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INSTITUTE'S RESEARCH – HISTORICAL OUTLINE

Paper for the 70th anniversary conference of the Institute

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Introduction

Times change and so do we: the Institute at the service of the society. This is the main idea of the paper, which the presents selected achievements of the Institute[1]. The task is not easy due to the limited scope of the paper, given that this is a long period during which external conditions, including political doctrines and economic practice, have changed, especially taking into account the extensive scope of the Institute's activities.

Within the 70-year period that we are celebrating today, agriculture[2] was changing, as was the agriculture management system − from the central planning system (in the period of the People's Republic of Poland), through the free market system (in the period of political transformation after 1989) to a mixed system with significant interventionism of national and EU political institutions (after accession to the European Union). These systems underwent significant changes over time. The doctrine of the socialist system was gradually reconciled, as was later the neo-

[1] Over a period of 70 years, the name of the Institute changed several times: from the Institute of Agricultural Economics (Polish: Instytut Ekonomiki Rolnej, IER), through the Institute of Agricultural and Food Economics (Polish: *Instytut Ekonomiki Rolnictwa i Gospodarki Żywnościowej, IERiGŻ*), the merger of the both, i.e, the Institute of Economics and Food Industry Organisation (Polish: *Instytut Ekonomiki i Organizacji Przemysłu Spożywczego*) to the current Institute of Agricultural and Food Economics – National Research Institute (Polish: *Instytut Ekonomiki Rolnictwa i Gospodarki Żywnościowej – Państwowy Instytut Badawczy, IERiGŻ-PIB*). By way of simplification, it will be simply referred to as "the Institute".

[2] Agriculture entered the post-war period, as did the whole country, in a disastrous condition as a result of the destruction and pillaging of war. The reconstruction of agriculture was undertaken mainly thanks to the precautionary measures taken by peasants. A flattering assessment of the reconstruction of agriculture was given in the report on the state of agriculture in Poland by M. Ezekiel, who came to Poland with the FAO mission which aimed to assess the situation in Polish agriculture in 1947 and 1959. (Ezekiel, 1960).

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liberal doctrine, which culminated in the first years of transition[3] and the objectives of the European Union gradually evolved.

During this period, the thematic scope of the Institute's research, which mainly defined the needs of agricultural policy, rural policy, and food policy, changed, as did the research methods. The scope of the Institute's research has evolved to include the economics of the organization of the food industry and the entire food economy, the issues of nutrition, food quality, food policy, and the environment. The inclusion of food industry players in the market environment required research into external conditions related to the market (demand, competition, risk), relations with the national economy and ecological conditions, and after the accession to the European Union conditions resulting from the European integration. Parallel to agricultural issues, the focus was on the countryside. The Institute's research was of a microeconomic nature (relating to economic units, such as farms and food economy enterprises) and of a macroeconomic nature (relating to intersectoral relations, macroeconomic situation, policies, challenges and regional and global conditions). Microeconomic analyses focused on the characteristics and evolution of economic units (especially family farms), while the macroeconomic work took on socio-economic transformation of agriculture and the links between agriculture and the entire food economy and the social economy.

The Institute's research was closely linked to agricultural and rural policy as it monitored the effects of political decisions, but also influenced this policy by identifying areas requiring political intervention and formulating proposals for solutions. Numerous disputes have been held regarding agricultural policy, policy instruments, agrarian structure, subsumption, income parity, and others and proved extremely important.

In the approach to the farm survey, the treatment of the farm as an organic unit ("German school") was abandoned in favor of treating it as a mere economic unit ("American school"). This reductionist approach, which is in line with neoclassical economic theory and neoliberal doctrine, continues to take place to this day, although the need for a holistic approach is becoming more and more apparent with the growing awareness of the many functions performed by farms.

The pattern of examining the problems involved establishing the state of affairs, causes, and effects and sometimes proposing solutions. Research methods have been improved; they became more formalized and quantitative with an expanded empirical basis.

Given the scale of work carried out at the Institute to deliver a single conference paper it is necessary to focus on a selected thematic scope. Therefore, I will omit or merely mention many issues, especially those that are the subject of other papers and jubilee publications[4]. I will focus on the Institute's activities in the distant

[3] The transformation was marked by a new dogmatism: minimum government influence in the economy and maximum reliance on the market. The market mechanism is sufficient for efficiency and growth, privatization of everything. There is no third way: it is either planning or market.

[4] In particular, this concerns the issue of agricultural markets developed with the support of American experts at the beginning of the political transformation and examined by teams led by J. Małkowski and now by P. Szajner.

past, which, for obvious reasons, are not widely known, and remain cursory about the period after accession, as it has not yet escaped our memory. The same applies to the bibliographical references presented herein.

The Institute's achievements are the achievements of its staff, i.e., many people, and it is impossible to present the contribution of each of them. From among the people who already passed away but who contributed greatly to the Institute's work, I will only mention three professors: Augustyn Woś, Zdzisław Grochowski, and Waldemar Michna.

Socio-economic transformation of agriculture

After the war, Polish agriculture faced a political and industrial transformation. The former consisted in socializing agriculture, while the latter was based on changes in technology and production organization. The doctrine of socialization of agriculture was particularly visible in the first half of the 1950s through the establishment of agricultural production cooperatives, compulsory deliveries, and the allocation of investments in a discriminatory manner in relation to peasant farms[5]. Like the sword of Damocles, social reconstruction hung over agriculture until the 1980s[6]. The drive for socialization was hampered by the unfavorable economic performance of the socialized sector (state agricultural farms and agricultural production cooperatives), the excessive workforce in agriculture, the scarcity of industrial resources for agricultural production and food shortages.

After the so-called Polish October in 1956, the course for the socialization of agriculture was relaxed, followed by the adoption of the principle of agricultural policy: *associating production growth with socialist changes in the countryside*. It was assumed that production would increase in all sectors of agriculture, together with expenditures on agricultural mechanization, drainage, and rural construction. In the 1970s, compulsory deliveries were abolished, introducing agricultural contracting instead, economic conditions for agricultural production were improved, the supply of industrial means of agricultural production was increased, and health care and social security systems for the agricultural population were initiated. The 1980s witnessed further loosening of the socialization of agriculture by adopting the principle of equality of agricultural sectors in agricultural policy and the sustainability of individual farms (1983). This was forced by a few years of crisis in agriculture at the turn of the 1970s and 1980s.[7]

The transformation of agriculture was the foreground of numerous debates, where the Institute played a significant role. The first such dispute concerned the so-called

[5] In this period, individual farms accounted for only about 1/4 of total investment in agriculture, whereas between 1957 and1959 they amounted to 1/2 of total investment in agriculture (GUS, 1968, p. XX).

[6] In other countries of the Soviet bloc, apart from Yugoslavia, agriculture was socialized.

