

## **2005 agriculture census in Azerbaijan Republic**

### **1. Introduction**

The overall agricultural census was held in Azerbaijan Republic from 1 to 30 June for the first time.

The preparing and conducting of census was carried out by the State Statistical Committee of Azerbaijan Republic and its local bodies.

All important problems of national agricultural census were reflected at suitable organizational plan.

The census program was prepared by the specialist of the Ministry of Agriculture, Ministry of Economic Development, Ministry of Ecology and Natural Resources, Ministry of Finance, the State Committee of Land and Cartography, Research Institute on Agriculture Economy and its organizations, Academy of Agriculture, Institute of Economy of National Sciences Academy.

### **2. Purpose**

Radical changes had been occurred at social and field structure of agriculture as a result of reforms which realized in the agrarian field in 1995 as a main part of re-establishment of market relations of country's economy. Serious necessity was arose on obtaining of the precise statistical data on different farms subjects instead of large farms, namely labor force at agriculture, cattle and poultry number, sowing area of agriculture plants, perennials herbs, peasant and farmer farms' lands, agricultural enterprises. Detailed information that was obtained in the result of conducted agriculture census will be used as corresponding database for carrying out of statistical works and correct determination of directions of future development of country's agriculture.

### **3. Historical view**

The first Azerbaijan agriculture census was carried out in 1921. Survey and records of different fields of agriculture were conducted during next years. After 1932 it wasn't necessary to conduct large scale agriculture census because of arising of the large farms related with creating of collective and state farms. The corresponding statistical data on state and collective farms was received on the basis of state statistical records that presented by these farms. Information on population's own subsidiary farms was collected on the base of sample observation and complete record. Moreover, conducting of census and record of different fields of agriculture was being gone on. We can show information on record of cattle or conducting of survey for the state of 1 January, census of vineyard in 1940, 1947, 1953, 1970, 1980, 1984 years, and garden and berry plantations in 1945, 1952, 1970, 1984 years, conducting of complete records of the plantations.

### **4. Legal base of agriculture census conducting**

The legal base of agriculture census conducting is following documents:

- Order of President of Azerbaijan Republic on confirming of the program on food security in Azerbaijan Republic, dated 2 March in 2001, № 640.

- Order of President of Azerbaijan Republic on confirming of the state program on improving of the official statistics in Azerbaijan Republic during 2003-2007, dated 20 February in 2003, № 853.
- Order of the Cabinet of Ministers Azerbaijan Republic on conducting of the census of agriculture, dated 28 November № 152

The general base of agricultural census conducting made up Law and adequate order and instructions of State Statistical Committee.

Recommendations of UN FAO on “world agricultural census program 2000”, experience of certain countries in this field as well as local conditions were taken into account on preparation of the agricultural census. According to recommendations of FAO agricultural census should have been conducted during 1996-2005.

### **5. The program of census**

Following indicators were collected during the survey:

- Belonging of farm
- Land property, lease relations and land utilization
- Sawn areas of agriculture plants
- Number of trees and bushes according to perennial herbs
- Availability of livestock and poultry according to sex and age
- Lake and puddle fishing
- Equipments for processing of agricultural products
- Availability of agricultural buildings and constructions
- Availability of agricultural equipments
- Labor force at agriculture

### **6. Rules of conducting of census**

The census was conducted by getting data from all farms engaging in agricultural production. Depending on organization of work, the census was conducted on two main group farm categories.

The first group included all agricultural enterprises engaging in agriculture and other organizations-collective (joint) farms, stock-joint companies (open and close), farm societies (Ltd and companies having additional responsibilities), agricultural producer’s cooperatives, state farms and other agriculture farms. According to the registration and inventory documents these farms have presented filled in census forms to the statistical bodies.

**Collective-joint farm** – is a thrift form engaging in selling, processing and production of agricultural products based on private property of two or more families as well as citizens and collective-joint labor not depending on presence of state registration or not.

#### **Joint-Stock Companies:**

**-open joint-stock company** – are companies that can expropriate the owned stocks without consent of other stockholders (such joint-stock company can realize open subscription to output stocks and free selling of them).

