I.

CHAPTER X

SUMMARY AND CONCLUSIONS

10.1. There are 70.5 million operational holdings in Indian agriculture operating over an aggregate area of 162 million ha. of land, according to the 1970-71 Agricultural Census. The average size of the holdings is 2.30 ha. out of which the net area under cultivation is 2.06 ha.

(Paragraphs 8.1 & 8.4)

10.2. The aggregate of 70.5 million holdings is made up of

---12.4 million wholly irrigated holdings operating over an area of 12.1 million ha.

---17 million partly irrigated holdings covering an aggregate area of 46 million ha. of which the irrigated component adds up to 17 million ha., and

---41 million wholly unirrigated holdings operating over a total area of 77 million ha. characterised by rainfed agriculture.

(Paragraph 8.5)

10.3. The total of 70.5 million operational holdings is made up of 58.7 million individual holdings (83.3 per cent) operating an area of 129 million ha. and 11.8 million joint holdings (16.7 per cent) operating 33 million ha.

(Paragraph 8.7)

10.4. Preponderance of marginal holdings (Below 1.0 ha.) is one of the dominant features of operational holdings in India. Half the number of operational holdings are marginal, although their contribution to total area is only nine per cent. Nineteen per cent of the holdings are small (1.0—2.0 ha.) and they cover 12 per cent of the area. Semi-medium holdings (2.0—4.0 ha.) constitute about 15 per cent of the total number and 19 per cent of the total area. On the other hand medium (4.0—10.0 ha.) and large holdings (10.0 ha. and above) account for roughly two-thirds of the area under these holdings. Eleven per cent of the holdings are medium holdings and four per cent are large holdings. In absolute terms 2.8 million holdings which are of 10 ha. and above account for an area of 50 million ha. The average size of large holdings is roughly 18 ha.

(Paragraphs 8.8 to 8.11)

10.5. Over two-thirds of the total irrigated area in the country (67.6 per cent is made up of irrigated areas in the middle groups, viz. small and semi-medium holdings (39.0 per cent) and medium holdings (28.6 per cent).

(Paragraph 8.12)

10.6. Two-fifths of the total area under tubewell irrigation in the country is made up of areas located in the small and semi-medium holdings. Canal irrigation accounts for a little over two-fifths of the total irrigated area in all the size groups. Almost two-thirds of the total area under rice cultivation in the country is un-irrigated.

(Paragraphs 8.14, 8.15 and 8.24)

10.7. Small and semi-medium holdings (1.0 to 4.0 ha.) account for the largest part of the area under rice cultivation, both irrigated and unirrigated (43.6 per cent and 44.1 per cent respectively). Although marginal and sub-marginal holdings (less than 1 ha.) constitute one-half of the total number of operational holdings in the country, rice cultivation by these holdings add up to an area which is less than one-fifth of the total area under rice cultivation.

(Paragraph 8.25)

10.8. Given the substantial role of the small and semi-medium holdings in rice production in the country and the technical and economic viability of these holdings in this group for the cultivation of this crop, it appears to be advantageous if added facilities are given to this category of holdings.

(Paragraph 8.27)
10.9 Greater part of the wheat cultivation in the country is under irrigated conditions (55.9 per cent of the total area under wheat) in contrast to conditions of rice cultivation. Small and semi-medium holdings (1.0-4.0 ha.) account for the largest part of the area under wheat cultivation (35.2 per cent of the irrigated area and 30.0 per cent of the unirrigated area), a phenomenon noticed in rice cultivation as well. Added facilities to the small and semi-medium holdings (which account for the largest area under wheat) towards raising wheat production in the irrigated areas and strengthening unirrigated cultivation through supplementary (minor) irrigational facilities would be a distinct advantage to the economy.

(Paragraphs 8.28, 8.29 and 8.31)

10.10 Small and semi-medium holdings (1.0-4.0 ha.) account for the largest part (about two-fifths) of the area under maize, both irrigated and unirrigated. Similar is the position in case of barley.

(Paragraphs 8.34 and 8.35)

10.11 There are about 7 million operational holdings engaged in the cultivation of jowar and bajra under marginal and sub-marginal conditions constituting 72 per cent of the total operational holdings devoted to these crops.

