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THE TRANSFORMATION PROCESS OF FARMS OPERATED BY LEGAL PERSONS BETWEEN 1990 AND 1996

Abstract

The article analyses the changes in the sector of farms operated by legal persons between 1990 and 1996, i.e. in a period that marked the most fundamental systemic changes. The adoption and implementation of the idea of accelerating the transformation of ownership relationships in agriculture, aimed at reducing public as well as collective private ownership and instead extending and enhancing private ownership by natural persons, resulted in liquidating the production sector of State agricultural enterprises and weakening agricultural cooperatives. At the same time, the process removed the territorial barriers to the development of farms run by natural persons, which made it possible to establish farms operated by private legal persons in legal and organisational forms other than cooperatives. As a result, a very dynamic transformation process began, not only in the ownership structure of farms, but also in organisational, legal, territorial and economic structure. The paper presents changes in the entire sector of farms operated by legal persons, considering the different legal and organisational forms as well as area, and the changes in the share of those farms in the use of agricultural land, labour resources, capital resources, and in agricultural production. The paper also presents changes in the efficiency of agricultural production in farms of that sector against farms operated by natural persons.

Keywords: transformation process, farms of legal entities, cooperatives, state-owned farms,

Introduction

The process of systemic changes in Poland has been ongoing for almost a quarter of a century. This is a very difficult and complicated process. The transition from a centrally controlled economy to a free market economy and the transformation of ownership relations, aimed at limiting public ownership for the purpose of extending and strengthening private ownership, constitutes the determinant of these transformations.

The specifics of Polish agriculture consisted in the fact that due to the failure of our country to carry out the collectivisation of agriculture, throughout the whole period of the Polish People's Republic, the dominant role in agriculture was played by private semi-commercial farms¹. The ownership structure of our agriculture, in comparison with other branches of the national economy, especially the industry, did not force the need to accelerate the process of ownership transformations in favour of the extension and strengthening of private ownership. The process is also not evoked by the situation on the agricultural market (after the transformation of prices into market oriented level and the reduction of the population's income there arose a surplus of agricultural products over demand), dominated by private sector production, as well as on the agricultural land market (lack of demand for agricultural land from individual agricultural farms) and the capital market (lack of capital in private agriculture and great difficulties in obtaining it). The fundamental problem of our agriculture at the onset of systemic change consisted in the sharp decline in profitability of agricultural production and the income inefficiency of farms. Despite this, the concept of acceleration of systemic transformations has been adopted and implemented, aiming at expanding and consolidating the semi-commercial farming sector. This resulted in the liquidation of the state-owned agricultural farming sector and the weakening of the RSP (agricultural cooperatives) while at the same time eliminating the barriers to the development of individual farms and enabling the creation of private households of legal entities in other legal and organizational forms than the cooperative. As a result, a very dynamic process of transformation took place not only in the ownership structure of farms, but also in the organizational and legal, area and economic structure. Particularly profound changes took place in the farming sector, which were not farms operated by natural persons. This sector primarily consists of legal entities' farms, as well as, to some extent, farms of organizational units without legal personality². However, so far, there are no studies analysing the changes in this farming sector. Previous research focused mainly on problems

¹ The share of individual farms in the use of agricultural land, according to the Central Statistical Office of Poland data, amounted to: 1950 – 89.6%; 1960 – 86.9%; 1970 – 81.0%; 1980 – 74.5%, 1989 – 76.2%; in terms of final agricultural production it amounted to 77.8% in the years 1981-1985 and 76.4% in the years 1986-1990.

² In this article we will use the term “farm operated by legal persons” to refer to farms in this sector.

related to the privatization of state-owned farms and the economic and productive results of large-scale farms of legal and natural persons formed on the property remaining after the PGR (state-owned farms). It is therefore necessary to attempt to analyse changes in the whole sector of farms operated by legal persons, considering various legal and organizational forms and area sizes, as well as changes in the share of these farms in the use of agricultural land, labour resources, capital stock, agricultural production and management efficiency.

In this paper an attempt has been made to analyse the transformations in the legal sector in the years 1990-1996, i.e. in the period of the most fundamental systemic changes³. The analysis was based on the Central Statistical Office of Poland (GUS) data and research results, mainly carried out in the Institute of Agricultural and Food Economics (IERiGŻ) and the Institute of Rural and Agricultural Development of the Polish Academy of Sciences (IRWiR PAN).

Farms of legal entities on the threshold of systemic change

Until the systemic changes, production units in the Polish agriculture were divided into the so-called social farms (state and collective farms) and non-social farms (private semi-commercial farms called individual farms). This division was identical to the division of farms belonging to legal and natural persons, since the creation of private farms operated by legal persons outside cooperative farms was not possible. Due to the historical conditions of their development, the majority of farms, mainly state-owned farms, were concentrated in northern and western voivodships (Fig. 1).

During the period of systemic change, these farms were included after nine years of operating under the “3S” reform (self-reliance, self-management, self-financing).⁴ This reform was of particular importance for state-owned agricultural enterprise subordinated to central planning (Dzun W., 1991, 2005); this impact was lower in case of cooperative farms operating under cooperative law (see Boczar M., Szelązek T., Wala, F., 1993). For state farms, the introduction of the reform meant that all decisions regarding the organization of the enterprise could⁵ be made autonomously: production and services planning, the use of specific techniques and manufacturing technology, as well as the formation

³ The analysis of changes in this sector of farms in the pre- and post-accession period, i.e. from 1996 to 2010, will be the subject of further study.

⁴ The principles of this reform in agricultural enterprises began to take effect at the beginning of the 1981/82 marketing year, i.e. from mid-1981, while in the whole national economy these has entered into force since the beginning of 1982.

⁵ The PGR Central Management Board and 25 territorial unions were liquidated. During the transitional period only obligatory associations of companies specializing in plant breeding and livestock husbandry were established. State farms, with the exception of the abovementioned specialized farms, were subordinated to the local authorities, and voivodes became their founding authority. These companies received the possibility of voluntary association on a territorial or sectoral basis.

of a material and technical basis for the enterprise. The company's financial performance constituted the primary indicator for its evaluation. This resulted in profound changes in the organizational structure of the state-owned⁶ farms, as well as in the level and structure of production and services. This also allowed state-owned farms to get rid of the "unwanted" land⁷ and to abandon the unsuccessful investments that had been imposed on them⁸.

As a result of the implementation of these reforms, in the years preceding the systemic changes (1981-1989), the sector of the legal farms decreased slightly in quantitative terms. The area of agricultural land in state-owned farms decreased by 191 thousand ha, in cooperative farms by 50 thousand ha and the total number of employees in these farms by 59 thousand and 8 thousand respectively. However, at the same time, legal farms, in particular PGR, have clearly entered the path leading towards the improvement of their managing efficiency⁹. The extension of production factors, i.e. labour, materials and services, as well as tangible assets (depreciation) per unit of final agricultural production in the years 1981-1989 decreased by 36.6% in the PGR, 12.1% in the RSP, while in case of individual farms it declined by 10.4%. The productivity of agricultural land and effectiveness of work have also improved significantly. In 1980-1990, the value of agricultural output (in fixed prices from 1984) per ha of agricultural land in state owned farms increased by 20.3%, in cooperative farms by 4.6%, in individual farms by 16.2%, and in final production it increased by 22.2%, 3.7% and 12.6% respectively. The above-mentioned increases were largely due to the differences between these farms in the level of agricultural production from 1 ha of agricultural land that has already been achieved. In RSP the final output per ha was 18.8% higher than the output in the PGR and 23.4% higher than in case of individual farms. However, it should be noted that such elevated level of production in cooperative farms was the result of large volume of materials and services. Due to the increase in agricultural production, while the number of employees was decreasing, labour productivity also increased significantly and in 1990 it was 3 times higher in PGR, and in RSP it was twice as high as in individual farms.