**-close stock-joint company** - are companies of which stocks are being expanded only among the founders or around other persons defined in advance.

**Farm societies:**

**-Ltd** is a society founded by one or some persons the statute capital of which is shared in quantity defined in advance according to statute. Participants of LTD are not responsible for its obligations and take a risk related with society activity in the limit of amount invested for losses.

**Company having additional responsibility** is a society founded by one or some persons the statute capital of which is shared in quantity defined in advance according to statute. Participants of such company are responsible for subsidies and properties in amount that is equal for all of them defined according to society statute on its obligations.

**Agricultural producer's cooperative** is a volunteer unity based on membership for joint activity of natural and legal entities and organization founded by combining of participants' rights for property share.

State pedigree farms, seed farms, sort-piled and educational experiment farms, subsidiary state agricultures and other state farms refer to **State farms**.

Farms that do not correspond with above indicated farm categories during census are registered as **"other farms"**.

The second group contains peasant (farmer) farms, family peasant farms, households and homesteads. Information on these farms was received by interviewing of head or old member of family by enumerators involved in census.

At this time, in connection with financial facilities and other difficulties (absence of owners of summer houses) on summer house farms, the census had been conducted by sample method, and then the results were concerned to general aggregate, according to registry information of summer house farms, there development and exploitation unity.

**Peasant (farmer) farms** is a thrift form engaging in sale, conversion and production of agricultural products in land which are in lease or property of farm basing on private labor, and officially registered as legal entity. Peasant (farmer) farms can be a person or family.

Peasant (farmer) farms registered during census are considered **owner farms** in connection with acceptance of Law on family peasant farm.

**Family peasant farms** is joint realization of production and other activity (product output, processing, storage, transportation and sale) in rural places without formation of legal entity based on private labor of family members and persons jointly acted with them, and leased or own property.

During census farms received land share as a result of agrarian reform and farms (families) heads of which act in own farm are registered as **"family peasant farm"** and farms heads of which act outside the farm as **"households"**. Households also include farms of urban and rural residents not received land share as a result of agrarian reform and having only homestead and livestock.

**Summer house farms** include all farms available as summer residence-dacha in suburban areas and used in regions as temporary summer house. Farms of refugees and IDPs having sown area and livestock and settled in several regions

were registered by resided region in connection with used land, and laconically settled farms were registered by their occupied region.

### **7. Initial brief results of agricultural census**

The agricultural census covered whole country territories except occupied lands. During census 1287385 farms of different type of organization –legal form, including, 2027 agricultural enterprises and other organizations, 2709 peasant (farmers) farms, 807427 family-peasant farms, 396574 households, 78648 farmlands were registered.

As a result of census the information about income of farms by types of economic activity had been got for the first time. Thus, 57.2% of farms covered by census indicated that main income was from agriculture activities. At the same time, 20.5% of farms received income from agricultural services, 0.3% -hunting and fishery, 2.4% -manufacture of agricultural products, 10.3% commercial activities, 40.9% - other activity type.

Although, in connection with agrarian reforms the lands were dispensed to the population, there was no accurate information about their kind and use, and the results of agricultural census gave opportunity to identify it. So, 2163.8 thousand ha or 92.4% of total land areas make agricultural lands, 12.3 thousand ha or 0.5% - forestry, trees and reserves, 165.0 thousand ha or 7.0 % - other lands (water, road, buildings and etc.).

The main part of the lands which the farms used makes lands in property and use, the rent is also widespread. So, 18.6 % of agricultural lands were rented from others. The main part of the rented lands includes pastures and hayfields which preserved under the state property. This depends on the dynamic development of the cattle-breeding.

Main part of agricultural lands makes sown areas (62.7%).

As a result of census data, 106.7 thousand ha of lands made orchards, 8.9 thousand ha of vineyards, 1.8 thousand ha of tea plantations existence was defined.

According to current census data, areas of orchards were more for 14.7% or 13.7 thousand ha, vineyards - 7.4% or 0.7 thousand ha, and tea plantations – 38,0% or 1.1 thousand ha less compared to 2005.

