CHAPTER I

INTRODUCTION

Storage was one of the four important stages which agricultural produce passed through once it was harvested. The others were processing, transport and marketing. The need for public warehousing was emphasized time and again by various commissions on agriculture and rural credit.

In 1945, the Agricultural Finance Sub-Committee of the Finance Ministry said of warehousing as follows:

"From the point of view of agricultural marketing warehouses might be considered as extensions of the system of transport and the planning of the location of warehouses must be done as part of planning the extension and..."
improvement of transport facilities. The construction of a chain of warehouses is unlikely to attract immediately sufficient private capital and it might also not be desirable to leave the running of the warehousing system in private hands. We, therefore, recommend that the State should itself undertake, as part of its programme of development of rural transport, the planning and construction of warehouses at all nuclear points of trade in agricultural produce. The warehouse system should be operated by a public corporation organised on lines similar to those of Improvement Trusts or Port Trusts. This would provide for a better and more economic management of the system than if the warehouses were owned by individuals or particular sale societies and would also facilitate the issue of warehouse bills.1.

The Rural Banking Enquiry Committee (1950) also emphasised the importance of storage and warehousing in relation to rural credit and rural banking. It recognized the all-India character of the problem as well as the need for State finance and State subsidies. The suggestion for the formation of a warehousing development board with a large capital was with the purpose of giving loans and subsidies to those who were prepared to take up this line of activity as a business. "But in the absence of a detailed scheme whereby execution and implementation - and not merely finance and subsidy - could be secured, no progress has been made in pursuance of this recommendation. The Reserve Bank has since carried out a study of the relevant conditions in different states which broadly confirms that the difficulties are cost, finance and organisation.2.

For effective action, according to the Committee, the chief steps would have to be on the following lines:

" (i) A planning and financing body at the Centre, e.g. under the Ministry of Food and Agriculture, sufficiently expert and representative and adequately provided with finance, which would plan a whole system of storage and warehousing. This body would plan for the whole country and would be put in a position to subsidize and finance. At the same time it would be organizationally related to different coordinated agencies which would carry out the programme.

(ii) The agencies themselves could be broadly divided into three categories:(i) an all-India organization for development of storage and warehousing at points of all-India importance;(ii) State organizations concerned with points of State or district importance, and (iii) co-operative organizations at the taluka and village levels."3

Based on the recommendations of the All-India Rural Credit Survey, the Agricultural Produce (Development and Warehousing) Corporations Act, 1956, was passed by Parliament. It provided for the establishment of the National Cooperative Development and Warehousing Board which was to be the policy-making and financing body. The Act also provided for the establishment of a Central Warehousing Corporation, whose share capital would be subscribed by the National Board and other financial institutions. The Act also provided for the establishment of State Warehousing Corporations in different States. These were to be established by the State Governments with the approval of the Central Warehousing Corporation. The Central

3. Ibid.
Warehousing Corporation was established under this Act in 1957; some State Warehousing Corporations were also established under it.

A separate Department of Cooperation was created by the Government of India in January, 1959. The business of the National Cooperative Development Board was transferred to the Department of Cooperation and that of the Central Warehousing Corporation to the Department of Food. The overall administration of Warehousing Corporations was since vested with the Department of Food. The Agricultural Produce (Development and Warehousing) Corporations Act, 1956, was replaced by the Warehousing Corporations Act, 1962; the Central Warehousing Corporation was now the apex warehousing body which together with the respective State Governments, was a shareholder of the State Warehousing Corporations.

With the availability of increasing marketable surplus in agriculture, inadequacy of storage accommodation emerged, in the eighties, as one of the serious problems of post-harvest management. The problem was compounded by the inability of the railway system to carry procured food-grains from the surplus to the deficit areas at a fast enough pace. Table 1.1 shows the increasing mandi arrivals and annual procurement of wheat in Haryana for the years 1980-81 to 1986-87. The figures in the table show an increasing proportion of the wheat produced coming to the mandis; while 4620 thousand tonnes of wheat were produced in 1985-86 and the same amount in 1986-87, 1990 thousand tonnes came to the mandi, and 1959 thousand tonnes
TABLE 1.1
Wheat Procurement

