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THE ECONOMIC AND SOCIAL CONDITIONS OF THE DEVELOPMENT OF THE POLISH FOOD ECONOMY FOLLOWING POLAND`S ACCESSION TO THE EUROPEAN UNION

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1. INTRODUCTION

Contrary to appearances, the agricultural policy of the European Economic Community, and of the European Union afterwards, has had an effect on Polish agricultural markets not only since Poland's joining the EU, or from the inclusion of our country in the pre-accession aid scheme, but over the entire period of trade relations with the European Communities. Throughout the period, CAP measures such as import restrictions, customs duties, levies or export refunds have affected the Polish agriculture, to a lesser or greater extent.

Under the centrally planned economy in Poland, the impact of the CAP on Polish agri-food markets was rather minor since Poland only had insignificant surpluses of few food products and agricultural exports to third countries were subject to virtually no limitations imposed by the EU.

After 1989, the situation began to change rapidly. The first step was Poland's transition to the free-market economy, followed by efforts aimed at joining the EU and the resulting adjustments to the EU requirements, and finally, Poland's accession to the European Community.

On accession, a number of CAP instruments or EU-like solutions were already effective in Poland. Therefore, the analysis of the CAP impact on Polish agri-food markets cannot be limited to the period of the EU membership and should include, at least as the reference period, the years immediately preceding accession.

One year of the EU membership is insufficient to fully assess the effect of the CAP on Polish markets, especially that the mere opening up of the EU markets was crucial in the first year. Under such circumstances, particular CAP instruments have performed markedly worse than they are expected to in the future when the "opening-up effect" will have faded.

The analysis, the first results of which are presented in this report, covers the main agri-food markets in Poland, i.e. the cereals, rape and feedingstuffs, sugar and sugar confectionery, milk and milk products, meat and preparations of meat, fruit and vegetables, starch, beverages and other highly processed food products markets.

The examination is based on systematic monitoring of the EU common agricultural policy on the one hand, and of the situation in Polish agricultural markets on the other hand. The condition of specific markets is characterised by prices (e.g. buying-in, marketplace, wholesale or foreign trade prices, depending on the product) and the volume of turnover.

The essential methodological problem was the manner of identifying the impact of the CAP on agricultural markets. Due to difficulties with the quantifi-

cation of particular instruments of the common agricultural policy, it was impossible to accurately **measure** this effect by means of statistical methods. Therefore, the necessary limitation was the impact **assessment** of the common agricultural policy on agricultural markets, naturally supported by statistical analyses to the largest extent possible.

Measuring the impact of the CAP on Polish agricultural markets can only be attempted when this policy has been implemented for several years, on availability of longer time series of data, which should allow to quantify this influence by means of more sophisticated statistical methods.

The presented report consists of two main parts. The first part reviews the situation in the main agricultural markets in Poland from May 2004 to April 2005, in comparison with the situation in the previous years. The second part attempts to assess the impact of the common agricultural policy on Polish agricultural markets. The analysis in both parts is based on the figures presented in the statistical annex.

2. THE CAP MEASURES ON SPECIFIC MARKETS

2.1. The market in cereals, rape and feedingstuffs[1]

Cereals account for 70% of arable land and generate 23% of gross receipts of the Polish agriculture. Across the European Union, this sector absorbs some 40% of the agricultural budget.

Apart from cereals, the rules and regulations in the cereals sector also concern oil seeds and protein crops. They are applicable to both unprocessed (wheat, including durum wheat, rye, barley, maize) and processed products (wheat flour, rye flour, cereal groats and meals, starch and glucose).

Since 1 May 2004, Poland has been subject to the EU market regulations, the so-called Common Market Organisations (CMOs). In the cereals, feedingstuffs and oil seeds markets, the CMO is applied by means of market intervention, direct income support, commercial policy, as well as standards on production and the use of feedingstuffs.

Intervention buying-in is aimed at withdrawing excess quantities of cereals from the market and thus maintaining market prices. It covers wheat, maize and barley. Across the EU, a single intervention price applies, currently at EUR

[1] Prepared on the basis of W. Łopaciuk: *Ocena wpływu WPR na rynek zbóż, pasz i rzepaku*, a study within the framework of the research task 4002, typescript, Warsaw 2005.

101.31 per tonne; it is increased by EUR 0.46 per tonne on a monthly basis in the following months of the intervention period, which is intended to compensate for the storage costs. The period of intervention is from 1 November to 31 May of the following year.

Methods applied to determine the quality of products eligible for buying-in, as well as deductions and premiums depending on seed quality are the same across the Community. There are two levels of quality requirements in force – minimum and standard. The minimum quantity of cereals delivered is 80 tonnes, and payment is made between the 30th and the 35th day following the date of takeover. Both producers and traders are allowed to offer cereals for intervention buying-in. Intervention centres are obliged to purchase all offered lots of cereals meeting the minimum quality requirements. The intervention buying-in excludes cereals other than the aforementioned COP products[2], also rye and rape, important to Polish producers.

The **direct payments** scheme applicable in Poland, a form of income support for arable crop producers, differs from the EU-wide system in the amounts of payments, sources of financing and methods of distribution among farms (the simplified scheme).

Over the first three years of membership, farmers receive single area payments (SAP) from the EU budget. In the following years, the rates of payments per tonne of the reference crop are 25%, 30% and 35% of the full amount of these benefits in the EU-15. Moreover, farmers receive supplementary payments increasing the SAP rates by 30%. The funds for this purpose come from the national budget and are also shifted from the second pillar. All agricultural land maintained in good condition is eligible for payments and, in contrast to the EU-15 countries, there is no set-aside requirement.

In 2004, the SAP rate was PLN 210.53 per hectare of arable land. As regards crops covered by the regulation of the cereals market, the supplementary payment amounted to PLN 292.78 per ha, therefore producers of cereals were entitled to a total of PLN 503.31 per ha.

After Poland joined the EU and Polish farmers were covered by the **common commercial policy**, there has been an increase in the level of protection of the market in cereals. In this market, imports or exports, even of small lots of products, are subject to a licence[3].

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[2] Cereals, oil seeds and protein grain crops.

[3] This requirement applies to imports of more than 5 tonnes of cereals or 1 tonne of other products, any quantity of products imported under preferential conditions, as well as exports of more than 5 tonnes of cereals or 0.5 tonnes of other products.

In the sector of oil seeds, including rape, there is no obligation to obtain a licence and the level of protection of this market is considerably lover. Exports of cereals and oil seeds may be entitled to export refunds.

As regards cereals, numerous import regulations are primarily aimed at protecting the EU market against cheap imports from third countries. Under the system of the EU market protection, the above-mentioned licences are accompanied by tariffied customs duties[4]. Specified cases justify the use of special measures, such as special safeguard clause (SSG), and additional customs duties.

The markets in oil seeds and cakes are subject to a relatively low level of protection since tariffs on their imports are set below 10%, and higher customs duties, even exceeding 40%, are only imposed on processed products such as margarines.

The main way to dispose of excess quantities of cereals in the EU is **export**. In the past, significantly higher prices for cereals in the EU Member States than in world markets rendered export impossible without various forms of subsidising. Under the provisions of the Uruguay Round of GATT (WTO), both the volume of subsidised exports of cereals and total export subsidies were limited.

It is possible to export cereals from the EU in various ways:

- directly from the EU market to third countries with the use of export refunds, at rates established by the Commission through open calls for tenders on a weekly basis,
- directly from the EU intervention stocks to third countries within intervention export sales,
- directly from the EU market to third countries with the use of fixed export refunds periodically established by the Commission,
- in the form of food aid.

The importance of export subsidies has been declining in recent years as cereals from the EU Member States have been increasingly competitive in world markets, owing to diminishing or even vanishing price differences. At the same time, there is no need for export refunds on oil seeds, cakes and vegetable oils, although the WTO rules allow such a solution.

Since Poland's accession to the European Union, Polish exporters of cereals have had the possibility to benefit from subsidies.

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[4] The level of customs duties is consistent with provisions of the Uruguay Round of GATT (WTO), and in some cases also with the Blair House Agreement. For the method to calculate customs duties see W. Łopaciuk: *Ocena wpływu*…, op. cit., pp. 3-4.

As regards the **sowing structure of cereal crops** in Poland, recent years have witnessed apparent changes resulting from relatively low levels of market-oriented production, specific to our country. Feed cereals (triticale, barley oats), marketed only to a minor extent and mostly intended for on-farm consumption, account for a considerable share. This is primarily due to the existing structure of the Polish agriculture.

A relatively new development has been the increasing cropland of grain maize (mainly at the expense of oats and rye), which should be attributed to the growing popularity of the cultivation technology, harvesting and the use of maize for animal feed.

It is interesting to note the side effects of the system of maintaining prices for cereals on their sowing structure. The fact that intervention buying-in practically covers only wheat and maize and direct payments exclusively concern prices for cereals bought in under the intervention scheme has resulted in an increasing share of wheat in the crop area, while the share of rye remains high.

2.2. The market in sugar[5]

The common organisation of the market in sugar, in force in the European Union since 1968, covered the new EU Member States, also Poland, in the 2004/05 marketing year. This organisation includes the following regulatory instruments:

1) guaranteed prices – the intervention price for sugar and minimum prices for sugar beet,
2) limits (quotas) on the production of sugar (and indirectly – on the production of sugar beet) covered by the guaranteed prices,
3) export refunds on sugar under quota and the obligation to export, without a refund, sugar produced in excess of this quota,
4) refunds on sugar used in the chemical industry, increasing internal demand,
5) instruments of the internal market protection – high rates of duty and tariff quotas on sugar imported on a duty-free basis or at reduced rates of duty,
6) limits (quotas) on the production of sugar substitutes – isoglucose and inulin syrup,
7) intervention buying-in of excess quantities of sugar.

[5] Prepared on the basis of Ł. Chudoba: *Wpływ WPR na rynek cukru*, a study within the framework of the research task 4002, typescript, Warsaw 2005.

Guaranteed prices for sugar concern the A quota, i.e. the quantity of sugar intended for sale on the EU internal market, and the B quota, i.e. the quantity of sugar for export with a refund or for the additional supply to the internal market. These quotas are allocated between the Member States.

Poland was granted the A quota of 1,580,000 tonnes of white sugar and the B quota of 91,900 tonnes. The intervention price for sugar was EUR 631.9 per tonne for both quotas. The minimum buying-in price for A beet was EUR 46.72 per tonne, and for B beet – EUR 32.42 per tonne.

Sugar levies paid by sugar producers amounted to 2% of the intervention price for A and B sugar, and additionally 37.5% of the intervention price for B sugar. The aim of these levies is to finance export refunds on B sugar and they are established as the difference between the intervention price on the EU internal market and the average world market price for sugar.

The conventional rate of duty on imports of white sugar, at EUR 419 per tonne, combined with additional import duties applicable under the WTO provisions minimise sugar imports outside preferential quotas.

In recent years sugar supply, i.e. initial stocks, current production, imports and an increase in ARR[6] reserves, has been significantly exceeding demand, i.e. domestic consumption, exports and a possible decline in ARR reserves. Over the last three marketing years, this gap was nearly 800,000 tonnes.

Demand for sugar depends on its private and public consumption, as well as on its use in the food industry and other industries. However, insofar as industry displays an apparent tendency to increase production of products containing sugar (mainly chocolate, sweets and preparations of fruit), the growth in demand of households, recorded in 2004, was probably of incidental nature and related to increased purchases of sugar prior to Poland's accession to the European Union.

Following the EU accession, there was a rise in sugar exports to the EU Member States (from some 106,000 tonnes in 2003 to approximately 209,000 tonnes in 2004). The share of exports to CIS countries and to non-EU Central and Eastern European countries showed a slight decline. At the same time, there was a growth in exports of products containing sugar and although imports of sugar in such goods also went up, the increase of exports was approximately three times as high as in the case of imports (in sugar terms).

Poland's accession to the European Union brought about a major improvement in profitability of growing sugar beet. In 2004, the average buying-in

[6] Agencja Rynku Rolnego – Agricultural Market Agency.

price for A, B and C sugar beet (with contract prices applicable in the last category) was by over 50% higher than in the previous year.

The period immediately preceding Poland's accession to the EU witnessed a very marked rise in selling prices for sugar, i.e. prices paid to producers in the domestic market. The increase occurred primarily in the second quarter of 2004 and led to the situation that in May and June of that year prices showed more than twofold growth compared to the level recorded in December of the previous year[7]. There was no economic reason; the underlying causes were, on the one hand, the psychosis of buying up sugar and accumulating stocks by households, and on the other hand – increased purchases on the part of sugar processors and traders with a view to accumulate stocks at prices which were lower than intervention prices in the EU markets. It resulted from disastrous forecasts of skyrocketing increases in prices after the EU accession, spread by some mass media and Eurosceptical political forces, as well as expectations of the Sejm's rejection of the so-called transitional provisions, prepared by the Commission and aimed at preventing the accumulation of stocks of white sugar and sugar contained in preparations, exceeding the "normal" level, by producers and traders. However, the Sejm adopted the respective provisions and from July 2004 prices began to rapidly decline. Although they have not as yet reached, for example, the level from the second half of 2003, the downward trend has been continuing, which is primarily attributable to existing stocks of sugar, including those made by rather many households. On the whole, however, high prices in the domestic market and profitable exports brought about a major improvement in the economic situation and financial standing of the sugar industry in 2004.