As a result of liquidation of kolkhoz and sovkhov system and the emergence of petty farming instead of them, some information on agriculture, including the situation of use of chemical substances and fertilizers and sown turnover was not possible to get. So that, as a result of census 49.2 % had arable land of farms which covered by census have used mineral and organic fertilizer, 25.4% of farms - chemical pesticides, 19.8% had sown area of farms applied sown turnover.

For product of 2005 by the republic, in 1358.0 thousand ha of areas the agricultural plants were sown. 60.3 % of total sown area made grain and leguminous, 9.6% industrial plants, 13.3% - potato, vegetable and market garden crops and 16.8% - fodder crops.

Spring and winter wheat has superiority in the structure of grain and leguminous and its share is equal to 73.1% in that plant group. Cotton has also superiority in the structure of industrial plants and equal to 86.5%, potato in the content of vegetable, potato and market garden plants - 39.5%, vegetable - 43.9%,

and annual grasses in the content of fodder – 4.7%, perennial plants of the current year - 26.1%.

During census the information about farms engaged in lake and pool fishery had been collected for the first time. 12.4 thsd ha of water reservoirs for breeding of fishes and 7.8 thsd ha of water reservoir for fishery are in use of farms.

It is clear that during agrarian reforms agricultural buildings belonging to kolkhoz and sovkhov, agricultural equipments and plant inventory were distributed to population farms. Moreover, there were buildings on population farms too. At the time of census the detailed information was received about all farm categories for the first time.

As a result of census data 229 units mills and grinders, 11 unit equipment for machining meat, 6 units equipments to machining oily seed and 68 unit equipment to machining fruit, berry, vegetable and grape products were defined on farms.

2344.6 Thousand head of cattle, including 7548.9 thousand head of sheep and goat, 1123.7 thousand head of cow and buffalo, and 25933.4 thousand poultry were available for the state of 1 June 2005.

There were 361.1 thsd. unit of livestock building and constructions with total space of 9672.6 thsd. sq.m for cattle, correspondingly for sheep and goats – 3012.7 thsd. sq.m. and 110.7 thsd. unit, for mixed livestock – 5622.8 thsd sq.m. and 178.8 thsd unit in use of farms.

There are 236.9 thsd storehouses for products storage with capacity of 3080.2 thsd ton.

During census there were 8424 lorries, 14913 tractors, and 1302 harvesters, 139 fodder harvester-combine, 22 cotton harvesting machine and other agricultural machineries on the farms.

For getting information about labor force at agriculture the information on number of peasant (farmer), family peasant farms and households, number of family members by sex and age structures, their participation in agricultural works was collected for the first time. At this time, information on labor force was collected on collective and individual farms by different methods, depending on organization of labor. In other words, indicators were defined by two groups – employees and self-employed. The first group includes agricultural enterprises and other organizations; the second group includes peasant (farmer), family peasant farms and households.

Number of employed in agricultural enterprises and other organizations made 24.4%, of which 81.5% or 19.9 thsd. person are engaged in agricultural enterprises and 99.0% of them are temporary employees.

There were participated more or less 2591.2 thsd. person of peasant (farmer), family peasant farms in agricultural works. 4.5% of employees engaged in agricultural works are occupied at the same time in other enterprises and organizations, 3.8% are pupils and 0.4% are students.

Table 1.

**Composition of the employees participated in  
2005 agriculture census**

|                              | Total number of workers involved in the census person | of which |               |  |           |  |
|------------------------------|---|----------|---------------|--|-----------|--|
|                              |   | women    | over 30 years | person participated in conducting of previous census or survey | education |  |
|                              |   |          |               |  | higher    | secondary or specialized secondary education |
| Total staff                  | 15624   | 2538     | 11797         | 5798   | 5719      | 9905   |
| Head of the division         | 303   | 15       | 274           | 186  | 244       | 59   |
| Instructor -controller       | 2432  | 305      | 1897          | 1023   | 1292      | 1140   |
| Enumerators                  | 12889   | 2218     | 9626          | 4589   | 4183      | 8706   |
| Of which reserve enumerators | 585   | 103      | 372           | 92   | 145       | 440  |

Table 2.