[7] The immediate cause of the crisis, which began in 1979, consisted in a deep decline in cereal yields and cereal imports from 7.8 million tonnes in 1980 to 2.2 million tonnes in 1985. The national income generated in agriculture in 1982 was 23% lower and 6% lower in 1985 compared to 1978. (WB, 1986, p. 6). The IER analysis indicated that development processes in agriculture have been reversed by 6-7 years, including plant production by as much as 10 years (Woś (dir.), 1981, p. I), which was proven through respective numerical data (ibid., p. 43).

primary accumulation of capital in Poland and was never fully resolved. Some believed that agriculture financed the industrialization of the country to a significant extent through a system of compulsory supply, equivalent exchange, and labor migration (Woś, 1975), while others believed that poor and destroyed agriculture had no accumulative capacity to finance non-agricultural sectors. There was a consensus, however, that migrants from agriculture to industry (with around 3 times higher labor productivity measured by clean production) automatically contributed to non-agricultural accumulation. The first director of the Institute, J. Tepicht, believed that the greatest contribution of peasant farming consisted in its input into migration: "The convergence of the capacity reserves of the unemployed "v" with the inactive "c" resulted in a significant increase in social labor productivity. It also proved beneficial for agriculture due to the outflow of some ‚redundant people' and the expansion of peasant workshops as a result of the agricultural reform. (Tepicht, 1966, p. 160).

In the 1960s, there was a wide debate on the gradual conversion of agriculture towards socialism, with a steady increase in agricultural production. In this regard, the Institute's staff (among others A. Brzoza, J. Tepicht, and Z. Grochowski) raised the issues of input efficiency, agricultural production factors, the role of agricultural clubs in the social conversion of agriculture, and the association of production growth with reconstruction (KiW, 1964; KiW, 1966). The need to increase agricultural production was the main factor favoring the peasant economy, as analyses carried out at the Institute unambiguously indicated higher productivity of land and means of production on individual farms, as well as significant opportunities to increase commodity production on those farms (Stelmach, 1975; Grochowski, 1976). In the absence of capital, what came to the foreground was the capital intensity of gross final production (in brackets: net value), i.e., the value of fixed assets in PLN per 100 PLN of the production value (fixed prices of 1971), which on average between 1974 and 1975 was as follows: the value of fixed assets for individual farms 256 (297) and state agricultural farms 471 (745), cash expenditure (including depreciation) for individual farms 38.2 (28.1) and state agricultural farms 81.3 (70.0) (Grochowski, 1976, p. 5, Table 1).

In the 1970s, the discussion on agricultural policy was joined by A. Woś (on the role of the market and prices in the process of controlling the production of peasant farms), T. Rychlik (on the reform of the economic system of the state agricultural farms), Z. Grochowski (the factors of agricultural production growth) (Rasiński (ed.), 1971; Rasiński (ed.), 1972). Z. Grochowski claimed that the pace of transformation in agriculture depends on: 1) the pace of economic growth of the whole country, 2) the possibility of providing agriculture with a sufficient amount of industrial means of production, 3) the possibility for non-agricultural sectors to absorb the labor force from agriculture (Grochowski, 1974, p. 12), concluding that "giving farmers the freedom to choose forms of farming and decide about their own destiny is one of the basic conditions for a conflict-free and harmonious combination of the process of social transformation in rural areas with a steady increase in agricultural production at the same time" (ibid., p. 18). This was then complemented by the postulate to gradually bring the living and working conditions of rural residents closer to those in the cities.

The Institute was developing the so-called subsumption theory, according to which the reconstruction of agriculture is not only about socializing the rural areas, but above all about socializing the agricultural production process. It was pointed out that it was possible to reconcile the growth of agricultural production and individual (peasant) farming with the socialization of agriculture, as peasant farms are increasingly integrated and even blended into the socialist agricultural environment. Thus, nothing prevents peasant farms from being recognized as a sustainable element of socialist agriculture (Grochowski (ed.), 1976). In the first half of the 1980s, the research led to the conclusion that "the main task of agriculture is to maintain the socially desirable growth rate of agricultural production and the reconstruction of agriculture should serve this purpose" (Woś (ed.), 1986, p. II). However, was it the case? The answer was provided by the Institute's analyses indicating, for example, the consumption of fodder from the purchase of the final production per 1000 PLN (in PLN, fixed prices): 1978 – PGR 284 PLN, RSP 470 PLN, ZGR[8] 735 PLN, individual farms 150 PLN; 1982 – PGR 195 PLN, RSP 268 PLN ZGR 632 PLN, individual farms 77 PLN (Woś (ed.), 1986, p. 426, table XII. 4). Since the mid-1970s, the course towards the industrialization of agriculture has become more marked[9]. This was reflected in an increase in the supply of industrial means of agricultural production, the development of specialist farms, industrial animal production methods, and commodity farms. Specialization became a government program for activating the peasant economy (through preferences for specialist farms) and supporting teams of individual farmers. Specialist farms became a developing segment of the individual economy. This trend was not reversed by the introduction of the market economy in 1989, which radically changed farming conditions, although a risk factor as regards prices and sales appeared (Grochowski and Kaźmierczak, 1991, p. X). Apart from individual farms specializing in animal production, such production was also developed in industrial farms in order to increase supply in order to mitigate the shortage of meat products on the market.

Commercialization is one of the basic processes of agricultural industrialization, critical to the transition of peasant farms from an existential to a business model. In the 1980s, the concept of commodity farms was developed together with specialization, the development of which accelerated during the years of political transformation and subsequent European integration, when the concept of a development farm was also introduced, meaning "a state-favored farm model providing family employment and income comparable to the average non-agricultural income" (Michna and Mierosławska, 2009, p. 47). Large-scale commodity farms (the so-called large-scale agricultural enterprises) established after 1990 became the subject of the Institute's research, which indicated a significant increase in total productivity, which, however, did not apply to companies owned by the State Treasury, and at the same time the symptoms of negative environmental impact of such enterprises were observed (Kagan, 2014, p. 134).

[8] PGR – state agricultural farm, RSP – agricultural production cooperative, ZGR – collective agricultural farm.

[9] The direction towards the industrialization of agriculture was recommended by the Rockefeller Foundation Mission led by N. Borlaug, who stayed in Poland in 1983 (Raport, 1983) and the World Bank report of 1986 (WB, 1986).

The transformation of agriculture requires financing, while the economic weakness of farms meant that they were unable to go beyond replacement investments. Z. Grochowski formulated and defended the thesis that investment outlays for technical and social reconstruction must be financed from social resources in the form of increasing debt and providing subsidies (Grochowski, 1977a, p. 18). Peasant farms adjusted the accumulation and consumption to the economic situation in such a way that during periods of income growth, the accumulation grew faster than consumption, while during the periods of decline, the "locking effect" appeared, i.e., farms secured consumption and limited accumulation (Gulbicka, 1986, p. 301). The situation did not change much during the political transformation, but after accession the inflow of capital to agriculture was significant. However, the use of external capital, especially from public funds (subsidies), requires caution, as "having public funds encourages agricultural politicians to practise political corruption and create political patronage" (Kulawik, 1999, p. 81), as well as causes the allocation of subsidies to richer farmers.

An important area of transformation is the agricultural structure, especially the agrarian, ownership and socio-economic structures. They have been the subject of constant monitoring and research into the forces and conditions of changes in these structures, especially the agrarian structure. The turning point in the transformation of the agrarian structure came at the end of the 1980s, when agriculture embarked on a 'self-sustaining' and gradual improvement of the agrarian structure. The analyses showed the factors behind and barriers to changes in the agrarian structure and forecasts in this respect (among others: Z. Grochowski, A. Woś, A. Szemberg, W. Józwiak).

