The impact of the COVID-19 pandemic on the fruit and vegetable market

Paweł Kraciński

Abstract

The fruit and vegetable market is important due to its production volume, which significantly exceeds the national demand and has a significant share in the entire plant production. The article aimed to identify changes that took place in the fruit and vegetable market in the first weeks of the COVID-19 pandemic.

Keywords: COVID-19 pandemic, fruit and vegetable market.

Paweł Kraciński, PhD, Department of Economics of Agricultural and Horticultural Farms, Institute of Agricultural Economics and Food Economy – National Research Institute.

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Introduction

The fruit and vegetable market plays a vital role in Polish agriculture. Our country is one of the largest producers of fruit and vegetables in the European Union – it ranks first in the production of apples, it is also one of the world leaders, right after China and the USA. We achieve similar results in the production of other fruits, although in this case the volume is slightly lower. The domestic vegetable production plays a minor role, although it is also an important branch of agriculture. According to the forecasts of IAFE-NRI, the harvest of fruit in Poland in 2020 will amount to 4.2 million tonnes, and of vegetables – 5.6 million tonnes. The aim of the study was to identify changes taking place on the fruit and vegetable market in the first weeks of the COVID-19 pandemic in Poland. Due to their properties, fruit and vegetables are perishable products, which makes this market unstable. The test results come from the monitoring carried out by IAFE-NRI. Its essence are systematic (weekly) interviews with a constant sample of entities – participants of the fruit and vegetable market.

Results

Monitoring of the fruit and vegetable market carried out by IAFE-NRI allows us to conclude that during the pandemic an increase in demand for most of the assortment of fresh fruit and vegetables on the Polish market was observed. Problems with managing the production of some vegetable species (e.g. parsley) or with prices lower than expected (in the case of other root or cruciferous vegetables) resulted from the higher supply (domestic production) compared to the previous year or competition of cheaper imported products (e.g. onion, greenhouse vegetables in early spring). The demand on the fruit market increased especially for apples, which in the first months of the year were the only domestic fruit available in larger quantities[1]. The demand for vegetables increased to a lesser extent. Increased interest in fruit (mainly apples) could also be observed on the part of foreign buyers. Larger orders came from European countries, while the demand of buyers from other continents decreased. The increased interest of European importers resulted from the willingness to meet the growing demand for fruit, similar to Poland's. According to information from entities cooperating with IAFE-NRI, shipments to Asia and Africa decreased, mainly due to sanitary restrictions in sea ports and logistic

1. Domestic production of pears is lower than the needs of the internal market.

problems resulting from a limited number of cruises. The increase in demand for apples was accompanied by a decrease in the supply of these fruits. On the one hand, it resulted from lower stocks, caused by weaker crops in 2019, but on the other – from the willingness of growers to influence further increases in purchase prices. This led to a significant (about 100%) increase in the purchase prices of apples, and in some cases the need to import these fruits from other countries in order to fulfill orders of recipients on the domestic market.

The purchasing model of consumers has also changed, which had an impact on the supply chain, especially in the first phase of the pandemic. Consumers reduced the frequency of essential purchases: previously they bought supplies every 1–2 days, then every 6–7 days[2]. In the case of fruit and vegetables, it contributed to an increase in demand for species that stay fresh longer (apples, onions, potatoes, brassica), at the expense of the so-called early vegetables and less durable species (berries).

In the first phase of the pandemic, a demand shock (increased consumer purchases) and a change in the frequency of purchases caused disruptions in the supply chain, consisting of a high volatility of turnover. Retailers ordered larger quantities of fruit and vegetables, which were then partially unsold due to a decline in consumer purchases. It took several weeks for the supply chain to recover. This phenomenon is known as the "bullwhip effect".

There was also a significant increase in the purchase of fruit and vegetables via the Internet, with delivery to parcel machines or by couriers/suppliers in the contactless system. It is still a small percentage of the total turnover in the fruit and vegetable market, but some consumers have convinced themselves to buy fresh products without first seeing them (choosing).

One of the positive effects of the pandemic for the industry in question may be the development of remote sales with delivery, bypassing retailers. In the case of small agricultural producers, organizations of fruit and vegetable producers and commercial companies supplying chain stores, the development opportunities in this area are smaller than that of supermarkets and discounters, but they do exist. With proper organization and enrichment of the assortment thanks to the cooperation of producers, this may be a chance for an increase in revenues, especially in the seasons of overproduction. The marketing argument should be the shortening of the supply chain, which translates into greater freshness of products delivered to consumers. The potential should also be sought in a permanent change in the consumption habits of the society towards a varied diet, one rich in fruit and vegetables, which would translate into an increase in domestic demand. An opportunity for the

2. The information comes from research conducted by one of the leading retail chains in Poland.

sector As a result of the pandemic, people may pay more attention to the products' country of origin and consciously choose domestic fruit and vegetables thanks to the campaigns by the Ministry of Agriculture and Rural Development and social organizations.

