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Endeavours to intensify agricultural production in Austrian Galicia during World War II

Abstract

The most negative factors having affected the effectiveness of agricultural production in Austrian Galicia were both the unprofitable agrarian structure and the structure of use of arable land, and also the lack of modernisation of the agricultural production process. This situation contributed to the emergence of the extensive nature of the agricultural production and its low efficiency.

After the German Reich had captured Western Galicia in 1939, and Eastern Galicia in 1941, the maximum intensification of agricultural production of this region was set as a primary goal. This was planned to be achieved by the mechanisation of the production process and improvement of the agricultural industry, followed by the growth of fertilisation and chemical treatment of crops, land improvement and the restructuring of arable land. In addition to this, farmers' education and the consolidation of agricultural holdings were schemed along with the dissemination of high yielding varieties of grains and root crops, horned cattle and pig husbandry. The aim of the German actions listed above was to supply the Wehrmacht with food, and in a broader perspective to prepare the land for German colonization following the ultimate German victory.

Key words: Austrian Galicia, World War II, agriculture, agricultural production, crop contingents

1. Introduction

The aim of this article is to present measures taken by the German authorities during World War II (1939–1944) to boost agricultural pro-

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duction in Galicia and the effects of German attempts to modernise and intensify Galician agriculture. Additionally, the reasons why those attempts failed will be discussed.

Under Austrian rule 1770–1918, the former Polish territory was widely known as Galicia, but its official name was the Kingdom of Galicia and Lodomeria. The area of the province was about 78,500 square km and it was divided into Western Galicia, west of the San River, and Eastern Galicia, east of the San River (Skowronek 1981: 181–183). After the end of World War I, the region of Galicia became once again part of Poland. Following the outbreak of World War II and the German occupation of Poland, Western Galicia was incorporated into the General Government (GG) in September 1939 and Eastern Galicia in July 1941. The Galician lands formed mainly the districts of Cracow and Lviv (the latter was officially named the district of Galicia). At the time of the German invasion, Galicia was poorly industrialised and the economy was based on agriculture characterised by low productivity and high land fragmentation.

One of the main economic objectives of the Germans was to maximise agricultural production in the region of Galicia. This was to be achieved by: improving the mechanisation of the agricultural production process and agricultural product processing, increasing the use of fertilisers, intensifying the use of chemicals for plant cultivation, enhancing land reclamation, restructuring agricultural land, providing training to farmers, introducing and popularising efficient species and types of grains, root crops, cattle and pigs, as well as implementing land consolidation measures (Łuczak 1979: 259).

It should be noted that by improving agriculture and consequently intensifying agricultural production in Galicia, the Germans intended to secure food supplies for the Wehrmacht and the Reich and, in the longer term, to optimally prepare the area for German colonists, who would arrive as soon as the Germans won the war.

2. Mechanisation, chemization and educating farmers

In interwar Poland, only about 10% of micro farms (up to 2 ha) and about 60% of small farms (2–5 ha) had ploughs and harrows, while on average one in ten large farms (20–50 ha) had a seed drill and reaper (Mieszczankowski 1983: 158–159). The Germans knew that Galician agriculture was underdeveloped and they attached great importance to its mechanisation with the aim of having a positive impact on the quality of land cultivation and an increase in crop yields.

Throughout the German occupation, tractors, threshing machines and various kinds of agricultural machinery and tools were delivered to Galicia, and the German agricultural administration oversaw its distribution. However, only large-scale farms were provided with modern agricultural equipment – reapers, threshing machines, cultivators, harrows, ploughs, etc. Small farmers could only buy simple agricultural tools of poor quality. Landowners were keen to take advantage of this opportunity to modernise their machinery. All the more so as it was possible to purchase agricultural equipment cheaply and the credit terms were highly favourable (Gapys 2020: 102; Łuczak 1979: 211, 215; Rudnicki 1996: 115; Rajca 1991: 30). As a result of these supplies, in the first two years of the German occupation, farmers in Galicia had more opportunities to acquire agricultural machinery and tools as compared to the period before World War II when their agricultural production was relatively insignificant. However, later on access to new agricultural machinery and tools stagnated and the situation became worse than before World War II (Rajca 1991: 30–31).

