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## PARCELS OF NON-FARMING RURAL FAMILIES AND METHODS OF USING THEM

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**ABSTRACT.** One of the determinants of the transformation process in agriculture and socio-economic changes occurring within rural areas is constituted by progressive status variations of inhabitants of rural areas resulting from the diversity of income sources. As indicated by the research of IAFE-NRI, nearly 57% of inhabitants of rural areas do not possess a farm. These families, referred to as non-farming or non-farmer ones, make a living by earning money beyond agriculture, but it does not mean that they do not possess or use smaller land parcels. Over  $\frac{3}{4}$  of them have a parcel at disposal whose area does not exceed 1 ha of agricultural land. The area thereof is usually small, but the advantages derived from them seem to be significant in the life of non-farming rural families.

**JEL Classification:** O18, P25    **Keywords:** rural areas, agricultural parcels, non-farming families.

### Introduction

Pursuant to legal regulations applicable in Poland, a unit with area of over 1 ha of agricultural land is regarded as a farm. Following this criterion, rural families can be divided into farming ones, i.e. the ones that possess such a farm, and non-farming ones having a farm with area of over 1 ha at disposal. While making such a division, it turned out that over a half (56.9%) of families inhabiting rural areas do not use a farm. It does not mean, however, that these are the farms that do not have land. Within this community, over 79% use land with area amounting to a maximum of 1 ha of agricultural land, which is defined as a parcel. Although they are small, they perform an important role in determining the conditions of living of non-farming families. Therefore it has been concluded that it serves a specific purpose in the characteristic of parcels that are at disposal of non-farming families.

Information collected during research conducted by IAFE in 2005 among all families inhabiting 76 villages has been used for the analysis of the issue in question. In general, the survey covered 8,604 rural families, among which every second family did not possess a farm. The main problems included in this chapter are: the scale of parcel prevalence, the size thereof and use directions. The issues of using parcels for agricultural production or livestock breeding were also considered. All the motifs in question have been compared with the

research results from the previous surveys in 1996 and 2000, which allowed to trace the directions of changes that have occurred in this field within 10 years.

### Non-farming families possessing parcels

The research of IAFE-NRI indicates that 43.1% of 8,604 families inhabiting the surveyed villages possessed a farm, 44.9% – a parcel, including a farm with area amounting to a minimum of 0.1 ha of agricultural land – 28.4%. In comparison with 2000, the number of farming families decreased by over 2 pp while the number of those with a parcel increased by nearly 3 pp, therefore it can be concluded that the decrease in the number of farms and increase in the group of families possessing parcels only, observed already in the research conducted in 1988, is still in progress and is primarily a result of keeping small land parcels by the retiring farmers. Possession of such a parcel is regarded as one of the possibilities of improving a difficult financial situation of non-farming rural families.

With regard to the group of non-farming families only, the share of units having a parcel at disposal in 2005 amounted to nearly 79% and was higher by 1.7 pp in comparison with similar research conducted in 2000. This means that the percentage of non-farmer families possessing a parcel is still increasing, but this increase is not as dynamic now as in 1992-1996. In this period, the average annual growth rate of parcels of the total non-farming families amounted to 2.55% and was the highest in the analysed period (Figure 1).