It seems, however, that threats to the domestic fruit and vegetable sector are of greater importance. There is a possibility of a potential reduction in trade turnover in the future as a result of the global pandemic-induced trend of promoting domestic products and discouraging imports. Meanwhile, the domestic production of fruit and vegetables in recent years has been based on the import of cheaper labor and the export of products (apples, frozen fruit and vegetables, and concentrated juices).

A major threat may be the outflow of seasonal workers from Poland to other European countries in the event of liberalization of the labor market in the European Union. Wages offered in other countries (Germany, France, Italy) are higher than in Poland, which in the case of easy access to those markets may reduce the labor supply of Ukrainian citizens in Poland and increase their cost, contributing to a further reduction of the competitiveness of products exported from Poland.

The danger of a pandemic could be further disintegration of producer organizations. Large price fluctuations translate into higher profits in some seasons, which favors individualism in running a business. Fragmentation of supply further increases susceptibility to these fluctuations, which in years of good yields is detrimental to fruit and vegetable producers and producer organizations.

During the pandemic, farming conditions deteriorated. In the case of fruit and vegetables, there was a large shortage of seasonal workers. There was also greater uncertainty about doing business. The risk of lack of employees, economic crisis, illness of the producer and his family, as well as the uncertainty of the sales market in the face of the new situation, in some cases resulted in a reduction in production or a change in its structure.

The conditions for selling products have changed unfavorably – at every level of the marketing chain. The pandemic increased costs, if only because of the need to comply with sanitary requirements. Foreign shipments were also more difficult due to problems at state borders.

In the processing of fruit and vegetables, the effects of the pandemic were not so noticeable, because at the time of the outbreak, most plants were already past the peak of the production season.

In the period from the announcement of the pandemic to the second half of May, apples were almost the only fruit available on the market. In the following weeks, strawberries joined the assortment of domestic fruit, followed by other species. Strong concerns about the availability of seasonal workers to harvest the fruit, thanks to the action of the state administration and the relatively mild course of the pandemic, turned out to be less severe than expected. The pandemic had a positive impact on income. The purchase prices of apples in quality class I increased to the highest level in history (on average PLN 2.80/kg in the first week of June) and the prices of greenhouse strawberries and accelerated crops were significantly (from 50% to 100%) higher compared to the previous year. This translated into higher revenues for producers and a profit. However, it should be noted that this state of affairs was influenced not only by the pandemic, but also by other factors, mainly lower harvest (supply) of apples in 2019. They were caused by weather conditions such as spring drought, frosts and cold weather in May, which resulted in worse growing conditions and strawberry yields. The situation on the apple market remained at a similar level until the next harvest (September), while the strawberry market changed and the prices dropped along with the increase in supply. The profitability of the production of other species (gooseberries, chokeberries, currants, raspberries, cherries, etc.) was more influenced by supply factors (yields) at home and abroad and by the price level in other countries, as these species are mostly exported in the form of processed (such as frozen fruit, concentrated juices) than by the pandemic.

In the vegetable market, the situation was more diverse, not only in terms of species but also in terms of the form of sale. In general, vegetable prices did not increase to the same extent as fruit prices, as the supply of most vegetables was higher than in the corresponding period of the previous year, which blocked price increases. Diversification of obtained revenues also resulted from the form of sale. According to information from entities cooperating with IAFE-PIB, some distribution channels, such as large-scale retail chains, reported less demand due to a smaller number of customers, while discounters had greater needs. The turnover of entities that buy their supplies on wholesale markets, i.e. small grocery stores, "greengrocers" or street stalls, was also higher. Shifts in shopping preferences towards smaller retail outlets were the result of the pandemic and were mainly observed in the first weeks.

Producers of greenhouse vegetables, such as tomatoes or cucumbers, and producers of spring vegetables had fared the worst, which can only be partially associated with the effects of the pandemic and problems with selling less perishable vegetables. The reason was also the increased supply and pressure of cheaper imports of certain species of vegetables in the first weeks of the pandemic. The observed effects of the pandemic on the vegetable market as regards the level of producers' income have not been very severe so far.

Summary

In the first weeks of the pandemic, there was a shock to the fruit and vegetable market, which led to disruptions, especially in the supply chain. However, the impact on producers was less severe than expected. It is difficult to say what the situation will look like in the fall, and it will depend on the further development of the pandemic.

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