



Poland

WHEAT SUMMARY



Super-expensive wheat cropping in Opolskie voivodeship.

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Introduction

Agriculture in Poland

Poland is considered to be a comparatively medium-sized country. Its total area is 312 700 km². With a population of 38.5 million, the country occupies 6th place in the EU-28, both in terms of population and area. It is worth noting that Poland has the highest agricultural population in the EU-28 and in terms of the total number of agricultural farms it holds second position after Romania. Poland is a rather unique country within the context of the currently conducted SUFISA project that focuses on agriculture and rural areas. There are also other arguments that can support this thesis. In Poland, the percentage of people working in agriculture, hunting, forestry and fishing industry is 2.5 times larger than the percentage of people employed in these sectors in the EU-28 overall.

In recent years a growing rural population could be observed in Poland. The number of people in Poland in 2014 was 38.5 million people, of which 23.2 million people lived in cities and metropolitan areas and 15.3 million people lived in rural areas. In the years 2005-2014 the number of rural people increased by over half a million (529 000) but negative population growth in the cities meant that the overall population growth for the entire country during the analyzed period was no more than 323 000 people.

Territory-wise, Poland is divided into 16 provinces, 314 counties, 66 city counties and 2479 municipalities. Auxiliary units in municipalities include i.a village councils in number of 40 617 000.

Territorial Division Units in Poland



Source: "Agriculture and food economy in Poland" Ministry of Agriculture and Rural Development, Warszawa, 2015, p. 11.

Polish agriculture is characterized by great fragmentation. However, the average farm size has been increasing in recent years, and reached 10.3 ha in 2014. The dynamics of these changes should be noted. In 2002 the average farm size was 5.8 ha, which indicates a growth of 77% in 12 years. Still, more than half of agricultural farms (51%) in Poland operate on no more than 5 ha of utilized agricultural land, with farms of this size comprising 12.7% of total utilized agricultural areas in Poland. The farms utilizing less than 10 ha of arable land make up 75% of all farms and their total area comprises 27.7% of the utilized agricultural area in Poland. Such a farm structure is the result of farming traditions and patterns of agricultural land ownership in Poland. Referring to this farm structure it should be noted that farms up to 10 ha are characterized by traditional agricultural production with low mineral fertilization and use of agricultural chemicals. Farms of the size between 10 and 30 ha comprise 31% of utilized agricultural areas in Poland, and the largest farms (over 30 ha of utilized agricultural area) make up 5.2% of all farms. These farms comprise 41.3% of utilized agricultural land.

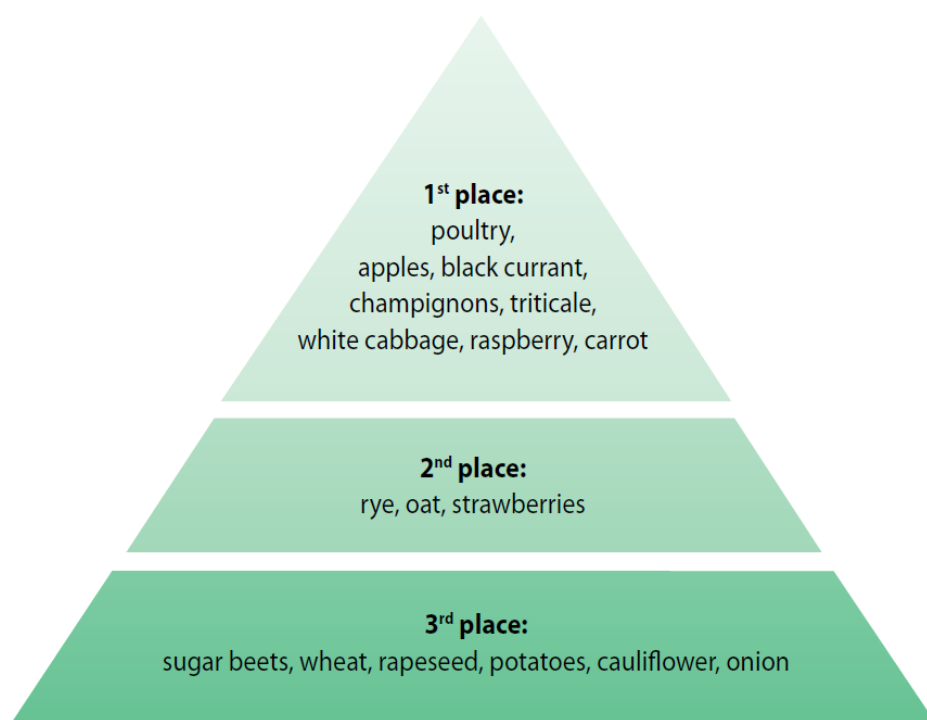
Average farm size in Poland (in ha)



Source: Authors' own study based on the data from: "Agriculture and food economy in Poland" Ministry of Agriculture and Rural Development, Warszawa, 2015.

Despite its unfavourable agrarian structure, Poland plays a significant role in the production of crops, garden vegetables, and products of animal origin, both in Europe and worldwide. One of the most notable factors contributing to this is undoubtedly its easy access to an agricultural labour force. Within the structure of commodity production in 2014 the share of commodities was as follows: cow milk (18.6%), pork (13.9%), poultry (13.5%), cereal (13.3%), vegetables (9.1%), industrial plants (7.3%), beef and veal (6.3%), hen eggs (5.7%) and fruit (5.1%).

Polish agriculture in the EU – 28 in 2014



Source: prepared on the basis of Eurostat data.

Source: “Agriculture and food economy in Poland” Ministry of Agriculture and Rural Development, Warszawa, 2015, p. 14. <https://bip.minrol.gov.pl/Opracowania-ekspertyzy-publikacje/ROLNICTWO-I-GOSPODARKA-ZYWNOSCIOWA-W-POLSCE2>

As noted earlier, regional traditions have a substantial influence on production specialization. Besides soil and climate conditions they are the most important factor contributing to Poland’s diversity in terms of crops. In central, northern and eastern Poland agriculture production mostly focuses on rye, cereal mixes and corn. There are also many green areas there. Plants that require better soil and climate conditions are cultivated mostly in south-eastern and western Poland.

Data on the number of farms in particular years confirm the tendency for changes in Polish agriculture observed in recent years, especially after the accession to the European Union. Comparing the newest data with those collected for the Agricultural Census in 2002 the changes relate to:

- Reduction in the number of farms combined with a parallel increase in their size;
- Significant changes in the structure of agricultural farms, with a 49.4% drop in the number of the smallest farms (1-2 ha), a 27.4% drop in the number of farms in the group 2-10 ha, a 19.4% drop in the group of farms sized 10-15 ha, and a 10.2% drop in farms sized 15 – 30 ha. These changes are accompanied by a significant increase of 25,1% in the number of farms sized 30-50 ha, and a 66,8% increase in the number of farms of 50 ha and more;
- Slow but steady dissemination of the functional farm model, particularly in the group of small farms, which take up non-agricultural activities and partially or entirely resign agricultural activity;
- Reduction in overall arable land that could be utilized due to conversion of agricultural areas to serve non-agricultural purposes such as infrastructure. The total area of utilized agricultural land in Poland has decreased from 16.9 million hectares to 14.6 million hectares.