**Grouping of the employees of 2005 agriculture census  
according to economic activity**

|                              | Total number of workers involved in the census, person | including                          |                                |          |            |            |       |
|------------------------------|--|------------------------------------|--------------------------------|----------|------------|------------|-------|
|                              |  | engaged in budgetary organizations | engaged in commercial activity | students | pensioners | unemployed | other |
| Total staff                  | 15624  | 4515                               | 602                            | 411      | 425        | 6523       | 3148  |
| Head of the division         | 303  | 146                                | 11                             | 1        | 12         | 70         | 63    |
| Instructor- controller       | 2432   | 1110                               | 92                             | 38       | 77         | 629        | 486   |
| Enumerators                  | 12889  | 3259                               | 499                            | 372      | 336        | 5824       | 2599  |
| Of which reserve enumerators | 585  | 76                                 | 34                             | 27       | 19         | 267        | 162   |

Table 3.

**Land type and its distribution by farm categories, thousand ha**

|  | All categories of farms | including  |  |
|--|-------------------------|--|--|
|  |                         | agricultural enterprises and other organizations | peasant (farmer) farms, family peasant farms, households and country house farms |
| Number of farms, unit                                  | 1287385                 | 2027   | 1285358  |
| Land, total  | 2341,0                  | 402,8  | 1938,2   |
| of which:  |                         |  |  |
| Arable land  | 2163,8                  | 267,1  | 1896,7   |
| of which irrigated                                     | 1172,9                  | 64   | 1108,9   |
| sown area  | 1357,1                  | 48,2   | 1308,9   |
| fallow and othe non-used land                          | 198,6                   | 49,1   | 149,5  |
| perennial plants                                       | 120,7                   | 6,3  | 114,4  |
| haymaking and pastures                                 | 487,4                   | 163,4  | 324  |
| Land under forests, trees, bushes and plants           | 12,3                    | 8,4  | 3,9  |
| Other lands (under water, road, construction and etc.) | 164,9                   | 127,3  | 37,6   |
| Reference: Arable land per farm                        | 1,7                     | 131,9  | 1,5  |

Table 4.

| Rent and using of land                       |                       |               |      |
|--|-----------------------|---------------|------|
|  | Quantity,<br>thsd. ha | As % to total |      |
| <b>Arable land</b>                           |                       |               |      |
| Property and ownership of farm               | 1793,1                | 79,1          | X    |
| Rented for money or product (used)           | 402,0                 | 17,8          | X    |
| From municipality                            | 114,2                 | 5,0           | X    |
| Other  | 70,9                  | 3,1           | X    |
| Turnover, total                              | 2266,0                | 100           | X    |
| of which:                                    |                       |               |      |
| To lease (use)                               | 102,2                 | 4,5           | X    |
| Arable land used by farms, total             | 2163,8                | 95,5/100      | 92,4 |
| Of which irrigated                           | 1172,9                | 54,2          | 50,1 |
| <b>Using of land</b>                         |                       |               |      |
| sown are                                     | 1357,1                | 62,7          | X    |
| fallow and non-used land                     | 198,6                 | 9,2           | X    |
| perennial plant                              | 120,7                 | 5,6           | X    |
| haymaking and pastures                       | 487,4                 | 22,5          | X    |
| Land under forests, trees, bushes and plants | 12,3                  | X             | 0,5  |
| Other lands                                  | 164,9                 | X             | 7,1  |
| Land, total                                  | 2341,0                | X             | 100  |

Table 5.

## Orchards, vineyards and tea plantations, ha

|                              | All farms       |                           | including   |                           |   |                           |
|------------------------------|-----------------|---------------------------|---|---------------------------|---|---------------------------|
|                              |                 |                           | agricultural enterprises<br>and other organizations |                           | peasant (farmer) farms,<br>family peasant farms,<br>households and country<br>house farms |                           |
|                              | total<br>plants | of which<br>fruitful year | total<br>plants                                     | of which<br>fruitful year | total<br>plants   | of which<br>fruitful year |
| Orchards                     | 106290          | 86137                     | 3968  | 2829                      | 102322  | 83308                     |
| Berries                      | 364             | 364                       | -   | -                         | 364   | 364                       |
| Fruits and berries,<br>total | 106654          | 86501                     | 3968  | 2829                      | 102686  | 82672                     |
| Vineyards                    | 8868            | 7882                      | 1774  | 1363                      | 7094  | 6519                      |
| Tea plantations              | 1798            | 1797                      | 71  | 71                        | 1727  | 1726                      |

Table 6.

