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Avian Influenza in the Americas

IICA's vision

IICA

Argentina

The importance of small farmers from an economic and labor perspective

This pioneering study, and its innovative methodology, will lead to the formulation of more effective rural development policies.

Edith S. de Obschatko
IICA technical coordinator, Argentina Office

Small farmers, campesinos or family farmers are a very important part of the agricultural sector of Latin America and the Caribbean, irrespective of the strong differences that exist between the agricultural economies of the region.

This statement is perfectly applicable to agriculture in Argentina. In recent years, however, a lack of wide-ranging, up-to-date information on "small farmers" or "family agriculture" has led to questions regarding the actual importance of such producers, and their evolution following the significant economic crises that have afflicted the country. While the 1988 National Agricultural Census has been used to study the number of farmers in each of the country's regions, thereby providing an approximate overview of the importance of family agriculture, no thorough, exhaustive analysis of the characteristics and dynamics of this group has thus far been available.

Thanks to the 2002 National Agricultural Census (CNA 02) and the cooperation of the National Institute of Statistics and Censuses (INDEC), which provided the necessary information, an in-depth analysis of these issues has now been undertaken.

The Small Farmers Development Project (PROINDER)[1], of the Secretariat for Agriculture, Livestock, Fisheries and Food, has requested the assistance of the Argentina office of the Inter-American Institute for Cooperation on Agriculture in the development of a study on the importance of small farmers vis-à-vis farmers as a whole, as

[1] PROINDER is a national project financed by the World Bank (IBRD) and implemented by SAGPyA, in a decentralized manner, throughout the country's 23 provinces. Its objectives are the following: a) to improve living conditions for 40,000 poor families comprised of small farmers and temporary agricultural workers, by financing agricultural or agriculture-related projects; b) to strengthen national, provincial and local institutional capacity for the generation and implementation of rural development policies.

The views expressed in this document are those of the author and do not necessarily represent the views of the Inter-American Institute for Cooperation on Agriculture (IIICA).

This was the first study of small farmers in Argentina to cover such a wide range of issues. In addition to its specific results, the study's significant conceptual and methodological contributions have laid a foundation and provided tools for future studies.

well as their role in physical output, output value and employment.[2]

By providing an understanding of the characteristics of small farmers and their contribution to output and employment, the study meets a significant need in the field of rural development policies and programs. It comes at a time when family agriculture has become a priority for governments in the region, as shown by the creation of the "Regional Working Group on the Relationship between Entrepreneurial and Family Farming", within the framework of CAS (the Southern Agricultural Council, made up of Argentina, Brazil, Uruguay, Paraguay, Chile and Bolivia) in March 2004, as well as the establishment of a Specialized Meeting on Family Farming (REAF) within MERCOSUR, in June 2004.

The study used information obtained from the 2002 National Agricultural Census to assess the importance of small farmers from an economic and labor standpoint, thouroughly classifying its findings by agro-economic region, province and department, calculating the overall number of small farmers and establishing various "types" within that universe. This was the first study of small farmers in Argentina to cover such a wide range of issues. In addition to its specific results, the study's significant conceptual and methodological contributions have laid a foundation and provided tools for future studies.

The results of the study, summarized below, provide an enormously useful store of information for use in the creation of policies and programs on rural development, employment and supply chains. They also provide basic information for future studies and academic research on the universe of small farmers or family agriculture.[3]

The study

The study's epistemological approach focuses on the use of structural characteristics to define the term "small farmer" (SF). Similar criteria are used to distinguish different "types" or categories within the universe of small farmers. This approach was adopted after reviewing the literature on previous efforts in the country – mainly studies based on the previous Agricultural Census, conducted in 1988, as well as the selection criteria used to choose beneficiaries of state-sponsored small-farmer aid programs. A number of foreign studies were also consulted, as were the opinions of the foremost national experts on small-scale agriculture. Classic studies on small holdings, which classified farms with a surface area below a certain threshold as "small", were found to be inadequate when describing and classifying a universe of farmers spread across regions with widely varying productive capabilities.

The hypothesis set forth in the study is closely linked to family farming, and can be stated as follows: small farms are those which are operated directly by the farmer or owner, without employing permanent unpaid family workers.

