IDCB Technical Session 7: Estimates, forecasts, expert opinions and assessment - their role in the official statistics on agriculture

The importance of system GCEA to Brazilian agricultural statistics

Carlos Alfredo Barreto Guedes & Octávio Costa de Oliveira
Tecnologista do Instituto Brasileiro de Geografia e Estatística

1 - INTRODUCTION

The current system of continuous agricultural statistics surveys of IBGE is based on cadastral and subjective surveys. The cadastral surveys raise data acquisition of animal raw by industry, the production of hen eggs and agricultural stocks of storage units, investigating panels of informants identified with the thematic universe of survey. Subjective surveys raise the annual production of agriculture, livestock, forestry and plant extraction, and monthly monitoring of the evolution of the crops, with data released statewide. In subjective surveys the investigation unit is the municipality and the information is obtained indirectly in consultations and meetings with qualified informants. So, in our continuous surveys, there is no estimate of error or accuracy measurement

In addition to continuous survey, IBGE performs the agricultural census, which nationwide directly investigates the farmer, obtaining statistical information of agriculture that often conflict with those obtained through continuous survey.

In order to quantify and qualify the continuous survey, was created in 1973 the system GCEA (Coordination Group for Agricultural Statistics) which has the purpose of providing technical support and cooperation to survey and dissemination of information related to agricultural activity. It consists of representations of public and private areas, directly or indirectly linked to the production and use of statistical data and information from the agricultural sector. The CGEA is responsible for the creation and maintenance of the Municipal Commissions of Agricultural Statistics formed by local bodies which compose, together with technical and / or other experienced people and representative of the producing classes that aims to establish a basic framework and permanent production and agricultural statistics.

Due to the great subjectivity of the method, this type of survey information received criticism from various sectors of society, can occur because the manipulation of information for their own benefit, since it is not possible to verify the quality of information using a statistical basis for data analysis. However, in some cases this is almost the only way of obtaining data, taking into account the level of detail required in the required speed and economic conditions and techniques available for such a survey.

This paper aims to report on how the agricultural statistics were incorporated into the scope of IBGE surveys, describing problems and imperfections of a subjective system, perhaps the only one who can bring quantitative information on more detailed geographical level on an annual basis. Describe the role and importance of GCEA for the proper functioning of this system.

2 - BACKGROUND

Since 1938 agricultural statistics were under responsibility of the Ministry of Agriculture, but have been conducted by IBGE. By centralizing all production of statistical and geographical information in an institution is sought then establish a single coordination of these services, in order to systematize the results that were obtained by very different methods. Soon in 1938 IBGE conducted a 1st data collection at the national level using a unique method of subjective estimates in which the information was obtained by a standard form, named Book B. With this single instrument collection information was obtained on various aspects of agricultural production. The estimates were made at the end of each calendar year based on data from the last harvest of agricultural production. This method was used until 1944 when the Executive Board of the IBGE instituted book D by changing the survey on essential points.

Concerned about the monitoring and forecasting of crops already in 1962, the Ministry of Agriculture instituted the Service Forecast Crops (SPS). In 1964 this ministerial body began its crop forecasting testing records of the Land Tax and the agricultural census trying to create a system of references that make feasible the development of previous estimates of agricultural production. Due to failures on registers and to limited financial and human resources, the SPS decided to accompany agricultural crops based on subjective estimates.

In 1968 based on the National Basic Statistics IBGE created the Brazilian Center for Basic Statistics (CBEA), an organ for the planning, implementation and coordination of surveys studies and analysis in the field of agricultural statistics.

By that time the situation of the agricultural statistical surveys were confused. IBGE, through the CBEA had a statistical plan and the Ministry of Agriculture had other two, one under the Office and the other in ETEA (Technical Team of Agricultural Statistics).

Only in 1969 on the occasion of the 3rd National Congress of Agriculture was prepared the National Plan for Agricultural Statistics which was a merger of the three existing plans then. In addition to the general objective of providing the interested sectors reliable statistics, it was determined that it was necessary in the technical area the intensification and use of sampling method and, in the administrative area, the characterization of duties of each participant organ in the system. The executing agency for the Plan was the Ministry of Agriculture being IBGE responsible for the technical coordination, oversight and policy guidance.

Aiming at the development of the Single Plan of Agricultural Statistics, the Special Commission of Planning Control and Evaluation of Agricultural Statistics (CEPAGRO) was established in 1971, consisting of three representatives of the Ministry of Agriculture three of IBGE, chaired by a Director of IBGE.