Prior to the outbreak of World War II, the use of artificial fertilisers in Polish agriculture was not widespread. Only large-scale farms applied them extensively. During World War II, the situation was particularly difficult in the General Government, including Galicia, where adequate fertilisation was further complicated by a decline in the livestock population and consequently, a significant shortage of manure and compost. The Germans wanted to improve the situation and decided to increase more than tenfold the supply of mineral fertilisers to the GG, including Galicia. The beginning was promising: high volumes of fertilisers were supplied. The relatively low prices and the fact that farmers could buy fertilisers on credit resulted in a significant increase in their use on large-scale farms. Unfortunately, in subsequent years, as the situation in the Reich worsened and the use of chemical fertilisers there decreased by almost 50% compared to pre-WWII times, the plan could only be partially implemented. The supply of fertilisers to Galician agriculture was particularly poor in the marketing year of 1943/44. Overall, under the German occupation of Galicia, a significant improvement was achieved in the use of potassium fertilisers and a slight improvement in the use of nitrogen fertilisers. In contrast, the use of phosphate fertilisers declined compared to pre-World War II volumes. The availability of crop protection chemicals and herbicides was even lower. After 1942, it was virtually impossible for farmers to buy them (Gapys 2020: 101; Łuczak 1979: 260–261; Rajca 1991: 30–31).

The Germans paid special attention to the agricultural education and further training of farmers. In the General Government, including Galicia, agricultural schools were not forced to close and Poles were allowed to attend. In addition, numerous vocational courses were offered to farmers and competitions were organised to determine the best farms in each district and municipality. In addition, so-called model farms were chosen, mostly from landed estates, less frequently from large farms, to serve as role models for neighbouring farms and show how a farm should be managed. Training courses in land preparation and management were delivered and agricultural exhibitions were held there (Gapys 2020: 105; Łuczak 1979: 88–104; Meducki 1991: 262–263).

3. Introduction of seeding material and new types of crops, restructuring of agricultural land

The Germans viewed the poor quality of seeds and breeding material to be one of the main reasons for the low productivity of Polish agriculture. Accordingly, they immediately began to replace Polish crops and breeds with high-yield material in Galicia and throughout the entire General Government (Gapys 2020: 103–104; Łuczak 1979: 261).

Seeds and seed potatoes were imported from the Reich and the occupied Western European countries or they were produced locally with increasing success. In addition, seed production was significantly increased in the GG, including Galicia (Łuczak 1979: 261–262).

Interestingly, the Germans tried to cultivate on a large scale kok-saghyz, a rubber containing plant native to the southern parts of the Soviet Union. Starting in 1942, it was particularly intensively promoted in an attempt to substitute imported rubber. The Germans had high hopes that it could be used in industry and they put a great deal of effort into its popularisation. In the autumn of 1943 kok-saghyz was first introduced on some landed estates in Galicia, and in the spring of 1944 work in the fields there was devoted almost entirely to its cultivation. However, due to unsuitable soils, adverse climatic conditions and lack of experience, the cultivation of kok-saghyz was nothing more than an experiment and it did not become widespread (Gapys 2020: 102–103; Łuczak 1979: 269).

With a few exceptions, the occupying forces' efforts to increase crop production in the General Government did not bring the desired results, as German statistics show. Under the German occupation, the production of the four basic grains, potatoes and oilseeds for all marketing years failed to reach the levels of 1935–1938. In fact, it was well short in each

of them. Only sugar beet production increased and this was due to the fact that the area of sugar beet cultivation expanded. The average yields per hectare for wheat, rye, oats, potatoes and sugar beet were also lower compared to the pre-World War II period. Except for 1943/1944, the production of barley also decreased (Łuczak 1979: 266).

The attempts to intensify crop production in Galicia with new seeds and new varieties of grain failed for the following reasons: firstly, the Germans, in trying to achieve rapid improvements in crop yields and breeding, introduced new varieties of cereals hastily and against the will of farmers. Secondly, they did not take account of the difference between the climatic conditions, soil types and agricultural practice in Galicia and the areas where the imported seeds and germplasm originally came from. This was a fundamental mistake. Soon, it became apparent that the material delivered to landed estates was not resistant to Polish conditions. A virus spread in seed potatoes imported from Germany as they were not suited to the new soils and climatic conditions. This resulted in low yields and soon they reverted to the planting of domestic varieties. Similarly, the attempt to plant German grain varieties failed. The Germans were particularly keen to sow as much acreage as possible with German varieties of wheat. However, due to diseases, wheat yields were so low that in subsequent sowing campaigns local varieties of grain were used. Following these failed attempts, the German agricultural administration in the GG abandoned the plan to introduce new varieties of cereals and it concentrated on promoting the production of elite seeding material in the landed estates. Landowners who started such cultivation or continued an existing one were rewarded. The prices that German cooperatives paid for their crops were two times higher than the usual ones. These landowners paid official prices for supplies of seeds and their quota for compulsory deliveries were reduced. However, their strongest motivation for taking part in the unprofitable cultivation of elite seeding material was fear. They could have their property seized if they refused to carry out the orders of the occupation authorities (Gapys 2020: 103–104; Łuczak 1979: 259; Meducki 1991: 129).

