

RURAL COTTAGE INDUSTRY IN BRAZIL

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Abstract – In recent years the debate pertaining to the development of rural areas has been enriched by contributions that indicate the growing importance of non agricultural activities in rural areas. These contributions are significant to the Brazilian agricultural establishment and most importantly to what is known as family agriculture. The objective of this study is to contribute to the debate by analyzing available information pertinent to rural cottage industry, in other words rural activity that is not agricultural. This exploratory study has shown that activities pertaining to rural cottage industry are important in supplying the internal market when some products that are clearly present on the agricultural production units, specifically those relying on family production. It should also be noted that on the average, these activities create jobs and income for the families involved and provides significantly higher income than activities in traditional agriculture. The data show that stimulating rural cottage industry can contribute significantly in developing the Brazilian rural area.

Key words: Brazil; rural cottage industry; rural area development.

I – Introduction

In recent years, rural areas have felt the impact of structural changes in the economy primarily related to the process of incipient free trade agreement and the economic integration of South American countries (Mercosul). Reducing or eliminating import duty barriers

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has contributed to a significant decline in the price of agricultural products such as milk, rice, beans and corn (FERNANDES FILHO and CAMPOS, 1998). This decline in the price of agricultural goods has in turn affected the income of production units, specifically family based units, thus worsening the crisis in the area². This crisis can also be linked to economic stability occurring between July 1994 and January 1999, leading to a discernible enhancement of the exchange rates. This resulted in price reductions of imported goods in the internal market, increased interest rates and increased production costs. The subsequent decrease of the conditions of sustainability of these production units, caused by their diminished revenue³, is another facet of this crisis.

Researchers studying the issue of development, segments of civil society and different levels of government are looking for ways in which to assist in the recovery of sustainability of these family units. One alternative proposed is to stimulate the development of rural non agricultural activities in these production units by encouraging activities such as improvement and transformation of traditional agriculture also known as rural cottage industry.⁴ What is being proposed in this article with the idea of contributing to the debate while analyzing the social and economic relevance, is a discussion of the importance that this rural cottage industry has for the country. The discussion will also include an analysis of the ways in which support for this industry will affect overall development of the country. It should also be made clear that this study in discussing the importance and

² Agricultural census data indicate that between 1985 and 1995-96, there was a significant decrease in the number of farms (16%), the area used to produce temporary crops (19%), area used to produce permanent crops (24%), and the number of persons involved in agriculture (23%). (AGRICULTURAL CENSUS, 1985 and 1995-96).

³ Evidence of this diminished revenue from agricultural activity can be obtained from the Price Paid Index – PPI and the Price Received Index that farmers received– PRI, calculated by Fundação Getúlio Vargas. The PPI provided a price variation of 103.46%, whereas the PRI indicated a variation of only 60.45%, from August 1994 to 2000. (AGROANALYSIS,12/2000).

⁴ The name rural industrial handicraft has been used to differentiate this industry from rural industry in general, in that it refers only those activities that are labor intensive and use little or no automation or machines and are part of an integrated family agricultural production.

the role of rural cottage industry, will also contribute to the debate on development of rural areas of the country in that this issue is rarely brought into question in the Brazilian literature that discusses the problem of rural development.

To begin this analysis it will be cogent to study the relationship that exists in the literature in terms of rural development and capitalism in agriculture. Subsequently, an analysis will be carried out of the relationship between rural industry and the rural area, specifically family based production units, present in the literature and in development programs implemented by official structure. Based on the available data, the analysis will examine the recent development in rural cottage industry in Brazil, indicating the main products and their importance in generating financial resources, regional and statewide distribution and their importance in supplying markets.

II – Rural Industry and the Development of Capitalism in Agriculture

The concept of Rural Industry that will be used in this paper is suggested by the Brazilian Institute of Geography and Economics (Instituto Brasileiro de Geografia e Economia – IBGE). The IBGE defines rural industry as being “...activities that transform and increase the value of (plant or animal derivative) agricultural products, produced in existing business organizations or in other locations such as flour or sugar cane mills.⁵ Although this definition is significantly more restricted than others that appear in the economic literature, this study will have as its principal source of data Agricultural Census taken by the IBGE.

The concept of rural industry as proposed by authors such as Marx (1987), Kautsky (1980) and Lenin (1992) is more comprehensive than the definition used in this paper. These authors understand rural industry as encompassing all manufacturing activities carried

⁵ Production obtained from industrial units located in agricultural establishments, that were duly licensed, were not included in the Agricultural Census. Thus, the data presented herein significantly underestimates the importance of these activities to the establishments in question.

out in rural production units and subsequently, with the process of social division of labor intensified, these activities became part of the activities carried out in cities.

