CHAPTER - I
INTRODUCTION AND METHODOLOGICAL FRAMEWORK

INTRODUCTION:

Islamic Republic of Iran -- known as Persia in historic times, an adaptation from its former name. Persis, which later became Fars. The even more ancient name, Iran (meaning land of the Aryans), came into general usage after March 19351 -- covers a vast territory of 1648195 sq km and is situated on a high triangular plateau. About 90 per cent of the Iranian land is a plateau. Large part of the country lies between an altitude of 900 and 1660 metres. The average altitude is 1000 metres above sea level.2

The whole of Iran is divided into 23 states (Ostan), 195 districts (Shahrestan), 500 towns (Bakhsh) and 1583 assemblies of villages (Dehestan) Table 1.1.

It is located between 44°5E longitude and 63° 18' E longitude. 39° 47' N latitude makes the northern boundary and 25° 3' N latitude makes the southern boundary3 (Figure 1.1).

Caspian Sea lies in the central part of its northern boundary flanked by Azerbeyejan and Armenia in the west and Turkmenistan in the east. On the south it is bounded by the Persian Gulf and the Arabian Sea and provides access to the
### TABLE - 1.1
Details of Administrative Division of Iran - 1987

<table>
<thead>
<tr>
<th>S.No.</th>
<th>Name of the State</th>
<th>Longitude o , o</th>
<th>Latitude o , o</th>
<th>Altitude of state (Ostan) centre (metres)</th>
<th>Area (Km²)</th>
<th>No. of shahrestan (Distt.)</th>
<th>No. of Bahsh Towns</th>
<th>No. of Dehestan (Assemblies of villages)</th>
<th>State (Ostan) Centre</th>
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**Iran Total**: 1153 1643509.7 195 500 1583 23

**Source**: 1. Statistical Centre of Iran, A Statistical Reflection of the Islamic Republic of Iran, Serial No. 1065, July, 1987 pp. 5 & 9

2. Islamic Republic of Iran, pp. 24-32 (Persian).
sea routes of the world. More than half of the upper boundary of the country's eastern part flanks on Afghanistan while less than the half of the lower part impinges on Pakistan. On the west, its major part borders on Iraq only a small portion on the extreme north-west adjoins Turkey (Figure 1.1).

Almost all of Iran lies in the north temperature zone, but the plateau as a whole offers a variety of climate which, in turn, yields a great variety of agriculture products.

Two major ranges divide Iran in a west-easterly direction; the Elburz, beginning in the Caucasus, passes through northern Iran and continues into Afghanistan. The second range, the Zagros, begins in Turkey and continues right down to Baluchistan. To the south and west the contrast between the massive ranges of the Zagros and the low lands of Mesopotamia is particularly striking. On the north, there is an equally abrupt descent from the Elburz ranges to the basin of the Caspian. Elsewhere, however, the mountain ring of Iran continues with much less interruption into the high lands of eastern Turkey and into the more broken massifs of Baluchistan and Afghanistan.4

In general, the land is part of a large plateau that was formed by the uplifting and folding effect of two giant blocks, one Arabian and the other Russian, pressing towards each other. The squeezing yielded considerable folding at
the edge and some in the centre, responsible for the location of mountain ranges. Sub-terranea shifts have produced numerous faults in the earth crust.  

There are several major lakes in Iran, apart from the great inland sea, the Caspian. The largest Lake is Rezaiyeh in West Azerbayejan, followed by the Hamun in Sistan and Baluchistan and Bakhtegan in Fars.

Iran has two big deserts: the Salt Desert (Dasht-e-Kavir or Kavir-e-Namak) to the south-east of Tehran and further south-east is the Barren Desert (Dasht-e-Lut or Kavir-e-Lut).

Agriculture in Iran provides an ancient and complex way of life. It covers a wide spectrum of economic activity. Before the boom of oil, agriculture formed the basic economy of the land for millenia and occupied a commanding height of the Iranian economy.

The country is large with diverse climatic conditions which have lend to the development of agriculture on different parametres in different sub-regions and in the method of agricultural operations.

With a large and rapidly growing population - quite apart from shortage of rainfall, age old agricultural methods, archaic method of land tenure still in vogue, absentee land-lords, lack of education, shortage of capital, long time continued war - the demand of food day by day
increases in Iran. Rapid population growth of 3.61 per cent per annum, the expanding per capita want of a growing industrial labour force and other job opportunities in urban areas bring pressure on food supply. In 1977-78 Iran imported 1.30 million tonnes of wheat (35.14 per cent of the total production), 0.30 million tonnes of rice (4.05 per cent of the total production) and 1.20 million tonnes of coarse grains totalling 2.80 million tonnes of cereals worth US $ 546 million. In the subsequent years 2.40 million tonnes of cereals worth US $ 379 million. In the year 1984-85, 2.90 million tonnes of wheat (43.94 per cent of the total domestic production of wheat), 0.70 million tonnes of rice (38.89 per cent of the total rice production) and 1.30 million tonnes of coarse grains, with a total of 4.90 million tonnes of cereals worth US $ 930 million were imported. In the preceding year it imported 5.80 million tonnes of cereals (of which wheat accounted 58.60 per cent of total domestic production and rice 46.67 per cent) at an estimated cost of US $ 942 million which put a high pressure on the Government exchequer.

