European Union
Agriculture and rural development

Agricultural Situation and Prospects

in the Central and Eastern European Countries

Poland

Working Document
June 1998

European Commission
Directorate for Agriculture (DG VI)

Poland

Agricultural Situation and Prospects in the Central and Eastern European Countries

Working Document

This report was prepared by DG VI in collaboration with Professor Allan Buckwell, Wye College, UK; Dr Stanislaw Paszkowski, Poznan University, Dr Wladyslaw Piskorz of SAEPR (Sekcja Analiz Ekonomicznych Polityki Rolnej (Agricultural Policy Analysis Unit of the Polish Ministry of Agriculture) and Professor Jerzy Wilkin of Warsaw University. Assistance was given by DG II, DG IA, EUROSTAT and TAIEX.

The manuscript was prepared by Owen Jones with contributions from Zélie Peppiette, Sally Gibbins, Anna Machnio and Françoise Simon. Els De Roeck prepared the maps. The authors accept full responsibility for any errors which could still remain in the text. The closing date for data collection was June 1998.

June 1998

A great deal of additional information on the European Union is available on the Internet. It can be accessed through the Europa server (http://europa.eu.int).

Cataloguing data can be found at the end of this publication.

Luxembourg: Office for Official Publications of the European Communities, 1998

ISBN 92-828-3699-1

Printed in Belgium

Table of contents

List of tables

List of figures

Introduction

In 1995 DG VI published a series of ten country reports and a summary report on the agricultural situation and prospects in the associated countries of Central and Eastern Europe (CECs). The reports provided an analysis of the transition agriculture and the agro-food sector in these countries were going through in the first half of the nineties and an assessment of the outlook for the main agricultural commodity markets till the year 2000.

With three years more of information the current publications, which cover Bulgaria, the Czech Republic, Estonia, Hungary, Latvia, Lithuania, Poland, Romania, Slovakia and Slovenia, provide an update of the 1995 reports and take the outlook horizon till 2003. The underlying working hypothesis for the reports is that the first CECs will join the Union and will start to be integrated in to the single market and the Common Agricultural Policy after 2003.

The accession process was officially launched on 30 March 1998 with the submission to the applicant countries of the Accession Partnerships, which for each country set out the principles, priorities, intermediate objectives and conditions leading up to accession. A main priority is adoption of the "acquis", the body of Community legislation, including for agriculture the sensitive areas of veterinary and phytosanitary legislation.

As was the case in 1995 the individual country reports have been prepared by the services of the Commission in close collaboration with national experts of the countries concerned and with the help of scientific advisers.

The country reports and the summary report attempt to provide an objective analysis of the current situation in agriculture and the agro-food sector and an assessment of where the candidate countries can be expected to be in their agricultural development by the time of the next enlargement.

About the data...

The data used in the country reports are derived from a CEC dataset established by DG VI in co-operation with other services of the European Commission and with external experts. Data originate from various sources, mainly national statistics and economic institutes, FAO, OECD, and the European Commission (DG II, Eurostat).

For agriculture, in general the FAO data were used, but for certain countries and/or for certain products, and in particular for the most recent years, the figures were adjusted or replaced by data from other sources, after discussion with country specialists. For the commodity supply balance sheets a simpler approach than by the FAO was used, taking into account trade in agricultural commodities up to the first processing stage, but not in further processed products.

The main objective was to obtain a dataset which was as coherent as possible, offering a good comparability of data.

Despite all efforts to create a coherent, reliable and up to date dataset, all figures presented in the country reports should be interpreted with care. Significant changes in data collection and processing methods have sometimes led to major breaks in historical series as the countries concerned have moved from centrally planned to market economies. One general impression is that these problems may have led to overestimate the decline in economic activity in general and of agricultural production in particular in the first years of transition, data from 1989 and before being somewhat inflated and data after 1989 underrecording the increase in private sector activity. More recently many CECs have undertaken serious efforts to start to harmonise data collection and processing methods with EU practices.

With three more years of data and experience the original 1995 dataset has been improved and further adapted to DG VI's analytical needs.

Executive Summary

Economic and political background

Poland is the ninth largest country in Europe sharing borders with seven others and the Baltic Sea. Most of the country is generally low lying. The climate is a transition between Central European and the more moderate Atlantic climate. This can lead to unstable weather conditions, fluctuations in the length of seasons and in agricultural production.

The Polish people adopted an amended Constitution in October 1992 to enable Poland's transition to a parliamentary democracy. The Sejm or lower house is the supreme legislative body and the Senate (upper house) are the two chambers of Parliament. Members are elected every four years. The President, elected for a five year term is the representative of the state.

From 1993 to 1997, the Democratic Left Alliance (SLD) including many former communists and the Polish Peasant Party (PSL) drawing its power from a small-farmer base formed a governing coalition. The government encouraged privatisation programs and economic reform and aimed to improve the climate for foreign investment while paying attention to agricultural constituents. The coalition was defeated in September 1997 by Polish Solidarity Electoral Action (AWS) and the Freedom Union (UW). The AWS is the electoral wing of the Solidarity trade union and an umbrella organisation formed to bring unity to the very fragmented political right.

The Polish economy experienced a severe recession in 1990 and 1991. In 1992 the decline came to an end, real GDP accelerated steadily, averaging an annual growth of 5.3% in 1993-95 and 6.9% in 1997. Poland's economy continues to grow quickly on a sound macroeconomic basis, which appears to be strengthened further with the implementation of the new central bank law and the financial strategy of the new government.

Polish trade has been reoriented since the beginning of the economic transformation process in 1989. The major structural change in Poland's trading relationship is due to the collapse of the COMECON-trading block. In 1997, Poland exported 64% of total exports to the EU and imported 64% from the EU. Poland is the seventh trade partner for the EU. More recently however, Polish exports to Central and Eastern Europe and Russia has rapidly expanded (presently 20-24% of Polish exports).

The year-on-year rate of consumer price inflation in May 1998 was 13.3%, still down from 14.2% in February 1998. Inflation now appears to be back on course to fall to single-digit figures by the end of 1998.

The unemployment rate in the country as a whole fell from 13.2% at the end of 1996 to 10.5% at the end of 1997. In urban areas, unemployment is very low (3%), but rates of more than 25% are observed in the northern part of Poland, where state-owned farms have collapsed and obsolete factories have closed down.

Agriculture in the economy

The contribution of agriculture to total GDP is falling though still relatively important at an estimated 6.0% in 1996 compared with 12.9% in 1989. Since the beginning of the transition, agricultural recession has been caused by an unfavourable development of the terms of trade and reduced production, mainly in the livestock sector. The agricultural labour force still holds a 26.7% share of the total employment. This high figure is inflated by a certain amount of underemployment and hidden unemployment in rural areas. Nevertheless, this important difference between GDP contribution and persons employed in agriculture indicates very low labour productivity

and reflects the importance of part-time farming. The degree of self sufficiency for main products is still close to 100%.

Agricultural production

In recent years the average ratio of the value of crop production to animal production has been 55 to 45 though with considerable fluctuations. In terms of marketed production, the ratio is the inverse as crop products are used for intermediate and home consumption.

Of the 31.3 mio ha total area in Poland, 59% was Utilised Agricultural Area (UAA) in 1996, amounting to 18.5 mio ha. Of the UAA, arable land is by far the most important at 14.1 mio ha, followed by meadows (2.8 mio ha), permanent pastures (1.4 mio ha) and orchards (0.26 mio ha). The share of arable land in relation to UAA is around 76 % whereas the corresponding figure for the EU-15 is 56%. Only 3.3% of the soils are classified as good quality, most are rather sandy which together with low rainfall has a substantial impact on agricultural production.

By far the most important crops are cereals, particularly wheat and rye, less significant and in order of area are potatoes, fodder crops, sugar beet, oilseeds and pulses. For most crops, production has been lower in recent years than before transition. Self sufficiency in most crops is generally between 90 and 100% except for oilseeds (ranging between 55% and 146%) where the area has fluctuated considerably in recent years and for sugar where there is generally an exportable surplus. Fruit and vegetables account for 3% of the agricultural area and 10.3% of agricultural output. There are strong exports, in particular of fruit and fruit products.

The economic transformation process affected the livestock sector more than the crops sector. State farms in particular let their livestock production fall and concentrated on crops. Falling incomes together with the elimination of consumption subsidies severely reduced meat consumption.

Pigmeat production avoided the worst depression though there has been some fluctuation in particular due to high feed prices in some years. Poland is one of the biggest pig meat producers in Europe. Poultry production was badly affected initially but has recovered to be by far the most dynamic sector. Cattle and particularly sheep numbers were severely cut. The fall in beef production has slowed down in recent years. For milk, the first sign of a small increase occurred in 1997.

Agricultural trade

Within global external trade, agricultural products represent a significant part: 13.0% for exports and 11,0% for imports in 1997. Agricultural trade has increased consistently since 1992 but with imports at a faster rate. As a result, the agricultural trade balance, which was in surplus at 971 mio, ECU in 1990, deteriorated to –418 mio ECU in 1997. Important exports for Poland are live animals, meat and meat products, milk products and processed fruit and vegetables and confectionery. Imports are more diverse but include cereals, oilseeds and most importantly fresh (citrus) fruit, coffee, cocoa and tea.

EU-15 is Poland's most important agricultural trading partner. However the EU's share is diminishing at an accelerating rate. The EU took 60% of Polish exports in 1989 which was down to 39% in 1997. Official statistics show the Polish agricultural trade balance with the EU has become negative. It is the former Soviet Union in second place to which Polish exports have increased considerably, in particular for processed products.

Structures

The farm size is small and changes in farm structures are rather slow. The average farm size only increased

from 7.0 ha in 1988 to 7.9 ha in 1996 though this is faster than longer term trends. Projections suggest that no more than 40% of agricultural land will be part of holdings greater than 15 ha by 2005. In 1996, the average number of milk cows per holding is 2.6 and for pigs 16.

The public view of MAFE is that in the medium term only 400 000 to 500 000 farms are sustainable (of the current 2.1 million holdings) and this is supported by other studies. Yet given the strong cultural attachment to "small scale farming" in many areas, typified in south east Poland, significant changes to the size and number of small holdings cannot be expected. This phenomenon has a strong social impact. If this population stay attached to their land on increasingly unsustainable holdings, then important rural development policies will be necessary.

Farming was not comprehensively collectivised in Poland. Successive communist governments finally accepted the private farm as the main base for food production in Poland. Some 18% of land was in State hands. While most of this agricultural land is still not sold by the state, most is now leased to private managers.

Rural development

Poland is an extremely rural country, predominantly urban regions account for only 19% of the population. The rural areas vary greatly in structure, economy and demography. Regions where state farms predominated tend to have high unemployment levels and tend to be amongst the poorest in Poland. In voivodships where farms are smaller, rural dwellers activities are more diversified. Agriculture accounts for 44% of total employment in predominantly rural regions. This extremely high level of agricultural employment is one of the biggest challenges facing Poland as it seeks to modernise and restructure the agricultural sector without destroying rural communities.

Rural areas in Poland suffer from a number of constraints which restrict development and reinforce rural communities' isolation and remoteness. The dispersed settlement pattern makes the provision of infrastructure (water, gas, telephones, sewerage) and services (post school education, banking, professional services) difficult, and lack of access to transport in rural areas only exacerbates the disparities with urban centres.

In general, agriculture is less intensive in Poland than in most current EU Member States, and the rural areas support a rich variety of wildlife and range of habitats. Modernisation programmes, investment and education will also tend to increase the levels of inputs used, as farmers seek to increase productivity.

Livestock farming is an important sector of Polish agriculture, but stocking densities have declined considerably as a result of the economic transition process. 27% of the land area is considered to be in a "natural" or "extensively managed" state, with approximately 11% designated as of international importance.

Upstream and down stream sectors

After 1990, as a result of the worsening price ratio between inputs and agricultural products, inputs use - in particular fertilisers, lime and crop protection products - rapidly decreased but a gradual recovery is discernible.

The banking sector in Poland is not well developed and the rural banking network is fragmented with up to 1322 co-operative banks in 1997. A restructuring strategy is proposed which seems to progress slowly. Despite these problems the situation appears to be improving.

Polish farmers use relatively little debt in their farming operations and rural businesses generally use their own funds to finance investments. Nevertheless a feature of agricultural support in Poland are inter-

est rate credits for approved investments. The 1998 budget however has reduced the number of credit lines from forty to eight. More emphasis is being put on structural inputs such as restructuring and modernisation rather than for production inputs such as fertiliser and seed purchase.

The food industry has for the most part undergone a dynamic transformation in privatisation, profitability and investment. In particular nearer the retail end. The process has been much slower in the "first stage processing sector" such as slaughtering, milling and freezing. These sectors still present a barrier to farmers benefiting from the higher purchasing power of consumers.

Agricultural policy

In 1997 the budget expenditure for the agricultural sector amounted to 3,4 bio ECU (9,8% of the total budget expenditure). By far the biggest part (72%) of agricultural budget expenditure is destined for the farmer's social security system.

The stabilisation activities of the intervention organisation apply to wheat, rye, butter, skimmed milk powder, pigmeat and beef, sugar, potato starch and occasionally honey and hops. However, intervention measures are of more importance for the grain, dairy and pig meat markets. For market stabilisation, a price range is fixed in which prices are allowed to fluctuate. These reference prices have increased in real terms in recent years.

While in the pre-transition period Poland's agriculture and food exports were fairly highly subsidised, since 1990 export subsidies were rarely applied and were limited to sugar, SMP, butter and pork.

For animal products, the beef price in Poland is only half that of the EU and partly reflects lower quality and the low demand in Poland but of course the higher support price in the EU. However, pig and poultry meat is at an equivalent price, the lower pig meat price in Poland caused by generally poorer quality carcasses. The milk price in Poland has increased since 1993 and is currently around 50% of that in the EU. For high quality milk (equivalent to that in the EU), a premium is paid by processors which would bring the producer price much closer to the EU level for milk of equivalent quality.

Trade policy in the agricultural and food sector is governed by a number of multilateral and bilateral agreements, GATT/WTO, CEFTA, Europe Agreement, and Free Trade Agreements with Lithuania and with Israel.

Poland's commitments on domestic support are expressed in $ and therefore shielded against the devaluation of the zloty. Total Aggregate Measurement of Support (AMS) is limited to 3.3 bio $ by the year 2000, an amount which seems rather comfortable, considering the high level of support during the reference period 1986-88. Current levels of domestic support are much lower than the commitments.

Producers subsidy equivalent (PSE) calculations show that at the beginning of the transformation process in 1989-90, Poland intended to build up a very liberal market economy with low support levels. Since then Poland reinforced the border measures and equivalent price support systems mainly due to increasing competition problems caused by structural deficiencies particularly in the food processing industries. Support to farmers as measured by PSE and in particular the MPS component has therefore increased.

A comparison of the PSE of Poland and the EU show that the support of agricultural producers in the EU has been more stable and higher than in Poland though Polish farmers now enjoy substantial support following being implicitly taxed in 1990-91.

Rural policy

Since 1994 rural development has been increasingly recognised as a priority by successive Polish Governments, due to the high levels of agricultural employment, the need to modernise and develop agricultural practices and the need to create non-agricultural jobs in rural areas. In 1994, it was one of the 10 key objectives included in the Government's development plan.

This "Strategy for Poland" gave four objectives for rural development policy: village renewal including job creation and encouragement of non-agricultural activities; encouraging the modernisation of agricultural structures and processes; supporting the development of socio-economic infrastructure such as co-operatives, commodity exchanges, telephone and road networks and the agricultural advisory service; and lastly recognition of the natural value of villages. The National Programme for the Adoption of the Acquis (NPAA) recently presented by the Polish Government follows a similar line to the "Strategy for Poland" in regard to rural development policy. Policy measures to assist farms in less-favoured areas are under development. Currently the only preferential treatment for these areas is an exemption from the agricultural tax for land of the poorest quality (land classes V and VI).