The CEPAGRO soon set up three working groups: the first (GT.1) to work on the improvement of traditional surveys of continuous statistics. The second (GT.2) sought to establish areas of the Single Plan and develop a Program of Agricultural Statistics using probabilistic sampling at producer level. The third working group (GT.3) was created to integrate census with the ongoing statistics. Based on the advice of GT.1 IBGE became responsible for industrial statistics of the agricultural sector composed from surveys on meat derivatives and by-products and vegetable oils and fats. The GT.2 established areas of the Single Plan for the national agricultural sector, setting priority for these areas for data collect purposes. GT.2 proceeded drafting the Program of Agricultural Statistics by sampling, part of the Unified Plan of Agricultural Holdings.

The general purpose with respect to the continuous statistics was the gradual replacement of subjective surveys at municipal level by a new system of statistics using probabilistic sampling at the producer level. This progressive substitution did not occur and as a consequence the IBGE implemented in 1972 the Systematic Survey of Agricultural Production (LSPA).

At this time the IBGE was stated as the coordinating body of the National Statistical System in charge of getting all the stages of implementation of surveys of agricultural municipal, mining vegetable production livestock, poultry apiculture and sericulture. Thus these studies which were previously under the Ministry of Agriculture have undergone some changes.

3 – DISCUSSION

The need of generating agricultural statistics at the local level each year is a challenge in a country size like Brazil, where agricultural production is present throughout the national territory. In addition, there are large inter-regional differences regarding the formalization of farming, production and marketing chain, institutional infrastructure (existence of technical assistance, research and extension), the associations, cultural and technological level of the farmer, etc.., which become more diverse and complex supply data and operation of your collection.

Statistics by probabilistic sampling are not suitable for this purpose, because the sample size needed to adequately represent more than 40 agricultural, 12 species of livestock, livestock products 6 and 49 forest products in 5,565 counties would be of such a scale that would make the collection, due to their complexity and cost, similar to an agricultural census.

Other possible methods for obtaining estimates of production would be the use of administrative records, aerial photography and consultations with experts directly involved with the production system.

Administrative records, when available, refer to a very limited number of products (eg, records of vaccination of cattle), and sometimes with spacial limits. These records are produced by other public institutions and transferred to the IBGE through contacts with their supervisors and state agricultural meetings of GCEA, as there are no formal agreements between NSI and these institutions to receive this information systematically.

Even with administrative records, validation of your data by GCEA is of fundamental importance, since sometimes there is no adequate transparency on the methodology used and the update of these data, which may result in loss of quality. Another critical evaluation that occurs within the GCEA is about the spatial distribution of the data, adjusting them to the concepts used by IBGE for the allocation of production and actual animals in each municipality, which can sometimes be different from those observed in these administrative records.

The use of aerial photography for estimating production was not adopted as the method due to the high cost and lack of availability of images, whether in time for the monthly monitoring of crops, either in spatial coverage for annual estimate of all Brazilian municipalities. Even though there was this picture availability would need a huge infrastructure of storage, management and analysis of this material without dispensed numerous and frequent field visits for calibration methodology.

The methodology of consulting experts, called subjective methodology, was the option adopted to obtain estimates of agricultural production to meet this demand, because, besides allowing to obtain information at the frequency and spatial coverage needed, has a cost relatively low compared to previous approaches.

Indeed, one can consider that the methodology for obtaining estimates of Brazilian agricultural production is mixed; involves not only consulting experts, but also the administrative records, where they exist, the information producer associations and individual producers which times account for the entire production of a municipality, the information from other surveys of IBGE, as the search for Hen Egg Production, the statistical surveys of state institutions, etc.. So data collection methodology presupposes the development of a regional network of information sources, constructed by each local agent IBGE, according to availability. This results in a large heterogeneity of sources consulted in every county and state in Brazil.

3.1 - Disabilities of subjective statistics

The agricultural statistics are often considered unsatisfactory approaches in the national statistical system, given their methodological limitations and content, and difficulties not faced properly in

surveys. However, indirect surveys through qualified informant or estimates based on images are useful and can contribute to global estimates of production, but end up having a limited number of variables and does not allow higher qualification of the activity.

In general, the scope of the research are quite homogeneous, and have as main objective the agricultural production data without delving into issues of structure and mode of production of agricultural holdings. Among these is the difficulty of distinguishing between the institutional sectors, and the very definition of household production for own consumption and commercial production. It is important to ensure a more detailed statistical data in order to distinguish between types of agriculture, cultural practices used, environmental conservation and income generation. In many countries the municipal indirect surveys form the basis or are important part in providing agricultural statistics (Conference of European Statisticians, 2008).