⁶ Most of the combines broke apart and some of the multi-unit companies split. As a result, the number of enterprises of the Ministry of Agriculture increased from 947 in 1980 to 1278 in 1984, and the average size of the company decreased from 3.7 to 2.6 thousand ha of agricultural land. In later years, the organizational structure of the PGR stabilized.

⁷ In 1976-1980 the PGR transferred 42 thousand ha to the PFZ, and the PFZ took over 374 thousand ha of land for development, and thus increased the utilized area by 332 thousand ha; yet in 1981-85 these amounted to 227 and 35 thousand ha respectively, and thus decreased their area by 192 thousand ha. In the subsequent years (1986-1989), the land area of PGR did not change substantially (29 thousand ha were allocated to the PFZ and 30 thousand ha were used for the development).

⁸ However, loans granted for these investments were not remitted, their payment was only suspended.

⁹ All quoted data come directly, or after own calculations, from: "Kierunki i czynniki rozwoju rolnictwa gospodarki żywnościowej. Grupa tematyczna III, Efektywność gospodarowania w rolnictwie (synteza)" IERiGŻ, Warsaw 1991.

As a result of the above-mentioned changes, both state and cooperative farms have generated positive financial results and have clearly improved them in the last few years before the systemic changes¹⁰. These results were achieved with the almost complete abandonment (from the 1981/82 marketing year) of grants and subsidies related to agricultural production and the continued reduction of non-productive subsidies and subsidies related to scientific and technical progress in agriculture¹¹. At the same time, subsidies and grants did not fully cover the costs of implementing non-productive tasks borne by these farms. Lower efficiency of agricultural production in RSP was compensated by high profitability of non-agricultural production.

In conclusion, it can be stated that in the 1980s, the legal farms, and in particular the PGR, have dynamically improved the management efficiency. As indicated in the summary of the results of research carried out in IERiGŻ, the aggregated effectiveness of land, labour and capital in years 1981-1988 has been increasing at 4% pace in the PGR, at 1.8% in RSP, and 1.4% yearly in case of individual farms (see Woś A., 1991; Gburczyk Sł., 1991; Wiśniewski L., Kaprzyk Z., Krawczyk I., 1991). The absolute level of such agricultural production efficiency in PGR, as compared to individual farms, was slightly lower, while it was still significantly lower in case of the RSP¹².

Changes in the number and structure of farms operated by legal persons and their equipping with basic production factors in the period 1990-1996

Already in 1990 there was no sign of recession in the development of state and cooperative farms. It was only the “victory” of the concept consisting in the following: the full submission of agriculture to market economy rules, the rejection of state intervention in agriculture, and the acceleration of ownership transformations in order to expand and strengthen the private sector that triggered the rapid destruction of the state-owned sector and significantly reduced

¹⁰ The profit in PGR after inflation increased almost two times in 1988, and in 1989 it was about 5 times higher than in 1985; in RSP it was 2 and 2.5 times higher respectively. In 1990, due to very high inflation, the profit calculated this way was only 2 times higher in PGR, and in RSP it was even slightly lower than in 1985.

¹¹ Following the introduction of the “3S” economic reform from the 1981/82 marketing year, the vast majority of grants and subsidies related to agricultural production have been liquidated. Only subsidies granted to some types of agricultural processing, including for the production of industrial feed (on the principles existing in the agricultural food industry) and subsidies to the plant breeding and livestock husbandry as well as farms of Agricultural Advisory Centres were kept. Part of subsidies related to the implementation of non-productive tasks (e.g. for corporate housing, social and cultural facilities as well as maintenance of monuments) was kept. In PGR, the share of subsidies in revenues decreased from 9.8% in 1987 to 1.6% in 1990, and in the RSP, from 2.8% to 0.2% respectively (see more on this subject: Dzun W., 2005).

¹² Average inputs of production factors in PLN per PLN 1000 of final production in the years 1987-1989 amounted to PLN 980 in PGR and PLN 1060 in RSP, while in the individual farms it amounted to PLN 940.

and weakened the cooperative farming sector; at the same time, the creation of a new group of private legal entities, in legal and organizational forms other than cooperative entities began¹³.

Changes in the public farming sector

Definitely, the largest and most violent changes occurred in case of state farms (see Dzun W., 2005). It should be noted that, on the one hand, PGR has not been free of various statutory regimes resulting from the previous system, which has hampered their adaptation to the reality of the new system and, on the other hand, since the beginning of 1990, the implementation of the principle of universal legalism (especially in the fiscal sphere) for all state enterprises, without taking into account the specificity of agriculture as a branch of the national economy and the specificity of PGR as a form of farming in agriculture. However, the Act on the Management of Agricultural Real Estate of the State Treasury adopted by Polish Parliament (Sejm) in October 1991, which was implemented in the beginning of 1992, was of fundamental importance. On the basis of this law, in the years 1992-1993 the Agricultural Property Agency of the State Treasury (AWRSP) liquidated almost all typical PGRs¹⁴ (882 in 1992 and 713 in 1993). Already in 1994, 66 PGRs were liquidated and 5 in 1995. In total, by the end of 1995, 1666 PGRs were liquidated and their assets (land, tangible and intangible assets, working capital, inventories and production in progress) were included in the Agricultural Property Stock of the State Treasury (WRSP)¹⁵.

The main direction of the development of the post-PGR property, especially all the land, according to the document "Direction of actions of the Agricultural Property Agency of the State Treasury", prepared by the Office of the President of the Agency and approved by the Ministry supervising the Agency¹⁶ was supposed to be a sale and lease for the enlargement and creation of new family farms. Land that would not be sold or leased to family farms was to be leased or administered and used successively for sale and lease to family farms in subsequent years, as the demand arose, in the form of state treasury farms. The exception were only selected farms which were to be organized in the form of State Treasury companies

¹³ All data, unless otherwise stated, are based on GUS publications: Systematics and characteristics of farms (1998); Rolnictwo i Gospodarka Żywnościowa 1986-1990 (1992); Rocznik Statystyczny Rolnictwa 1998 (1999).

¹⁴ Only state farms that were owned by the State Treasury were liquidated, i.e. those, which were essentially owned by a ministry or voivode.

¹⁵ Their property was also taken over as well as receivables liable to the liquidated PGR and the necessary employees to maintain this property. The Agricultural Property Agency of the State Treasury was generated not only from the acquisition of land after liquidated PGR, but also from the acquisition of land by the National Land Fund (Państwowy Fundusz Ziemi) and, in principle, the formal takeover of utilized state land by various economic entities and institutions. In total, about 4.7 million ha were taken into the Resource, including 3.7 million ha from liquidated PGR.

¹⁶ The Ministry of the Treasury and the Ministry of Agriculture have been responsible for the supervision.

or administered farms, as well as farms that constituted the backbone of business activity, e.g. processing, but only in low demand areas on the part of family farms.

However, progress in allocating resources from the Agricultural Property Agency of the State Treasury, in line with the stated objectives, has encountered considerable difficulties, primarily due to lack of demand from individual farmers¹⁷. On the other hand, the dynamics of the reduction of agricultural production and employment as well as the devastation of assets in the liquidated and acquired PGRs, and in those that awaited liquidation were enormous. As a result, the excitement surrounding the decommissioning of PGRs and the distribution of WRSP intensified. On the one hand, the Agency was under intense political and ideological pressure, initially aimed at the complete parcel of the post-PGR land and its transfer to individual farms, and on the broad consideration of the reprivatization claims of the former owners. On the other hand, the Agency faced the following problems:

- huge difficulties related to the division of the land into parcels, sale or lease of individual farms, large and integrated assets of liquidated PGRs in such a way as not to cause its devastation;
- a very difficult situation in the labour market, and thus the threat of high unemployment in the areas of liquidated PGRs in case of total parcelling;
- great determination of the employees of liquidated PGRs to maintain their jobs by participating in the management of its property;
- in general, small demand for agricultural land from individual farmers in the regions of the PGR's dominance, as well as the lack of response of farmers from the regions characterized by fragmented agriculture to various types of settlement proposals on the basis of the Agricultural Property Agency of the State Treasury in the so-called post-PGR voivodeships;
- gaining financial means for its operation.