<table>
<thead>
<tr>
<th>Year</th>
<th>Area under crop (000 hect.)</th>
<th>Production (000 tonnes)</th>
<th>Mandi ARRIVAL</th>
<th>Procurement by agencies</th>
<th>PSD</th>
<th>HAFED</th>
<th>PCI</th>
<th>HAIC</th>
<th>HWC</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>1980-81</td>
<td>1479</td>
<td>3490</td>
<td>1198</td>
<td>428</td>
<td>353</td>
<td>221</td>
<td>1002</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1981-82</td>
<td>1564</td>
<td>3606</td>
<td>1217</td>
<td>523</td>
<td>347</td>
<td>236</td>
<td>1121</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1982-83</td>
<td>1722</td>
<td>4347</td>
<td>1666</td>
<td>419</td>
<td>449</td>
<td>345</td>
<td>1261</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1983-84</td>
<td>1784</td>
<td>4458</td>
<td>1823</td>
<td>536</td>
<td>508</td>
<td>282</td>
<td>1399</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1984-85</td>
<td>1704</td>
<td>4418</td>
<td>1837</td>
<td>695</td>
<td>539</td>
<td>418</td>
<td>1774</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1985-86</td>
<td>1780</td>
<td>4620</td>
<td>1990</td>
<td>697</td>
<td>560</td>
<td>590</td>
<td>1959</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1986-87</td>
<td>1780</td>
<td>4620</td>
<td>2462</td>
<td>614</td>
<td>616</td>
<td>845</td>
<td>2336</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

PSD Food and Supplies Department
HAFED Haryana Cooperative Supply and Marketing Federation
PCI Food Corporation of India
HAIC Haryana Agro-Industries Corporation
HWC Haryana Warehousing Corp.

Source: Food Department, Haryana

were procured in 1985-86; 2462 thousand tonnes came to the mandi and 2336 thousand tonnes were procured in 1986-87. Warehousing facilities were required for the wheat procured by the state procurement agencies and also for that which remained with the farmers. "On account of improper handling and storage of foodgrains, about 10% of the production is lost. The losses arising from defective storage alone have been estimated around 6.6%."

There were three agencies in the public sector which were engaged in building large-scale warehousing capacity, namely, the Food Corporation of India, the Central Warehousing Corporation and the State Warehousing Corporation. The functions of the Central Warehousing Corporation and the State Warehousing Corporations were to acquire and build warehouses at suitable places and to operate them for storage of agricultural produce, fertilizers and certain other commodities. Table 1.2 gives the storage capacity created by the public sector storage agencies during the Sixth Five Year Plan period (1980-85).

<table>
<thead>
<tr>
<th>Agency</th>
<th>Sixth Plan Target</th>
<th>Achievement</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Food Corporation of India</td>
<td>3.56</td>
<td>2.482</td>
</tr>
<tr>
<td>2. Central Warehousing Corporation</td>
<td>1.45</td>
<td>1.110</td>
</tr>
<tr>
<td>3. State Warehousing Corporation</td>
<td>2.50</td>
<td>1.611</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>7.51</strong></td>
<td><strong>5.203</strong></td>
</tr>
</tbody>
</table>

Table 1.3 gives the total owned and hired capacity available with the public sector agencies on March 31, 1985.

6. Ibid., p. 19.
Table 1.3
Covered Storage Capacity
- Agency-wise

<table>
<thead>
<tr>
<th>Agency</th>
<th>Owned</th>
<th>Hired</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Food Corporation of India</td>
<td>8.93</td>
<td>6.40*</td>
<td>15.33</td>
</tr>
<tr>
<td>Central Warehousing Corporation</td>
<td>3.17</td>
<td>1.60</td>
<td>4.77</td>
</tr>
<tr>
<td>State Warehousing Corporations</td>
<td>3.95</td>
<td>2.75</td>
<td>6.70</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>16.05</td>
<td>10.75</td>
<td>26.80</td>
</tr>
</tbody>
</table>

* Hired from sources other than the Central Warehousing Corporation and the State Warehousing Corporations.

The additional storage capacity needed for foodgrains was estimated to be 7.5 million tonnes by the end of the Seventh Plan period; 50% of the capacity to be constructed by the Central Warehousing Corporation and the State Warehousing Corporations was to be available for foodgrains. Table 1.4 gives the total storage capacity to be created by the public sector agencies during the Seventh Plan period.

