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*AFFORESTATION OF AGRICULTURAL LAND UNDER THE RDP  
PROGRAMME – IMPLEMENTATION OF THE MEASURE  
IN WIELKOPOLSKA PROVINCE IN THE YEARS 2004-2006*

**ZALESIENIA GRUNTÓW ROLNYCH W RAMACH PROW –  
REALIZACJA DZIAŁANIA W WOJ. WIELKOPOLSKIM W LATACH  
2004-2006**

*Key words: afforestation, agricultural land, Rural Development Programme*

**Słowa kluczowe: zalesienia, grunty rolne, Plan Rozwoju Obszarów Wiejskich**

**Abstract.** An analysis was made of spatial differences in the activity of farms in acquiring financial means for afforestation of agricultural land under the Rural Development Programme. The study embraced the absorption level and an assessment of this process.

### **Introduction**

Poland's incorporation into the European Union on 1 May 2004 gave the country access to the instruments of the EU's Common Agricultural Policy whose goals are implemented by means of, among other things, an operating program devised by the Ministry of Agriculture and Rural Development, namely the Rural Development Programme (RDP). This document stipulates the goals, priorities and rules of supporting rural areas' sustainable development. Its beneficiaries include farmers submitting applications for financial aids as part of 8 activities. On the UE side, the RDP is chiefly financed by the Guarantee Section as part of the European Agricultural Guidance and Guarantee Fund (EAGGF). These are the so-called accompanying means, part of Axis 2 of the Common Agricultural Policy. The EU's share of RDP activities represents 80% of the financing while the remaining 20% pertains to national budgets.

Forest economy is an integral part of the rural areas' sustainable development. As Rudnicki [2007] pinpointed, „Solving the problem of excessive use of small agricultural utility land by forestation thereof affects sustainable development of agriculture and rural areas directly (by increasing forest coverage and hence creating conditions for reinforcing ecosystems and biological diversity) as well as indirectly (by generating extra employment and income)”.

The goal of afforestation of farmland is afforestation of agricultural land (minimum 0.3 ha) of small agricultural utility and susceptible to degradation (erosion, a great drain on soil nutrients, infiltration of pollutants to water). RDP-related afforestation could take place exclusively on regularly cultivated land. This means that the activity did not encompass fallow land (including self-seeding) or uncultivated land.

Financial support for farmers undertaking this activity includes afforestation support (a single flat fee for the afforestation cost, reimbursing 80% of the cost of establishing the plantation, a maintenance bonus (covering the cost of maintaining a new forest cultivation, paid out once a year for 5 years upon cultivation establishment) and an afforestation bonus (support balancing income foregone on account of exclusion from cultivation, paid out once a year for the successive 20 years upon cultivation establishment). The support value varies, depending on the tree stand's structure, the terrain, protecting the cultivation from animals as well as the quota of the beneficiary's farming income of his or her total income [PROW 2004].

Agricultural use of land declared for afforestation was a prerequisite for obtaining subsidies for afforestation; however, it was not the only requirement to be fulfilled. Together with application submitted before the Agency for Restructuring and Modernisation of Agriculture (ARMA), the

farm's owner was required to enclose an excerpt from the local zoning plan, confirming the plot's intended use for afforestation or – when the commune does not have an updated zoning plan, a certificate confirming that the plot's intended use for afforestation is in compliance with the study on the conditions of the commune development.

Afforestation was not allowed on farming plots eligible for subsidies on account of farming on less favoured areas for at least 5 years upon the first related subsidy. Moreover, financial support could not be granted to farmers benefiting from structural pensions.

This article's spatial range focuses on Wielkopolska province. The adopted basic research unit is the territorial range of the County Branch of the Agency for Restructuring and Modernisation of Agriculture (ARMA).

The related timeframe was 2004-2006 i.e. Poland's first financial stage of EU membership. The analysis has been conducted with respect to unpublished data collected by ARMA's Management Information System (as of May 2008).

This article focuses on a spatial analysis of Stage 5 of the Rural Development Programme i.e. afforestation of farmland and evaluation of implementation thereof in Wielkopolska province, a region enjoying high agricultural culture accompanied by a relatively small forestation rate.

