

Wojtyra Bożena ©
Warsaw Agricultural University, Poland

FACTORS INFLUENCING FLUCTUATIONS OF PORK LIVESTOCK PRODUCTION IN POLISH

Abstract: *The objective of this research was presentation of factors influencing pork production output in Poland. Data from GUS, IERiGŻ was used in this analysis. Main factors effecting pork production are market buy prices of pork and prices of the feed.*

Key words: *pork livestock production, purchase prices, prices of grain*

Introduction

All of the pork producers know, that pork livestock production undergo cyclic fluctuations. First there is temporary increase of supply, causing the decrease of purchase prices, than decrease of stock causes the prices to go up. Those fluctuations are brought about by different factors and in spite of intervention purchase programs implemented by the Agricultural Market Agency, it is not possible to eliminate them (Wojtyra, 2002).

According to Szymańska (2009), production fluctuations in Poland are caused by large dispersion of pig farming. Small farms quickly react to changes in pork prices. With low prices of grain, which is the base of pork feed, interest in pig farming increases, and it especially applies to small farms. In addition, quick increase of stock of that kind, enables short production cycle. When grain prices are high and buy prices of pork are low, farms keeping low livestock back away from pig production in short period of time (Szymańska, 2006).

Material and methods

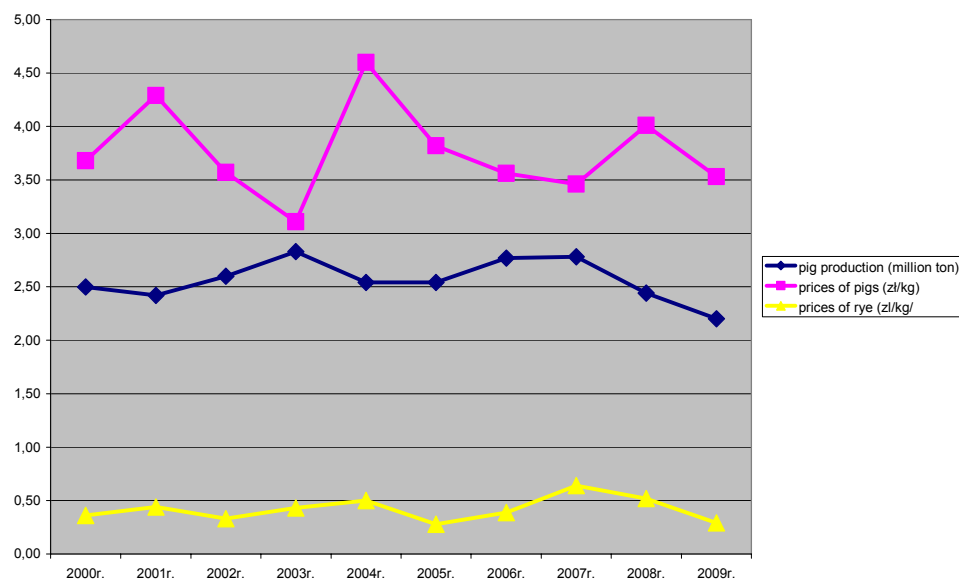
The objective of this research was determining the factors influencing the scale of pig livestock production. Detailed analysis was conducted of buy prices of pork, prices of grain and prices of piglets in the years of 1990-2009, In the analysis, data from GUS, IERiGŻ and subject literature study were used.

Results of researches

There were many factors influencing production of pork livestock in the years of 1990-2009. As the main factors, pork producers name profitability of pig production, affected by buy prices of pork, and prices of feed, especially the grain.

Chart 1 illustrates the pig production and the connection with the fluctuation of live pigs and rye prices. The decrease in pig production in the years of 2003 and 2006-2007 was the result of the decreasing stock and lower production profitability. The improvement in economical conditions for the pig production occurred in 2003 and in second half of 2008. The pig buy prices went up and the prices of grain went down.

Chart 1. Production and prices of pigs and prices of rye for the years of 2000-2009



Due to the high prices of grain and low buy prices of pigs in the years of 2006-2007, raising pigs was extremely unprofitable. Unfavorable economical conditions of pig production, that begun in fall of 2006, forced the producers to decrease the stock. Beginning of 2008 brought very bad economical conditions for the pig producers again. Farmers were reducing the pig stock. As a result, in July, the number of pigs was lower, than after the deep collapse in the analogical period in 1983. At the end of March, 2008 in comparison to the similar period in the previous year, the pig stock decreased by 2,3 million heads down to approximately 15.7 million heads, what meant the lowest level since 1983 (Bureau of Analysis and prognosis of Agricultural Market Agency, 2010).

Second half of 2008 brought the reverse in prices and slow improvement of the profitability of the pig farming was observed. Due to the low stocks availability, pig prices reached the record levels at the end of 2008 and the profitability increased. As a result, the increase of pig population was observed in the following time. The results of pig population research, conducted in July of 2008, showed the continuance of the negative downward trend in pigs breeding, and the results of the research conducted at the end of November indicated further deepening of the declining phase of the swine cycle.

At the end of November of 2008 pig population was 14,2 million heads, lower by 3,4 million (19,2%) in comparison to the previous year.

Usually, the reduction in population applies to each weight-use group. The sow population, which is a determining factor of the production focus and defines reproductive capabilities of the herd, decreased by 1278800 heads (19,4%), where the pregnant sow population decreased by 822000 heads (17,6%), in comparison with 2007. There was 22,5% less piglets, 15,3% less weaned pigs and 19% less porkers (Bureau of Analysis and prognosis of Agricultural Market Agency, 2010).