The principal environmental problems in Poland are linked to industrial, rather than agricultural activity, and so even though Poland was the first CEEC to develop a national environmental policy, it is only recently that agri-environmental issues have begun to receive much attention.

Outlook

As regards policy, it is expected that Poland will gradually adapt its market and structural policy to be more compatible with the Community aquis. Border measures will remain compatible with international agreements.

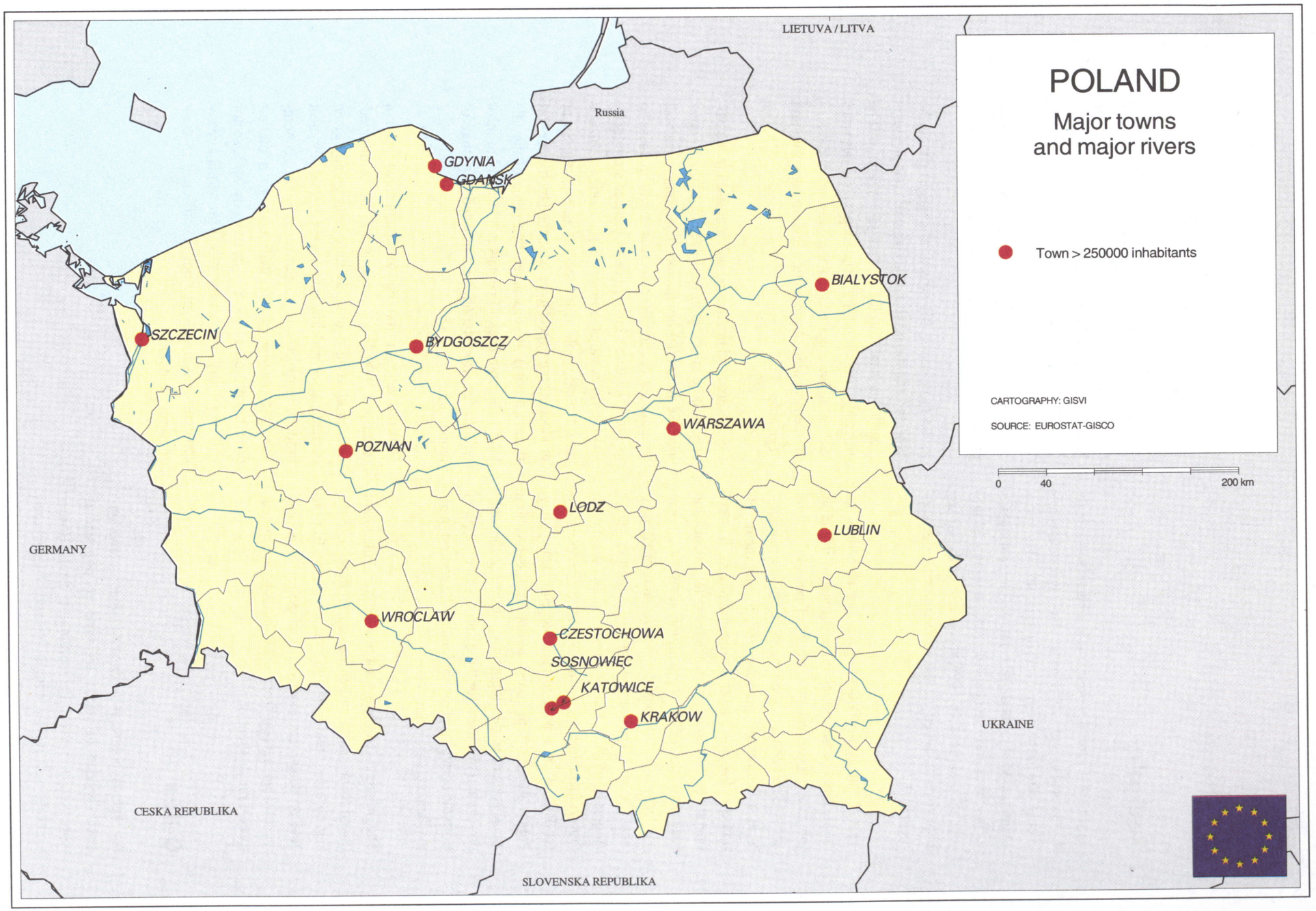
The general economic background is for sustained moderate to good growth which will impact positively on the demand for agricultural products.

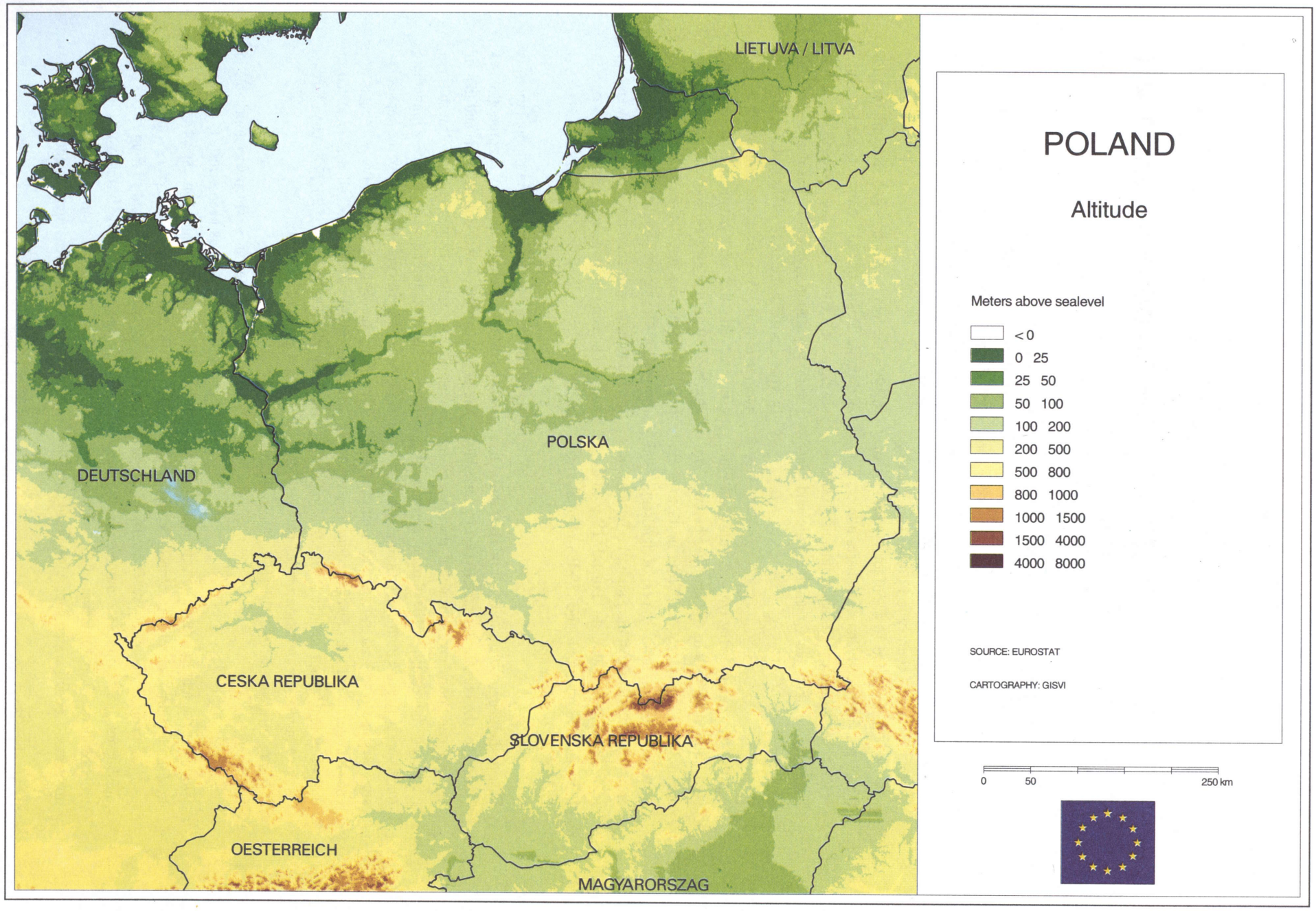
The food processing industry will continue to develop vigorously with the exception of the 'first stage processing sector' where changes will remain slow.

In the farm sector, big structural changes cannot be expected and the small farms size will continue to be a particular handicap for modernisation. This will be especially important for land dependant activities such as arable crops and grazing livestock but less so to intensive animal production and perhaps fruit and vegetables.

Cereals area and production will increase but the balance will be taken up in feed use due to the forecast increase in animal production. The potato area will continue its decline. Rapeseed area will increase to its pre 1989 levels but will be influenced strongly by short term weather and price fluctuations. In this case, Poland would again become an exporter. Sugar production can expect to be contained by the support system (quota). It is assumed that some of the idle land will come back to cereals production but most will go for afforestation, be converted to pasture or remain idle.

Milk production is foreseen to expand slowly but not reach pre 1990 levels, exports will be maintained. Beef production is unlikely to recover greatly given current prices and low consumer demand. Pigmeat production which was least affected by the economic transformation process will undergo a modest growth with some exports. The most dynamic sector will be poultry where very strong growth is already apparent though this may not be sufficient to meet consumer demand.


POLAND
Major towns
and major rivers
Town > 250000 inhabitants
CARTOGRAPHY: GISVI
SOURCE: EUROSTAT-GISCO
0
40
200 km
LIETUVA / LITVA
Russia
GDYNIA
GDANSK
BIALYSTOK
SZCZECIN
BYDGOSZCZ
WARSZAWA
POZNAN
LODZ
LUBLIN
GERMANY
WROCLAW
CZESTOCHOWA
SOSNOWIEC
KATOWICE
KRAKOW
UKRAINE
CESKA REPUBLIKA
SLOVENSKA REPUBLIKA


LIETUVA / LITVA
POLSKA
DEUTSCHLAND
CESKA REPUBLIKA
SLOVENSKA REPUBLIKA
OESTERREICH
MAGYARORSZAG
POLAND
Altitude
Meters above sealevel
< 0
0 25
25 50
50 100
100 200
200 500
500 800
800 1000
1000 1500
1500 4000
4000 8000
SOURCE: EUROSTAT
CARTOGRAPHY: GISVI
0
50
250 km

1. General overview

1.1 Geography, Climate and Demography

Poland runs from the Baltic Sea to the Carpathian Mountains, with a total area of 312 680 km^2 making it the ninth largest country in Europe. This equates to 9.7% of the area and 10.4% of total population of the current European Union. It shares borders with seven other countries: Russia, Lithuania, Belarus, Ukraine, Slovakia, the Czech Republic and Germany.

Most of the country is flat with generally low lying land; more than 75% of the land lies below 200m and only 2.9% above 500m. From north to south there are several major types of landscape and around 10 000 lakes. In the South, the Tatra mountains exceed 2 000m. In Poland 18.5 million hectares is agricultural land (59.1% of total area) and 28.2% is afforested.

Due to the geographical location of Poland and its landscape, the climate is characterised by unstable weather conditions and substantial fluctuations in the length of the seasons. The climate represents the transition between continental Europe (fairly dry summers and cold winters) and the Atlantic-influenced moderate climate of western Europe. Average annual air temperatures range from 6.0°C to 8.8°C. Average annual precipitation ranges between 500-600 mm in lowlands to 1200-1500 mm in mountainous areas.

Following the administrative reform in the seventies, the territory was organised in 49 voivodships, each of them representing between 0.5 to 1 mio inhabitants. 2483[1] gminas (communes) are the basic units of the territorial division of the country with an elected Council which supervises local authorities. An administrative reform decided in July 1998 reduces the a number of voivodships from 49 to 16, along with the creation of 308 poviats, an additional administrative level between the voivodship and the gmina.

In 1997, the total population was 38.6 million with an average density of 123 inhabitants per km^2, consisting almost entirely of ethnic Poles (97.6%). The natural population growth rate has declined steadily from a peak in the early 1980s and is forecast to average only 0.15% growth per year to 2000. It is estimated that the total population will increase slowly to 39 million by 2000 and reach 40.3 million in 2010. Of the total population, 38% are located in rural areas. The steady population drift from countryside to town will continue, but at a slower pace due to a housing shortage amongst other barriers to mobility.

By European standards Poland's population is young, but it is ageing steadily as the proportion of the population below working age falls and that of pensioners increases. Evidently this will result in a rising pension requirement, but the more immediate result will be a growth in the share of the population of working age. During 1991-95 the working population increased by 645 000 and it is expected to grow by 916 000 between 1996-2000 and a further 987 000 during 2000-2005.

The fall in life expectancy which was noticeable in the mid to late 1980s has been arrested; according to figures from 1995 males can expect to live for 67.6 years and females 76.4 years. Since 1980, child mortality rates have declined from 25.5 deaths in the first year per 1,000 live births to 11.1 in 1996. These figures are still high in comparison to European standards, however improvement is expected.

[1] Source: GUS 1996, 2468-EUROSTAT 1997

1.2 Institutions, the political situation and the economy

1.2.1 Constitution and Institution

The 1952 Constitution was amended and revised in October 1992 to enable Poland's transition to a parliamentary democracy. In May 1997 a new Constitution was adopted by referendum and in October the country's first post-communist Constitution became law.

The new constitution reflects the compromises between those wishing to preserve elements of the old orders and those seeking radical change. The main changes are:

- a constitutional limit on the size of public debt (60% of GDP, coinciding with one entry condition for the EMU) and the budget deficit must stay within the limits set by the parliament.

- the National Bank of Poland is constitutionally charged with safeguarding the value of the currency, and a Monetary Policy Board equally staffed by nominees of the state president, Sejm (lower chamber) and senate supervises its monetary policy decisions.

Parliament consists of two chambers. The Sejm is the supreme legislative body of the State consisting of 460 deputies elected for a period of four years and parties with a majority there are invited to form the government. The Senate (upper house) made up of 100 members also serves four years. Members of the Council of Ministers (cabinet) are nominated by the President at the request of the Prime Minister. Parliament must endorse the legislative programme.

The President, elected for a five-year term, is the representative of the state. He guarantees the Constitution, the country's sovereignty and is responsible for international co-operation and military alliances. In certain circumstances the President has the power to dissolve parliament and can also veto parliamentary legislation, although a three-fifths majority in the Sejm can overturn the veto.

1.2.2 Political Developments

At the general election in September 1993 the Democratic Left Alliance (SLD) which included many former communists won 20.4% of the vote and the Polish Peasant Party (PSL) 15.4%, forming an alliance whose combined 35.8% equated to 66% of the seats in the Sejm. Considerable tensions existed between the coalition partners. The SLD wanted to accelerate the cash and voucher privatisation programmes, cut industrial and agricultural subsidies and improve the climate for foreign investment in order to achieve its ambitious growth and anti-inflation targets. The PSL put more emphasis on loyalty to its small-farmer base, with its continued effort to maintain subsidised credit and express its misgivings over privatisation.

The parliamentary elections held on 21 September 1997 saw the defeat of the SLD/PSL government, by the Polish Solidarity Electoral Action (AWS) and the Freedom Union (UW) securing a working majority of 57%. The ratio of AWS/UW in the Council of Ministers is 5:2 (against 7:2 in the parliament), but many of the leading posts fell to the AWS. The AWS is the electoral wing of the Solidarity trade union. It is also an umbrella organisation designed precisely to bring about unity on the political right. The new government's objectives include: lower tax rates; higher expenditure for health, education, judiciary, and public safety; completion of privatisation; reform of social security; reduction of the budget deficit; combating unemployment and rural development.

Since September 1989, when the first Solidarity prime minister, Tadeusz Mazowiecki, was appointed, Poland has had two presidential and two parliamentary elections, a further seven prime ministers and at least as many governments. In October 1997

Jerzy Buzek became the eighth Prime Minister of Poland since 1989. Jacek Janiszewski was appointed Minister of Agriculture and the Food Economy.