- Small reduction of cultivated areas with parallel changes in the structure of cultivated crops – a drop in the areas of rye, barley, and oats cultivation and an increase in areas where triticale, corn for grains, potatoes, and sugar beets are cultivated. There is also an increase in areas of canola and fodder plants cultivation;
- Increase of total cattle stock with smaller herds which are more efficient. This tendency is connected with an increasing interest in cattle production intended for slaughter after Poland's accession to the European Union and an increase in the profitability of production;
- Improvement in agricultural farm equipment in production means, which confirms the process of agricultural modernization after the access to the European Union;

This overview of Polish agriculture was prepared based upon publications from the Ministry of Agriculture and Rural Development (www.minrol.gov.pl).

1. Case Study I: Wheat (Opolskie Region)

Cereal production in Poland

Grain production is one of the most crucial branch of Polish agriculture. When it comes to total agricultural land utilized for grain production, Poland has a second place in the European Union but the volume of grain harvest gives the country the third place in Europe after France and Germany.

National grain production in 2014 was dominated by wheat, corn and triticale. Significant areas of utilized agricultural land were devoted to barley, rye and cereal mixes. The quantity of collected crops may vary from year to year, mostly due to changes in harvest volume and not so much because of the size of cultivated areas.

The area devoted to grain production in 2014 in Poland was 7.5 million ha, which was quite similar to the number of hectares allotted for grain production 2013. In 2014 grain harvest reached the record level of 31.9 million tons, which was 12.3% more than in 2013 and about 19.5% more than average harvest in the years 2006-2010. Such big increase was a result of better planning. The grain yields reached almost 4.2 t/ha, which is 12.3% more than in 2013 r. (for wheat it was almost 5 t/ha, for corn intended for grains – 6.6 t/ha, barley and triticale– 4 t/ha, rye – 3.2 t/ha).

For years, national demand for grains oscillated between 26-28 million tons. In the 2014/15 season the use of grains was 27.7 million tons as compared to 26.8 million tons in the previous season. In the structure of national use grazing uses 16-18 million tons on average. In the 2014/15 season the use of grains for animal feed rose by 1.2 million tons because of beef and poultry production surge. Industrial use of grains also increased while use of grains for consumption purposes decreased. Grain consumption has been declining for many years as people change their eating habits. In 2014 export played a significant role in national grain production and it amounted to 5.5 million tons (increase by 33.6%). The 89 % increase was noted in wheat export and 3.2 million tons were exported abroad. Such intense increase of wheat export compensated for the drop of export of other types of grains (rye, barley, oats and corn).

Case study introduction

Opolskie voivodship (region) (NUT 2) has a size of less than 10 thousand square kilometers as well as the population reaching slightly more than one million dwellers. It has been an agricultural-industrial region with advantageous climate as well soil conditions. Concerning the administrative partition of

the region we might point out eleven rural sub-regions as well as one city. In the city (the capital city of the region) one might observe significantly more than a hundred thousand inhabitants. The Opolskie region consists of seventy one local communes (NUT 4): three of them are of urban character, thirty one can be classified as urban-rural and the remaining thirty seven are purely rural. Rural areas make up more than 90% of the Opolskie region. However, rural communities seem to be quite large when compared to other rural localities in Poland. The average number of inhabitants in rural communities in Opolskie region is 525 persons, while the national average is 340. Opolskie region seems to be quite peculiar in that regard since every fifth village has more than 800 inhabitants. One should also stress that 47% of the inhabitants of Opolskie region live in rural areas but these areas appear to have more in common with urban areas than with rural areas of other parts of Poland. Rural areas of the Opolskie region are also known for the best spatial planning, landscape construction and aesthetics of rural houses and farmyards. Since 1997, the Opolskie region has been the leading area in Poland in the Rural Renewal programme. This particular initiative is one of the most important as well as the longest regional programme in Poland concerning the activation of rural communities. Opolskie region has been perceived as one the best areas in Poland for agricultural production. It is one of the warmest regions in Poland with slightly wavy landscape and significant number of lowlands and plains. The climate in the region is quite beneficial to agricultural production with warm summers, mild and a rather short winter, early spring as well as long and mild autumn. All these conditions seem to be quite friendly to the plant cultivation and production. The vegetative period starts early usually in late March and continues to early November and roughly amounts to 200 to 230 days in the year. Rainfalls take place in 160 to 180 days per year with multi-year level of 600-800 millimetres. Moreover, in the Opolskie region the majority (62%) of arable land is quite fertile, which also creates favourable environment for the development of agricultural production.

One also should mention that from 2008 to 2012 Poland was one of the largest grains producers in the European Union after France and Germany and before United Kingdom as well as Spain. Notably, the Opolskie region has been the area of high plant productivity in Poland. It has a leading position in the national production of grains, rapeseed as well as sugar beets. Almost 2/3 of arable land in the region is designated for grain production. It should also be stressed that this small-sized region has produced more than 6% of grain in Poland. Wheat seems to be a special type of product in the region since its productivity has been on the level of 45-52 dt (deciton) per ha while the level for the whole country oscillates around 30-34 dt per ha. However, there are some intensive, industrial farms in the region that in the last ten years reached the productivity level of 100 dt per ha.

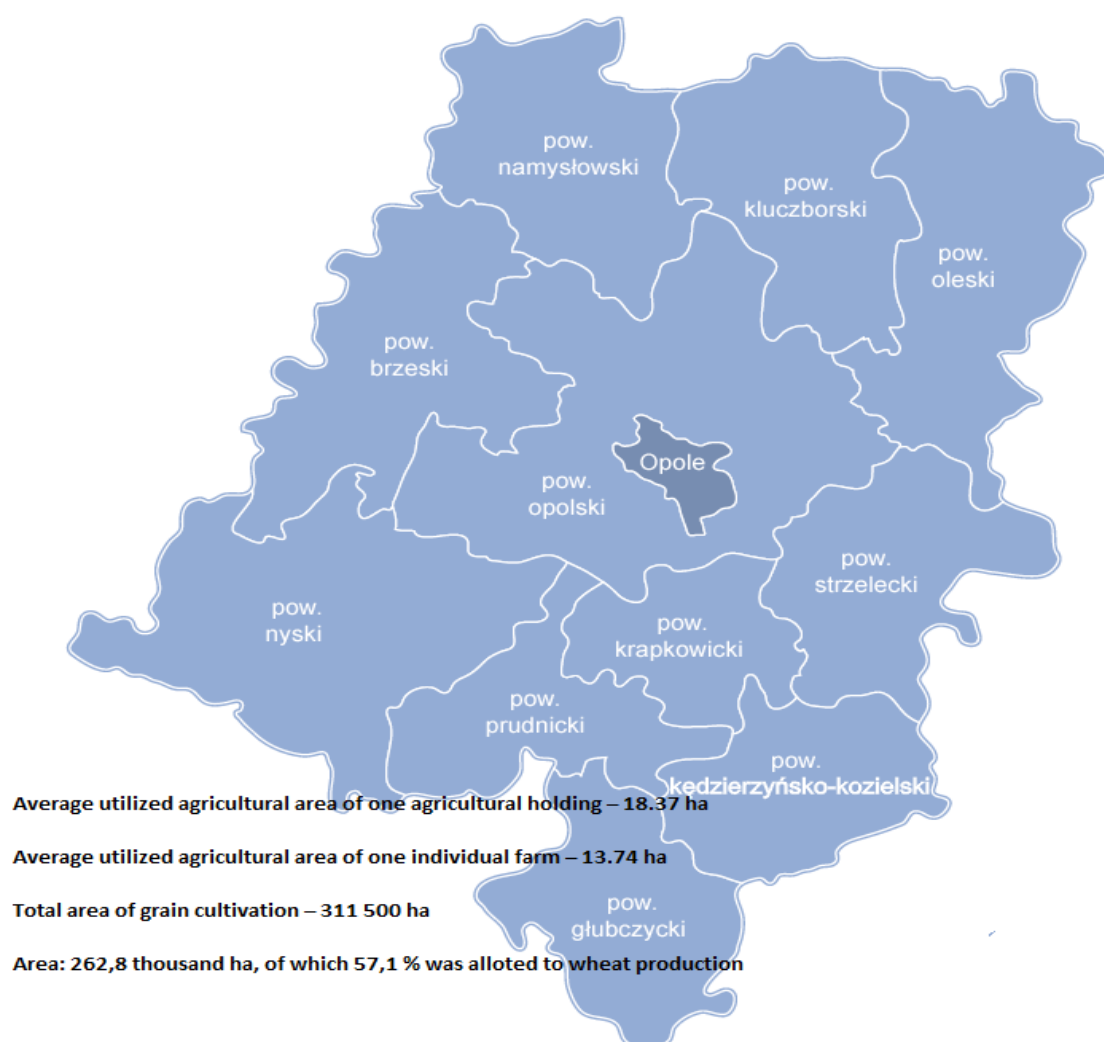
Slightly more than half a million and slightly less than 50% of people in the Opolskie region inhabit rural areas. Rural population is relatively young there. Concerning this particular indicator the Opolskie region seems to have a relatively high level of inhabitants in the productive age living in rural areas. In fact, this region has second youngest rural population among all 16 regions of the country. Moreover, the percentage of the labour force involved in agriculture is 28 %, one of the highest in Poland.

