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THE SALES OF FARM PRODUCTS IN WIELKOPOLSKIE VOIVODESHIP*

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Abstract. The main goal of this paper was to identify the process of sales and organisation of transport of farm products, including a division into product groups in farms in Wielkopolskie voivodeship. The research on a group of 184 farms led to the following conclusions: wheat was the most frequent product sold by farms in the plant production category; more than 70% of the farms used their own transport to deliver agricultural products to their consignees, third party transport was mostly used to deliver pork and beef livestock; there was diversity in the distance from farms to buying stations, depending on individual products sold.

Key words: farms, sales of farm products, agrilogistics, transport

INTRODUCTION

Farm products have their specific character due to the specificity of agriculture as the most important segment of the entire food economy complex. There is temporary imbalance between the sales and demand for farm products and they are characterised by low transportability and storability (Klepacki, 2011). The transport of agri-food products is particularly important due to the fact that it is an important link in the supply chain and

it may cause many dangers which directly influence the food quality and safety (Baryła-Paśnik et al., 2013). The organisation of transport in a farm also derives from the specific character of agricultural activity. As Klepacki et al., (2013) stress, transport at the farm level is characterised by higher intensity at the time of agritechnical procedures, incomplete use of the capacity and load of means of transport and the use of universal means of transport. The authors also indicate that there is considerable diversity in the physiochemical properties of loads transported. Appropriate organisation of transport processes inside and outside the farm is a factor influencing the effectiveness of production processes (Rokicki and Wicki, 2010). Many of those processes also require appropriate sales strategies of farm products, adapted to the changing needs of the market. More and more often farms use different forms of horizontal and vertical integration in order to achieve this goal. They also strengthen their competitive and negotiating position in relations with the food processing sector. Strong market orientation, which is particularly noticeable in commercial farms, requires that market participants should take a wide range of marketing actions, monitor the situation on the market and quickly react to changes in the economic situation.

*The study was conducted as part of Research Area 5 “The Economic Conditions of the Development of Production, Market Infrastructure and Turnover System and the Cost-Effectiveness of Pulse Used as Feed in Poland”, long-term programme “Improvement of the Domestic Sources of Plant Protein, Their Production and Use in Feeds”.

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MATERIAL AND METHOD

The basis for the analysis were surveys (using a questionnaire survey), carried out in 2012 on the population of 184 farms from Wielkopolskie voivodeship. The farms were selected for the research by purposive sampling, which means that the items were deliberately selected for the sample. The following selection criteria were assumed: farm area (at least 9 ha of farmland) and commercial production. The questionnaires included open-ended and closed-ended questions. The information collected from the questionnaires was analysed and described by means of descriptive statistical methods.

FARM CHARACTERISTICS

The farms were grouped according to the total farm area, including the area of the farm and the area of land leased (Table 1).

Three types of production (plant, animal and mixed) were distinguished in individual groups of farms. The analysed farms were dominated by mixed production. Cereals were the prevalent plant production, i.e. 134 farms grew wheat, 102 farms grew rye, 132 farms grew barley, 41 farms grew oats and 12 farms grew triticale. Few farmers grew pulse. 47 farms grew yellow lupine,

22 farms grew narrow-leaved lupine, 21 farms grew field peas, 10 farms grew peas and only 1 farm grew fava bean var. minor. The animal production was dominated by cattle (78 farms) and pigs (72 farms).

SALES AND ORGANISATION OF TRANSPORT OF FARM PRODUCTS

The process of the sales of farm products was analysed with the division into plant and animal production. The research comprised the most mass products provided by farms to the market, which simultaneously were the commercial production of farms. The plant production category presents the respondents' replies concerning cereals, i.e. wheat and maize, and rape as an oil plant, whereas the animal production category comprised pork and beef livestock (Table 2). According to the data of the Central Statistical Office of 2013 (GUS, 2014), wheat had the greatest share of all cereals in the commercial agricultural production in Poland. Among the farms under study, 68 farms sold this cereal, which amounted to 37% of the total number of farms under investigation. The average sales of wheat reached the level of 71.4 tonnes a year and it depended on the size of the farm and internal use as feed. By comparison we presented the data concerning the sales of rape

Table 1. Farm characteristics
Tabela 1. Charakterystyka badanych gospodarstw

Area (ha) Powierzchnia (ha)	Number of farms Liczba gospodarstw	Number of farms producing: Liczba gospodarstw zajmujących się produkcją:		
		plants roślinną	animals zwierzęcą	mixed mieszaną
9–20	40	7	6	26
20–50	63	6	8	49
50–100	49	15	2	33
100 or more 100 i więcej	32	12	6	14
Total Razem	184	40	22	122

Source: own elaboration based on the questionnaires.

Źródło: opracowanie własne na podstawie badań ankietowych.

