

AGRARIAN OVERPOPULATION IN POLAND AS A SOCIO-ECONOMIC PROBLEM

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Abstract: One of the fundamental problems of Polish agriculture is constituted by overpopulation on the farms. Its effects are the incorrect relations between the production factors, decreasing efficiency of agricultural production and the incomes of the farming population. Consequently, the agrarian overpopulation causes the persistence of a significant gap dividing agriculture of Poland from that of the European Union.

Key words: agrarian overpopulation, agriculture countryside, farms, commercialization

One of the fundamental problems of Polish agriculture in the context of integration with the European Union is the excess of labour pool linked with Polish farming. In order to emphasise the weight of this question, particular authors often denote it with such expressions as "agrarian overpopulation" or "agricultural overpopulation" (see Leopold, 1997; Michna, 1998). Overpopulation is defined as "... excess of population on a given territory" (*Słownik...* 1984, p. 983). We speak of overpopulation in agriculture when the number of population living off farming exceeds the optimum level for the given conditions. Hence, the overpopulation problem, including that of agrarian overpopulation, is a chorological issue. Simultaneously, it is also socio-economic and political problem.

Currently, the agrarian overpopulation in Poland is spoken about primarily as a hampering factor in the process of integration of Poland with the European Union (Leopold, 1997; Michna, 1998). From this reason, it is important to determine:

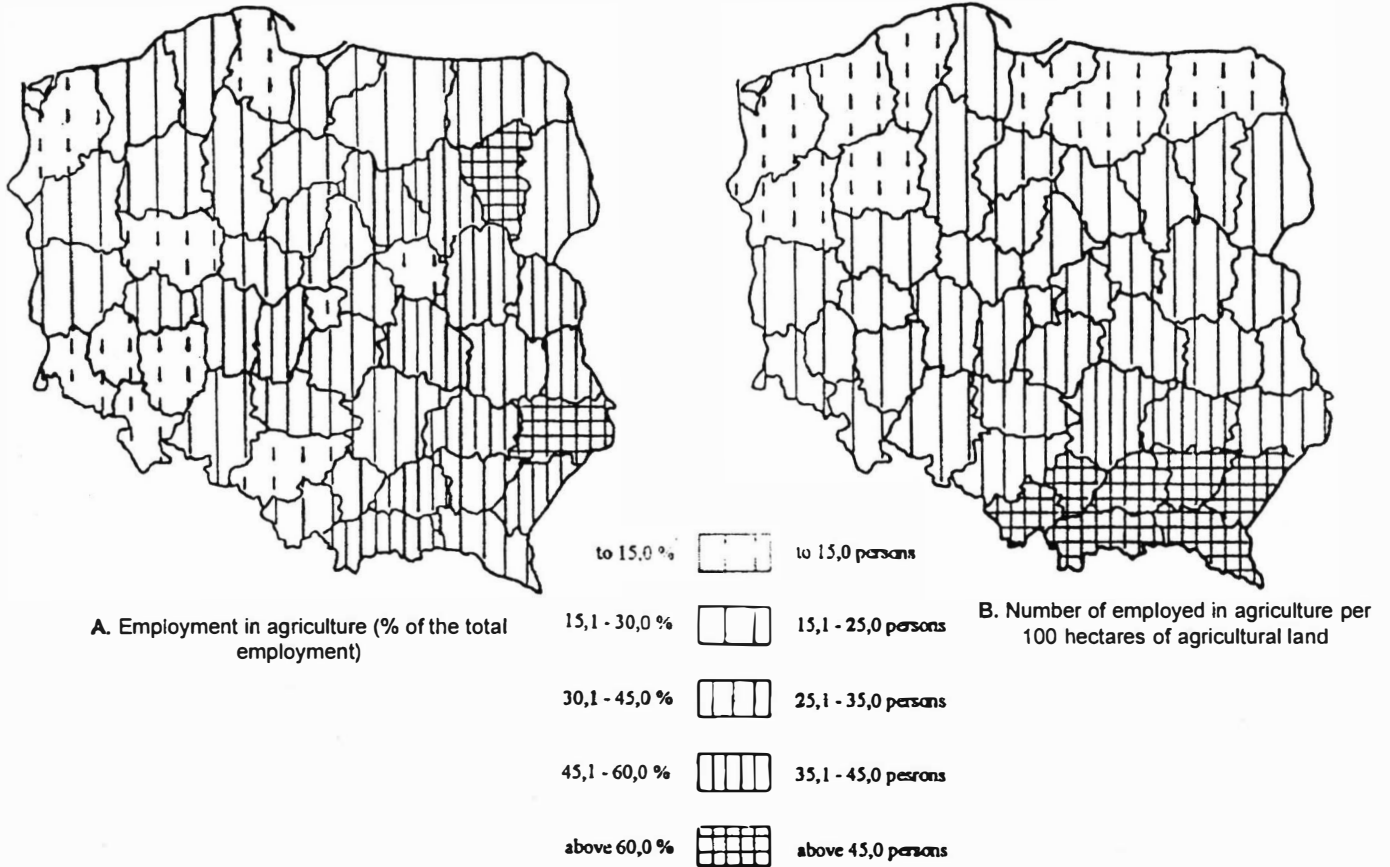


Fig. 1 Employment in agriculture

1. the dimensions of the agrarian overpopulation,¹
2. the socio-economic and political consequences brought about by this phenomenon,
3. the possibility of alleviation or liquidation of the agrarian overpopulation.

The population inhabiting countryside now in Poland is now at 14.7 million persons, that is 38.1% of total population of Poland.² Not all of the inhabitants of the countryside are associated with farming. Such association is characterising some 8.2 million persons in Poland, composing 21.2% of the total population of the country.³ The vast majority of the population associated with the farms - 7.5 million persons, equivalent to 90.9% - lives in the countryside. Hence, 50.9% of rural population are the persons associated with farming. Not all persons living on the farms are professionally associated with agriculture. There are in Poland 3.8 million persons working in agriculture, i.e. 46.5% of the total number of population having an association with the farms. The remaining part (53.5%), they are the persons who live on the farms, but are professionally not associated with agriculture. They only sometimes help in farm work, or are of an old age. Yet, these 3.8 million persons employed in Polish farming amount to 25.5% of the total employment in Polish economy.⁴ The particularly high indicators of share of employment in agriculture are observed in some eastern and southern provinces of Poland, where this indicator may exceed 45% of total employment. The number of persons working in agriculture per 100 hectares of agricultural land exceeds often in these areas 50 persons, while the average value of this indicator for Poland is 27.5. This is, therefore, also a measure of agrarian overpopulation in these areas.

Agricultural overpopulation touches first of all the regions with very diverse size of farms. The small farms are namely the most overpopulated. The average number of persons employed in agriculture in Poland per 100 hectares of agricultural land is 27.5. This number increases to 91.5 persons in the farms of up to 2 hectares, and in the farms with size between 2 to 5 hectares it amounts to 52.1 persons.

Simultaneously, an important part of the population working on small farms is not used in full. Although irrespective of the farm acreage the majority of those people work on the farm between 10 and 12 months a year, in the small farms the percentage of the

¹ It is difficult to identify precisely the dimensions of the agrarian overpopulation, since we lack consistent criteria allowing to establish the optimal levels of agricultural population densities. The optimum of agricultural population is a variable quantity, determined in time and space by a set of natural, socio-economic, legal, and sometimes even religious factors (Poniatowski, 1936).

² This is one of the highest values in Europe of the rural population share indicator. Its value, though, is very differentiated across space and ranges between 7% in the strongly urbanized Łódź voivodship up to 70% in Zamość voivodship.

³ These ones are the persons living in the households with a farm operator (farm acreage exceeding one hectare). After having accounted for the population living in the households with the user of a farming plot (acreage between 0.1 and 1 hectare), the number of farming population increases to 11.6 million, i.e. 29.9% of total population. In further considerations we account only for the population associated with private farming.

⁴ When 823 thousand persons working on farming plots are also considered, the number of persons employed in farming in Poland increases to almost 4.7 million, i.e. to 31.0% of total employment.

population working on the farm during at most six months a year increases significantly. In the farms of up to five hectares of surface the persons working for at most half a year constitute 18.3%, while in the farms of 20 hectares and more - only 10% of the total of persons employed on the farms.