Generally in subjective investigation the statistical unit is the municipality and the information is obtained indirectly in consultations and meetings with technical and economic agents related to agribusiness. This system uses information regarding the amount of marketed inputs, agricultural credit, predictions about the weather, market trend and history of the region, among others. However, in continuous surveys, there is no error estimate or accuracy measurement. Critics of this type of survey argue that it can benefit industries or people who are interested in manipulating information for their own benefit, usually at the expense of the rest of the population, so these surveys are more common in third world countries.

Pino (2001) listed some shortcomings of subjective statistics, among them stand out : 1 - has no statistical basis, one can not therefore use the whole mathematical arsenal of this science to analyze their data, 2 - can not verify the quality of the results from the data, which are subject to serious biases and great lack of precision ; 3 - responsible for issuing an opinion on the crops wont answer about a very large area, over which it has the lowest power of decision, because it was not he who planted, so the quality of the answer depends on how strongly the responsibility intrinsically knows about each culture and creation in the region, which makes it subject to pressures that can seriously bias data ; 4 – as such measurements are rough, it is not possible to capture subtle variations that occur over time and that, as a rule, are the most interesting for the market, these characteristics make this type of survey highly maneuverable and can be, in theory, get the data you want.

Proponents of the subjective method argue that this may be the only way to get data in situations where any option of scientific data collection is not economically feasible or in countries that do not have qualified personnel to plan and execute other type of survey. The lack of access to space technology and the lack of statistics in certain countries, or even in some regions of some countries can prevent a survey other than of subjective type. Furthermore, its recognized that it is much easier

to work with subjective data than with data obtained by statistical calculations that require a certain complexity and often produce results that are difficult to analyze (Pin, 2001).

Criticism aside, subjective surveys on agricultural crops have been used in Brazil for a long time and in some moments and situations, and are the only source of data available. However, the dependence of the fitness collection agent to develop this kind of field work is critical to the smooth conduct of a subjective survey. The holding of meetings with experts from other agencies linked to the agricultural sector requires knowledge and savvy, and it takes a while to be acquired by the researcher.

Crucial condition for the improvement of agricultural statistics lies in ensuring statistical infrastructure, especially with regard to records and reference systems suitable for research by the producing establishment. Given the peculiar characteristics of agricultural activity, and the conditions most prevalent in your organization, use of registers is essential to most countries. New technologies and the computerization of administrative records, greater state presence, and expansion of formal instruments of access to citizenship and source control of production, come providing better conditions for maintaining records of businesses and agricultural producers. The use of GPS decisively contributes to the identification and location of units, becoming an essential part of the address, which tend to be quite poor in rural areas. Thus, investment in maintenance records are presented today as a key recommendation, with greater prospect of success. An important question concerns the obtaining and sharing of registration information between the institutes of statistics and administrative bodies.

3.2 - The continuous surveys and agricultural census

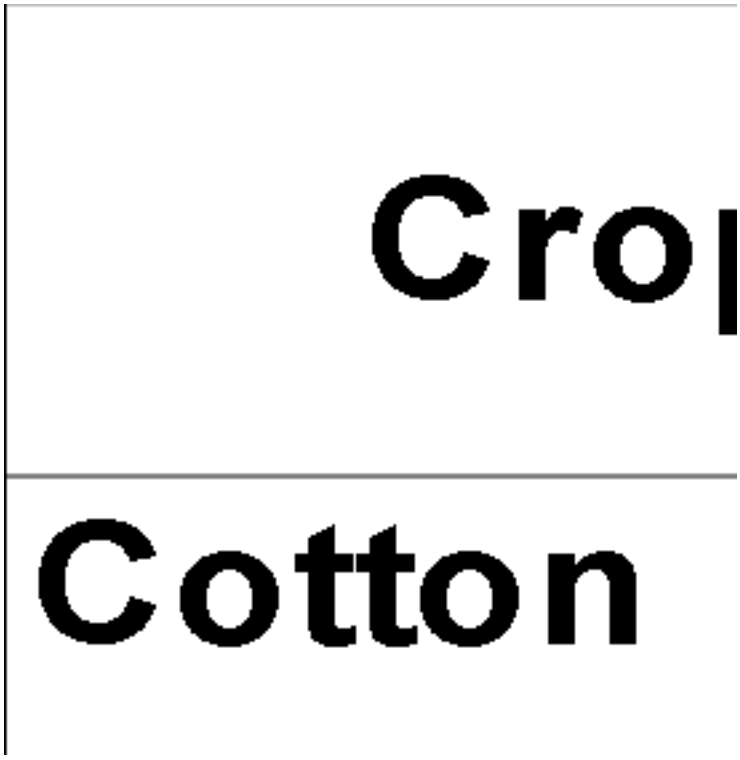
IBGE, the Brazilian statistics office, conducts the agricultural census in all farms, every five or ten years or so. Going nationwide, directly investigating the farmer, obtains statistical information of agriculture that often conflict with those obtained through continuous research.