Table 2. Sales and organisation of transport of farm products in selected farms in Greater Poland voivodeship

Tabela 2. Sprzedaż i organizacja transportu produktów rolnych w badanych gospodarstwach rolnych województwa wielkopolskiego

Product Produkt	Wheat Pszenica	Rape Rzepak	Maize Kukurydza	Pork livestock Żywiec wieprzowy	Beef livestock Żywiec wołowy
Number of farms in sales transactions Liczba gospodarstw zawierających transakcje sprzedaży	68	34	15	63	46
Average amount of product sold (tonnes/year) Średnia ilość sprzedawanego produktu (t/rok)	71.4	34.3	196	44.3	19.7
Distance from buying station (km) Odległość od punktu skupu (km)					
Minimum Minimalna	1	2	9	2	2
Average Średnia	21.3	34.03	41.8	29.5	21.9
Maximum Maksymalna	150	150	200	270	55
Type of transport used to sell products (%) Rodzaj wykorzystywanego transportu przy sprzedaży produktu (%)					
Own transport Transport własny	74.63	76.47	69.23	30.65	18.18
Third party's transport Transport obcy	25.37	23.53	30.77	69.35	81.82

Source: own elaboration based on the questionnaires.

Źródło: opracowanie własne na podstawie badań ankietowych.

as an industrial crop, which is the basic raw material for the production of vegetable oil, biocomponents and biofuels. 42 farms cultivated rape (18.5% of the sample), of which 34 provide this product to the market, which was half the number of the farms that sold wheat. The average yearly sales volume was 34.3 tonnes and it was also considerably lower than the average amount of wheat sold. 15 farms (8.2% of the sample under study) sold maize. The share of this crop was the lowest of all the three crops in the plant production category. It is noteworthy that the average annual sales of maize was very high, i.e. 196 tonnes. Among 15 farms which sold maize a few grew the crop in larger areas than 50 ha. As far as animal production is concerned, 34.2% of the total number farms, sold pork livestock. The mean annual sales volume was much higher than the sales

volume of beef livestock – 44.3 tonnes vs 19.7 tonnes. The number of farms that sold beef livestock was also smaller. 46 farms sold beef livestock, i.e. every fourth farm under analysis.

The study also comprised the data concerning agri-logistics in farms. It involves the activities related with the organisation, planning, control and implementation of the flow of farm products from the place of their production, through the channels related with the purchase, storage, production and distribution of those products up to the final consignee (Klepacki, 2011). Agri-logistics is a significant component of the logistic system as a whole (Gebresenbet and Bosona, 2012). In view of this fact the distance to the buying station was checked when the sales of individual products was investigated. Above all, buying stations are usually

agri-food processing plants (gristmills, oleochemical plants, meat processing enterprises) and agencies acting as intermediaries in sales transactions. As has been proved (Gazdecki, 2012), sales to processing plants and buying stations are the most important channels of sales of agricultural products. The average distance to a buying station ranged from 21.3 km (wheat buying station) to 41.8 km (maize buying station). The closest buying stations were 1 or 2 km away from the farms under investigation, whereas there was considerable diversification among the most distant stations. The most distant wheat and rape buying stations were located 150 km away from the farms. As far as maize and pork livestock are concerned, some farms were respectively as far as 200 km and 270 km away from buying stations. There was greater concentration of beef livestock buying stations – the maximum distance was 55 km. The data significantly illustrate considerable divergence between the distances to buying stations of individual products, which results in varying costs of transport. The analysis of the type of means of transport used for the sales of farm products gave interesting results. As Koźlak (2009) reports, transport plays a fundamental role in logistic systems. As far as the sales of wheat, maize and

rape is concerned, about 70% of the farms used their own means of transport to deliver products to their consignees. As far as livestock is concerned, the vast majority of farms used third party's transport – 69.35% of the farms under study used that type of transport to sell pork livestock and 81.82% of the farms used it to deliver beef livestock. Naturally, it results from the fact that the transport of farm animals requires special conditions of animal welfare and the means of animal transport must meet these conditions.

The research revealed that most often farm producers sold wheat (92.42%), maize (77%), beef livestock (86.36%) and pork livestock (77.42%), having made individual negotiations with consignees (Table 3). On the other hand, rape was usually sold under procurement contracts with consignees (47.06%). An appropriate system of procurement contracts gives a chance to eliminate many negative consequences of extemporaneous cooperation between farmers and enterprises buying farm products. In the farms under analysis there were usually 12-month procurement contracts, with the greatest number of contracts where the prices on the day of delivery were applicable. 8% of the respondents sold maize under commission agreements.