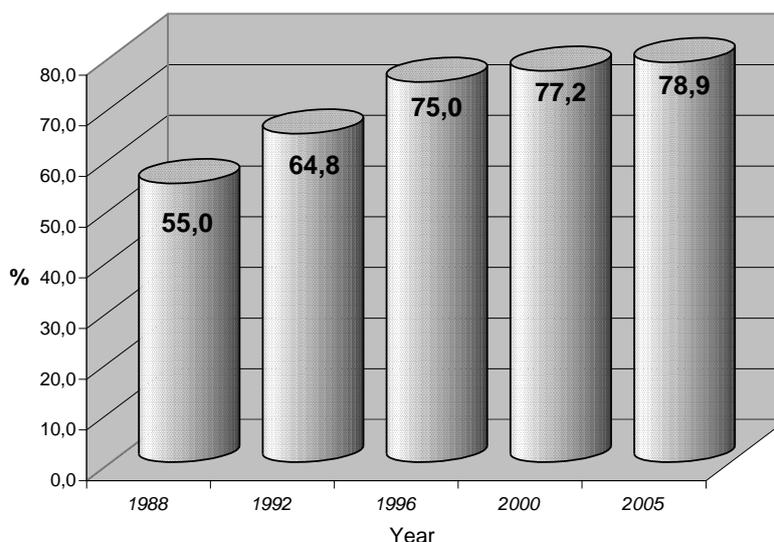


Figure 1. Non-farming families possessing parcels in 1988-2005

Source: IAFE-NRI survey: 1988, 1992, 1996, 2000, 2005.

Spatial distribution of non-farming families possessing a parcel in 2005, examined by means of coefficient of variation, should be evaluated a not very diverse since the value thereof amounted to  $V_s = 4.1\%$ <sup>1</sup>. While comparing the indicator value with its value in 1996 and 2000 ( $V_s = 11.2\%$  and  $6.8\%$  respectively), it can be even concluded that regional differences in respect to parcel prevalence are gradually disappearing. Nonetheless, only in the northern area, the share of non-farming population possessing parcels was close to the

<sup>1</sup> The following coefficient thresholds have been assumed:

- up to 20% – diversity of feature value is low
- up to 50% – diversity of feature value is average
- above 50% – diversity of feature value is high

average level of the surveyed sample and amounted to 78.5%. In the central-Western and South-Western macro-region, the percentage was lower (73.6% and 75.9% respectively) whereas in the central-Eastern and South-Eastern it was higher than the average national value (80.2% and 82.7%). As presented in Figure 2, in the spatial distribution of the non-farmer population group possessing parcels, a division into Western and central regions has been shaped, where rural population featured a lower share of families with parcels, and into the Eastern part of the country with a high percentage.