In the above situation, the AWRSP undertook actions aiming on the one hand to creating better conditions for the purchase or lease of property (primarily land) from the Agricultural Property Agency of the State Treasury by individual farmers (including through further settlement programs), and on the other to extending the possibility of managing this property by other entities. This second direction of action is visible in the following:

- the sale and lease of post-PGR property not only to individual farmers, but also to all willing natural and legal persons, including various national commercial and production as well as financial units;
- the acceptance of the possibility of renting and selling of restructured property of the liquidated PGRs (most often after the parcelling of part of the land for sale or lease to nearby farmers) to the employee-owned companies;

¹⁷ In the first two years of operation (1992 and 1993) the Agency sold only 35 thousand ha and leased 850 thousand ha of the post-PGR land.

- the approval of the creation of AWRSP commercial companies on the basis of difficult-to-split large, effectively functioning PGRs, most often the former PGR combines such as in Kietrz or Głubczyce;
- the acceptance of land lease by foreign natural and legal persons and the sale of land to units with foreign capital, but with predominance of domestic capital.

As a result, still a significant portion of WRSP was not permanently utilized (it was not sold nor leased) and remained in temporary management or administration. At the same time, in the atmosphere of neglect of state property in agriculture and in the conditions of low profitability of agricultural production, the farms in distinct types of state units were also spontaneously liquidated (through sale or lease).

As a result of the above-mentioned changes in 1996, there were a total of 2016 farms (1953 state, 53 communal ownership and 10 mixed ownership) in the public sector (including state and municipal property), which was slightly less than in 1990. A group of state-owned farms was formed by 503 farms owned by the State Treasury (private limited companies created on the basis of the property of liquidated PGRs, mainly plant breeding and livestock husbandry companies, but also typically commercial companies, as well as liquidated PGRs in temporary administering or management) and 1450 farms of several types of state entities and institutions.

In total, 1.62 million ha of agricultural land was in public sector use in 1996, but only 1.25 million ha were used by public farms (0.37 million were outside the farms, mainly the agricultural land of the Agricultural Property Agency of the State Treasury Resource that has not been allocated and has not constituted a part of farms). The area of agricultural land in public sector farms decreased by as much as 64% and their share in the total land use declined from 18.9% to 7.0%. Although the privatization process included primarily larger state-owned farms, in 1996 this sector's area was still dominated by large farms. Farms over 100 ha of agricultural land, accounting for 52% of total farming area, used almost 98% of the agricultural land sector; farms of 1000 ha and more used 13.5% and 74.2% respectively.

Substantial changes occurred also in the level and structure of the labour resources involved in this sector's farms. First and foremost, due to the decommissioning of the PGR production sector, the almost complete decommissioning of non-agricultural activities (including social welfare), the almost total exclusion of plots of near-farm land, the significant reduction of livestock production, etc., the labour resources on these farms decreased significantly faster than agricultural land resources. In the years 1990-1996 the total number of employees decreased from around 433.4 thousand (400.6 thousand employed and 32 thousand working on employee plots) to 68.5 thousand (employment at the end of the year), i.e. slightly over 5.8 times. The number of employees in agricultural production decreased from about 265 thousand to about 62 thousand, which is

slightly more than four times less, and to a lesser extent, because almost two times less, after calculating this amounts per 100 ha of agricultural land used (from about 9.5 to 5.5 contractual, annual work units).

At the same time, it should be noted that the area of agricultural land used for agricultural production and the intensity of farming have been drastically reduced. Therefore, if the number of employees is related to the agricultural land that is cultivated, then the number of people employed per 100 ha would amount to over 9 persons when counted on a full-time basis. Considering the lower intensity of the management, it can be stated that the level of usage of labour resources has deteriorated considerably in state-owned farms and, generally, in farms remaining in the Agricultural Property Agency of the State Treasury.

Changes in co-operative farms

The rapid reduction of the state sector was accompanied by a process of significant destruction in the sector of cooperative farms (see Boczar K., Szelażek T., Wala F., 1993, Domagalski A., 2004). The Act on Changes in Organization and Scope of Activities of Cooperative Sector, which entered into force 20 January 1990, negatively impacted the situation of cooperative farms. It assumed the liquidation of existing cooperative unions, both at central and local level, and thus the liquidation of cooperatives that until this point had been carried out by central unions. The law also introduced a ban on the association of cooperatives (union formation)¹⁸. As a result, cooperatives in their most difficult period were deprived of the organizational, economic and legal advice, professional liquidation, scientific facilities, their own press and human resource development centres; the assets of liquidated unions, which were the product of many generations of cooperative members, were largely lost. Since the beginning of 1990, the process of creating new RSPs has been hampered, and at the same time the process of liquidating existing, especially smaller and less economically efficient ones, has intensified. Economically strong RSPs were also liquidated, mainly through the transformation of RSPs into commercial law companies. The elimination of even economically strong RSPs was often the result of the aspiration of some members to divide substantial wealth (favoured by the earlier division of team property), for example, to start independent business activity ("on their own"). As a result, in the years 1990-1996 the number of RSPs decreased from 2240 to 1383 (by 38%). Other farms belonging to this sector, i.e. farms of distinct types of rural co-operatives, as well as cooperative farms of agricultural associations were also liquidated or discontinued.

In total, almost 2467 Agricultural Production Cooperatives (SPR) operated in 1996, with the majority of 1383 Agricultural Cooperatives (RSP). The agricultural land resources at their disposal decreased from 0.75 to 0.5 million ha.

¹⁸ This ban was later recognised by the Constitutional Tribunal to be incompatible with the Constitution, but the substantive effects of this provision proved to be very detrimental to cooperatives and very difficult to be removed.

Due to the inclusion in this sector of several types of small, cooperative property farms, in its area structure the share of farms of up to 1 ha amounted to 28.6% and the share of farms of 1-10 ha to 6.9%. However, farms with large area of over 50 ha (mainly RSP), which accounted for 56% of all farms in this sector, still maintained a dominating role, but used almost 96% of the entire agricultural land of this sector. The average number of working members of the co-operative was also greatly reduced – from 146.7 thousand in 1990 it declined to 41.6 thousand in 1996. However, there is no data on employees or the scale of engagement of working members of the cooperative in agricultural activity. Of course, the non-agricultural activity of the SPR has been significantly reduced (mainly due to the lower demand on the market for the non-agricultural services and non-agricultural production offered by these cooperatives), and thus the scale of involvement in this activity of working members of cooperatives and employees has also decreased. It can be estimated that the number of people working in cooperative farms has decreased to about 43-44 thousand, i.e. 3.5 times, and in agricultural production to about 32-34 thousand of people (about 6.5 people per 100 ha of agricultural land), i.e. 3 times.

***Development of a group of private legal farms
in other organizational and legal forms than co-operatives***

As indicated earlier, systemic change was also accompanied by the formation of a group of private farms operated by legal persons in other organizational forms than cooperatives (usually in the form of commercial law companies, but also in farms without legal personality that were owned by economic and service entities, institutions, foundations, the Church, etc.). This process was particularly aggravated during the initial allocation of the Agricultural Property Agency of the State Treasury¹⁹. Several types of private legal entities acquired, leased²⁰ or received free of charge²¹ all post-PGR farms or parts thereof for their needs. The process of disposing of the Agricultural Property Agency of the State Treasury, mainly by way of lease, involved also (although on a small scale) the foreign capital²². As a result, in 1996, apart from the SPR, there were 1920 farms of private legal persons in our agriculture, including 1784 of domestic ownership (1155 of which were organized

¹⁹ In 1996 land of 838 private companies, 317 state-owned farms, 280 cooperative farms and 54 foreign entities was leased from the Agricultural Property Agency of the State Treasury.

