Role and Functions of Agricultural Census Organization Pakistan Bureau of Statistics Government of Pakistan

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Background

1. Agriculture is the second largest sector of Pakistan's economy.
2. Agriculture is contributing more than 21% to the GDP and is absorbing 45% of the labour force.
3. 62% of the population is living in rural areas and related to the agriculture.
4. Data on agriculture is required for better planning, allocation of resources and execution for rural development.
5. Task of data generation for agriculture had been entrusted to the Agricultural Census Organization (ACO) under the Agricultural Census Act 1958.

Functions and Responsibilities

ACO is responsible to conduct

a. Decennial Censuses of Agriculture in the year ending with digit zero (0).

b. Decennial Censuses of Agricultural Machinery in the year ending with digit four (4).

c. Decennial Censuses of Livestock in the year ending with digit six (6).

d. Quinquennial Mouza Censuses in the years ending with digit three (3) and eight (8).

e. Other adhoc censuses / surveys in the field of agriculture.

Agricultural Census

Six Agricultural Censuses conducted i.e. in 1960, 1972, 1980, 1990, 2000 and 2010

objectives:

1. develop basic information-
2. provide information about the agricultural resources and the state of their utilization.
3. asses the acceptance of modern farming methods in the farming community.

Agricultural Census Reports

Agricultural Census reports furnish data on:

i) Agricultural resources, their distribution and arrangements made for their operationing.

ii) Performance of farming units under different conditions, use of modern agricultural production methods, cultivation practices and use of improved inputs.

Sample Design of Agricultural Census

1. Three stage weighted sample design for settled areas, except for settled areas of Balochistan, Azad Jammu & Kashmir, Gilga Baltistan and unsettled areas, in which single stage weighted sample design is used

2. Two stage sample design for the entire urban areas.

Sample Frames

1. Up-dated list of mouzas by administrative order.

2. List of urban blocks for urban areas.

3. List of households in selected mouzas / urban blocks.

4. List of big holdings i.e. National Certainty Holdings(NCH) at country level for complete enumeration.

5. List of Mouza Certainty Holdings (MCH) at sampled mouza / urban block level for complete enumeration.

Stages of Sample Selection

- **First stage:** Patwar circles are selected at the first stage.

- **Second stage:** Mouzas are selected at the second stage.

- **Third stage:** Household clusters are selected at the third stage.

Samples of first two stages are selected with Probability Proportional to Size (PPS) taking Geometric Mean of cultivated area and households of sampling units.

The third stage sample of household clusters (approximately 30 HHs in a cluster) is selected by using simple random sampling technique.

Urban blocks as well as their households are selected through systematic sampling technique.

Salient Findings of Agricultural Census 2000

Number and Area of Farms

In millions

Farms	Number	Area in Acres
Number of Farms	6.62	50.43
Owner Farms	5.13	36.97
Owner-cum-tenant Farms	0.56	07.32
Tenant Farms	0.93	06.14

Land Use and Cropping Intensities

Farms	Land Use Intensity	Cropping Intensity
All Farms	85	142
Owner Farms	83	140
Owner-cum-tenant Farms	89	146
Tenant Farms	92	147

Livestock Census

- ACO has conducted so far four Livestock Censuses each in 1976, 1986, 1996 and 2006.
- Objectives of Livestock census

1. Provide current estimates of the commercially important livestock and poultry birds by age, breed and sex distribution.
2. Develop information based on livestock composition.
3. Ascertain the number of livestock units reporting animals and poultry birds.

Sampling Frames for Livestock Census

1. Up-dated complete list of mouzas by administrative order.

2. List of urban blocks for urban areas.

3. Complete list of households in selected mouzas / urban blocks.

4. Complete list of big livestock holdings i.e. National Certainty Holdings(NCH) at country level.

5. Complete list of Mouza Certainty Holdings (MCH) at sampled mouza / urban block level.

Sample Design for Livestock Census

Two stage sample design has been used for livestock census:

First Stage: Mouzas are selected with PPS technique by taking households as measure of size. Urban blocks are selected through systematic selection.

Second Stage: Households are selected at second stage through systematic sampling technique with random start.

All the NCHs and MCHs are enumerated on complete count basis.

Salient Findings of Livestock Census 2006

Type of Animal	Number (In million)
Cattle	29.56
Bullocks (3 years & above)	04.15
Cows (3 years & above)	15.16
In-milk Cows	8.72
Youngstock (Below 3 years)	10.25
Male Youngstock	05.37
Female Youngstock	04.88
Total Buffaloes	27.33
Male Buffaloes (3 years & above)	00.61
Female Buffaloes (3 years & above)	15.56
In-milk Buffaloes	10.22
Youngstock (Below 3 years)	11.16
Male Youngstock	04.70
Female Youngstock	06.46
Total Sheep	26.49
Total Goats	53.79

Agricultural Machinery Census

- Use of agricultural machinery is important factor affecting agricultural production.