### The activity's implementation and evaluation in Wielkopolska province

In 2004-2006 financial support as part of the farmland afforestation activity in Wielkopolska province included 505 farmers, the exact number of lodged applications<sup>1</sup> which represents 5.6% of all applications submitted in Poland. Wielkopolska province ranked 9<sup>th</sup> with respect to the number of submitted applications, following the Subcarpathian, Masovian, Warmian-Masurian, Lublin, Świętokrzyskie, Podlaskie, Łódź and Kuyavian-Pomeranian provinces.

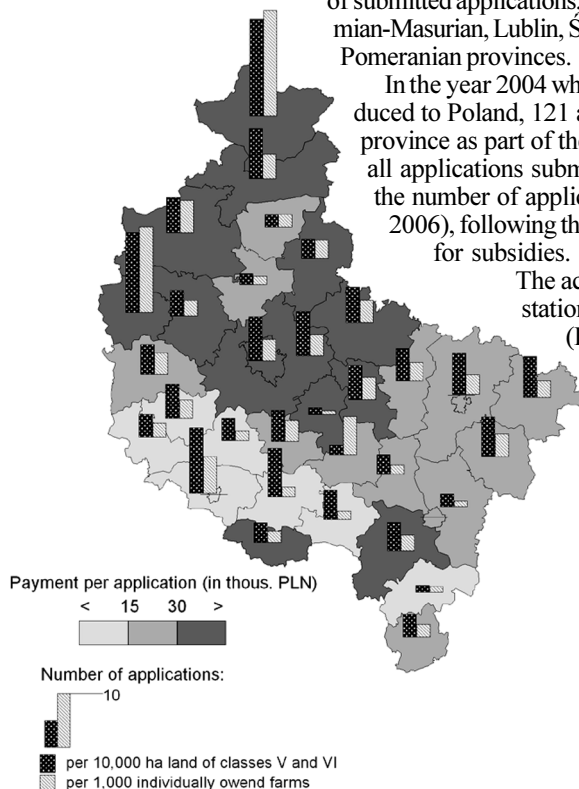
In the year 2004 when the Common Agricultural Policy was introduced to Poland, 121 applications were submitted in Wielkopolska province as part of the activity in question; this represented 7% of all applications submitted in the country. In the successive years the number of applications grew to 203 (in 2005) and to 181 (in 2006), following the farmers' better knowledge of their eligibility for subsidies.

The activity of beneficiaries of the farmland afforestation programme tends to be spatially diversified (Fig. 1).

In 2004-2006 the largest number of applications was lodged in Złotów (55), Konin (50), Poznań (32), Turek (32), Czarnków and Trzcianka (29) and Koło (25) districts. On the other hand, the least active districts included Środa (2 applications), Oborniki (3), Chodzież (4) and Ostrzeszów (5).

The farmland afforestation programme in the analysed years covered merely 0.36% of the total number of individual farms of areas exceeding 1 ha of agricultural land in the province. This share varied from below 0.1% in Środa, Kalisz and Ostrzeszów districts to 1.6% in Międzychód district (Fig. 2).

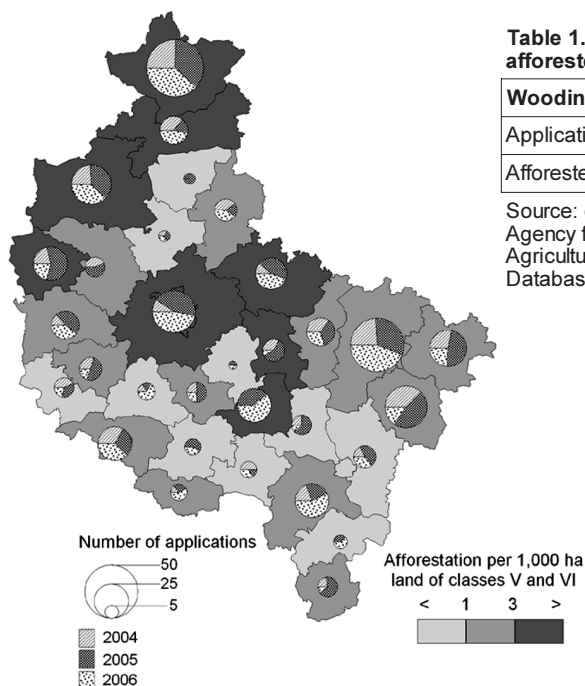
The number of applications for farmland afforestation subsidies tends to grow as the size of the farm grows (Fig. 3). Nearly two thirds of the submitted applications are represented by farms of 1-20 ha. The



**Figure 1. Number of applications and agricultural land afforested in the years 2004-2006**

Source: own compilation.

