the free settlers have branched off from the 80 original households of petty landowners, and 35 households have gone to Zeytno from other places during the last 10 years.

2. The area of the cultivated lands of the village has not changed, excepting the sections lost by farming holders as a result of construction of the Sari - Gorgan highway. From the total 500 hectares, 400 hectares are still held by the previous owners and the remaining 100 hectares consist of dwellings, communication roads or streets and public buildings of the village.

3. Although the area of the lands divided among the farmers has not changed much, many farm holders, due to poverty or for other reasons, lease their lands to other farmers of a higher financial standing. One of them has sold part of his lands to another holder.

4. According to a program, 4 villages were to be created with an area of 500 hectares, and 100 households in each, while every household was to be given 5 hectares of cultivated land plus 1.8 hectare for a house and garden.

However, no village has been created except zeytno which is itself made up of two smaller villages of Shahabad and Shahriar Kandi and has in all 400 hectares of cultivable lands with 80 households. In zeytno some households have been given 5 hectares and some other 3.5, but there is no difference in the amount of installment to be paid.

5. The income of one household having 5 hectares of land had been estimated as Rls. 29050 or \$ 388 ten years ago, while the income of such a household is now Rls. 79335 or \$ 1058, the reason for this increase having already been given in the previous pages.

With a view to facilitating the comparison of the present condition of the villages under study with that of 10 years ago, we give below the text of a report on the study of the village in question, drawn up in 1954 by the Ministry of Agriculture, with the assistance of Point 4 and the Ford Foundation.

پیشگاہ علوم انسانی و مطالعات فرہنگی
پرتال جامع علوم انسانی

Province : Gilan
Township : Rasht
Village : Gigasar

In general the villages of Gilan province have a larger population and a more intensive cultivation pattern than elsewhere in Iran. The village of Gigasar, 14 kilometers west of Rasht, for example, has 150 families with 1500 population, with a total of 350 hectares of rice, 50 hectares of tobacco, and 5 hectares of tea plants, in addition to small garden plots. Moreover the village enjoys income returns from sericulture poultry, and the sale of milk products.

Ownership of the village is vested in one landlord who has parcelled out small plots to 130 of the village families. The other twenty families are daily laborers. Four villagers picked at random from respondents, worked rice paddies of the following sizes : (a) 5 hectares, (b) 4 hectares, (c) $2 \frac{1}{2}$ hectares and (d) $1 \frac{1}{2}$ hectares.

The total income of the village from its 350 hectares of rice lands is approximately as follows : 198 kgs. of seed rice to the hectare with a 1650 kgs. per hectare return and at a market price of 8 to 10 rials per kilo for *Champa* (70 per cent) and 10 to 12 rials per kilo for *Binom* (30 per cent) brings 5,544,000 rials. The landlord takes $\frac{1}{3}$, leaving the village a yearly income of 3,696,000 for rice .

The village return from tobacco on 50 hectares is 12,000 rials per hectare equaling 600,000 rials minus 50,000 rials for the landlord, or 550,000 return. The landlord operates the tea terraces independently and takes all profits. The rice return plus the tobacco return divided by the number of people in the village equals 2,830 rials per capita (note: by families of 10).

This figure does not take into account, of course, the outflow of capital from the village due to the cost of labor brought in from outside the village, but this is negligible, as the twenty daily farm laborers' (*khoshneshin*) families- plus the women and children of the village all perform labour service. The average daily farm laborers' (*khoshneshin*) family has an income of about 5,500 rials; 2,000 rials from the woman's work in the rice fields during the 45 day planting - season, and 3,500 rials for the man's work of six months : harvesting rice, cutting wood, and tending livestock. One hundred of the one hundred and fifty families own their own oxen and thirty families great their oxen for, 1,000 rials per ox per season.

Because rice is a high labour crop with a great rial return per hectare, the families of this village, even with their small holdings of 2 to 4 hectare, have a much higher annual income than a comparable acreage of other cereal crops, the average family with $2\frac{1}{2}$ hectares of rice paddy for cultivation and with its own motive power (one ox) realizes an annual gross income of 22,500 rials . With the sale or consumption of mi:k products and poultry and some additional income from the sale of silk cocoons, this family approaches perhaps as high a level of remunerative production as we have seen in this country on such a small amount of land.

This relative prosperity is reflected in the material aspects of the province such as better houses, clothing, and furniture than usually found in peasant homes elsewhere, and in non - material aspects such as more schools and better diet for the third class farmers . For the first time we heard the actual people who cultivate the soil say, «in good years we may have 500 rials over expenses for the year's work». On the other hand, there is considerable idleness on the part of the adult male population, as most of the hand work in rice and tea fields is done by women and children. From this point of view Gilan might be one of the first provinces considered for secondary industrial innovation. If underemployment could be reduced by alternative employment to the point where the farm family could cultivate four hectares of rice land, a more stable economic base could be established for this area.