Marx (1987), suggests that the destruction of natural rural economy and consequently its economy began with the agricultural revolution –in the last quarter of the XVth century and most of the XVIth – and is completed when the of the capitalist mode of production is introduced. The destruction of rural industry resulted in the separation of city and rural areas – manufacturing processes were developed in cities and only activities pertaining to plant and animal production remained in the rural areas. Thus, the separation between agriculture and manufacturing occurs. This separation, therefore, begins with the manufacturing process and is completed with capital production. It is thus possible to say that when capitalism is introduced in agriculture, it lead to the destruction of rural industry.

Silva (1996a), in his analysis of the process of development of capitalism in Brazilian agriculture, suggests that in this case also, this process brought about the separation of cities and the rural areas, given the continuous dislocation of manufacturing activity. Previously, these activities were hand made in the agricultural production units that were part of rural areas and subsequently sent to the cities. In addition, this author points out that the development of capitalism in Brazilian agriculture was slow. It began in 1850, with the development of coffee plantations in the State of São Paulo. Thus, the development of capitalism in Brazilian agriculture also contributed to the destruction of rural industry as understood by the classical authors.

Nonetheless, in Brazil, the development of capitalism in Brazilian agriculture cannot be seen as developing on the same magnitude and intensity as proposed by Marx (1987), in that rural industry and its related activities were not completely destroyed, particularly those activities that transformed and improved the quality of plant and animal derivatives. It is relevant to note that even today in many rural areas of the country, as the data analyzed will show, there is still

a significant rural industry in terms of the number of agricultural production units that develop these activities as well as the furnishing employment and income to the local population.

III – Rural Industry and Rural Development in Brazil

In recent years, Abramovay (1997), Campos, Fernandes Filho and Oliveira (1999), Carneiro (1998), Carvalho (1997), Centeno (1997), Graziano da Silva (1996), Navarro (1997) and Wilkinson (1999), have pointed out the role that non agricultural development activities such as crafts, rural tourism, rural industry, have in the development of rural areas in Brazil. Graziano da Silva (1996), for example, notes that non agricultural activities are relevant in the dynamics of rural employment. Thus, the expansion of rural employment cannot be explained simply by the expansion of traditional activities carried out in rural areas.

The authors mentioned above suggest that the rural area is no longer defined exclusively by agricultural activity. Most rural producers can no longer be defined as farmers or cattlemen in that more and more they seek to complement and diversify their income by working with agricultural and non agricultural activities, the latter demonstrating a significant degree of dynamism.

The quest, on the part of farmers, to develop non agricultural activities in rural areas can be explained by the crises of reduced profits that traditional agriculture is facing. This crisis has contributed to a significant reduction in employment in rural areas as well as reduction of the area cultivated. On the one hand, Graziano da Silva (1998), suggests that families that live in rural areas and are involved in activities that coexist with traditional farming have, on the average, an income that is 43% higher than farmers who are exclusively involved in traditional agriculture. On the other hand, the development of these non agricultural activities is enhanced by the fact that in many regions of the country farming no longer requires intensive manual labor and also in that technology has been incorporated into the productive process. Thus,

more time can be dedicated by the farmer and family to the development of non agricultural related activities (Campos, Fernandes Filho and Oliveira, (1999). Another factor that enhances the development of non agricultural activity is the seasonal nature of production.

Because of its specific nature, an important characteristic in assisting rural industry is that it is a non agricultural activity which is influential in developing rural areas. In providing assistance for these activities also provides a stimulus for traditional farming practices such as milk production, raising sugar cane, manioc, fruit, corn production and raising hogs, in that the value of these products will be significantly increased and modified by rural industry.

Maluf and Bilbao (1988), suggest that an important aspect of these activities of increasing the value and modifying these products is that generally work techniques are uncomplicated and intensive. By this it is meant that manual dexterity and knowledge of the product are essential elements in developing these activities. Vieira (1998), stresses the fact that technology used in the production of these goods is provided by members of the producers family. Thus, in addition to creating jobs and income, the knowledge of these producers contributes in improving self-esteem and enhancing the rural area.