In summing up the discussion on the Germans' attempts to intensify the crop production, we need to take a look at the structure of agricultural land in the General Government and measures taken to improve it. Most of the soils in this area were of poor quality. The structure of rural land use in the General Government, including the district of Lviv, was as follows: agricultural land 71.2%; forest 21.7%; wasteland 7.1%. The average use of agricultural land in the entire GG was as follows: area used for crop production 76–77%; permanent grassland 20–21% orchards

and gardens about 1.2%. Galicia was best positioned with 33.4% of all land used for agriculture in the GG, including 62% of the orchards, 42% of the pastures, 35.5% of the gardens and 31.4% of the total arable land. This characteristic pattern of land use was due to the fact that land was in high demand in this part of Poland even before the outbreak of World War II. Even the poorest soils, which in agriculturally developed countries would be used for afforestation, were used as cropland. This circumstance resulted in the existence of extensive agriculture in Galicia (Rajca 1991: 24–25; Seräphin 1941: 30; Sycz 1997: 130).

According to the German guidelines, the proportion of arable land in each landed estate was to be 1/3 of its total area in order to produce adequate yields of cereals, legumes, non-food and root crops. Meeting these requirements involved, in many cases, a rather significant and costly reorganisation of the estate's management, particularly in estates where forestry predominated. The German agricultural administration also demanded that the share of winter cereals be limited to 40% of the total arable area, and together with spring cereals their share be limited to 60%. These restrictions were supposed to force the landowners to use the remaining share of arable land of at least 40% for the production of root crops, oilseeds and legumes. However, the share of arable land used for flax and hemp was to be limited to 3% (Gapys 2020: 102–103; Łuczak 1979: 269).

Changes in the structure of crops were intended to adapt their scale to the needs of the war economy. The Germans wanted to increase the oilseed and root crop production area. In the GG, the target area for root crops was 33% of the total cropland. On the other hand, in other lands that were incorporated into the German state an increase of the sugar beet area to 25% of the total agricultural land was pushed to the fore. These plans, however, did not reach fruition. The area of potato cultivation shrunk during the German occupation, both in the territories incorporated into the German state and in the GG. Attempts to enlarge the area of oilseed production and to extend its processing in the GG fell flat too. An exception here was the district of Lviv, where the Germans developed oil mills and increased their production capacity significantly. In 1941/42 less than 900 tonnes of vegetable oil were produced, but in the following year it had increased to 1,300 tonnes and in 1943/44 almost 2,500 tonnes. In contrast, the Germans had great success with sugar beet cultivation. Due to the fact that in 1941 the fertile lands of Eastern Galicia were incorporated into the GG, the sugar beet area in the GG increased by 100% and three sugar factories in Horodenka, Chorodów and Podole, near Tarnopol, operated at full capacity. Sugar production rose

steadily: in 1941/42 13,000 tonnes and in 1942/43 285,000 tonnes of sugar were produced. In 1943/44, the last marketing year, sugar production fell by only 25,000 tonnes (Bonusiak 1990: 67; Łuczak 1979: 269).

4. Improvement of livestock breeding and new livestock species

Another measure aimed at increasing the productivity of Galician agriculture was the reconstruction of livestock after the losses caused by warfare and the qualitative improvement of the breeding stock. In the occupied Polish territories, including Galicia, the Germans planned to rear only selected breeds such as the workhorse descended from the Rhenish German Coldblood, the Rhenish German Warmblood, the German Red Pied cattle, and the pedigree German pig. Old breeds were to be replaced gradually. Selected breeds were imported from the Netherlands, Denmark and the Reich, and stallions from Czechoslovakia, Hungary and Yugoslavia (Łuczak 1979: 274–275). Efforts to improve the quality of livestock breeding material involved almost exclusively landed estates (Gapys 2020: 104).