The methodological difference between the Agricultural Census and continuous surveys of COAGRO, primarily with regard to data collection, leading to differences between the results achieved by these types of survey. While in the first data collection occurs by direct interview with the producer, the second collection happens in meetings with industry experts, when, then, the results are obtained by means of consensus among the participants or by consulting experts and administrative records. Obviously, the differences in methodology are broader, but not up here, the enumeration of details that also have significant importance in the context of this study.

Historically, there have always been differences between the results of Agricultural Census and continuous surveys. By way of illustration, are shown the results of comparative study for the Agricultural Census of 1980 and 1985 with its continuous surveys, for the same reference years,

considering a set of relevant variables. Tables 1 and 2 show the number of counties where information from the Census of Agriculture and the corresponding Continuing Survey were different from zero, and in these cases, where the results were higher for continuous surveys, and equal in both higher for the Agricultural Census. The distinct results, predictable due to the significant methodological differences between the methods of surveying are placed. However, one must deserve greater attention to high magnitudes of these differences, in certain situations, and the reasons for these more expressive occurrences, especially in products of great economic and social importance, which occurred both in the past and at present.

Table 1 - Number of cases of different data between the agricultural continuous survey (Pesquisa Agrícola Municipal - PAM) and Agricultural Census, for some crops in 1980 and 1985.



Source: Produção Agrícola Municipal (1980 and 1985) and Agricultural Census (1980 and 1985).

Table 2 – Number of cases of different data between the livestock continuous survey (Pesquisa Pecuária Municipal - PPM) and Agricultural Census, for some livestock in 1980 and 1985.

Source: Produção Pecuária Municipal (1980 and 1985) and Agricultural Census (1980 and 1985).

Between two censuses, data collection agents made conjectural estimates, looking to find out about local trends in order to infer the variations over the last census available, thus obtaining subjective data about the crop of each municipality But in some cases the agents do not use the census as a basis to adjust the estimates to understand, according to a number of factors, the subjective estimate supported by knowledge of the actors who participate in the various organs GCEAs, better reflect the reality of agricultural production the information disclosed by the census, bringing a nonuniform statistical analyzes.

The use of census data causes a strong impact on the subjective survey time series, as occurred with the herd of pigs in 1996 (Figures 1 and 2). These adjustments are as higher as greater the deficiency of information sources in the years between censuses, as well with products of low economic importance. This is the case of effective mules (mules), Fig 3.