²⁰ A relatively large share in the lease was held by companies of the former PGR employees. At the end of 1996, 726 of these companies leased 572 thousand ha, i.e. more than 1/5 of the total leased post-PGR land.

²¹ 69 thousand ha was transferred for free to churches, 31 thousand ha to state and other entities for the implementation of statutory goals (Polish Academy of Sciences, higher and secondary agricultural schools, self-governances, foundations, etc.).

²² In 1996, 136 foreign and mixed ownership entities used 118 thousand ha of agricultural land. In 67 entities the total of land and in 8 entities a part of the land were leased from the Agricultural Property Agency of the State Treasury.

as commercial law companies), 100 farms of foreign ownership and 36 of mixed ownership. These farms used almost 0.96 million ha of agricultural land (5.4% of the entire agricultural land). In this group entities of domestic ownership used 841 thousand ha of land, entities of foreign ownerships 73 thousand ha, and the ones of mixed ownership 45 thousand ha. The area structure of these farms was very diverse and polarized. More than 30% of all farms were small farms (farms of up to 1 ha – 11.3%, 1-10 ha – 18.9%), but they used only 0.25% of the entire agricultural land. Farms that were very large in area (over 200 ha) dominated. They accounted for 51.5% of all the farms (including those over 1000 ha – 14.8%) and used 87% of the entire agricultural land.

On the basis of data from PSR 1996 and IERiGŻ studies, it can be estimated that about 44-46 thousand people were employed on these farms, i.e. about 5 people per 100 ha of agricultural land.

Changes across the legal persons farming sector

As a result of the above changes, the whole sector of legal entities amounted to around 6.4 thousand units in 1996, including almost 2.5 thousand cooperative farms and 2 thousand public ones, whereas in 1990, according to the Central Statistical Office of Poland statistics, there were about 4.7 thousand of such farms. This increase in the number of legal persons was a result of the very rapidly increasing number of newly established private farms operated by legal persons, but also the fact that the Central Statistical Office of Poland included in its statistics from 1996 very small state and cooperative farms. As a result, the internal structure of this farm sector has changed considerably. The share of public (mainly state) farms in the total number of farms in this sector has fallen from almost 50% to 30%, and cooperative farms from over 50% to almost 40%, while the share of the newly established sub-sector of private farms has reached 30%.

The scale of changes in the legal persons farming sector in the analysed period can be assessed on the basis of changes in the sector's ownership of basic production factors and, above all, agricultural land. In this period, the area of agricultural land used by this sector decreased from 4.24 to 2.71 million ha, i.e. 36%, and its share in agricultural land use decreased from 23% to 15.6% (mainly because of reduction of the share of state-owned farms from 18.9% to 7.2%). Even greater changes took place in the structure of the agricultural land that was being used. Public sector share fell from over 82% to 46%, the share of cooperatives increased slightly (from 17.7% to 18.5%), and the share of the new private sector amounted to 35.4%.

Large-area farms maintained a dominant role in this sector. In 1996 the share of farms with an area of 200 ha and more amounted to 41.8%, and the use of agricultural land to 94.5%. Approximately 5% of the entire agricultural land was used by farms of 30-200 ha, representing 21.1% of all the farms. Large part consisted of farms of 1 ha (15.3%), 1-10 ha (13.8%) and 10-30 ha (8.0%), but their share in the use of agricultural land was very low (about 0.5%).

Despite the reduction of the area of utilized agricultural land, especially in public farms, very strong regional differentiation of the share of farms operated by legal persons in the structure of agricultural land use at the level of voivodships did not diminish significantly, but only moved to a lower level (Fig. 1 and 2). In voivodships where this share in 1990 was very high, a significant decline was visible (in Szczecin Voivodeship from 65% to 40.5%, in Koszalin Voivodeship from 62.3% to 37.7%, in Słupsk Voivodeship from 57.1% to 35.5%, in Gorzów Voivodeship from 56.9% to 40.1%, in Zielona Góra Voivodeship from 51.4% to 41%, in Elbląg Voivodeship from 50.4% to 29.9%). At the same time, in the majority of voivodships, the lowest level of this share was also markedly lowered (from 2.7% to 1.1% in Ostrołęka Voivodeship, in Łomża Voivodeship from 3.8% to 1.9%, in Lublin Voivodeship from 3.9% to 3.4%, in Radom Voivodeship from 4.5% to 3.4%, in Sieradz Voivodeship from 4.7% to 3.5%). Generally, in the voivodships where the shares were low, there was a slight increase of these shares (the largest in the Nowy Sącz Voivodeship – increase by 4.4 percentage points, Warsaw Voivodeship – 4.1, Piotrków Voivodeship – 2.9 and Siedlce and Tarnów Voivodeship – 2.1).

Even more changes have occurred in the workforce. However, as indicated above, there is no precise data on the scale of these changes. On the basis of previously presented estimates for individual groups of farms operated by legal persons, it can be stated that the number of employees in the analysed farming sector decreased from around 590 thousand to about 150 thousand (almost by 3/4), including those working in agricultural production from about 400 thousand to about 140 thousand, i.e. by about 2/3. The number of employees per 100 ha of agricultural land decreased approx. 2 times to 5.2 persons. In this period, the number of persons working on individual farms, on the basis of full-time employment, slightly increased (by 3.2%) from 3560 to 3675 thousand, whereas when calculated per 100 ha of agricultural land it decreased from about 25 to 24 people. As a result, the share of legal farms in the total number of people employed in agricultural production decreased from around 10% to 3.7%.

It is also difficult to accurately estimate changes in the capital resources of the analysed farms. It can only be stated that at the end of the 1980s (after 1987, thus after the improvement of the financial situation of farms), state and cooperative farms began to invest more diligently in the development of the material and technical base, especially in new production techniques and technologies. The effects of some of these investments (especially in buildings and structures) have been visible in the early 1990s²³. At the beginning of the 1990s, these farms not only stopped (almost entirely) making new investments, but also often decided not to continue the ones that had already been started.

²³ It can be indicated here that while in the years 1986-1990 only 135 livestock buildings were put into operation, in the years 1990-1991 these amounted to as much as 437; however, in the years to come, this number decreased sharply – to 51 in 1992 and only 2 in 1996.

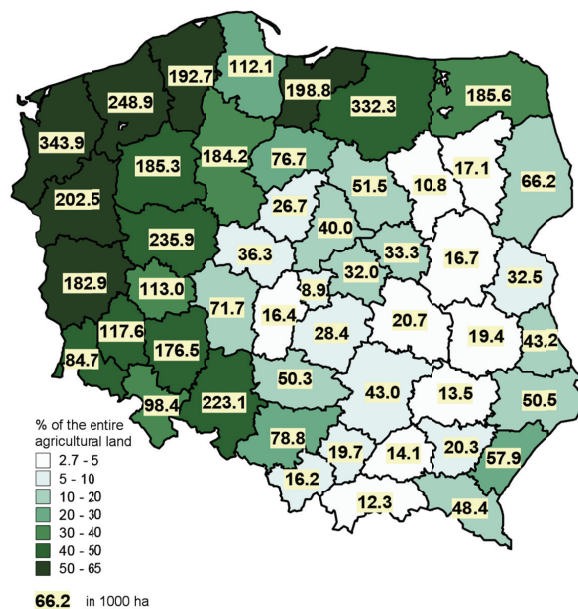


Fig. 1. Area of agricultural land in the legal sector (in thousand ha) and its share in total agricultural land (in %) by voivodship in 1990.