Province : Mazandaran
Township : Shahsavar
Village : Ghalehgardan

The richest agricultural area visited by this team in Iran was the Shahsavar region in Mazandaran. The first crop of agricultural importance here is rice, with 30,000 hectares under production; citrus fruit is second, with tea, grown on the terraced mountain slopes, third. All of these crops are high-labor, high production, high cash-return crops.

In the village of Ghalehgardan, 8 kilometers south of Shahsavar, there are three hundred families. One hundred of these families rent land from the Crown Lands Department (*Amlak*); 175 families own land; while only fifteen families are daily farm laborers (*khosnoshin*). The village land is owned one part by *Amlak* and two parts by private owners. The total land owned by the people of the village and by *Amlak* is 500 hectares. The land owned by any one family varies from $\frac{1}{2}$ hectare to 3 hectares, with 2 hectares the average holding. To illustrate, from the people of the village interviewed, one man owned one hectare of rice land, one hectare of citrus fruit land, and 3,000 square meters of tea bushes; the second man had one hectare of rice land and $\frac{1}{2}$ hectare of citrus fruit; the third owned $\frac{1}{2}$ hectare of rice and 3,000 square meters of tea; the fourth owned $\frac{1}{2}$ hectare of tea; the fifth $\frac{1}{2}$ hectare of tea; the sixth $\frac{1}{3}$ hectare of rice, 2,000 square meters of citrus, 2,000 square meters of tea; and the last 2,000 square meters of citrus, 2 hectares of rice, and 3,000 square meters of tea. Production from these small holdings are significantly high, as shown below :

1 hectare of rice; 200 kgs. of seed \times 26 : 1 return equals 5,200 kilos at an average of ten rials per kg. equals Rls. 52,000.

1/3 hectare of tea returns 18,333 rials.

1 hectare of citrus fruit returns 60,000 rials.

Total gross production equals 130,333 rials.

Labour at 10,000 rials per year, return to *Amlak* of 330 kilos of rice per hectare (3,300 rials,) one-fourth of return from citrus crop to *Amlak* (5,000 rials), rice seed at 2,000 rials, and one-fourth of tea crop (4,583 rials) gives a net return to the land rentor of 95,450 rials on $2\frac{1}{3}$ hectares of land. It will be noticed that the return to *Amlak*, 330 kgs. of rice from 5,200 kgs. production per hectare, is only about six-tenths per cent of the return. Using the same formula for deriving rial return, the second farmer above would have a gross of 79,500 rials, the third 34,333 rials, the fourth 26,000 rials, the fifth 40,333 rials, and the sixth 134,333 rials. These are the highest income figures reported for farmers in this survey.

Total gross production from the 500 hectares of village land would be: Rice . 200 hectares of rice \times 200 kilo of seed per hectare equals 40,000 kilos of seed \times 26: 1 return equals 1,040,000 kilos at 10 rials per kilo equals 10,400,000 rials. Two-thirds of the village land is owned by small owners and one-third by *Amlak*, so the private owner's share is 6,933,332 rials and *Amlak's* share in rent is $66\frac{2}{3}$ hectares \times 330 kilo per hectare equaling 22,000 kilos of rice at 10 rials per hectare equaling 220,000 rials. Therefore, from the gross return of 3,466,666 rials from *Amlak* land, 3,246,666 rials goes back into the village, making a gross return of 10,179,998 rials to the village for its rice paddies. Seed cost reduces this figure to 779,998 rials.

Citrus fruit. 146 hectares of fruit trees belonging to villagers \times 60,000 rials per hectare equals 8,760,000 rials income to the village.

104 h. ctares of fruit trees owned by *Amlak* \times 60,000 rials per hectare equals 6,240,000 minus one-fourth to *Amlak* equals 4,680,000 rials return to the village.

Tea. 36 hectares of tea \times 55,000 rials per hectare return equals 1,980,000 rials return to villagers who own land.

14 hectares of tea \times 55,000 rials per hectare equals 770,000 rials minus one-fourth to *Amlak* equals 577,500 rials to the village renters of land from *Amlak*.

Total Agricultural Return to Village :

Rice

6,933,332 rials to private owners

3,246,666 rials to *Amlak* renters

Citrus fruit

8,760,000 rials to private owners

4,680,000 rials to *Amlak* renters

Tea

1,980,000 rials to private owners

577,500 rials to *Amlak* renters

26,177,498 rials to villagers.

Labor costs amount to 10,000 rials per year for each of the 185 landowning families, as well as each of the 100 *Amlak* renting families, reducing the gross return to a net return of 23,327,498 rials for the village, or 77,758 rials per family for the total 300 families. The per capita income for the 1200 population is 19,439 rials.

Other than income from agricultural production, there is additional income coming into Ghalehgardan, since twenty men work in government offices in Rasht and twenty more work in the *Amlak* tea factory for six months of the year at 60 rials per day. Moreover, the village has a carpentry shop, a black smith shop, and several general consumer goods shops owned by the villagers themselves.