The frequent changes in the administration do not seem to have greatly harmed economic growth which continues at a good pace and although the present coalition is fragmented it has been stable up to July 1998.

1.2.3 The Economy

The Polish economy experienced a severe recession in 1990 and 1991. In 1992 the decline came to an end, real GDP accelerated steadily, averaging an annual growth of 5.3% in 1993-95. The growth rate peaked at 7% in 1995 and in 1997 real GDP increased by 6.9%. While the 1992 recovery was mainly driven by domestic consumption, with exports playing a subsidiary role, in 1994 investment took on a more significant part (table 1.2.3-1).

Poland's economy continues to grow fast on a sound macroeconomic basis, which appears to be strengthening further with the implementation of the new central bank law and the financial strategy of the new government. An extension of the period with GDP growth between 5 and 7%, which has entered its fifth year, should allow the government to speed up the pace of restructuring and social reform. Several structural reform plans have been put forward, but almost invariably they have run into social unrest and political opposition, even within the government coalition. At the same time, the flare-up of inflation in the early months of 1998 has triggered wage increases which appear to be difficult to contain.

Gross domestic product increased by 6.9% in 1997, which is between 1 and 2 percentage points higher than expected by most forecasters a year ago. The rise in domestic demand was driven by private investment, which in real terms was 22% higher than in 1996. This was even a slight improvement on the growth of investment in the previous year, but more importantly from a macroeconomic point of view the increase in investment was no longer accompanied by a decline in the savings rate. Private consumption in 1997 grew at the same pace as GDP.

Industrial output rose by 10.8% in 1997, while employment in the same sector fell by 0.7%. The share of the private sector in industrial production increased to 64%, partly because of privatisation. Construction and assembly output in 1997 was 16% higher than in 1996. This sector is set for further expansion, following a notable increase in building permissions. It should be noted that part of construction activity still takes place in the informal sector. Nevertheless, there is a significant shortage of housing and, especially in the larger cities, rents for newcomers in the housing market can easily be higher than the average wage.

Table 1.2.3-1: Main Macro-Economic Indicators

		1990	1991	1992	1993	1994	1995	1996	1997
GDP (Real terms)	% change	-11.6	-7.0	2.6	3.8	5.2	7.0	6.1	6.9
GDP per capita	ECU			1698	1913	2022	2366	2783	3150
Inflation	% change	618.0	71.1	43.0	35.3	32.2	27.8	19.9	14.9
Unemployment	% of labour force	6.3	11.8	14.3	16.4	16.0	14.9	13.6	10.5
Budget balance	% of GDP	0.2	-3.8	-6.0	-2.8	-2.7	-2.6	-2.5	-1.4
Exchange rate	ZL/ECU	1.206	1.307	1.766	2.119	2.703	3.135	3.377	3.705
Current account	% of GDP			-0.54	-2.55	-2.49	4.61	-1.03	-3.14
Trade balance	Bio ECU	4.3	-0.5	-2.1	-4.0	-0.7	-1.4	-6.5	-7.4
Foreign debt	bio ecu	37.1	39.3	35.5	38.7	35.6	33.6	31.9	33.8

Source: GUS, National Bank of Poland, DG II.

1.2.4 Currency

Poland's official currency is the złoty (zł or PLN) divided into 100 groszy (1 new złoty is the equivalent of 10,000 old Polish złoty, that constituted legal currency before the January lst, 1995). The value of the złoty is linked to a basket of western currencies, whose weights in the basket reflect their relative importance in Poland's foreign trading transactions; the basket is made up of the USD (45%), the Deutschmark (35%), the British pound (10%), the Swiss franc (5%) and the French franc (5%).

1.2.5 Trade

Polish trade has been reoriented since the beginning of the economic transformation process in 1989. The major structural change in Poland's trading relationship is due to the collapse of the COMECON-trading block. In 1997, Poland exported 64% of total exports to the EU and imported 64% from the EU. Poland is the seventh trade partner for the EU. More recently however, Polish exports to Central and Eastern Europe and Russia has rapidly expanded (presently 20-24% of Polish exports).

The changes in the direction of trade have been accompanied by shifts in the products exchanged. The emerging export pattern with the EU includes a growing importance of wood and timber products, declining importance of fuel and minerals and a sharp fall in the role of food and agriculture. In comparison, imports of machinery, equipment and chemical products from Western suppliers have grown sharply.

In the second half of 1997, exports began to grow as fast as imports. This favourable development, together with the growth in GDP, kept the current account deficit away from Poland's self-declared danger zone of 6-8% of GDP. The likelihood that the current account deficit will end up in this range in the years to come has diminished. The deficit in 1997 amounted to $4.3 billion – or 3.2% of GDP – which is much better than expected during most of last year. It is also comfortably financed by an increasing inflow of foreign direct investment, which amounted to $6.6 billion in 1997.

One uncertainty is the surplus in unrecorded trade, which appears to be on a declining trend, although it still amounted to slightly more than $6 billion (or 4.5% of GDP) in 1997, according to the data of the National Bank of Poland (NBP). The surplus is supposed to be related to "tourist" trade across the borders with Germany, Russia (Kaliningrad), Belarus and Ukraine. The "foreigners law", which entered into force on 1 January, introduced stricter controls and visa regulations at Poland's eastern borders, partly in anticipation of the future obligations of EU membership. Although the implementation of the new law was softened in response to the initial confusion and protest of traders, there are indications that truck traffic across some of the eastern borders is increasing and that at least part of the previously unclassified and informal trade is now officially recorded.

1.2.6 Prices

The year-on-year rate of consumer price inflation in May 1998 was 13.3%, still down from 14.2% in February 1998. Inflation now appears to be back on course to fall to single-digit figures by the end of this year, starting from just over 13% at the end of 1997. However, the inflationary expectations fuelled by the short-lived rise in inflation in the first two months of the year have already generated real wage increases of 6% in the business sector – far in excess of the 3.2% assumed in the government budget for 1998. This has cast doubt on the ability of the tripartite commission to contain such wage increases. The government has announced plans to publish a list of the state-owned companies which have allowed excessive wage growth in recent months.

As was widely expected, the NBP's monetary policy committee decided at the end of February to reduce the monthly devaluation of the złoty against a basket of currencies to 0.8%. At the same time, it widened the band of exchange rate deviations from the central rate to 10% on either side. Since then, the złoty has been bumping up to and over the old 7% band. During 1997, the NBP intervened intramarginally when the zloty rose to more than 2% above the central parity and attempted to increase the downward risk by allowing for larger fluctuations below the central rate in the rare occasions of downward pressure. The continued inflow of foreign portfolio capital in the early months of 1998 was no surprise, given that the return on Polish treasury bills in terms of Deutschmarks was about 16%.

1.2.7 Public finance

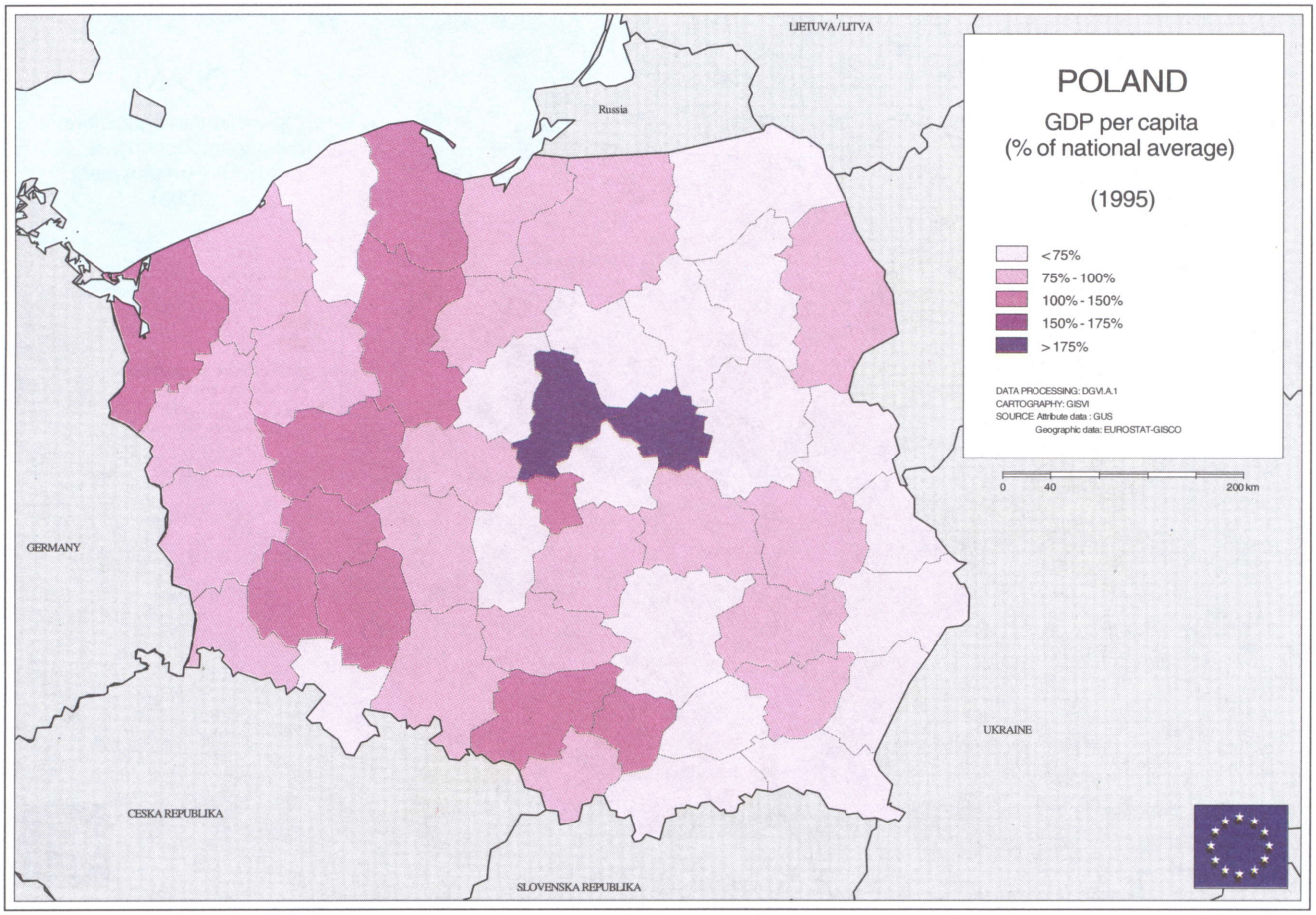
In March 1998, the Ministry of Finance presented its Medium-term Financial Strategy, which includes the best possible estimate of the general government deficit in accordance with EU definitions. This deficit was 3.1% of GDP in 1997 - high considering Poland's rate of economic growth. In the medium-term strategy, it is assumed that the deficit will be eliminated in 2003. The bigger challenges are, however, the reduction of government expenditure and taxation and the envisaged shift between expenditure categories. Poland currently has a large and growing public pension bill. While the dependency ratio of retired people to the working population will be stable for the next seven or eight years, the demographic situation will eventually place a strain on the resources available. The proposals unveiled in 1997 for a new three-pillar pension system are due to start in 1999. Workers will be required to top up their state pensions with compulsory contributions to private schemes.