Table 1.4
Additional Storage Capacity to be Created in the Seventh Plan

<table>
<thead>
<tr>
<th>Agency</th>
<th>Capacity (in million tonnes)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Food Corporation of India</td>
<td>5.00</td>
</tr>
<tr>
<td>Central Warehousing Corporation</td>
<td>2.00</td>
</tr>
<tr>
<td>State Warehousing Corporations</td>
<td>3.00</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>10.00</td>
</tr>
</tbody>
</table>

7. Ibid. p.19
There were six agencies in Haryana which maintained food storage godowns. However, the Central and State Warehousing Corporation were the only agencies which provided scientific storage facilities to diverse categories of depositors, for a wide range of products.

Table 1.5 gives the storage accommodation available with various agencies in Haryana as on March 31, 1984.

TABLE 1.5
Storage Accommodation
(Fig. in 000 tonnes)

<table>
<thead>
<tr>
<th>Agency</th>
<th>Existing Storage Accommodation</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>On March 31, 1985</td>
</tr>
<tr>
<td>1. Haryana Warehousing Corporation</td>
<td>174.6</td>
</tr>
<tr>
<td>2. Haryana Cooperation and Supply Marketing Federation.</td>
<td>134.5</td>
</tr>
<tr>
<td>3. Haryana Agricultural Marketing Board.</td>
<td>162.0</td>
</tr>
<tr>
<td>4. Food and Supplies Department</td>
<td>135.39</td>
</tr>
<tr>
<td>5. Central Warehousing Corporation</td>
<td>75.0</td>
</tr>
<tr>
<td>6. Food Corporation of India</td>
<td>764.17</td>
</tr>
<tr>
<td></td>
<td>1445.66</td>
</tr>
</tbody>
</table>

**REVIEW OF LITERATURE**

Research work on warehousing in India, done so far, is limited to doctoral dissertation, three M.A. dissertations, one book and six

---

journal articles. The proceedings of a conference on warehousing are also available. We shall deal with these in the chronological order.

A paper entitled "Role of Warehousing", dealt with the need for warehousing in the country and discussed the relevant legislation. The author was the Managing Director of the Central Warehousing Corporation.

A doctoral dissertation entitled "Indian Warehouses and their Role in Agricultural Economy," was submitted in 1972. It was not based on a field study, but only on secondary data. It dealt with the growth and development of the warehousing system in India, its area of operation and role in marketing. The provisions for advances against warehouse receipts, by the Reserve Bank of India, were studied. Technical aspects of storage were dealt with in detail. One chapter dealt with warehousing in some foreign countries. Certain operational difficulties of warehousing and problems like shortage of storage space and funds, non-finalization of the design of storage structures for public warehousing, and costliness of construction were discussed.

A paper entitled "State Warehousing: A case Study," was published in 1972. It was based on secondary data: government reports and official documents of the Orissa Warehousing Corporation. The paper dealt with the historical background of warehousing in India, and some aspects of the service provided by the Orissa Warehousing Corporation.

A paper entitled "Warehousing in Public Sector in India", was published in 1981. Its author was the Managing Director of the Central Warehousing Corporation. It was based on the official documents of the Corporation. The paper dealt with the coverage of warehousing and some of the flaws in the services provided.

Two case studies, based mainly on secondary data, dealt respectively with working capital management in the Rajasthan Warehousing Corporation and pricing in the Central Warehousing Corporation. The author sought to explain the high price of storage on the basis of high costs incurred by the Corporation.

A book entitled "Warehousing Corporations in India", was published by the Central Warehousing Corporation in 1982. Its author was the Commercial Manager of the Central Warehousing Corporation. The work was based mainly upon the official documents of the Central and State Warehousing Corporations. It contained a historical background of warehousing corporations, the business of warehousing and various functions performed by the Central Warehousing Corporation. The establishment of state warehousing corporations, their performance and


15. O.N. Chibber, Warehousing Corporations in India, (N.Delhi: Central Warehousing Corporation, 1982).
their relationship with the Central Warehousing Corporation was also dealt with. A conference on warehousing entitled "International Warehousing Conference", was held in 1982 as part of the silver jubilee celebrations of the Central Warehousing Corporation. The papers dealt with the historical background of warehousing in India, the performance of the Central and State Warehousing Corporations and technical aspects of storage and preservation. Other papers dealt with warehousing in some developed and under developed countries.