After 1989, political conditions were created for the industrial transformation of agriculture according to the World Bank's recommended strategy of agricultural development under free market conditions (WB, 1990). The transformation was determined by changes in the systemic (economic) sphere: the marketization of agricultural prices, the emergence of competition, greater supply of means of agricultural and institutional production — building market institutions, as well as the transformation of state agricultural farms[10]. However, there were no economic conditions, especially there was a lack of capital in agriculture and jobs outside the agricultural sector. These barriers were significantly reduced by the accession to the European Union and the inclusion of Polish agriculture in the CAP mechanisms.

The management of agriculture has undergone a significant evolution, starting from the Polish version of the NEP during the reconstruction (1946-1949), through a centralized planned-and-banned system to a free market economy and the Common Agricultural Policy. The plan of agriculture covered the subjects of socialized agriculture and the sphere of agricultural service and, to a lesser extent,

[10] The assessment of these transformations (in fact, the collapse of state agricultural farms as a result of political decisions in 1990) is not clear. For example, A. Woś stated: "These losses were not necessary if another way of reconstructing the sector had been adopted, which was possible. It was recognized that the privatization of state-owned farms was paramount, and the economic effects would come as a result of privatization. The assumption that it is enough to change the form of ownership to achieve a new quality in economic terms proved to be wrong" (Woś (dir.), 1993, p. 24).

peasant economy. Over time, the concept of a regulated market model was born with the areas of direct influence of the government (agricultural infrastructure, research, investment policy, state food reserves) and indirect influence through the use of certain instruments such as contracts, taxes and other charges, insurance, supply, output, services, consulting and education (Woś, 1985); the government's meddling in prices which must be left to the market to determine (Woś, 1988) was opposed. The political transformation has completed the stage of the planned and banned economy[11] and introduced economic instruments with the shifting of support for farmers' income from prices to subsidies directly to income (more and more dependent on the environment), subsidies to agricultural and social insurance, and payments for ecological services. This was accompanied by changes in the institutional environment – state and cooperative institutions established in the post-war period were in ruins and new ones were established: the Agricultural Market Agency (1990), the Fund for Restructuring and Debt Management (1992), which replaced the Agency for Restructuring and Modernisation of Agriculture (1994), the Treasury Agricultural Property Agency (1991), which was transformed into the Agricultural Property Agency (2003) and the National Agricultural Support Centre (2017).

In the 1980s, the symptoms of a new look at the process of agricultural industrialization began to appear, which from today's perspective can be described as, towards sustainability'. As A. Woś, the then Director of the Institute, stated: "Environmental issues cannot be neglected in the agricultural development strategy. The environment and its elements, such as space, are becoming a rare good, and thus an important economic category, which must be taken into account in both strategic and operational decisions for the whole society" (Woś, 1980, p. 1251). He then raised the still valid challenge that modern societies "must reconcile the imperative of increasing food production in the short term to meet the growing needs with the imperative of preserving the environment and resources in the long term, which in turn is an inalienable condition for improving nutrition and living conditions in the future" (Woś, 1996, p. 10). The ecological aspects of agricultural and food production and the need for consensus on agricultural and food policy were also raised by W. Michna (1991). At the beginning of the first decade of this century, the concept of socially sustainable agriculture was formulated (Woś, Zegar, 2002). Research in this area has been intensified after the accession to the EU and the inclusion of this issue in the Multiannual Programs — the results were disseminated in a series of 50 notebooks entitled "Z badań nad rolnictwem społecznie zrównoważonym" („From Research on Socially Sustainable Agriculture"), as well as in other publications referring to a wide range of problems (Zegar, 2012), agricultural sustainability (Toczyński et al., 2013), farm sustainability (Wrzaszcz, 2012), or the impact of environmental measures on the economic efficiency of farms (Zieliński, 2016).

[11] It should be mentioned that agriculture in developed countries, like no other sector, has been subject to considerable state regulation for almost 100 years. Accession to the EU has raised the level of regulation to a higher level and, in the case of family farming, it is a level which significantly limits farmers' freedom of decision.

Agricultural and food economics

The research focused on issues specific to classical agricultural economics in terms of the whole agriculture and its segments (individual, state and cooperative farms, agricultural clubs), the production sphere of agricultural service, and agricultural organizations. Over time, the research covered the entire food economy, broadening the thematic scope to include relations with the national economy, external (including global), environmental and social conditions.

Of the wide range of economic research topics, the research on production costs, income, and food security[12] seems to be the most important one. The research on agricultural production costs, including the unit costs of agricultural products, are of key importance for the overall economics of agricultural holdings and the agricultural sector. The research on the costs referred to the concept of S. Moszczeński – the distinction of economic costs (related to starting production) and property costs (resulting from the existence of wealth). The research on production costs among farms in the socialized sector (state agricultural farm and agricultural production cooperative) was conducted on the basis of reporting data, while in the case of peasant farms, agricultural accounting data were used. There were several disputes about production costs (and profitability): 1) taking into account land rent and interest on fixed assets in the production costs; 2) calculating production costs only for the whole holding (an organic method using synthetic accounting) or also for branches and products (a separate method using analytical accounting); 3) determining own input costs[13]; 4) calculating production profitability (price to cost ratio). There was a problem with taking into account the tax burden, land rent, and interest on means of production (Grochowski, 1958) as well as which category of income should be used (global income or clean income). Research on unit costs of agricultural products has been conducted systematically since 1965, overcoming various methodological problems ranging from the Agrokoszty system to the cost of unused resources (Skarżyńska, 2016). Research on unit costs was needed in connection with the regulation of agricultural prices by the state and not by the free market. This is because prices play a key role in shaping income and production structure.

For understandable reasons, agricultural income should be surveyed for both agriculture as a whole and agricultural holdings. In the first area, the Institute (Z. Grochowski) for many years determined the income of the agricultural sector, starting from pure production, while to determine the income of individual farms, agricultural accounting data were used (Czerniewska, 1959), and later also

[12] Apart from the text, there are, for example, issues of agricultural competitiveness and food economy (presented in the works of A. Woś, I. Szczepaniak, P. Chechelski, R. Grochowska, M. Wigier, and A. Kowalski), the agricultural tax and social security system (works of J. Kulawik, J. Pawłowska-Tyszko, J. Góral, and M. Wigier, among others).

[13] The Institute developed a method that assumed that: a) products of internal trade are calculated according to own costs, b) by-products (straw, manure, beet leaves, etc.) are calculated according to advance prices (calculated by reducing the cost of the main product by the value of by-products; advance prices express contractual own costs), c) land expenditure — land is treated as land capital and its interest is taken into account, d) fixed assets expenditure — depreciation and interest is taken into account.

household budget data. The situation changed after the start of drawing up national accounts and economic accounts for agriculture and then after Poland's accession to the EU in connection with the CAP transfers. Direct payments and other subsidies had a significant impact on income and the entire economy of agricultural holdings, as documented by the FADN and EAA data. The Institute also worked on principles and instruments of income policy (Ostrowski, 1988). It was particularly concerned with the effects of the principle of equal income growth of the agricultural and non-agricultural population adopted in 1971, and since 1981 the principle of income parity. The Institute's experts took part in the ongoing discussion on income parity and attempted to resolve the following dilemmas: whether the parity should be set per person or per employee; whether it should be set only for the so-called full-time farms or together with dual occupation farms; whether to take into account the total income or only the income allocated for consumption and non-productive investments, how to value natural consumption. The concept of income parity has been criticized by some circles, including the Consultative Economic Council (KRG, 1974), while the Food Economics Council (RGŻ, 1974) has opted for parity. If parity had been used used to set prices, then obviously high purchase prices would have caused inflation, protected inefficient farms, and blocked structural changes in agriculture. It was right to link the parity with labor productivity in agriculture, which was influenced especially by the supply of production means for agriculture and demand for labor. Hence, the political compromise principle of income parity in ‚conditions of effective production'.