The respondents in our study belonged to the following categories: a. farming families with dominant wheat production, b. farming families with farm operators under the age of 40 (the youngest ones); c. farming families with farm operators aged 41-50 (the largest category of family farm operators); d. an investigated community is divided into those farms where agricultural (fruits) productions has

been the major source of income and those where the agricultural (fruits) production has been an additional source of family income.

Describing political conditions and regulations of wheat production and sales in Poland one should start with the institutionalized surroundings of the wheat market. The role of these intuitions can be seen at every link on the food chain, from wheat production through processing, distribution and sales. Certain state units have as their priorities to monitor, inspect, advise and help producers. It should be stated here that presentation of the institutional background and mechanisms of the wheat market in Poland provides only a rough frame of formal premises describing how the market should look and how it should be monitored and controlled. If commentaries acquired during in-depth interviews with the representatives of the wheat sector from the Opole area are added, the picture looks quite different. Combining farmers' narration with legal and formal aspects of the wheat market mechanisms in Poland gives a rather realistic picture of what is really happening.

Characteristics of agricultural farms in the Opolskie region 2014



Source: *Agriculture in Opolskie region in 2014*, Central Statistical Office of Poland, Opole 2015, p.19,26.

Producer strategies

Types of farms according to the model of selling their products:

Producer group – farmers praised this strategy, as it provided them with a better bargaining position in relation to both the retailers of means of production and the purchasers of their product (namely wheat). They claimed that older farmers were not open to innovation and did not support their younger counterparts. Younger farmers declared the possibility to change the strategy every few years but they still valued the confidence and certainty stemming from participation in the producer group. Sometimes this strategy had its drawbacks, such as lower product price, but, on the other hand, it included barter transactions such as acquiring fertilizers and means of production based on future wheat sales.

Direct marketing – involving direct selling of wheat to a grain elevator, had a rather good reputation among farmers. It allowed for flexible reactions and selling wheat at the moment, when the price was the best. This was purely the market strategy, which was not constrained by any agreements or obligations. Farmers following this strategy were well aware that they needed to use the help of middlemen and finance their operations as well. The advantage of this strategy was that farmers did not need to search for contracting parties. According to the surveyed farmers, this was an ideal strategy for medium farms that were not big enough to create channels directly marketing or selling their products to big processors but at the same time were too big to concentrate on dispersal distribution within niche sales channels.

Selling to processors – selling wheat directly to processors, but this was only feasible for larger producers who had large quantities of homogenous grains at their disposal.

Selling during harvest time – according to farmers in the focus group – was only suitable for the smallest farms, whose area did not exceed 30 ha. This strategy could be summarized as immediate sales of wheat during harvest necessitated by an inability to store the grain. Although this strategy did not seem to be very beneficial to wheat producers, as it did not give them time to negotiate prices, it did not always necessarily mean poor prices for farmers' products.

Producer group	Individual producers selling their products directly to purchasers	Sales direct to food processors	Direct sales during the harvest time
<ul style="list-style-type: none"> •The less numerous type of production since to social and institutional conditions •Products sold to food processors and purchasers •Rare contracts with partners •The global markets define prices, but producer groups have the abilities to control prices to some extent 	<ul style="list-style-type: none"> •The most often type of selling the products among big and middle-size producers •The domination of purchasers over producers due to qualities of the products •Rare contracts between purchasers and producers have been focused on particular types of products •Global markets define prices 	<ul style="list-style-type: none"> •Quite rare type of selling since food producers prefer to purchase large amounts of products from storehouses and purchasers •Producers have been focused on particular types of wheat due to requests from food producers •Producers sale their products to local purchasers since high costs of the transport of the wheat •Domination of cartels of food producers •Lack of contracts •Global markets define prices 	<ul style="list-style-type: none"> •Necessity of selling during the harvest time due to lack of storage infrastructure •High risk of speculation •Small producers •Lack of contracts •Global markets define prices

Adaptation strategies to policy and regulation

Regarding agricultural policy regulations, the wheat producers were in favour of curbing grain imports to Poland. They argued that such grains were of poor quality and often ended up being mixed in with better quality Polish grains. As a result, the quality of the overall product was compromised. The farmers in the FGI thought that the current agricultural policy brought some difficulties to their business activities.

The wheat producers felt threatened by the import of grains to Poland from some EU countries, such as the Czech Republic, and from outside the European Union (e.g. Ukraine). They claimed that policymakers viewed the market from the narrow perspective of product price thus resulting in the import cheap grains from Ukraine. The farmers in the FGI did not address the fact that grains (mostly wheat) from Poland were exported to other countries and that in some ways farmers benefit from such exports.

The surveyed wheat producers reported a strong attachment to the land and farming tradition. In this perspective, politicians responsible for agricultural and rural policies are seen in rather ambivalent terms as the ones who are aware that farmers will not abandon the cultivated land, no matter what. In that sense, farmers' attachment to the land is the reason why political institutions pay no special attention to the activities of agricultural producers. In the focus group farmers declared a rather low level of interest in general political questions, emphasizing that their main concern is about the effects of their economic activity. Therefore, farmers appeared to be disconnected the national or European political scene. The demands of wheat producers focused on the following issues: a/ introduction of guaranteed minimal crop prices, which should be known at the moment of production decision; b/ subsidizing credit interests; c/ disconnecting eligibility for the EU funds from the demand that farmers must leave Agricultural Social Insurance Fund (Kasa Rolniczego Ubezpieczenia Społecznego –KRUS), which exists in Poland is known to be beneficial to

farmers ; d/ more favourable rules for land purchasing and renting for smaller farms; e/ limiting of the bureaucracy. To summarize, the opinions of farmers expressed in the focus group defend particular interests of small and medium farms and they are the reflection of the economic way of thinking.