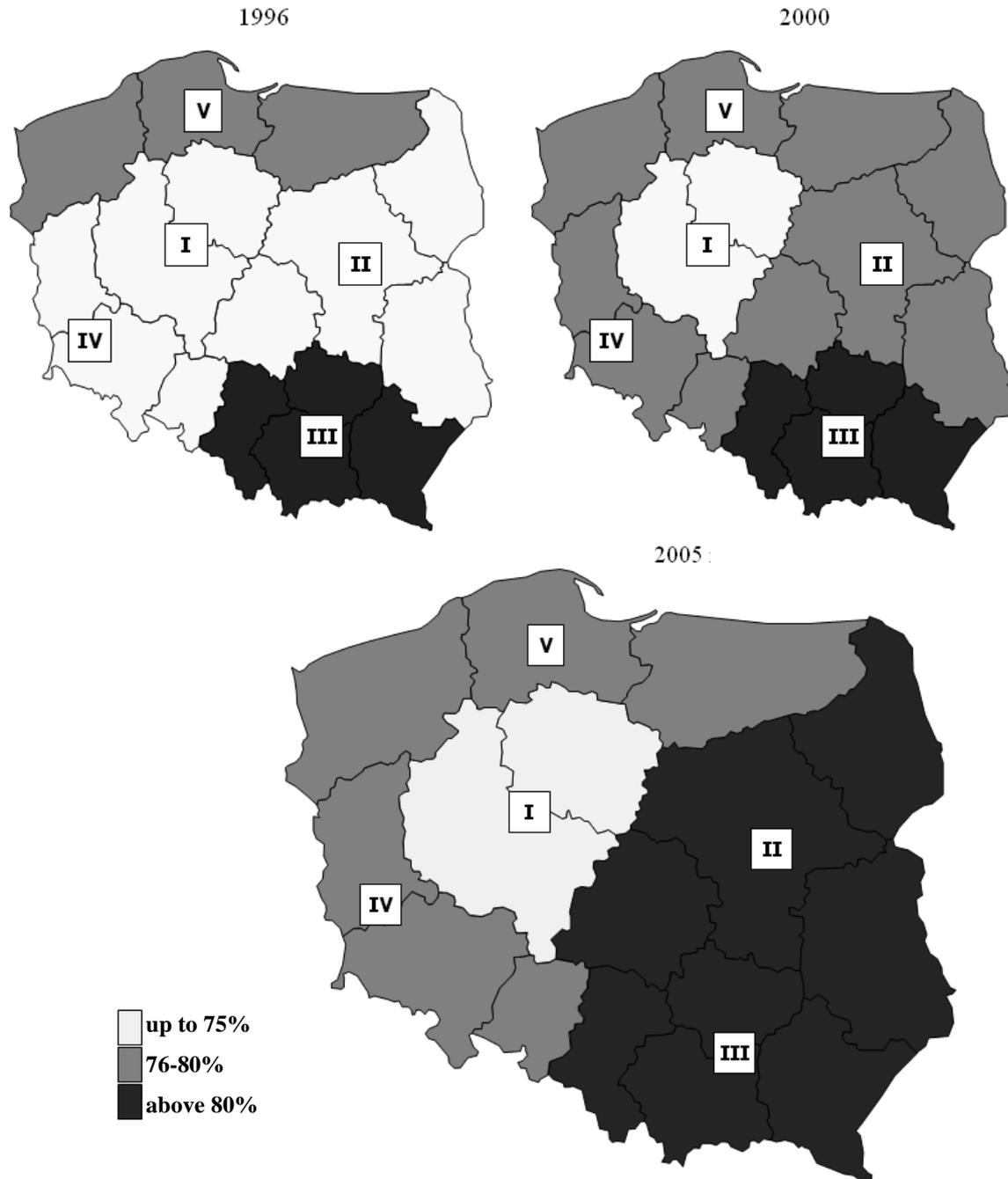


Figure 2. Spatial variations in the prevalence of parcels broken down by macro-regions in 1996, 2000 and 2005

Source: IAFE-NRI survey: 1996, 2000, 2005.

Such a configuration can be explained by a substantial farm fragmentation in the Central-Eastern and South-Eastern macro-regions, as well as population density. On the other hand, in the central-Western macro-region, relatively the smallest share of population possessed parcels, which is a reflection of the situation on that agricultural land market, for which a high pressure exercised by demand is typical.

One of the factors affecting the fact of possessing a parcel is the source of income of a farming family (Fig. 2). The percentage of families with a parcel in particular income categories in 2005 ranged from over 70% in families making a living mainly by means of other sources than the mentioned ones. In families where a regular source of income is present (employment, pension), the possession of a parcel was regarded as a means of spending leisure time or production for one's own needs for healthy and better fruit and vegetable. On the other hand, where income was not regular, parcels, in a way provided a possibility of making a living in a hard financial situation and difficult conditions of living of families.