Vieira (1998), suggests that the producer is motivated to develop activities linked to rural industry. This author points out that rural industry uses the surplus goods that are not absorbed by traditional markets in that at times these goods are not up to the standards required by the market or do not meet quality control requirements. Another factor is that by increasing the value of surplus goods the farmer is able to withstand price fluctuation of farm products. Vieira, nonetheless, emphasizes that in general farmers pay little or no attention to quality, packaging or marketing their product. These factors almost always contribute in reducing access to modern techniques of marketing strategies and tends toward informal commercialization of products. Thus, a lack of standardization in terms of intrinsic quality and packaging, linked to limited and dispersed pro-

duction, deficient marketing techniques, causes these activities to appear transitory.

To alter this scenario the participants in this context are beginning to articulate strategies to improve the situation. The strategy being developed to solve this problem is being thought out in the Federal District of Brasilia. From 1995 to 1998, the Secretary of Agriculture developed and carried out a Program of Verticalization of Small Family Farm Production (PROVE). This program, at the time it was put into effect, had as its objective verticalization of the production of small farmers as a means of providing income and jobs in rural areas. The aim was also to provide technical, economic and financial assistance, thus allowing family farmers to build agro-industries and market their products.

The results obtained from PROVE, Program of Verticalization of Small Family Farm Production in employment terms of creating jobs, showed that 300 family based agro-industries, generated 7,400 jobs. Of these jobs 2,400 were directly related to agro-industries and the income from them was considered satisfactory.⁶ Nonetheless, critics of the program have pointed out that for the program to show positive results, high levels of subsidies were required. Wilkinson (1999:85), suggests that in effect it is not a major problem if with the withdrawal of subsidies "...the subsidies are dynamic and presupposes, that eventually the projects will be self-sustaining."

In general these producers have little or no financial resources, do not have access to rural credit nor do they have access to technical assistance, are not aware of modern management techniques, do not know how to maintain or package their product, thus making the PROVE subsidies vital in assisting farmers in keeping rural family industries in business. Even though initial investments are low and taking into account the fact that the produce available from the farms

⁶ Seeking to provide incentive to similar programs in other regions a non governmental organization known as Support for the Verticalization of Small Family Farm Production was created – APROVE. The results from this NGO indicate that the ideas of PROVE have spread to other regions of the country and similar programs have been created in Campina Grande – PB, Franca – SP, Pantanal – MS and Minas

constitutes the unprocessed material on which production is based, subsidies are extremely important.

Other authors have sought to encourage rural development by creating projects that integrate agricultural and non agricultural industrial craft activities with the aim of increasing the value of agricultural products. Many examples of success stories are available in written and televised accounts.

State governments are providing incentives for rural development through rural industry. In the State of Minas Gerais, a project known as Selo Azul (Blue Seal), has as its objective the elimination clandestine cottage industries in the State of Minas Gerais. This project seeks to establish norms, warranties and guarantee the quality of the crafts produced such as cane liquor (cachaça), sausage, cheese, sweets and candies which are part of traditional foods in the State of Minas Gerais. The intention is to increase the value of the product while reducing costs (Revista Globo Rural, May, 1999).

Another program that was recently instituted in the State of Minas Gerais is the Programa de Qualidade da Cachaça de Minas – Pró Cachaça (Program to Improve the quality of Cane Liquor in Minas). The objectives of this program include establishing rules of certification, quality and origin of the cane liquor produced in Minas, providing quality control and overseeing the farms that make the product. It is hoped that by maintaining the standards of production, the overall conditions of marketing the product will improve.

The Federal government has also tried to stimulate development of agro-industry in terms of farm production. The Federal government established a program (AGREGAR), linked to the National Program for the Strengthening of Family Agriculture, the goal being to give financial assistance at low interest rates, thus strengthening activities that would encourage direct employment of family members.

Incentives of rural cottage industry consequently became of interest to groups that wanted to develop rural areas. As a result of this interest, rural craft industry has had a significant role in creating jobs and income, particularly in farms that depend on the labor of family members.

Hence, it can be stated that the industrialization of agricultural products results in a promising source of income and in turn generates jobs for rural producers and rural areas as well. In general it should be noted that investments necessary to build rural industry are relatively low and unprocessed material is easily obtained on farms (productive units). In addition, craft activities are generally labor intensive and therefore contribute to new occupations in rural areas. Thus, incentives designed to stimulate building rural industry will increase the accrued value of local products as well as increasing the self-esteem of rural producers (farmers). It will also absorb the excess labor force, particularly of young people, ultimately avoiding rural exodus.