As regards organisational aspects of the performance of regulatory instruments in the market in sugar, they fall within the competence of ARR. It collects sugar levies, handles intervention buying-in and the sale of sugar, pays refunds on sugar used in the chemical industry and deals with foreign trade in sugar.

2.3. The market in milk and milk products[8]

The years immediately preceding accession witnessed rapid adjustments of the Polish dairy industry to the EU standards – the implementation of West European sanitary and veterinary standards, increasing concentration of rearing high-yield dairy cows in barns with equipment for mechanical milking and cool-

[7] See Ł. Chudoba: *Wpływ WPR*…, op. cit., p. 5.

[8] Prepared on the basis of Z. Smoleński: *Ocena wpływu WPR na rynek mleka i jego przetworów*, a study within the framework of the research task 4002, typescript, Warsaw 2005.

ing milk. At the same time, however, there was a number of agricultural holdings, mostly small farms, with one or two dairy cows for subsistence production and limited sale of milk or milk products in the neighbourhood or in nearby villages and towns.

As a consequence of the above-mentioned processes, the number of cows in Poland has been declining rather sharply. According to censuses conducted in June, there were approximately 3.1 million cows in 2000, 2.9 million in 2002, 2.8 million in 2004 and 2005. At the same time, milk yield per cow has been growing from nearly 3,700 litres annually in 2000 to some 4,100 litres in 2004. Thus, milk production is stabilising at approximately 11,500 billion litres.

Among regulatory instruments in the market in milk and milk products, quotas on market-oriented milk production, introduced on accession, are undoubtedly the most important in practice. Financial aid for the consumption of milk and milk products in schools, aid for manufacturers of pastry products processing butter and cream, aid for the purchase of butter by non-profit institutions and organisations, as well as storage aid for cheese are definitely less significant.

Export refunds have a certain effect on exports of milk powder (whole and skimmed) since to the end of 2004 these were at slightly more than PLN 23.4 million and concerned some 13,000 tonnes of products. Over the last eight months of 2004, export refunds on cheese, butter and butteroil totalled some PLN 8.4 million.

Following Poland's accession to the European Union, the share of milk sold in the premium (*ekstra*) class has stabilised at the level of 88-90%. The remaining share is accounted for by 1st class milk, disposed of by dairies, which were granted a transitional period before bringing production into compliance with the EU standards and are entitled to sell their products exclusively in the domestic market and at lower prices. However, direct sales of milk, both covered by and excluded from the quota scheme, have been continuing. There has been an ongoing process of diminishing subsistence production of milk products by the rural population.

Prior to the EU accession, buying-in prices for milk declined from PLN 78.40 per 100 litres in 2000 and 2001 to PLN 71.80 in 2002 and PLN 71.50 in 2003. In the accession year, however, prices showed a marked increase from PLN 79.50 in January to PLN 81.00 in April, PLN 86.10 in July, PLN 89.00 in September and PLN 98.30 per 100 litres in December 2004. In 2005, on the other hand, a downward trend in buying-in prices for milk has been observed (to

PLN 91.10 in May and PLN 89.00 in August), but the price level still remains markedly higher than in the pre-accession period[9].

The opening up of the European Union market brought about essential changes in milk production, processing and exporting. For example, there has been a rise in the manufacture of rennet cheese, butter and milk powder. Virtually non-existent prior to accession, exports of milk for further processing (mostly to Germany) showed a vigorous increase and reached more than 8,000 tonnes in 2004. Although they only account for 0.04% of production, those exports have significant growth potential.

In 2004, exports of butter to the EU-15 countries went up in comparison with the previous year by 135%, exports of cheese by 144%, and exports of milk powder showed more than threefold increase. In contrast, there has been a decline in the consumption of milk and butter in Poland, to some extent resulting from the discontinuation of rearing dairy cows by small and medium-sized farms, which cannot afford purchasing such quantities of milk products as they had consumed before.

2.4. The market in meat[10]

Prior to accession, intervention in the Polish market in meat only concerned pork, mostly intended for export to CIS countries. From May 2004, that kind of intervention had to be discontinued and other CAP instruments could become effective.

Storage aid for pigmeat, beef and sheepmeat may be granted on the basis of the assessment of the demand and supply situation in Member States[11]. Although most of the time after Poland's accession to the European Union reference prices for pork were lower than the basic price, so theoretically it was possible to obtain storage aid, in practice such aid was not applied, as in other Member States. This resulted from the cyclical nature of supply fluctuations, as well as facilitated sales of excess quantities of pigmeat following the opening up of the EU market. Similarly, Polish farmers did not apply for storage aid for beef, because disposing of excess quantities in the EU market was relatively easy.

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[9] Prior to accession, low prices for milk allowed dairies to speed up modernisation and adjustment to the EU requirements. At present, these requirements are met by some 80% of the processing capacity of the dairy industry.

[10] Prepared on the basis of D. Rycombel: *Ocena wpływu WPR na rynek mięsa*, a study within the framework of the research task 4002, typescript, Warsaw 2005.

[11] For a more detailed description of the aid scheme see: D. Rycombel: *Ocena wpływu*…, ibid., p. 3.

Export refunds on meat, preparations of meat and animals for slaughter concern sales of these products to the so-called third countries and are aimed at maintaining balanced supply of and demand for meat in the EU market. In the first year of Poland's membership, however, the relevance of this CAP instrument to export support was relatively limited, which stemmed from increased sales opportunities in the EU market, the resulting rise in prices in the domestic market, the strengthening of the zloty against the euro and, to some extent, the product scope of refunds. In the period in question, exports with a refund covered relatively small quantities of preparations of pork and chicks. Export refunds on beef, which covered some 56% of sales, were slightly more relevant to maintaining the level of exports to third countries' markets.

In part, **direct payments** can be treated as a CAP measure related to the market in meat and preparations of meat. The so-called supplementary area payments concern, *inter alia*, growing fodder crops, and these payments also support the rearing of beef cattle and sheep.

Over the next few years, the direct payment scheme will be evolving not only in the new Member States, but in the EU-15 countries as well. In connection with the diminishing degree of self-sufficiency in beef production, which has been continuing for some time, and lack of self-sufficiency in sheepmeat production, persisting for years, it is possible to grant certain categories of beef and sheep premiums coupled with production. It is worth noting that this violates the CAP rule, applicable for years, that no payments should encourage growth in production. However, rules are rather flexibly adjusted to current needs.

Poland's accession to the European Union implied the adoption of the EU Common Customs Tariff, which resulted in a growing level of market protection against imports from third countries. At the same time, the adoption of the rules of supporting exports to these countries is aimed at increasing the competitiveness of products manufactured in the EU Member States in the world market.

For Poland, integration with the EU involves the possibility of increased sales of meat and preparations of meat in the EU internal market and, importantly, the possibility to sell at higher prices. Foreign exchange receipts from exports[12] of beef and pork went up from approximately EUR 278 million in 2002 to EUR 393 million in 2003 and EUR 529 million in 2004, and revenues from sales of live poultry, poultrymeat and preparations, from EUR 58 million

[12] Under the new circumstances, *exports* should be reserved exclusively for describing sales in the so-called third countries' markets, but at times we use this term in the traditional meaning, i.e. to define foreign sales.

to EUR 108 million and EUR 129 million respectively. The share of the EU-25 in receipts from exports of the above-mentioned types of meat rose from an average of 47% in 2002-2003 to 67% in 2004. In imports from the EU countries, which showed a more robust increase, more than twofold in the period in question, this share grew from 80% to 90%.

The adoption of the rules regulating the market in pigmeat and the implementation of the CAP instruments brought about essential changes in the volume and the value of trade. Exports of pork, offal, preparations of pork and pig fats declined from 254,000 tonnes in 2003 to 207,000 tonnes in 2004 (of which exports of pigmeat from 201,000 tonnes to 146,000 tonnes). At the same time, however, foreign exchange receipts from export sales went up from EUR 226 million to EUR 259 million respectively. Evidently, average unit prices for all products increased by more than 40%.

Exporters of live cattle and beef benefited from the opening up of markets to a much greater extent than in the case of pigmeat. It resulted from insufficient production of this kind of meat in the EU countries and substantial differences in beef prices between Poland and, especially, the EU-15, encouraging sales.

Exports of cattle and calves grew from 560,000 in 2003 to 918,000 numbers in 2004 (of which sales to the EU countries from 396,000 to 793,000), and exports of beef from 44,000 tonnes in 2003 to 67,000 tonnes in 2004 (of which to the EU from 20,000 tonnes to 51,000 tonnes). Foreign exchange receipts from these sales went up from EUR 166 million in 2003 to EUR 280 million in 2004. Sales of poultry to the EU Member States grew at a slightly lower rate since the epidemic of bird flu in the EU-15 countries increased export possibilities as early as 2003. In 2004, the restoration of poultry production in the "old" EU Member States and a rise in prices in the Polish market restrained growth in exports to these countries. They only went up to 78,000 tonnes in 2004, compared to 65,000 tonnes in 2003 and 36,000 tonnes in 2002.

The facilitation of exports to the EU markets determined a significant rise in selling prices. This was particularly evident in comparison with exports to CIS countries (primarily from ARR stocks prior to accession). Moreover, veterinary restrictions introduced by Russia had some effect on foreign sales. In 2004, exports of pork to Russia declined nearly by two thirds compared to the previous year, and the Russian market, previously vital to exports of pork and poultry, clearly diminished in importance[13].

[13] However, one should not jump to conclusions. For some time, the Russian market will continue to provide opportunities to dispose of excess quantities of products, which will be increasingly difficult to sell in the EU market.

The increase in sales to the EU countries was accompanied by a rise in purchases, encouraged by falling import prices with a simultaneous growth in prices in the domestic market. Profitability of transactions was also improved due to the strengthening of the zloty. For example, the increase in imports of pork from 8,000 tonnes from January to April 2004 to 91,000 tonnes from May to December of that year might seem impressive. Nevertheless, Poland remained and consolidated its position as a net exporter.

The full opening up of the EU markets contributed to a rise in domestic buying-in prices for beef and poultry, and the cyclical nature of pig farming had an additional effect of boosting prices for pork. Therefore, in the first half of 2004 buying-in prices for beef and pork increased by more than 50%, and buying-in prices for poultry by 20%. In the second half of 2004, buying-in prices for poultry and pork declined since intervention was no longer possible. Prices for beef, on the other hand, remained at the previous level. Thus, price relations changed. Beef became more expensive than pork or poultry, which was typical of the European Union countries for a long time, but very new in Poland. Insofar as in the first quarter of 2004 1 kg of live cattle was equivalent to 0.87-0.90 kg of live poultry, in the first quarter of 2005 this ratio increased to 1.26-1.29. As regards buying-in prices for live pigs, these relations went up from 0.74-0.84 to 0.99-1.05 respectively.

The growth in buying-in prices for animals for slaughter brought about a slight decline in meat consumption, with the exception of poultrymeat. In 2004, pork consumption fell by some 5%, and beef consumption nearly by 9% in comparison with the previous year. In contrast, poultrymeat consumption grew by 12%. Therefore, total consumption per capita remained virtually unchanged, the pattern of meat consumption became slightly more similar to one prevailing in West European countries.

2.5. The market in fruit and vegetables[14]

The organisation of the market in fresh fruit and vegetables is very liberal in comparison with other EU markets. There are no direct payments, intervention prices or production quotas. To a considerable extent, this market is arranged by producer organisations. However, processors of fruit and vegetables need to comply, as other food producers, with food safety and hygiene standards, as well as with commercial quality requirements for agri-food products

[14] Prepared on the basis of J. Mierwiński, T. Smoleński: *Ocena wpływu WPR na rynek owoców i warzyw*, a study within the framework of the research task 4002, typescript, Warsaw 2005.

(the HACCP system, product labelling, transport rules and environmental protection).

The organisations of producers of fruit and vegetables, the main beneficiaries of the EU funds, must be officially recognised by respective authorities in Member States. In 2004, the EU expenditures in the horticultural sector supporting operational funds (OF) of producer organisations amounted to EUR 405 million, i.e. some 70% of total expenditures on support for this sector, whereas, for example, subsidies for the withdrawal of products from the market were merely EUR 50 million.

In terms of production of fruit and vegetables, Poland ranks 4th or 5th in the enlarged EU, but in terms of producer organisations – nearly ranks last. In Poland, the share of production sold by all registered producer groups and organisations is as little as some 2.5%, and combined with the share of entities which have only applied for pre-recognition or recognition – up to 3.5%. In the EU-15, producer groups and organisations sell some 40% of fresh horticultural products[15].

The intervention mechanisms in the market in fruit and vegetables include compensations for the withdrawal of products from the market. These products must meet certain quality criteria and quantitative limits. Such measures may only be benefited from by recognised producer groups and intervention may cover only specified products (in Poland, these include apples and cauliflowers). In the first year following accession, however, Polish producer organisations did not apply for such compensations.

