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## **NIGER - Recensement Général de l'Agriculture et du Cheptel RGAC 2004-2008 – Explanatory notes**

### **1. Historical Outline**

The first and also most recent (until 2005) agricultural census of the Republic of Niger was in 1980, and until the “*Recensement Général de l'Agriculture et du Cheptel (RGAC)*”, no comprehensive or nationwide investigation on livestock had been conducted in the country since Independence in 1960.

Successive droughts in 1972, 1973, and from 1983 to 1984, almost cut Niger's livestock numbers in half and led to changes in the species composition of herds. Since then, it has been difficult to obtain reliable statistics to help in the development of programs for the livestock sector.

### **2. Legal Basis and Organization**

The General Census of Agriculture and Livestock 2004/2008 was designed and implemented by the Ministry of Agricultural Development and the Ministry of Animal Resources, working closely with the National Statistics Institute of the Ministry Finance and Economy. The FAO provided technical assistance. The European Union and the World Bank have provided funding for the census.

### **3. Reference Period or Date**

With the modular approach adopted for the census, the reference period covers two agro pastoral campaigns: 2005/2006 and 2006/2007.

### **4. Enumeration Period**

Given the modular approach, Census enumeration operations were carried from 2001 to 2008 in four main phases, namely:

- (1) Administrative and technical preparation for the census from 2001 to 2003;
- (2) Realization of the Pre-Census Enumeration in 2004/2005;
- (3) Data collection and processing of the five core modules and five thematic modules in 2005/2006 and 2006/2007;
- (4) Analysis and dissemination of census results in 2007 and 2008.

### **5. Definition of the Statistical Unit**

The census of agriculture and livestock used several types of statistical units: (i) The Primary Unit will be the Enumeration Areas (EA); (ii) The Secondary Unit will, according to the module or the agricultural household, the agro pastor or the breeder.

*Enumeration Area (EA):* Geographic unit defined for the needs of the general census of population and housing. The EA is composed of a set of concessions and households. It is a geographical unit of homogeneous size containing about a thousand inhabitants.

*Agricultural Holding:* Agricultural production unit characterized by a single management and consists of men and women who work there, of land used wholly or partly, animals, equipment, buildings or fixed installations and other means of production. The Agricultural Holding concept used in the Census is that of a family unit of production. It is thus defined in relation to farm household. By convention, the household head is the head of the agricultural holding and it will be called "Head of the holding".

*Agricultural Household:* A household is said agricultural household if one of its members at least practices agriculture in the broad sense without being an employee only in agriculture.

In the case of the inventory of sites and horticultural producers, the primary unit will horticultural production site and the secondary unit will horticultural holding. For the specific case of the observation of variables relating to transhumance and nomadic livestock: (i) The primary unit is the concentration area (assembly points transhumant and nomadic animals at specific times of the year, that is to say the pastoral water points for livestock and nomadic crossings animals for livestock transhumance); (ii) The

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secondary unit will be the breeder (the shepherd) identified as responsible for the flock, even if he does not own the flocks.

## **6. Geographic Coverage**

The General Census of Agriculture and Livestock 2004/2008 covered the entire national territory of the Republic of Niger in all 8 regions, 36 departments and 3 communities of Niamey.

## **7. Exclusions and Cut-Off Thresholds**

Not explicitly stated and none noted.

## **8. Methodology**

### ***FAO Modular Approach***

The FAO recommendation for a modular approach was used. The General Census of Agriculture and Livestock was covered ten (10) modules over a four-year period from 2004 to 2008: Module 1: Pre-Census of agricultural households; Module 2: Census of the rainfed agriculture and irrigated sector; Module 3: Census of the water points, livestock areas concentration in the dry season and waypoints of transhumance routes; Module 4: Census of the livestock sector; Module 5: Census of the horticultural production sites and horticultural holdings; Module 6: Food security; Module 7: Productivity of agricultural holdings; Module 8: Support to farmers organizations; Module 9: Productivity livestock; Module 10: Marketing of products and sub-products animal.

### ***Frame***

The sampling frame of the agricultural households obtained through the Census of Population and Housing conducted in 2001. From the total of 8,034 Enumeration Areas (EA's), 7,465 EA's with 1,189,828 households were identified as being involved in some type of agricultural activity.