Agricultural policy and related matters played significant roles in the discussions at the Participatory Workshop. Farmers indicated that due to longer lifespan, it was increasingly possible that farmers could pass their farms on to their grandchildren instead of their children. Farmers also asserted that in the Opolskie Province, due to the lack of available agricultural land for sale, current regulations in force in Poland and related to land turnover for cultivation did not influence the activities of wheat producers in the region. The farmers emphasized that it was necessary to increase the export of wheat from Poland because the country had a significant surplus caused by grain imports from Czech Republic and Ukraine. The producers paid a lot of attention to the issue of levelling out the subsidies for Polish farmers with those available to farmers in Western Europe. It was stated that limiting cultivation of wheat would be desired and a smaller quantity of high-quality wheat could be produced. There were also calls for the introduction of a stable wheat price in a timeframe of at least 10 years. More radical statements alluded to conducting Poland's own agricultural policy for wheat production, without the need to consider the interests of other UE wheat-producing countries. These opinions were followed by claims that national agricultural policy could only be possible after Poland's exit from the European Union. Some respondents suggested the introduction of a minimal wheat price while others preferred to focus on Polish comparative advantages, which could lead to gaining new markets. In this context the issue of cheap wheat imports from Ukraine and Canada were addressed again, but this time in reference to GMO threats. The respondents thought that the relatively low affluence level of Polish society made consumers more concerned about the price of the product rather than its quality, which made them more agreeable to accepting genetically modified products.

During the research the wheat producers indicated three types of conditions potentially changing their situation and consequently influencing their farming strategies. The first one related to elimination of other production directions (i.e. drop in milk prices which resulted in abandoning animal production and taking up plant production, later resulting in increased wheat production and consequently a price drop. Two other factors were related to Poland's accession to the European Union and globalization. The former factor was regarded as positive, creating opportunities for modernization of production. The latter was seen as ambivalent indicating the necessity to enlarge farms (giant mania) or to engage in narrow specialization. The „effect of the scale” becomes the most important here.

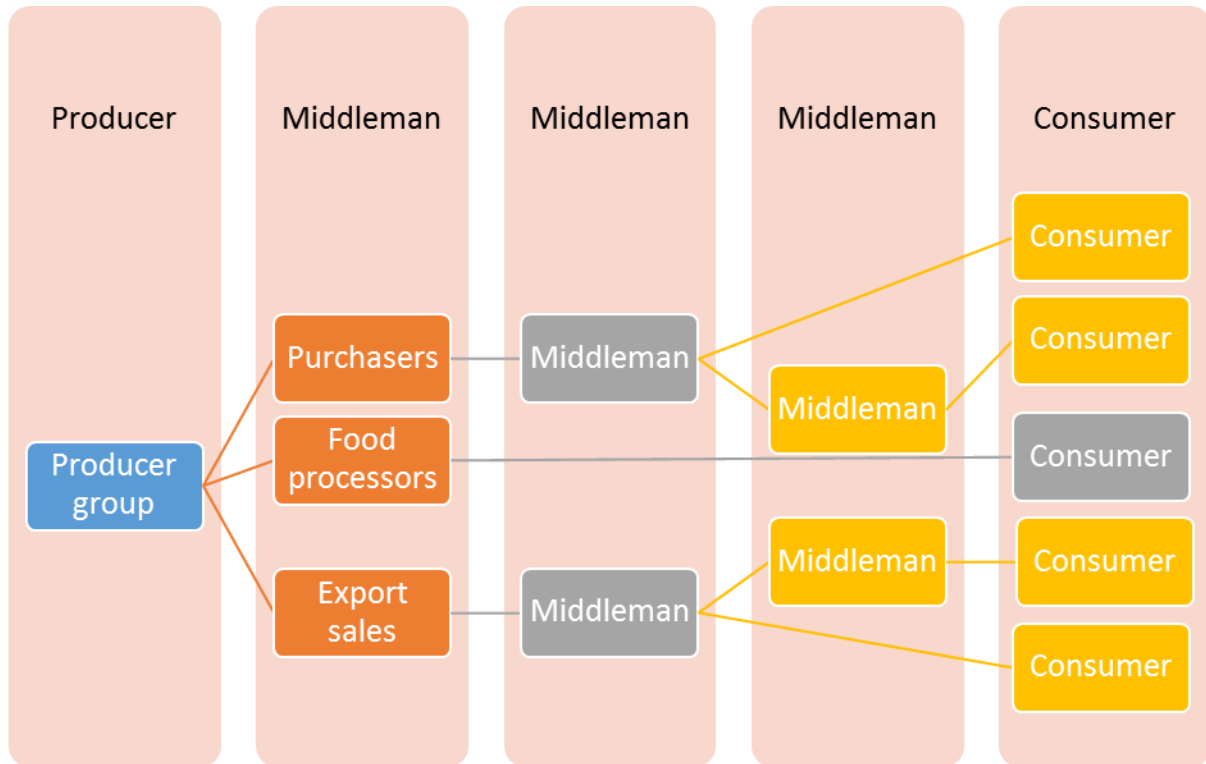
Adaptation strategies to markets

Wheat producers perceived import of grains to Poland as their biggest threat. They felt threatened by the imports from the EU countries such as Czech Republic as well as the imports from outside the EU, namely from Ukraine

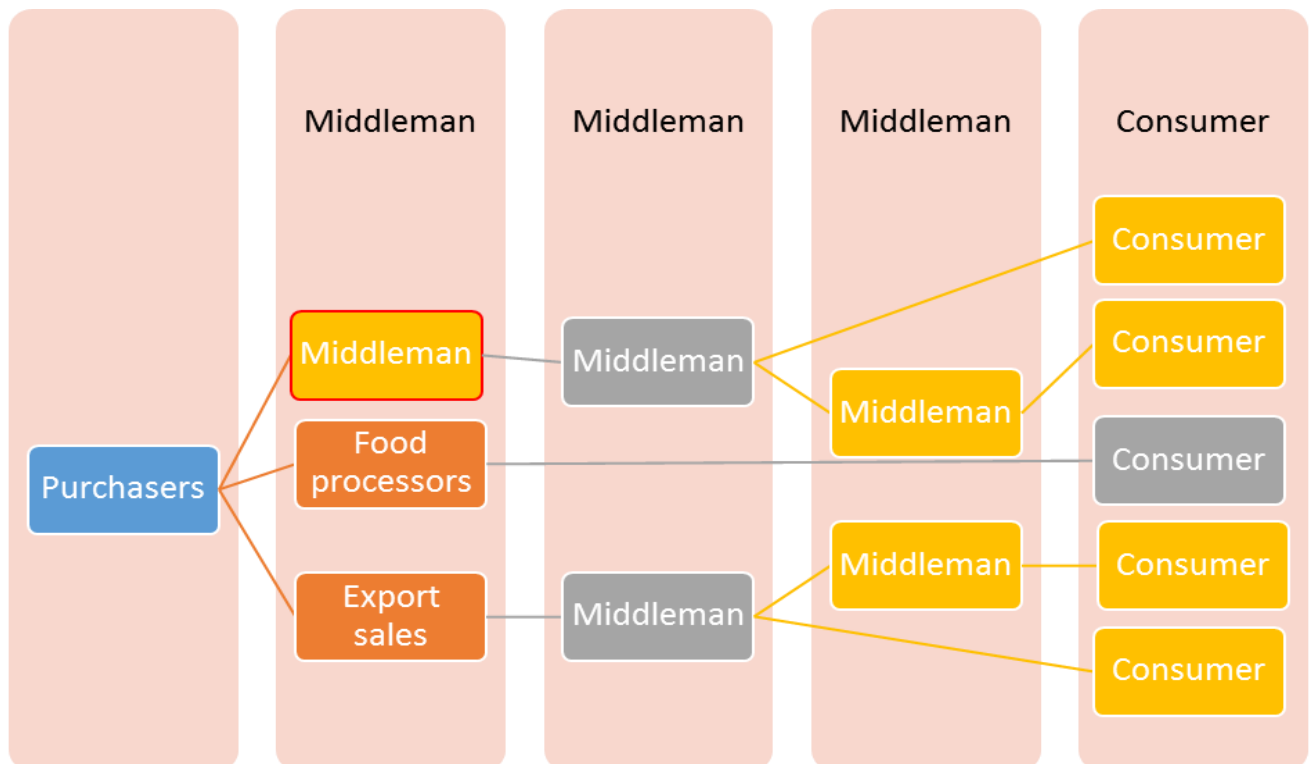
The participating farmers had the feeling of being dominated by purchasers of their products. It was mostly connected with the evaluation of parameters of the sold wheat. Purchasers oftentimes lower these parameters, which causes price drops and consequently less profits for producers