The interest in the food economy in agricultural research was intensified after the merger of IER and IEiOPS. The Institute has formulated a concept for the treatment and analysis of food economy with the use of the inter-branch flow method (Zegar, 1981; Woś and Zegar, 1983). Changes were monitored and forecasts made (Kamiński, 1980). During the transformation period, and especially after the accession, the growing dependence of the food industry on imports became apparent, which required an analysis of the impact of globalization and integration on the food economy and the extent of food sovereignty[14]. Research was conducted on the growing importance of foreign corporations and the acquisition of added value by foreign entities at the expense of domestic producers (Chechelski, Grochowska, Wigier, 2014). It was established that the replacement of the integrated agriculture system and the food industry built in the planned economy by a system based on the market was extremely beneficial (Chechelski, 2008, p. 210). Globalization increases the share of processors, trade, and consumers in the added value of food chains and reduces the share of farmers. The policy of cheap food conducted between1945 and 1989 (through compulsory supply at undervalued prices, subsidies and preferential credits, subsidies for means of production, and decreed prices)

[14] The issue of food self-sufficiency gained more importance in connection with the introduction of economic restrictions, especially by the USA, after the introduction of martial law. From1976 to 1981, Poland bought over 40 million tonnes of cereals abroad, of which only 3 million tonnes in socialist countries. The purchase of fish shots, cake and meal in that period was about 8 million tonnes from capitalist countries alone. During this period, society demanded an increase in food supply and meat consumption increased by around 20 kg *per capita*.

led to higher food consumption than it would have resulted from the level of economic development and created a good agricultural situation for all farms, but did not lead to an improvement in the health condition of the society (lack of iodine, calcium and excess animal fats) (Michna, 1996, p. 21). Hence, the need to educate the consumer was stressed, because irrational living is also due to insufficient knowledge (Kamiński, 1980; Gulbicka, Kwasek, 2004). The issue of nutrition is being given more and more attention in the Institute's research, significantly expanding and deepening the analysis (Michna, Gulbicka, Chmielewka, 1992; Gulbicka, 2000; Chmielewska, 2000; Gulbicka, Kwasek, 2004; Kwasek, 2012; Świetlik (ed.), 2015; Kowalczyk, 2018). The subjects of analysis are also the ecological conditions of food security (Michna, 1991; Michna, 1992), food aid programs addressed, among others, to pupils of primary and secondary schools (the second breakfast program), food aid programs for infants and children under 6 years of age and for pregnant women (Michna, 1996), as well as the quality of food.

Transformation of rural areas

From the very beginning, the issues of rural areas have been the subject of the Institute's analyses based on data from the Central Statistical Office (GUS) and the Great Rural Survey (WAW) and ad hoc surveys. Research in this area was conducted especially in the team led by B. Gałęski, A. Szemberg, and A. Sikorska – with the participation of, among others, the Ministry of Agriculture and Rural Development: L. Ostrowski, A. Wrzochalska, B. Karwat-Woźniak, M. Dudek and P. Chmieliński. They concerned primarily the historical process of village deagrarianization: from the identity of farms and villages to the marginalization of agriculture. The effects of this process are, in a nutshell, concentrated in the rural population fraction, for which income from agricultural activity is the primary source of income. This fraction was just over 8/10 at the time the Institute was set up, and is now 1/10. In the structure of the rural community, the proportion of the landless population (non-peasant families) is systematically increasing. Research in the field of economic and social development of rural areas has covered a wide range of problems concerning agricultural structures, migration, demography, education, rural organizations, technical and social infrastructure, living standards, and the course for sustainable development.

The problem of the countryside was the excess of the population which had no farm work and few non-agricultural economic and organizational entities. The population redundant in agriculture was considerable, although during the reconstruction period (1946-1949) about half a million people a year left the agricultural sector. As early as in the mid-1950s, the number of professionally redundant peasants was estimated at 2.3 million on farms up to 14 ha, while on farms over 14 ha there was a shortage of about 80,000 farmers due to the technical equipment of the time (Brzoza, 1957, p. 40).

The development of industry and other sectors took away the surplus labor force resulting from a relatively high natural growth through permanent and seasonal migration (two-professional population), but did not reach the population redundant in agriculture. This situation remained until the 1990s. The slow development of non-agricultural jobs in conditions of high demographic growth led to significant unem-

ployment, which proved difficult to eliminate. The situation in this area improved significantly after the accession, to which the development of the urban and rural labor markets and foreign emigration contributed. However, the creation of jobs directly in the countryside is still desirable. It is supported by the low mobility of the rural labor force and lower costs of living in the countryside (including housing). This is supported by a great increase in the education of the rural population, including farmers (Chmieliński et al., 2013). As long as it goes hand in hand with knowledge, education is important, because as the number of people working in agriculture grows and decreases, the importance of physical work decreases and knowledge increases, so does the level of skills. Education also extends opportunities to work outside the farm.

An important subject of the Institute's research is the technical and social infrastructure of the countryside (communication, telecommunications, sewage and water supply, education, culture, health care, and recreation). The state of infrastructure in rural areas is important for the economic and social development of villages, for the vitality of rural areas and for the sustainable development of agriculture and rural areas (ZRRiOW). In particular, the equipment and institutions supporting the natural balance, soil fertility, and social balance and enabling an optimal use of internal resources of farms, favoring their multifunctionality are important (Kołodziejczyk (ed.), 2013, p. 100).

Income and infrastructure are basic factors determining the standard of living of the rural population. In various aspects, this level has been the subject of monitoring and analysis of the Institute since the beginning – formerly mainly on the Great Rural Survey (WAW) and Central Statistical Office (GUS) databases, and now mainly on the Central Statistical Office data (Gulbicka and Niewęgłowska, 1995; Chmielewska and Zegar, 2020).

Rural development is integrally connected with rural organizations deeply rooted in the countryside (public benefit organizations, professional organizations, local governments, cooperatives, voluntary fire brigades, rural housewives associations, and cooperative banks). Their role in rural development cannot be overestimated (Michna, 2010; Kołodziejczyk (ed.), 2014).

The socio-economic condition of rural settlements is regionally diverse. The imprint of history is still visible. There is also a progress in the differentiation of rural localities depending on their communication with urban centers. The better connected towns are becoming suburban, while the less connected towns are moving to peripheral positions and are often affected by depopulation. We are therefore dealing with the formation of rural villages as a continuum between metropolitan and peripheral villages.

The Institute's research documenting the huge progress in rural development, including in terms of infrastructure and living standards, and even in terms of rural well-being, especially after Poland's accession to the EU, shows that the countryside is becoming an increasingly attractive place to live, also for city dwellers.