Cattle recovery is a long-term process that can take many years. Despite the use of new equipment imported from the Reich, better fodder and improved veterinary care, the cattle population grew slowly in 1940 and 1941. As a result, the Germans started to deliver livestock to the General Government. Particular importance was attached to the intensification of pig breeding. This was due to the fact that Poland was a known exporter of pork and pork products, even before World War II. Additionally, this breeding guaranteed a rapid increase in the production of meat, which was essential for the provisions of the Wehrmacht soldiers fighting on the Eastern Front and the people in the hinterland. Large-scale farms were particularly important in the German concept of pig rearing in Galicia. Intensified and highly efficient pig breeding meeting the requirements of the occupying forces would take place on such farms, but they would also serve the task of popularising new pig breeds among local farmers. Each large-scale farm was obliged to establish a breeding herd with boars, sows and piglets. This process was closely supervised and monitored by the German administration. The condition and development of the nucleus herd population was closely monitored. However, as was the case with the introduction of new grains, the campaign to intensify pig breeding failed miserably. Large-scale Polish farms had no previous experience in pig farming. They were not in-

volved in extensive pork production, as was the case with small farms. This was a completely new type of agricultural production posing numerous problems for many landowners, but they had to implement it on their estates regardless, because they feared penalties from the occupying forces. However, the main reason for the fiasco of the German project was swine disease. In the first year most of the pigs died of swine fever. The German agricultural administration quickly learned its lesson and immediately ordered the farmers to switch to local pig breeds (Gapys 2020: 104–105; Markowski 1993: 74–75; Meducki 1991: 149).

Due to the fact that only a small number of cows had been supplied from the Reich, the efforts aimed at improving cow milk yields and increasing milk production in Western Galicia were based on indigenous cattle. In the beginning, the Germans carried out selection among herds on landed estates, determining which bulls, cows, yearlings and heifers should be chosen for breeding purposes. Then, the most valuable specimens held on small farms were to be transferred to neighbouring landed estates. Small farmers were forced to sell them at official prices. This put them at a disadvantage as they had to pay free market prices, much higher than the official ones, for a bull or a cow to replenish their herds. In addition, farmers from micro farms were forced to hand over their cattle to landed estates for the winter. The Germans hoped that milk yield would improve significantly if cows were provided better fodder in the winter. However, as was the case with pigs, the Germans failed here too. The meat quota imposed put an enormous strain on the farms in the General Government. This resulted in the size of the core herd decreasing significantly, which had a negative effect on cow milk yields and milk production (Gapys 2020: 105; Wyka 2010: 300).

The agricultural administration in the General Government took a unique approach to livestock breeding in the district of Galicia. After Eastern Galicia was seized by the Germans, it became apparent that the number of animals bred for slaughter had dropped massively under the Soviet occupation. According to estimates of the German administration in the district of Galicia, the cattle population had fallen by half and the pig population by more than 60% compared to the pre-war period. This forced the Germans to abandon their plans to maximise meat procurement and they let the cattle and pig herds recover. The guideline specified that 25% of cattle and 40% of pigs were to be appropriated in the quota followed that idea (Bonusiak 1990: 65–66).

In addition, the Germans launched a special programme to develop the dairy industry in the district of Galicia. It entailed mainly the modernising of existing processing plants, which helped to increase capacity significantly. In the marketing year of 1941/42, the dairy factories processed 67,000 tonnes of milk, in the following year 205,000 tonnes, and in 1943/44 almost 300,000 tonnes (Bonusiak 1990: 67).

As a result of proper management and imports from other regions, the livestock population increased slowly in the General Government, including Galicia. The turning point came at the beginning of 1942, when the overexploitation of livestock began. The growing demand for meat supplies for the Wehrmacht soldiers and the German citizens in the Reich triggered the change. The sharp decline in the population of animals for slaughter started in early 1944 and continued until the end of World War II. This was due to the fact that the war turned against the Germans. The rich sources of livestock which the Germans were very keen to exploit were lost as the advancing Soviet offensive captured huge areas in the east. The Germans compensated for the resulting shortage of meat by extensively slaughtering the livestock in occupied Poland (Łuczak 1979: 271–273).

Despite the great efforts that the Germans put into improving livestock breeding in Galicia, they did not succeed in rebuilding livestock populations to pre-World War II levels. The exception here was goat breeding. There was no quota for compulsory deliveries of goats and farmers were allowed to eat goat meat. Goats were also very valuable because of their low feed requirements and the fact that they provided milk, even though the milk yields were not very significant (Łuczak 1979: 273–274).

5. Conclusions

One of the main economic tasks the German administration had to fulfil in Galicia during World War II was to maximise agricultural production. The Germans tried to achieve this aim by improving the mechanisation of the agricultural production process and agricultural processing, increasing the use of artificial fertilisers, intensifying the use of chemicals for plant crops, intensifying land reclamation, restructuring agricultural land, providing training to farmers, introducing and popularising more productive species and varieties of grain, root crops, cattle and pigs, as well as implementing land consolidation measures.