In the EU countries, common quality requirements were introduced for 16 types of fruit and 21 types of vegetables. There are three quality classes (premium, I and II). These requirements are applicable to all phases of market turnover, from producers to retailers, and do not apply only to on-farm sales of products directly to consumers and in the case of products intended for processing.

Export refunds in the market in fruit and vegetables are aimed, as in the case of several other markets, at compensating for the differences between the EU price and world prices. As regards Poland, this mechanism is only of some relevance to exports of apples intended for consumption to markets of CIS countries and the Balkan countries. At the same time, refunds paid on exports of tomatoes to third countries' markets are marginal.

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[15] According to ARiMR, in mid-2005 there were 39 producer organisations in the Polish market, of which 9 were recognised and 30 pre-recognised organisations. They had a total of nearly 2,000 member producers.

Mechanisms for narrowing price gaps (alignment of prices) between the EU and world markets, of similar nature, were introduced for certain preparations of fruit and vegetables. In the case of Poland, this exclusively concerns deliveries of tomatoes for processing. Poland was granted a limit of 195,000 tonnes, which is slightly more than 2% of the total limit for the EU-25 countries, among which Italy obtained nearly 50% of the limit, followed by Spain, Greece and Portugal with shares of 12-14%. As regards Poland's limit, it was only utilised in some three fourths, due to the deterioration of tomato crops in 2004. Subsidies are estimated to have increased prices paid to producers by approximately 20%, which contributed to arresting the downward trend in the cropland of field tomatoes.

Presumably, part of financial aid for producers paid by their organisations was taken over by processors. For the time being, producer groups and organisations proved too weak to counteract this situation, although the market in tomatoes for processing ranks among the best organised markets in Poland, and the share of buying-in operations by producer groups and organisations exceeds 70% in this market.

2.6. The market in potato starch[16]

Poland's accession to the European Union has induced no essential changes in the market in potato starch, since necessary legal regulations, as part of adjustment of the Polish legislation to the EU requirements, were introduced in Poland as early as 2001. However, there was a fall in the production of potato starch, resulting from the fact that the production quota granted to Poland, of less than 145,000 tonnes, was by 20,000-30,000 tonnes smaller than the production level in the previous years.

The common agricultural policy comprises the following instruments in the market in potato starch:

- aid for producers of potato starch – the so-called production premiums,
- payments to starch potato farmers,
- subsidies for the production of starch intended for non-food use,
- export refunds on potato starch.

Production premiums are granted to processors provided that they pay farmers at least the minimum price (also determined by the European Commis-

[16] Prepared on the basis of W. Dzwonkowski: *Ocena wpływu Wspólnej Polityki Rolnej na rynek skrobi ziemniaczanej*, a study within the framework of the research task 4002, typescript, Warsaw 2005.

sion) for starch potatoes delivered. In the 2004/05 season, both production premiums and minimum prices were slightly higher than those paid in the previous season.

Supplementary payments to starch potato farmers depend on the starch content of the potatoes. In the 2004/05 marketing year, those payments were more than 2.5-fold higher than in the 2003/04 season.

Export refunds on potato starch play the same role as export refunds applicable in markets in some other products, i.e. compensate for the difference between the EU prices and world market prices. Thus far, subsidies for the production of starch intended for non-food use are only of marginal importance in Poland.

Poland's accession to the EU involved the elimination of any restrictions on trade with other Member States, and at the same time reduced the level of protection of the Polish market against the inflow of starch from third countries. The latter factor was of little consequence since prior to accession a vast majority of Polish imports of potato starch was from the EU-15 countries. However, the abolition of customs duties in trade with the EU Member States brought about an increase in imports of starch products to 155,000 tonnes in 2004, compared to only 97,000 tonnes in the previous year. The most robust, i.e. sevenfold, growth was recorded in the case of imports of starch syrups (from 6,600 tonnes in 2003 to 45,400 tonnes in 2004). Purchases of other starch products in the EU countries also showed an increase, but to a lesser extent.

The introduction of the common agricultural policy rules in the market in starch caused no price changes. In the 2004/05 marketing year, the average selling price for potato starch reached – following the initial rise and then a decline – PLN 1.72 per kg compared to PLN 1.68 per kg in the previous season. The growth rate of the retail price for potato starch was slightly higher.

Poland's accession to the European Union and the adoption of the simplified direct payments scheme resulted in a significant growth in incomes of starch potato farmers since compensatory payments per hectare showed an apparent increase. However, the opening up of the Community market and the insufficient production quotas for starch which had been negotiated has brought about a number of clearly negative consequences. There has been a fall in the production of starch potatoes, capacity utilisation in the processing industry has dropped even more (which drives up unit production costs), imports have risen, and growing domestic demand for starch and starch products will have to be satisfied with further increases in imports. The domestic market in starch does not as yet experience a downturn since the refund system allows to export excess quantities to third countries, but the future may be a matter of concern.

2.7. The markets in beverages and highly processed food products[17]

The sector of highly processed food products mostly depends on demand-related factors and therefore cannot be significantly influenced by the common agricultural policy, which primarily determines supply-related factors. At the same time, it cannot remain unaffected by changes, especially sharp fluctuations, in prices for raw materials which depend on the agricultural policy. The first year after the EU accession witnessed such changes, of which the following were vital for the processing industry:

- substantial increases in prices for sugar, which despite the downward trend recorded from June 2004 are still by some 50% higher than at the end of 2003,
- a fall in selling prices for products of the milling industry, which declined by one sixth over the same period,
- growing prices for milk powder, higher by over 25% in May 2005 than in December 2003,
- a downward trend of the price for potato starch, which in May 2005 was by 5% lower than in December 2003 and by 18% lower than a year before,
- a decrease in prices for vegetable oils, by 3% in comparison with December 2003 and by 10% compared to mid-2004.

The above-mentioned changes are closely related either to specific regulations in agricultural markets (sugar, milk, starch) or to the opening up of the EU market and fluctuations in foreign exchange rates. Their impact on the highly processed food products industries may be assessed on the basis of the growth rates of output and exports of products of this sector. After the EU accession, these were as follows:

- High growth rates of output and exports were characteristic of the confectionery industry, especially the manufacture of chocolate and chocolate products. After the EU accession, the manufacture of these articles was by 13% higher than in 2003. The production of sweets grew at a slower pace. From May 2004, exports of confectionery reached some 125,000 tonnes and the value of EUR 330 million. In 2004, they accounted for 30% of financial revenues of this sector. This sector is strongly export-oriented and simultaneously heavily dependent on imports of a number of raw material components,

[17] Entirely based on R. Urban: *Ocena wpływu WPR na rynek napojów i produktów wtórnego przetwórstwa żywności*, a study within the framework of the research task 4002, typescript, Warsaw 2005.

especially cocoa. Growing prices for sugar had no substantial effect on output and sales of the sector.

- A similar situation was found in the manufacture and export of pastry (fresh and preserved). This form of processing of cereals and sugar (as well as of milk and oils) increased exports from less than 10,000 tonnes in 2003 to over 14,000 tonnes per month following the EU accession. In the first months of 2005, the manufacture of pastry goods was by 10% higher than in the previous year. The share of exports in turnover of pastry producers amounts to 24%, and trade surplus exceeds 15%.
- After joining the EU, there was also a continuing upward trend of those high-processed products which are classified in the sector of food concentrates. In 2004, the value of sales at current prices was PLN 4.3 billion, i.e. by 10% higher than in 2003. There was a further increase in the manufacture of soups and broths, food supplements, spices and food additives. This branch of industry is characterised by a substantial share of exports in sales (30% in 2004), but also by strong import dependence; it recorded trade deficit of 6.6% of turnover.
- The EU accession did not accelerate growth in the beverages sector. In this sector, there was a significant fall in output (by 10%), which resulted from the cold summer of 2004 and the first months of 2005. With the exception of the manufacture of concentrated juices, the entire beverages sector is characterised by limited exports and their minor share in turnover (merely 8% in 2004), although with trade surplus.

Lack of relevance of the common agricultural policy and integration with the EU to the development of highly processed food products is also reflected in the comparison of growth rates of retail prices for these products with growth rates of retail food prices. Retail prices for highly processed food products increased at lower rates than prices for other foodstuffs. This also concerns products with a high sugar content, although growth rates of their prices were only slightly lower than in the case of all foodstuffs. As a matter of fact, the market in highly processed food products experienced virtually no price shock due to integration since prices for these articles adjusted to the market situation, are primarily determined by supply and demand relationships.

3. THE IMPACT ASSESSMENT OF THE CAP ON AGRICULTURAL MARKETS IN POLAND

The examination of the situation in specific agricultural markets in Poland in the first year of membership leads to the immediate conclusion that the most important changes resulted from the EU accession itself rather than from the introduction of particular CAP instruments. For most products, the crucial factor was market expansion related to the virtually unrestricted opening up of the EU single market, or more precisely, to the beginning of treating Poland as an inseparable part of this market. The effect of the opening up of the EU market was observable in markets in all main products (including cereals, meat, milk and sugar), stimulating growth in exports, even in those unfavourable moments when the exceptionally strong zloty rather discouraged export activities.

Another consequence of accession was psychologically embedded. Political campaigns of Eurosceptics and Euroenthusiasts, who (both groups) liked to call themselves Eurorealists, raised high hopes and even greater concerns among producers, traders and consumers. Those were fuelled by mass media, releasing a large number of opinions, generally superficial. Hopes for a rapid increase in profits among some producers and traders were accompanied by concerns about a substantial growth in living costs, rather widespread among consumers. All this resulted in a rise in prices for a great number of basic products in the months immediately before and after the EU accession.

The analysis of the composite index of agricultural prices[18] points to the beginning of an apparent, if short-lived, upward trend of these prices from November 2003, i.e. about six months before Poland's joining the European Union. This increase continued until June 2005 inclusive and in comparison with October 2003 the growth rate was as much as 37.4%[19]. In July and August 2004, there was a marked fall in this index until it stabilised in the fourth quarter of 2004, at a level nearly by 9% lower than the maximum value (June 2004), but by some 25% higher than in October of the previous year. The beginning of 2005 saw a further decline in this index, although very slow.

Fluctuations of the composite index of agricultural prices in the period in question are hardly attributable to the effect of any particular CAP instruments.

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[18] The composite index of agricultural prices was calculated on the basis of buying-in prices (published by GUS on a monthly basis) for seven basic products – wheat, rye, potatoes, cattle, pigs, poultry and milk – which account for a total of some two thirds of the market output of the Polish agriculture.

[19] The impact of seasonal fluctuations, of consequence only to crop production, was removed from the index.

The level of this index is primarily determined by buying-in prices for live pigs and milk. Most CAP instruments concerning markets in these products were applicable in the Polish market even before Poland's accession to the EU (e.g. export refunds on pork sold outside the EU or intervention buying-in), or there was no need to apply them due to a favourable market situation, as in the case of the market in milk.

The growth in agricultural prices from November 2003 to June 2004 (in the case of animal production even to November 2004) was determined by three factors:

- the alignment of prices with the EU level,
- the increase in prices related to the opening up of new markets,
- the psychological effect.

The first of the above-mentioned factors will continue to affect agricultural prices (for example, especially, prices for live cattle) for many years, but the turbulent phase of growth is left behind. The demand barrier in the domestic market contributed to the shortening of this phase, which is obvious considering very low incomes of the population in terms of the EU standards.

The second factor will also have a prolonged effect, although its relevance will be diminishing as the demand gap is narrowing and price alignment is under way.

The third factor clearly affected agricultural prices in the months preceding Poland's accession to the European Union; it was fuelled by the so-called black anti-EU propaganda on the one hand, and by some producers seeking to take advantage of the situation on the other hand[20].

It can be concluded that the turbulent period of price fluctuations is already left behind. In the years to come, two tendencies will be working against each other. The first one, an upward trend, will result from the above-mentioned alignment of prices and the shifting of the demand barrier due to growing incomes. The other, downward trend will reflect the general downward tendency of food prices in developed countries and efforts at strengthening the role of measures for direct support of the level of agricultural incomes at the expense of price-related intervention instruments.

The rise in prices for basic agricultural products immediately before and after accession was accompanied by a significant growth in prices for agricultural inputs. Price increases which started in February 2004 continued until May or

[20] One can expect similar developments, although possibly on a smaller scale, immediately before Poland's joining the eurozone.

June 2004. Over this period, prices for agricultural inputs went up by an average of 17.5%, and throughout the first year of the EU membership, by some 20%[21].

Growing prices for means of production in the period in question are aptly referred to by the authors of the mentioned study as the "syndrome of Janosik"[22]. Producers of and traders in agricultural inputs decided to seize some income effects of increased buying-in prices and receipts from direct payments hoped-for at that time. In the case of agricultural machinery, some SAPARD funds were taken over in a similar fashion.

However, insofar as prices for agricultural products showed an apparent downward trend in the second half of 2004, prices for agricultural inputs continued to grow. Thus, from mid-2004 the price scissors began to open clearly to the disadvantage of agriculture. Neither did consumers benefit from declining buying-in prices, and falling, if at a slower pace, prices paid to food producers. One year after the EU accession, food producer prices were nearly by 4% higher than in December 2003, buying-in prices grew by 6.5%, and retail prices increased by 7%[23].