Wheat production and distribution chains seems to be unified and global. The models presented above show various positions of producers within the system. Positions of producers result mainly from the area of their farms and the amount of their products.

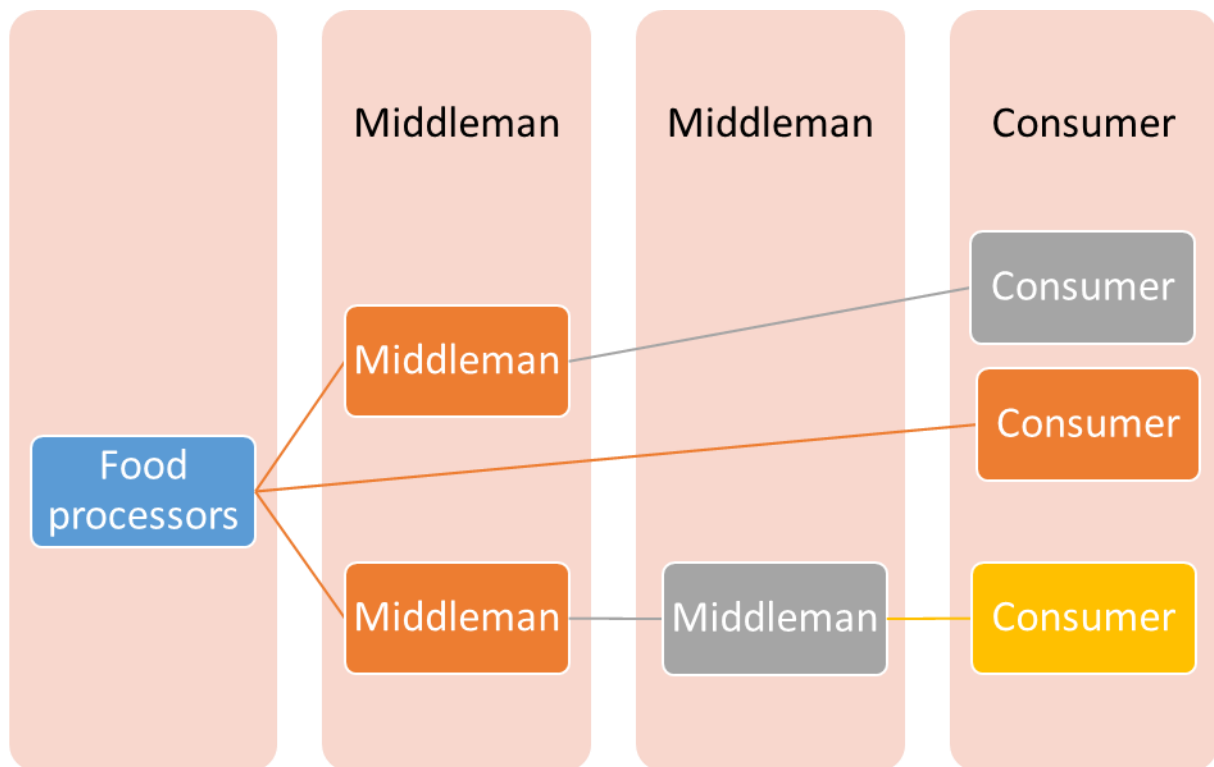
Producer groups model



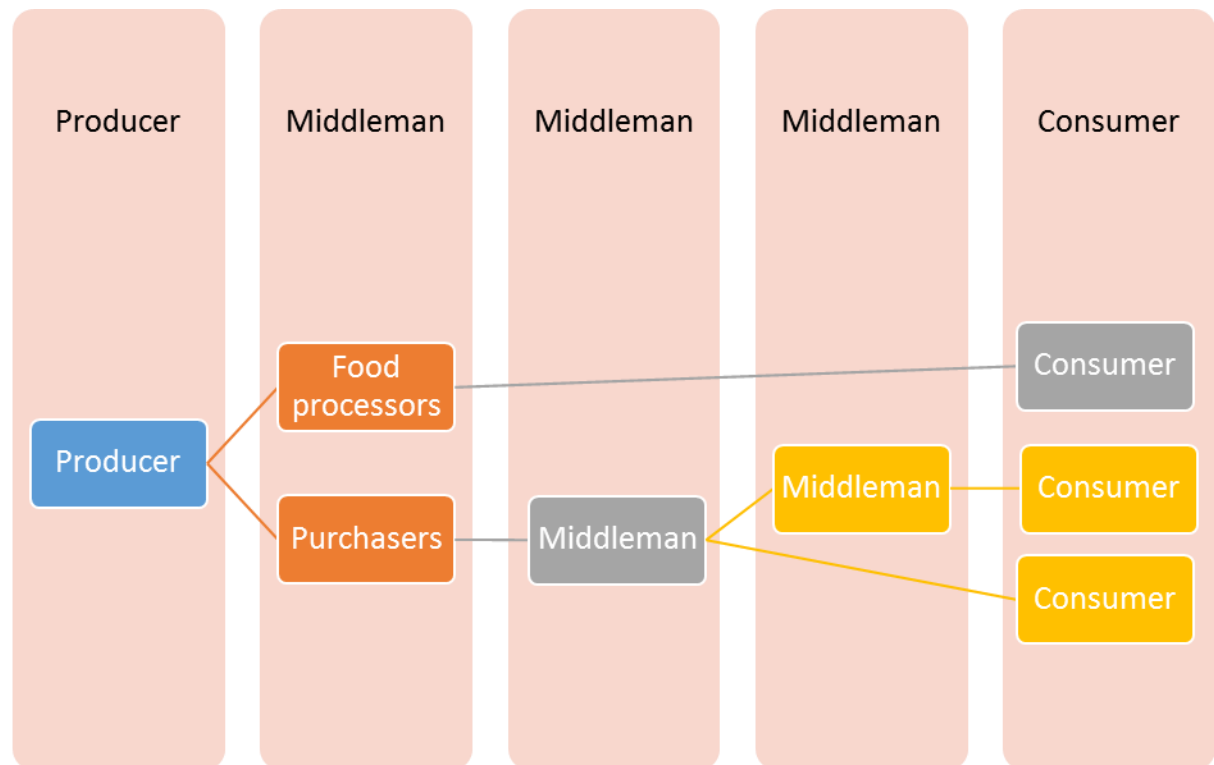
Purchasers model



Food processors model



Direct sales during the harvest time



Adaptation strategies to socio-economic issues

The farmers participating in the workshop appreciated the producer group operating in the region, whose members were producers and processors alike. Nevertheless, they brought up the problems of financial regulations as being unfavourable to producers. Operating within a producer group was treated as a regular economic activity. Farmers felt dominated here by the purchasers of their product and the prices they offered.