In the service of science, practice and policy

Apart from statutory research, the Institute has also carried out research projects financed in other ways, expert opinions for the needs of the Ministry supervizing the Institute, but also for the needs of other central and supreme state bodies as well

as agricultural and economic organizations. An important role in this respect was played by the databases that were created in-house. The Institute also conducted extensive publishing and training activities and organized seminars and conferences. In particular, these were conferences related to the implementation of multi-annual programs with the wide participation of foreign researchers, which strengthened the international position of the Institute and gave the opportunity to intensify international cooperation. The Institute also initiated the creation of the European Rural Development Network (ERDN).

Databases. From the very beginning, the Institute has been keeping agricultural accounts, which it received as a dowry together with the Department of Smallholdings at the State Research Institute of Rural Husbandry (PINGW). The results of the accounting farms have been published annually since 1956 in the Institute's publication series entitled *Results of Agricultural Accounting of Individual Farm*s. The agricultural accounting system has evolved in terms of methodology and the number of holdings covered, with the greatest changes occurring in connection with Poland's accession to the EU, when this system became part of the Polish EU agricultural accounting system (FADN). A significant contribution to these changes was made by the then head of the Agricultural Accounting Department, L. Goraj, PhD. The FADN data are used in the Institute's research, as well as in the research conducted by many scientific institutions, in agricultural advisory services and in school and academic teaching. The database collected as part of the so-called Great Rural Survey (WAW) conducted, with a few exceptions, every four years from 1952[15] to 2016, is unique on a European and probably global scale. The subject of the survey was the whole village and individual randomly selected households. The research tools were two questionnaires: "Family and Household" aimed at rural households and "General Characteristics of the Village" to gather information about the entire village, infrastructure, social and cultural life. In 1952, the survey covered 120 villages and continued until 1976, when the number of surveyed villages was increased to 186. During the transformation years, the number of surveyed villages was reduced to 73 for economic reasons and in 2000, 76 villages were surveyed. In the whole period, there were 29 villages under constant observation. The survey was a valuable source of knowledge about the evolution of peasant agriculture and villages. Unfortunately, due to lack of funds, it was discontinued.

Being a satellite account to national accounts, the Economic Accounts of Agriculture (EAA), was initiated at the Institute by W. Józwiak in cooperation with the Central Statistical Office (GUS) since 1998. The accounts are drawn up on the basis of a uniform method in all EU countries. The EAA establishes the basic production and economic categories of the agricultural sector, distinguishing farms owned by natural persons from those owned by legal persons. The EAA database, which is available for all EU countries, allows for tracking changes in agriculture and performing comparative analyses. The EAA data are transmitted to Eurostat and used in the country

[15] The research on the socio-economic structure of villages and agriculture conducted in the pre-war period by the Institute of Social Economy (IGS) was resumed after the war in 1947 by the Economic Department of the Ministry of Agriculture and Agricultural Reform.

for expert opinions and work undertaken by various scientific centers. The broad scope of the database is not yet fully utilized in economic analyses.

Based on the database of large commercial farms, a ranking was drawn up, the so-called *List of 300 Best Agricultural Enterprises.*

The ranking was conducted on the basis of individual data from 1994-2016. The last 23rd ranking was published in 2017. The financial data were mainly published for the top 300 farms in the country (except for 1994, when 200 farms were included). A survey of large farms was conducted in parallel. For the purpose of this survey, detailed individual data were collected annually from an average of 150 farms in the country.

With the transformation, market surveys were undertaken at the Institute, for which statistics on the national, EU, and world markets are collected. Empirical data concerning the domestic market in particular is collected in electronic form. The data covers all elements of the agri-food market throughout the supply chain. The time series and some data on a monthly (or quarterly) basis allow for statistical analysis over a long period of time taking into account cyclic economic changes and seasonal variations. The collected databases on agricultural markets form the basis for cooperation with government and EU administrations and other research institutions at the national and international levels. For the purposes of implementing the multi-annual program, data on agricultural holdings were collected by the Central Statistical Office (GUS) in the National Agricultural Census (PSR) in 2002 and 2010 and in agricultural structure surveys conducted in 2005, 2007, and 2016. Processed and broken into extensive categories by regions and voivodeships, the data were used for analyses of farm diversification and changes that occurred over time.

Research projects implemented at the Institute

Apart from statutory research, for many years the Institute has been carrying out various research projects as part of commissioned work and nodal programs. For example, in 1989 it implemented the Central Program of Basic Research 10.06 "Directions and Factors of Development of Agriculture and Food Economy"[16], the Departmental Research and Development Program "Agricultural Accounting of Individual Farms" and 18 works commissioned by the Ministry of Agriculture and Rural Development and other economic and scientific research units (Raport, 1990). The commissioned research has been intensified over the last 30 years, also in connection with changes in the financing system and thesystematic reduction of funds for statutory research. Since 1991, the Institute has carried out 58 research projects financed by the National Bank of Poland, the Ministry of Science and Higher Education, the National Centre for Research and Development, the National Science Centre, EU and other institutions. The projects generally concerned problems of practical importance. Of particular importance was the establishment of multi-annual programs,

[16] Five subjects were implemented as part of this program: 1) Forecasting and programming of rural development, agriculture and food economy, 2) Economic instruments for controlling the development of food economy, 3) Effectiveness of management in agriculture, 4) Effectiveness of management in food industry and agricultural trade enterprises, 5) Food economy in spatial terms.

three of which were implemented by the Institute between 2005 and 2019: (1) Multi-Annual Program 2005-2009 "Economic and social conditions for the development of the Polish food economy after Poland's accession to the European Union", (2) Multi-Annual Program 2011-2014 "Competitiveness of the Polish food economy in the conditions of globalization and European integration" and (3) Multi-Annual Program 2015-2019 "Polish agriculture and EU 2020+. Challenges, opportunities, threats, proposals". The results of research carried out under multi-annual programs were included in 498 multi-annual reports, excluding articles, papers, and reports.

Cognitive and utilitarian contributions

Above all, it is necessary to point out the monitoring of economic and social processes in the agri-food sector and in the countryside, including causative factors, conditions, responses to policy instruments, production and economic performance and agricultural structures. An example is the agricultural policy impact assessment with proposals for changes in the 1970s commissioned by the Ministry of Agriculture and Rural Development (Woś (ed.), 1982). This assessment points out, among other things, the errors of this policy, including the flow of land from the individual to social economy, the hindering of investment, and a fall in production, which led to an acute food shortage. The assessment formulated critical remarks about the system of centralized management of the economy, in which particular industry (group) interests prevailed over general social interests. It was considered necessary to base the system of agricultural control on economic rights by developing a system of parametric control, using prices, credit, tax, interest rate, etc., and automatic regulation mechanisms (mainly market mechanisms). The conclusion was drawn that orientation towards individual economy is the main direction of improving the food situation. Monitoring the changes in the food economy became more important after Poland's accession to the EU and the establishment of multiannual programs. It was about the impact of the CAP on the Polish food sector. This has been reflected in numerous publications, including the European Food Safety Authority: R. Grochowska, W. Józwiak, J. Kulawik, R. Urban, M. Wigier, reports on the implementation of multiannual programs, papers for scientific conferences, expert opinions and the annual publication entitled *Analiza produkcyjno-ekonomicznej sytuacji rolnictwa* (*Analysis of Production and Economic Condition of Agriculture*).