While farm size was not used as a criterion to differentiate SFs, a cap was set on farm size and capital, in order to prevent the small-farm universe from being conflated with holdings which, though clearly not family-managed, may have been reported as such for census purposes. Holdings

[2] Dr. Edith S. de Obschatko, of the Argentina Office of IICA, served as staff coordinator of the study. The project's main researchers were sociologist María del Pilar Foti and agricultural engineer Marcela E. Románs. The following sources were consulted: INDEC, which provided data from the 2002 National Agricultural Census; the Secretariat for Agriculture, Livestock, Fisheries and Food; the National Institute of Agricultural Technology, which provided information on agricultural output; provincial secretariats or agriculture departments; academics from the University of Buenos Aires and research institutions; and qualified experts.

[3] The publication, entitled "Small Farmers in the Republic of Argentina and their Importance in Agricultural Production and Employment, according to the 2002 National Agricultural Census", was published in June 2006 by PROINDER (SAGPyA) and IICA in Buenos Aires. It includes a CD containing 572 tables and figures displaying its results.

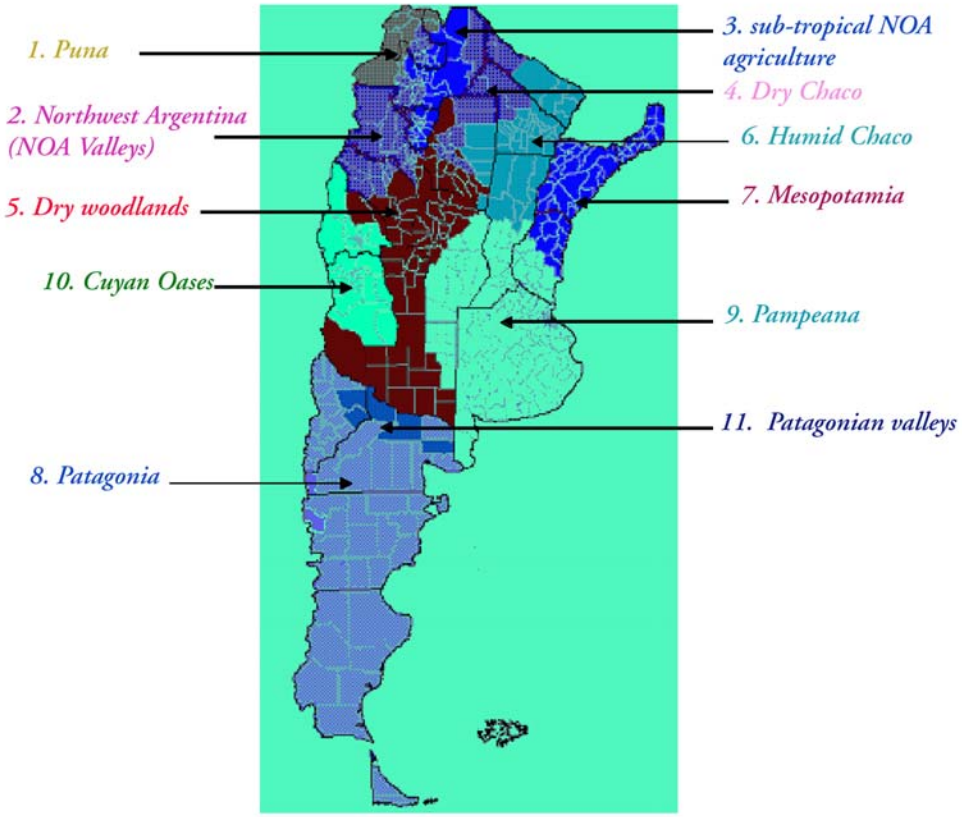
Small farms are those which are operated directly by the farmer or owner, without employing permanent unpaid family workers.

registered as corporations or partnerships limited by shares were also eliminated from the data base.

The country was divided into 11 homogeneous agro-ecological regions, based on readjusted regional classifications from earlier studies. The decisive classification criterion was the prevalence of certain productive activities in specifically defined ecological regions. The results were also classified by province and department.

One significant contribution of the study was the establishment of "types" within the universe of small farmers. This classification was based on a heterogeneous view of the small-scale agricultural sector, which differs from the previous, dualist view. The latter recognized only two strata, based on the effects of agricultural modernization or globalization: small farmers who achieved insertion in the model through capitalization, and small farmers who were excluded from the model.