**Sown area of agricultural products for  
the state of 1st June 2005, thousand ha**

|  | All farms | including   |  |
|--|-----------|---|--|
|  |           | agricultural enterprises and<br>other organizations | peasant (farmer) farms, family<br>peasant farms, households and<br>country house farms |
| Total sowing area                                      | 1358,0    | 48,1  | 1309,9   |
| including:   |           |   |  |
| Grain and legumes                                      | 818,7     | 34,8  | 783,9  |
| of which wheat   | 598,1     | 24,4  | 573,7  |
| barley   | 171,4     | 8,1   | 163,3  |
| rice   | 2,4       | -   | 2,4  |
| maize for seed   | 32,3      | 1,7   | 30,6   |
| legumes  | 10,2      | 0,4   | 9,8  |
| Total industrial plants                                | 130,3     | 4,2   | 126,1  |
| of which cotton  | 112,7     | 3,4   | 109,3  |
| tobacco  | 2,8       | 0,1   | 2,7  |
| sugar beet   | 3,1       | 0,2   | 2,9  |
| sunflower for seed                                     | 11,5      | 0,3   | 11,2   |
| Potatoes, vegetable, and<br>market garden crops, total | 180,1     | 1,3   | 178,8  |
| of which potato  | 71,1      | 0,2   | 70,9   |
| vegetable  | 78,7      | 0,9   | 78,2   |
| market garden<br>crops                                 | 30,3      | 0,2   | 29,7   |
| Fodder plants  | 228,9     | 7,8   | 221,1  |
| of which   |           |   |  |
| root crops for fodder                                  | 0,2       | 0,1   | 0,1  |
| annual grasses   | 10,8      | 0,6   | 10,2   |
| perennial grasses of<br>current years                  | 59,9      | 2,4   | 57,5   |
| perennial grasses of<br>last years                     | 156,5     | 4,3   | 152,2  |

Table 7.

**Equipments for manufacturing  
of agricultural products, units**

|  | Quantity, total<br>cømi | Of which in order | Productivity,<br>ton/hour |
|--|-------------------------|-------------------|---------------------------|
| Mill   | 229                     | 201               | 17315                     |
| Equipment for processing of meat                                     | 11                      | 9                 | 57                        |
| Equipment for processing of oil seed<br>(sunflower, cotton and etc.) | 6                       | 6                 | 343                       |
| Equipment for processing of fruits,<br>berries, vegetables           | 68                      | 53                | 297                       |

Table 8.

**Number cattle and poultry for the state  
of 1 June 2005, thousand head**

|                                | All farms | including   |   |
|--------------------------------|-----------|---|---|
|                                |           | agricultural enterprises<br>and other organizations | peasant (farmer)<br>farms, family peasant<br>farms, households and<br>country house farms |
| Cattle, total                  | 2344,6    | 23,1  | 2321,5  |
| including<br>cow and buffaloes | 1123,7    | 8,8   | 1114,9  |
| Sheep and goats, total         | 7548,9    | 258,7   | 7290,2  |
| Pigs                           | 21,4      | 4,4   | 17  |
| Poultry, total                 | 25933,5   | 3856,8  | 22076,7   |
| Horses                         | 68,1      | 0,9   | 67,2  |
| Donkey                         | 45,4      | 0,2   | 45,2  |
| Camel, head                    | 454       | 101   | 353   |
| Mule, head                     | 463       | -   | 463   |
| Bee                            | 102,0     | 1,2   | 100,8   |

Table 9.