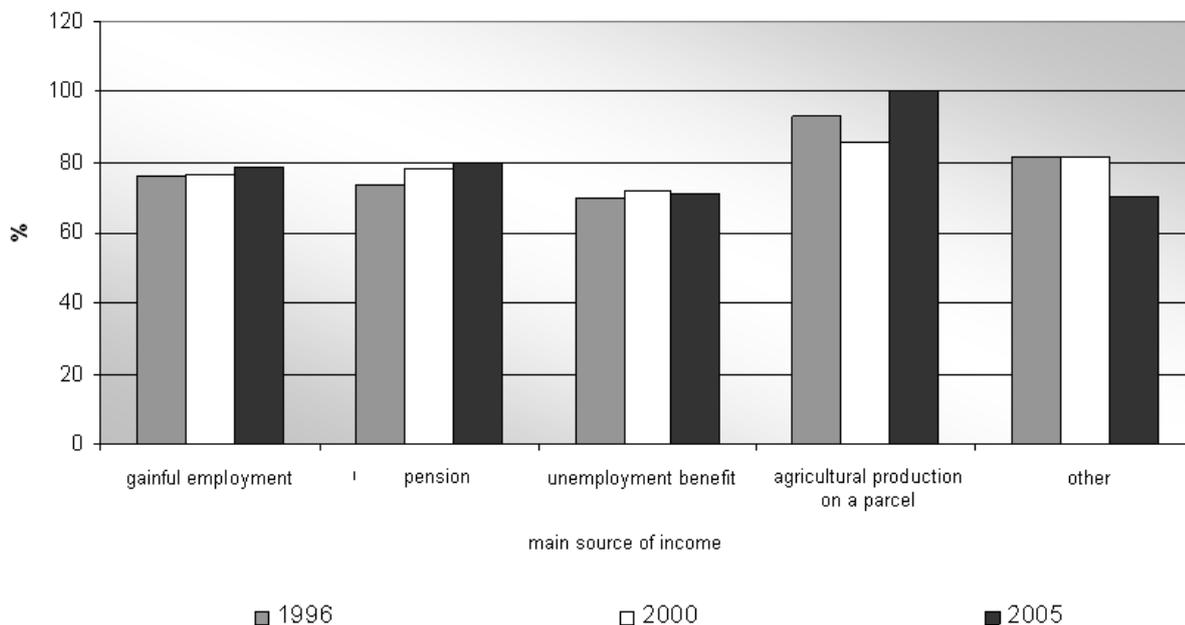


Figure 3. Surveyed families possessing a parcel in 1996, 2000 and 2005 broken down by groups of main source of income

Source: Author's calculation on the basis of IAFE-NRI survey from 1996, 2000 and 2005.

### Characteristics of parcels

It results from the date of survey in 2005 that on average there were 51 parcels, with the total area of 17.3 ha, per one village. In comparison with the previous years, both the number of parcels and the area thereof increased slightly. In 1996 there were 44 parcels, with the total area of 14.5 ha, per one village and in 2000 – 48 with the area of 15.7. The average parcel area also increased slightly from 33 acres (in 1996 and 2000) to 34 in the examined period.

On the other hand, with regard only to families possessing parcels containing agricultural land, the share thereof in the total number of farms having parcels at disposal decreased slightly. Currently they represent 82% of the total farms whereas ten years earlier the share thereof amounted to 83.3%. However, the regional structure is not subject to changes in this respect. For many years the share of non-farming families possessing parcels with agricultural land is featured by the northern macro-region (nearly 90% of the total non-farming families) and South-Eastern one (over 73%). There are no major differences in

relation to the average in the remaining parts of the country. Despite decreasing share of parcels with agricultural land, the number thereof per one village increase from 37 in 1996 to 42 in 2005. Thus it can be concluded that the growth rate of parcels with agricultural land is slower than in the growth in the number of parcels without agricultural land, and hence the directions of suing parcels are changing from typically agricultural to non-agricultural.

An important element of the characteristic of non-farming families possessing parcels is the inflow of new units into this group. Following the examination of this issue in a 10-year period (since 1996 until 2005), it turns out that the process of establishing new parcels proceeds slower and slower. In 1992-1996 the newly established unit amounted to 15.8%. After four years this share decreased by 2.7 pp while in 2005 it amounted barely to 11.7%. By comparing these data with the information from similar periods on newly established non-farming families, which constituted 19% in 1996, 16.5% in 2000 and 13% in 2005 of the total surveyed population, it turns out that the increase in the percentage of non-farmer population with parcels is lower than the increase in the percentage of new non-farming families.

With regard to the main source of income of a family, it is the new parcels that were established most frequently in the group of farms making a living from agricultural production only. On the other hand, the rarest new parcels were established in the group earning a livelihood on the basis of pensions.

### **Forms of parcel ownership**

The data related to the forms of parcel ownership have been collected for the first time in an IAFE survey in 1996. At that time as well, a question was asked whether rural non-farming families are the parcel owners or usufructuaries only.