The livestock frame also included all known water points and transhumance routes. The inventory of water points, wells, permanent ponds, passages, tracks and historical chokepoints and crossings used by nomadic herds and extra-territorial transhumance herding practices was a prerequisite for the estimation of livestock, particularly camels, goats, and cattle.

### ***Complete or sample enumeration methods***

The Census 2004-2008 was undertaken in five Phases: (i) The administrative and technical preparations for the census from 2001 to 2003; (ii) The complete enumeration of all the agricultural holdings through the Pre-Census in 2004/2005; (iii) The complete enumeration for five (5) core modules in 2005/2006, including the data processing; (iv) The sample enumeration for the data collection for five (5) thematic modules in 2006/2007, including the data processing; (v) The analysis and dissemination of census results in 2007 and 2008.

### ***Sample Design***

There was no single sample design for the Census of Agriculture and Livestock. There were a number of samples selected for the sample design and frame depending on the particular module and questionnaire content with the biggest differences being between the crop and livestock samples. The objective was always to design samples of EA's able to provide reliable statistics for the whole of Niger.

Samples were selected at the "Departmental" geographic level. EA's were the Primary Sampling Units and households the Secondary Sampling Units. Many of the samples were single purpose so there would be a sample for livestock, another for food crops, and another for horticulture. Within each sample of selected EA's, the households in those EAs all had an equal probability of selection and were randomly selected with replacement.

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### **Collection Method**

Data were collected using personal interviews and the information was recorded on printed questionnaires.

### **Questionnaire(s)**

The Census was a complex operation consisting of the listing documents and 19 questionnaires including the Pre-Census of Agriculture and Livestock which was a household listing of the 7,465 Census of Population and Housing EA's with agricultural activity.

The Census was a complex multi-year/multi-module operation and included the completion of 19 questionnaires addressing subjects such as: irrigated and rain-fed food and horticulture crops by crop type; area; yield; production; stocks; and productivity; livestock numbers by type of animal of sedentary; nomadic; and extra-territorial transhumance farming practices. The questionnaires and their content are all available from the methodology manuals on the National Statistics Institute website.

### **Controls to Minimize Non-Sampling Errors**

It is explicitly noted in the methodology report that efforts were made to minimize non-sampling errors by raising the issue in the training materials, emphasizing the threat they pose to data quality in the training workshops, and making quality-consciousness an important part of the work of the interviewers and their supervisors.

### **Innovative Methodologies**

Niger has developed some practical approaches to estimate livestock populations in a country where a large proportion of herders (farmers) have a tradition of using nomadic livestock herding practices and only a proportion of the herds are found in sedentary farm operations. Nomadic pastoralism and extra-territorial transhumance make the estimation of camels, goats and to some degree, cattle, and a challenge. Niger reports that it's methodology of calculating the herd numbers by stationing enumerators at the key choke, crossing, and permanent-watering points, was a successful experience.

## **9. Data Entry, Edits, Imputations and Tabulation**

Data entry was based on the data entry module of CPro as was data transfer or export. CPro was also used for range and consistency edits and imputations. SPSS was used for data analysis and Excel was used for tabulation. Consideration was given to the use of Excel-PX (a macro that allows for the creation, maintenance, and commissioning of files), Web-PX and the use of PC-Axis files as a means to create SQL databases but it is not clear from the documentation whether they were indeed used.

## **10. Data Dissemination and Use**

The results of the Census of the Census of Agriculture and Livestock are available from printed reports and brochures, CD-ROM's, the website of CountrySTAT-Niger (<http://countrystat.org/home.aspx?c=NER&tr=55>), the website of the National Institute of Statistics (Institut National de la Statistique: <http://www.stat-niger.org/NigerInfo/rgac/indexe.html>), and upon request.

## **11. Census Data Quality**

No documentation.

## **12. Data Sources**

<http://www.countrystat.org/home.aspx?c=NER>

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FAO ESS World Census of Agriculture 2010, Country Documents  
[www.fao.org/economic/ess/ess-wca/wca-2010/countryinfo/en/](http://www.fao.org/economic/ess/ess-wca/wca-2010/countryinfo/en/)

### **13. Contact**

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#### ***Website***

CountrySTAT-Niger: <http://www.countrystat.org/home.aspx?c=NER>  
National Institute of Statistics (Institut National de la Statistique): <http://www.stat-niger.org/statistique/>