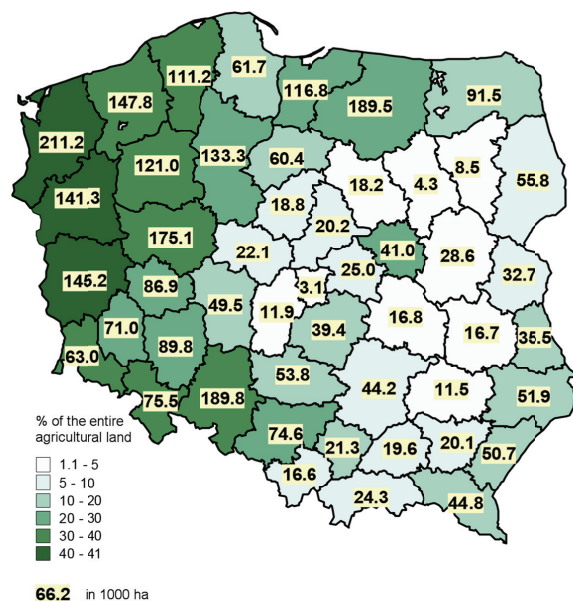


Fig. 2. Area of agricultural land in the legal sector (in thousand ha) and its share in total agricultural land (in %) by voivodship in 1996.

The only available synthetic indicator of changes in equipment with tangible assets is the equipment index of the mechanical draught force. In the years 1990-1996, this indicator (calculated in mechanical draught units per 100 ha of agricultural land) decreased significantly in public sector farms from 27.0 to 22.5, but increased in co-operative farms from 36.9 (data for RSP) to 47.9 (data for the SPR), and in natural persons' farms from 48.9 to 59.0. It can be estimated that in the newly established farms operated by legal persons the rate was similar to that of the former PGRs in the first years of their liquidation, i.e. about 25 draught power units per 100 ha. There was therefore a deterioration of this ratio in the farms operated by legal persons and an improvement in farms of natural persons.

Table 1

Changes in equipment in farms of legal and natural persons on the basis of agricultural machinery in the years 1987-1996 against the changes in the area of agricultural land in these farms (number of machines in thousands)

Selected machines	Farms operated by legal persons			Farms of natural persons		
	1987 ^a	1996	1996/1987	1987	1996	1996/1987
Combine harvester	38.0	14.0	36.8	30.4	83.1	273.7
Beetroot harvesters	4.9	1.5	30.6	10.0	25.5	255.0
Forage harvesters	8.7	3.8	43.7	25.8	9.4	36.6
Fertiliser spreaders	44.9	12.0	26.7	316.7	430.7	136.6
Pick-up balers	24.5	6.8	27.8	31.3	97.9	313.0
Tractor sprayers	38.2	9.3	24.3	101.4	398.6	393.1
Agricultural land (area)	4280	2709	63.3	14,370	15,173	105.6

^a PGR and RSP.

Source: own calculations based on: Rocznik Statystyczny Rolnictwa 1998 (1999).

It is clear from the PSR data of 1987 and 1996 that during this period, and in general since the beginning of the 1990s, farms operated by legal persons have undergone a dramatic decline in terms of the equipment with basic agricultural machinery (a reduction in the number of machines significantly greater than the decrease of agricultural land), while in farms of natural persons there was a noticeable improvement in this area (the increase in the number of machines was significantly higher than the increase of agricultural land area).

In 1996, a significant part of farms operated by legal persons did not own tractors or basic machinery and tools (almost 25% of all farms). This ratio was the highest in public farms (nearly 40%), relatively high in farms established on post-PGR property (about 29%) and lowest in cooperative farms (about 19%).

The equipment with basic machinery such as fertilizer spreaders, manure spreaders, cultivation systems among farms was even worse. In this case, the public sector, especially farms remaining in the Agricultural Property Agency of the

State Treasury, was particularly disadvantaged. Data show that this was primarily the result of large perturbations in the management of post-PGR property, but also the inclusion of very small farms, which generally did not carry out typical farm production, in the statistics. Of course, it should be noted that, despite the negative tendencies, farms operated by legal persons were better equipped with technical, tangible assets than those of natural persons. A significant problem, closely linked to systemic changes in the agricultural and structural sector, was the change in the level of use of tangible assets. Perturbations in the development of farms operated by legal persons in addition to the collapse of profitability of agricultural production, especially of livestock, led to a deep collapse in the use of farm buildings and structures. In 1996, 22% of the livestock premises owned by these farms were not used (including 32% of sheds, 22% of piggeries and 23% of poultry sheds), while in farms operated by natural persons this amounted only to 8% (12% of barns, 13% of piggeries and 14% of poultry sheds). The highest share of area in livestock buildings that was not used for agricultural activity was found in state owned farms in the Agricultural Property Agency of the State Treasury – 52%.

Table 2

Changes in the consumption of fertilizers and lime on legal farms against the farms of natural persons in the marketing years 1989/90-1995/96

Indicator	Farms of natural persons		Farms operated by legal persons ^a				
			public		SPR		other
	1989/90	1995/96	1989/90	1995/96	1989/90	1995/96	1995/96
NPK/ha in kg	136.0	80.1	258.3	85.0	253.3	144.9	140.2
CaO/ha in kg	147.4	124.7	314.0	97.7	233.8	172.9	157.7

^a For the 1989/90 marketing year the concept of a public farm only covers state farms and SPR includes only RSP.

Source: own calculations based on: Rolnictwo i Gospodarka Żywnościowa 1986-1990 (1992); Rocznik Statystyczny Rolnictwa 2001 (2002).

In the period under discussion, both the farms of legal and natural persons showed a clear tendency to decrease working capital expenditure. This was visible in a significant decrease in the level of mineral fertilization and liming of agricultural land, the use of eligible material on arable crops, the use of insemination of farm livestock, etc. This was particularly the case in state farms, and above all in the remaining the Agricultural Property Agency of the State Treasury.

Changes in the level and structure of agricultural production

The turbulent transformations in the number and structure of farms operated by legal persons and their participation in the basic means of production, in conditions of very radical deterioration in profitability of agricultural production at the beginning of the 1990s, as well as significant changes in prices of particular agricultural products have also caused great perturbations in agricultural production.

The fundamental tendency of changes in plant production was the rapid reduction of the area of crops (Table 3). In the years 1990-1996 the area of crops in farms operated by legal persons decreased by 2 times – from 3.3 to 1.6 million ha. This was a consequence of a significant decrease in the area of utilized arable land (by 36%), but above all the rapid growth (by almost 14 times) of fallow areas (from 38 to 528 thousand ha). This process was particularly visible in the public sector (reduction of crop area by 82%), in which the fallow areas increased by almost 15 times to over 423 thousand ha²⁴. The reduction of the crop area (by 35%) also concerned co-operative farms, which were mainly affected by the reduction of the area of the utilized arable land (by 30%). The fallows in this group of farms constituted 33 thousand ha in 1996, which amounted to 7.8% of utilized arable land, i.e. even slightly less than in case of individual farms (8.2%). Such a large decrease in the crop area in state and cooperative farms (by over 2.4 million ha) only partially compensated for crops in the newly established group of private, legal farms (733 thousand ha). Fallow area in this group accounted for 8.9%.

Changes in prices of agricultural products to the detriment of livestock production, a large decline in livestock population and significant perturbations in the sphere of agricultural product sales have also contributed to profound changes, similar to those in farms operated by natural persons, in the structure of crops (Table 3). In particular, the share of cereals significantly increased (from 51% to 68%), while there was a decrease in the share of forage (from 21% to 11%), potatoes (from 4.4% to 1.4%) and legumes (6.5% to 3.1%).