The Institute was the birthplace of ideas that were reflected in political decisions, such as: the thesis on the necessity of technical reconstruction of agriculture before social reconstruction (Grochowski (ed.), 1975), the concept of an agricultural tax developed with the participation of the Institute of Soil Science and Plant Cultivation (IUNG), which after minor changes was enacted and is still valid today (Zegar (ed.), 1988), the concept of the Agricultural Market Agency (Urban (dir.), 1989), a report for the Minister for Agriculture and Food Economy on trends in changes and the nutritional status of the society, which, among other things, postulated the establishment of the Food and Nutrition Agency as the minister's executive body in order to, among other things, monitor and provide education on nutrition

(Michna, Gulbicka, Chmielewska, 1992)[17], or the *Pact for Agriculture and Rural Areas* (adopted by the Council on 22 July 1999) (A. Woś, J. Zegar, A. Czyżewski).

The Institute also developed certain methods, which were subsequently applied in its analyses. For example, organic cost accounting in agriculture, which referred to the achievements of S. Moszczeński (1946) and supported organic farm accounting. It was particularly concerned with the valuation of internal trade inputs (an attempt to capture the feedback mechanism and its impact on the secondary distribution of inputs for final products) (Grochowski, 1958; Grochowski, 1965). The method of calculating the unit costs of agricultural products, the cost-effectiveness, and profitability of agricultural production was further developed, taking into account labor costs in the peasant economy determined as the value of consumption fund from agricultural income per 1 day of work in agricultural production (according to the Central Statistical Office data) (Grochowski, 1977b)[18]. Another example is a synthetic index of the economic situation in agriculture (Woś, 1992). Moreover, the Institute has significant achievements in quantitative methods, developed in particular in the team of W. Rembisz.

At all times, the Institute has performed expert functions, drawing up expert opinions and notes of different significance. The Institute produced 102 and 232 expert opinions in 2000 and 2019, respectively.

Dissemination of knowledge

The results of the Institute's research were made available in the form of publications in the Institute's publishing houses, mass media, papers for national and foreign conferences and seminars. The number of publications only within the Institute's publishing series between 1950 and 2019[19] includes almost 2.5 thousand volumes (Podstawka, Wrzochalska, 2020). The list should also include the journal entitled *Zagadnienia Ekonomiki Rolnej* (*Problems of Agricultural Economics*) published at the Institute of Agricultural Economics since 1957 (362 volumes), papers published under research programs (e.g. 196, 178, and 124 volumes were published under the 2005-2009, 2011-2014, and 2015-2019 Multi-Annual Programs, respectively), papers outside the series published also in cooperation with other publishers[20].

[17] The idea of establishing the Council for Monitoring the Quality of Soil, Plants, Agricultural and Food Products by the Ministry of Agriculture and Rural Development was already born in 1991 while conducting research (led by W. Michna), which prepared reports on monitoring studies (e.g. 1996, 1997, 1998).

[18] The average size of the consumption fund in a peasant family was the cost of labor force reproduction, which was then used to establish economic categories (pure production, agricultural income, consumption) of various groups of peasant farms (Kozłowski, 1968).

[19] Only in 2019, the Institute published 8 volumes of Studia i Monografie (Studies and Monographs), 4 volumes of *Zagadnienia Ekonomiki Rolnej* (*Problems of Agricultural Economics*), 8 volumes of Monografie PW (Monographs under the Multi-Annual Program), 19 volumes of Analizy Rynkowe (Market Analyses), 3 volumes of other non-series publications, 3 printed and 8 electronic versions of the monthly bulletin *Rynek Rolny* (*Agricultural Market*), 21 volumes of the Polish FADN publications.

[20] In agreement with the Committee of Agricultural Economics of the Polish Academy of Sciences and the Agricultural Section of the Polish Academy of Sciences (PTE), IER took the initiative to publish a series of socio-economic works on rural areas and agriculture (following the example of the "Puławy Library") by PWRiL. The first work to be published was that of Z. Grochowski (1958).

Among the Institute's publications, one should distinguish the annual publication entitled *Analiza produkcyjno-ekonomicznej sytuacji rolnictwa* (*Analysis of Production and Economic Condition of Agriculture and Food Economy*) in 1963 (for 1962) and 2015 [since 1982 referred to as *Analiza produkcyjno-ekonomicznej sytuacji rolnictwa i gospodarki żywnościowej* (*Analysis of Production and Economic Condition of Agriculture and Food Economy*)], prepared by various employees of the Institute under the direction of A. Woś until 2008[21], and since 2007 under the direction of A. Kowalski. The Analysis covered a variety of topics depending on the situation[22] and databases, and was very successful (at some point, the summarized English version was handed over to diplomatic missions)[23].

The Institute's staff published their papers[24] and often took the floor in the mass media on current events, often struggling with anti-rural and anti-agricultural opinions[25]. The Institute's papers were also presented at exhibition and promotional events, fairs, conferences and seminars[26].

It is also worth mentioning the contribution of the Institute to the education of the research staff, which began with doctoral (candidate) studies between 1952 and 1956, which were attended by 18 persons, most of whom were later professors and high-level activists (including: D. Gałaj, B. Strużek, J. Okuniewski, W. Michna). In the following years, the Institute promoted a considerable number of PhDs and post docs both before the Scientific Council of the Institute and in academic institutions. Many of the Institute's employees were awarded the title of professor (Podstawka, Wrzochalska, 2020).

[21] With the exception of 1988, when the team was headed by Z. Grochowski, and 1989 under the direction of Z. Grochowski and A. Woś.

[22] In 1983 (data for 1982), the food industry was included in the analysis for the first time and in the 1991 Analysis a chapter on agricultural markets was introduced. Until 1981, the Analysis was for the official use of its addressees.

[23] The Analysis did not avoid taking a position on important issues, e.g. implementation of the Balcerowicz Plan: "Here we are faced with the fundamental dilemma of whether agricultural policy is to be shaped under the pressure of the current needs and demands of farmers or whether it is to be formed by the staff of politicians and pushed in the name of undoubtedly legitimate future interests" (Woś (dir.), 1991).

[24] The number of publications of the Institute's staff between 1950 and 1965 was 2202 (including publications commissioned by the Institute) (Institute of Agricultural Economics 1950-1965. Bibliografia. PWRiL, Warsaw), between 1966 and 1974 it was 2250 items (Institute of Agricultural Economics 1966-1974. Bibliografia. Warsaw 1975), between1975 and1979 the number amounted to1559 items (Institute of Agricultural Economics 1975-1979. Bibliografia. IER, Warsaw 1980). In 2019, the number of publications was 518, including monographs 12 and 257 popular science works (Raport, 2020).

[25] For example, at the beginning of the political transformation in defense of the agricultural sector or at the turn of the century until the accession, when highly negative opinions about family farms, which were considered to be obsolete and branded as backwater and ball and chains, burdening consumers with maintaining agriculture, postulating at the same time that farms should be like Western European and preferably like American ones. The peasants themselves were considered to be a relic in Europe, accusing them of ignorance and drunkenness. There were 72 and 100 media coverage in 2000 and 2019, respectively.