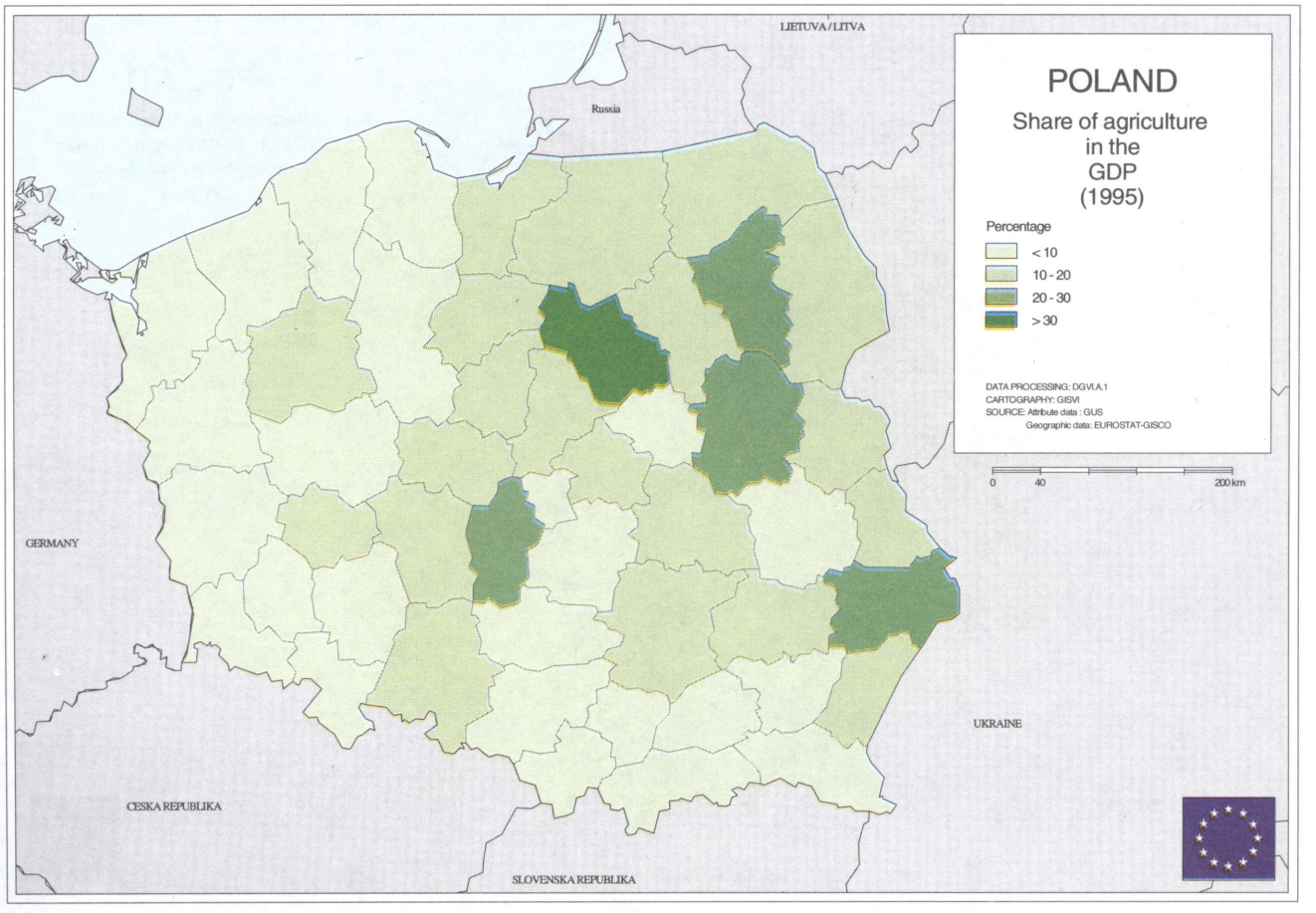
1.2.8 Administration

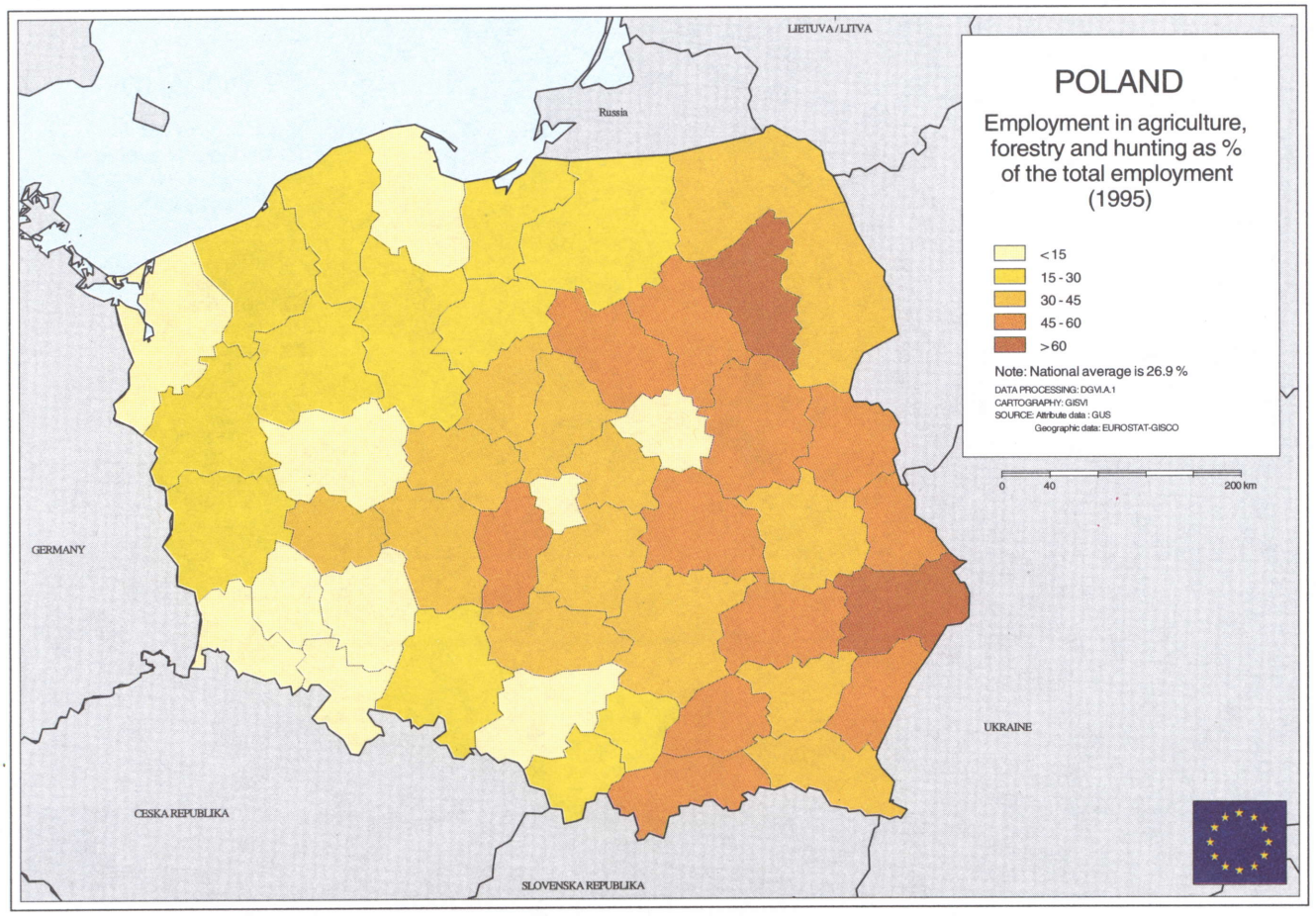
Representatives at all three levels of government the 16 new voivods or provinces, 392 new powiats or districts and the 2483 gminas or communes will be elected and local authorities will receive greater responsibilities, including financial ones. At present, the budget of all local administrations combined amount to 6% of GDP. The reform, to which the new government is firmly committed, would shift 10% of GDP from central to local and regional authorities, so that with time both levels would have budgets of approximately the same size.

1.2.9 Unemployment

Although the regional distribution of unemployment remains uneven, the differences have been diminishing and the rapid fall in unemployment in recent years has been widespread. The unemployment rate in the country as a whole fell from 13.2% at the end of 1996 to 10.5% at the end of 1997. In urban areas such as Warsaw, Krakow or Poznan, unemployment is very low (3%), but rates of more than 25% are observed in the Northern part of Poland, where state-owned farms have collapsed and obsolete factories have closed down. Employment increased by 0.6% only in 1997, which corresponds with about 95 thousand jobs. The largest part of these jobs was created in the services sector. The discrepancy between the net inflow into the employed labour force and the outflow of registered unemployed can be explained by the fact that there is little incentive to register since unemployment benefits are low and 70% of the unemployed do not receive benefits at all (diagram 1).


LIETUVA/LITVA
Russia
POLAND
GDP per capita
(% of national average)
(1995)
<75%
75% - 100%
100% - 150%
150% - 175%
>175%
DATA PROCESSING: DGVI.A.1
CARTOGRAPHY: GISVI
SOURCE: Attribute data : GUS
Geographic data: EUROSTAT-GISCO
0
40
200 km
GERMANY
UKRAINE
CESKA REPUBLIKA
SLOVENSKA REPUBLIKA


LIETUVA/LITVA
Russia
POLAND
Share of agriculture
in the
GDP
(1995)
Percentage
<10
10 - 20
20 - 30
>30
DATA PROCESSING: DGVI.A.1
CARTOGRAPHY: GISVI
SOURCE: Attribute data : GUS
Geographic data: EUROSTAT-GISCO
0
40
200 km
GERMANY
UKRAINE
CESKA REPUBLIKA
SLOVENSKA REPUBLIKA


POLAND
Employment in agriculture, forestry and hunting as % of the total employment (1995)
<15
15 - 30
30 - 45
45 - 60
>60
Note: National average is 26.9 %
DATA PROCESSING: DGVI.A.1
CARTOGRAPHY: GISVI
SOURCE: Attribute data : GUS
Geographic data: EUROSTAT-GISCO
0
40
200 km
LIETUVA/LITVA
Russia
GERMANY
UKRAINE
CESKA REPUBLIKA
SLOVENSKA REPUBLIKA

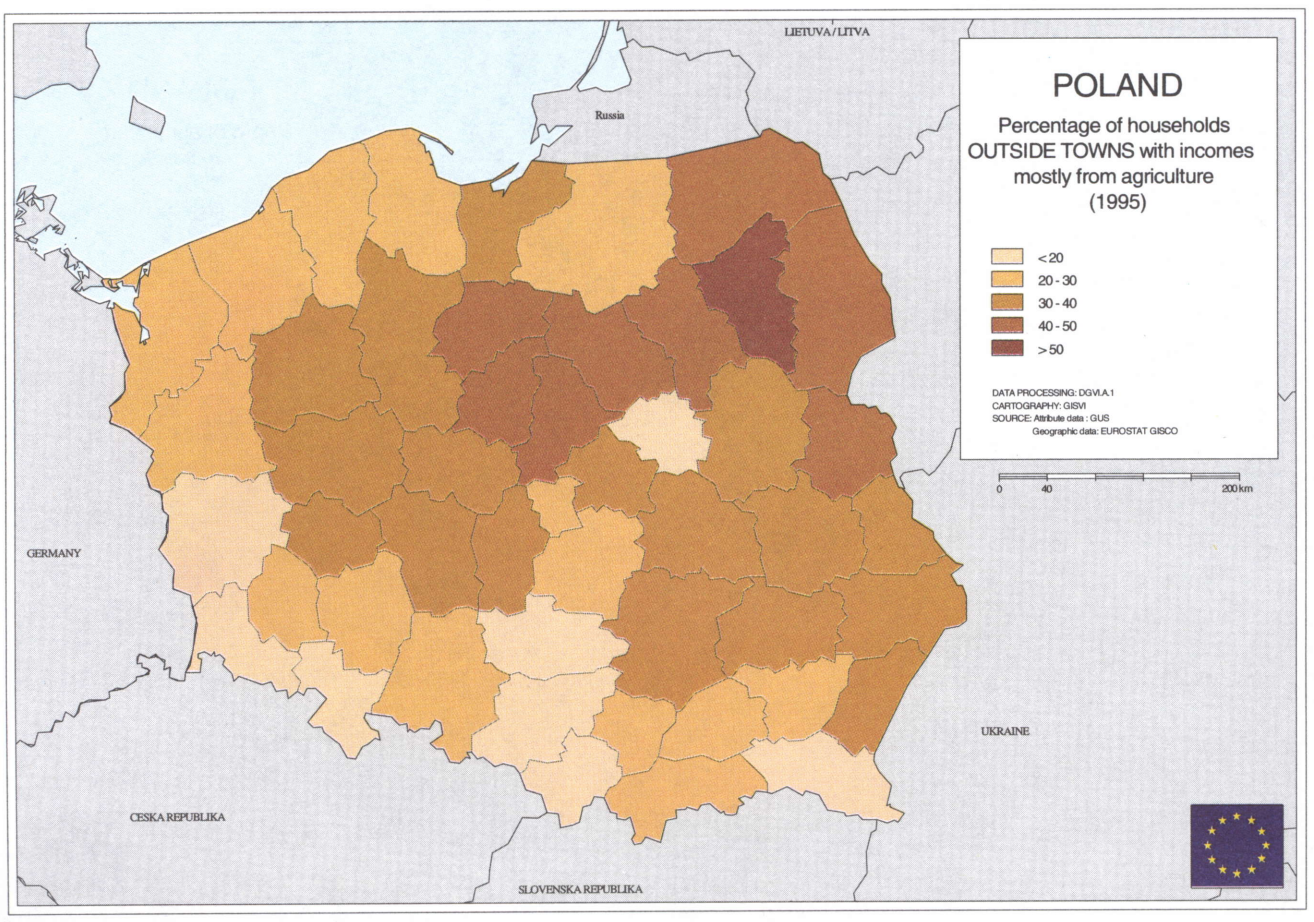

POLAND
Percentage of households OUTSIDE TOWNS with incomes mostly from agriculture (1995)
<20
20 - 30
30 - 40
40 - 50
>50
DATA PROCESSING: DGVI.A.1
CARTOGRAPHY: GISVI
SOURCE: Attribute data : GUS
Geographic data: EUROSTAT GISCO
0
40
200 km
LIETUVA/LITVA
Russia
GERMANY
UKRAINE
CESKA REPUBLIKA
SLOVENSKA REPUBLIKA

Diagram 1. The New Voivodships (July 1998)


POLAND
Adminstrative regions (June 1998)
CARTOGRAPHY: GISVI
SOURCE: EUROSTAT-GISCO
0 40 200 km
LIETUVA / LITVA
Russia
GERMANY
CESKA REPUBLIKA
SLOVENSKA REPUBLIKA
UKRAINE
SLUPSKIE
ELBLASKIE
SUWALSKIE
GDANSKIE
OLSZTYNSKIE
KOSZALINSKIE
LOMZYNSKIE
BYDGOSKIE
SZCZECINSKIE
TORUNSKIE
OSTROLECKIE
BIALOSTOCKIE
CIECHANOWSKIE
PILSKIE
WLOCLAWSKIE
PLOCKIE
WARSZAWSKIE
BIALSKOPODLASKIE
POZNANSKIE
GORZOWSKIE
KONINSKIE
SKIERNIEWICKIE
SIEDLECKIE
LODZKIE
KALISKIE
ZIELONOGORSKIE
LESZCZYNSKIE
SIERADZKIE
RADOMSKIE
LUBELSKIE
CHELMSKIE
PIOTRKOWSKIE
KIELECKIE
ZAMOJSKIE
LEGNICKIE
WROCLAWSKIE
TARNOBRZESKIE
JELENIOGORSKIE
CZESTOCHOWSKIE
WALBRZYSKIE
RZESZOWSKIE
PRZEMYSKIE
OPOLSKIE
KRAKOWSKIE
KATOWICKIE
TARNOWSKIE
BIELSKIE
KROSNIENSKIE
NOWOSADECKIE

1.3 Agriculture in the economy

1.3.1 Share of agriculture in the economy

The contribution of agriculture to total GDP is falling though still relatively important at 6.0% in 1996 compared with 12.9% in 1989 (table 1.3.1-1). While not suffering the same depression as the GDP in 1990 and 1991 it has suffered from drought in 1992 and 1994 and has not grown at the same speed as the rest of the economy subsequently. Since the beginning of the transition, agricultural recession has been caused by an unfavourable development of the terms of trade and reduced production, mainly in the livestock sector. The agricultural labour force still holds a 26.7% share of the total employment. This high figure is inflated by a certain amount of underemployment and hidden unemployment in rural areas. Nevertheless, this important difference between GDP contribution and persons employed in agriculture indicates very low labour productivity and reflects the importance of part-time farming (table 1.3.1-1).

Household expenditure on food (exc. alcohol) declined from 38% in 1986 to around 32.5% in 1997 (34.7% in 1996). Consumption subsidies were substantially cut back after the economic transition making food more expensive, however at the same time, prices for other consumption items like gas, rents, water etc. also increased considerably. In recent years the economic growth means households have more to spend on non food items. The structure in food consumption has changed since transition. Per capita consumption has increased for fruit and vegetables, vegetable oils, bread and other grain products, but declined for meat, milk, butter and eggs. Recent trends however are for these latter animal products to increase again including cheese. Relatively stable consumption can be observed for potatoes and, since 1992, for sugar. There is a visible trend for differentiated food consumption patterns in which quality aspects and processed food products are gaining importance.

The degree of self sufficiency for main products is still close to 100% which is partly due to reduced consumption levels as a consequence of decreasing

Table 1.3.3-1 Agriculture in the economy

		1989	1990	1991	1992	1993	1994	1995	1996	1997
Products										
GDP	%var	0.2	-11.6	-7.0	2.6	3.8	5.2	7.0	6.1	6.9
Gross Agric, Product (GAP)	%var	0.9	-0.3	6.8	-12.3	3.0	-9.3	10.7	1.1	-0.1
Share of Agric, in GDP	(%)	12.9	8.4	6.9	6.9	6.8	6.3	6.4	6.0	
Share Food Processing in GDP	(%)	6.8	8.2	9.6	9.2	7.2	5.0		6.0	
Employment										
Share of Agric.	(%)	26.7	25.8	26	25.5	25.5	25.4	25.9	26.7	
Share of Food Processing	(%)	n.a.	2.4	2.9	3.3	3.3	3.4			
Gross Agricultural Output (GAO) of which:	%var	1.8	-5.5	-1.6	-12.7	6.8	-9.3	10.7	1.1	-0.9
Plant production	%var	5.9	-4.9	-2.8	-21.2	23.2	-14.9	12.2	2.1	
Livestock production	%var	-0.5	-5.8	-0.4	-4.1	-11.1	-0.7	8.7	-0.3	
Shares of Subsectors										
- Crops	(%)	57.4	50.6	47.2	51.7	58.1	52.2	58.6	59	
- Livestock	(%)	42.6	49.4	52.8	48.3	41.9	47.8	41.4	41	
Share of Agric, on Exports	(%)	14	14.1	16.6	14.6	11.6	12.1	11	11.3	13.0
Share of Agric, on Imports	(%)	13.9	8.2	13.5	12.4	12	11.2	10.3	10.7	9.0

Source: GUS, National Bank of Poland, DG II.

real incomes over the last five years. Some goods like fresh and processed fruit and vegetables, live animals and sugar are also destined for export markets, whereas for others like grain maize, durum wheat, protein feed, raw tobacco and food preparations Poland's trade balance shows a structural deficit. In 1997, agricultural exports represented 13.0% of all Polish exports and 9.0% of total imports.

1.3.2 Structure of agricultural output

In terms of global production, the average ratio of the value of crop production to animal production between 1989 and 1996 has been 55 to 45 (figure 1). These have been considerable fluctuations due to livestock destocking in the early 90s, droughts in 1992 and 1994 and the effect of a pig cycle exacerbated by high cereal prices e.g. 1993 and 1996. In 1996, the ratio was 59 to 41 though in the future the trend might move towards livestock as poultry production increases strongly and milk production recovers. In terms of marketed production, the ratio is the inverse at 40 to 60 in 1996 as crop products are used for intermediate and home consumption (figure 2).