Table 3

Changes in the share of farms operated by legal persons in total crop area and crops of basic groups of crop plants against changes in the share of arable land in 1990-1996

Indicator	Farms in 1990				Farms in 1996			
	total	including			total	including		
		PGR	RSP	ZGR KR		public	SPR	other
Cereals	19.7	15.3	4.2	0.2	12.6	3.5	3.4	5.7
Potatoes	7.9	6.8	1.0	0.1	1.6	0.4	0.4	0.8
Grain legumes	67.0	56.3	10.4	0.3	34.0	11.6	7.4	15.0
Industrial	44.8	37.4	6.8	0.6	28.0	8.1	5.8	14.1
Forage	34.6	31.4	3.0	0.2	20.3	9.1	3.0	8.2
Cropping in total	23.2	19.0	3.9	0.3	13.3	4.1	3.2	6.0
Arable land	23.4	19.1	4.0	0.3	16.0	6.8	3.2	6.0

Source: own calculations based on: Rolnictwo i Gospodarka Żywnościowa 1986-1990 (1992); Rocznik Statystyczny Rolnictwa 1998 (1999), as well as Użytkowanie i jakość gruntów (1996).

²⁴ Due to the difficulty in effectively managing the property after liquidated PGR, in 1996 approximately 38% of public farms in the area group of 100 ha and more (28% in the group of 1000 ha and more) owning arable land abandoned the cropping.

In the first years of systemic change, the sector in question also underwent a significant decrease in yields from crops (especially in state farms). It was even slightly larger than in farms of natural persons. However, in the mid-1990s, farms operated by legal persons significantly improved the level of yields, especially root crops, and they had more yields of all the main crops, in particular cereals and rapeseed than those in farms of natural persons.

As a result, the share of farms operated by legal persons, especially public farms, in the basic crop plants has decreased (Table 4). This was mainly the case with potatoes, to a lesser degree with cereals and to a relatively small extent with industrial plants (considering the reduction of arable land).

Table 4

Changes in the share of legal farms in the main crops during the period of intensive systemic changes (in % of total crop in the entire agriculture)

Indicator	On average in 1986-1990			On average in 1995-1997			
	total	including		total	including		
		PGR	RSP		public	SPR	other
Cereals	23.7	20.7	3.0	14.8	4.8	3.7	6.3
Potatoes	8.4	7.1	1.3	2.9	0.5	0.5	1.9
Sugar beet	17.0	13.9	3.1	15.1	5.1	3.1	6.9
Rapeseed	68.3	59.2	9.1	51.5	18.4	9.8	23.3

Source: own calculations based on: Rolnictwo i Gospodarka Żywnościowa 1986-1990 (1992); Rocznik Statystyczny Rolnictwa 1998 (1999).

A very important trend in the sector of farms of legal and natural persons was the withdrawal of part of farms from livestock production and the limitation of most of the newly established farms to plant production. In this sector, the share of farms with basic livestock decreased to almost 42% (in public farms to 42%, in SPR to 40%²⁵, in the rest of the private sector to 44%) and in the natural persons farming sector to 52%.

In the period under review, the number of livestock (in conversion units) decreased by 64%, including 85% in public farms and 42% in SPR, while in the natural persons farming sector it declined by 17% (Table 5). As a result, the share of this farming sector in the number of livestock units decreased from 19.2% to 9.3%, including in public farms from 16.5% to 3.4%, and in SPR from 2.7% to 2.1%. The share of the newly formed group of private, legal farms amounted to 3.7%. Of course, when analysing the scale of reduction, the changes in the utilized area of agricultural land should be considered. In the farms operated by legal persons, the number of livestock units per 100 ha of agricultural land decreased from 55 to 31, i.e. by 44% (in public farms by 57% and in SPR by 14%), while in farms operated by natural persons it declined from 70 to 54, i.e. by 23%.

²⁵ Generally, only RSP maintain livestock (almost 70% of all farms in this group).

Table 5

Changes in the number of livestock in terms of large livestock units in farms operated by legal persons in the years 1990-1996 against the farms of natural persons

Farms	Livestock (in thousands)			Livestock (in units per 100 ha of agricultural land)		
	1990	1996	1996/1990	1990	1996	1996/1990
Total	12,233	9017	73.7	65	49	75.4
Legal persons	2345	836	35.7	55	31	56.4
- public	2018	311	15.4	54	19	35.2
- SPR	327	191	58.4	44	38	86.4
- other	-	334	-	-	35	-
Natural persons	9888	8181	82.7	70	54	77.1

Source: own calculations and comparison based on: Rolnictwo i Gospodarka Żywnościowa 1986-1990 (1992); Rocznik Statystyczny Rolnictwa 1998 (1999).

Decline in livestock population in farms operated by legal persons (similarly in farms of natural persons) was primarily related to sheep (by 90%) and cattle (by 69%), in lesser extent to pigs (by 54%) and poultry (by 30%). In the same period, the number of sheep and goats in farms of natural persons decreased; meanwhile the following populations increased: pigs (by 11%) and poultry (by 9%), which was largely influenced by the development of industrial farming (based on purchased fodder).

The large decline in livestock in the analysed farming sector and the positive selection of farms keeping livestock and herds, as well as technical and biological progress, have resulted in increased livestock productivity. In this respect, the predominance of farms operated by legal persons to those owned by natural persons, which was already visible in 1990, has clearly increased²⁶. However, this only marginally reduced the large decline in livestock production in this sector (Table 6). In the years 1990-1996, slaughter livestock production decreased by 84% in the public sector, by 47% in the SPR; milk production decreased by 80% and 42% respectively, while eggs production declined by 38% and 18% respectively. This increase was not balanced by the increase in production in other legal farms. Livestock slaughter production in the entire legal sector decreased by 57%, milk production by 63%, and eggs production by 8%. The share of this sector in total livestock slaughter production decreased during this period from 26.9% to 11.9% (in public farms to 3.6%, in SPR to 3.7% and in the remaining farms to 4.5%), milk production from 14.4% to 7.2% (to 3.6%, 1.1% and 2.5% respectively) and eggs production from 22.6 to 22.2% (to 7.3%, 10.4% and 4.9% respectively).

²⁶ For example, in the years 1990-1996 in public farms the milking of cows increased from 4035 to 4784 litres, in SPR from 3741 to 3852 litres, and in farms of natural persons from 3042 to 3192 litres.

Table 6

Changes in the share of farms operated by legal persons in the livestock population in the years 1990-1996 (% of total livestock population in agriculture)

Indicator	Farms in 1990			Farms in 1996			
	total	including		total	including		
		PGR	RSP ^a		public	SPR ^b	other
Cattle	17.2	15.3	1.9	7.6	3.3	1.3	3.0
Pigs	28.3	23.1	5.3	14.1	4.0	4.3	5.8
Sheep	33.1	27.3	5.8	22.6	11.4	4.2	7.1
In livestock units	19.2	16.5	2.7	9.3	3.4	2.1	3.7

^a Including ZGR KR.

^b Including farms owned by agricultural trade unions.

Source: own calculations based on: Rolnictwo i Gospodarka Żywnościowa 1986-1990 (1992); Rocznik Statystyczny Rolnictwa 1998 (1999).

The presented changes in the area and structure of crops, crop yields, livestock population and its productivity were reflected in changes on the level of agricultural production. In farms operated by legal persons, with a 36% reduction in agricultural land use, the value of agricultural output (in constant prices as of 1990) was 40% lower, and the final and trade output value amounted to 47%. This was primarily due to a very large decline in public farms (with a 64% reduction in agricultural land, the reduction in global production amounted to 80%, final production to 77% and commercial production to 81%). On the other hand, in farms owned by natural persons, the increase of utilized agricultural land by 6.6% resulted in a slight increase in global agricultural production (by 4.9%) and slightly higher final production (by 11.2%) and commercial production (by 7.6%).