(Paragraph 8.38)

10.12 Marginal and sub-marginal holdings which constitute one-half of the total operational holdings, account for only 8 per cent of the total area under pulses cultivation.

(Paragraph 8.42)

10.13 Large holdings (10 ha. and above) account for about 16 per cent of the total area under sugarcane both in the irrigated and unirrigated areas.

(Paragraph 8.44)

10.14 Medium and large holdings together account for 63 per cent of the total area under oilseeds.

(Paragraph 8.48)

10.15 The bulk of cotton cultivation in the country is on the part of operational holdings of a size of 4 hectares and above, which account for 77 per cent of the total area under cotton.

(Paragraph 8.49)

10.16 Jute cultivation in the country is largely an activity of semi-medium, small and marginal holdings.

(Paragraph 8.50)

10.17 The aggregate land under operational holdings which is cultivable but not being cultivated is of the order of 12.4 million ha. One-half of this land is situated in large holdings (10 ha. and above). The reasons for such large area lying uncultivated need to be explored and measures should be taken to bring this area under cultivation wherever feasible.

(Paragraphs 8.54 to 8.56)

Regional Similarities and Diversities in Indian Agriculture

10.18 Uttar Pradesh, the largest State of the Indian Union in respect of population has the largest number of operational holdings numbering 16 million (22.2 per cent of the total holdings in the country) and operating over an area of 18 million ha. (11.2 per cent of the total area under the holdings in the country).

(Paragraph 9.3)

10.19 Although the total area of operational holdings constitutes nearly one-half of the total geographical area of the country as a whole, in respect of individual State, the extent of area under operational holdings out of geographical area of the State varies widely. The States of Punjab and Haryana with vast areas inside the State consisting of plains cover nearly four-fifths of their geographical area for agricultural exploitation. At the other extreme are the predominantly mountainous States of Jammu and Kashmir and Himachal Pradesh which have 4 per cent and 17 per cent respectively of the geographical areas presently under agricultural activities.

(Paragraphs 9.8 and 9.9)

10.20 Uncultivated portion of the total area under operational holdings in the States of Rajasthan, Maharashtra and Madhya Pradesh are of a sizeable importance, 3.4 million ha. in Rajasthan, 3.1 million ha. in Maharashtra and 2.7 million ha. in Madhya Pradesh. Some part of this uncultivated area is, however, not fit for cultivation.

(Paragraph 9.10)

10.21 The States of Uttar Pradesh, Andhra Pradesh, Punjab, Tamil Nadu, Rajasthan, Bihar, Haryana and West Bengal together account for 77.5 per cent of the net irrigated area in the country.

(Paragraph 9.33)
10.22 Eighty-four per cent of the canal irrigated area and 62 per cent of the well irrigated area in Rajasthan are in holdings above four hectares.

(Paragraph 9.34)

10.23 The States of Uttar Pradesh, Punjab Har- 

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under tubewell irrigation. Sixty-seven and 57 per 

cent of the area irrigated through tubewells in the 

States of Uttar Pradesh and Bihar are in holdings 

below four ha. whereas in Punjab and Haryana 65 

and 69 per cent of the tubewell irrigated area are in 

holdings above 4 ha. respectively.

(Paragraph 9.35)

10.24 The States of Uttar Pradesh, Bihar and 

West Bengal of the Indo-Gangetic plains, the Sou-

thern States of Andhra Pradesh and Tamil Nadu and 

the Northern States of Punjab and Haryana along-

with Rajasthan, together account for 85 per cent of 

the wholly irrigated holdings of the country, both in 

terms of number of holdings and their area.

(Paragraph 9.49)

10.25 These are also the eight States, viz. Uttar Pra-

desh, Bihar, West Bengal, Andhra Pradesh, Tamil 

Nadu, Punjab, Haryana and Rajasthan which together 

account for the greatest part of the major irrigational 

facilities in the country (77 per cent of the total area 

under canal irrigation in the country lies within these 

States)

(Paragraphs 9.17 to 9.22)

10.26 Large wholly irrigated holdings (10 ha. and above) exist in considerable numbers only in Punjab, Rajasthan, Bihar, and Haryana. The largest number of these holdings are in Punjab (27,906 holdings with a combined area of 363,556 ha.). Next comes the State of Rajasthan (12,522 holdings with a combined area of 199,264 ha.).