IV – Rural Cottage Industry in Brazil

Data analyzed in this study were taken from the 1995-96 census of the IBGE. Based on the data presented in Table 25 of this census, approximately 1,100.838 establishments, or the equivalent of 23.76 percent of the total, state that they were involved in one or another type of rural craft industry in 1996. The informants are grouped by economic activity such as temporary crops (43.93 percent), cattle raising (19.95 percent), assorted production (19.77 percent), and permanent crops (12.06 percent). In terms of the size of the land cultivated, farms of up to 100 hectares constituted 90,19 percent of farmers interviewed. The census, nonetheless considers products such as beef and meat from other animals, coffee, rice that in terms of this study will be excluded from this study in that processing these products adds relatively little value to the end product. Therefore, these products will be excluded from the analysis.

IV.1 – Classification of the Rural Area

The principal products of rural Brazilian industry in 1995, in terms of the number of agricultural establishments that responded to having this type of activity on their farms are listed in Table 1 below.

The products that are available on a large scale basis are manioc flour, cheese and cream cheese. These products are present in 13.45 percent and 7.3 percent, respectively, of Brazilian agricultural establishments (Third column, Table 1).

Some activities presented on the Census list will be excluded from the analysis and this list will be analyzed with the intent to establish the number farms that are involved in rural industry. Census data, however, do not make it possible to calculate percentages in that the data provided do not discriminate among establishments that are involved in only one cottage industry and those that are involved in more than one activity. It is clear that the percentages will, at the very least, be similar to percentages obtained for manioc flour (13.45 percent). It may be possible to obtain an approximation of the percentage by using the formula for weighted average, by determining the activity with the highest percentage of these activities in each state. In other words, taking into account farms with the largest production for each state and weighting these percentages by the total number of establishments in the state, based on the formula below.

$$\text{Weighted average} = \frac{\sum X \cdot P}{P}$$

where:

x represents rural industry with a higher percentage in each State, and

p represents the total number of establishments per State.

Table 1 – Principal Products of Brazilian Cottage Industry and the average contribution to the revenue of establishments of up to 100 acres corresponding to the 1995-96 fiscal years. 1995-96

PRODUCTS	RESPONDENTS		AMOUNT (T)			AVERAGE CONTRIBUTION TO INCOME PER ESTABLISHMENT OF UP TO 100 HEC ** (7)
	NUMBER	PERCENTAGE	PRODUCED	SOLD	(5) / (4) PERCENTAGE	
-1	-2	* (3)	-4	-5	-6	
Sugar	31.129	0,64%	19.831	16.28	82,09%	RS 76,08
Cane liquor	21.765	0,45%	106.98	93.953	87,82%	RS 1.793,89
Fruit liquor	275	0,01%	107	53	49,77%	RS 198,73
Grape liquor	927	0,02%	341	48	14,16%	RS 54,17
Cane alcohol	377	0,01%	4.865	4.683	96,26%	RS 906,52
Manioc/cassava residue	6.166	0,13%	4.613	1.205	26,13%	RS 25,55
Palm oil (dendê)	1.515	0,03%	2.926	2.853	97,48%	RS 736,42
Hominy	3.1	0,06%	355	56	15,87%	RS 6,87
Cracked hominy	950	0,02%	687	18	2,67%	RS 4,56
Manioc/cassava flour cakes	1.814	0,04%	1.859	899	48,38%	RS 305,38
Jerky/charqui beef	27.438	0,56%	3.622	808	22,30%	RS 67,73
Clabber	4.329	0,09%	1.243	414	33,33%	RS 73,36
Fruit preserves	10.304	0,21%	1.468	441	30,04%	RS 41,92
Leather and hides	48.279	0,99%	1.777	1.387	78,03%	RS 28,08
Cream	23.064	0,47%	6.506	824	12,67%	RS 29,22
Caramel	7.549	0,16%	2.994	2.697	90,07%	RS 594,53
Preserves	112.813	2,32%	9.477	2.542	26,83%	RS 66,79
Cassava/manioc flour	653.739	13,45%	1.478.979	1.123.292	75,95%	RS 592,99
Crystallized fruit	699	0,01%	336	253	75,37%	RS 573,51
Corrmeal	75.681	1,56%	56.369	5.793	10,28%	RS 17,75
Fine corrmeal	807	0,02%	813	520	63,93%	RS 155,49
Tobacco (leaves)/twisted	26.356	0,54%	18.843	17.379	92,23%	RS 1.029,96
Cane juice	2.604	0,05%	3.673	2.263	61,61%	RS 328,23
Jellies	18.245	0,38%	1.217	419	34,39%	RS 28,48
Fruit Liqueur	418	0,01%	94	49	51,56%	RS 95,44
Butter	82.568	1,70%	6.516	4.126	63,32%	RS 73,39
Manioc/cassava dough	2.601	0,05%	1.618	1.116	68,99%	RS 163,78
Molasses	69.412	1,43%	20.682	9.513	46,00%	RS 68,07
Other products	72.278	1,49%	74.327	42.166	56,73%	RS 194,97
Fruit paste	15.663	0,32%	4.373	3.073	70,27%	RS 119,53
Manioc/cassava flour (refined)	87.91	1,81%	40.749	24.399	59,88%	RS 140,58
Cheese and cream cheese	358.619	7,38%	202.262	162.983	80,58%	RS 867,91
Brown sugar (unprocessed)	56.645	1,17%	79.267	67.454	85,10%	RS 491,05
Grape juice	1.852	0,04%	360	125	34,74%	RS 68,66
Tapioca	18.421	0,38%	7.297	4.964	68,02%	RS 285,48
Manioc/cassava brandy	1.568	0,03%	990	699	70,60%	RS 293,94
Sugar cane vinegar	298	0,01%	81	11	13,93%	RS 16,28
Grape vinegar	5.895	0,12%	924	204	22,03%	RS 22,95
Wine (fruit)	1.423	0,03%	906	367	40,56%	RS 143,24
Wine (grapes)	19.906	0,41%	25.363	10.424	41,10%	RS 259,72
Cabbage palm Syrup	16.085	0,33%	17.312	208	1,20%	RS 6,73
General	-	-	-	-	-	RS451,58