Of the total surface area of 165 million hectares 17.50 million hectares (10.61 per cent) is under cultivation out of which about a half at anyone time is under fallow, 5.50 million hectares (31.43 per cent) is covered by either traditional water supply system known as Qanat or modern
system of water storage and supply. Roughly one-third of all irrigated land in the 1970's relied on Qanats. The building of several dams and many other irrigation canal systems on major rivers (the Karun, Dez, Safidrud and Karej) and the drilling of deep wells, have rendered about a quarter of the Qanat system, which were costly to repair and maintain, inoperative and obsolete in many regions.

By increasing the irrigated area and rationalizing irrigation methods, and by improving the soil with chemical fertilizers, it is hoped that it may become possible to till some 20 per cent more area not yet under cultivation. By adopting the above measure, the productivity would increase and new croplands could be added. This would add about 33.00 million hectares (20 per cent) of cropland and the country could be made self-relient in food production.

In 1960 Iran was self-sufficient in food stuffs. Later, the failure on the part of the Government regarding land tenure system and overall agricultural policy was responsible for the poor performance of agricultural sector. Government gave low priority to agricultural sector without realizing the consequences.

Until 1960's agriculture was technologically backward and yields were low. Only a few big estates were using modern technologies and had the necessary equipment to do so. Elsewhere the ways and means of production were
those of traditional agriculture. As regards marketing methods, they were even more primitive, owing to lack of proper specialized organizations and transport facilities Iranian farmers could hardly rise above the level of subsistence economy.

Social status of the peasants was no better than serfs. It was rare for the land to belong to the man who tilled it. Most of it was the property of a landed aristocracy - whose members did not live on their huge estates, rather they preferred to live in big cities and towns in their mansions, or else it belonged to the crown. The peasant was only a share cropper and the term tenancy, unchanged for centuries, gave the lion's share to the owner. Three-fifth of the harvest was his; whereas only two fifth was left to him. As a result farmers very often could not live from one meagre harvest to the next unless they borrowed money at exorbitant rates.

Iran's system of farming has been based from ancient times on absentee landlords and peasants. The former Shah of Iran, therefore, introduced land reform programme in 1962, despite strong opposition from powerful landlords. The programme was based on fair distribution of land in order to increase productivity, but the programmes turned out to be a failure. Production and productivity made no significant impact in the agricultural sector. Under the land reform
programme government distributed the land among peasants and provided financial assistance to the farmers but due to malpractices the needy farmers could not get necessary financial assistance and only big land lords or the farmer-owners with large land holdings and influence could be benefited from it. Thus the land reform scheme in its real spirit did not serve the purpose for which it was meant. The land reform programme was politically motivated to counteract the strong hold of landlords and eliminate the domination and influence of big land-lords in rural system. The image of the Shah among the elite and urban middle class was waning so he tried to improve his image by the reform programme.

As regards the price policy, the government extended the policy of support prices for agricultural produce. But it was of little benefit. Iran imported massive agricultural commodities at much higher prices than the price of those commodities produced in the country. Further these commodities were offered at much lower prices through fair price to the consumers. As a result prices of traditional crops gradually declined. The unfavourable credit policy led to a shift of financial resources away from agricultural sector.
Increased purchasing power of the people due to rise in the prices of oil led to an increase in the demand for better food commodities and rapid transformation of agriculture but the country still imported food items worth 150-220 billion Rials (US 2-3 billion dollars) and the country has not yet been able to achieve self-sufficiency, though enough fund has been invested during plan periods.

In Iran the per capita net sown area available in the year 1976-77 was 0.25 hectare while it decreased to 0.22 hectare in the year 1984-85. A decrease of 1.20 per cent per annum. Owing to rapid increase in the growth of population and increasing demand of food commodities, it became obligatory on the part of the government either to bring more land under cultivation or increase the productivity of the land.