(Paragraphs 9.56 & 9.57)

10.27 There are 6.3 million wholly irrigated holdings in the country of a size of less than half-an-hectare: this means that more than half the total number of wholly irrigated holdings belong to the sub-marginal category. In Uttar Pradesh alone there are 2.5 million such holdings and another half-a-million in Bihar. The States of Andhra Pradesh and Tamil Nadu together account for 1.8 million such holdings.

(Paragraph 9.50)

10.28 In the States of West Bengal, Tamil Nadu, 

Uttar Pradesh, Andhra Pradesh and Bihar, the largest 

part of the area under the wholly irrigated holdings 

in the State belongs to the small and semi-medium 

holdings (58 per cent, 47 per cent, 45 per cent, 44 per cent and 43 per cent respectively). In these States, medium holdings (4.0 to 10.0 ha.) rank next in importance in respect of the share in the total area of irrigated holdings.

(Paragraphs 9.52 and 9.54)

10.29. In the States of Punjab, Haryana and 

Rajasthan, it is the medium category (4.0 to 10.0 

ha) that accounts for the largest part of the area under 

the wholly irrigated holdings of the State 

(39 per cent, 36 per cent and 31 per cent) respectively. Next in importance are the small and semi-medium holdings. It is of interest to note 

that the area situated in the large holdings (10 ha. 

and above) constitutes a sizeable proportion in these 

States (19 per cent in Punjab and Haryana and 29 

per cent in Rajasthan).

(Paragraphs 9.54 and 9.55)

10.30 Marginal and sub-marginal holdings (less 

than 1 ha.) on an average have only 0.3 ha. as the 

irrigated component of the holdings, and the figure 

is as low as 0.2 ha. and 0.1 ha. in Bihar and West 

Bengal.

(Table 9.18)

10.31 There are about 7 million partly irrigated 

holdings in the country in the small (1.0—2.0 ha.) 

and semi-medium (2.0—4.0 ha.) category, and these 

holdings account for an aggregate irrigated area of 

about 6.1 million ha.

(Table II of Part II, Statistical Tables)

10.32 Medium holdings (4.0 to 10.0 ha.) and large 

holdings (10 ha. and above) are generally marked by 

a low irrigated component in the area under the holdings. The average size of the irrigated component in a partly irrigated holding of the group : 4.0 to 10.0 ha. ranges from 3.9 ha. in Punjab and 3.2 ha. in Haryana to 1.4 ha. in Andhra Pradesh and 1.5 ha. in West Bengal. In respect of the large holdings (10 ha. and above), the range of the irrigated component
in a holding is from 9.6 ha. in Punjab and 7.6 ha. in Haryana to 3.3 ha. in West Bengal and 2.8 ha in Andhra Pradesh.

(10.33) About 41 million operational holdings (out of the total 70.5 million) do not enjoy any sort of irrigational facilities. The aggregate area under these holdings depending on rainfed agriculture is of the order of 77 million ha.

(Paragraph 9.45)

10.34 Nearly one-half of the total unirrigated holdings of the country lie in the Eastern region (Assam, West Bengal, Orissa, Bihar and eastern parts of Uttar Pradesh and Madhya Pradesh). The average size of the holding is in the range of 1.7 ha. (Orissa) to 0.86 ha. (Uttar Pradesh). Rice is the dominant crop of rainfed agriculture in the region but yields (in comparison with irrigated area) are strikingly low. Moreover, cultivation is exposed to the recurring hazards of floods and drought. (Of the 23 million ha. of area under rainfed rice in the country, this region alone accounts for 20 million ha.)