The fact that in the first year of membership in the European Union the accession itself, or more precisely, the opening up of the Community market, was more important than the introduction of the common agricultural policy instruments in the Polish food economy, does not imply that those instruments were irrelevant. Only after several years it will be possible to assess the actual relevance of specific CAP tools to the performance of agricultural markets in Poland. However, they are very likely to be increasingly important as the "accession effect" fades, due to its one-off character[24].

Over half a century of its existence, the European Union has developed a great variety of the common agricultural policy instruments. Tools applied at present considerably differ from those of the past. It should be recalled that at the beginning the European Economic Community, the predecessor of the present EU, needed to pursue self-sufficiency in terms of basic agricultural products. However, the goal of self-sufficiency was attained rather quickly and soon

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[21] See L. Mieszkowska: *Ceny środków produkcji dla rolnictwa*, [in:] *Stan polskiej gospodarki żywnościowej po przystąpieniu do Unii Europejskiej*. *Raport 1*, R. Urban (ed.), Institute of Agricultural Economics and Food Economy – National Research Institute, Warsaw 2005, pp. 18-23.

[22] *Stan polskiej…*, ibid., p. 19.

[23] R. Urban: *Porównanie rozwoju cen rolnych, cen środków produkcji i cen żywności*, [in:] *Stan polskiej…*, ibid., p. 33.

[24] The enlargement of the European Union towards other countries, e.g. Romania and Bulgaria, should not be expected to have a major impact on Polish agricultural markets, but some relevance to certain markets cannot be excluded.

agriculture started generating ever-growing surpluses which called for export or storage.

For the most part, the stimulation of growth in production consisted in encouraging change in the structure of agriculture, the modernisation of farms and the improvement in production efficiency[25]. Over the first decades of existence of the Community, the common agricultural policy proved highly effective and relatively inexpensive in transforming agriculture and increasing its productivity[26].

The policy of restricting the growth in production, subsidising export of food surpluses and protecting the Community market against imports appeared to be much more complex and costly. These are precisely the objectives of most contemporary instruments of the common agricultural policy. Some of those instruments were applicable in Poland even prior to accession (the so-called Act on starch adopted in Poland as early as 2001 may serve as an example) and then Poland's joining the EU had no major impact on the Polish market. In some cases, regulations in the Polish markets were inconsistent with the EU solutions and on accession needed to be replaced with the EU rules. This was the case of the intervention schemes operated by ARR in the market in cereals or pigmeat. Other instruments such as refunds on exports outside the EU, uniform for all Member States, were introduced only on accession, e.g. in the markets in cereals, meat and sugar.

In the first year of the EU membership, Poland made little or no use of a number of CAP instruments. For example, this was the case of storage aid for meat, practically not utilised, due to either the relations of reference prices to basic prices or the increased possibility to sell surpluses of products in the EU market. In some cases, however, it was organisational underdevelopment that stood in the way of benefiting from the EU financial resources. One example is the small number and the low degree of organisation of producer groups and organisations in the market in fruit and vegetables.

Nevertheless, there were cases of perfectly effective CAP instruments. Customs duties on imports of cereals, supported by a system of detailed licensing, are of nearly prohibitive nature. Similarly effective, although not always beneficial to Polish producers, are production quotas (e.g. the schemes applicable in the markets in milk, sugar and starch).

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[25] Contrary to appearances, it is open to question whether the EEC, and the EU afterwards, was indeed successful in the last area, which is discussed in more detail below.

[26] The structural changes in agriculture were strongly encouraged by the development of other sections of the economy, especially industry and services, which absorbed labour from agriculture, thus accelerating land concentration and the mechanisation of production.

To sum up, it should be repeated that in the first year of the EU membership the Polish agriculture benefited from the opening up of the Community market to a much greater extent than from the application of specific CAP instruments. However, these proportions will be changing quickly since the "accession effect" will soon fade away and Polish agricultural producers, processors and traders will be increasingly skilled and effective in making use of available appropriations for the common agricultural policy.

Finally, however, it is worth point out that Poland's accession to the European Union implied joining a group of countries with well functioning and technologically advanced, but extremely inefficient agriculture. The process of the EU farmers becoming increasingly dependent on the Community support within the framework of the common agricultural policy, continuing for decades, has led to the situation where the EU agriculture is no longer able to exist without this support and protection against external competition.

Threats to the continuation of this policy of supporting agriculture are twofold. On the one hand, the EU net contributors, inspired by the United Kingdom, are increasingly reluctant to finance the CAP, on the other hand – "the rest of the world" more strongly insists on the opening up of the EU markets. In the nearest future there will be no significant implications since the group which has a vested interest in continued support for its agriculture, led by France and including the new Member States, is very powerful. However, in the distant future the situation is unpredictable.

To say that on accession the Polish agriculture took the path of becoming increasingly dependent on external support and gradually deteriorating its ability to compete, is not to make any practical suggestions for our agricultural policy. It is hardly imaginable that Poland could voluntarily give up the benefits of the common agricultural policy, even short-term and rather doubtful in the distant future. However, it should be at least recognised that taking the path currently defined by the CAP implies that there is no turning back for Poland.

4. SUMMARY

The most important changes in the situation of agricultural producers, processors, traders and food consumers in Poland following accession to the European Union resulted from the opening up of the common market rather than from the full implementation of all CAP instruments.

Psychological factors had a marked impact on the behaviour of both producers and consumers. High hopes and even greater concerns, which had been

raised, especially, in the months immediately preceding accession, to some extent disturbed the performance of certain agricultural markets. However, the situation quickly began to return to normal and each market reached a new equilibrium, although in some cases it was different from the previous one.

The general and anticipated tendency is the alignment of prices for agricultural raw materials, foodstuffs and means of production with the EU levels. In different areas, however, this process varies in speed.

As regards retail prices for food and agricultural inputs, price alignment will be hampered by restrictions resulting from the purchasing power of both consumers and producers.

As the accession effect fades, the role of particular common agricultural policy instruments will increase. In a longer-term perspective, these instruments will have a crucial impact on trends and rates of structural change in the Polish agriculture. Regrettably, CAP measures in this area are inconsistent. On the one hand, a number of CAP instruments are originally aimed at concentrating land and capital (and labour to a lesser extent) in farms viable economically and capable of providing the farmer and his family with fair income. On the other hand, other CAP instruments such as direct payments may contribute to the preservation of existing structures.

All things considered, however, the transformation of the Polish agriculture will be substantially accelerated, although not to such an extent as in the case of the six EEC countries over the first two decades of existence of this organisation.

STATISTICAL ANNEX

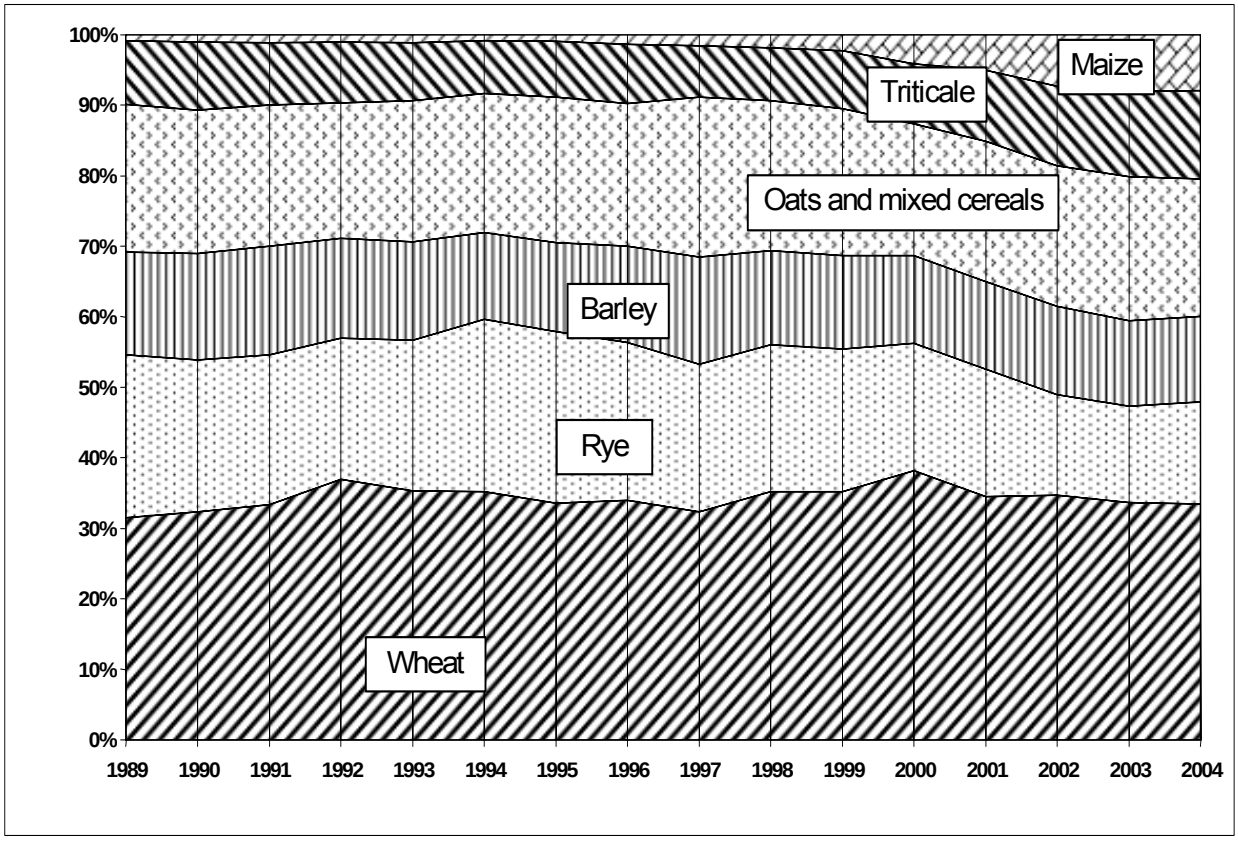
Table 1. Cereal production and area under cereals in 2000-2004 (thousand tonnes, thousand ha)

Specification		1995--2000, average	2001	2002	2003	2004	2003 = 100	1995-2000 = 100
Wheat	production	8,755	9,283	9,304	7,858	9,892	125.9	113.0
	area	2,549	2,627	2,414	2,308	2,311	100.1	90.7
Rye	production	5,348	4,864	3,831	3,172	4,281	134.9	80.0
	area	2,305	2,002	1,560	1,479	1,550	104.8	67.2
Barley	production	3,396	3,330	3,370	2,832	3,571	126.1	105.1
	area	1,127	1,071	1,051	1,016	1,014	99.8	90.0
Oats and mixed cereals	production	5,237	5,365	5,323	4,790	5,752	113.7	109.8
	area	1,987	2,002	1,970	1,981	1,981	100.0	99.7
Triticale	production	2,013	2,698	3,048	2,812	3,625	128.9	185.0
	area	656	838	944	985.6	1,058	107.4	161.4
Basic cereals[a]	**production**	**24,748**	**25,540**	**24,876**	**21,463**	**27,220**	**126.8**	**110.0**
	area	**8,623**	**8,541**	**7,939**	**7,770**	**7,913**	**101.8**	**91.8**
Maize	production	504	1 362	1,962	1,884	2,343	123.3	464.7
	area	89	224	319	356	411	115.5	460.7
Cereals, total[b]	**production**	25,309	**26 902**	**26,838**	**23,347**	**29,562**	**126.7**	**117.1**
	area	8,758	**8 820**	**8,294**	**8,163**	**8,378**	**102.6**	**95.7**

[a] basic cereals, including cereal-based compound feedingstuffs; [b] excluding millet and buckwheat.

Source: W. Łopaciuk: Ocena wpływu…, op. cit.

Figure 1. Structure of cereal production in Poland in 1989-2004



Source: W. Łopaciuk: Ocena wpływu…, op. cit.

Table 2. Buying-in of wheat and rye (thousand tonnes)

Period	Wheat	Rye
2002/03	4,316.4	560.0
2003/04	3,790.5	605.8
2003/04[a]	3,417.6	547.3
2004/05[a]	3,078.5	594.8
XI 2002 – V 2003	2,565.6	269.6
XI 2003 – V 2004	2,152.2	286.3
XI 2004 – V 2005	2,699.2	445.6

[a] In corresponding periods (from July to May).

Source: W. Łopaciuk: Ocena wpływu…, op. cit.