In the Post-Islamic revolution the leaders of the new government realized the importance of agriculture in the country, and paid special attention towards the improvement of agriculture. The revolutionary government has introduced land reform and land distribution programme afresh and paid attention to the solution of water problem for irrigation. Agriculture has suffered a massive loss of agricultural labours - 5 million people since 1982 as 10 per cent land was under Iraqi occupation which now has been returned to the country again. Burden of war reduced the allocation on agriculture. However, in 1980 it was only
26,661 million Rials (US $ 340.37 million) while in the year 1985 it rose to 77,700 million Rials (US $ 876.78 million), an increase of 191.4 per cent was recorded during the period, which is about 32 per cent per annum. Realizing the important role of agricultural sector in transforming economic development of the country, the government has put emphasis on the intensification of agricultural improvement of farming on the existing land. The support price for grain and other crops was raised. The biggest subsidy was given to wheat, the leading and most important crop of the country. Its price was increased from pre-revolution price of Rials 18 (US $ 0.20) to Rials 53 (US $ 0.74)/kg, an increase of 194.4 per cent. Farmers who delivered their wheat to government agencies were given tractors at much reduced price.

From 1983 onward for each tonne of wheat government offered 100 kg of fertilizer and tax exemption for 10 years to the farmers who followed official guide lines.

Subsidies to rice growers and other grains were also introduced. Rice import was reduced in 1986 and additional aid was given to rice growers.6

With the incentive given to the farmers agricultural production in some states during 1976-77 to 1984-85 attained a high growth rate. For example wheat production in the province of Hormozgan, Kohgilueh and Boyer Ahmad and
Khuzestan registered a high growth rate of 28.95, 28.46 and 23.34 per cent per annum respectively. Wheat production at national level also increased by 1.04 per cent after revolution (1978-79 to 1984-85) as compared to pre-revolution negative growth of -1.53 per cent per annum between 1971-72 and 1977-78. Rice production showed 3.22 per cent increase in post-revolution period as compared to -3.46 per cent decline before revolution. All other crops including cash crops showed a high positive growth rate in production except sugar-beet which had a negative growth of -0.79 per cent per annum in production but 1.46 per cent increase in the yield. This confirms that decline in the production of sugar-beet is due to the decline in the area which accidentally fell in the war zone where large acrage under sugar-beet was either in the Iraqi occupation or was located in the war front. Overall, post-revolution position of cereals points out an increase of 2.78 per cent in area, 3.08 per cent in production and 0.15 per cent in the yield whereas pre-revolution position indicate a negative growth of area -2.51 per cent, production -1.26 per cent but an increase of 1.17 per cent in the yield.

It will thus be seen that in the pre-revolution period decline in the growth of production was mainly due to decrease in area, and not yield. Whereas in the post-revolution period increase in the production is much due to
increased area under cultivation rather than increase in the yield.

The slow growth of agriculture compared to fast growth in population has been due to a variety of factors. One of the major causes is the variability of rainfall. The scanty overall rainfall and the inadequacy of the surface and underground water system to irrigate more than the present one-third of cultivated land have been the major constraints. The second major obstacle is the antiquated and inefficient farming techniques in many part of the country. The insufficient use of farm inputs - especially fertilizer and high quality seeds - poor communication and market system have all led to poor yields. Agricultural extension services and farm credits are limited. Previously in Iranian plan it was assumed that Iran's National comparative advantage was not in agriculture because relatively cheap food could always be brought from the world's surplus countries against exports of higher valued industrial goods. But three subsequent events changed this philosophy (i) emerging food shortage the world over, (ii) the emergence of physical bottlenecks to the inflow of imports even if foreign exchange was available and (iii) a more sobering realization that industrialization cannot be self sustaining without agricultural growth. As a result in the fifth five year plan more attention was given to farming.
Realizing the important role that agriculture can play in transforming the economic development of the country, government is trying its best to remove all inadequacies and short comings that agricultural sector is facing at present.

METHODOLOGICAL FRAMEWORK

Problem

The present study is concerned with the regional imbalances in levels and growth of agricultural productivity in Iran. Disparity in productivity reflects a direct influence upon the economic and social status and life of a particular region. For instance, investment made to boost agriculture during the Shah regime was mainly in the province of Mazandaran, East Azerbayejan and Gilan which brought prosperity and affluence to the people of these areas. Per capita income rose to 406801 Rials (US $5653.94) in these states while in the province of Sistan and Baluchistan it remained only 565 Rials (US $7.85). This type of disparity in the social life may create dissatisfaction among the people.

Secondly, level of productivity is directly concerned with food security. A high level of productivity ensures protection to the people in the hour of national crisis. For example Iran imported (especially at the time
of war with Iraq), massive agricultural products from other countries at much higher prices than the prices of the same domestic product at home and those imported products were offered at much lower prices to the people. As a result there was gradual and persistent decline in the relative prices of those crops, consequently the farmers were discouraged and forced to practice subsistence type of farming. All these factors in Iran operate in a highly complex type of environment.

The arena of the study is to take account of several techniques to measure the efficiency of the existing performance in agriculture and delineate regions of varying levels to bring developed, under developed and poor performance areas into focus thereby provide a basis for suggestions and remedial measures to be taken. But one major difficulty in the analysis of levels of productivity is the non-availability of data at micro level.