* Number of establishments that informed to develop this activity divided by the total number of establishments.

** Medium contribution of the activities related to elaborates her rural striped in this table for the monetary income of the unformed establishments of the inferior strata to 100 hectares.

Source: IBGE, Census Agricultural 1985 and 1995-96. Elaboration of the Authors

Using the above formula it is possible to note that activities linked to rural industry are present in at least 18.26 percent (887,411 in 4,859.865) of the total number of establishments.⁷ Thus, it is possible to state definitely that in more than 18 percent of the establishments cottage industries are in existence. This percentage approximates the observation made when all the activities listed in the census, 23.76 percent, and is an indicator that the exclusion of those activities does alter the results obtained.

It is relevant to point out that even though a given activity is not specifically represented at the national level it does not imply that it may not exist at a regional, state or even within regions of a given state, thus making it possible and relevant in providing income and jobs in that specific area of the country.

An analysis of regional spatial distribution of rural industrial activity (cottage industry) of larger regions, indicates that products of the cottage industry are not uniformly present in larger regions or among the States. Exceptions are cheese and cream cheese, manioc flour and refined manioc flour. These products are present in almost every State.

The distribution, however, is not uniform either among States or within the individual States. Research conducted in the State of Minas Gerais and that does not appear in the data, shows high individual percentages for the existence of cottage industries. Within this type of activity – the largest is the production of cheese and cream cheese at 11.64 percent. Data indicate that farms providing information and that were actively involved in rural industry are also clustered in mid regions of the North of Minas Gerais and Jequitinhonha valley. In these regions, agro-environmental conditions are not amenable to traditional agriculture such as raising corn, rice and beans and these areas also present the lowest levels of development (Campos, Fernandes Filho and Oliveira, 1999). In this context, support for rural non agricultural activities is perhaps the only alternative. Thus, even in States that have a low level of con-

⁷ For the States located in the North and Northeast of the country percentages used were those of refined manioc flour. For States located in the South, Southeast and Midwest percentages used were those taken from cheese and cream cheese production.

centration of activity in this area, specific regions may show significant levels of these activities.

In terms of the larger regions, almost all present index of rural industry in the farms participating in the census, with percentages above 10 percent. In the North for example, manioc flour showed a production of 40.04 percent; in the South production of cheese and cream cheese 18.82 percent and preserves 10.82 percent. In the Northeast, 18.01 percent of manioc flour represented the production of the region; in the Midwest 12.73 percent cheese and cream cheese represented the production of the region. An exception to this trend is to be found in the southeast where cheese and cream cheese at 8.47 percent, represent rural agricultural production.

Proceeding with the regional analysis it is possible to state that the region which presents the least diversity of rural agricultural products is the North and the region that presents the greatest variety of products is the South. Nonetheless, there is enormous wealth in terms of alternative activities related to rural industry and these activities would benefit from development policies aimed at rural areas.