Figure 1. Selected products in agricultural output 1996

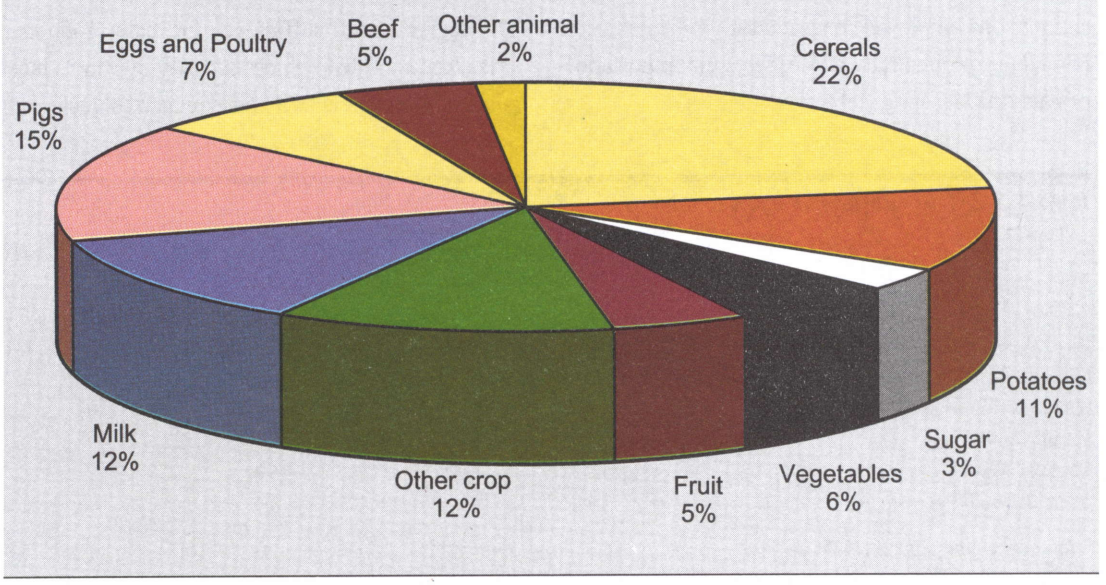
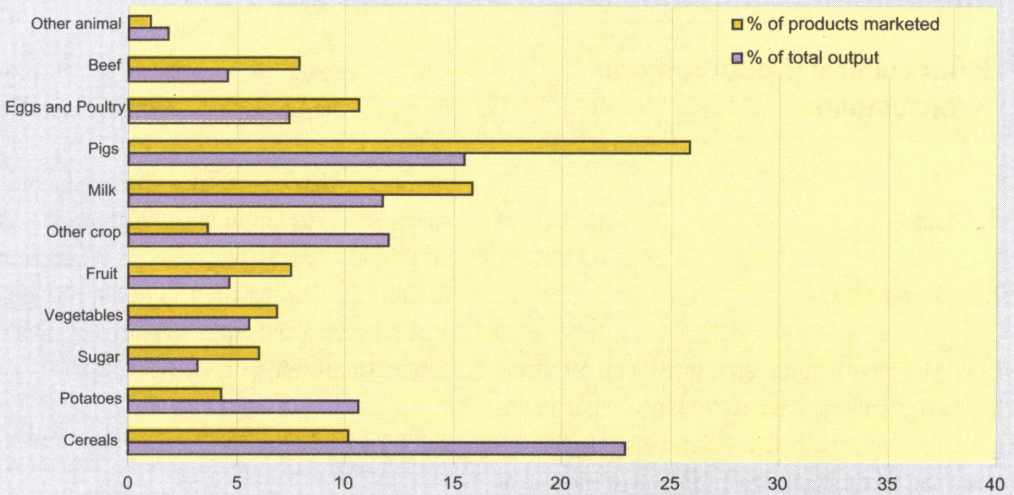


Figure 2. Share of selected agricultural products in total production and in product marketed



	Cereals	Potatoes	Sugar	Vegetables	Fruit	Other crop	Milk	Pigs	Eggs and Poultry	Beef	Other animal
% of products marketed	10,2	4,3	6,1	6,9	7,5	3,7	15,9	25,9	10,6	7,9	1,0
% of total output	22,9	10,6	3,2	5,6	4,7	12,0	11,7	15,5	7,4	4,6	1,8

2. Agricultural and rural society

2.1 Agricultural production and consumption

2.1.1 Land

2.1.1.1 Land Use

Of the 31.3 mio ha total area in Poland, 59% was Utilised Agricultural Area (UAA) in 1996, amounting to 18.5 mio ha (table 2.1.1-1 and figure 3). Forests and forest land account for 8.8 million ha or 28 % of the country over 80% of this is state owned. As for "other areas", 13% of the land surface is under buildings, water, roads and includes other idle land.

Of the UAA, arable land is by far the most important at 14.1 mio ha, followed by meadows (2.8 mio ha), permanent pastures (1.4 mio ha) and orchards (0.26 mio ha). The share of arable land in relation to UAA is around 76 % whereas the corresponding figure for the EU-15 is 56% (table 2.1.1-1).

Arable land has been in slow but continuous decline since the 1970s but in the 1990s this has accelerated to 0.4% year (table 2.1.1-2). While arable land has lost 1.0 mio ha (-5.0%) during the period, the area for permanent crops increased by 34%. Permanent pastures fell by 2.5% (table 2.1.1-2).

2.1.1.2 Land Quality

Soil quality in Poland is classified into six categories. High quality soils – classes I and II represent only 3.3% of the land area whereas medium quality soils represent 61.1% (table 2.1.1-3). The soil quality has a substantial impact on the plant production in the country. The most favourable agronomic conditions are in the south eastern region, western region, and south western regions (see map on soil quality and cereals yield). It is in

Table 2.1.1-1. Land use 1996 ('000 ha)

Country		31269	100%	%
o.w.	Forest	8814	28%	
o.w.	Others	3980	13%	
o.w.	Agricultural land	18474	59%	100%
o.w.	Permanent grassland/meadow	4125		22.3%
o.w.	Orchards (inc fruit bushes)	262		1.4%
o.w.	Arable land	14087		76.3%
o.w.	Idle land	1799		9.7%
o.w.	Cereals (inc maize)	8920		48.3%
o.w.	Potatoes	1342		7.3%
o.w.	Sugar beet	453		2.4%
o.w.	Rapeseed	283		1.5%
o.w.	Other industrial	22		0.1%
o.w.	Pasture	863		4.7%
o.w.	Vegetables	237		1.3%
o.w.	Other	170		0.9%

Source: Agric census 1996 GUS 1997

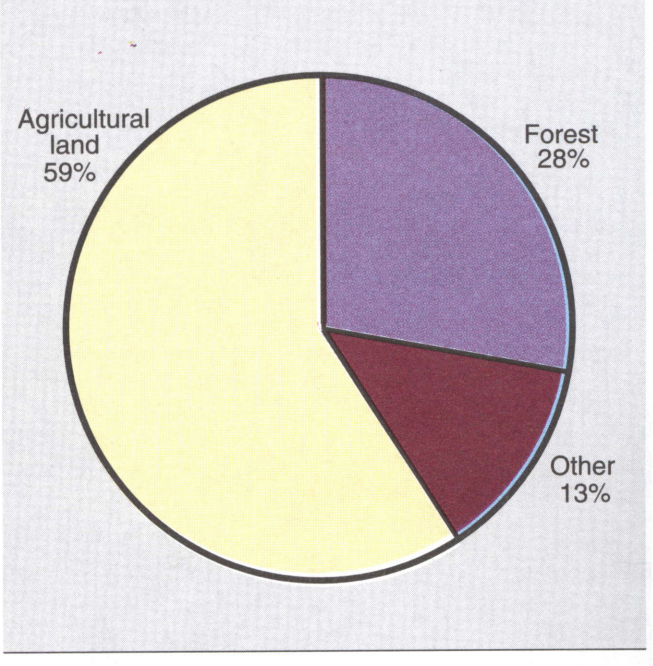


Figure 3. Agricultural land use 1996

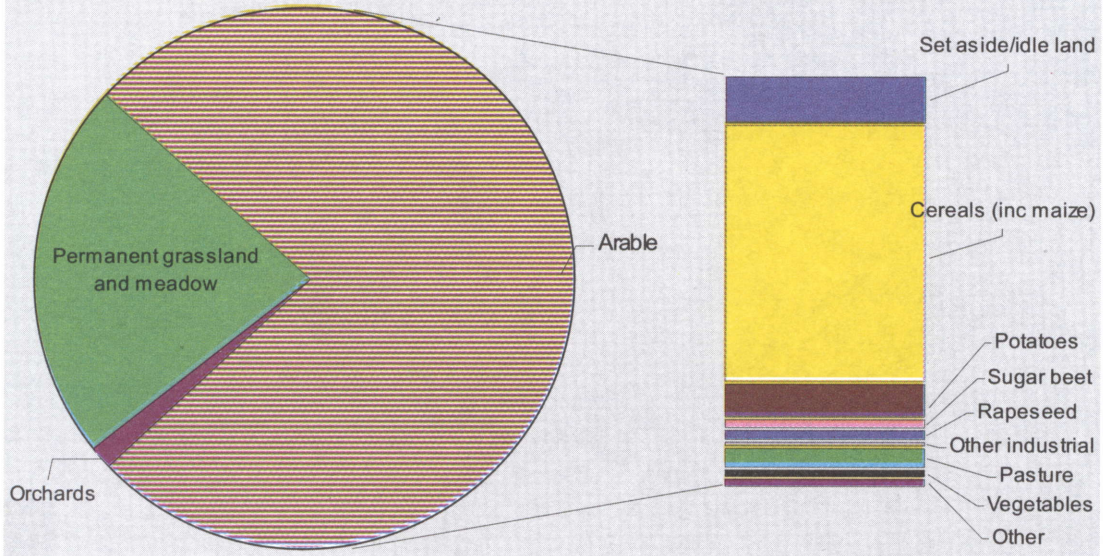


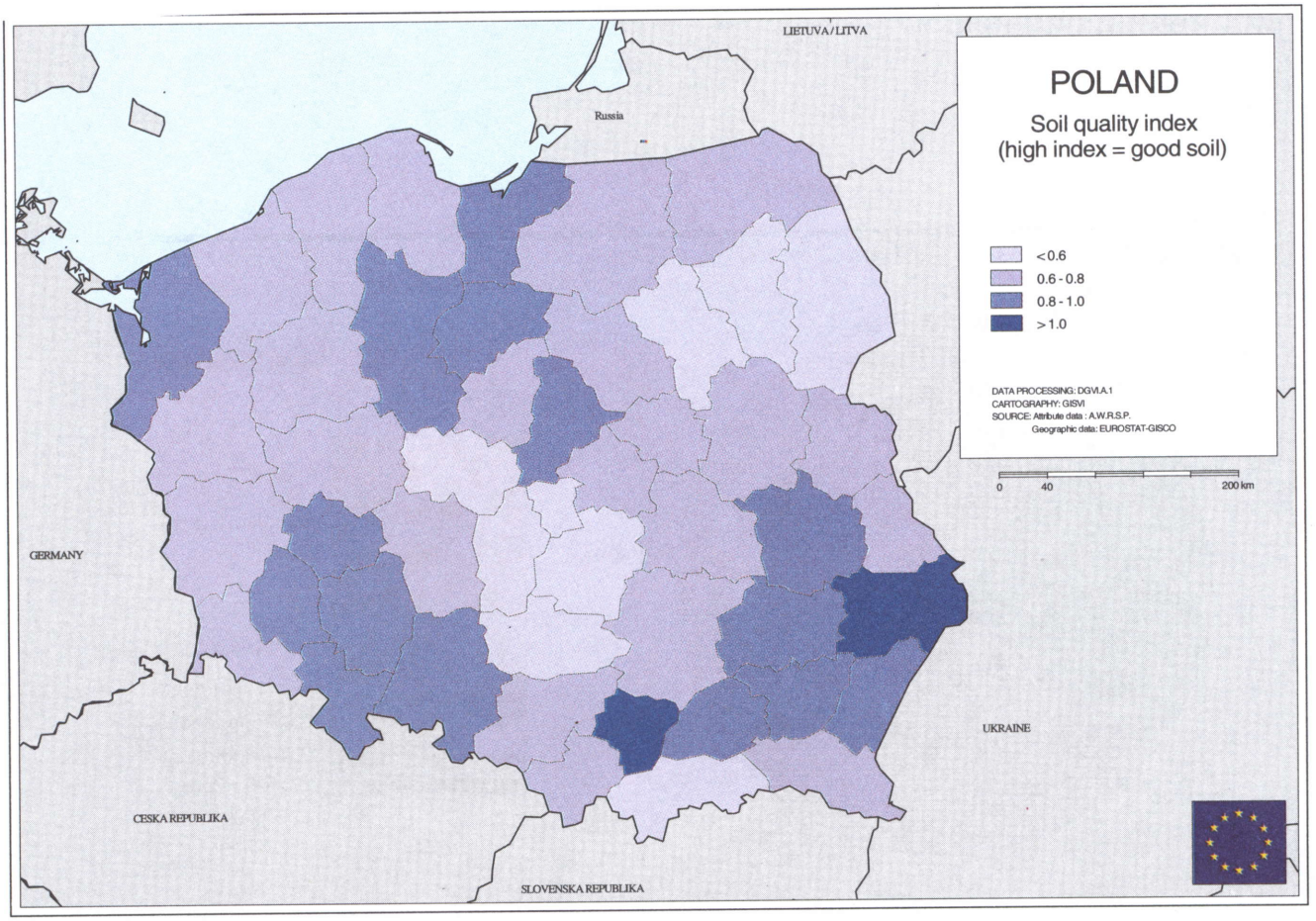
Table 2.1.1-2. Land use trends 1970 to 1996