Table 3. Cropland, yield and production of rape

Year	Cropland in thousand ha	Yield in tonnes/ha	Production in thousand tonnes
2000	436.8	2.19	958.1
2001	443.2	2.40	1,063.6
2002	439.0	2.17	952.7
2003	426.3	1.86	793.0
2004	538.2	3.03	1,632.9

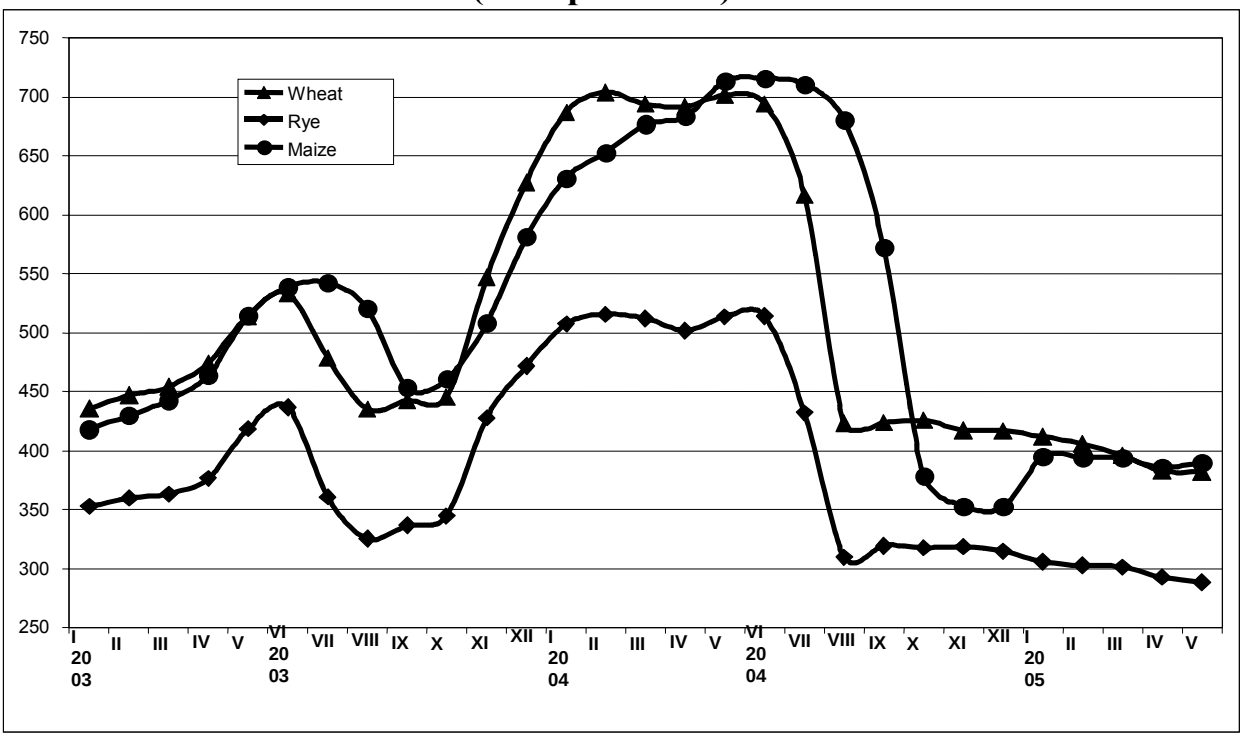
Source: W. Łopaciuk: Ocena wpływu…, op. cit.

Table 4. Consumption of cereals in Poland in the 2000/01 – 2004/05 marketing years (thousand tonnes)

Purpose	Specification	2000/01	2001/02	2002/03	2003/04	2004/05 estimate	2003/04 = 100
Use for animal feed	Wheat	3,900	3,699	3,435	2,940	2,800	95.2
	Rye	2,290	2,553	1,952	1,490	1,600	107.3
	Barley	2,770	2,516	2,705	2,490	2,400	96.4
	Triticale	1,700	2,007	2,851	2,680	2,600	97.0
	Maize	1,300	1,316	1,800	2,420	2,150	88.8
	Oats and mixed cereals	3,550	4,307	4,869	4,400	4,500	102.3
	Use for animal feed, total	**15,510**	**16,420**	**17,612**	**16,420**	**16,050**	**96.2**
	of which: use for the production of cereal-based compound feedingstuffs	2,400	2,568	2,700	2,900	3,050	105.2
	Unprocessed	13,110	13,830	14,912	13,500	13,000	96.3
Human consumption	Wheat	4,280	4,286	4,294	4,294	4,295	100.0
	Rye	1,230	1,228	1,226	1,210	1,205	99.6
	Barley	194	190	185	184	182	98.9
	Maize	46	46	46	44	45	102.3
	Oats and mixed cereals	42	43	41	40	38	95.0
	Human consumption, total	**5,793**	**5,793**	**5,792**	**5,772**	**5,765**	**99.9**
Industrial use	Wheat	140	202	210	210	150	93.8
	Rye	324	400	440	340	480	134.3
	Barley	449	479	500	520	530	101.9
	Maize	17	18	10	50	40	80.0
	Industrial use, total	**931**	**1,102**	**1,161**	**1,121**	**1,200**	**107.0**
Domestic consumption, total		**25,283**	**26,531**	**27,614**	**26,051**	**26,109**	**100.2**
Final stocks		**2,563**	**3,768**	**2,603**	**817**	**4,393**	**574.6**
Final stocks/consumption (%)		**10.1**	**14.1**	**9.0**	**3.1**	**16.5**	**-**

Source: W. Łopaciuk: Ocena wpływu…, op. cit.

Figure 2. Monthly buying-in prices for cereals in 2003-2004 (PLN per tonne)



Source: W. Łopaciuk: Ocena wpływu…, op. cit.

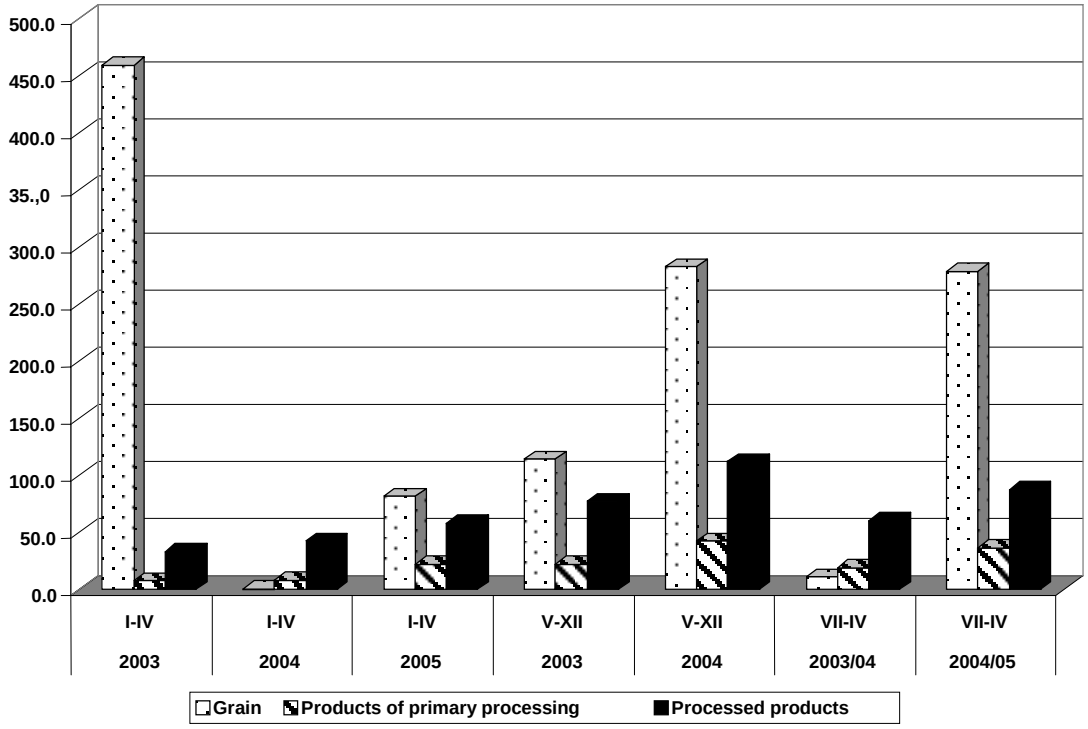
Table 5. Exports of cereals and cereal products (thousand tonnes)

Specification	2003 I-IV	2004 I-IV	2005 I-IV	2003 V-XII	2004 V-XII	2003/04 VII-IV	2004/05 VII-IV	2003 I-XII	2004 I-XII
Wheat	448.7	0.1	2.5	111.1	190.2	9.2	189.0	559.8	190.3
Rye	7.8	0.0	50.4	2.1	78.4	0.9	78.4	10.0	78.5
Barley	0.0	0.1	1.2	0.0	0.0	0.0	0.0	0.0	0.1
Oats	2.4	0.0	9.4	0.0	1.3	0.0	1.3	2.4	1.3
Maize	0.1	0.1	16.3	0.1	9.3	0.0	6.3	0.2	9.5
Grain, total	**459.5**	**0.7**	**81.5**	**114.0**	**283.0**	**10.7**	**278.8**	**573.5**	**283.7**
Wheat flour	6.0	0.7	3.5	4.5	6.1	2.5	5.7	10.5	6.8
Flour, other	0.0	0.0	0.1	0.1	0.2	0.0	0.1	0.1	0.2
Groats, semolina etc.	1.4	0.6	1.1	1.7	1.7	1.2	1.5	3.0	2.3
Grain otherwise processed	0.1	0.0	0.6	0.1	0.1	0.0	0.1	0.1	0.1
Malt	0.0	6.9	13.8	16.1	31.1	14.9	25.8	16.1	38.0
Bran	0.0	0.2	3.4	0.2	3.4	0.2	3.4	0.2	3.5
Products of primary processing, total	**7.5**	**8.4**	**22.4**	**22.6**	**42.6**	**18.9**	**36.7**	**30.1**	**51.0**
Pasta dough	2.0	2.4	2.7	4.0	5.6	2.9	4.8	5.9	8.1
Other products[a]	6.7	7.3	10.0	12.9	15.3	9.9	11.3	19.6	22.6
Bread	24.2	32.8	45.7	60.6	91.1	47.6	71.5	84.9	123.9
Processed products, total	**32.9**	**42.6**	**58.4**	**77.5**	**112.0**	**60.4**	**87.6**	**110.4**	**154.6**
Cereals and cereal products, total	**500.0**	**51.7**	**162.3**	**214.0**	**437.6**	**90.0**	**403.0**	**714.0**	**489.3**
Rice	0.2	0.6	2.5	1.3	2.8	1.2	2.2	1.4	3.4

[a] obtained by the swelling or roasting of cereals.

Source: W. Łopaciuk: Ocena wpływu…, op. cit.

Figure 3. Exports of cereals and cereal products (thousand tonnes)



Source: W. Łopaciuk: Ocena wpływu…, op. cit.

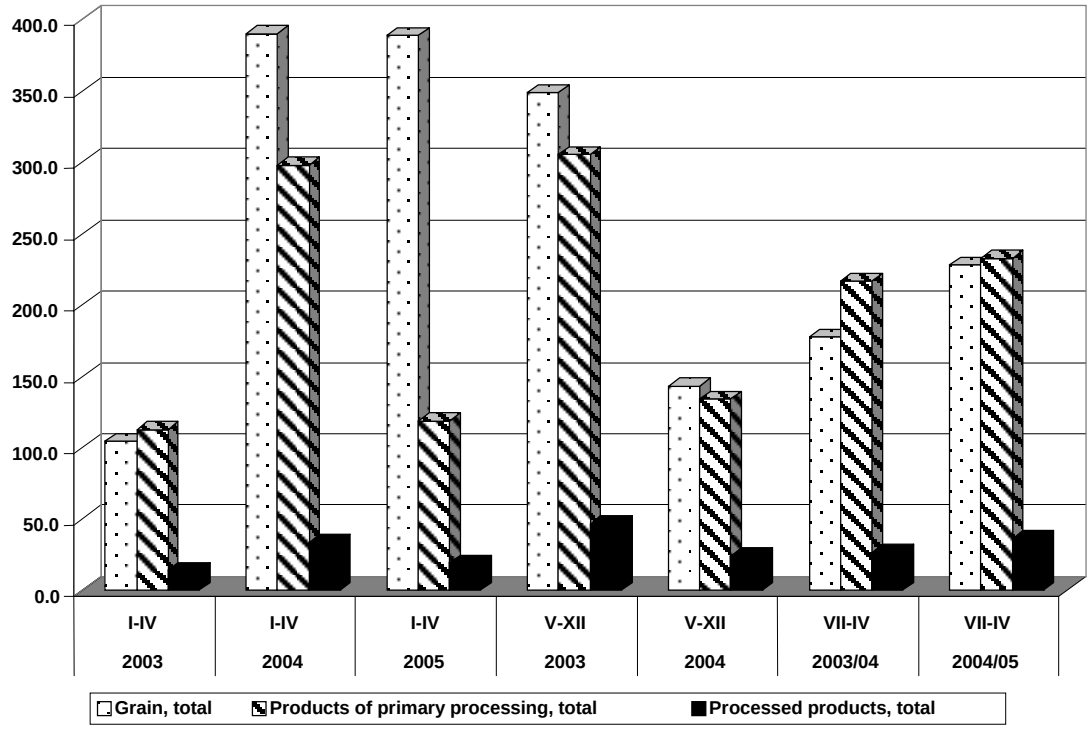
Table 6. Imports of cereals and cereal products (thousand tonnes)