If here should be an approach to full employment any where in Iran it is in this area, for the men do the heavy work of preparing the rice fields and irrigation, while the women and children plant and harvest rice and tea and fruit. Yet for the most part of the year the men are idle, especially the managerial elite who merely rent their land, with little to occupy their time except tea drinking, gambling (our interview interfered with a gambling game), and opium smoking.

With improvement in income has come improvement in the level of living. The houses of the villages are large and airy, each with its separate compound; «store bought» clothes of good quality are in evidence everywhere; and there is a school with six classes, 200 students, and six teachers. Only in this area may it be said that the level of income of the rural people could be compared favorably with that of Southern or Eastern European farmers.



پښتونستان د علومو، انساني او مطالعاتو مرکز
پرتال جامع علوم انساني

Province : Mazandaran
Township: Gorgan
Village : Zeitno

In stating some of the perimeters of the problem that the survey team would attempt to investigate, the question was posed : «How large should the individual farms be in new reclamation areas, and in other that may be developed later? Should their size be determined without regard to the conditions prevailing in over-populated areas, or should the government of Iran avail itself of the opportunity to obtain a more equitable distribution of its farming population and thus provide a basis for improving the standard of living of rural people?»

One new development area under the aegis of *Amlak* was studied in Mazandaran Area, 22 kilometers east of the city of Sari.

A group of seventy families recently removed from a dedicated landvillage near Sarakhs in the extreme northeastern part of Khorasan had written HIM the Shah asking for land on which to settle. It was arranged that 2,000 hectares of unused land near the village of Zeitno on the Gorgan plains be used for land development. The plan is to make four new village with 500 hectares of land apiece with 100 families in each village, giving to each family five hectares of land for cultivation and 1/8 hectare in addition for a house site and a vegetable garden.

At the time of our visit, the seventy new village families were helping to build their houses. A hospital, a school house, a building to house a consumer cooperative, and a bath house were in various stages of construction. A water well had previously been installed by Point Four help to provide potable drinking water for the new village.

Amlak was charged by His Majesty with the supervision of the resettlement project and for the provision of tractors to plow and seed the crops. *Amlak* has provided 5,000,000 rials credit for the cost of building construction. The cost of the public buildings and the individual houses, it was planned, would be added to the price of the land to be repaid by the new landowners over a period of twenty-five years.

The agricultural agent of the Ministry of Agriculture from Sari stated he would advise the farmers on what crops to grow and on what agricultural methods to employ. He is recommending that the five hectares allotted to each farmer be cropped as follows:

cotton, 2 hectares; wheat, 2 hectares; vegetables and melons, 1 hectares.

Let us consider what the theoretical income from such a system would be for five hectares with these crops :

Dry land cotton in this area yields 1500 kilo of bulk cotton (lint and seed) per hectare, being seeded at 60 kilo per hectare. The current market price is 10 rials per kilo, so the theoretical return from two hectares of cotton would be 28,000 rials after deducting seed costs.

Wheat is seeded at the rate of 75 kilo to the hectare in this area (not irrigated) and returns about 10 to 1. At the market price of 3 rials per kilo, 2 hectares of wheat minus seed cost would return 4,050 rials. The gross return from one hectare of vegetables or melons minus seed and fertilizer is estimated to be 5,500 rials.

It is planned that this land will be tractor plowed and seeded. Based on *ymlak* experience in the Varamin Area, the plowing and seeding of five hectares would amount to about 600 rials per hectare for plowing and 350 rials per hectare for seeding of wheat and cotton. The gross agricultural income of 37,550 rials from the five hectares minus plowing and seeding costs would be 33,150 rials.

Assuming that, according to present financing plans each farmer would be assessed 50,000 rials for the cost of his home and the public buildings and 50,000 rials for the cost of his land, to be repaid over a 25 years period at 6 per cent interest, the cost per farmer per year would be about 4,100 rials leaving him a net income of 29,050 rials. While this project is certainly one of the most worthwhile projects we have seen anywhere in Iran from

social and humanitarian viewpoint, we question the economic feasibility of distributing land in such small units on the following grounds :

1. Adequate evidence is available that with machine plowing and seeding one family may cultivate at least twice this amount of land. Division of land in such small units as five hectares ties the living level of these families on new land and a brace new project down to the living level of the general farming population of the country, which patently is too low mainly because of underemployment resulting from the limited supply of land available to the farming unit. For the rural economy of Iran to grow and prosper, agricultural and other government officials must think bigger than in terms of five hectares of land per family, especially where mechanization of farming methods is introduced.

2. Unless fertilizer is introduced and used, production on the four hectares of wheat and cotton will be seriously reduced after the first three years. Neither fertilizer cost nor fallow land have been considered in the five hectares computation.

3. Wheat, cotton, and melons are the traditional crops in this region, but are the best crops that could be grown here income - wise? what are alternative high - income yielding crops?

There are other questions that could be asked pertaining to the problem of the further fractionization of land by inheritance, trial period on the land for farmers before title to to and is given, and moratorium on payments due to crop failures, but our major query refers back to the problem stated above: Is five hectares of land a sound economic base to improve the standard of living of a rural Iranian families? In the considered opinion of this team, it is not.