Table 3. Type of transactions for the sales of individual products in the farms under analysis

Tabela 3. Rodzaj transakcji zawieranych przy sprzedaży poszczególnych produktów w analizowanych gospodarstwach rolnych

Product Produkt	Wheat Pszenica	Rape Rzepak	Maize Kukurydza	Pork livestock Żywiec wieprzowy	Beef livestock Żywiec wołowy
Type of sales transactions (%) Rodzaj zawieranych transakcji przy sprzedaży produktu (%)					
Individual negotiations Indywidualne negocjacje	92.42	44.12	77.00	77.42	86.36
Procurement contract Kontrakcja	1.52	47.06	15.00	11.29	11.36
Negotiations by groups of producers Negocjacje przez grupę producencką	0.00	0.00	0.00	1.61	0.00
Commission agreement Sprzedaż komisowa	0.00	0.00	8.00	0.00	0.00
Other Inne	6.06	8.82	0.00	9.68	2.27

Source: own elaboration based on the questionnaires.

Źródło: opracowanie własne na podstawie badań ankietowych.

Apart from transport, storage is another key logistic process in a farm. The need to store farm products has considerable influence on the amount of operating costs in a farm. In view of this fact the respondents were asked if they could store agricultural products on their farms.

81% of the respondents had warehouses where they stored their products. Thanks to storage the producers were able to sell their products at the time when they reached the highest prices on the market rather than immediately after harvest, when the market prices of products are usually the lowest during the whole production season due to the increasing supply.

The study also included the form of payment, i.e. whether farmers were paid by cash for the products sold or if consignees paid them with delay.

24% of the respondents granted a trade credit to their contractors, usually for 14 days. The following main factors were decisive to the granting of a trade credit to consignees (Fig. 1): purchasing a large amount of products (57%), high frequency of purchase (41%) and timely payment of earlier liabilities.

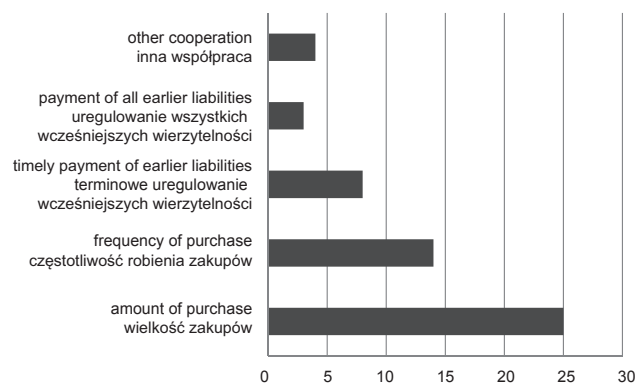


Fig. 1. Factors affecting the granting of a trade credit to consignees (number of responses)

Source: own elaboration based on the questionnaires.

Rys. 1. Czynniki wpływające na udzielenie odbiorcom kredytu kupieckiego (liczba wskazań)

Źródło: opracowanie własne na podstawie badań ankietowych.

SUMMARY

The research on a group of 184 farms from Wielkopolskie voivodeship led to the following conclusions:

1. Wheat was the most frequent sold product by the farms in the plant production category. The average amount of wheat sold during the entire production season was 71.4 tonnes.

2. As far as the type of sales transactions of agricultural products is concerned, usually the transactions were concluded on the basis of individual negotiations and procurement contracts.

3. Each fourth farm under analysis granted a trade credit to their consignees. The main factors which affected the granting of a trade credit were: a large amount of products purchased and the frequency of purchase.

4. There was diversity in the distance from farms to buying stations, depending on individual products sold. The shortest average distance to the buying station was noted for wheat and beef livestock, whereas the distance to maize buying stations was the longest.

5. More than 70% of the farms used their own transport to deliver agricultural products to their consignees. Third party transport was mostly used to deliver pork and beef livestock.

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SPRZEDAŻ PRODUKTÓW Z GOSPODARSTW ROLNYCH W WOJEWÓDZTWIE WIELKOPOLSKIM

Streszczenie. Głównym celem badań jest identyfikacja procesu sprzedaży oraz organizacji transportu produktów rolnych, z uwzględnieniem podziału na grupy towarowe w gospodarstwach rolnych województwa wielkopolskiego. Na podstawie przeprowadzonych badań w grupie 184 gospodarstw rolnych przedstawiono następujące wnioski: w kategorii produkcji roślinnej najczęściej sprzedawanym przez gospodarstwa rolne produktem była pszenica, ponad 70% badanych podmiotów we własnym zakresie dostarczała roślinne płody rolne do swoich odbiorców, przy realizacji transportu żywca wieprzowego i wołowego w większości wykorzystywano transport obcy, zróżnicowana była odległość od punktów skupu dla poszczególnych produktów sprzedawanych przez gospodarstwa rolne.

Słowa kluczowe: gospodarstwa rolne, sprzedaż produktów rolnych, agrologistyka, transport

Zaakceptowano do druku – Accepted for print: 12.01.2015

Do cytowania – For citation

Śmiglak-Krajewska, M., Łąkowski, H. (2015). The sales of farm products in Wielkopolskie voivodeship. J. Agribus. Rural Dev., 2(36), 329–334. DOI: 10.17306/JARD.2015.35