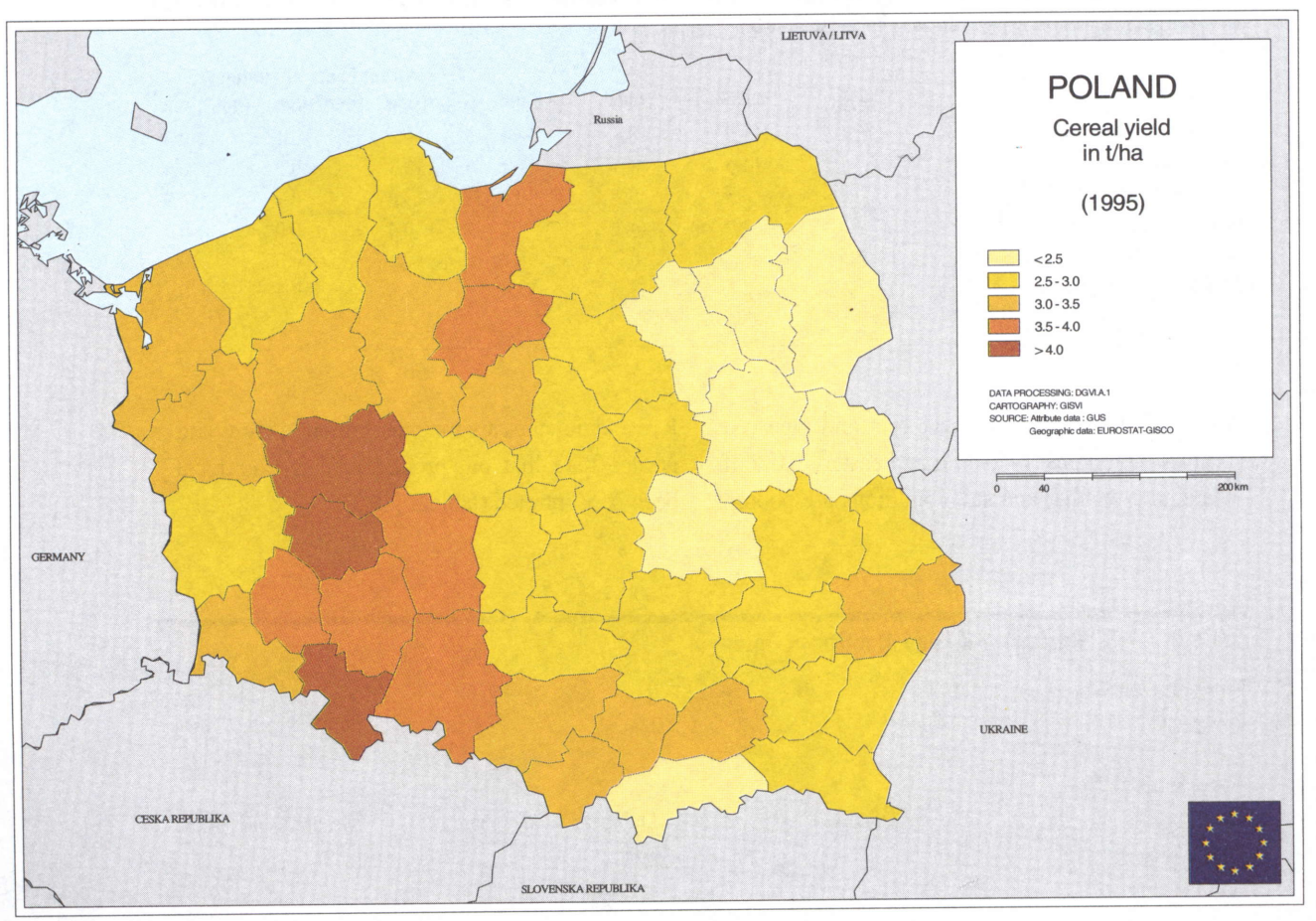
					Annual rate of change %		
	1970	1980	1990	1996	1980/1970	1990/1980	1996/1990
Agricultural area	19.5	19.0	18.8	18.5	-0.3	-0.1	-0.3
Arable land	15.1	14.6	14.4	14.1	-0.3	-0.2	-0.4
Permanent crops	0.2	0.3	0.3	0.4	3.6	0.1	0.9
Permanent pasture	4.2	4.0	4.1	4.1	-0.4	0.0	0.3
Forest & wood	8.5	8.7	8.7	8.8	0.1	0.0	0.3
All other land	2.4	2.8	3.0	3.0	1.6	0.7	0.1

these regions that wheat, sugar beet and rapeseed are important crops. In central and eastern parts of Poland, the weather and soil conditions are poorer. Rye and potatoes are the most common crops and it is also here that pig production has traditionally been concentrated (table 2.1.1-3).

Table 2.1.1-3. Agricultural Land Quality in Poland

Soil value class	**I**	**II**	**III**	**IV**	**V**	**VI**
% of land area	0.4	2.9	22.3	39.8	22.7	11.9
Agronomic index						
	Total Agricultural Land		Arable land and orchards		Meadows and pasture	
Index	0.79		0.85		0.59	


LIETUVA / LITVA
Russia
POLAND
Soil quality index
(high index = good soil)
<0.6
0.6 - 0.8
0.8 - 1.0
>1.0
DATA PROCESSING: DGVI.A.1
CARTOGRAPHY: GISVI
SOURCE: Attribute data : A.W.R.S.P.
Geographic data: EUROSTAT-GISCO
0
40
200 km
GERMANY
UKRAINE
CESKA REPUBLIKA
SLOVENSKA REPUBLIKA


LIETUVA / LITVA
Russia
POLAND
Cereal yield
in t/ha
(1995)
<2.5
2.5 - 3.0
3.0 - 3.5
3.5 - 4.0
>4.0
DATA PROCESSING: DGVI.A.1
CARTOGRAPHY: GISVI
SOURCE: Attribute data : GUS
Geographic data: EUROSTAT-GISCO
0
40
200 km
GERMANY
UKRAINE
CESKA REPUBLIKA
SLOVENSKA REPUBLIKA

2.1.2 Crops

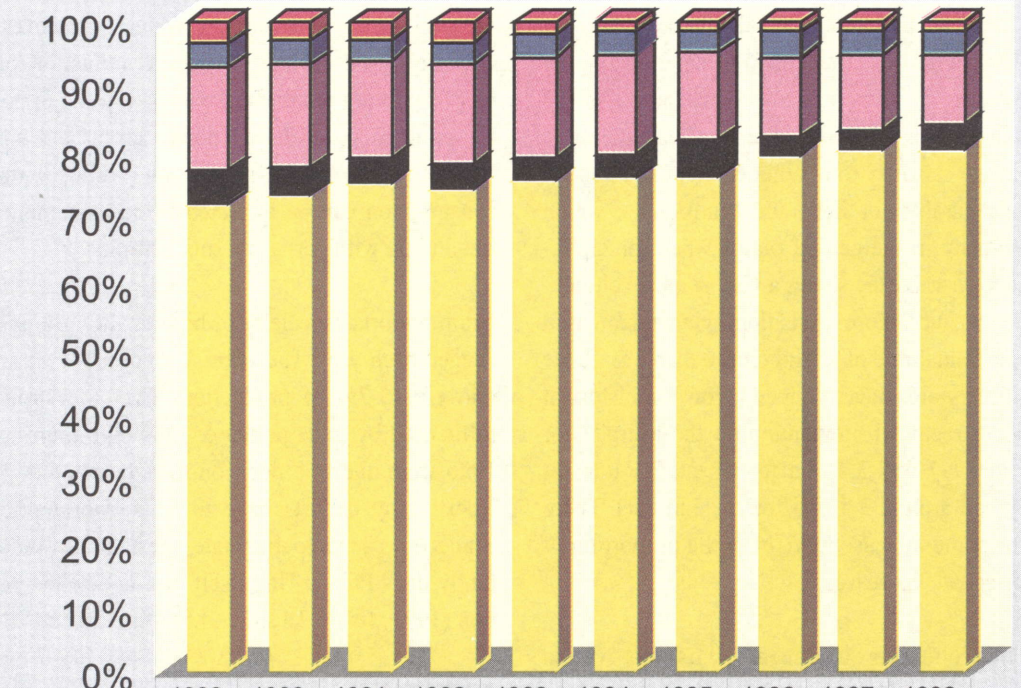
Total crop value accounted for 59.0% of gross agricultural output in 1996. In more detail, fruit & vegetables contributed 10.3%, wheat 9.6%, potatoes 10.6%, rye 4.0% and sugar beet 3.2%.

In 1997, arable land was 14.1 mio ha with cereals accounting for 8.8 mio ha (64% of arable land). Other important arable crops are potatoes (1.3 mio ha), fodder crops (1.1 mio ha), sugar (0.4 mio ha), oilseeds (0.3 mio ha) and pulses (0.1 mio ha) (figure 4). As much as 1.8 mio ha (13%) of arable land was not planted in 1996. This fallow land was mainly in northwestern regions where the state-owned farms are concentrated indicating certain problems connected with privatisation and management of these farm units. It mostly concerns poorer quality land some of which may eventually be absorbed into afforestation. A certain amount of this land is also found on uncultivated household plots.

2.1.2.1 Cereals

Cereals are grown on around 8.8 mio ha with an average yield of 2.9 t/ha in the period 1995 to 1997. Wheat is planted on 28% of the cereal area, followed by rye (26%), barley (14%), triticale (7%) and oats (7%). Wheat with its higher yield represents 33% of production. Almost 1.3 mio ha are planted to mixed grains, which are mainly used as animal feed. Total area planted to cereals has

Figure 4. Evolution of arable crops area ('000 ha).



	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998
Pulses	386	318	330	352	217	159	148	147	147	150
Sugar	423	440	361	376	399	400	384	453	419	400
Potatoes	1859	1835	1733	1757	1761	1697	1522	1342	1306	1200
Rapeseed	570	500	468	417	348	370	606	283	317	400
Cereals	8311	8493	8681	8279	8467	8445	8532	8679	8857	8725

Table 2.1.2-1 Total cereals (inc. maize) balance sheet

		1989	1990	1991	1992	1993	1994	1995	1996	1997	1998(f)
area	000 ha	8311	8493	8681	8279	8467	8445	8532	8679	8857	8725
yield	t/ha	3.24	3.29	3.20	2.41	2.76	2.57	3.03	2.91	2.87	2.87
production	000 t	26888	27971	27772	19928	23368	21733	25859	25245	25351	25077
stock change	000 t	1457	625	-1636	-756	857	-622	274	2292	-861	-1621
imports	000 t	3591	768	330	3183	804	1767	1945	3428	982	1145
exports	000 t	80	480	1885	93	44	79	268	222	116	84
available for util.	000 t	28942	27634	27853	23774	23271	24043	27262	26159	27078	27759
utilization	**000t**										
feed	000 t	18859	18335	18583	14609	13814	14674	17277	16062	16900	17900
seed	000 t	1892	1910	1816	1860	1870	1856	1919	1990	1961	1960
food	000 t	6517	5564	5704	5788	5934	5800	5815	5815	5812	5805
other	000 t	1674	1825	1750	1517	1653	1713	2251	2292	2405	2094
food in kg/capita	kg	172	146	149	151	154	151	151	151	150	150
selfsufficiency	%	93	101	100	84	100	90	95	97	94	90

increased slightly in recent years at the expense of oilseeds and potatoes although oilseeds appear to be increasing again (table 2.1.2-1).

The share of individual cereals in the total has remained rather static over the whole period 1989 to 1998 (figure 5). The once expected displacement of rye will probably remain rather limited, since this crop is less sensitive to weather changes and it is the most favourable for light and sandy soils, which predominate in the central plains where precipitation is lowest. Barley shows a very stable evolution. In the period before transition, yields increased with an annual rate of slightly more than 2%. Since transition, yields have dropped below the historical trend but regained momentum so the average for 1995 to 1997 was 3.4 t/ha for wheat, 3.1 t/ha for barley and around 2.5 t/ha for rye and oats. There may be some increase in yield as the proportion of winter cereals increases.

Cereal production in recent years has varied between 20 and 26 mio t, which under normal conditions is roughly in balance with total consumption. Direct human consumption is fairly static at 5.8 million tonnes (22 % of domestic use); This is expected to be 73% wheat and 21% rye in 1997/98. Spirits and brewing have a small impact on overall consumption. Therefore the real driving force in grain utilisation in future will be animal feeding. In 1996 due to expensive grains combining with a dip in the pig cycle, feed grains consumption fell to 16.1 million tonnes. In 1997 this had increased to 16.9 million tonnes as animal production recovered. Growing grain feeding will be a reflection of a recovery in pig numbers, the upward trend in poultry production, declining potato crops and some intensification in milk production. Production and consumption can be expected to develop more or less in line with perhaps a small surplus.

Grain imports especially of high quality grains are needed each year. The average since 1994 was 1.6 mio t or 5-7% of production. They are strongly influenced by trade policy e.g. the high imports in 1996 were due to a decision to replenish strategic stocks. Any exports have to be at world prices. Trade does tend to fluctuate substantially though rarely does Poland find itself in a net export position (1991) (table 2.1.2-2,3,4,5).

2.1.2.2 Potatoes

Potatoes are an important arable crop in Poland. For a large proportion of the rural population, potatoes are a semi-subsistence crop used mainly for animal feed and home consumption with only a small marketable surplus generated. Although in the last 10

Figure 5. Production of the main cereals 1991-1997 (' 000 t)

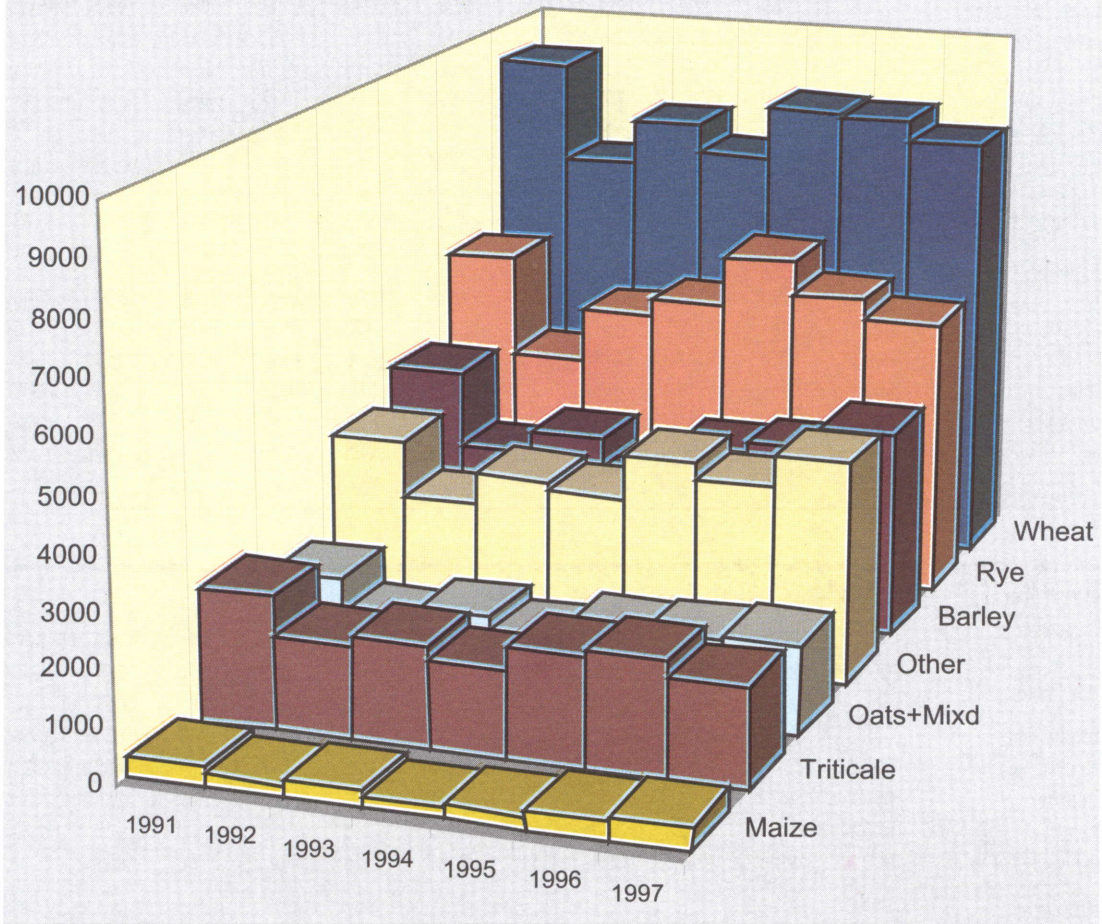


Table 2.1.2-2. Wheat balance sheet

		1989	1990	1991	1992	1993	1994	1995	1996	1997	1998(f)
area	000 ha	2195	2281	2437	2405	2477	2407	2407	2480	2555	2540
yield	t/ha	3.86	3.96	3.80	3.06	3.33	3.18	3.60	3.46	3.21	3.33
production	000 t	8462	9026	9270	7368	8243	7659	8668	8576	8193	8459
stock change *	000 t	1004	310	-991	-661	352	-149	437	1586	-856	-923
imports *	000 t	2565	697	200	764	500	786	1002	2186	320	475
exports *	000 t	4	207	900	27	33	71	223	206	50	75
available for util.	000 t	10019	9206	9561	8766	8358	8523	9010	8970	9319	9781
utilization											
feed *	000 t	4324	4137	4351	3543	2991	3302	3700	3500	3820	4420
seed *	000 t	578	602	594	613	607	602	645	675	670	670
food *	000 t	4654	3986	4129	4230	4330	4250	4260	4265	4270	4280
other	000 t	463	480	487	380	430	369	405	530	559	411
food in kg/capita	kg	123	105	108	110	113	110	110	110	111	111
selfsufficiency	%	84	98	97	84	99	90	96	96	88	86