Agro-economicregions in study of smart farmers in Argentina



Three types were identified; they can be broadly classified as follows:

- **Type 1:** small, capitalized family farmers who are capable of evolving (expanding their production systems), despite the relative scarcity of their productive resources (land and capital) compared to those available to the average agricultural entrepreneur. Generally speaking, these farmers cannot be described as poor; their main shortfalls involve technical support services for production (financing and credit, technical assistance, marketing support, supply chain insertion, etc.).

- **Type 2:** an intermediate stratum comprised of small family farmers (called campesinos or small "transitional" farmers in sociological theory) whose scant resources (land, capital, etc.) prevent their farms from expanding or evolving. They are capable only of simple replication (that is, of operating at their current levels). They possess some characteristics consistent with poverty, given their lack of access to basic social services.

This classification is an attempt to identify agrarian social types as sociological categories that fit the generally accepted concept of "campesinos and small rural farmers". It is also intended to reflect the experience of rural development programs in Argentina, insofar as their target population is concerned.

- **Type 3:** small family farmers who lack the resources necessary to make farming their sole livelihood on an ongoing basis (working solely as farmers under current conditions is a "non-viable" option), and must therefore earn their living by other means (work outside the farm, usually as temporary wage-earners in temporary and/or unskilled occupations). These farmers are sharply afflicted by poverty, and in the vast majority of cases their operations are only kept afloat by government assistance programs, and possibly by alternate sources of income.

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From an operational standpoint, the best approach in selecting the indicators that identify the three strata would have been to classify farmers based on differences in income. This was, for example, the approach adopted by a recent study on family farming in Brazil. The last two censuses conducted in Argentina, however, contain no data on output or income. There was also a desire to test the hypothesis that "types" can be established based on farm structure variables. In light of the above, the approach identified in the literature, and the one with which most experts agreed, was to classify farmer types by their "level of capitalization". This is the main factor that influences productive alternatives, and hence determines viability, earnings, and farm staying power or growth.

This is considered an appropriate approach, as it defers to a structural variable which identifies the quantity of productive resources a farm posesses. When combined with a classification which determines how a farm's labor relations or social organization of production are configured (this information is already implicitly available once the SF universe has been identified), it explains a given economic result. A capitalization level was established for each region, based on the prevailing productive activities among small farmers, and using the following indicators (as applicable in each case): stock in hand, ownership and age of tractor, farmland effectively covered by irrigated field crops, hothouse ownership and size of fruit plantations.

The importance of small farmers

The application of the aforementioned hypotheses, their implementation as applied to CNA 02 and the implementation of the methodology designed to appraise output value have produced a thorough overview of the characteristics and activities of small farmers in Argentina.[4] The results are summarized below.

According to the study, as of 2002 there were 218,868 small farmers in the country. This is equivalent to two thirds of all farms (EAPs). This information cannot be accurately checked against data compiled by studies based on the 1988 Agricultural Census, since these studies did not employ the same definition of small farmer. Despite these limitations, approximate comparisons suggest that the number of farms remained steady during the period preceding the study. This is worthy of mention, since the country suffered two major economic crises during that period, and the overall number of farms decreased by 87,000 between censuses.

As of 2002, small farms covered 23.5 million hectares, or 13.5% of all farmland.

Average SF farm size was 107 hectares, compared to 1,320 hectares for non-SF farms.

In a great many cases, SFs make up a substantial majority (as a percentage of the total number of farms producing a given crop) of the farms

[4] The study made it possible to establish a small-farmer data base consisting of 428 million entries, 1,500,000 of which were used in the study. Processed information is available for 2,500 different units of information, for a range of 191 agricultural products. Statistical results are displayed in 600 tables and figures.

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growing certain crops. They account for over 85% of tobacco, cotton, Paraguayan tea and sugarcane production, and between 70% and 80% of several types of vegetables.