An M.A. dissertation entitled "A Study of the Organization and working of the Central Warehousing Corporation with special reference to Regional office, Chandigarh", was submitted in 1982. It was based on secondary data; no field study was undertaken. It outlined the growth of warehousing in India, with special reference to the Central Warehousing Corporation. The performance of the warehousing centres under the regional office at Chandigarh was described.

An M.A. dissertation entitled "Organisation and Working of Punjab Warehousing Corporation, Chandigarh", was submitted in 1983. No field study was undertaken. Secondary data were used. The period of the study was limited to three years: 1977-78 to 1980-81. The


organisational structure and performance for the three years period of the study was described.

An M.A. dissertation entitled "Organization and Working of Haryana State Warehousing Corporation", was submitted in 1984. It was based on secondary data. The period of the study was limited to three years: 1980-81 to 1982-83. It described the organisational structure of the Corporation and its performance.

A paper entitled "Warehousing Corporations - A Profile", was published in 1986. It was mostly based on secondary data; the top official of the State Warehousing concerned had been interviewed. The paper dealt with the historical background of Warehousing Corporations in India. It described the performance of the Tamilnadu State Warehousing Corporation and its relationship with the apex body - the Central Warehousing Corporation. Some suggestions for greater coordination of the two, in various fields, were given.

OBJECTIVES

The objectives of the present work are to study the following:

- the policies and programmes of the Haryana Warehousing Corporation from its inception in 1967 to 1986.
- the organizational structure;


- personnel administration including classification of personnel, conditions of service, recruitment and selection, promotion, performance appraisal, transfer, training, conduct and discipline, and employee associations;
- financial administration, including formulation of the budget, its authorisation, execution, and review;
- substantive procedures related to storage, procurement of wheat, and publicity of the Corporation's services.

THEORETICAL FRAMEWORK

Public administration in developing countries has been shaped by social, economic and political factors, and the administration has, in turn, tried to bring about change, or development, in all these aspects of the society.

The "steepness of the class structure", in developing societies, is "accentuated by the difference between the modern and the traditional sectors, the heavy predominance of the agrarian element in the traditional sector, by the continuous disorganization of the traditional center and by the heavy proponderance of government oriented
and bureaucratic class formation in the modern center”.

In underdeveloped countries values like wealth, political power, education and social status tend to be concentrated in a small section at the top while the vast majority remains largely bereft of each of these.

The underdevelopment of the political system means partly the absence or weakness of interest groups and political parties. The prime role of interest groups is to articulate interests while that of political parties is to aggregate these. The absence of interest groups for articulating the interests of the poor has the result that their felt needs remain unknown to the rulers. While the farmers, particularly small ones, remain unheard and weak because of being unorganised much of industrial labour, by contrast, is organised and therefore its interests are better articulated and looked after.

Most modernizing changes in traditional societies have been focused on the central institutions of the society. Eisenstadt has pointed out that colonial powers “attempted to limit such changes to administrative


and technical as against deeper social and cultural spheres, and to the center as against the broader periphery. Most changes introduced either directly or indirectly by the colonial powers have been focused on the central institutions of the society.

According to Riggs, there are certain characteristics which mark the administration of "traditional" societies. In societies which are in the process of industrialization and modernization, where the new and the old exist side by side in a heterogeneous mixture, there is a certain overlapping. Riggs explains this as meaning that "the new formal apparatus, like the administrative bureau, gives an illusory impression of autonomousness, whereas in fact it is deeply enmeshed in and cross influenced by, remnants of older political systems".

The phenomena of overlapping and heterogeneity are related to another element - that of formalism. "A law which is formalistic sets forth a policy or a goal which is not, administratively, put into practice". When a high degree of overlapping in administrative organisation occurs, considerable formalism may be expected.

---

21f. Riggs, ibid., p.15.
21g. Riggs, ibid., p.15.
According to Heady bureaucracies in developing countries are generally deficient in skilled manpower necessary for developmental programmes. "The public services are almost universally conceded to be overstaffed in the lower ranks with attendants, messengers, minor clerks, and other supernumeraries. The shortage is in trained administrators with management capacity, developmental skills, and technical competence".