* = FAO data

Table 2.1.2-3. Rye balance sheet

		1989	1990	1991	1992	1993	1994	1995	1996	1997	1998(f)
area	000 ha	2275	2315	2290	2034	2213	2436	2452	2415	2298	2300
yield	t/ha	2.73	2.61	2.58	1.96	2.26	2.18	2.56	2.34	2.31	2.33
production	000 t	6217	6044	5899	3982	4992	5300	6287	5652	5300	5348
stock change *	000 t	356	346	-415	-299	281	-375	-83	-100	17	62
imports *	000 t	110	1	20	654	24	17	10	162	2	110
exports *	000 t	12	15	650	32	0	1	33	0	2	3
available for util.	000 t	5959	5684	5684	4903	4735	5691	6347	5914	5283	5393
utilization											
feed *	000 t	3770	3440	3610	2682	2417	3209	3600	3200	2650	2800
seed *	000 t	486	477	417	453	458	470	465	475	465	465
food *	000 t	1214	1248	1243	1250	1300	1250	1260	1245	1250	1240
other	000 t	489	519	415	518	561	762	1022	994	918	888
food in kg/capita	kg	32	33	33	33	34	32	33	32	32	32
selfsufficiency	%	104	106	104	81	105	93	99	96	100	99

* = FAO data

Table 2.1.2-4. Barley balance sheet

		1989	1990	1991	1992	1993	1994	1995	1996	1997	1998(f)
area	000 ha	1175	1174	1237	1198	1168	1032	1048	1130	1242	1180
yield	t/ha	3.33	3.59	3.44	2.35	2.79	2.60	3.13	3.04	3.11	3.10
production	000 t	3909	4217	4257	2819	3255	2686	3279	3437	3866	3658
stock change	000 t	40	14	-131	41	244	-2	-293	184	135	-321
imports	000 t	627	2	10	754	178	693	448	447	210	335
exports	000 t	0	172	200	21	2	5	8	0	20	3
available for util.	000 t	4496	4033	4198	3511	3187	3376	4012	3700	3921	4311
utilization											
feed	000 t	3322	3108	3265	2701	2361	2603	3150	2730	2870	3340
seed	000 t	241	251	245	239	245	231	250	265	280	260
food	000 t	220	241	206	208	210	210	200	200	200	195
other	000 t	713	433	482	363	371	331	491	540	500	510
food in kg/capita	kg	6	6	5	5	5	5	5	5	5	5
selfsufficiency	%	87	105	101	80	102	80	80	92	100	85

years there has been a significant shift away from potatoes to wheat and partly rapeseed, potatoes are still Poland's third largest crop after wheat and rye at 1.3 mio ha in 1997. Because in Poland potatoes are often grown on poor soils, yields are relatively low and do not exceed 20t/ha (EU 30t/ha). Production in 1997 is estimated at around 20.8 mio tonnes (table 2.1.2-6).

Most of the marketed potatoes (25% of total utilisation) are for table consumption with the rest going for processing, largely for starch and alcohol production. Many farms continue to feed potatoes to pigs though the practice is becoming less widespread. While pig production in 1997 was above 1989 levels, feed use of potatoes in 1997 (half of total utilisation in 1989) has been reduced by over 30%. Losses at harvest and storage tend to be high. Imports are small and exports have fallen in recent years, accounting for around 2 % of production in 1997.

Table 2.1.2-5. Maize balance sheet

		1989	1990	1991	1992	1993	1994	1995	1996	1997	1998(f)
area	000 ha	51	59	70	56	55	50	48	69	77	65
yield	t/ha	4.77	4.91	4.85	3.67	5.32	3.75	4.96	5.05	5.40	4.85
production	000 t	244	290	340	206	290	189	240	350	416	316
stock change	000 t	0	27	0	162	-126	5	120	286	3	-436
imports	000 t	461	68	100	1000	92	255	465	631	450	225
exports	000 t	0	0	15	1	0	0	1	14	2	3
available for util.	000 t	705	331	425	1043	508	439	584	681	861	974
utilization											
feed *	000 t	543	253	304	952	429	373	495	605	780	890
seed *	000 t	17	14	13	13	14	11	12	15	13	12
food ~	000 t	33	40	84	55	49	45	50	45	48	45
other	000 t	113	24	24	23	16	10	27	16	20	27
food in kg/capita	kg	1	1	2	1	1	1	1	1	1	1
selfsufficiency	%	35	88	80	20	57	43	41	51	48	32

* = FAO data - ~ = GUS

Table 2.1.2-6. Potato balance sheet

		1989	1990	1991	1992	1993	1994	1995	1996	1997	1998(f)
area *	000 ha	1859	1835	1733	1757	1761	1697	1522	1342	1306	1200
yield	t/ha	18.50	19.79	16.76	13.31	20.60	13.59	16.35	20.30	15.90	18.33
production *	000 t	34391	36313	29038	23388	36271	23058	24892	27240	20770	22000
stock change	000 t	48	-815	-759	653	-131	965	-325			
imports *	000 t	0	39	2	267	13	29	25	35	35	30
exports *	000 t	789	1024	777	788	324	141	122	72	39	100
available for util.	000 t	33650	34512	27504	23521	35828	23911	24470	27203	20766	21930
utilization											
feed *	000 t	15727	17760	13872	10070	18604	10764	12798	12774	9058	10000
seed *	000 t	4511	4385	4193	4047	3788	3580	3100	3072	2880	2700
food *	000 t	5421	5646	5474	5708	5814	5244	5209	5214	5155	5100
other	000 t	7991	6721	3965	3695	7622	4323	3363	6143	3673	4130
food in kg/capita	kg	143	148	143	149	151	136	135	135	133	132
selfsufficiency	%	102	105	106	99	101	96	102	100	100	100

* = FAO data

2.1.2.3 Oilseeds

Oilseeds production consists almost exclusively of rapeseed. In the period before transition, state-owned farms produced over two-thirds of total rapeseed. Total area planted to rapeseed declined consistently from 1989 to 1996 except for 1995. In 1995 in response to good prices compared to wheat the year before, rapeseed production shot up but then fell back. In 1997, however, the area planted picked up again to 317 000 ha and production to 595 000 t. Indications are that there has been a further substantial increase in area to 400 000 ha in 1998 which should reduce imports. It is assumed the crushing capacity will continue to be at least 850 000 t (table 2.1.2-7).

Most of the rapeseed grown in Poland is "00" rapeseed (oil for food, meal for feed). The remainder is destined for non-edible uses (mainly varieties with a high content of erucic acid).

Table 2.1.2-7. Rapeseed balance sheet

		1989	1990	1991	1992	1993	1994	1995	1996	1997	1998(f)
area *	000 ha	570	500	468	417	348	370	606	283	317	400
yield	t/ha	2.78	2.41	2.23	1.82	1.71	2.04	2.27	1.59	1.88	2.19
production *	000 t	1585	1206	1043	758	594	756	1377	449	595	875
stock change *	000 t	0	-142	81	8	-10	4	-23	-8	77	-43
imports *	000 t	3	0	3	23	17	5	1	374	126	75
exports *	000 t	493	669	556	210	33	9	411	0	0	2
available for util.	000 t	1095	395	571	579	568	756	944	815	798	905
utilization											
seed *	000 t	50	87	75	55	43	56	99	33	43	65
processed *	000 t	1096	513	496	524	525	700	845	782	755	840
other	000 t	-51	-205	0	0	0	0	0	0	0	0
self sufficiency	%	145	305	183	131	105	100	146	55	75	97

* = FAO data

Since transition, total human consumption of vegetable oils has increased while that of animal fats has declined. Total vegetable fat production is forecast at 600 000 t in 1998 compared with 279 000 t in 1990. This, combined with the reduced production has turned Poland from a net exporter (669 000 t of rapeseed in 1990) to be a net importer of 271 000 t in 1997. Rapeseed imports are also supplemented by soya meal as the demand for high quality feed proteins increases. Soya meal imports doubled from just over 400 000 t in 1993 to over 800 000 t in 1996.

2.1.2.4 Sugarbeet and Sugar

Sugarbeet planting was 400 000 ha in 1998, some 10% lower than 1990 levels. Record plantings of 453 000 ha in 1996 coincided with good yields that depressed the market. The sugar yields at 4.9 t/ha in 1997 was around two thirds of the EU 15 average (table 2.1.2-8).

Despite some annual fluctuations, Poland is a net exporter of sugar. Export subsidies are needed and recently Poland has drawn upon "unused WTO quantities" (see trade chapter) from previous years. Sugar exports have been helped by the developing exports in confectionery. Since the beginning of the 1990s, domestic demand has been rather stable reaching around 42 kg/head. The future price and income situation for farmers planting sugarbeet will depend mainly on the restructuring of the sugar industry and on the effectiveness of the sugar market regulation (see chapter 3.1). An amendment to the sugar bill allowed food companies to buy C quota sugar for export production in 1996/97.

In the campaign 1997/98 it is estimated 76 sugar plants processed 15 million tonnes of beet to produce 1.9-20 million tonnes of sugar. Low prices meant the industry lost money in 1997 (estimated 1.9% of revenues). Despite this, by early 1998 there was still no substantial restructuring activity. Estimates are that 1630 thousand tonnes will be sold on the internal market as A quota and 113 thousand tonnes will be exported as part of the B regime the remainder of 300-400 thousand tonnes exported without subsidy.

2.1.2.5 Fruit and vegetables

In 1997, fruit was grown on 265 000 ha and vegetables on 291 400 ha, approximately 90% is produced on individual farms. Although both crops occupy only 3% of UAA, they account for 10.3% of GAO and 14.4% of marketed produce.

Table 2.1.2-8. Sugar and sugar beet balance sheet

Sugar beet		**1989**	**1990**	**1991**	**1992**	**1993**	**1994**	**1995**	**1996**	**1997**	**1998(f)**
area *	000 ha	423	440	361	376	399	400	384	453	419	400
yield	t/ha	34.0	38.0	31.6	29.4	39.2	29.2	34.6	39.4	37.5	36.0
production *	000 t	14374	16721	11412	11052	15621	11676	13309	17846	15719	14400
imports *	000 t	0	0	0	0	0	0	50	0	0	0
exports	000 t		0	0	0	0	0	0	0	0	0
available	000 t	14374	16721	11412	11052	15621	11676	13359	17846	15719	14400
Sugar (ref. eq)											
production *	000 t	1730	2041	1543	1595	1996	1373	1577	2240	2060	1920
yield	t/ha	4.1	4.6	4.3	4.2	5.0	3.4	4.1	4.9	4.9	4.8
yield	% sugar	12.0	12.2	13.5	14.4	12.8	11.8	11.8	12.6	13.1	13.3
stock change *	000 t	37	-38	144	11	126	-127	32	81	0	-110
imports *	000 t	13	32	16	70	34	110	54	76	5	0
exports *	000 t	117	356	343	155	370	20	5	513	400	255
utilization	000 t	1663	1680	1360	1521	1786	1336	1620	1650	1665	1670
feed *	000 t		37	37	40	30	10	12	15		
food *	000 t		1643	1323	1481	1689	1615	1539	1631		
others	000 t		0	0	0	67	-289	69	4		
food kg/capita	kg		43	35	39	44	42	40	42		
selfsufficiency [2]	%	104	122	113	105	112	103	97	136	124	

* = FAO data

Table 2.1.2–9. Fruit production and area

Year	TOTAL FRUIT	Total top fruit	o.w. Apples	o.w. Pears	o.w. Plums	o.w. Sour cherries	o.w. Sweet cherries	o.w. Soft fruit	o.w. Straw-berry	o.w. Rasp-berry	o.w. Black/red currant	o.w. Goose-cherries
		000 ha			000 trees/bushes				000 ha	000 ha	000 trees/bushes	
Average												
86-89		259	33307	4108	7924	7058	1740		54.6	9.6	63847	12288
1991		276	37409	4344	7521	9741	1880		62.4	11	87481	12574
1996		325	54078	5391	10242	14628	2899		53.6	12.5	81284	12776
Annual change												
1991 to 1996		3.3%	7.6%	4.4%	6.4%	8.5%	9.0%		-3.0%	2.6%	-1.5%	0.3%
Production '000 t												
Average												
86-89	1987	1495	1272	57	85	57	85	492	283	31	139	39
1991	1873	1365	1145	53	67	80	16	509	263	32	169	42
1996	2672	2249	1900	55	117	127	35	423	160	40	165	41
Annual change												
1991 to 1996	7.4%	10.5%	10.7%	0.7%	11.8%	9.7%	16.9%	-3.6%	-9.5%	4.6%	-0.5%	-0.5%

FRUIT

Important fruits are apples, pears, cherries, soft fruits (strawberries, currants, raspberries and gooseberries) (table 2.1.2–9).

In 1996, total fruit production amounted to 2.7 mio t of which 1.4 mio t (52%) were processed into fruit juices, frozen fruits and canned products. Poland is a significant exporter of both fresh and processed fruits. In recent years, fruit exports (in fresh fruit equivalent) accounted for an average of 40-50% of

Figure 6. Processed fruit production in 1986-1990 and in 1997 ('000 t)

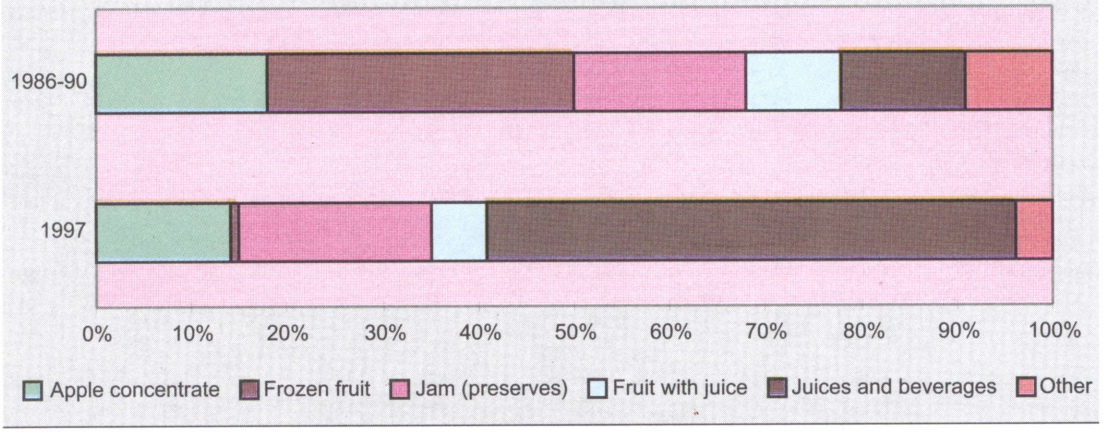


Table 2.1.2–10. Vegetable production ('000 t)

Year	TOTAL VEGETABLES	Field vegetables	o.w. Cabbage	o.w. Onions	o.w. Carrots	o.w. Beetroot	o.w. Cucumber	o.w. Tomato	o.w. Cauliflower	In Glass-houses	o.w. Tomato	o.w. Cucumber
Average												
86-89	5801	5501	1717	552	738	477	380	448	230	300	165	100
1991	6019	5737	1848	670	842	553	463	450	254	282	159	103
1997	5413	5078	1811	612	800	500	328	205	267	335	207	102
Annual change												
1991 to 1997	-1.8%	-2.0%	-0.3%	-1.5%	-0.8%	-1.7%	-5.6%	-12.3%	0.8%	2.9%	4.5%	-0.2%

fruit production in Poland. The principal exports are apples, soft fruits and processed products, frozen soft fruits and condensed apple juice. Domestic consumption of both home-grown fruit and vegetables has increased but was also stimulated by competitive imports of tropical and Mediterranean fruits and juices (figure 6).