Table 1 The number of persons working on private farms per 100 hectares of agricultural land according to acreage classes of farms

Farm acreage	Number of persons working per 100 hectares of agricultural land
Total	27,5
1 - 2 hectares	91,5
2 - 5 hectares	52,1
5 - 7 hectares	35,1
7 - 10 hectares	27,1
10 - 15 hectares	20,2
15 - 20 hectares	15
20 and more hectares	3,9

Source: GUS (1997a, part II, p. 37)

Table 2 Persons employed on private farms according to the number of months of work during a year and to the acreage classes of farms

Farm acreage	Persons employed on the farms			
	Up to 3 months	4-6 months	7-9 months	10-12 months
	in %			
Total	4,5	9,4	5,4	80,7
1 - 2 hectares	8,3	17,2	10,6	63,9
2 - 5 hectares	4,5	10,1	6,4	79
5 - 7 hectares	3,4	7,5	4,4	84,7
7 - 10 hectares	3,3	6,8	3,6	86,3
10 -15 hectares	3,4	6,5	3	87
15 - 20 hectares	3,6	6,3	2,7	87,5
20 hectares and more	3,8	6,2	2,7	87,3

Source: as for Table 1

The analysis of time devoted to the work on the farm allows declare that there is a significant surplus of labour force in the group of persons working on the farms. This surplus is estimated at 889.6 thousand persons.⁵ Hence, the persons considered redundant on the farm constitute 23.2% of the total farm employment. The highest share of persons redundant on the farm exists in the class of the smallest farms. So, in the size

⁵ This population was estimated on the basis of the National Agricultural Census of 1996 with the help of the so called "objective criterion". The foundation for the estimation of the surplus of persons employed on the farms was constituted both by the number of months and by the daily work time on the farm. Thus, this population is composed of 173 thousand persons working on the farm at most three months a year, and of 716.6 thousand persons working longer than three months, but up to three hours a day at most.

group of farms of up to five hectares, the surplus of labour force is estimated at 31.5% of those employed on those farms.

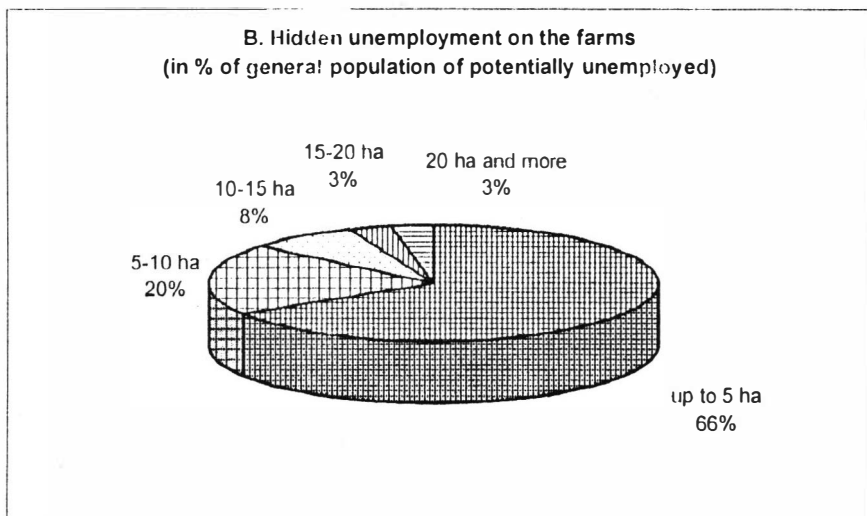
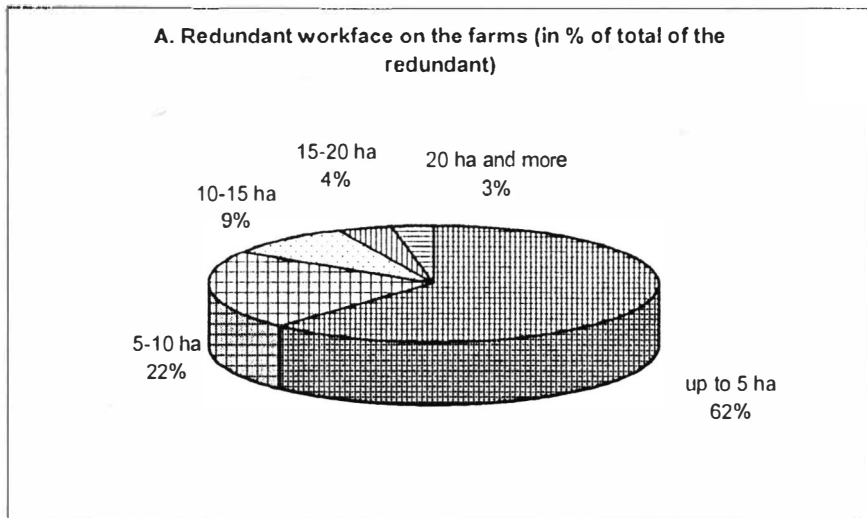