Specification	2003 I-IV	2004 I-IV	2005 I-IV	2003 V-XII	2004 V-XII	2003/04 VII-IV	2004/05 VII-IV	2003 I-XII	2004 I-XII
Wheat	28.5	69.4	56.0	193.3	93.1	47.0	151.6	97.9	249.3
Rye	7.4	76.5	6.5	9.0	0.4	24.1	2.8	83.9	15.5
Barley	30.7	121.1	80.9	115.3	32.3	65.4	54.4	151.8	196.2
Oats	0.0	5.1	0.3	2.3	0.8	1.8	0.7	5.1	2.6
Maize	26.2	107.3	242.6	22.4	12.9	32.7	13.6	133.6	264.9
Grain, total	**104.6**	**390.4**	**388.7**	**348.7**	**142.9**	**177.4**	**227.7**	**495.0**	**737.5**
Wheat flour	2.7	8.8	4.1	15.8	10.1	6.0	12.4	11.5	19.9
Flour, other	2.7	6.4	3.1	6.5	5.8	4.6	4.4	9.2	9.6
Groats, semolina etc.	10.8	22.4	7.9	27.3	13.9	16.3	21.0	33.2	35.1
Grain otherwise processed	6.1	11.2	4.1	13.2	8.2	8.2	8.5	17.3	17.3
Malt	40.3	136.5	47.9	139.4	53.0	96.8	103.9	176.8	187.4
Bran	49.9	112.6	51.5	103.3	43.0	84.7	82.8	162.5	154.8
Products of primary processing, total	**112.5**	**298.0**	**118.6**	**305.5**	**134.0**	**216.7**	**232.9**	**410.4**	**424.1**
Pasta dough	5.9	13.4	6.9	16.9	8.7	10.7	12.8	19.3	23.8
Other products[a]	0.6	1.3	1.2	2.0	1.9	1.1	1.5	1.8	3.2
Bread	7.3	19.1	11.2	27.7	13.5	14.8	21.8	26.4	38.9
Processed products, total	**13.8**	**33.7**	**19.3**	**46.6**	**24.0**	**26.5**	**36.1**	**47.5**	**66.0**
Cereals and cereal products, total	**230.9**	**722.0**	**526.7**	**700.9**	**300.9**	**420.6**	**496.7**	**952.9**	**1 227.6**
Rice	32.6	64.4	75.2	25.8	34.2	44.0	24.1	97.0	101.0

[a] obtained by the swelling or roasting of cereals.

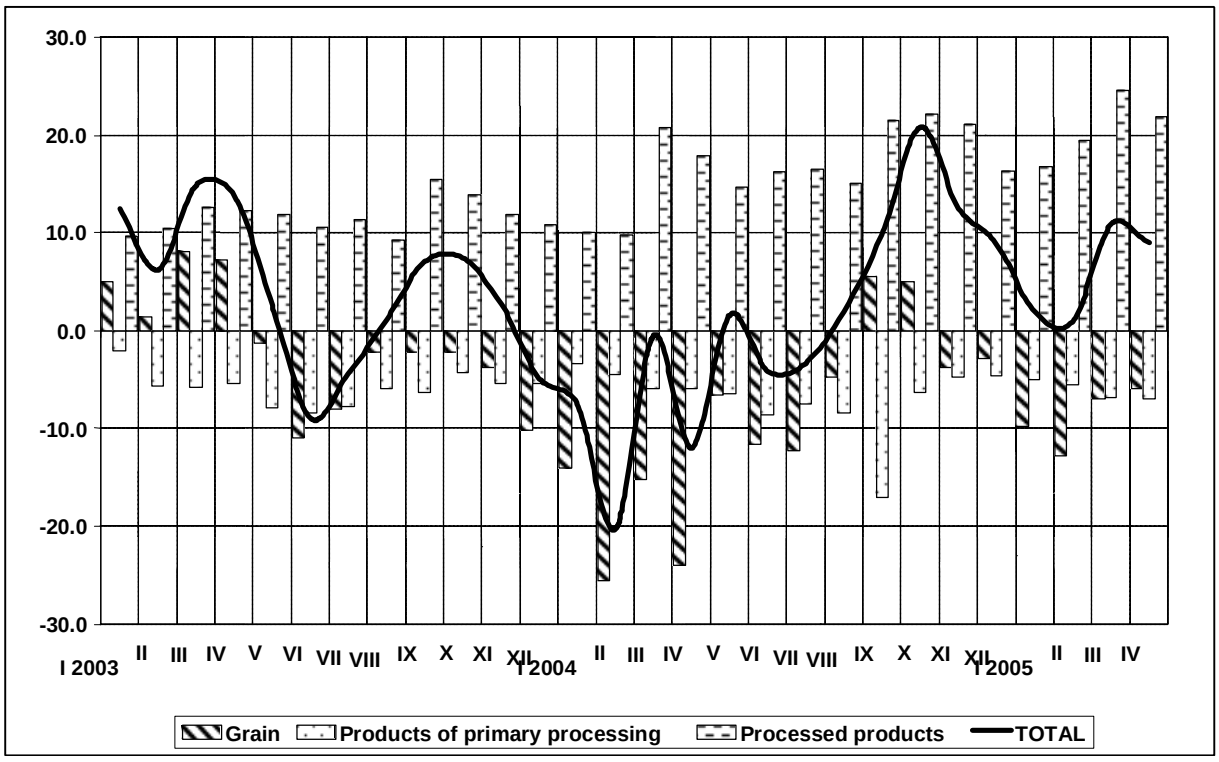
Source: W. Łopaciuk: Ocena wpływu…. op. cit.

Figure 4. Imports of cereals and cereal products (thousand tonnes)



Source: W. Łopaciuk: Ocena wpływu…. op. cit.

Figure 5. Balance of foreign trade in cereals and preparations of cereals (EUR million)



Source: W. Łopaciuk: Ocena wpływu…. op. cit.

Table 7. Exports of oil seed products (thousand tonnes)

Specification	2003 I-IV	2004 I-IV	2005 I-IV	2003 V-XII	2004 V-XII	2003 I-XII	2004 I-XII
Oil seeds	1.3	0.1	22.1	7.6	292.1	8.9	292.3
Cakes	69.1	43.4	109.2	88.4	90.4	157.5	133.8
Oils	0.1	6.0	24.8	0.9	48.0	1.0	54.0

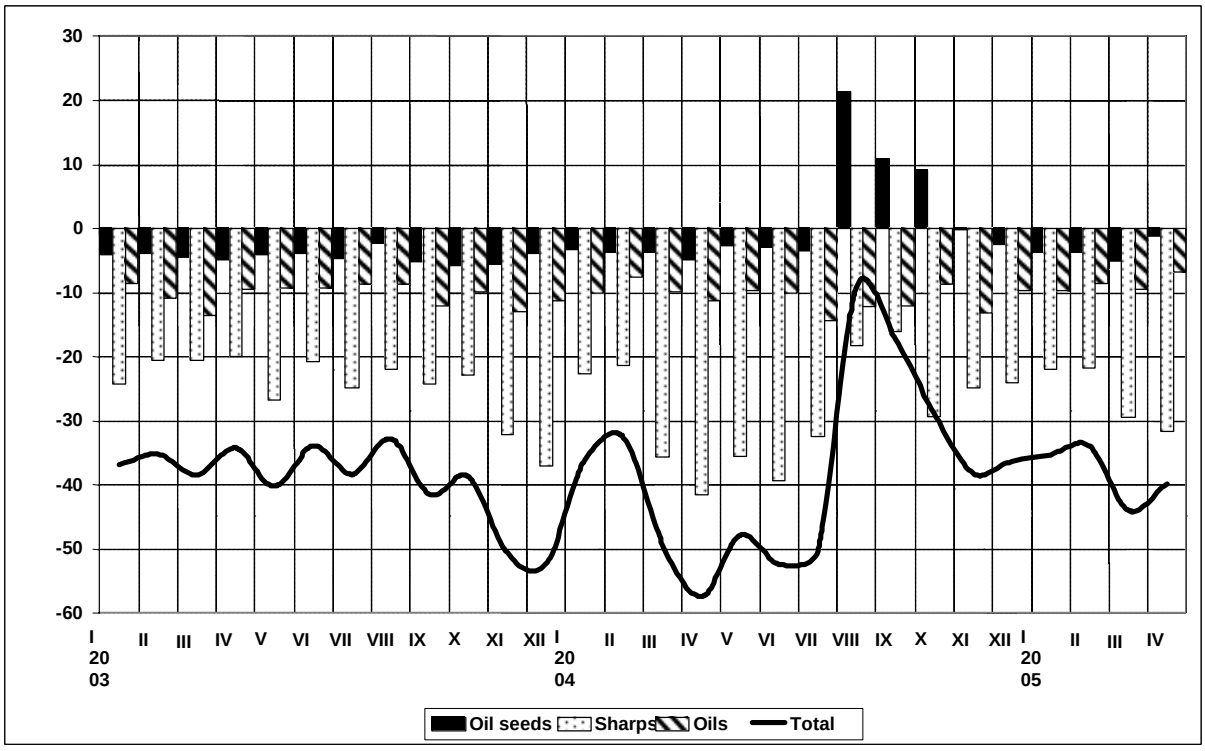
Source: W. Łopaciuk: Ocena wpływu…, op. cit.

Table 8. Imports of oil seed products (thousand tonnes)

Specification	2003 I-IV	2004 I-IV	2005 I-IV	2003 V-XII	2004 V-XII	2003 I-XII	2004 I-XII
Oil seeds	29.2	26.7	33.8	73.4	53.9	102.7	80.6
Cakes	486.8	529.3	604.5	1 118.7	1 105.6	1 605.5	1 634.9
Oils	71.5	74.8	81.0	153.3	203.8	224.8	278.6

Source: W. Łopaciuk: Ocena wpływu…, op. cit.

Figure 6. Balance of foreign trade in oil seeds (EUR million)



Source: W. Łopaciuk: Ocena wpływu…, op. cit.

Table 9. Sugar balance (thousand tonnes of white sugar)

Marketing years (1 VII – 30 VI)	Supply					Demand				Final stocks[a]
	Initial stocks[a]	Production	Imports	Increase in resources – from ARR reserves	**Total**	Domestic consumption	Exports	Decline in resources – at the expense ARR reserves	**Total**	
2002/03	661	2,030	85	13	**2,789**	1,590	408	–	**1,998**	791
2003/04	791	1,949	45	13	**2,798**	1,600	394	–	**1,994**	804
2004/05	804	2,002	46	–	**2,852**	1,630	450	–	**2,080**	772

[a] producer and trade stocks.

Source: Ł. Chudoba: Wpływ WPR…, op. cit.

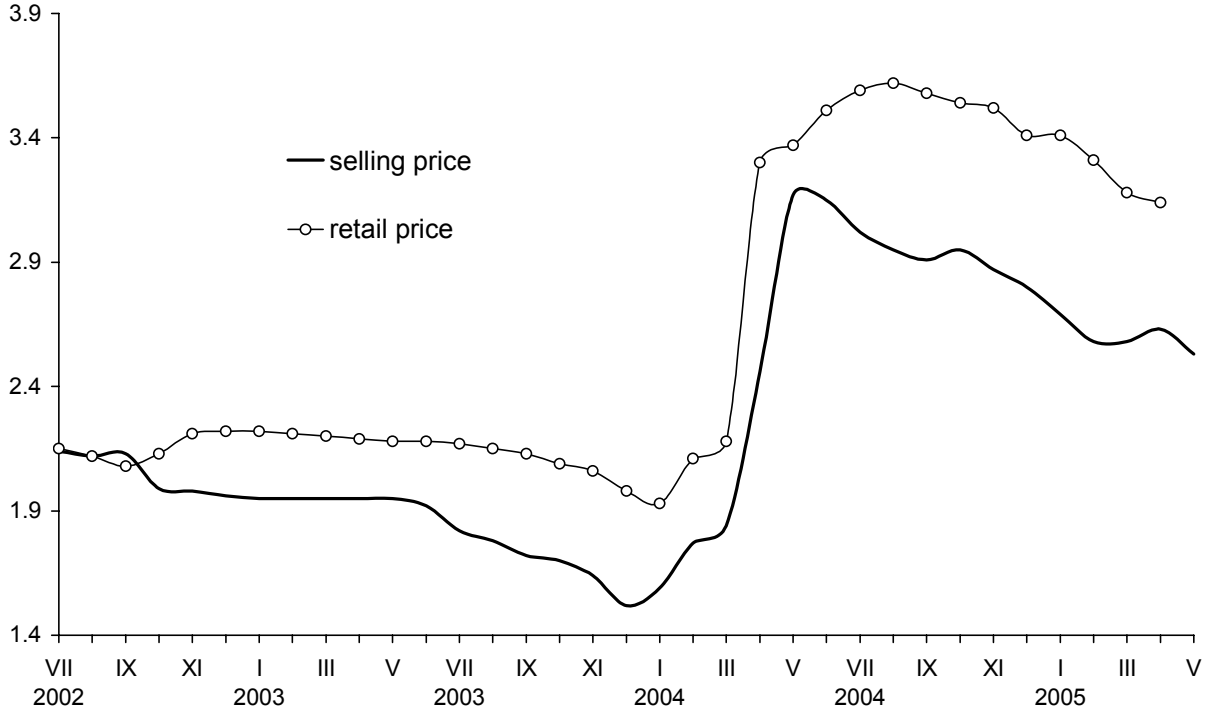
Table 10. Selling prices for white sugar[a]

Selling period		Market selling price (producer price) according to GUS[b] in PLN/kg	Intervention price[c] in PLN/kg	Difference between the market price and the intervention price in PLN/kg
2003/04	July	1.82	1.98	–0.16
	August	1.78	1.98	–0.20
	September	1.72	1.98	–0.26
	October	1.70	1.98	–0.28
	November	1.64	1.98	–0.34
	December	1.52	1.98	–0.46
	January	1.59	1.98	–0.39
	February	1.77	1.98	–0.21
	March	1.84	1.98	–0.14
	April	2.46	1.98	+0.48
	May	3.17	1.98	+1.19
	June	3.15	1.98	+1.17
Year 2004/05	July	3.02	3.23	–0.21
	August	2.95	3.21	–0.26
	September	2.91	3.17	–0.26
	October	2.95	3.12	–0.17
	November	2.87	2.88	–0.01
	December	2.80	2.80	0.00
	January	2.69	2.78	–0.09
	February	2.58	2.70	–0.12
	March	2.58	2.72	–0.14
	April	2.63	2.80	–0.17
	May	2.53	2.83	–0.30

[a] selling prices and intervention prices including 7% VAT; [b] applicable to white granulated sugar (50 kg); [c] the intervention price for sugar, excluding VAT, in the 2003/04 marketing year was PLN 1.85 per kg, and in 2004/05 – EUR 631.9 per tonne. The intervention price quoted in euro was converted into the zloty according to monthly NBP exchange rates and increased by 7% VAT.