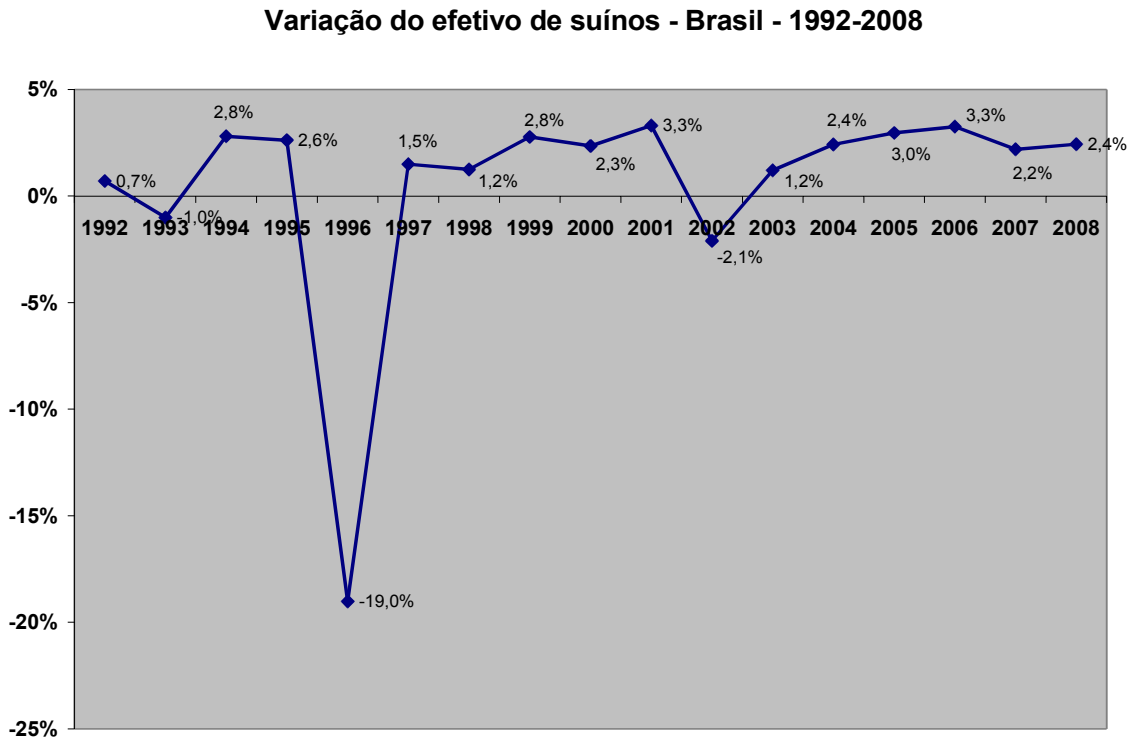


Figure 1. Annual variation in swine herd from 1992 to 2008, according to the Pesquisa Pecuária Municipal.

Figure 2. Evolution of swine herd from 1992 to 2008, according to the Pesquisa Pecuária Municipal.

Figure 3. Evolution of the flock of mules from 1992 to 2008, according to the Pesquisa Pecuária Municipal.

Even with regard to research information about production, direct inquiry allows not only more precision and quality in the statistics produced, but also allows the calculation and monitoring according to different areas of estimation, eg, type of producer, the size of holding, technological aspects that derive environmental impact, use of irrigation and agrochemicals or even greater product qualification such as organic, GM, traditional.

In the Agricultural Census of 2006 it was found that 11% of holdings have ceased to inform production, while in previous years (1980, 1985 and 1996) found that only about 2% of holdings were undeclared production. Furthermore, the results of production of some products for which you can compare with estimates from other sources, or from supply balance, based on information processing, exports, imports and inventory changes, the results indicate significant underestimation census at the national level. For soybeans, there is an underestimation of the order of 13.6 %, in the cane sugar of 17.2 % and 42.9 % in orange.

The conducted survey, as to the qualitative assessment of survey processes, reiterated and detailed many limitations and difficulties of survey, and especially in relation to the census operation. As for ongoing survey, points out that the fundamental problem is the lack of reliable informants, in certain situations, at the municipal level, to the huge range of crops, livestock and products of the plant extractivism. This entails: 1 - a considerable amount of municipalities with frequent repetition of data from one year to another ; 2 - in other cases, the quality of the data is questionable, and 3 - are considered when extensive historical data, there is some variation abrupt, especially in the years immediately after conducting agricultural censuses.

3.3 - Repetition of information and the frequency of the committees.

Considering the advancement of agriculture in recent years, with the incorporation of new areas and productivity growth, it is doubtful if the information remains unchanged from one year to another, especially when dealing with temporary crops, which require a new planting after harvesting, and are generally strongly affected by climatic changes. In work in coordination with agriculture to verify the repetition of the municipal agricultural research data comparing year over year from 1998 to 2003, it was concluded that a large number of information are repeated from year to year as can be seen in Table 3.

Tabel 3. Data repetition on Produção Agrícola Municipal - Brazil - 1998-2003

Year	Rate of repeated data (%)			Weigh of repeated data (%)	
	Area (ha)	Yield (kg/ha)	Production (t)	Area (ha)	Production (t)
1998	43.5	35.9	26.1	34.1	19.4
1999	47.8	41.2	31.6	34.5	18.9
2000	51.4	45.5	36.5	41.4	25.2
2001	49.2	26.6	19.3	35.7	13.9
2002	47.9	39.4	30.4	34.9	18.2
2003	49.6	42.9	32.7	35.4	20.7
Mean	**48.3**	**38.6**	**29.5**	**36.0**	**19.4**

Considering the six years analyzed, the rate of repeated data was 48.3 % of the information, which represented 36.0 % of the harvested area in the period. The production was the variable that was repeated least because it is the product of the other two variables (area x yield, yet 29.5 % of production information were repeated, which represented 19.4% of national production. In Table 4, in general, one can verify that the information area and yield have a high rate of repetition, especially in the temporary and permanent crops long cycle. When analyzing the weight of this information it appears that municipalities are less significant, because whenever there is a reduction in the rate of repeated weight to what they represent, but there may be a large county producer who has repeated the information.