Farmers indicated that due to longer lifespan, it was increasingly possible that farmers could pass their farms on to their grandchildren instead of their children. Farmers also asserted that in the Opolskie Province, due to the lack of available agricultural land for sale, current regulations in force in Poland and related to land turnover for cultivation did not influence the activities of wheat producers in the region. The respondents thought that the relatively low affluence level of Polish society made consumers more concerned about the price of the product rather than its quality, which made them more agreeable to accepting genetically modified products. On a general level, the declarations on horizontal cooperation were absolutely positive. All farmers in the group were able to find at least several other producers they cooperated with in some way. The reciprocity rule was strongly emphasized here. In that sense, horizontal cooperation is highly rationalized in a purely economic sense. This cooperation is treated as certain kind of insurance in sudden and unpredicted cases.

The farmers mostly do receive support from the producer groups they belong to, as the president of such groups is looking out for the best prices for wheat and exploring the possibilities for gaining potential contracts for them. This is the only active way to search for new markets because the production scale of most grain producers is rather small. The surveyed producers appeared to have a subordinate position in relation to the buyers of their products, who often questioned the grain's quality. The farmers in the focus group were not particularly interested in certified agricultural production. The wheat producers felt threatened by the import of grains to Poland from some EU countries, such as the Czech Republic, and from outside the European Union (e.g. Ukraine).

While describing vertical coordination the surveyed primary producers emphasized that it was based on stable relations with purchasers and fostered by informal relations. Regarding agricultural policy regulations, the wheat producers were in favour of curbing grain imports to Poland. They argued that such grains were of poor quality and often ended up being mixed in with better quality Polish grains.

The young farmers were also asked about vertical cooperation. In the view of these wheat producers such cooperation was mostly based on economic relations. As was noted, the tradition of such cooperation is often passed from generation to generation, highlighting the importance of mutual trust, which is a crucial and helpful factor in conducting the business. The emphasis on this aspect of vertical cooperation did not interfere with the search for other new partners.

Sustainability of the sector

They were skeptical about the future of producer groups and cooperatives because of the strong, individualistic approach among farmers, which caused older farmers to prefer to sell their own land. The remedy for this was seen in a potential consolidation of small farms and enforcing adequate care and stewardship of the land where cultivating wheat could be possible, as such areas in Poland were rather rare.

The farmers argued that their farms did not pollute. The ecological character of the farms was also determined by the fact that excessive use of chemical products generated high production costs and could make production unprofitable. Within this context, farmers called for CAP subsidies to be the same in all EU countries.

In reaction to three models of farm presented in the focus group (family farming model, market model, and sustainable farming model) the surveyed producers were pointing to the market model as having a real possibility to thrive. The family farm model in this context was only treated as a certain form of tradition and principles for the functioning of the contemporary farm. It was stressed that without family tradition and the groundwork established by previous generations, it would be nearly impossible to start a wheat production business and to create such a farm from scratch due to the extremely high costs of such an endeavor. Furthermore, the market model of farming is to some extent imposed on farmers by the increasingly globalized nature of the agricultural market forcing agricultural farms to specialize, and to expand their production scale. The main factors that determined the functioning of agricultural farms and possible changes of their production profile were the following: market outlets, costs of engaging in the new type of economic activity, climate change, etc. Social factors (tradition, producer's preferences, etc.) seem to be of secondary importance.

One of the section of questions in the survey dealt with potential influence of sales agreement/transaction described above on sustainable development. The respondents were asked to express the opinion whether the agreement related to membership in organization had any clauses that could be seen as conducive to sustainable development and especially its environmental, social and economic aspects. The most frequent answers that the respondents chose indicated that membership in and/or agreement with collective organization had influence on maintaining profitability of agricultural production (68%), investing in agricultural business activity (59.9%) and creating good networking connections with buyers and input providers and establishing connections with other farmers (in both cases 53.8%). Less than half of respondents thought that agreement with/ membership in collective organization had influence on their ability to deal with changing marketing conditions and 37.8% and increasing the prestige of farmer's profession. Slightly over 1/3 of respondents (34.2%) said that thanks to this agreement with/membership in collective organization they were able to create good relations and networking with purchasers and suppliers, and every fourth respondents said (25.9%) that it influenced sales in periods of time when prices of wheat were low. Only 19.7% of surveyed farmers said that because of agreements with/membership in collective organizations they secured the succession of agricultural farm and 18.7% reported that they were able to maintain the biodiversity of the farm. For the respondents' agreements with/membership in collective organization had the least influence on maintaining good quality of water (7.3%).

Sales channels and agreements

For the description of strategic perspective it seemed important to identify key purchasers and prevailing types of sales for the surveyed farms. Here, it should be stated that individual sales channels were the most common. As many as 87% of respondents declared this form of sales as prevalent. Collective sales channels were the dominant form of sales for only 13% of respondents. While reviewing the main types of sales it could be quite helpful to take a look at specific purchasers. In the collective sales channels, 12% of respondents used their membership in producer groups, 4.5%

sold their merchandise through cooperatives, and only 1.5% through an inter-branch organization. The same percentage of respondents (1.5%) sold wheat through a farmers' union or wheat producer association. The analysis of sales through individual channels did not present large diversification. Selling to wholesalers and grain warehouses was the most popular market channel. This channel was used by half of the respondents (51%). Almost ¼ of respondents sold wheat individually, directly at local markets, including farmers' markets (21%). The remaining sales channels were used less frequently. 11% of respondents sold part of their production directly to wheat processors (grits processors, mills, breweries, etc.) and 8.5% through middlemen who did not store grains. Only 5% of respondents sold wheat to small wholesalers that later sold their purchases on the local market, and 3% exported their merchandise.

The above data were consistent with farmers' declarations of membership in agricultural organizations. As many as 90% of respondents did not belong to any such organization, 7% were members of producer organizations, 2% had membership in farmers' union or association and only 1% of respondents were involved in cooperatives. The respondents who were members of agricultural organizations constituted 10% of the sample. Each of them was asked about the types of services that the organizations offered. Due to the small number of such respondents, their answers could only be presented in a qualitative manner, as a certain trend. All cooperative members reported that the cooperative bought their production and facilitated contacts with purchasers. Their opinions, however, were equally divided when it came to the cooperative helping with price negotiations with purchasers and cooperative support with designing terms of contract/negotiation. In the case of members of producer groups, the significant majority of respondents recognized that the organization bought their production, helped to facilitate contacts with purchasers, negotiated prices with purchasers and supported farmers when terms of contract/transactions were being designed. There were some discrepancies (although not very significant) regarding help with making contacts with purchasers. The experience of members of farm unions or associations was a bit different. These organizations did not buy production from their members, did not support them when terms of contract/transactions were being designed. They did not negotiate prices with purchasers on behalf of farmers. But these institutions did help all of their members to make contacts with purchasers.