Source: Ł. Chudoba: Wpływ WPR…, op. cit.

Figure 7. Sugar prices in Poland (PLN/kg)



Source: Ł. Chudoba: Wpływ WPR…, op. cit.

Table 11. Milk production and buying-in

Year	Milk production		Market output	of which: buying-in for dairy industry
	in thousand tonnes	in million litres	in million litres	in million litres
2001	11,873	11,538	8,442	6,832
2002	11,861	11,527	8,447	7,007
2003	11,881	11,546	8,596	7,316
2004	11,811	11,478	8,761	7,769
2005 forecast	11,751	11,420	8,840	8,050

Source: Z. Smoleński: Ocena wpływu…, op. cit.

Table 12. Allocation of the domestic milk production (million litres)

Specification	2001	2002	2003	2004
Production	11,538	11,527	11,546	11,478
On-farm use	3,096	2,930	2,850	2,720
of which: human consumption	2,450	2,300	2,250	2,150
Sales, total	8,442	8,597	8,696	8,758
of which: for processing	7,025	7,219	7,316	7,769
other sales	1,417	1,378	1,380	989

Source: Z. Smoleński: Ocena wpływu…, op. cit.

Table 13. Output of main milk products

Specification	Output in thousand tonnes		Change in output (previous year = 100)
	2003	2004	2004
Processed liquid milk			
total (million litres)	1 992.3	1 994.2	100.1
of which: forwarded milk	.	8.0	.
Whole milk powder	26.8	30.0	111.9
Skimmed milk powder	148.7	141.0	94.8
Maturing cheese	195.2	220.2	112.8
Curd	286.5	281.4	98.2
Cream (million litres)	214.8	263.1	122.5
Butter	167.0	164.0	98.2
Milk-based beverages	440.5	455.3	103.4

Source: Z. Smoleński: Ocena wpływu…, op. cit.

Table 14. Foreign trade in milk products (thousand tonnes)

Specification	Exports		Imports	
	2003	2004	2003	2004
Milk powder				
total	107.6	128.6	8.3	10.0
of which: EU-15	21.8	71.8	2.6	5.5
Cheese				
Total	52.0	80.3	5.7	8.5
of which: EU-15	12.6	30.8	4.2	6.7
Butter				
Total	9.2	27.1	5.3	4.4
of which: EU-15	8.9	20.9	0.6	1.1

Source: Z. Smoleński: Ocena wpływu…, op. cit.

Table 15. Consumption of milk and milk products per capita

Specification	Unit	2001	2003	2004	2004 / 2003 in %
Milk	litre	61.32	57.60	55.08	95.6
Yoghurts	kg	3.84	4.20	4.20	100.0
Cheese	kg	10.08	10.32	10.44	101.2
of which:					
– curd	kg	6.36	6.36	6.36	100.0
– maturing and processed cheese	kg	3.72	3.96	4.08	103.0
Cream	litre	5.40	5.04	5.20	103.2
Butter	kg	3.96	4.20	3.96	94.3
Milk-based beverages	litre	2.88	2.88	3.12	108.3

Source: Z. Smoleński: Ocena wpływu…, op. cit.

Table 16. Beef balance (thousand tonnes)

Specification	2000	2001	2002	2003	2004
Production of beef and veal in thousand tonnes of post-slaughter warm weight	381.0	342.0	319.0	355.0	350.0
Imports	2.0	0.0	3.7	5.2	3.7
Domestic supply	383.0	342.0	322.7	360.2	353.7
Exports	57.6	57.4	107.8	92.5	117.2
Domestic consumption	325.4	284.6	214.9	267.7	232.8
Consumption in kg per capita	7.0	5.5	5.2	5.8	5.0

Source: D. Rycombel: Ocena wpływu…, op. cit.

Table 17. Pork balance (thousand tonnes)

Specification	2000	2001	2002	2003	2004
Pork production in thousand tonnes	1,950.0	1,884.0	2,028.0	2,210.0	1,979.0
Imports	54.0	42.0	59.7	58.6	123.5
Domestic supply	2,004.0	1,926.0	2,087.7	2,268.6	2,102.5
Exports	131.0	84.0	86.7	250.5	208.6
Domestic consumption	1,873.0	1,842.0	2,001.0	2,018.1	1,893.9
Consumption in kg per capita	38.7	38.2	39.2	41.2	39.2

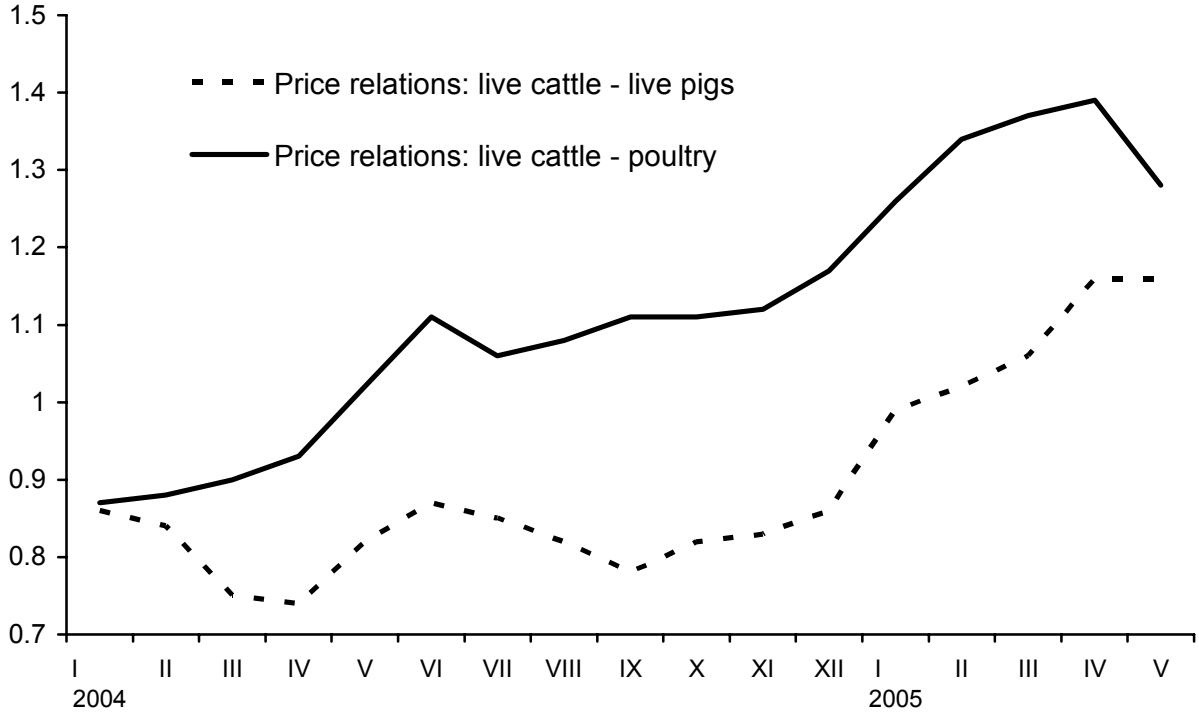
Source: D. Rycombel: Ocena wpływu…, op. cit.

Table 18. Poultrymeat balance (thousand tonnes)

Specification	2000	2001	2002	2003	2004
Poultry production in thousand tonnes	584	695	797	860	915
Imports	17	26	31	24	89
Domestic supply	601	721	825	884	1,004
Exports	46	45	58	108	129
Domestic consumption	555	676	767	776	875
Consumption in kg per capita	14.5	17.0	19.8	19.7	22.0

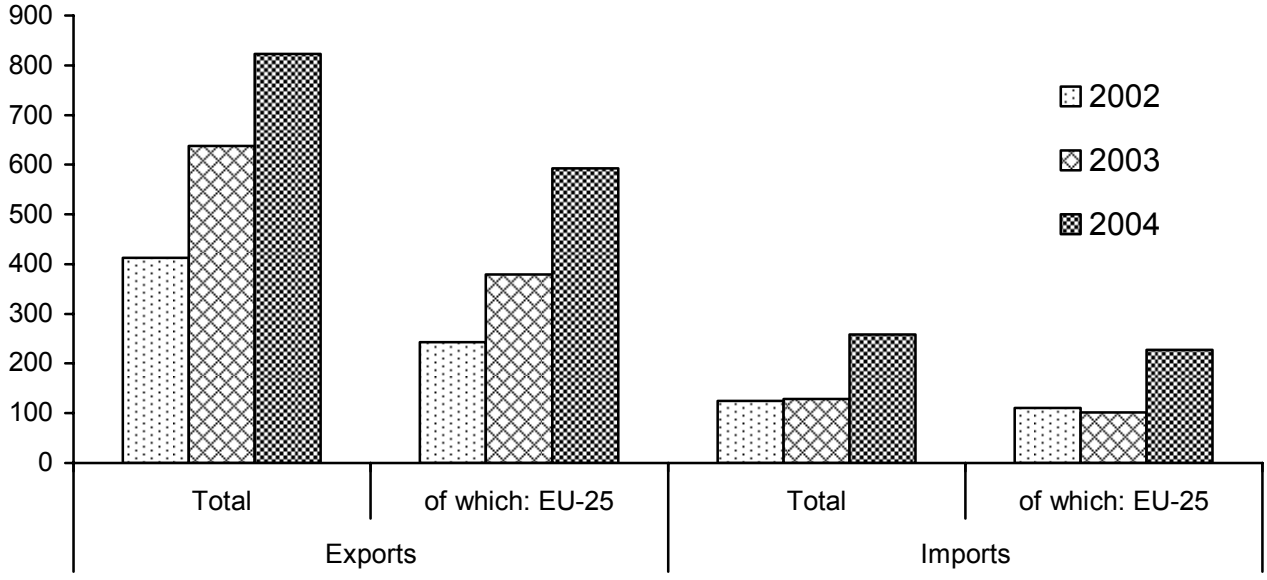
Source: D. Rycombel: Ocena wpływu…, op. cit.

Figure 8. Relations of buying-in prices for live cattle and live pigs and poultry from January 2004 to May 2005



Source: D. Rycombel: Ocena wpływu…, op. cit.

Figure 9. Share of EU-25 in export receipts and the import value of pork, beef and poultry (EUR million)



Beef - live cattle, meat, offal, preserved meat products
Poultry - live poultry, meat and offal, preparations
Pork - meat, preparations, offal, fats

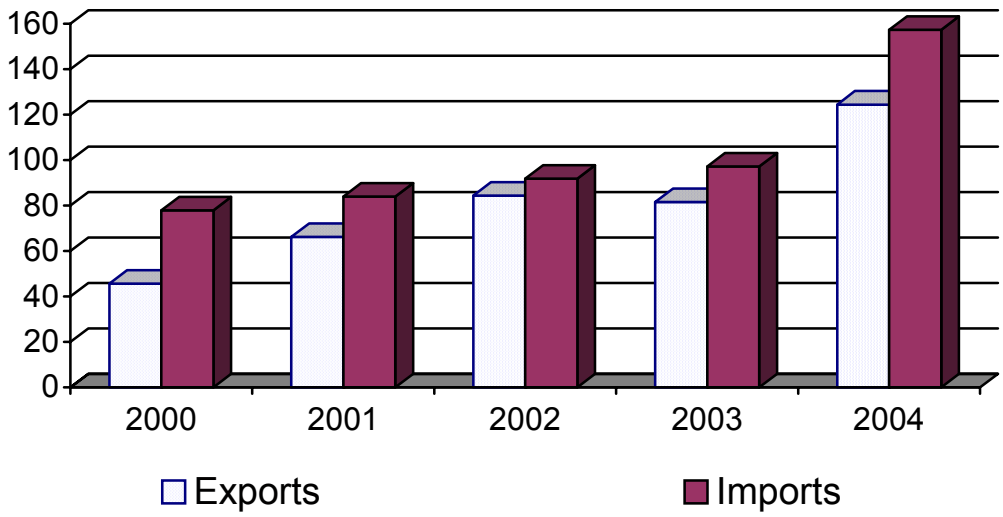
Source: D. Rycombel: Ocena wpływu…, op. cit.