According to Cholewa and associates (2009), production of pig livestock was unprofitable in the years of 2005-2008, due to production costs of 1 kg of pork surpassing its selling price (from 5% in 2005 to 24% in 2007 and 3% in 2009).

As a result of the decline in pig production, buy prices started to increase. The highest prices of livestock was observed in three years: 1997 (4,20 zł/kg), 2001 (4,50 zł/kg) and 2004 (4,90 zł/kg) (Małkowski, Rycombel; 2007).

Within those years the production and the supply of the pork livestock were the lowest. Prices of piglets changed accordingly to the buy price of livestock. The highest price of a 1 piglet was reached in 2004 – on average 130 zł, and the lowest, in 1996 – 60 zł. Increase of pig production causes slow decrease of buy prices. The lowest prices were observed in 2003 (3,11 zł/kg) and in 2007 (3,46 zł/kg).

In Poland, buy prices of livestock are related to prices of rye. According to Seremak Bulge (2009), at this moment that price relation is like 1:8. At this level we can observe an increased interest in pig farming. While observing the fluctuations of grain prices within the researched period, it can be determined, that those prices initiate fluctuations of livestock output and in the end – production.

In the second half of 2008, as a result of increasing buy prices of pigs and prices of grain on decline, relation between the price of pigs and price of grain, determining the profitability of pig production, improved slowly, but systematically. Relation of the average buy price of 1 kg of pork to 1 kg of rye was 8,6 in comparison to 4,7 a year before. For the first time in 2 years it went over the bottom margin of profitability (where 1 kg of pork is equal to 8 kg of rye) and sustained the level favorable to the pig producers. Within the period from Sep. 2006 to Nov. 2008, when the relation between the prices of pork-rye was narrower than the marginal, pig producers were not earning profits but they were gaining losses (Bureau of Analysis and prognosis of Agricultural Market Agency, 2010).

Slow down of a decline of the pig population in 2009 was caused by the high prices of pork and low prices of grain. Relation of buy prices of pigs to the market price of rye and barley in 2008 on average were like 10,2 : 1 and 8,8 : 1, in comparison to 6,0:1 and 5,4:1 in 2008 (Jabłonska-Urbaniak, 2009).

In 2009, due to the low population of pigs, pig production decreased significantly. It's estimated, that it reached the level of 2200000 tons (live pigs weight), which is less by 11%, than the year before and less by 22% than in the record year of 2003 (2830000 tons) (Chart 1).

After Poland joined the EU, there was a new factor influencing the prices of pigs and that was the price level in the Union. For example, in 2009 strong decrease was observed in the buy prices of pigs in the EU. Average reference price in the EU went down (jointly) by 13%, from 1,53 €/kg to 1,34 €/kg (post-slaughter weight, class E). The biggest decline, by 24%, was observed in Spain and Portugal, followed by the group of large producers : Poland, Holland, France and Germany (decrease by 16-18%). Situation of pork market is mainly caused by the low demand, internal as well as external, when the supply is still pretty low.

Conclusions

1. Within the years of 1990-2009 the fluctuations in the supply of pig livestock were big and were caused by buy prices and production cost.
2. The main factor influencing the size of pork livestock in Poland was the prices of grain, especially rye.
3. Additional factor influencing the pig prices in Poland is the price structuring in the European Union.

Reference

- Biuro Analiz i prognozowania ARR, 2010: Prognoza cen rynkowych podstawowych produktów rolniczych, Biuletyn Informacyjny ARR, nr 4: 48-64.
- Cholewa M., Dziewulski M., Skarżyńska A., 2009: Koszty i dochody wybranych produktów rolnych. Praca zbiorowa pod kierunkiem Zegara J. w zbiorze: Sytuacja ekonomiczna polskiego rolnictwa po akcesji do Unii Europejskiej. IERiGŻ – PIB
- Jabłońska- Urbaniak T., 2009: Rolnictwo i gospodarka żywnościowa w Polsce., Ministerstwo Rolnictwa i Rozwoju Wsi
- Małkowski J., Rycombel D., 2007: Aktualny i przewidywany stan rynku wieprzowiny. Rynek rolny. IERiGŻ-PIB, ARR, MRIRW
- Rocznik Statystyczny Rolnictwa, 2009, GUS
- Seremak Bulge J., 2009: Wahania koniunkturalne na rynku trzody chlewnej. InfoPOLSUS
- Szymańska E., 2009: Opłacalność produkcji żywca wieprzowego w Polsce po integracji z UE. Prob. Rol. 133-143
- Szymańska E., 2006: Wpływ rozszerzenia UE na rynek wieprzowiny w Polsce. Problemy Rolnictwa Światowego. Rolnictwo i gospodarka żywnościowa Polski w ramach Unii Europejskiej t. XV.
- Wojtyra B., 2002: Działania interwencyjne Agencji Rynku Rolnego na rynku mięsa wieprzowego w Polsce. Międzyn. Konf. Czeskie Budziejowice, 140
- Ziółkowska E. i wsp., 2009: Rolnictwo w 2008r. GUS

Summary

The biggest influence on scale of pork livestock production has on price for live pigs and costs of feeding stuffs particularly cereals. In Poland, buy prices of livestock are related to prices of rye. This moment that price relation is like 1:8. At this level we can observe an increased interest in pig farming. After Poland joined the EU, there was a new factor influencing the prices of pigs and that was the price level in the Union.