According to Merton, an effective bureaucracy demands strict devotion to regulations. This leads to their transformation into absolutes and thus interferes with their adaptation under special conditions. "Thus, the very elements which conduce towards efficiency in general produce inefficiency in specific instances". Merton goes on to state that "...these very devices which increase the probability of conformance also lead to an over-concern with strict adherence to regulations which induces timidity, conservatism, and technicism".

Weber points out that, "Under normal conditions, the power position of a fully developed bureaucracy is

---


21j. Merton, ibid., p.255.
always overtowering". In transitional societies the weight of bureaucratic power is relatively greater. Riggs states that, in such societies "the very measures taken to strengthen the administrative capabilities of a bureaucracy may also augment the weight of its power, and actually hamper its administrative efficiency". If the power of the bureaucracy is great, its dysfunctions, particularly technicism, are also likely to be accentuated.

The main hypotheses which flow from the above discussion and which we propose to test in the course of our study are as follows:

1. In Haryana, associations of farmers are non-existent or weak.
2. Government policies often tend to be made without consultation with the clientele.
3. The interests and felt needs of the farmers, in Haryana, remain unknown and unattended to.
4. Traditional institutions like that of the arhatiya (commission agent) continue to exist side by side with new ones like the warehouse and the public procurement agency.
5. Services intended to be provided by public agencies may not be in demand.


211. Riggs, op. cit., p.223.

21m. Riggs, ibid., p.227.
6. There is centralization in both policy making and implementation.

7. Personnel administration remains traditional in respect of classification, recruitment, training, performance appraisal and incentives.

8. There is a lack of trained personnel.

9. Public sector undertakings, while being autonomous in name, tend to function like government departments.

10. Modern methods and techniques of management have often not been adopted.

THE UNIVERSE

Haryana has an area of 44,222 sq. kms. At the time of the survey it was divided into 12 revenue districts, the headquarters of which are shown in Map 1.1. The population of Haryana, according to the 1981 census was 1,28,50,902. The capital of Haryana is Chandigarh.

The State is bounded on the north by Himachal Pradesh, on the north-west by Punjab, on the east by the river Yamuna, which separates it from Uttar Pradesh, and on the south-west by Rajasthan. Delhi lies on its south-western border. Haryana forms part of the Indo-Gangetic plain. In the east, along the river Yamuna, the region is alluvial, the central region is forested and the western region is sandy. The Yamuna, the Saraswati, the Markanda and the Ghaggar are the main rivers. There are three main seasons, the winter, the summer and the rainy season.
The main industries in the State are those of cotton and woolen textiles, paper, bicycles, sugar, cement, brassware, glassware, machine tools, tractors and agricultural implements.

The economy of the State is dominated by agriculture. Out of the total state income of Rs. 1562 crores, the total net income from agriculture and animal husbandry in Haryana during 1984-85 was Rs. 764 crores. The index of agricultural production went up from 113.07 in 1971-72 to 166.82 in 1983-84. The index of industrial production rose to 272.34 in 1983-84, showing an increase of 3.4 percent per annum from the base year of 1970-71.22

Agriculture

Agricultural production rose progressively over the years. The foodgrains production in the year 1983-84 touched a level of 68.89 lakh tonnes as against 60.36 lakh tonnes in the year 1980-81. During 1983-84, production of wheat and rice established an all-time record of 44.58 lakh tonnes and 13.32 lakh tonnes respectively.

Out of the total reported area of 43.94 lakh hectares, the net area sown in 1984-85 was 36 lakh hectares (81.9%). The area sown more than once was 59.2% of the net area sown in 1981-82. The all-India average of area sown more than once was 24.7% in 1980-81. The main agricultural produce consisted of wheat, sugarcane, rice, maize,
cotton, oilseeds, tobacco, chillies, barley and pulses in the fertile area; mainly millets, gram, wheat and pulses were cultivated in the dry areas.

Irrigation

The gross area under irrigation which was 31.31 lakh hectares in 1979-80 went up to 35.59 lakh hectares in 1983-84. The gross area under irrigation as a percentage of gross area sown went up from 53.9% in 1978-79 to 63.2% in 1983-84. The most highly irrigated areas were in the eastern districts of Karnal and Rohtak, and the least in the south-western and sandy district of Mahendragarh. The Eastern Yamuna Canal and Bhakra Canal water this State. Wells are mostly used in the western areas. Tube-wells are also being used in large numbers.