Table 19. Export and production refunds on potato starch (EUR per tonne)

Date of regulation	Export refund	Production refund
27 May 2004	34.62	0.00
24 June 2004	49.23	0.00
8 July 2004	59.95	9.62
29 July 2004	73.78	14.32
26 August 2004	35.50	0.00
30 September 2004	48.69	0.00
28 October 2004	49.30	0.00
25 November 2004	49.30	0.00
16 December 2004	65.49	0.00
27 January 2005	59.97	0.00
10 February 2004	59.97	11.60
24 February 2005	64.00	8.75
31 March 2005	64.02	0.00
28 April 2005	66.22	10.85
26 May 2005	67.55	10.85

Source: W. Dzwonkowski: Ocena wpływu…, op. cit.

Figure 10. Foreign trade in starch products (thousand tonnes)



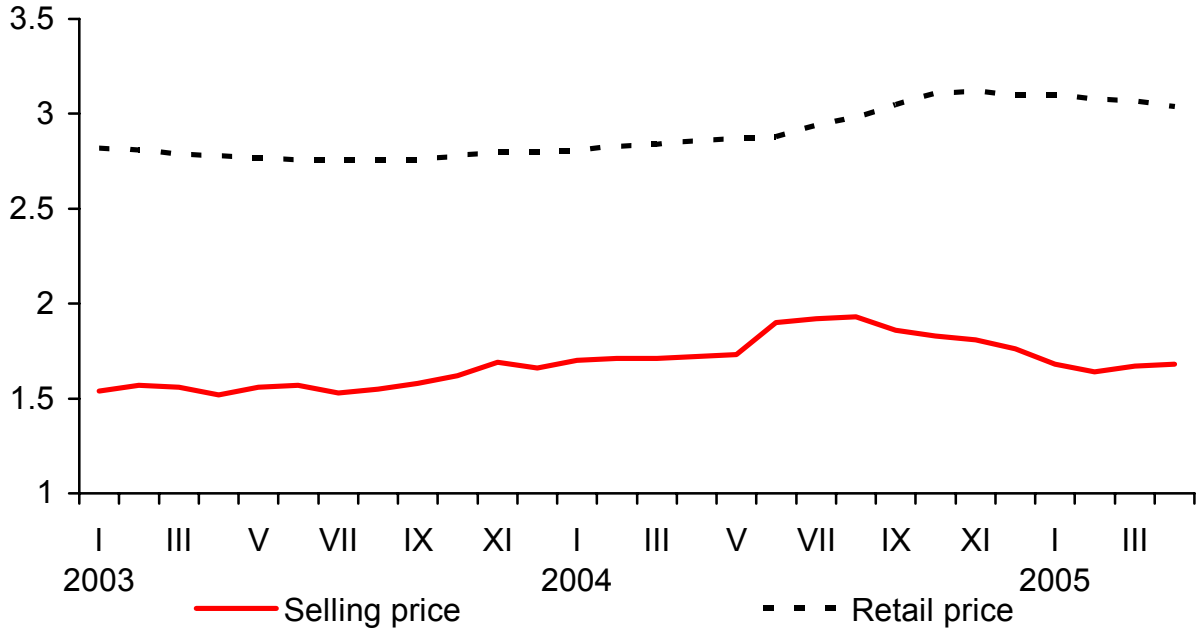
Source: W. Dzwonkowski: Ocena wpływu…, op. cit.

Table 20. Foreign trade in starch products (thousand tonnes)

Specification	2003		2004				2005 I-IV
	Total	I-VI	Total	I-VI	I-IV	V-XII	
Imports							
Starch and potato flour	0.1	0.0	1.6	0.1	0.0	1.6	0.8
Other starches	4.6	2.1	13.9	3.1	1.3	12.6	9.0
Starch syrups	6.6	2.9	43.8	11.0	1.6	42.2	19.4
Dextrins	47.2	21.3	53.4	22.9	15.2	38.2	15.4
Finishing agents prepared from starch	29.2	14.8	30.1	14.9	10.6	19.5	4.5
Residues of starch manufacture	9.3	4.6	12.9	6.3	4.0	8.9	6.0
Imports, total	**97.0**	**45.7**	**155.7**	**58.3**	**32.7**	**123.0**	**55.1**
Exports							
Starch and potato flour	46.3	14.5	65.7	36.8	32.4	33.4	15.2
Other starches	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Starch syrups	0.1	0.0	11.5	0.9	0.3	11.2	12.7
Dextrins	3.6	1.9	10.0	1.4	0.9	9.1	8.3
Finishing agents prepared from starch	0.0	0.0	3.2	0.7	-	3.2	14.0
Residues of starch manufacture	27.1	13.1	28.6	16.0	10.2	18.4	4.5
Exports, total	**77.1**	**29.5**	**119.0**	**55.8**	**43.8**	**75.3**	**54.7**

Source: W. Dzwonkowski: Ocena wpływu…, op. cit.

Figure 11. Prices for potato starch (PLN per kg)



Source: W. Dzwonkowski: Ocena wpływu…, op. cit.

Table 21. Selling prices for raw materials used in highly processed food production (PLN per kg)

Products	2003	VI 2004	XII 2004	V 2005
Sugar	1.82	2.95	2.80	2.53
Whole and semi-skimmed milk powder	8.22	10.51	11.18	10.40
Skimmed milk powder	6.27	8.75	9.07	8.12
Wheat cake flour, in sacks	1.02	1.16	0.92	0.85
Potato starch	1.64	1.90	1.76	1.56
Refined rapeseed oil	3.22	3.45	3.46	3.11

Source: R. Urban: Ocena wpływu…, op. cit.

Table 22. Retail prices for highly processed food products (December 2003 = 100)

Specification	VI 2004	XII 2004	V 2005
Bakers' wares and biscuits	103.3	105.8	106.4
Pasta	103.1	104.5	104.4
Sugar confectionery	103.3	105.7	106.8
Spices	100.8	101.8	101.4
Soups, concentrates	101.7	103.9	104.7
Other foodstuffs	102.0	103.7	105.4
Beverages	101.2	102.1	102.3
Juices	100.2	100.6	100.7
Food and beverages, average	106.2	106.8	100.8

Source: R. Urban: Ocena wpływu…, op. cit.

Table 23. Output of highly processed food products and beverages[a] (thousand tonnes or million litres per month)

Specification	2003 V-XII	2004 I-IV	2004 V-XII	2005 I-IV
Chocolate	9.0	10.7	12.4	11.3
Chocolate products	6.4	6.8	6.1	6.1
Pastry	.	6.8	6.2	7.0
Pasta	6.6	6.8	6.7	8.1
Soups, broths, homogenised preparations	.	3.6	3.4	4.5
Confectionery (excluding chocolate and chocolate products)	.	6.0	5.6	6.8
Beverages (excluding juices)	.	386	386	325

[a] concerns large and medium-sized enterprises.

Source: R. Urban: Ocena wpływu…, op. cit.

Table 24. Exports of selected highly processed food products (thousand tonnes)

Specification	2003	2004	2004 I-IV	2004 V-XII	2005 I-IV	V 2004 – – IV 2005
Highly processed cereals products	9.2	12.9	10.6	14.0	14.9	14.6
Confectionery	7.7	11.3	12.8	10.5	9.8	10.3
Pastry	3.3	4.2	3.8	4.5	3.7	4.2

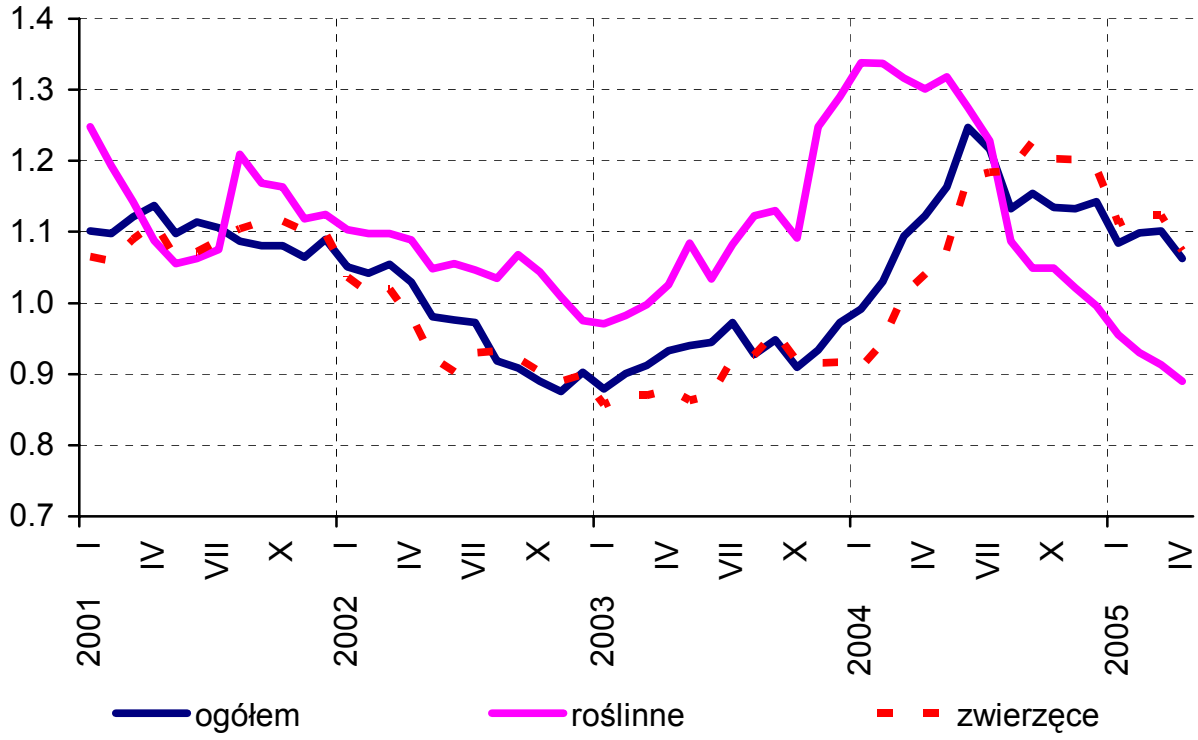
Source: R. Urban: Ocena wpływu…, op. cit.

Table 25. Ratio of the value of imports and exports to the value of sold production of food industry in 2004

Subsection of highly processed food products	Exports	Imports	Balance
Highly processed cereals products	23.9	8.2	15.7
Confectionery	29.8	25.0	4.8
Other foodstuffs (concentrates)	29.7	35.9	-6.2
Beverages	7.8	3.2	4.6

Source: R. Urban: Ocena wpływu…, op. cit.

Figure 12. Index of buying-in prices for agricultural products (I-XII 2000 = 1)



Source: Own study based on GUS data.

REFERENCES

1. *Analiza produkcyjno-ekonomicznej sytuacji rolnictwa i gospodarki żywnościowej w 2004 roku*, A. Wosia (ed.), Institute of Agricultural Economics and Food Economy – National Research Institute, Warsaw 2005.
2. Chudoba Ł.: *Wpływ WPR na rynek cukru*, a study within the framework of the research task 4002, typescript, Warsaw 2005.
3. Dzwonkowski W.: *Ocena wpływu Wspólnej Polityki Rolnej na rynek skrobi ziemniaczanej*, a study within the framework of the research task 4002, typescript, Warsaw 2005.
4. Łopaciuk W.: *Ocena wpływu WPR na rynek zbóż, pasz i rzepaku*, a study within the framework of the research task 4002, typescript, Warsaw 2005.
5. Mierwiński J., Smoleński T.: *Ocena wpływu WPR na rynek owoców i warzyw*, a study within the framework of the research task 4002, typescript, Warsaw 2005.
6. Rycombel D.: *Ocena wpływu WPR na rynek mięsa*, a study within the framework of the research task 4002, typescript, Warsaw 2005.
7. Smoleński Z.: *Ocena wpływu WPR na rynek mleka i jego przetworów*, a study within the framework of the research task 4002, typescript, Warsaw 2005.
8. *Stan polskiej gospodarki żywnościowej po przystąpieniu do Unii Europejskiej. Raport 1*; R. Urban (ed.), Institute of Agricultural Economics and Food Economy – National Research Institute, Warsaw 2005.
9. Urban R.: *Ocena wpływu WPR na rynek napojów i produktów wtórnego przetwórstwa żywności*, a study within the framework of the research task 4002, typescript, Warsaw 2005.