Table 7

Changes in the share of farms operated by legal persons in the value of agricultural production (% of production in the entire agriculture in current prices)

Agricultural production	Farms in 1990			Farms in 1996			
	total	including		total	including		
		PGR	RSP ^a		public	SPR ^b	other
Global	23.0	18.0	5.0	11.0	4.0	3.0	4.0
Final production	23.5	18.5	5.0	12.5	4.5	3.3	4.7
Commercial production in total	26.5	21.2	5.3	14.5	5.6	3.7	5.2
Trade plant production	25.4	21.9	3.7	15.7	7.0	3.1	5.6
Trade livestock production	27.0	20.8	6.2	13.7	4.7	4.1	4.9

^{a, b} As in the table 6.

Source: own calculation and comparison based on: Rolnictwo i Gospodarka Żywnościowa 1986-1990 (1992); Rocznik Statystyczny Rolnictwa 1998 (1999).

As a result, the share of this sector in total agricultural production decreased by almost 1/2 (global production from 23% to 11%, final production from 23.5% to 12.5%, and commercial production from 26.5% to 14.5%) while the usage of agricultural land declined from 23.0% to 15.2%, i.e. by 1/3. Farms operated by legal persons in 1996 dominated in agricultural commercial production, to a slightly larger degree in plant (15.7%) than in livestock production (13.7%).

The share of public farms in agricultural production decreased approximately 4 times and the share of cooperative farms declined by about 1/3. As a result, in 1996 the share of public farms in the structure of agricultural production was clearly lower than in the structure of utilized agricultural land (7.2% and 4.0%, respectively), the share of SPR was slightly higher (2.8% and 3.0% respectively), while the share of the remaining farms was slightly lower (5.4% and 4.0%).

Changes in the effectiveness of management in farms operated by legal persons in comparison with farms owned by natural persons

From the presented data on changes in agricultural production the farms operated by legal persons had the productivity of the utilized agricultural land significantly reduced. These changes can be presented using the value of agricultural production per 1 ha of agricultural land in 1990 and 1996 at constant prices.

This decrease was small in cooperative farms (by 5.1% when calculated in terms of global production, by 6% in terms of final production and by 4% in terms of commercial production), but very large in the public sector (by 43%, 37% and 34% respectively). In households, the fall in productivity of utilized agricultural land, calculated in terms of the value of global agricultural production, amounted to 1.7%, while in terms of final production it increased by 4.3%, and in terms of commercial production by 0.9%. As a result, in 1990, the productivity of agricultural land in state-owned farms was comparable to the productivity of agricultural land in farms owned by natural persons (slightly lower in global production, similar in final production and higher in commercial production); however, already in 1996 it was significantly lower in comparison with all the mentioned categories of agricultural production. This was mainly due to the liquidation of the most productive sector of state farms (PGR subordinated to the Ministry of Agriculture and the voivodes) as well as difficulties in maintaining agricultural production on farms meant to be privatized which were managed by the Agricultural Property Agency of the State Treasury. First and foremost, attention should be paid to the very high (47%) share of fallows in arable land and very poor usage of grassland, due to large share of farms without herbivore livestock. Productivity in cooperative farms in relation to individual farms has decreased only to a small extent. The slight deterioration of relations in 1996 in comparison to 1990 was mainly due to the deterioration of the internal structure of these farms and a significant reduction of livestock production. The productivity of agricultural land in cooperative farms was still higher than in individual farms (in 1996 in constant prices from 1990, when calculated in terms of global production – by 8%, final production –

by 13%, and commercial production – by 31%). Productivity of agricultural land in a newly established group of farms operated by legal persons, created on the basis of post-PGR property, in 1996 was at a level much higher than public farms, but lower than in the SPR. Because of the “origin” of these farms they were unable to improve the level and structure of production, and because of the financial difficulties they rather lowered and simplified it by disposing primarily of low profitable livestock production. Thus, the productivity of agricultural land was lower than that of individual farms – by 4-5% when calculated by means of global and final production, and by about 10% higher in terms of commercial production.

Table 8

Changes in the productivity of agricultural land in the farms operated by legal persons in comparison with farms of natural persons between 1990-1996 (in PLN per 1 ha of agricultural land at constant prices from 1990)

Agricultural production	Farms in 1990				Farms in 1996				
	natural persons	legal persons in total	including		natural persons	legal persons in total	including		
			PGR	RSP			PGR	SPR	others
Global	482	470	455	540	474	373	259	513	447
Final production	343	354	338	429	358	295	214	404	345
Commercial production	286	346	336	394	288	285	223	379	316

Source: own calculation and comparison based on: Rolnictwo i Gospodarka Żywnościowa 1986-1990 (1992); Rocznik Statystyczny Rolnictwa 1998 (1999).

Table 9

Changes in the level of productivity of farms operated by legal persons in comparison with farms owned by natural persons (in PLN of agricultural output value at constant prices from 1990)

Agricultural production	Farms in 1990				Farms in 1996				
	natural persons	legal persons in total	including ^a		natural persons	legal persons in total	including		
			PGR	RSP			PGR	SPR	others
Global	1926	4990	5470	3715	1957	7209	5219	7791	9524
Final production	1372	3761	4064	2954	1478	5717	4315	6137	7339
Commercial production	1142	3678	4041	2713	1191	5509	4499	5753	6723

^a If the number of people working in agricultural production in PGR at the level of 290 thousand and 109 thousand in RSP. Without making the number of people working in agricultural production more real, these would amount to 3660, 2719 and 2704 in PGR; 2754, 2190 and 2017 respectively in RSP.

Source: own calculation, comparison and estimates based on: Rolnictwo i Gospodarka Żywnościowa 1986-1990 (1992); Rocznik Statystyczny Rolnictwa 1998 (1999).

Substantial changes in agricultural land productivity and, at the same time, even higher number of employees also contributed to significant changes in labour productivity (Table 9). Labour productivity in the entire legal sector, including, in particular in case of SPR, has clearly increased. In this respect, the farms operated by legal persons have significantly increased the advantage over farms of natural persons. The highest productivity was found in companies. Only in the public farming sector, despite a significant decrease in the number of people employed per 100 ha of agricultural land, there was a slight decrease in labour productivity as measured by global production and a slight increase calculated in terms of final and commercial production. This was mainly due to the unfinished process of managing the property taken over by the Agricultural Property Agency of the State Treasury after liquidated PGR. In this sector, some of the holdings taken over by the Agricultural Property Agency of the State Treasury, and not privatized, included farms without or with very limited agricultural production. It should be noted, however, that some of the state-owned farms, which have been given a possibility of prolonged managing of this type of property (primarily plant breeding and livestock husbandry companies, as well as also typically commercial companies), have significantly improved their managing efficiency.