In the case of grain legumes and oil seeds, the area information is repeated enough, but the weight of these data to output is very small, as in the case of soybeans, where 15% of the area information was repeated, but this represents only area 6.4 % of the total soybean area harvested in Brazil in 2003, and only 1.2 % of the national production. This leads us to conclude that

municipalities more repeat information are those with small productions. The same is true for corn, beans, rice, wheat, sorghum and upland cotton.

In crops such as sugar cane, coffee and cassava rate of repeated area and yield is close to 50%, this area accounted for approximately 30% of the area planted to these crops in 2003. For production, the repetition rate was 36.4 % for cassava, 43.2% for sugar cane and 27.0 % for coffee, representing 22.2%, 16.3% and 8.9%, respectively, of the production of these products. Permanent crops, such as oranges, cocoa, banana, coconut, mango grape, tangerine, lime, etc., have a repetition rate for area between 60% and 70%, between 45% and 55% for yield, and between 30% and 50% for production. In the case of orange, 70.5 % of municipalities repeated information on area harvested, and 50.7% for the production information, corresponding to 24.2% and 21.8% of the area under cultivation and production, respectively. The same process occurred for the other products, and for grape, mango and lemon repeated production represented about 12% of national production. Crops such as pear, walnut, quince, persimmon and fig, had a repeating area data greater than 80%.

Table 4 – Repetition of data on Produção Agrícola Municipal, in descending order of harvested area - Brazil – 2003

Produtos	Taxa de dados repetidos (%)			Peso dos valores repetidos (%)		Nº municípios informantes	Área colhida (ha)	% da área colhida
	Área	Rendimento	Produção	Área	Produção			
Soybean	15.0	19.1	7.1	6.4	1.2	1722	18,524,769	32.13
Maize	25.7	24.5	14.3	14.1	4.4	5275	12,965,678	22.49
Sugarcane	56.8	59.5	43.4	28.0	16.3	3575	5,371,020	9.31
Beans	22.7	16.9	12.9	12.1	3.2	4896	4,090,568	7.09
Rice	37.5	34.6	22.9	18.2	6.7	3819	3,180,859	5.52
Wheat - *Triticum* spp	11.8	9.0	4.2	7.5	0.7	936	2,560,231	4.44
Coffee	48.9	30.0	27.0	32.3	8.9	2006	2,395,501	4.15
Cassava	46.2	59.9	36.4	31.7	22.2	4742	1,633,568	2.83
Orange	70.5	54.9	50.7	24.2	21.8	3362	836,041	1.45
Sorghum	23.3	23.0	15.7	6.0	3.4	566	753,767	1.31
Cotton	14.7	15.9	8.0	7.5	4.8	1027	712,556	1.24
Cashew nut	72.4	24.5	23.9	46.0	8.0	872	682,503	1.18
Cocoa	61.4	50.8	48.5	59.5	33.5	264	590,945	1.02
Banana	61.6	57.2	43.6	46.7	29.2	3636	509,588	0.88
Tobacco	21.5	22.9	16.3	7.7	1.0	922	392,619	0.68
Oat grain	37.1	31.0	19.2	18.2	5.7	442	297,083	0.52
Coconut	63.2	44.5	35.9	48.1	26.9	1891	280,382	0.49
Sisal	44.3	49.2	22.1	25.0	20.9	122	221,638	0.38
Potato	53.0	52.4	42.8	22.0	11.8	925	151,850	0.26
Castor beans	24.2	27.8	13.9	35.0	13.7	252	133,879	0.23
Barley	15.0	10.4	6.2	5.1	2.1	193	119,224	0.21
Natural rubber (Hevea spp)	59.2	29.9	27.5	44.2	20.4	495	103,586	0.18
Peanut	56.4	56.3	47.9	23.5	14.4	1225	89,174	0.15
Dendê (nut)	48.6	70.3	51.4	21.3	26.1	37	85,889	0.15
Mate	56.1	55.8	39.2	38.2	32.0	554	84,438	0.15
Watermelon	47.9	45.2	32.4	31.9	14.7	1661	82,285	0.14
Onion	63.7	62.9	49.6	29.8	13.2	911	68,790	0.12
Grapefruit	66.3	46.0	41.7	41.9	12.7	1154	68,432	0.12
Mango	70.8	35.8	30.3	41.5	14.4	1752	68,136	0.12