In all analysed period, private ownership was the most common form of ownership of parcels (ranging from 89.7% of parcels in 1996 to 93% in 2005). Parcels with leased land constituted 3%, while land in the remaining cases was made available without any formal agreements, by parents, relatives possessing a farm or they were business or employer parcels or the ones allowed in kind.

The gathered data indicates that the source of origin of parcels was determined by the socio-economic situation of families to a certain degree. Depending on the main source of income, the share of parcels with owned land ranged from 78%, in the group of families making a living on the basis of sources other than the mentioned ones, to 100% in the group for which the main source of income was represented by agricultural production (Table 1). A high share of private ownership (94.4%) was featured also by the group earning a livelihood from pensions. Parcels possessed by such persons were usually established as a result of keeping a piece of land after liquidating a farm.

On the other hand, most leased parcels were among the unemployed making a living on the basis of unemployment benefits.

Table 1. Forms of parcel ownership in particular non-farming families in 1996, 2000 and 2005

Rural non-farming families broken down by source of income	Year	Legal title to use a parcel		
		ownership	lease	other
gainful job	1996	89.1	3.3	7.6
	2000	90.8	4.3	4.9
	2005	92.5	3.4	4.1
pension	1996	91.6	2.5	5.9
	2000	92.9	1.7	5.4
	2005	94.4	2.1	3.5
unemployment benefit	1996	74.1	2.5	23.4
	2000	86.5	3.8	9.7
	2005	84.6	11.5	3.9
agricultural production on the parcel	1996	85.7	7.1	7.2
	2000	83.3	0.0	16.7
	2005	100.0	0.0	0.0
other	1996	84.6	4.2	11.2
	2000	89.4	5.0	5.6
	2005	78.3	9.6	12.0

Source: Author's calculation on the basis of IAFE-NRI survey from 1996, 2000 and 2005.

By employing unused, due to lack of gainful jobs, resources of labour force, these families are able to gain additional income due to operation of agricultural production and since not all possess a private parcel, they are forced to lease small parcels of land for that purpose.

### Ways of using parcels

Factors which have impact on a decision of having a parcel can be divided into two groups. The first one comprises of conditions connected with owner of a parcel, his socio-economic status and age or education. Second comprises of properties of a parcel, i.e. its area, location etc. Depending on these conditions, there are various directions of using parcels (Table 2). In 2005, they most often perform functions of abodes (86.7%), a place where family lives, but also a place through which by building and living in a new house young people become independent. In turn, the most popular direction of using parcels, in terms of production, was using them as gardens (72.7%). These two items are on similar level in the analysed period. Whereas the use of parcels by landless people as cultivable land is decreasing (13.5%), and it is more often treated as a recreational place, place to rest after work and to attractively and peacefully spend time. The share of this group in the course of ten years increased nearly twice (15.1%). The following category of parcels are waste land (6.4%). On the other hand, the share of parcels left for conducting economic activity has decreased (1.0%) as well as those for which it was impossible to determine their main form of use.

Table 2. Directions of using parcels in 1996, 2000 and 2005

Directions of using parcels	% of parcels in individual years (number of parcels=100.0)		
	1996	2000	2005
abode	82.9	89.6	86.7
garden	73.1	73.3	72.7
cultivable land	37.4	17.9	13.5
recreational place	7.8	14.0	15.1
place of economic activity	1.3	1.2	1.0
waste land	12.0	6.2	6.4
other	1.5	2.5	1.7

Source: IAFE NRI survey: 1996, 2000, 2005.

Data presented above, provides above all information on how the function of using parcels was perceived by non-agricultural people. It turned out, that respondents emphasised above all the basic significance of parcels as abodes as well as their traditional use as house garden, while rarely emphasised the role of parcel in conducted economic activity.