Fig. 2 Labour forces surplus in the farms according to acreage classes of farms

Likewise, the analysis of the general population of the labour surplus in the farms confirms the hypothesis of the overpopulation of the smallest farms. More than 60% of this group originate, namely, from the farms with size below five hectares, and only 3.4% - from the farms of 20 hectares and more.

It should also be mentioned that more than half of the population considered as redundant in the farms is constituted by the potentially unemployed.⁶ It is estimated that the hidden unemployment in the farms amounts to 481.2 thousand persons, that is - 12.5% of those working on the farms. As in the previous case, the highest share of the potentially unemployed exists in the small farms, which had been before the realm of the so-called peasant-workers (bi-occupational). Thus, hidden unemployment in the farms of up to five hectares of surface is estimated at 315.7 thousand, i.e. 18.2% of all those employed on these farms. The persons considered potentially unemployed, in this size group of farms, account for 65.6% of the total hidden unemployment in Polish agriculture. Such a big surplus of labour force in the small farms is largely the result of reductions of employment in the non-agricultural sectors of economy (primarily in manufacturing), which affected first of all the bi-occupational population, having the alternative source of income, namely a farm.

The magnitude of the labour force surplus in the farms is quite differentiated across space. The highest shares of the persons redundant on the farm are observed in southern and western provinces of Poland (more than 25% of persons employed in the farms), that is - the regions with highly dispersed acreage structure of the farms, as well as the post-state-farm areas.

These characteristics imply not only that Polish agriculture is overpopulated, but also that the ample resources of labour force are inadequately allocated. High employment on the small farms, namely, does not provide the chances of the effective use of labour and strengthens the improper structure of production factors. In the opinion of A. Woś (1998, p. 42) "... we are thus dealing with the petrified structure of the labour force potential in Polish agriculture at a low level of efficiency and effectiveness."

The high number of persons employed in agriculture, along with the more generally disadvantageous economic situation of the agricultural sector, and the crisis in Polish agriculture lasting already for almost 10 years, add up to a very low level of incomes of the farming population. The average monthly income of a farm, per capita, amounts to the bare 40.63 Polish zlotys, while the average monthly per capita income for all households is 473.79 zlotys. Hence, the average monthly income from a farm per capita is almost 12 times lower than the nation-wide average calculated for the households. Likewise, the farmer pensions are in Poland much lower than the average employee pensions. The mean private farmer's pension is at 443.94 zlotys, while the average

⁶ The population of the potentially unemployed, referred also to as hidden unemployment, was determined through the narrowing of the population of persons redundant on the farms down to those in professionally active age.

employee pension - at 741.43 zlotys. Thus, farmer pensions constitute on the average mere 59.9% of the employee pension.

This state of affairs leads to a clear discontent among the farming population. Only 7.5% of the farm operators assess the incomes from these farms as very good and good, 36.1% as sufficient, 44.4% - as insufficient for the family upkeep, and 12.0% - as being at the poverty level (Michna, 1996). Since incomes from farm operation are closely related to farm acreage, the assessments quote above are correlated with the surface area of the farms.

Table 3 Self-evaluation of incomes from the farms according to farm acreage groups (in %)

Farm acreage groups	Incomes assessed as:		
	very good, good and sufficient	insufficient for family upkeep	at the poverty level
Total	43,6	44,4	12
up to 2 hectares	17,3	56,6	26,1
2 - 5 hectares	30	52,9	17,1
5 - 7 hectares	44,2	48,3	7,5
7 - 10 hectares	53,5	40,2	6,3
10 - 15 hectares	64,6	31,1	4,3
15 - 20 hectares	71,8	25,9	2,3
at least 20 hectares	84	14,4	1,6

Source: Zegar (1998, p.200)

The lowest income generating capacity displays the smallest farms, with size up to 5 hectares.⁷ These farms, however, are the home to 4.2 million persons, that is - 51.3% of the total number of persons associated with agriculture, and they employ 1.7 million persons, that is - 44.7% of the total employment in the farms.

