AGRICULTURE CENSUS

INDIAN EXPERIENCE

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AGRICULTURE PROFILE OF INDIA

- Agriculture-dominated country
- Agriculture contributes 27% to GDP
- Agriculture provides employment to 70% of population
- Total Geographical area: 329 million hectares
- Agriculture covers 50% of country’s geographical area
- Reporting area: 93% of geographical area
AGRICULTURAL DIVERSITY IN INDIA
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• 15 Agro climatic zones
  - variation in soil type, rainfall, temperature, water resources
• 4 Major crop seasons
  - Early Kharif, Late Kharif, Rabi and Summer
• 6 Lakh cadastrally surveyed villages
  - around 1000 fields spread in area of 600 ha in a village
• More than 100 food and non food crops grown
  - cereals, pulses, fruits, vegetables, spices, oil seeds, fibres, drugs and narcotics,
FARMERS PROFILE IN INDIA

Marginal : land below one hectare (62%)

Small : land between one and two hectares (19%)

Semi-medium : between two and four hectares (12%)

Medium : land between four and ten hectares (6%)

Large farmers : land more than ten hectares (1%)
LAND USE STATISTICS

- Forests (23%)
- Area under non-agricultural use (8%)
- Barren and un-culturable land (6%)
- Permanent pastures and other grazing lands (3%)
- Miscellaneous tree crops and goves not included in the net area sown (1%)
- Culturable waste (4%)
- Fallow land other than current fallow (3%)
- Current fallow (5%)
- Net area sown (47%)
LAND RECORD SYSTEM

- Villages cadastrally surveyed for revenue collection
- Primary agency-Patwari - lowest level functionary of Revenue Department
- Patwari to carry out field to field inspection every year and every season
- Details of ownership, crop enumeration and land utilization recorded in 'Khasra register'
- Abstract of 9 fold utilisation and crop wise area transmitted to successive revenue heirarchy
LAND BASED SURVEYS
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• Annual _Crop area and land utilisation survey_ through complete enumeration of villages

• Decennial _Land holding and live stock holding survey_ for ownership and operational holdings through household enquiry

• Quinquennial _Agriculture Census_ through re-tabulation of land records

• Quinquennial _Input survey_ for agriculture inputs fertilizers, seeds, pesticides, implements
AGRICULTURE CENSUS

• Need
• Objective
• History
• Approach
• Operationalisation
• Organisation
• Methodology
• Processing
• Output
• Use of data
WHY AGRICULTURE CENSUS?

- Predominance of Agriculture sector in Indian economy
- Area distribution by size class, social group and gender of farmers needed for micro and macro level planning
- International comparability of characteristics of holdings
- Agricultural Census result throws light on the structural changes in Indian agriculture brought about by socio-economic and technological factors
OBJECTIVE OF CENSUS

• Describe agricultural structure and related characteristics by providing statistical data on operational holdings, including land utilization, live-stock, agricultural machinery and implements, use of fertilizers etc.

• Provide benchmark data needed for formulating new agricultural development programmes and evaluating their progress.

• Provide basic frames of households and operational holdings for future agricultural surveys

• Lay a basis for developing an integrated programme for current Agricultural Statistics
• Land record data available through field to field enumeration re-tabulated by size class of holding in all villages
• Sample survey through house hold enquiry adopted where land records not available
• Detail characteristics of holdings collected in sample villages only
CHRONOLOGY OF CENSUS

• House hold Land holding surveys by National Sample Survey of India conducted with World Agriculture census in 1950 and 1960.
• First Agriculture Census in India conducted in 1970-71 along with World Agriculture Census.
• Successive eight Census conducted at 5 years interval up to 2005-06
• Next Census planned in 2010-11
Organisation

Union Government

- Agriculture Census Division, headed by Sr. Administrative Grade officer of Indian Statistical Service in the Ministry of Agriculture is the nodal authority.
- High level Steering Committee with officers from National Statistical Organisation and other line departments decides all aspects of census operation.
ORGANISATION

State Government

• State Department of Revenue/ Agriculture/ Statistics are incharge for organising the census in states

• District Collectors are in-charge of field level data collection.