The Germans partially succeeded in improving the farmers' access to new agricultural equipment, tools and fertilisers as well as to further training. Their efforts to extend the oilseed and sugar beet production area and the associated processing were also partially successful. In contrast, other measures aimed at intensifying agricultural production did not bear fruit. The reasons for this were: the climatic conditions, soil types and cultivation methods in Galicia varied from those typical for the area where the imported seeds and breeding material originally came from; diesel and petrol supplies started to fall drastically in 1943; the growing shortage of the labour force required for seasonal work as a result of, among other things, numerous deportations of the rural population to the Reich; Poles being forced to leave their homes and becoming resettled. They were replaced by German settlers who often found it difficult to adapt to the new climatic conditions and soils, and severe frosts caused great damage to agriculture, especially to orchards. In the winter of 1939/1940 almost 75% of fruit trees were damaged by frost.

Bibliography

- Bonusiak W., 1990, *Małopolska Wschodnia pod rządami Trzeciej Rzeszy*, Wydawnictwo Wyższej Szkoły Pedagogicznej w Rzeszowie, Rzeszów.
- Gapys J., 2020, *Niemiecka polityka gospodarcza wobec ziemiaństwa w Generalnym Gubernatorstwie w latach 1939–1945*, „UR Journal of Humanities and Social Sciences”, 1(14), DOI: 10.15584/johass.2020.1.5.
- Łuczak C., 1979, *Polityka ludnościowa i ekonomiczna hitlerowskich Niemiec w okupowanej Polsce*, Wydawnictwo Poznańskie, Poznań.
- Markowski M., 1993, *Obywatele ziemscy w województwie kieleckim 1918–1939*, Kielce Towarzystwo Naukowe, Kielce.
- Meducki S., 1991, *Wieś kielecka w czasie okupacji niemieckiej (1939–1945): studium historyczno-gospodarcze*, Wydawnictwo Politechniki Świętokrzyskiej, Kielce.
- Mieszczankowski M., 1983, *Rolnictwo II Rzeczypospolitej*, Książka i Wiedza, Warszawa.
- Rajca C., 1991, *Walka o chleb 1939–1944*, Rada Naukowa Towarzystwa Opieki nad Majdankiem, Państwowe Muzeum na Majdanku, Lublin.
- Rudnicki S., 1996, *Ziemiaństwo polskie w XX wieku*, Wydawnictwo Trio, Warszawa.
- Seräphin P., 1941, *Wirtschaftsstruktur des General Gouvernement*, Verlag des Instituts für Deutschen Ostarbeit, Kraków.
- Skowronek J., 1981, *Galicja* [in:] *Encyklopedia historii gospodarczej Polski do 1945 r.*, vol. I, Wiedza Powszechna, Warszawa.
- Sycz M., 1997, *Spółdzielczość ukraińska w Galicji w okresie II wojny światowej*, Pracownia Wydawnicza, Warszawa.
- Wyka K., 2010, *Życie na niby*, Towarzystwo Autorów i Wydawców Prac Naukowych Universitas, Kraków.

Próby intensyfikacji produkcji rolniczej w Galicji austriackiej podczas II wojny światowej

Streszczenie

Najważniejszymi czynnikami wpływającymi negatywnie na efektywność produkcji rolniczej w Galicji austriackiej była niekorzystna struktura agrarna i struktura użytkowania gruntów oraz brak modernizacji procesu produkcji płodów rolnych. Sytuacja ta powodowała, że w Galicji austriackiej dominowało rolnictwo o ekstensywnym charakterze i bardzo niskiej wydajności. Po zajęciu przez Rzeszę Galicji Zachodniej w 1939 r., a w 1941 r. Galicji Wschodniej Niemcy za jeden z głównych celów uznali maksymalne zintensyfikowanie produkcji rolniczej tego obszaru. Zamierzano to osiągnąć poprzez: poprawę mechanizacji produkcji rolniczej oraz przetwórstwa rolnego, wzrost nawożenia nawozami sztucznymi, intensyfikację chemizacji upraw roślinnych, intensyfikację melioracji gruntów rolnych, restrukturyzację użytków rolnych, doksztalcanie rolników, wprowadzenie i upowszechnienie bardziej wydajnych gatunków i odmian zbóż, roślin okopowych, bydła rogatego i trzody chlewnej, komasację gospodarstw. Działania niemieckie podczas II wojny światowej na ziemiach Galicji austriackiej zmierzające do zintensyfikowania produkcji rolniczej miały przede wszystkim służyć zaopatrywaniu Wehrmachtu oraz Niemiec w żywność, a w dłuższej perspektywie jak najlepszemu przygotowaniu tych terenów pod kolonizację niemiecką, która miała nastąpić po zwycięskim zakończeniu wojny przez Niemców.

Słowa kluczowe: Galicja austriacka, II wojna światowa, rolnictwo, produkcja rolnicza, kontyngenty rolne