- Five Agricultural Machinery Censuses (AMC) have so far been conducted by ACO each in 1968, 1975, 1984, 1994 and 2004.

Objectives of Agricultural Machinery Census

- To have a count of tractors by type of model / horse power and that of tractor drawn as well as self propelled implements along with an estimate of bulldozers and combine harvesters.

- To have an inventory of tubewells and surface pumps by type of power source along with other related information.

- To reckon the type of households owning tractors and tubewells.

- To study the extent of use of those machines on owner farms and the practice of renting out tractor time and tubewell water.

Sample Design for Agricultural Machinery Census

- Number of tractors and tubewells are listed on complete count basis through out the country.

- A single stage sample of tractors / tubewells is selected systematically with random start for detailed information.

Salient Findings of AMC 2004

Count of Agricultural Machinery in Pakistan

Type of Machinery	Number
Private Tractors	400,446
Massey Ferguson	171,943
Ford	24,968
Fiat	164,941
IMT	2,037
Belarus	31,768
Others	6,004
Private Tubewells / Lift Pumps	922,207
Electric	88,885
Diesel	833,322

Mouza Census

- Mouza / Village censuses have been conducted quinquennially once before Agricultural Census and secondly before Livestock Census.

- Eight mouza censuses have so far been conducted in Pakistan i.e. 1971, 1979, 1983, 1988, 1993, 1998, 2003 and 2008.

Objectives of Mouza Census

- Verification of mouzas / dehs / villages list in respect of their number and grouping into patwar and kanoongo circles.

- Collection of information on various socio-economic facilities locally available at mouza level and the distance of mouzas / dehs / villages from facilities not locally available.

Socio-Economic Facilities Available in Mouza Covered in Mouza Census 2008

1. Status of Mouza
2. Name and Number of Union Council*
3. Total / Cultivated / Uncultivated Acreage
4. Important Crops of Mouza*
5. Sources of Irrigation
6. Water Course Improvement Scheme
7. Credit Facility by Gender*
8. Market Place (Bazar)*
9. Sources of Employment by Gender*
10. Type of Industries*
11. Sources of Drinking Water
12. Taste of Sub-soil Water

13. Water Treatment Facility*
14. Facility of Toilet*
15. Pacca Streets
16. Pacca Drains and Sewerage* Facilities
17. Availability of Energy*
18. Media Facilities*
19. Housing Condition (Pacca / Kacha)*
20. Play Grounds & Sports Teams by Gender*
21. Development Organizations by Gender*
22. Dispute Resolution Mechanism*

* Covered first time

Socio-Economic Facilities Available at Mouza or Located at Distance From Mouza Covered in Mouza Census 2008

1. Veterinary Health Coverage
2. Cattle Market, Grain Market, Fruit & Vegetable Market & Wheat Procurement Centre
3. Agricultural Inputs (Fertilizers / Seeds / Pesticides)
4. Commercial Banks and On-line Banking*
5. Post Office
6. Health Facilities
7. Availability of Electricity
8. Diesel and Petrol Pump / Depot / Agency
9. CNG / LPG Availability*
10. Metaled Road
11. Transport Facility*
12. Telecommunication / Internet*
13. Education Facility by Gender (Primary / Middle / High School & College and Vocational Centre)
14. Police Station

* Covered first time

Salient Features of Mouza Census 2008	Number
Number of Districts	131
Number of Tehsils	388
Number of Total Mouzas	52376
Rural Mouzas	45906
Urban Mouzas	1099
Partly Urban	1576
Forest	439
Unpopulated Mouzas	3356
Rural Populated Mouzas	47482
Electrified Mouzas	38435
Non Electrified Mouzas	9047
Bricked Streets	
Completely	2440
Mostly	10138
Partly	11060
None	23844
Sources of Irrigation	
Canal	21660
River	1790
Tubewell / Well	24077
Arid (Barani)	12459
Flooding / Torrent	3154

Data Dissemination

- ACO produces and is sole custodian of agriculture statistical data
- Publish country, provincial and district reports
- Provincial reports have data at the province and district levels
- Data are disseminated on complementary basis in hard as well as soft copies
- Data are also available from website of Statistics Division "www.pbs.gov.pk"

THANKS