The low level of incomes in the small farms results both from their overpopulation and low degree of commercialisation. Thus, in the acreage group of up to five hectares the autarchic farms constitute as much as 64.5%, this segment of the group being inhabited by 2.7 million persons, equivalent to 64.0% of the total number of population in this acreage group. Hence, a definite income handicap of these farms affects a significant segment of population.

The degree of commercialisation of the farms increases with their area. And so, the farms producing primarily for the market constitute 31.9% among the farms of up to 5 hectares of area, 72.0% - among those between 5 and 10 hectares, 90.1% - among those between 10 and 15 hectares, and 94.8% - among the farms of at least 15 hectares of area. Simultaneously, along with the increase of the farm acreage, the incomes measured in terms of commercial production value per person employed increase as well.⁸ So, in the

⁷ Note, though, that the farms of up to 5 hectares of surface area constitute 54.4% of the total number of farms in Poland, and account for 20.0% of agricultural land owned by private farmers.

⁸ The value of commercial production per 1 hectare of agricultural land, irrespective of the farm area, is

acreage group of up to 5 hectares of land production value per person employed is at 2 - 2.5 thousand zlotys, for farms of 5 to 10 hectares - approximately 4 thousand zlotys, 10 to 15 hectares - approximately 6 thousand zlotys, and in the farms of at least 15 hectares of land - between 8 thousand zlotys and even more than 140 thousand zlotys per one person employed.

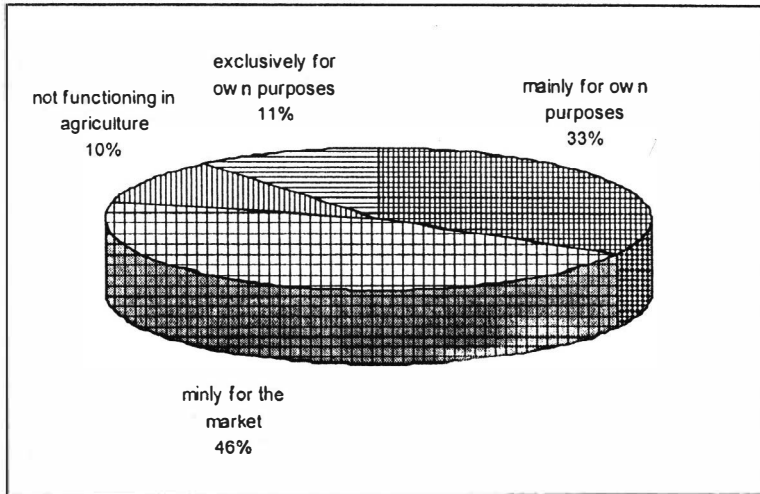


Fig. 3 Farms according to the purpose of agricultural production (in % of total number of farms)

Overpopulation is especially stark in the small farms. Yet, the unsuitable acreage structure of the farms causes that it affects an important part of the population, mainly through adverse effect on their income. This situation brings about a clear discontent among farmers, which has in recent months significantly intensified. More and more frequent are in Poland the protests of the farmer unions, demanding for the government subsidization of agriculture, primarily through the guaranteed purchase of farm products for profitable prices, and limitations to imports, especially of the less expensive cereals.

The question of overpopulation of Polish agriculture and of its low effectiveness is also an essential factor slowing down the negotiations concerning integration of Poland with the European Union. Our country's agriculture employment, namely, 3.8 million persons (25.5% of total employment), while in all the countries of the Union - 7.5 million (5.1%). Simultaneously, the value of production turned out by Polish farmers is evaluated at the mere 6.5 billion Euro a year (6% of the Polish GDP), while in the Union

quite similar (between 1 and 1.3 thousand zlotys). An exception is constituted by the smallest farms, the ones of up to 2 hectares of area, where commercial production per 1 hectare reaches the value of some 2 thousand zlotys.