[26] In 2000, the Institute's staff gave 105 lectures at scientific conferences, of which 25 were held at international conferences, with 166 and 69 lectures being held in 2019, respectively.

References

Brzoza, A. (1957). *Zagadnienia opłacalności produkcji rolniczej w gospodarce chłopskiej*. Zjazd ekonomistów w sprawach rolnictwa (Materiały Zjazdowe). Wrocław: PTE, Oddział we Wrocławiu, pp. 3-41.

Chechelski, P. (2008). *Wpływ procesów globalizacji na polski przemysł spożywczy*. Studia i Monografie, No. 145. Warszawa: IERiGŻ-PIB.

Chechelski, P., Grochowska, R., Wigier, M. (2014). *Wsparcie publiczne i konkurencyjność polskiej gospodarki żywnościowej*. Program Wieloletni 2011-2014, No. 129. Warszawa: IERiGŻ-PIB.

Chmielewska, B. (2000). *Spożycie żywności w gospodarstwach domowych rolników*. Studia i Monografie, No. 97, Warszawa: IERiGŻ.

Chmielewska, B., Zegar, J.S. (2020). Poziom życia na wsi na tle kraju i Unii Europejskiej. In: *Polska wieś 2020. Raport o stanie wsi* (pp. 115-138). Warszawa: WN SCHOLAR.

Chmieliński, P., Dudek, M., Karwat-Woźniak, B., Krupin, W., Maksymenko, A., Wrzochalska, A. (2013). *Cechy społeczno-demograficzne i aktywność ekonomiczna kierowników gospodarstw rolnych*. Program Wieloletni 2011-2014, No. 84. Warszawa: IERiGŻ-PIB.

Czerniewska, M. (1959). Dochody gospodarstw chłopskich w latach 1952/53-1957/58. *Zagadnienia Ekonomiki Rolnej,* No. 5. Supplement, pp. 3-12.

Ezekiel M. (1960). Sprawozdanie i wnioski z podróży po Polsce w dn. 20.IX-3.X. 1959 r. *Zagadnienia Ekonomiki Rolnej*, No. 5, pp. 122-133.

Grochowski, Z. (1958). Obliczanie kosztów i opłacalności produkcji w spółdzielniach produkcyjnych. Warszawa: PWRiL.

Grochowski, Z. (1965). Metoda obliczania kosztów, opłacalności i dochodowości produkcji w gospodarce chłopskiej. *Zagadnienia Ekonomiki Rolnej*, No. 5.

Grochowski, Z. (1974). Problemy społecznej i technicznej rekonstrukcji rolnictwa w Polsce. *Zagadnienia Ekonomiki Rolnej*, No. 2-3. Supplement. Warszawa: PWiRiL.

Grochowski, Z. (ed.). (1975). *Przemiany strukturalne w rolnictwie polskim*. Warszawa: PWRiL.

Grochowski, Z. (ed.). (1976). *Rolnictwo polskie w latach 1971-1975 i aktualne problemy jego rozwoju*. Warszawa: PWRiL.

Grochowski, Z. (1977a). Dochody i akumulacja w gospodarce chłopskiej oraz źródła finansowania jej rozwoju. *Zagadnienia Ekonomiki Rolnej*, No. 1, pp. 3-19.

Grochowski, Z. (1977b). Metoda obliczania kosztów jednostkowych, opłacalności i dochodowości produkcji. *Zagadnienia Ekonomiki Rolnej*, No. 5, pp. 7-20.

Grochowski, Z., Kaźmierczak, M. (1991). *Efekty produkcyjne i ekonomiczne przeciętnych gospodarstw indywidualnych i specjalizujących się w produkcji zwierzęcej*. Studia i Monografie, No. 57. Warszawa: IERiGŻ.

Gulbicka, B. (1986). *Dochody, spożycie i akumulacja w indywidualnych gospodarstwach chłopskich w Polsce Ludowej.* Studia i Monografie, No. 25. Warszawa: IERiGŻ.

Gulbicka, B. (2000). *Wyżywienie polskiego społeczeństwa w ostatniej dekadzie XX wieku*. Studia i Monografie, No. 96. Warszawa: IERiGŻ.

Gulbicka, B., Kwasek, M. (2004). *Spożycie żywności w Polsce i innych krajach UE*. Studia i Monografie, No. 123. Warszawa: IERiGŻ.

Gulbicka, B., Niewęgłowska, G. (1995). *Poziom życia ludności wiejskiej*. Studia i Monografie, No. 74, Warszawa: IERiGŻ.

GUS (1968). *Inwestycje i środki trwałe w rolnictwie 1946-1967*. Warszawa: GUS.

Kagan, A. (2014). *Techniczna i środowiskowa efektywność wielkotowarowych przedsiębiorstw rolnych w Polsce*. Warszawa: IERiGŻ-PIB.

Kamiński, W. (ed.). (1980). *Polityka i organizacja żywienia ludności.* Warszawa: PWE.

KiW (1964). *O socjalistyczny rozwój wsi*. *Dyskusja*. Warszawa: Książka i Wiedza.

KiW (1966). *O socjalistyczny rozwój ws*i. *Dyskusji ciąg dalszy*. Warszawa: Książka i Wiedza.

Kołodziejczyk. D. (ed.). (2013). *Instytucjonalne uwarunkowania rozwoju infrastruktury jako głównego czynnika zrównoważonego rozwoju rolnictwa i obszarów wiejskich*. *Część 1*. Program Wieloletni 2011-2014, No. 85. Warszawa: IERiGŻ-PIB.

Kołodziejczyk, D. (ed.). (2014). *Znaczenie instytucji w procesie wdrażania zrównoważonego rozwoju rolnictwa i obszarów wiejskich.* Program Wieloletni 2011-2014, No. 131. Warszawa: IERiGŻ-PIB.

Kowalczyk, S. (2018). *Rolnictwo zrównoważone w erze globalizacji. Zagrożenia i szanse. Z badań nad rolnictwem społecznie zrównoważonym (45)*. Program Wieloletni 2015-2019, No. 72. Warszawa: IERiGŻ-PIB.

Kozłowski, Z. (1968). Koszty reprodukcji siły roboczej w gospodarstwach chłopskich. *Zagadnienia Ekonomiki Rolnej*, No. 4, pp. 3-20.

KRG. (1974). Jak przerwać spiralę wzrostu. *Życie Gospodarcze*, No. 15.

Kulawik, J. (1999). *Instrumenty polityki finansowej w sektorze żywnościowym*. Research project "Ekonomiczny mechanizm modernizacji i restrukturyzacji polskiego rolnictwa". Issue 2. Warszawa: IERiGŻ.

Kwasek, M. (2012). *Wzorce konsumpcji żywności w Polsce*. Studia i Monografie, No. 153. Warszawa: IERiGŻ-PIB.

Michna, W. (1991). *Ekosystemy żywicielskie i żywność. Zagrożenie i problemy ochrony.* Report for the Minister for Environmental Protection, Natural Resources and Forestry. Warszawa: IOŚ.