The share of SFs in agicultural output was estimated based on cultivated farmland and the inventory of livestock reported to the Census. Given the lack of census data on output and income, information on agricultural, livestock and forest yields, as well as prices, had to be thoroughly compiled in order to conduct the appraisal.[5]

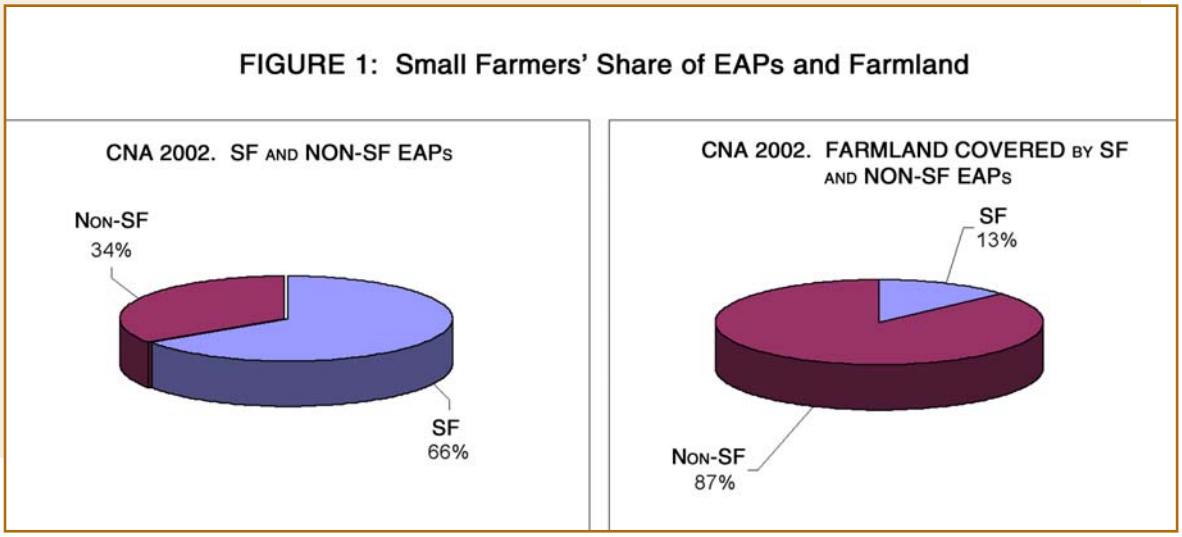
Given the difficulties faced in obtaining secondary information on yields, it must be stressed that the study does not detail the output value actually achieved by small farmers, but rather makes an estimate based on census and extra-census information. The advantage of this approach is that, by calculating a monetary amount, different physical outputs can be combined in a single unit, and then compared with the results obtained by farmers as a whole, which are estimated using the same methodology.

Assigning yields to cultivated farmland was key in estimating value. Two possibilities emerged in this regard. The first was to show the potential contribution of SFs (without the limitations inherent in their lower capitalizaton levels and inferior technology, credit, information management, etc.). To that end, output was calculated based on average yields. The second possibility was to estimate "real" output, using data on small-farm yields.

In the first scenario, the "potential" contribution of small farmers to overall output was 19.3%. In the second scenario, which is based on small-farm yields, their share in overall output was 14.3%.

The study's findings were somewhat surprising when compared to existing views concerning the primary activities of small farmers. Three "extensive" activities – namely, oil-seeds, bovine cattle and grains – accounted for 58% of output. Fruit plantations and field vegetables made up another important group, with 22.5%. Industrial crops (cotton, tobacco, sugarcane, Paraguayan tea), accounted for only 3.9% of output,

FIGURE 1: Small Farmers' Share of EAPs and Farmland



[5] Approximately 2000 different pieces of data were compiled on yields and prices for the 191 featured products. Information was obtained from a variety of sources, only some of which possessed systematic statistical methodologies. Given the diverse and extensive nature of the sources employed, establishing a single yield and price for each product was a difficult task, accomplished mainly through "good research practices", but without the use of a systematic methodology. The methodology employed to process information does, however, allow users to conduct their own appraisals, in order to correct or update the data in the study.

The study's findings were somewhat surprising when compared to existing views concerning the primary activities of small farmers.

even though these crops are grown mainly by small farmers.

The regions that contributed the most to small-farmer output value were Pampeana, Mesopotamia, the Humid Chaco, the dry woodlands region and the Cuyan oases. Taken together, these regions accounted for 88% of total output.