Tangerine	71.3	46.8	40.2	69.1	23.5	1560	64,999	0.11
Tomato	54.9	56.3	40.9	33.7	23.8	2026	63,479	0.11
Pineapple	52.3	61.0	41.7	33.5	24.6	1039	57,986	0.10
Lime	69.6	49.2	43.0	37.2	10.0	1610	50,950	0.09
Sweet potato	53.9	54.1	35.6	46.5	32.5	1425	46,351	0.08
Papaya	61.0	49.6	38.0	28.1	13.1	795	36,244	0.06
Passionfruit	44.6	41.6	25.7	27.5	20.7	1146	34,994	0.06
Fava bean	34.6	26.6	29.0	24.0	3.6	459	34,792	0.06
Apple	74.0	57.8	54.3	42.8	4.1	173	31,532	0.05
Pepper	56.9	43.6	36.0	50.3	42.5	225	25,628	0.04
Peach	74.2	53.1	47.5	67.0	34.3	779	24,507	0.04
Guava	71.1	49.2	40.9	36.6	18.6	828	17,574	0.03
Melon	74.5	65.6	57.4	16.9	5.1	538	16,266	0.03
Garlic	75.4	76.3	66.6	27.8	17.8	853	15,099	0.03
Urucum	49.8	33.9	25.7	47.0	20.2	245	13,190	0.02
Guarana	52.7	51.6	45.1	22.7	12.7	91	12,529	0.02
Avocado	74.7	45.7	41.9	62.2	23.9	878	10,053	0.02
Persimmon	81.2	52.8	49.5	66.5	55.8	616	7,472	0.01
Palmetto	39.7	35.9	24.4	43.7	44.6	234	7,117	0.01
Malva	40.6	56.3	37.5	70.9	76.2	32	6,421	0.01
Linen	34.4	21.9	15.6	10.0	3.0	32	5,753	0.01
Arboreum cotton	24.5	13.2	10.4	26.1	3.9	106	5,276	0.01
Fig	79.6	68.3	64.6	64.1	38.1	457	3,109	0.01
Tea	33.3	33.3	33.3	28.9	31.7	6	2,843	0.00
Rye	39.1	23.9	17.4	36.7	14.8	46	2,738	0.00
Peas	72.8	71.1	64.2	18.2	13.3	173	2,426	0.00
Peach	87.1	65.1	62.4	82.3	47.8	441	1,784	0.00
Walnut	92.2	76.5	72.9	96.2	46.4	166	1,662	0.00
Jute	62.5	81.3	62.5	57.0	59.4	16	1,047	0.00
Ramie	0.0	0.0	0.0	0.0	0.0	3	539	0.00
Tung	58.8	58.8	58.8	67.0	52.0	17	254	0.00
Quince	89.4	72.3	72.3	79.3	73.3	47	236	0.00
Alfalfa	0.0	0.0	0.0	0.0	0.0	2	102	0.00
Total						66298	57,659,951	100.00

Source: COAGRO

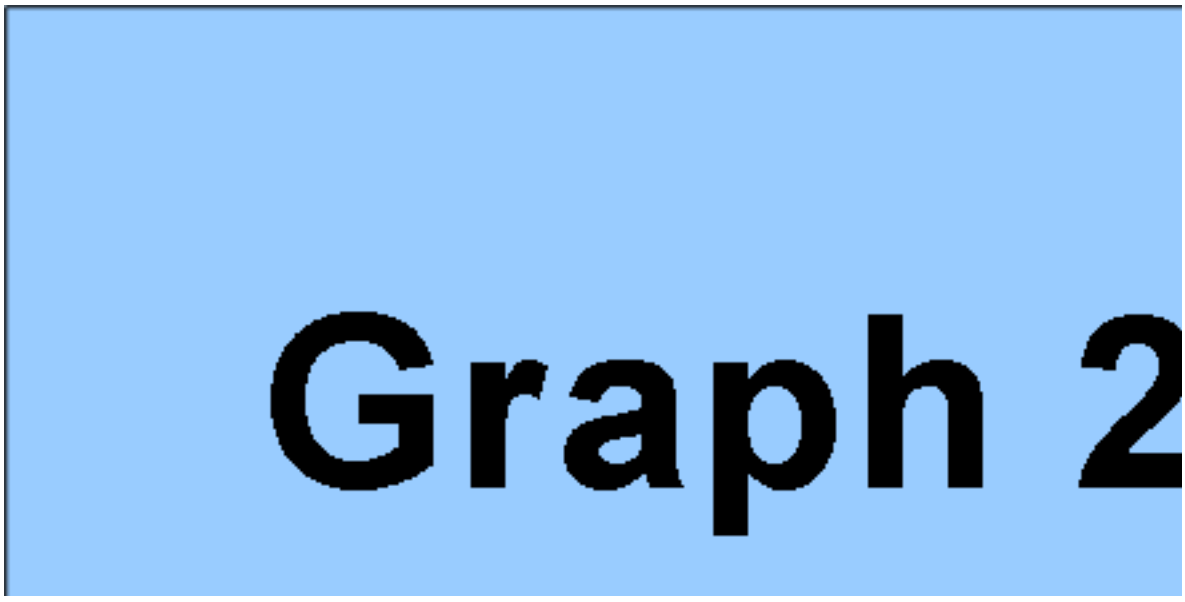
The repetition of data is often associated with lack of qualified municipal sources of information or the available data are not assessed as being reliable leading to the IBGE collection agent to repeat the previous year's data instead of assuming the burden of a estimate no technical skills. Another cause is the absence of updated data from the sources consulted by the IBGE usually by reducing the human, material and financial resources to raise the production data in the frequency desired.