### **Agricultural production on parcels**

Conducting agricultural activity on a parcel depends on various factors. Starting with the conviction that home-made food is healthier and always fresh, through traditional perception of land as family asset and regional conditions, ending with economic factors (less expensive, does not burden the house budget). Data from conducted survey demonstrates the fact that such production has a very important role. In 2005, over 62% of rural landless families conducted agricultural production. Individuals having a parcel had a dominant share in this population (98.5%), others (without parcels) bred animals. Comparing results of surveys from 2000, the share of families producing food remained at similar level.

Majority of produced agricultural products were used for meeting one's own needs, only less than 8% of families also sold them on neighbouring markets or to chance buyers, neighbours or acquaintances.

When describing agricultural production we should also mention rural landless families taking up on animal production. Admittedly, their share has been systematically decreasing, which is demonstrated by the results of surveys (in 1996 such families were less than 49%, in 2000 – 32.6%), despite that in 2005 nearly 25% of families still bred animals. Reasons for the decrease in animal production should be found above all in its low profitability, market immersion with products such as meat, poultry and eggs as well as in limitations in purchasing certain products by processing facilities from small producers.

Among rural landless families with livestock, nearly 90% bred poultry, followed by rabbits (19%), pigs (10.1%) and cattle (5.4%). Comparing this data with the results of previous surveys (Table 3), the share of individual groups of animals has decreased, however, they occurred with similar frequency. We can also notice a slight increase in breeding horses and keeping bees as well as fairly significant increase in keeping fur-bearing animals.

Table 3. Breeding animals in landless families in 1996, 2000 and 2005

Years	Share of families with livestock in landless families in total %	Percentage of families having*:								Livestock density in LSU per 100 ha of agricultural land
		cattle	pigs	poultry	rabbits	bee swarms	sheep	fur-bearing	horses	
1996	48.8	7.2	8.6	96.1	12.7	1.0	0.7	0.1	1.1	42
2000	32.6	7.6	10.2	94.4	22.9	1.0	0.8	0.1	1.3	32
2005	28.2	5.4	10.1	89.8	19.0	1.2	0.1	0.7	1.4	40

\*Number of families with livestock=100.0

Source: Calculations on the basis of the IAFE-NRI survey 1996, 2000,2005.

Differences in intensity of breeding animals, calculated in livestock units (LSU) per 100 ha of agricultural land among landless families, resulted mainly from the scope of breeding, especially of big animals. In 2005, livestock density in LSU per 100 ha was 40 in comparison to 32 from the previous survey. In territorial layout, this density was moderately diverse ( $V_s=39\%$ ) and oscillated between 30 and 70 LSU. The highest was in central-West macro region, equal to the average in central-East, and in the remaining three it was lower by 10 LSU per 100 ha.

### Sale of agricultural products

As it was already mentioned, agricultural production produced by rural landless families was used mainly for their own needs, although, as it follows from surveys, every thirteenth landless family sold it as well. In comparison with previous survey period, the percentage of families selling agricultural products slightly increased from 6.8% in 2000 to 7.7% in 2005. It follows mainly from reduced needs for self-provision of food among part of rural landless families in relation to slight improvement of the income situation resulting from favourable changes on the labour market.

Table 4. Families selling agricultural production in 2005

Rural landless families according to sources of income	% of families having a parcel and producing for sale
Total	7.7
paid work	8.1
pension	7.1
unemployment benefit	4.3
agricultural production on parcels	100.0
other	6.5

Source: IAFE NRI survey 2005.

Depending on the main source of income, the differences in terms of the share of families conducting agricultural production for sale were fairly significant (Table 6). The smallest number of individuals intended their products for sale among those making one's living of the unemployment benefit – 4.3%. In turn, all those making their living of the agricultural production conducted on parcels produced for their own needs and for sale or

mainly for sale. The average income in this respect in 2005 per one family producing agricultural products for sale was PLN 2,132.

As it was already mentioned, landless families selling products from agricultural parcels did not obtain significant income in this respect. In relation to nearly half of families, the income was up to PLN 1,000, whereas only 10% of families obtained income from sale above PLN 10,000.