One of the most significant contributions of small farmers involves agricultural labor. At the national level, small farmers account for 53% of all agricultural labor (the equivalent of 428,157 jobs) and 54% of permanent employment in the sector. They also utilize 29% of direct temporary labor.[6]

Small farmers also hire farm machinery. Their share in the overall hiring of machinery is 19%, and 6.9 million hectares of land are worked in this manner. This high figure is a result of the importance of small farmers in the Pampeana region, which is characterized by grains and oil-seeds that are handled primarily using hired machines.

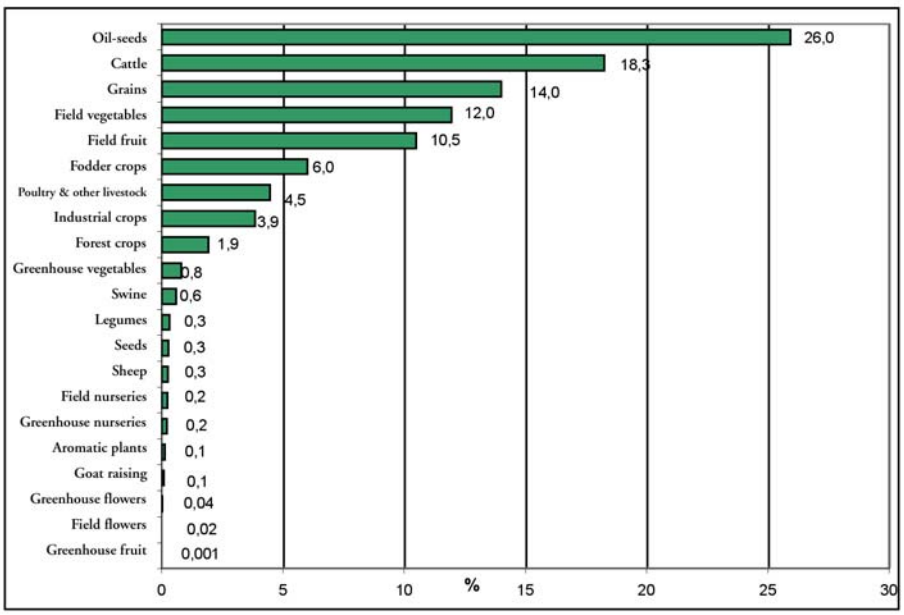
Almost one fourth (23%) of SFs hold outside jobs, in addition to working on their own farms. More than half (58%) of those with jobs work outside of the agricultural sector, while 42% work within the sector. Of these, 55% are wage-earners. Small farmers account for 67% of all farmers with outside jobs, and 81% of all farmers working as wage-earners away from their own farm.

Small farmer types and their contribution to output and labour

The application of the Census classification criteria produced the following distribution of the small-farmer universe: 21% of small farmers were classified as Type 1 – the most capitalized category; 27% were classified as Type 2 (intermediate); and 52% were classified as Type 3 – the poorest in terms of productive resources.

An inverse relationship exists between the percentage of farmers at the two ends of the spectrum and the distribution of farmland; Type 1 farmers account for 48% of hectares, compared to 25% for

Figure 2: Components of Share-scale Agriculture, by Share of Output Value



Source: IICA, with data from CNA 02 (INDEC).

[6] The term "labor" includes, by definition, those whose reported census occupation is "farmer", as well as family workers and temporary workers.

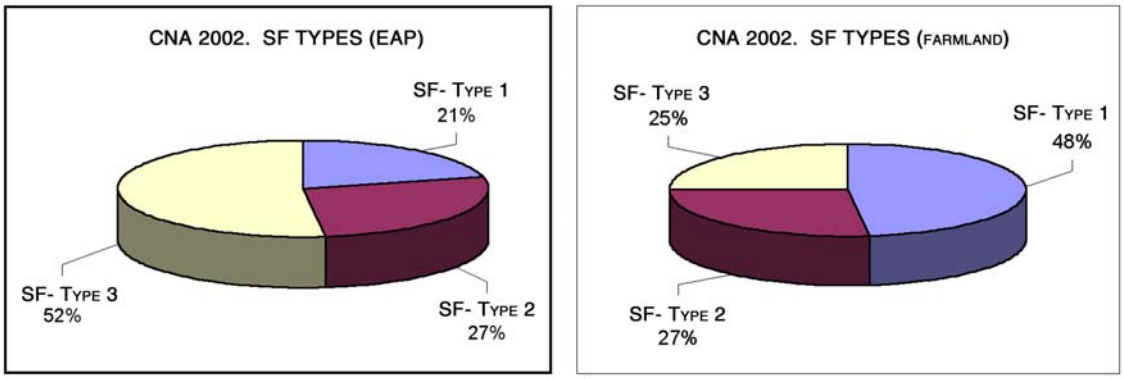
Almost one fourth (23%) of SFs hold outside jobs, in addition to working on their own farms.