<sup>1</sup> The analysis does not include continuation applications.



**Figure 2. Applications submitted and mean payment per application**  
Source: own compilation.

**Table 1. Proportion of applications and area afforested in relation to land woodiness**

Woodiness [%]	<20	20-30	30-40	40-50	>50
Applications [%]	43.0	26.9	8.9	15.4	5.7
Afforested area [%]	32.8	34.0	6.4	20.1	6.6

Source: own calculation on the basis of data of the Agency for Restructuring and Modernisation of Agriculture and Central Statistical Office's Regional Database.

largest number of applications (27%) was lodged by owners of farms of 10-20 ha while the number of applications submitted by owners of farms above 20 ha tends to drop significantly.

A comparison of the number of submitted applications and the share of forests in the district's total area offers interesting conclusions. The research indicates that as forestation rate drops, the number of applications for farmland forestation subsidies tends to grow (Table 1). This is an indication of a need for an environmentally friendly use of farmland as well as raising social awareness of environmental management of agricultural space [Pod-

stawka, Konieczny 2002].

At the same time, the number of applications tends to grow as the share of the lowest valuation class soils grows with the biggest number of applications lodged in districts with a big share (50-60%) of valuation class V and VI soils. The number of applications tends to drop when the share of marginal soils exceeds 60% of the agricultural land (Table 2).

In Wielkopolska province, the largest group of beneficiaries of the activity in question was represented by farmers generating not less than 20% of their income from farming. They submitted 420 applications which represented 83.2% of the total number of applications. Land owners generating less than 20% of their income from farming lodged 85 applications (16.8%). The beneficiaries in the former group prevailed in all analysed districts although their share was spatially diversified: from 50.0 to 54.5% in Środa and Kalisz districts to 100% in Gniezno, Krotoszyn, Oborniki and Szamotuły districts.

Farmers applied for subsidies on account of foresting farmland of 2186.4 ha which represents 5.6% of the area to be afforested in Poland. In the years in question, only 7 provinces dedicated less agricultural land for afforestation than Wielkopolska.

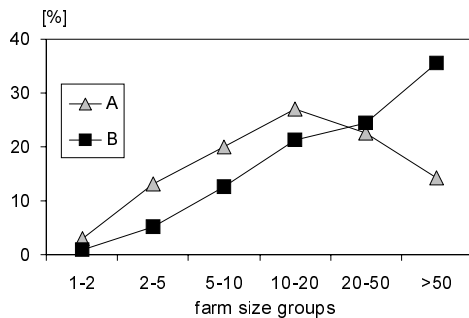
In the successive years, the area of farmland declared for forestation grew, amounting in 2004 to 449.4 ha, representing 20.5% of the total area submitted for forestation in Wielkopolska province in 2004-2006. In the successive year the programme's beneficiaries dedicated 715.4 ha of farmland to afforestation (32.7%) and as much as 1022 ha (46.7%) in 2006.

The percentage of farmland declared for afforestation tends to grow as the general area of farms submitting applications grows. Small and medium-sized farms (1-10 ha of agricultural land) represent less than 19% of the forestation area. On the other hand, over one third of forested land which received financial support came from the largest farms of over 50 ha (Fig. 3).

**Table 2. Proportion of applications and area afforested in relation to the percentage of the poorest soils**

Soil classes V and VI [%]	<20	20-30	30-40	40-50	50-60	>60
Applications [%]	1.4	11.7	23.6	24.8	25.5	13.1
Afforested area [%]	0.3	11.8	31.3	25.0	19.9	11.7

Source: own calculation on the basis of data of the Agency for Restructuring and Modernisation of Agriculture and Witek 1998.



**Figure 3. Proportion of applications (A) and afforestation area (B) in relation to the total area of farms undertaking the activity**

Source: own calculations on the basis of data of the Agency for Restructuring and Modernisation of Agriculture.

It is also worth noting that the largest forested area tends to accompany V and VI valuation class soils representing 30-40% of the area. Once this percentage grows, the forested areas tend to gradually decrease (Table 2).