## Summary

It follows from data presented on the basis of conducted surveys, that in 2005, over  $\frac{3}{4}$  of rural landless population had parcels, although the average annual growth in the number of parcel owners decreased from 0.44 to 0.34%.

In spatial layout a division to West and central region has formed, where rural population was characterised by lower share of families with parcels and to Eastern part of the country with big percentage of share of this group in population. Frequency of having a parcel among non-agricultural families depends also on main sources of income. Families with no permanent source of income were most interested in using parcels, and through selling products produced on parcels they obtain income which are very important item in the house budget.

In the analysed period, the average parcel areas slightly increased from 33 to 34 ares. The average number of families with parcels per one village also increased from 48 to 51 and their total area from 15.7 to 17.3 ha.

Depending on the area, parcels perform various functions. The most popular directions of using parcels were: abode, garden and agricultural land.

Nearly two thirds of rural landless families conducted agricultural activity, and only every thirteenth sold produced articles. The average income from sale per one family was over PLN 2,100.

To sum up, it needs to be assumed that in the current macroeconomic conditions, and thus also in the conditions of unemployment and labour market difficulties, the role of a parcel as an important additional source of income of rural non-agricultural families in rural areas still plays an important social and welfare role. This is confirmed also by the fact that from among families, which do not have such parcels, 12.4% intended to acquire one, of which almost a half expected to inherit one. This data is of declarative nature and it is unknown whether or not these families in fact fulfil these plans, but it clearly indicates that the interest in such parcels remains high among non-farmer rural residents.

Dividing into categories of families according to main sources of income, most families which were interested in acquiring a parcel belonged to the group of families obtaining income from various sources, where 22.2% of families intended to actively seek one or inherit it. In those families, due to the inability to find permanent source of income, a parcel gives an opportunity to improve living conditions and financial situation of the family. Also in the group of families, which earned money, the percentage of those which expressed the intention of acquiring one was relatively high – 17.8%. It may be assumed, however, that the goal to acquire land was totally different and could relate e.g. to the improvement of living conditions by building a new house or to extend the non-agricultural production in the case of persons running a business.

The tendency to acquire land was the highest in the younger groups. Every third family in the younger group (families whose head was aged 34 years or less) intended to acquire such parcel. The interest in a parcel decreased with age, which is confirmed by the fact that among those wishing to acquire a parcel, families, whose head was aged 65 or more, amounted to as little as 4%.

Interest in acquiring a parcel depended also on the family heads' education level. In the group of families, where the family head had higher education, 24% intended to acquire a parcel. Similarly high share (22.3%) was observed in the group of families with secondary and post-secondary education. Only every 20<sup>th</sup> family, whose family head had elementary education, was interested in acquiring a parcel.

Apart from the information regarding the future intention to acquire a parcel, equally important was its planned use. Most often respondents intended to arrange a vegetable garden (62.5%) or build a house (59.4%). Every fourth family planned to use the land for purely recreational purposes, and every fifth – as agricultural land.

## References

1. Chmieliński P. Otłowska A. (2007): Zmiany w strukturze społeczno-demograficznej ludności nierolniczej w latach 2000-2005 [Changes in Social and Demographic Structure of Non-Agricultural Population in 2000-2005], IAFE NRI, Warsaw.
2. Karwat-Woźniak B.(1999): Działki i produkcja rolnicza wiejskich rodzin bezrolnych, [Areas and production of agricultural country without rural family] KRE z. 437, IAFE NRI, Warsaw.
3. Sarnecki J. (2003): Działki wiejskich rodzin bezrolnych, [Areas of country without rural families] KRE z. 485, IAFE NRI, Warsaw.
4. Sikorska A. (2005) Zmiany w strukturze społeczno-ekonomicznej ludności niechłopskiej w okresie transformacji ustrojowej [Changes in Social and Economic Structure of Non-Agricultural Population During System Transformation], IAFE NRI, Warsaw.