The head office of the Haryana Warehousing Corporation was situated at Chandigarh and its district offices and warehousing centres, as shown in Map 1.1, were located in various places in different parts of the State. The Corporation had 8 district offices and 79 warehousing centres on March 31, 1986. The total number of its employees was 895; 780 of these were in the field.

DATA COLLECTION AND PROCESSING

Exploratory Study

The first step was to make an exploratory study for the purpose of becoming familiar with the Corporation and developing hypotheses.
HARYANA WAREHOUSING CORPORATION
Location of Warehouses
Books, dissertations and journal articles on agriculture in general, and warehousing in particular, were studied. Informal interviews with some officials of the Corporation at the head office and in the field were made. 25 farmers and 10 traders were also interviewed informally. The working of a warehousing centre at Ambala and that of the mandi (grain market) at Gohana was observed for about a day each.

Study of Documents

The following documents were studied:

The documents of the Government of Haryana which were studied were mainly the Fifth Five Year Plan, 1974-79; the Sixth Five Year Plan, 1980-85; the Seventh Five Year Plan, 1985-90; the Haryana Warehousing Act, 1957; the Evaluation of the construction of Rural Godowns in Haryana, 1974; the 11th Report of the Public Accounts Committee of the Fifth Haryana Vidhan Sabha, 1979; the Reports of the Comptroller and Auditor General of India on Government Corporations, Companies and Departments in Haryana, 1983-84, 1984-85 and 1985-86; and the 6th Report of the Committee on Public Undertakings of the Sixth Haryana Vidhan Sabha.

The documents of the Haryana Warehousing Corporation which were mainly studied were the Annual Reports since its inception in 1967-68 up to 1986-87; the Haryana Warehousing Corporation's Rules, 1969; the Staff Regulations, 1981; the Haryana Warehousing Corporation's Regulations 1981; the Haryana Warehousing Corporation's Provident Fund Regulations, 1971 and 1980; the Technical Manual of the Corporation; a mimeograph entitled "Evaluation of Rural Godowns in Haryana", 1974. Among the notes and correspondence of the Corporation were its annual budgets from 1981-82 up to 1986-87; the Wheat Procurement Instructions, the minutes of the meetings of the Board of Directors and Executive Committee of the Corporation since its inception; a number of files related to various aspects of the Corporation which were studied, for example, advances against warehouse receipts, internal audit, construction programmes.
The documents of the Central Warehousing Corporation which were mainly studied were its Annual Reports from 1982-83 to 1985-86 and the Report of its working group on the Review of the functions of Warehousing Corporations, 1976.

Interviews

All interviews were made personally by the researcher (mainly in May-June 1986).

Informal Interviews

Informal interviews with 4 Managing Directors who held this post at different times during the course of the research, the 7 Managers at the head office and 9 in the field (2 District Managers and 7 Warehouse Managers) were made. A large number of subordinate officials at the head office and in the field offices were also interviewed. In the course of these interviews official information was obtained, the official point of view was ascertained and documents were procured. Some of the officials were interviewed separately, inter alia to obtain their reactions to the opinions expressed by the clientele of the Corporation.

Informal interviews were also held with the Secretary, 3 of the Managers and some subordinate officials of the head office at New Delhi, and a Manager and other officials of the Chandigarh Regional Office of the Central Warehousing Corporation.
Some senior officers of the Department of Agriculture and Food and Supplies in the Government of Haryana, and bank managers at Rewari, Panipat and Chandigarh were also interviewed.

A number of farmers and traders were also interviewed at warehouses, mandis and in villages.

Structured Interviews

Standardized and structured schedules\(^2\) were used for interviewing respondents in samples of the Haryana Warehousing Corporation's officials and its clientele: farmers, traders, and officials of client agencies.

The State of Haryana was divided into 8 warehousing circles.\(^3\) Some of these were wheat-rich and others were rich in coarse grains. It was decided to randomly select 2 circles from the wheat-rich area and 1 from the rest. From the wheat-rich area Ambala and Panipat Circles and from among the rest Rewari were selected. From each of these circles two warehousing centres were randomly selected. These were Shahabad I and Shahabad II in the Ambala Circle, Samalka and Panipat in the Panipat Circle, and Rewari and Pataudi in the Pataudi Circle.