At State levels the data indicate that most States have at least one rural agricultural industry at or above 10 percent and nine States present levels of 20 percent. The largest percentages were found in the States of Amazonas and Pará where the production of manioc flour is at the level of 67.41 percent and 48.02 percent of the establishment. Only the States of Espírito Santo, Rio de Janeiro, São Paulo and Mato Grosso show levels of production at less than 10 percent. The States that have greater diversity of rural agricultural activities are Rio Grande do Sul, Santa Catarina, Piauí, Minas Gerais and Ceará.

IV. 2 – Economic Importance⁸

The economic importance of rural agricultural industry/cottage industry in Brazil can be measured in terms of the quantity/volume produced, the price of production, and the average revenue, the

⁸ Given that the census does not take into account rural agricultural industry/cottage industry produced by duly licensed establishments, the data underestimates the contribution of this activity to the income creation of jobs in rural areas.

contribution to the supply of the production unit and the market value as well as consumption of unprocessed goods produced in agricultural establishments. The existence of these activities in agricultural establishments was analyzed in the previous section.

The most important products of the rural industry in terms of volume/quantity of production are: Manioc flour 1,478.979 tons; cheese and cream cheese, 202,262 tons; cane liquor, 106,980.000 tons; unprocessed brown sugar, 79,267 tons; other products, 74,327 tons (column 4, Table 1).

In terms of the worth of the revenue, the principal products are: Manioc flour R\$403,886,551.00; cheese and cream cheese, R\$402,830,588.00; cane liquor, R\$54,485,363.00; unprocessed brown sugar (in cakes) R\$32,919,002.00; rolled or cord tobacco R\$28,194,875.00. On the one hand, the total amount of the revenue obtained from these products add up to R\$1,022,583,648.00. On the other hand, the revenue from rural industry adds up to R\$1,381,383,995.97, hence, approximately 74.03 percent of the production, measured in terms of revenue, is marketed. Thus, either in terms of quantity of production, in terms of revenue, or in terms of the worth of production the numbers obtained from rural agricultural production are significant.

The analysis calculates the average contribution of the rural agricultural activities to the income of the establishment. The following procedures were adopted in order to calculate revenue from these activities. Given that the interest of this research is to see the potential of these activities particularly in terms of development of the weakest agricultural sectors and consequently these were the ones most affected by the current crisis in agriculture – the analysis will be limited to establishments of up to 100 hectares. To calculate the average contribution the formula used was weighted where x is the average contribution for income of each product of rural industry in farms/establishments and p is the number of establishments of up to 100 hectares that supplied data.

The average contribution of activities related to rural industry to the revenue of establishments that provided data at less than 100

hectares was R\$451.58 (last line of column 7 Table 1).⁹ Activities that provide the greatest contributions are: Cane liquor, R\$1,793,89; tobacco R\$1,029.96; alcohol derived from sugar cane R\$906.52; cheese and cream cheese R\$867.91; palm oil R\$736.42; milk products in the form of caramels R\$594.93; manioc flour R\$592.99; candied fruit R\$573.51; unprocessed brown sugar R\$491.05. In general, the products of rural agricultural industry that contributed to the income of farm families are those with the largest percentage of produce marketed.

To give a better idea of the importance of these activities in generating revenue for these establishments a comparison will be made between the revenue from the cottage industry and traditional agriculture. Only farms of up to 100 hectares will be considered. The average contribution of R\$451.58 is significantly superior to the revenue from rice (R\$357.65), beans (R\$212.84), manioc (R\$248.03) and corn (R\$347.42) given the revenue of the establishments that furnished data.¹⁰ The revenue is only lower than obtained from milk (R\$2,839.99). On the average, contribution of these products to income is R\$546.41.¹¹ The fact that the contribution of these products to the family income is 20 percent higher than the contributions of rural industry does not overshadow the point being made that is that rural industry has an important contribution to make in the development of rural areas, particularly in regions where diverse structural factors reduce the ability to compete with traditional products such as rice corn and beans.

⁹ It would be ideal to calculate income (gross or net) as provided by rural industry, but the data of the Agricultural census do not make it possible. This fact, nonetheless, does not flaw the analysis in that this activity there is no significant difference between revenue and income in that to carry out these activities it is not necessary to obtain significant input of resources.