Michna, W. (1992). *Bezpieczeństwo żywnościowe i polityka rolna Polski na przełomie XX i XXI wieku.* Warszawa: Fundacja im. Friedricha Eberta w Polsce.

Michna, W. (1996). *Polityka żywnościowa Polski w latach 1989-1995*. Studia i Monografie, No. 78. Warszawa: IERiGŻ.

Michna, W. (2010). *Organizacje wiejskie i rolnicze oraz ich rola w rozwoju obywatelskiej demokracji i krajowej gospodarki*. Warszawa: IERiGŻ-PIB.

Michna, W., Gulbicka, B., Chmielewska, B. (1992). *Raport dla ministra rolnictwa i gospodarki żywnościowej o tendencjach zmian oraz stanie wyżywienia społeczeństwa*. Warszawa: IERiGŻ.

Michna, W., Mierosławska, A. (2009). *Strategia rozwoju gospodarstw rolnych i wsi w długiej perspektywie oraz w ujęciu przestrzennym*. Program Wieloletni 2005-2009, No. 134. Warszawa: IERiGŻ-PIB.

Moszczeński, S. (1946). *Rachunkowość rolnicza gospodarstw chłopskich.* Warszawa: PWRiL.

Ostrowski, L. (1988). *Polityka kształtowania dochodów ludności rolniczej*. Warszawa: Wyd. Spółdzielcze.

Podstawka, M., Wrzochalska, A. (2020). *Jubileusz 70-lecia Instytutu Ekonomiki Rolnictwa i Gospodarki Żywnościowej – Państwowego Instytutu Badawczego 1950-2020*. Warszawa: IERiGŻ-PIB.

Raport (1983). Raport o stanie rolnictwa i gospodarki żywnościowej Polski opracowanego przez Specjalną Misję Fundacji Rockefellera, USA, Grudzień 1983. Summary for the Management. Manuscript.

Rasiński, J., (ed.). (1971). *Dyskusja o polityce rolnej PRL*. Cz. I. Warszawa: PWRiL.

Rasiński, J., (ed.). (1972). *Dyskusja o polityce rolnej PRL*. Cz. II. Warszawa: PWRiL.

RGŻ (1974) Stanowisko Rady Gospodarki Żywnościowej w sprawie oceny polityki cenowej i dochodowej w rolnictwie dokonanej przez Konsultacyjną Radę Gospodarczą. *Życie Gospodarcze*, No. 22.

Rychlik, T. (1957). *Z zagadnień opłacalności produkcji w PGR*. Meeting of economists on agriculture (Conference Materials). Wrocław: PTE, Oddział we Wrocławiu, pp. 78-135.

Skarżyńska A. (2016). *Rachunek kosztów działań w badaniach produktów rolniczych*. Studia i Monografie, No. 165. Warszawa: IERiGŻ-PIB.

Sprawozdanie z działalności naukowo-badawczej za rok 1989 (1990). Warszawa: IERiGŻ.

Sprawozdanie z działalności Instytutu Ekonomiki Rolnictwa i Gospodarki Żywnościowej – PIB w 2019 roku (2020). Warszawa: IERiGŻ-PIB.

Stelmach, J. (1975). Przemiany jakościowe i procesy przystosowawcze w indywidualnych gospodarstwach chłopskich. *Zagadnienia Ekonomiki Rolnej*, No. 5-6, pp. 35-50.

Świetlik K. (ed.). (2015). *Konsumpcja żywności w Polsce w latach 2004-2014*. Studia i Monografie, No. 163. Warszawa: IERiGŻ-PIB.

Tepicht, J. (1966). Rolnictwo chłopskie a proces rozwoju gospodarczego. *Zagadnienia Ekonomiki Rolnej*, No. 5, pp. 125-176.

Toczyński, T., Wrzaszcz, W., Zegar, J.S. (2013). *Zrównoważenie polskiego rolnictwa*. Warszawa: GUS.

Urban R. (ed.). (1989). *Koncepcja Agencji Rynku Rolnego – instytucji państwowej interwencji na rynku rolno-spożywczym.* Maszynopis powielony. Warszawa: IERiGŻ.

WB (1986). Poland. A First Report. Annex II. Agriculture. Preliminary Report prepared by A.R. Khan.

WB (1990). An Agricultural Strategy for Poland. Report of the Polish, European Commission, and World Bank Task Force. The World Bank, Washington, D.C.

Woś, A. (1975) *Związki rolnictwa z gospodarką narodową*. Warszawa: PWRiL.

Woś, A. (1980). Wzrost gospodarczy w rolnictwie. *Ekonomista*, No. 5-6, pp. 1243-1252.

Woś, A. (ed.). (1981). *Analiza sytuacji ekonomiczno-produkcyjnej rolnictwa w 1980 r.* Warszawa: IER.

Woś, A. (ed.). (1982). *Rolnictwo i polityka rolna lat siedemdziesiątych*. Warszawa: PWRiL.

Woś, A. (1985). *Ekonomiczne narzędzia sterowania rolnictwem*. Warszawa: PWN.

Woś, A. (ed.). (1986). *Uwarunkowania i kierunki rozwoju rolnictwa w Polsce* (Synteza). Warszawa: IERiGŻ.

Woś, A. (1988). Bezpośrednie i pośrednie oddziaływanie centrum na procesy rynkowe w rolnictwie. *Zagadnienia Ekonomiki Rolnej*, No. 2, pp. 33-41.

Woś, A. (ed.). (1991). *Analiza sytuacji produkcyjno-ekonomicznej rolnictwa w 1990 r.* Warszawa: IERiGŻ.

Woś, A. (1992). Syntetyczny wskaźnik koniunktury w rolnictwie. *Zagadnienia Ekonomiki Rolnej*, No. 4, pp. 11-17.

Woś, A. (ed.). (1993). *Analiza sytuacji produkcyjno-ekonomicznej rolnictwa w 1992 r*. Warszawa: IER.

Woś, A. (1996). Cele ekonomiczne i cele ekologiczne w strategii rozwoju rolnictwa. *Wieś i Rolnictwo*, No. 1, pp. 5-12.

Woś, A., Zegar, J.S. (1983). *Gospodarka żywnościowa. Problemy ekonomiki i sterowania.* Warszawa: PWE.

Woś, A. Zegar, J.S. (2002). *Rolnictwo społecznie zrównoważone*. Warszawa: IERiGŻ.

Wrzaszcz, W. (2012). *Poziom zrównoważenia indywidualnych gospodarstw rolnych w Polsce (na podstawie danych FADN)*. Studia i Monografie, No. 155. Warszawa: IERiGŻ-PIB.

Zegar J.S. (1981). *Kompleks gospodarki żywnościowej w świetle bilansu przepływów międzygałęziowych*. Komunikaty, Raporty, Ekspertyzy, Issue 89. Warszawa: IER.

Zegar, J.S. (ed.). (1988). *System podatku rolnego* (*Zarys koncepcji*). Warszawa: IERiGŻ.

Zegar, J.S. (2012). *Współczesne wyzwania rolnictwa*. Warszawa: Wydawnictwo Naukowe PWN.

Zieliński M. (2016). *Emisja gazów cieplarnianych a wyniki ekonomiczne gospodarstw specjalizujących się w uprawach polowych*. Studia i Monografie, No. 167. Warszawa: IERiGŻ-PIB.