Aims and Objectives

The main objective behind the assessment of agricultural productivity is to find ways of increasing output per unit of input and to minimise the regional disparities. For the purpose, first one has to examine the agricultural efficiency and its growth pattern on a regional and inter-regional basis. For the formulation of effective policies
it would be necessary to assess existing levels, their past trends and future prospects in order to assess variation in time and space and to suggest essential measures to formulate and chalk out plans for various regions on the basis of prevailing conditions. In the absence of such assessments planning may not be uniform and it would be at random and haphazard.

Some important aims and objectives are explained below.

(1) To find out the existing linear growth rate of different important food and cash crops in the country.

(2) To estimate state-wise existing agricultural productivity by several important techniques.

(3) To calculate growth rate of productivity to assess the progress of agricultural efficiency.

(4) Evaluation of mutual relationship between various physical and economic factors and agricultural pattern in a wide sense.

(5) Simple presentation of quantitative expression of the input variables with a view to find out the estimated output.

(6) To suggest measures for improving the existing conditions in the light of the analysis of findings and conclusion drawn from it.
Apart from main objectives discussed above there are certain secondary objectives of the study which are given below.

(7) To analyse the impact of institutional factors in agricultural productivity.

(8) To study the role played by agriculture in the development and structural set-up of the country.

Significance of the Study

The study of regional imbalances in levels and growth of agricultural productivity is important on many counts. At first place agriculture occupies a crucial place in the country's economy and enjoys about 18 per cent of the Iran's Gross domestic product.

The present study is also important on the ground that agriculture exists to meet the basic needs of the people in the rural as well as urban areas. In rural areas it is dispensable to fulfill the very necessities of farming society - Iran spends roughly between 2-3 billion US $ for the import of food items per annum - and thus assumes a special significance.

The study is relevant because it focuses on the growth of area, production and yield of all the important crops their productivity and the delineation of productivity areas. It explores the factors responsible for causing regional imbalances in the productivity.
Hypothesis

The present study seeks to examine the regional imbalances in levels and growth of agricultural productivity in Iran on the basis of following assumptions.

1. Government's discriminatory policies at the time of Shah and War with Iraq afterwards affected the production adversely and created serious imbalance in some parts.

2. Archaic tenure system in some parts hindered the development of agriculture and productivity.

3. Out-moded system of farming in most parts of the country has adversely affected the growth of agricultural efficiency.

4. Limited water facilities and inadequate rainfall have seriously influenced the development of agriculture and efficiency of productivity.

Data Base and Methodology

Data have been collected from annual reports, documents, statistical year books of Iran and annual reports of the Ministry of Agriculture, Iran, also materials from the Embassy of Iran and Iranian culture house in New Delhi. Publications of Food and Agricultural Organization, original sources published in Persian language, Bank Markazi Iran, Jihade Sa Zindagi and questionnaires with Iranian Students.
Data collected on the basis of original literature in Agriculture in Persian after its due translation in English was also consulted.

Getting factual data of the West Asian Countries poses a formidable problem and Iran too suffers from the same constraints.

As the title of the work itself indicates, at first linear growth rate of every important crops statewise as well as national level was calculated. Again statewise agricultural efficiency by several important methods and their linear growth rate was calculated and regional demarcation of agricultural productivity into very high, high, medium and low productivity grades was made.

Scope of the Study

The present study has confined its scope to the statewise growth in area, production and yield of important crops from 1976-77 to 1984-85 and measuring agricultural productivity of the 23 states and its growth rate for the same period. Unit selected at state level was due to non-availability of data at micro level. The data at micro-level are not available even in unpublished form.

Limitations of the Study

Though the researcher has taken painstaking efforts as rigorously as possible in the collection of relevant
informations, certain limitations were, however, inevitable. Some important constraints are as follows.

1. The study is based on secondary sources of information. No case study has been made because the author did not get an opportunity to visit Iran due to the war and volatile situation in the region during study period. Moreover, the major difficulty in visiting Iran for field work was lack of funds. However, the writer did make efforts to obtain some information through questionnaire and interviews with Iranians in Aligarh who are connected with farming.

2. The information collected for the purpose of the study was obtained through questionnaire sent to people connected with farming; correspondence with some teachers in Iranian Universities; Embassy of Iran and Iranian Culture House, New Delhi and the Departmental and Central Libraries.

3. Some element of bias on the part of information cannot altogether be ruled out although wherever possible cross-checks were made to verify the veracity of the information.
REFERENCES:


2. *Basic Facts About Iran*, Ministry of Information and Tourism Publication Department, September, 1974, p.11.

3. Tourist Map of Islamic Republic of Iran.


5. Smith, H.H., et. al., op. cit., p.11.