(10.35) The other vest zone of wholly unirrigated holdings is in the western part of the country comprising the States of Rajasthan, Gujarat, Maharashtra and the adjoining areas in the States of Madhya Pradesh, Andhra Pradesh and Karnataka. Wholly unirrigated holdings in this region add up to some 17 million representing about two-fifths of the country's total in this regard. The average size of the holding ranges from 4.34 ha. (Rajasthan) to 2.01 ha. (Andhra Pradesh). However, the meagre conditions of rainfall in this arid and semi-arid region permit only the cultivation of coarse grains such as jowar and bajra, which are marked by low and uncertain yields. The comparatively larger size of an average holding in this region does not confer any added income advantage.

(10.36) Separate figures of operational holdings devoted to individual crops are not available. However, on the basis of some indirect estimation, it is found that there are some 7 million operational holdings of a size of less than 4 ha. cultivating jowar and bajra in the country (essentially in the western region) and these constitute 72 per cent of the total number of holdings (9.7 million) cultivating these crops. However, the area under the holdings that are below 4 ha. in size, constitutes only 28 per cent of the total area under jowar and bajra resulting in an average size of only 1.2 ha. per holding for 7 million holdings. In contrast, 2.7 million holdings of a size of 4+ ha. and above command 72 per cent of the total area under jowar and bajra in the country. In terms of levels of agricultural income, the vast number of holdings cultivating jowar and bajra under arid and semi-arid conditions, with an average size of holding of 1.2 ha., appear to be the most adversely placed.

(Paragraph 8.38)

10.37 Holdings below 4.0 ha. account for largest part of the area under rice cultivation in most of the States except Madhya Pradesh, Punjab, Haryana and Rajasthan. In Madhya Pradesh which ranks fourth in the country in terms of rice area 64 per cent of the area under rice is in holdings above 4.0 hectares. On the other hand in the States of Uttar Pradesh, West Bengal, Tamil Nadu and Assam 74 to 80 per cent of the area under rice cultivation is in holdings below 4 hectares.

(10.38) Unlike rice, bulk of the wheat area is in holdings which are 4.0 ha. and above in most of the States, except Uttar Pradesh and Bihar where 70 and 60 per cent of the wheat area are in holdings below 4.0 hectares.

(Paragraph 9.66)

10.39 In Madhya Pradesh, Punjab and Haryana bulk of the area under maize (53 to 71 per cent) is in holdings above 4.0 ha. In contrast to this 75 and 60 per cent of the area under maize in Uttar Pradesh and Bihar respectively are in holdings below 4.0 ha.

(10.40) Operational holdings of 4.0 ha. and above account for 70 per cent of the area under jowar at the all-India level. This is true even at the State level in the predominantly jowar growing States.

(Paragraph 9.101)

10.41 In Rajasthan which accounts for the largest area under bajra in the country, it is grown mostly in holdings of 10.0 ha. and above.
10.42 Except in Uttar Pradesh and Bihar where 64 and 58 per cent of the pulses area are in holdings below 4.0 ha. in all other States more than 60 per cent of the area is in holdings above 4.0 ha.

(Paragraph 9.103)

10.43 More than half of the area under sugarcane in Uttar Pradesh is in semi-medium (2.0—4.0 ha) and medium holdings. (4.0—10.0 ha)

(Paragraph 9.105)

10.44 In Gujarat (which has the largest area under oil seeds in the country) four-fifths of the area is in holdings of 4.0 ha. and above.

(Paragraph 9.107)

10.45 Holdings of 10.0 ha. and above are of considerable significance for cotton cultivation in most of the cotton growing States.

(Paragraph 9.109)

10.46 Jute cultivation is mainly in the marginal, small and semi-medium holdings. More than four-fifths of the area under jute in West Bengal (which has the largest area in the country) is in holdings below 4.0 hectares.

(Paragraph 9.111)

10.47 Four States, viz. Rajasthan, Madhya Pradesh, Maharashtra and Andhra Pradesh together have 8.3 million ha. of un-utilised land in the holdings.

(Paragraph 9.114)

10.48 About eighty per cent of the un-utilised land available for cultivation in the States of Rajasthan, Madhya Pradesh, Maharashtra, Andhra Pradesh and Karnataka is in the holdings of 4.0 ha. and above.

(Paragraph 9.114)