Summary

Due to the neo-liberal market system implemented since the early 1990, all farms faced very difficult requirements for adapting to the new system. Especially difficult conditions were set to so-called social farms, because these farms were contested in a systematic and ideological sense. Therefore, numerous economic and legal instruments were introduced to encourage the so-called social economy unit (*jednostka gospodarki społeczniejszej*, jgu), especially PGR, to accelerate the “decollectivisation” process. In this context, the Act of 19.10.1991 laying down the liquidation of the PGR state-owned agricultural production sector and the transfer of the post-PGR property, including primarily the land, to peasant farms, deserves to be mentioned. All these actions in the situation of deteriorating the profitability of agricultural production resulted in a sharp diminishing of state sector and cooperative farms. However, the transfer of agricultural land and tangible assets, mainly immovable, to peasant farms proved to be very difficult, mostly due to the lack of demand. This created the conditions for the emergence and development of a community of private legal farms, usually organized in the form of commercial law companies (including companies of former PGR employees). The free transfer of property by the AWRSP, mainly the land, to the Church and to various institutions for the purpose of fulfilling their statutory objectives, contributed to the development of this group of farms. This situation also contributed to the commercialization of parts of difficult to dispose of liquidated PGR (mainly former combines), and resulted

in leaving a considerable part of the post-PGR property in the temporary management or administration of the Agricultural Property Agency of the State Treasury. As a result, the internal structure of the farm operated by the sector of farms operated by legal persons has significantly changed. At the beginning of the analysed period state-owned farms dominated, yet at the end of that period this were farms of private legal persons, especially organized in the form of commercial law companies. The area structure of farms in this sector has also changed – the share of small and medium-sized farms has increased. At the end of the analysed period, farms in this sector were still predominantly very large. Although in the period under review, this sector has declined considerably, both in terms of utilized agricultural land as well as labour and capital resources, it still played a significant role, particularly in commercial agricultural production and in the dissemination of scientific and technical progress in agriculture. However, the deterioration of the profitability of agricultural production and the disturbances resulting from the difficulties in the efficient management of post-PGR property have resulted in a significant reduction of land productivity in this sector, mainly in state farms. In terms of this indicator, the farms operated by legal persons (other than cooperatives) at the end of the analysed period were, to a greater extent, in worse situation than farms of natural persons than at the beginning of this period. However, farms in this sector increase their advantage over private farms in terms of crop yield and productivity of livestock as well as labour productivity.

References

1. Bałtowski M.: Przekształcenia własnościowe przedsiębiorstw państwowych w Polsce. PWN, Warsaw 2002.
2. Boczar K., Szelażak T., Wala F.: Węzłowe problemy przełomu w polskiej spółdzielczości rolniczej przy przechodzeniu do systemu gospodarki rynkowej. Friedrich Ebert Foundation Representation in Poland, Warsaw 1993.
3. Czyżkowska-Dąbrowska J.: Efektywność gospodarowania w rolniczych spółdzielniach produkcyjnych [in:] Efektywność gospodarowania w rolnictwie. IERiGŻ, Warsaw 1991, 2000 (1989-1998).
4. Dmochowska H., Dyka S., Wąsowicz S.: Spółdzielczość polska w latach 1988-1991. Cooperative Research Institute, Warsaw 1993.
5. Domagalski A.: Polska spółdzielczość po 14 latach transformacji ustrojowej – raport sytuacyjny [in:] Wczoraj, dziś i jutro naszego rolnictwa. II Polish Agricultural Congress organized by the Polish Agricultural Council under the patronage of the President of the Republic of Poland Aleksander Kwaśniewski, Poznań, 4-5 June 2004.
6. Dzun W.: Gospodarstwa rolne w procesie transformacji systemowej (lata 1990-2002). *Wież Współczesna*, no. 1, 2004.
7. Dzun W.: Państwowe gospodarstwa rolne w procesie przemian systemowych w Polsce. IRWiR PAN, Warsaw 2005.
8. Dzun W.: PGR w rolnictwie polskim w latach 1944-1990. IRWiR PAN, Warsaw 1991.
9. Dzun W.: Przedsiębiorstwa rolne przed i po wejściu Polski do Unii Europejskiej. IERiGŻ-PIB, Warsaw 2009.
10. Dzun W.: Spółdzielnie produkcji rolnej w procesie przemian systemowych. *Zagadnienia Ekonomiki Rolnej*, no. 4, 2009.
11. Gburczyk Sł.: Efektywność gospodarowania w rolnictwie [in:] Efektywność gospodarowania w rolnictwie. IERiGŻ, Warsaw 1991.
12. Guzewicz W.: Spółdzielcze gospodarstwa rolne w warunkach gospodarki rynkowej. IERiGŻ, Warsaw 1992.
13. Guzewicz W., Zdzieborska M., Żarska A.: Rolnicze spółdzielnie produkcyjne w warunkach gospodarki rynkowej. IERiGŻ, Warsaw 1992.
14. Iwanek M.: Analiza instytucji własności przedsiębiorstw. Faculty of Economics at the Warsaw University, Warsaw 1996.
15. Osuch D.: Efektywność ekonomiczna zrestrukturyzowanych przedsiębiorstw rolnych powstałych w oparciu o majątek Skarbu Państwa (wstępne wyniki badań). IERiGŻ, Warsaw 1998.
16. Review of Agricultural Policies: Poland, OECD, Paris 1995.
17. Przekształcenia własnościowe w rolnictwie – 10 lat doświadczeń. SGGW Publishing House, AWRSP, Warsaw 2002.
18. Przekształcenia własnościowe w rolnictwie – 20 lat doświadczeń i perspektywy (scientific editor H. Runowski). SGGW Publishing House, Warsaw 2013.
19. Reformy strukturalne PGR. Aneks 7 do raportu Strategia rolna dla Polski. Warsaw 1991.
20. Runowski H.: Istota i cele przekształceń własnościowych w PGR [in:] Cele i metody przekształceń własnościowych państwowych przedsiębiorstw gospodarki rolnej. SGGW Publishing House, Warsaw 1991.

21. Runowski H., Ziętara W.: Stan dotychczasowy i rekomendacje na przyszłość w procesie przekształceń własnościowych [in:] Przekształcenia własnościowe w rolnictwie – 10 lat doświadczeń. SGGW Publishing House, AWRSP, Warsaw 2002.
22. Strategia rolna dla Polski. Raport wspólny grupy zadaniowej Polski (EWG) Banku Światowego. Aneks 6: Spółdzielnie rolnicze. Warsaw, 27 July 1990.
23. Wilkin J.: Państwowe gospodarstwa rolne – teraz i w przyszłości [in:] Własność państwowa w rolnictwie – przekształcenia, problemy, perspektywy. University of Agriculture and Technology in Olsztyn, Olsztyn 1994.
24. Wiśniewski L., Kaprzyk Z., Krawczyk I.: Efektywność gospodarowania w państwowych gospodarstwach rolnych [in:] Efektywność gospodarowania w rolnictwie. IERiGŻ, Warsaw 1991.
25. Woś A.: Kierunki i czynniki rozwoju rolnictwa i gospodarki żywnościowej. IERiGŻ, Warsaw 1991.
26. Woś A.: Polityka rolna w warunkach liberalizacji rynku (1990-1991). IERiGŻ, Warsaw 1991.

Statistical materials:

1. Budynki, budowle, infrastruktura techniczna. PSR 1996. GUS, Warszawa 1997.
2. Ciągniki, maszyny rolnicze i inne środki transportowe. GUS, Warszawa 1997.
3. Państwowe gospodarstwa rolne w latach 1986-1991. GUS, Warszawa 1991.
4. Przemiany agrarne. PSR 1996. GUS, Warszawa 1997.
5. Rocznik Statystyczny Rolnictwa 1993. GUS, Warszawa 1994.
6. Rocznik Statystyczny Rolnictwa 1998. GUS, Warszawa 1999.
7. Rolnictwo i Gospodarka Żywnościowa 1986-1990. GUS, Warszawa 1992.
8. Rolnicze spółdzielnie produkcyjne w Polsce Ludowej. PWRiL, Warszawa 1988.
9. Systematyka i charakterystyka gospodarstw rolnych. PSR 1996. GUS, Warszawa 1998.
10. Użytkowanie i jakość gruntów. PSR 1996. GUS, Warszawa 1997.
11. Wyposażenie gospodarstw rolnych w środki techniczne a cele i kierunki produkcji gospodarstw rolnych. PSR 1996. GUS, Warszawa 1998.
12. Zwierzęta gospodarskie. PSR 1996. GUS, Warszawa 1997.