¹⁰ Although it is true that the value of these products were lower due to the commercial opening and economic integration, particularly after the Real Plan (Fernandes Filho and Campos, 1998:981), and it is also true that prices of rural agricultural industry were negatively affected. This meant that the relationship observed should be the equivalent to the one noted above if there had not been commercial opening and economic integration. It should be noted also that the most important fact is that the contribution of rural industry is significant in terms of the revenue provided to farm families.

¹¹ To calculate these values the procedure was the same as above.

Table 1 also presents (column 6), the market to which the production will be sent. It is possible to note that of the 41 products listed, 21 will be commercialized in domestic markets and the domestic market is important for a major part of rural industry. In terms supplying the internal market an analysis of the data indicate that rural industry makes an important contribution.¹² For example, manioc flour represents 68.5 percent or 1,123,296 tons in 1,638,864 tons¹³; cheese and cream cheese represents 31.1 percent or 162,983 tons in 523,00 tons¹⁴; refined manioc flour represents 9,8 percent or 24,399 tons of a total of 249,136 tons; and cane liquor 9.3 percent or 93,953,0001 tons of a total of 1,000,000,0001 tons. Other products such as raw brown sugar and tobacco the percentages tend to be higher but it was not possible to make an estimate due to the lack of information in terms of the total quantity of these products produced and consumed nationally.

The economic importance of rural industrial/cottage industry activity is also evident by the fact that it is an important consumer of traditional agricultural products. The main unprocessed products processed by the rural agricultural industry/cottage industry are cassava, made into refined cassava flour, cassava flour, tapioca, cassava brandy, sun-dried cakes of cassava/manioc flour, beaten cassava/manioc, cassava/manioc chips; milk, made into cheese and cream cheese, butter, caramels, cream, clabber; corn, made into cornmeal, hominy; sugar cane, made into molasses, unprocessed brown sugar, alcohol, vinegar, liquor; grapes, made into juice, wine vinegar, liquor; beef cattle, beef jerky, leather and hides. So as to have an idea of the economic importance of these products, an estimate was calculated of the percentages of two unprocessed goods that were processed in the rural cottage

¹² Only part of the production of rural industry/cottage industry for market was considered in the analysis (Table 1).

¹³ Data of CONAB (2000) was used when analyzing total market consumption of manioc flour and refined manioc flour. To estimate the value for 1996 an rate of variation as calculated by ABIA (1999) was used.

¹⁴ In analyzing cheese and cream cheese market consumption it is the sum of industrial production (ABIA, 1999) added to rural industry/cottage industry intended for market consumption

industry¹⁵: cassava/manioc 32.38 percent and cows milk 12.11 percent. Thus, it is clear that support of rural industry also implies support of traditional agriculture and creates jobs and income.

In sum, the economic importance of activities linked to rural industry is significant in terms of the total quantity produced, its contribution to family income, the percentage of unprocessed goods that is processed, the percentage of the market that is supplied by rural cottage industry. However, it should be noted that the importance of this industry will vary from region to region.

IV. 3 – Social Importance

The importance of activities related to rural cottage industry in terms of its social relevance is, for example, resides in the fact that this industry generates direct and indirect jobs in rural areas.¹⁶ For example, the production of unprocessed goods used in rural cottage industry and using methodology proposed by Petti et al (1999), the following numbers, significant numbers, in terms of direct jobs created, were measured in terms of the equivalent/man/year (EMY),¹⁷ selected activities: manioc/cassava – 429,113 EMY, milk – 59,725

¹⁵ Only products that were to be marketed were considered. To calculate the percentages the parameters of conversion from unprocessed goods/processed goods: Manioc/cassava – 1 ton of cassava/manioc produces 200kg of tapioca; 200kg of refined manioc flour; 250 to 270kg of manioc flour; milk – a)cheese 6 to 6.5lt produces 1kg of fresh cheese, 8to 8.5lt produces 1kg of regular fresh cheese, 10lt of milk produces 1kg of muzzarella; b) Caramels10l of milk produces 3kg of creamy caramels; c) Butter and cream cheese 10 lts of milk produces 360 gr of butter,10lts of milk produces 450 gr of cream cheese, 35lts of milk produces 1 kg of cream cheese, yogurt, buttermilk – 100 percent yield. Data were obtained from the 1995-96 census and those referring to rural cottage industry production that was sent to markets were obtained from Table 1.

¹⁶ An estimate of direct and indirect land use as a result of rural industry/cottage industry is difficult to calculate in that agricultural census information does not specify these activities as being related to the economy nor does it give an estimate of the jobs created based on the quantity of goods produced in each of the cottage industries/rural industries.