The research, which focused on wheat producers, was meant to characterize the sales channels. At first, the surveyed farmers confirmed that their sales were oriented towards individual consumers. Nearly 90% said that this was the case.

The next series of questions addressed the terms and conditions of contracts and transactions related to sales through individual or collective channels. The differentiation of contracts/transactions was noticeable even at first sight. The highest percentage of respondents (39%) reported that their sales were based on informal agreement (e.g., a situation in which a farmer sold the wheat he produced to warehouses without having prior agreement) made at the time of grain delivery (40%). The second most popular form of wheat sales (34%), were legal or oral agreements made right before the delivery of merchandise. Such agreements/contracts could be legally executed. The third popular form of wheat sales (14%) was legal or oral agreement made before or during the production phase. Here, legal execution of the contract was also possible. For close to 6% of respondents wheat sales were based on an informal agreement (e.g. situation, in which a producer continuously, based on oral agreement sold products to the same purchaser) made

before or during the production. Only 2% of respondents said their sales were regulated by the statute of collective organization they belonged to, while 4% mentioned other forms of agreement. Besides the type of sales agreement, there were other aspects that differentiated the transactions, with the most significant being the duration of contract for sales/membership in collective organization that farmers had to abide. As many as 72% of respondents were involved in contract agreements pertinent to one concrete sale. For 15% the sales agreement was made for no more than six months. Close to 8% of producers sold wheat continuously to the same purchaser. Only 5% of respondents made sales agreements that lasted from 7 months to 5 years. The analysis of the distribution of answers suggested that the predominant majority of transactions were one-time transactions. The agreements for the most part were pertinent to one transaction.

Next, the respondent were asked to describe the characteristics of their formal or informal agreement, typical for wheat sales in the fully completed production year 2016-2017. The analysis of collected data was quite surprising, as it did not allow for determining the typical structure for the majority of contracts. What half of the 50% of contracts had in common was the possibility of receiving support with storage, transport and other services. In 40% of contracts there were clauses addressing the possibility to receive premiums for delivery of high quality product. In 26% of cases the agreements contained clauses which protected farmers against purchasers not keeping their terms of contract. Clauses addressing the possibility of farmers receiving interests in cases of purchasers being late with payments could be found in 23% contract agreements. Only 7% of contract agreements contained clauses on possible credit guarantees. 10% of agreements mentioned penalties that the producer could face for not delivering the agreed-upon volume of produce. For over 10% of agreements the possibility of receiving managerial support and technical assistance was considered a standard. Only 9% of agreements stated the possibility of receiving special assets and help with production technology, 7.6% of contracts required exclusivity (e.g. obligation to sell 100% of production to particular purchaser) and 12.6% contained clauses regarding automatic extension of contract agreement. Other types of requirements and provisions were rather rare.

Another aspect of the research was the formula according to which the price of wheat was set through a signed agreement. In 84.8% of contract the merchandise price was subject to change, connected to the market price at the moment of product delivery, and for 62.1% quality of delivered produce was quite important and had an effect on price. In every third contract agreement the volume of delivered production played an important role (32%). Among the factors that rarely influenced the price levels for wheats were costs of production (3%) and shares in organization profits (3%). For 12% of contracts the price was stable (not subject to change) and it was set at the moment of sale. It was inferred from farmers' declarations that the average price for the tonne of wheat fluctuated between €131 – 184.3 per tonne. For 50% of surveyed farmers the average price for wheat did not exceed €152.4/t. The remaining farmers received prices in the range of €153-184.3/t. For over 82% of farmers the costs of production consumed over 50% of the sales price. For every third farmer in the survey the costs of production absorbed 51-70% of wheat sales price (33%), and for 18% of them took up to 50% of sales price of wheat. Finally, for 22.7% of farmers production costs gobbled up 71-100% of wheat price. Interestingly, 26.3% of respondents were not able to estimate what percent of their sales price was consumed by the costs of production on their farm. The cause of that could stem from the fact that accounting on agricultural farms is rather rare in Poland. Production of wheat in this part of Poland is strongly tied with the market. Farmers do not engage in long-term contracts to sell wheat. The most popular model of sales had the following

scheme: the farmer made a call to the purchaser (warehouse owner) and then brought the merchandise to the warehouse making an agreement on the spot and during the sale (74%). A situation in which there were no sales price guarantees and the institutional support was rather weak, wheat production was a very risky type of economic activity.

In most cases farmers received the entire payment for their product after delivery (77%) and less often they received the entire payment during product deliveries (9%). Every tenth farmer (10%) received their entire payment before delivery. The most unusual were payments received at regular time intervals (i.e. daily, weekly, monthly) (7.5%), and at less regular time intervals, with some percent in the middle of the season, and the rest at the time of product delivery or later (2%). The data presented above could be compared with answers to questions in which respondents were asked to name the costs, which producer had to incur based on sales agreement. The costs that farmers reported the most frequently were related to storing, transport, servicing etc. (43%) and the costs of quality testing (10%). The remaining costs such as organization membership fee, costs of marketing and promotion commission/profit margin were rarely mentioned by respondents and did not exceed 3% answers. The data inferred from these two questions indicated market model of organization of wheat sales, where the risk of market game is shared by producers and purchasers. There is some imbalance connected with the larger risk on the side of wheat producers. Comparing the situation of wheat producers with apple ones, it can be said that the former did not incur much costs while selling wheat at the market.

These findings were confirmed by the data showing what kind of requirements purchasers had for producers regarding production quality standards. The analysis showed that the requirements were mostly related to food safety standards and hygiene standards related to human consumption of the final product (80.5%) and the quality of organoleptic characteristics of the final product (taste, colour, etc.), which was reported by 66.2% of respondents. Further down the list other standards were present but their popularity was significantly lower than the number of answers referring to the two most popular standards, which were mentioned earlier. Over ¼ of respondents named requirements connected with preservation of natural resources and environmental protection such as biodiversity, agricultural conservation, integrated management of pest protection (27.3%), and 4.5% pointed to the alleviation of, and adaptation to, the effects of climate change (minimization of carbon footprint, minimal number of food miles/kilometres in merchandise transport). For more than one fifth of farmers the purchasers made requirements for GMO free wheat.

The described disproportion of the market force between the purchasers and apple producers could indicate that apple growers were not satisfied with their position and would try to change the existing conditions. This was not the case, which could be seen in the distribution of answers to the question about the level of satisfaction from sales agreement. On the scale from 1 to 5 the respondents were to mark their level of satisfaction and their prevailing majority was satisfied with the sales contract. There were a total of 72.4% respondents who expressed their satisfaction, of which 44.4% of respondents said they were completely satisfied, 28.3% somewhat satisfied). The percentage of respondents who were unsatisfied from their sales agreements was low – 1.5% with 0.5% of respondents who were completely unsatisfied and 1% of farmers somewhat unsatisfied. A relatively large percentage of respondents expressed neutrality on the matter (20.7% of respondents were neither satisfied nor unsatisfied).