Type 3. Among Type 2 farmers, land distribution closely reflects group size; this category accounts for 27% of farmland.

The output share of each type follows a downward curve: Type 1 farmers contribute 9.0% of overall agricultural output value; Type 2 farmers contribute 6.2%, and Type 3 farmers contribute 4.0%.

Activities are not evenly distributed among farmer types. Types 1 and 2 are dominated by extensive crops and bovine cattle raising, which require more capital, while vegetables comprise the largest share of Type 3 activity, followed by the two items mentioned above. One of the study's most interesting findings was the share of oil-seeds (90% of them soybeans) in small-farmer output value. This shows that the expansion of oil-seeds has reached every type of farm.

FIGURE 3: Sf Types



Source: IICA, with data from CNA 02 (INDEC)

Argentina – Small Farmers and Types – Number of EAPs and Farmland

SFs and Types	No. of EAPs	%	Farmland (hectares)	%	Average Farmland
Total SF EAPs	218868	100	23519642		107
SF – Type 1	47032	21	11364699		242
SF – Type 2	58602	27	6268981		107
SF – Type 3	113234	52	5885962		52

Source: IICA, with data from CNA 02 (INDEC).

CONTRIBUTION OF SIX MAIN ACTIVITIES TO SF OUTPUT VALUE

SF Average		Type 1		Type 2		Type 3	
Activity	% total OV	Activity	% total OV	Activity	% total OV	Activity	% total OV
Oil-seeds	26.0	Cattle raising	26	Oil-seeds	32	Field vegetables	23
Cattle	18.3	Oil-seeds	23	Grains	15	Oil-seeds	23
Grains	14.0	Grains	15	Cattle raising	13	Grains	11
Field vegetables	12.0	Field fruit	11	Field fruit	11	Cattle raising	9
Field fruit	10.5	Fodder crops	10	Field vegetables	11	Field fruit	8
Fodder crops	6.0	Field vegetables	8	Poultry and other livestock	6	Industrial crops	8
cumulative % of six primary activities	86.7		92.7		87.6		83.2

Source: IICA, with data from CNA 02 (INDEC).

An inverse relationship exists between labor and output for the three types of farmer. Type 3 accounts for 53% of all SF labor, while Type 2 accounts for 26% and Type 1 accounts for 22%. Type 3 farmers contribute the largest share of work outside the farm – 57%. They are followed by Type 2, with 24%. Type 1 accounts for only 19% of all SFs working outside their own farms. Type 3 also contributes the largest number of farmers working as wage-earners.

Other implications

In addition to its specific results, the study has made a number of contributions to the field:

- It constitutes the first systematic, complete estimate of the share of SFs in agricultural output and employment.
- It is based on an exhaustive, comparative review of background information regarding the concept of small farmer, campesino, family farmer, and the inherent complexities of the search for a definition of small farmer.
- It is based on a structural definition of small farmers, and develops a classification thereof. Both the definition and the classification are expressed in terms of census variables.
- It groups data according to homogeneous ecological regions, and breaks them down by province and department, producing poten-

One of the study's most interesting findings was the share of oil-seeds (90% of them soybeans) in small-farmer output value.

tially useful results for policy and program developers at the national, provincial and municipal levels, as well as for financing agencies, among others.

- It provides a detailed overview of the productive activities of small farmers and the ways in which they utilize labor, classified by type at the departmental level.
- It provides information and analyses on farmland, livestock inventories, output volume and value, labor and employment for all farms. Other users can now profit from this previously unavailable information.
- Its methodology for processing and anal-yzing information can be used in similar studies.
- It employs a data-processing methodology which converts data bases into Excel tables, with information and formulae capable of reproducing analyses and simulating the impact of changes on different variables, thereby providing users not only with results, but also with an analytical tool.

One of the study's most interesting findings was the share of oil-seeds (90% of them soybeans) in small-farmer output value. This shows that the expansion of oil-seeds has reached every type of farm.