¹⁷ The calculate these values the following methodology was used: The coefficient EMY/ 100 hectare (Petti et allii, 1999), was multiplied by the total area used in the production of unprocessed goods and turned into processed goods by rural industry/cottage industry with goal of marketing these products. An estimate of the area used was obtained by dividing the quantity of unprocessed goods that was processed and the average production of each hectare.

EMY; sugar cane – 6754 EMY. The rate of job creation is underestimated given that in general, production per hectare is less than in establishments/farms that are involved in activities related to rural industry/cottage industry. In addition, only unprocessed goods destined to be marketed were included in the account.

It was impossible to obtain an estimate as to the number of jobs created in activities related to processing agricultural products due to the lack of guidelines. Nonetheless, given that the processing of these goods are hand crafted, and labor intensive, it can be assumed that they create a significant number of jobs in rural industry/cottage industry.

One other element that must be pointed out to the importance of this activity in creating jobs is that some of these activities – among them it is possible to mention, in terms of the quantity, value of sales and production, manioc/cassava flour, refined cassava flour, cane liquor and raw brown sugar – occur at the time of year when there is a very limited need for farm workers in the traditional agricultural sector. Perhaps with the exception of milk, corn, leather, beef and pork, that are processed the year round, it is possible to state that other unprocessed agricultural products are processed at certain times of the year. In other words, processing of manioc/cassava, sugar cane, fruit in general, grapes and tobacco, that require immediate processing after harvesting so as to obtain the best results, these products can only be processed at specific times of the year. Harvesting sugar cane and cassava, for example, can only be accomplished during the dry season, when the requirements of workers who participate in the harvest of traditional crops, such as corn, beans and rice, are significantly less. Thus, in these cases there is a concentration of labor in rural industry/cottage industry specifically when there is an availability of workers on farms. Thus, there is an incentive for the units of production to develop activities in rural agricultural industry/cottage industry in that jobs as well as income are generated without affecting the traditional agricultural activity and also contributes in maintaining these establishments as stimulating their social and economic growth.

Even when there is an overlap in rural agricultural industry/cottage industry and traditional agricultural tasks, even then, there is an incentive to develop both activities at the same time and one activity does not hinder the other. This occurs because many of these activities, such as preserves, cheese, leather, do not occupy all members of the families involved all the time, making it possible to accomplish other jobs as well, in the course of a day.

The social importance of rural agricultural industry/cottage industry also resides in the fact that their existence is concentrated in family run establishments and are usually relatively small enterprises that are located in agro environmental regions that do not favorably produce grain and which are not affected by negative conditions of sustainability. Therefore, what characterizes rural agricultural industry as being labor intensive, is not negative but is an indicator of the contribution that it can make in terms of creating jobs in these establishments.

Therefore, the significance and the importance of rural industry/cottage industry in Brazil on agricultural establishments/farms cannot be underestimated in terms of their ability to create jobs and income in these locations. This is an important contribution to making these production units social and economically viable.

V – Final Thoughts, Some Final Observations

The analysis carried out in this paper demonstrated the economic and social importance of rural agricultural industry/cottage industry in the rural areas of Brazil and for the country as a whole. It indicated for example that there is a significant contribution of rural agricultural industry in creating jobs and income in agricultural establishments of up to 100 hectares. There is also evidence that these establishments absorb unprocessed goods produced by these farms and supply internal markets with several products. This indicates that although there was reduction of establishments that gave information in terms of the activities presented between 1985 and 1995-96, rural cottage industry increased its importance in terms of creating jobs and income in agriculture.

Thus, the study shows that in Brazilian agricultural establishments there are many instances in which the development of activities related to processing of agricultural products, designed to increase the value of these products, that could be given incentives with the intention of developing rural areas. Data indicate that providing incentive to these activities make an important contribution to the development of rural areas and that the problems related to rural agricultural industry, as in the case of the Federal District (Distrito Federal), in terms of hygiene, quality, stability of supply among other factors, as a result of the use of inappropriate equipment, inadequate processing, untrained workers and inefficient marketing strategies – to which low cost solutions would provide answers – if there were decisive action on the part of government agencies and organizations of citizen groups.

Thus this study suggests that the State and organized citizen groups should stimulate programs that provide incentives to rural agricultural industry as a means of creating jobs and income in agricultural units, thus, contributing to improving their sustainability. It is further suggested that researchers that are in process of studying the issue of development in rural Brazilian areas pay more attention to the important role that rural cottage industry, and the role that it could have in improving rural areas and creating jobs and income.

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