The area of V and VI valuation class soils, eligible for the farmland forestation programme tends to be spatially diversified [see Rudnicki 2007, Fig. 3, p. 123]. Hence the degree of farmland afforestation in the province tends to vary. Calculated for 1000 ha of V and VI valuation class agricultural land, it varies between 0.3 ha in Kościan district to 11.3 ha in Złotów district while the average in the province amounts to 2.8 ha. As for the spatial arrangement, the most forested districts (over 3 ha/ 1000 ha of V and VI class of agricultural land) are located in the north-west and in the central part of the province (Fig. 1). On the other hand, the least forested areas

(below 1 ha) are typical of districts located in the south-west of the region.

97.5% (2132.1 ha) of the farmland declared for forestation in Wielkopolska province in 2004-2006 was located in favourable terrain. Barely 54.3 ha (2.5%) was located on slopes at a gradient of more than 12°. They represent 5.7% and 2.7%, respectively, of the total area of farmland dedicated to foresting in Poland. Beneficiaries from 11 districts expressed their intention to forest farmland located on slopes, the biggest area declared in Czarnków-Trzcianka district (11.5 ha) and the smallest in Pleszew (0.5 ha) and Złotów districts (0.83 ha).

On a national scale, areas dedicated to coniferous afforestation tend to prevail (57.3%). This holds true also for Wielkopolska province where the programme's beneficiaries planned to introduce coniferous species on 1393.7 ha of farmland (63.7% of the area declared for afforestation) while 792.7 ha (36.3%) was intended to be forested with deciduous species. However, Wielkopolska tended to be internally diversified to a large extent with respect to the species afforestation structure: the share of coniferous forestation ranged between 21% in Kościan district and 84.4% in Rawicz district.

Within three years, Wielkopolska farmers received over PLN 16 million<sup>2</sup>, this means that the region ranks 8<sup>th</sup> with respect to the total amount of subsidies. They represent 5.3% of all subsidies paid out for farmland afforestation in the analysed years as part of the Rural Development Programme. With respect to payment absorbed by specific districts, one third of the total amount paid out to farmers on account of foresting (PLN 5.32 million) was distributed among Poznań (16.6%) and Złotów districts (16.6%) while the less effective farmers came from Kościan, Oborniki, Krotoszyn and Ostrzeszów districts. The latter received in total PLN 236.4 thousand, less than 1.5% of the total amount of the relevant subsidies in Wielkopolska province.

The degree of the Rural Development Programme subsidies absorption as part of the farmland afforestation activity is demonstrated in the average value of subsidy per application. In this context, the average subsidy amounted to PLN 31.7 thousand with the biggest average payment per application recorded in Poznań (PLN 83.2 thou.) and Piła (PLN 57.3 thou.) districts while the smallest subsidies were paid out in Kościan (PLN 6 thou.) and Gostyń (PLN 6.4 thou.) districts.

As for the spatial arrangement, districts enjoying the highest analysed indicators formed a nearly homogenous cluster in the northern and central part of the region. The eastern part of the region is a hub of districts with the average subsidy per application ranging between PLN 15-30 thousand while the western districts enjoyed the smallest subsidies of below PLN 15 thou. per application (Fig.2).

<sup>2</sup> Payments continued from forestation support in 2004-2005 have been disregarded.

### Conclusins

The research in question indicates that usage of subsidies as part of measure 5 of the Rural Development Plan: farmland afforestation in Wielkopolska province tends to be considerably spatially diversified. This has been reflected in the farmers' diversified territorial activity with respect to the number of processed applications for financial support, the size of forested area as well as absorbed subsidies.

It has been concluded that the spatial diversification of the above mentioned features was affected by both natural factors (the percentage of soils of V and VI capability classes and woodiness) and the farms size structure. Indirectly, it also results from the farmers' poor knowledge of the conditions and procedures of granting financial support as the measure had not been preceded by any consulting or training sessions. One could also presume that the diversification of the afforestation process results from greater profitability of agricultural production following Poland's accession to the European Union. Therefore it is important to recognize the complete mechanism of absorbing EU subsidies targeted at farmland afforestation, from the point of view of regional development and the state's agricultural policy alike.

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### Streszczenie

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