- at 117.5 billion Euro (1.7% of the GDP of the Union). The difference in incomes between the Union and Polish farmers is, consequently of an order of magnitude (15.6 thousand Euro per farm a year in the Union, as compared to 1.58 thousand in Poland). The so big distance separating Polish and Union farming sectors causes that agriculture was the only sector not included in the processes of integration with the countries of the European Union.⁹

Overpopulation and low effectiveness of Polish agriculture slow down the integration with the European Union. Yet, from the standpoint of the whole economy this phenomenon cannot be unambiguously deemed negative. It namely significantly decreases the unemployment, which would appear on a much bigger scale in Poland, were agriculture subject to restructuring with preference for the labour-economizing forms (Woś, 1998). Thus, farms became a kind of "storerooms" for the bi-occupational population, who lost their jobs owing to reduction of employment in the non-agricultural sectors or owing to liquidation of the state farms and the agricultural service outlets. The development of trade and of the non-agricultural service sector, as well as of the private business in general was not capable of absorbing the so large numbers of people. The farms, therefore, took over certain social functions.¹⁰

The overpopulation and the definite income handicap of the farms forces the search for the additional income sources outside of agriculture (Michna, 1998). This is taking place especially in view of the fact that an important portion of the population employed on the farms are devoting only a part of their time to this occupation. Agricultural activity is already now the primary source of income for only 37.6% of all the farms.¹¹ The share of income generated within agriculture is, however, strongly linked to farm area. Therefore, in an essential part of the small farms (approximately 40%) the contribution of income from agricultural activity does not exceed 30%. On the other hand, in more than half of farms of 15 and more hectares of area, this contribution exceeds even 90%. It can therefore be stated that in small farms, incomes from the non-agricultural sources play an important role. These incomes constitute in a way a form of subsidization of small farms and contribute to the increase of incomes of their inhabitants.

An essential significance, both in terms of improved incomes of the farms, and in the broader socio-economic context, should be attributed to the conduct of non-agricultural activity on the farms. Alas, in Poland only 7.3% of farms conduct

⁹ Exclusion of Polish agriculture from the integration processes with the Union occurred also largely due to high export subsidies paid from the budget of the Union. Polish government could not afford so high subsidies to exports.

¹⁰ For economic - but also social - reasons one can hardly accept, though, the model of economy with a high share of structural unemployment in rural areas.

¹¹ In such farms the revenue from agricultural activity accounts for at least 51% of total income of the respective household.

non-agricultural activity.¹² When analysing, though, the acreage structure of the farms conducting non-agricultural activity, one can observe the especially advantageous high share of small farms, up to 5 hectares of area, among them: 61.6%. Additionally, for 77.6% of farms from the same acreage group, which conduct non-agricultural activity, the income from this activity exceeds 70% of the total farm income.

The development of the non-agricultural activity on the farms may become one of the factors alleviating the consequences of the agrarian overpopulation. It also appears that in the present economic situation of Poland this is the most realistic of such factors. It can namely hardly be expected that towns would be able to absorb such great masses of population in a near future. The process of creation of new jobs in the countryside in the framework of the so-called multifunctional rural development is also progressing very slowly. The development of the non-agricultural economic activity on the farms requires, though, a certain support from the side of the state, for instance through an increased accessibility of investment credits and information.

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¹² Some farms carry out this activity side by side with the agricultural one, while other ones suspend their agricultural operations.

Zegar J.S. (1998): Dochody rolników (Incomes of farmers; in Polish). In: Rolnictwo polskie w okresie transformacji systemowej, A. Woś, ed. Warszawa, IERiGŻ, pp. 185-209.

Resume

Przeludnienie agrarne w Polsce jako problem społeczno-polityczny

Jednym z podstawowych problemów polskiego rolnictwa jest przeludnienie gospodarstw rolnych. W rolnictwie pracuje bowiem 3,8 mln osób, tj. 25,5% ogółu zatrudnionych w gospodarce. Tak duża liczba ludności związanej zawodowo z rolnictwem wpływa na utrwalenie nieprawidłowych relacji między czynnikami produkcji, zwłaszcza między czynnikiem pracy i ziemi. W konsekwencji rolnictwo jest mało efektywne, co w niekorzystny sposób odbija się na dochodach rolników. Taka sytuacja budzi wyraźne niezadowolenie wśród rolników. Wyraża się ono m.in. coraz częstszymi protestami rolniczych związków zawodowych, które domagają się od rządu dofinansowania rolnictwa. Przeludnienie agrarne jest też jednym z czynników hamujących proces integracji Polski z Unią Europejską.