---

23. See Appendix E.
24. See Appendix B.
The sample of officials consisted of 100 respondents chosen on a stratified random basis. 45 of these were from the head office and 55 from the field. All the Class I and II officers at the head office and in the selected circles were included since they were small in number. Officials were selected randomly from Classes III and IV. The distribution in the sample was as follows:

Sample of officials of the Corporation

<table>
<thead>
<tr>
<th>Class</th>
<th>Head Office Universe</th>
<th>Head Office Sample</th>
<th>Field Office Universe</th>
<th>Field Office Sample</th>
</tr>
</thead>
<tbody>
<tr>
<td>Class I</td>
<td>7</td>
<td>7</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Class II</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Class III</td>
<td>59</td>
<td>30</td>
<td>76</td>
<td>43</td>
</tr>
<tr>
<td>Class IV</td>
<td>16</td>
<td>6</td>
<td>23</td>
<td>10</td>
</tr>
</tbody>
</table>

84 45 101 55

The size of the traders' sample was 50. There were five mandis (grain markets) in the area served by the six warehousing centres in the sample. It was decided to select 10 traders from each of the mandis. The selection was made on a systematic basis with a random start.

The size of farmers' sample was 125. They were also selected from the five mandis served by the six warehousing centres in the sample. They were selected on a systematic basis (while waiting to sell their produce) with a random start. 75 were chosen from the wheat-rich area served by two warehousing circles and 50 from the dry area served by one warehousing circle.
The sample of the officials was thus a stratified multi-stage, cluster sample selected on a random basis. The samples of traders and farmers, selected systematically, were such as to choose from among those who would constitute the clientele of the officials in the sample. This provided the opportunity to cross-check the facts. While officials were selected randomly from a list available in the head office, traders and farmers were selected on a systematic basis since their lists could not be had.

Two or three officials each were interviewed in each of the following ten client agencies (public undertakings and cooperatives) who dealt with the H.W.C. They are as follows:

(i) National Cooperative and Supply Marketing Federation;
(ii) Haryana Cooperative and Supply Marketing Federation;
(iii) National Fertilizers Ltd;
(iv) Food Corporation of India;
(v) Food and Supplies Department;
(vi) Indian Farmers' Fertilizers Cooperative;
(vii) Haryana Seeds Development Corporation;
(viii) National Seeds Corporation;
(ix) Krishak Bharti Cooperative Ltd;
(x) Indian Potash Ltd.

**Difficulties of Interviewing**

The difficulty of choosing farmers whose farms were spread all over the State was met by selecting and interviewing them in mandis where they had come for business. They were interviewed in their dialect which was known to
The researcher. The schedule given in the appendix is an English translation. The farmers were often under the impression that the researcher was a government official. This impression had to be repeatedly dispelled. Even so, they often took the researcher almost to be a representative of the elite and wanted to bring home to the researcher their various problems. The researcher took note of relevant information. Generally they were highly cooperative and responded to all the questions put to them.

The traders were interviewed in their own language—either Hindi or Panjabi. The schedule given in the appendix is an English translation. Traders were also often under the impression that the researcher was an official. They were told at the outset that the research work was not for the government. Still, they were somewhat reticent. However, they responded to the questions put to them. All officials were interviewed in the isolation of their offices. Senior officials at the head office were interviewed in English. Subordinate officials, at the head office, and in the field, were generally interviewed in Hindi. They were generally cooperative. However, some of them did not express any opinions on certain matters.

Observation

Unstructured observation was made by the researcher in farms, mandis, warehouses and government offices.
For observation of private storage used by farmers three villages in different areas were visited. Some farmers were using metallic bins; others had converted a room in the house into a grain store.

Six mandis were visited by the researcher. She stayed for three or four days at each place and observed the purchase of grain by government agencies and private traders. She also saw the grain stores of the private traders, some of which were bins and others were rooms adjacent to their shops. Grain was generally kept in gunny bags.

The head office was visited by the researcher innumerable times. She took this opportunity to observe the working and also dealings, for example, between officials and contractors who sought to provide labour at the warehouses. The researcher also observed the working of the offices of 3 warehousing circles and seven warehousing centres. She spent a day or two at each of these. She observed the working of the offices, dealings between officials and farmers or traders, and the working of warehouses.

Data Processing

Processing of data was done manually with the help of a calculator. Both qualitative and quantitative data were transferred on to cards. Cards were also used for classifying and tabulating data. Analysis of tables only required calculation of percentages and ratios.