**Existing buildings and constructions**

|  | Quantity , unit | Capacity |
|--|-----------------|----------|
| <b>Buildings and construction , sq.m</b>       |                 |          |
| Cow and buffaloes                              | 361056          | 9672599  |
| Sheep and goats                                | 110752          | 3012770  |
| Cattle, mixed                                  | 178787          | 5622821  |
| Pigs   | 1760            | 45175    |
| Poultry  | 601647          | 5007067  |
| <b>Storehouses</b>                             |                 |          |
| Potatoes and vegetables, <b>ton</b>            | 42300           | 278911   |
| Fruits and grape- <b>ton</b>                   | 7965            | 46367    |
| Grain- <b>ton</b>                              | 65396           | 571863   |
| Different types of agricultural products-sq.m  | 121261          | 2183018  |
| <b>Storehouses for fodder-ton</b>              |                 |          |
| Installation for silage                        | 1009            | 37689    |
| Briquette and etc.                             | 5709            | 56548    |
| Penthouse                                      | 136390          | 1012057  |
| Storehouse for fertilizers and chemicals       | 260             | 6296     |
| <b>Ground for agricultural equipments-sq.m</b> |                 |          |
| Traktors and agricultural machines             | 817             | 137790   |
| Cover ground for agricultural equipments       | 282             | 22271    |
| Open ground for grain drying                   | 1870            | 146982   |

Table 10.

**Number of main agricultural  
techniques and equipments, unit**

|  | Available | Own   | Produced before<br>1998 |
|--|-----------|-------|-------------------------|
| Lorries                                | 8424      | 7667  | 7416                    |
| Total Tractors                         | 14913     | 13966 | 13758                   |
| Grain harvesters                       | 1302      | 1167  | 1168                    |
| Maize harvesters                       | 43        | 32    | 22                      |
| Fodder harvesters                      | 139       | 103   | 94                      |
| Patatoes harvesters                    | 10        | 9     | 10                      |
| Cotton harvesters                      | 22        | 18    | 20                      |
| Grain mower                            | 903       | 853   | 817                     |
| Tractor plough                         | 3025      | 2860  | 2720                    |
| Cultivators                            | 1010      | 955   | 926                     |
| Grain drill                            | 1019      | 969   | 900                     |
| Cotton seed drill                      | 442       | 425   | 418                     |
| Maize drill                            | 83        | 77    | 74                      |
| Potato planting machine                | 13        | 12    | 13                      |
| Ore and organic fertilizer distributor | 135       | 128   | 124                     |
| Duster and sprayer                     | 201       | 197   | 179                     |
| Incubators                             | 40        | 39    | 34                      |

Table 11.

**Labor force by agricultural enterprises  
and organizations, thsd. person**

|  | Total | including |       |
|--|-------|-----------|-------|
|  |       | men       | women |
| Average number of workers engaged in farm          | 24,4  | 16,6      | 7,8   |
| Of which persons engaged in agriculture            | 19,9  | 13,3      | 6,6   |
| Persons engaged in agriculture:<br>at age of 16-35 | 6,5   | 3,8       | 2,7   |
| constant workers                                   | 19,7  | 13,9      | 5,8   |
| seasonal (temporary) workers                       | 4,3   | 2,4       | 1,9   |

Table 12.

**Labor force by peasant (farmer) farms, family-peasant  
farms and households, thsd. person**

|  | Total  | including |        |
|--|--------|-----------|--------|
|  |        | men       | women  |
| Number of the family members in the farm   | 4857,6 | 2411,0    | 2446,6 |
| of which at able bodied age<br>(men 15-62, women 15-57)  | 3114,6 | 1564,4    | 1550,2 |
| Total number of persons engaged with agriculture   | 2591,2 | 1284,6    | 1306,6 |
| of which persons at age of 16-35 years old   | 767,4  | 401,2     | 366,2  |
| In total number of persons engaged in agriculture :<br>persons engaged in other<br>enterprises and organizations | 117,2  | 79,1      | 38,1   |
| pupils   | 97,7   | 51,5      | 46,2   |
| students   | 9,2    | 5,0       | 4,2    |
| Workers involved from outside, total   | 208,3  | 175,9     | 32,4   |