Strategies and drivers of farming

Towards the end of the interview the respondents were asked to express their opinion on wider strategies that the farmers implemented in agricultural endeavours. They were to use the 5-point scale to evaluate whether particular factor had any influence on their decisions regarding farm production. The factors that played a role in respondents' decisions had the following order of importance: (1) unfavourable climate conditions (e.g. hail, drought, floods, diseases) with 68.2% of respondents recognizing their importance. For 31.3% of respondents the influence of these factors was very strong, for 36.9% it was strong and for 5.1% it was low. 19.2 % of respondents reported lack of influence while 7.6% of respondents recognized this influence to some degree; (2) year to year fluctuations of prices of production means (seeds, fertilizers, pesticides, gas, energy, etc.) - 66.7% of respondents thought that this factor was meaningful, of which 25.8% recognized its importance are very significant, 40.9% recognized it as significant, 16.7% of respondents did not think there was such influence, 5.3% said it was of low importance and 10.6% recognized this factor as influential to some extent; (3) severe drop in market prices (63.6% of respondents said this factor was important, with 24.2% reporting it as highly important, 39.4% noting that it was important. 3.5% chose the answer indicating its low influence. Lack of influence was noted by 15.7% of respondents and some influence was stated by 16.2% of surveyed farmers (4) changes in functioning of Common Agricultural Policy (e.g. changes related to direct subsidy payments and agri-environmental payments – 50.8% of respondents thought this factor was meaningful, with 7.7% of respondents recognizing its importance as significant and 43.1% agreeing it was important. 11.8% stated this factor was of low importance. Lack of influence was reported by 13.8%, and 21% of respondents recognized the influence to some degree); (5) access to credits and loans for means of production - 33.7% of respondents recognized this factor as influential, with 9.2% of respondents reporting its very significant influence, 24.5 recognizing its influence as significant. 24 % of respondents thought that this factor had low influence and 20.4% said this factor did not have any influence. 16.4% of respondents recognized this influence to some extent; (6) changes in regulations on agricultural activity such as regulations connected with water directive or regulations on plant protection products – 18.9% of respondents thought such changes were influential, with 5.1% recognizing its influence as very important 13.8% saying their influence was important and 19.9 reporting the these changes as having little importance. Lack of influence was stated by 16.3% and 39.3% of respondents recognized these changes of having some influence; (7) access to loans and capital investments (18.4% of recognized this factor as important with 3.1% saying it was very important, 15.3% noting it was important. 24.5 of respondents evaluated the importance of this factor as low and 28.1% said it was none. Another 21.4% of respondents recognized the importance of this factor to some extent. (8) Changes in consumer behaviour and preferences – 13.6% of respondents said these changes had important influence, with 2.4 % assessing these changes as very important and 11.2% saying that they were important. 14.8% of respondents reported low of influence of this factor and 34.3% said it was not at all influential. 36.7% of respondents said that these changes were influential to some degree.

The above data presented the array of factors that farmers had to consider while making strategic decisions on their production and their future activities were based on them. The main strategies of agricultural production development are oriented at maintaining the existing scale of operation of agricultural farm (70%), and almost one fourth of respondents planned to increase the existing scale of production of agricultural farm. Despite so many factors that farmers had to take into

consideration in farm management, only 3% of respondents were planning to quit farming altogether, while 2% wanted to decrease the scale of agricultural operation. 1% of respondents did not have precise plans of farm development in the next 5 years.

The future: Ukrainian competitors and beyond

Some general remarks (some kinds of policy recommendations)

- Introduction of the policy focused on strengthening of diversified production in farms since specialisation of production and “monoculture” might result in economic risk and the destruction of natural environment.
- Strengthening the role of credit unions that seem to be more sensitive and flexible in responding to producers’ requests quite contrary to commercial banks.
- Strengthening the role of producers when confronted with purchasers and processors through the strengthening of local apple processing and more intensive cooperation among individual producers.
- Policy focused on reduction of prices and harmonization of quality of means of production among EU countries.
- Introduction of the policy focused on an independent (from purchasers or processors) evaluation of the product quality.

Some specific remarks about Ukrainian competitors

- Young wheat producers painted the future of the system of wheat production in the region and in the entire country. In the regional context farmers did not expect any significant changes in the foreseeable future, mainly because of lack of land that could be cultivated. They also reported lack of prospects to expand smaller farms. On the country level they entertained the possibility of replacing wheat production with rapeseed production, which, according to farmers, was becoming more profitable. This idea was connected with farmers’ serious concerns over imports of wheat from Ukraine or the Czech Republic, where GM crops were allowed, which could destabilize the wheat market in Poland. There were also noticeable fears related to climate change and the effects of signing the CEFTA agreement with Canada, which – according to surveyed farmers – could result in Europe being flooded with cheap Canadian wheat.
- The wheat producers felt threatened by the import of grains to Poland from some EU countries, such as the Czech Republic, and from outside the European Union (e.g. Ukraine). They claimed that policymakers viewed the market from the narrow perspective of product price thus resulting in the import cheap grains from Ukraine. The farmers did not address the fact that grains (mostly wheat) from Poland were exported to other countries and that in some ways farmers could benefit from such exports.
- Agricultural policy and related matters played significant roles in the discussions. Farmers indicated that due to longer lifespan, it was increasingly possible that farmers could pass their farms on to their grandchildren instead of their children. Farmers also asserted that in the Opolskie Province, due to the lack of available agricultural land for sale, current regulations in force in Poland and related to land turnover for cultivation did not influence the activities of wheat producers in the region. The farmers emphasized that it was necessary to increase the export of wheat from Poland because the country had a significant surplus caused by grain imports from Czech Republic and Ukraine. The producers paid a lot of attention to the issue of levelling out the subsidies for Polish farmers with those available to farmers in Western Europe.

It was stated that limiting cultivation of wheat would be desired and a smaller quantity of high-quality wheat could be produced. There were also calls for the introduction of a stable wheat price in a timeframe of at least 10 years. More radical statements alluded to conducting Poland's own agricultural policy for wheat production, without the need to consider the interests of other UE wheat-producing countries. These opinions were followed by claims that national agricultural policy could only be possible after Poland's exit from the European Union. Some respondents suggested the introduction of a minimal wheat price while others preferred to focus on Polish comparative advantages, which could lead to gaining new markets. In this context the issue of cheap wheat imports from Ukraine and Canada were addressed again, but this time in reference to GMO threats. The respondents thought that the relatively low affluence level of Polish society made consumers more concerned about the price of the product rather than its quality, which made them more agreeable to accepting genetically modified products.

- Wheat producers perceived import of grains to Poland as their biggest threat. They felt threatened by the imports from the EU countries such as Czech Republic as well as the imports from outside the EU, namely from Ukraine.
- The farmers mostly do receive support from the producer groups they belong to, as the president of such groups is looking out for the best prices for wheat and exploring the possibilities for gaining potential contracts for them. This is the only active way to search for new markets because the production scale of most grain producers is rather small. The surveyed producers appeared to have a subordinate position in relation to the buyers of their products, who often questioned the grain's quality. The farmers in the focus group were not particularly interested in certified agricultural production. The wheat producers felt threatened by the import of grains to Poland from some EU countries, such as the Czech Republic, and from outside the European Union (e.g. Ukraine).
- Farmers provided the example of the Czech Republic, which borders the Opolskie region and where the system of wheat production resembles a closed circuit. The advantage of the Czech system could be seen in the dominance of a small number of very large farms, which resulted in a large supply of homogenous product. In that sense Czech production could pose a threat to Polish producers, who were more diverse and quite dispersed. A similar threat could be attributed to Ukrainian wheat production, but for a different reason. The price of wheat was the main issue, as it was significantly lower in Ukraine than in Poland.

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