• Village Administrative Officers at the lowest level collect the data.
• Agriculture Census in India requires high degree of coordination, statistical control and supervision over the States.
• In a large geographical spread of the country with 35 states/UTs, 65 Districts, 5767 Tehsils and around 6 lakh villages, the census is conducted in 3 phases for detail information on operational holdings
Phase 1

- Re-tabulation of data available in the land records through complete enumeration
- Sample survey household enquiry adopted where land records not in available
- Information compiled on gender and social group of ownership and area operated.
- Number and area of operational holdings at various administrative levels tabulated
Phase 2

• 20 percent villages in each Tehsil / Block selected

• Detail information on tenancy, land use, irrigation, cropping pattern of all the operational holdings collected through house hold enquiry
Phase 3

- Input Survey conducted in 7% villages
- Data on application of inputs like fertilizers, machineries and equipments, seed and live stock collected.
- The information based on household enquiry approach
ACTIVITIES IN CENSUS OPERATION

• Printing of Schedules and Instructions by States.
• Training of primary and supervisory staff for Agricultural Census.
• Commencement of fieldwork (immediately after training).
• Manual Scrutiny/Coding of Schedule
• Completion of data entry for Schedule including validation/error-correction.
• Generation of district tables and approval by State Government.
• Submission of final State Table by States / UTs to GOI for approval.
• Submission of State Reports to GOI
DATA PROCESSING

• De-centralised data processing
• National Informatics Centre of Government of India developed software
• State Governments carried out data entry and tabulations
• Results at various administrative levels, village, block, district and State are successively pooled
• Number of operational holding by size class, social group, gender and infrastructural facilities
• Number and area by tenancy status, terms of lease, land use, irrigation status and source of irrigation, cropping pattern
• Area under multiple cropping, application of fertilizers, seed variety, livestock and agricultural machineries and equipments
<table>
<thead>
<tr>
<th>Group</th>
<th>Classes</th>
<th>Area (in hectares)</th>
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<tbody>
<tr>
<td>Marginal</td>
<td>1.</td>
<td>Below 0.5</td>
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<tr>
<td></td>
<td>2.</td>
<td>0.5 – 1.0</td>
</tr>
<tr>
<td>Small</td>
<td>3.</td>
<td>1.0 - 2.0</td>
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<tr>
<td>Semi-Medium</td>
<td>4.</td>
<td>2.0 – 3.0</td>
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<td></td>
<td>5.</td>
<td>3.0 – 4.0</td>
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<tr>
<td>Medium</td>
<td>6.</td>
<td>4.0 – 5.0</td>
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<td></td>
<td>7.</td>
<td>5.0 – 7.5</td>
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<td></td>
<td>8.</td>
<td>7.5 – 10.0</td>
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<tr>
<td>Large</td>
<td>9.</td>
<td>10.0 – 20.0</td>
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<td></td>
<td>10.</td>
<td>20.0 and above</td>
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<tr>
<td>Year number holding</td>
<td>Year</td>
<td>Area operated (million hectares)</td>
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<td>---------------------</td>
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<td>1970-71</td>
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<td>162.1</td>
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<td>2000-01</td>
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<td>159.4</td>
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<tr>
<td>Group</td>
<td>Number (million)</td>
<td>Area operated (million ha)</td>
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<tr>
<td>--------------------</td>
<td>------------------</td>
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<tr>
<td>Marginal Below 1.0</td>
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<td>28.12</td>
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<tr>
<td>Small 1.0 – 2.0</td>
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<td>Semi-medium 2.0 – 4.0</td>
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<tr>
<td>Medium 4.0 – 10.0</td>
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<td>1.40</td>
</tr>
<tr>
<td>Large 10.0 &amp; Above</td>
<td>1.40</td>
<td>24.16</td>
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APPLICATION OF CENSUS DATA

- Planning and resource allocation to States
- Implementation of land reform
- Targetting irrigation programmes
- Monitoring impact of land ceiling and consolidation
- Assessing cropping intensity by irrigation
- Planning production, import and distribution of seeds and fertilisers
- Framing policies on subsidy for implements
- Study on holding pattern of animals
LIVE STOCK CENSUS

- Quinquennial exercise of count of live stock species
- Latest 18th census: Conducted in 2007
- Household enquiry approach
- Species covered
  - Cattle, Buffalo, Yaks, Mithuns, Sheeps, Horses and Ponies, Mules, Donkeys, Camels, Pigs, Dogs, Rabits, Fowls, Ducks
CLASSIFICATORY CHARACTERS

- Sex (male / female)
- Age
- Variety (exotic / crossbreed / indigenous)
- Use (breeding purpose / work)
- Agriculture implements
  (manually operated / mechanically operated)
- Machinery
  (Tractor, harvester/ tiller/ chaff cutter)
THANK YOU
AGRICULTURE CENSUS 2010-11

• Preliminary discussion with States and UT