In order to identify where the system is more fragile a consultation was held at Federation Units in 2012 about the functioning of GCEA and found that only one state does not make the meeting of GCEA. There is a variation among states in the number of meetings but most states do 10-12 meetings during the year. These differences in the numbers of meetings between states causes a lag of a conjunctural information in that the greater the space between updates the lower the accuracy and relevance to the market. In some the largest spacing between meetings can be justified in states of farming and little expression in times of harvests of major crops.

Regarding regional meetings at municipal level (COMEA/COREA), 19 states responded that perform, but at a frequency much lower than the meeting of GCEA, where there is the closing of state information. Accordingly, during certain months of the year, information is modified to occur without lifting municipal basis for the operation of the system. States that meetings are held, the majority (twelve) conducted between 0 and 3

COMEA/COREA meetings per year, it is important to report that these seven do not conduct any meeting during the year. This variation in the number of meetings during the year brings a great variability research, directly affecting the quality of information. But in some cases there really is no reason to hold meetings monthly, is the case of municipalities with little expression agricultural off-season periods, etc.

Among the most frequent reasons for not holding the meetings, we highlight noncompliance place, the long distances between the county seat of agencies and their area of jurisprudence increasing the cost for gathering information. The methodology relies heavily on subjective fitness collection agent, for the attainment of the goal, and one of the factors for the non-realization of comeas more often it is precisely the strength of the Heads of Agency to promote the meetings. In some cases, prefer to call the informant and analyzing the opinion of each individual member. With the increasing urbanization of society, and with the adoption of the public tender for admission into the institution, is under permanent or temporary increasingly collection agents, have less affinity with the farmer and his peculiarities, making it difficult to obtaining the information, and influencing the quality of them.



Regarding geographical issue, all states located in the southern and southeastern perform COMEA/COREA meetings, 42.9% of the northern states do not conduct meetings, and the same occurred with 33.3% of the northeastern states. Calls attention to the fact that

the State of Mato Grosso, the largest grain producer in Brazil, do not make COMEA/COREA meetings and make 6 GCEAS/year. However, a number of factors influence this decision, such as the small number of IBGE´s local offices in the state, large distances to travel, roads in disrepair, and a register of informants who account for almost all of the state's crop.

4 – FINAL CONSIDERATIONS

40 years after the merger of the municipal IBGE surveys, questions about quality of agricultural statistics remain and no comprehensive and continuous production based on a probabilistic sample was established. However, it is worth mentioning that perhaps the opposition of methods is presented as a false issue.

There is the belief that different types and methods of surveys, though, in part, are oriented to the measurement of the same phenomena, are not, properly, alternative methods. Each type of search faced serves different purposes than can be supplied by the other and have specific limitations. The program censuses can not produce annual data, nor is it feasible to obtain municipal information through sample surveys, and municipal subjective surveys are limited in scope and can not achieve the accuracy of the other. However, the census periodically offers accurate and detailed statistical information, subjective survey ensure annual municipal and sample surveys can provide annual aggregate with high accuracy and precision measurement.

It is considered that an integrated system is the best answer to the issues of quality and consistency, and sample surveys that can answer many of today demands not covered, in particular, the generic demand on quality in agricultural statistics.

5 - BIBLIOGRAPHY

Conference Commission and Economic Commission for Europe. Contribuição para revisão em profundidade das Estatísticas Agropecuárias. Nota preparada pelo Brasil. 2008.

PINO, F.A. Estimação subjetiva de safras agrícolas. Informações Econômicas, SP, v.31, n.6, p.55-58, 2001.