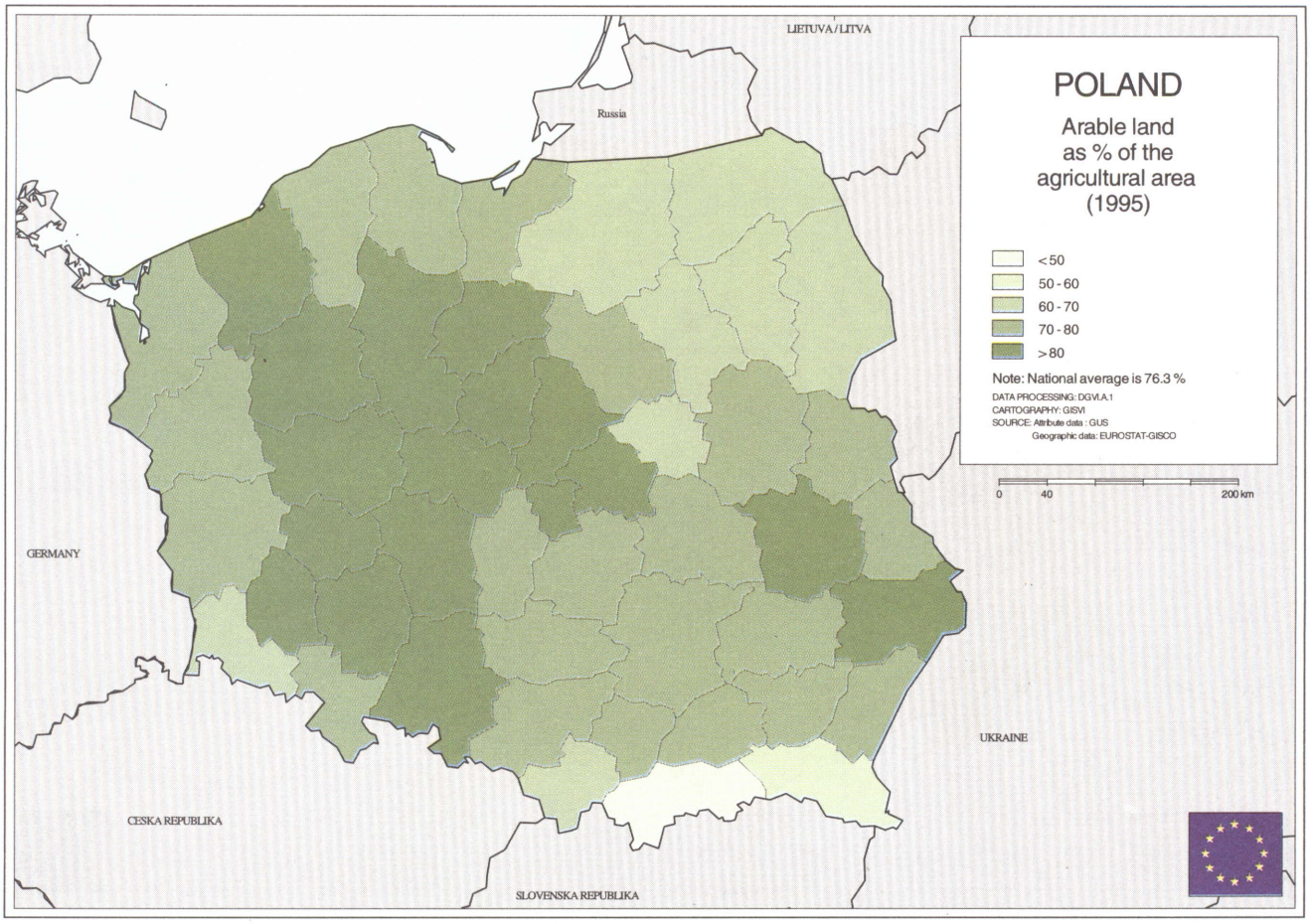
VEGETABLES

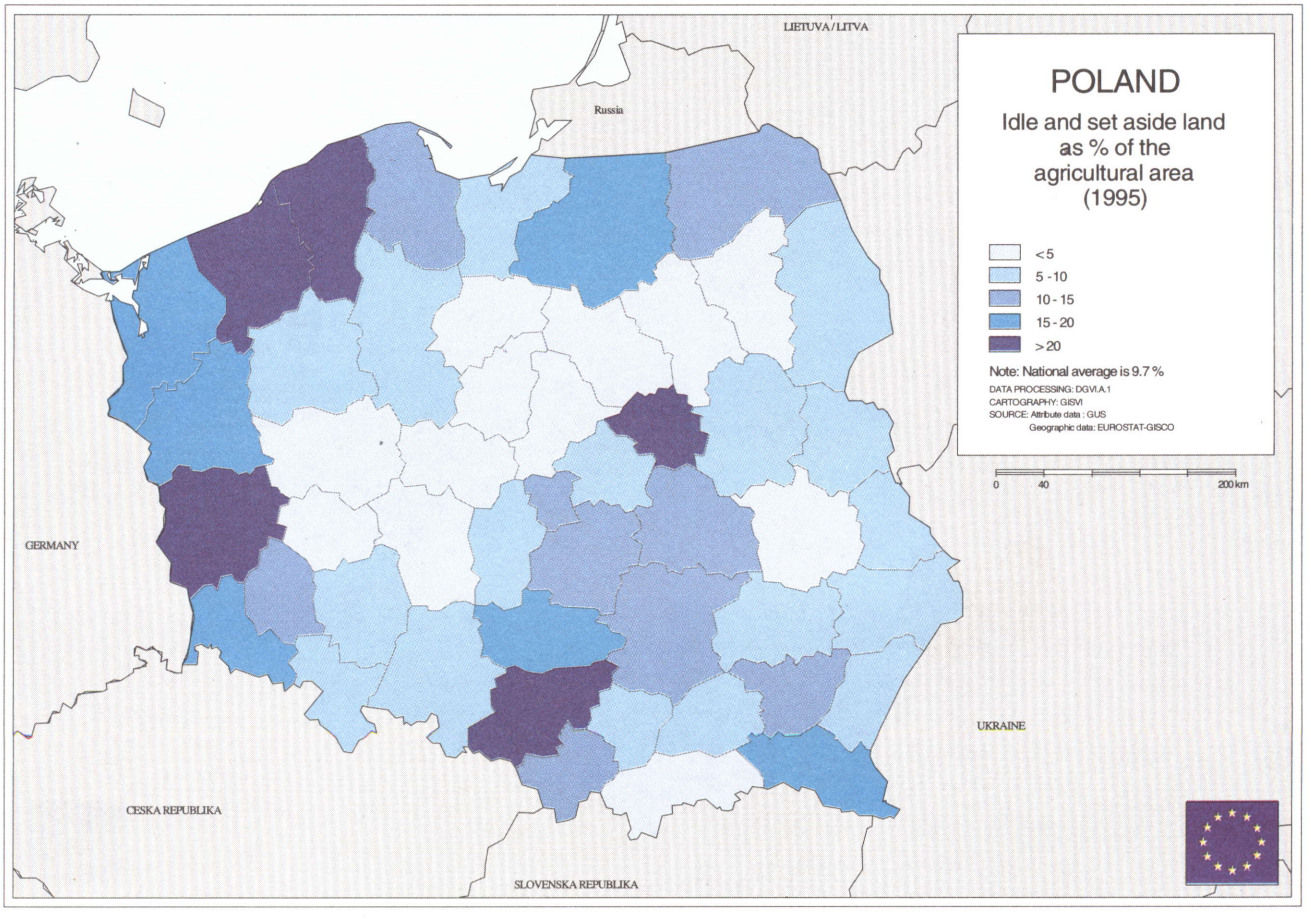
The most important vegetables are cabbage, cauliflower, onions, mushrooms, tomatoes, cucumbers, carrots and beets. The share of processed products in total vegetable production (5.9 mio t in 1993) is relatively low, reaching around 5%. Poland is also a net exporter of fresh and processed vegetables. The share of these exports (in fresh vegetable equivalent) is approximately 5-7% of domestic production, much lower than the figure for fruit.

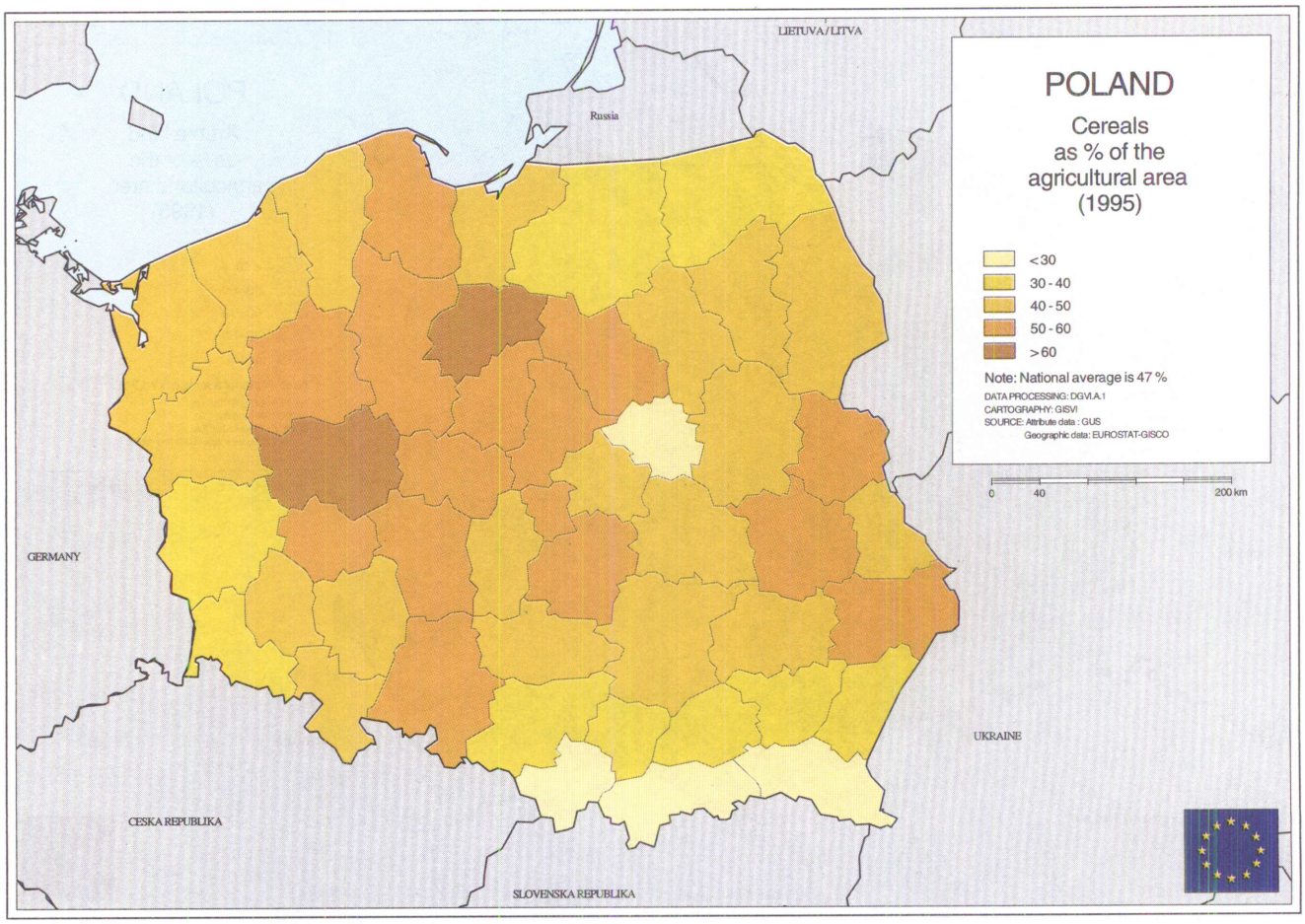
This situation is linked to the structural deficiencies in the processing industry, which faces severe liquidity problems finding it difficult to modernise production lines by implementing new technologies. Additionally, processing units, which are primarily in the hands of state enterprises and co-operatives, are not likely to be able to reduce the long delay of payments to farmers who consequently are more interested in selling their products directly to private companies and foreign buyers (table 2.1.2–10).

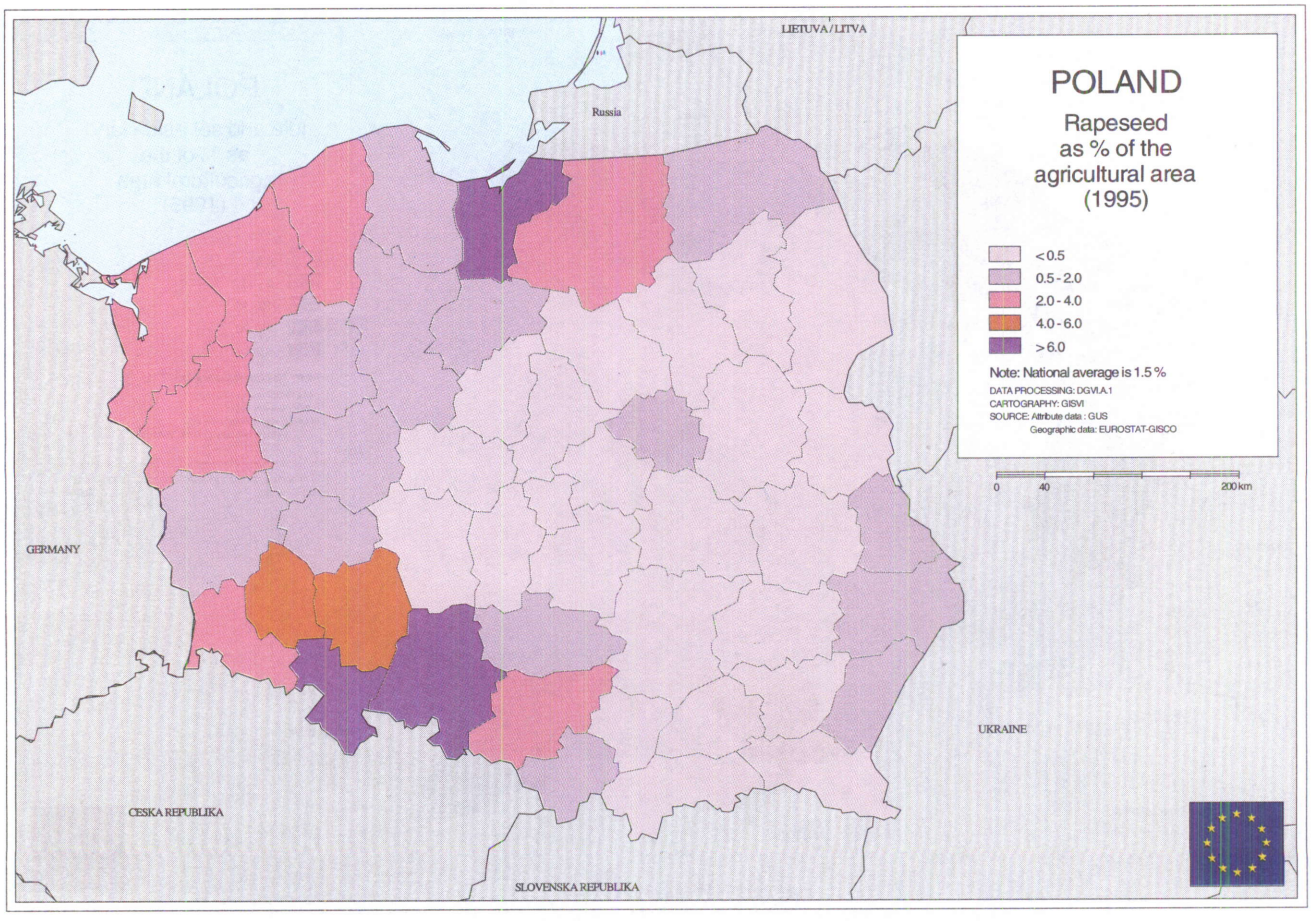
2.1.2.6 Other crops

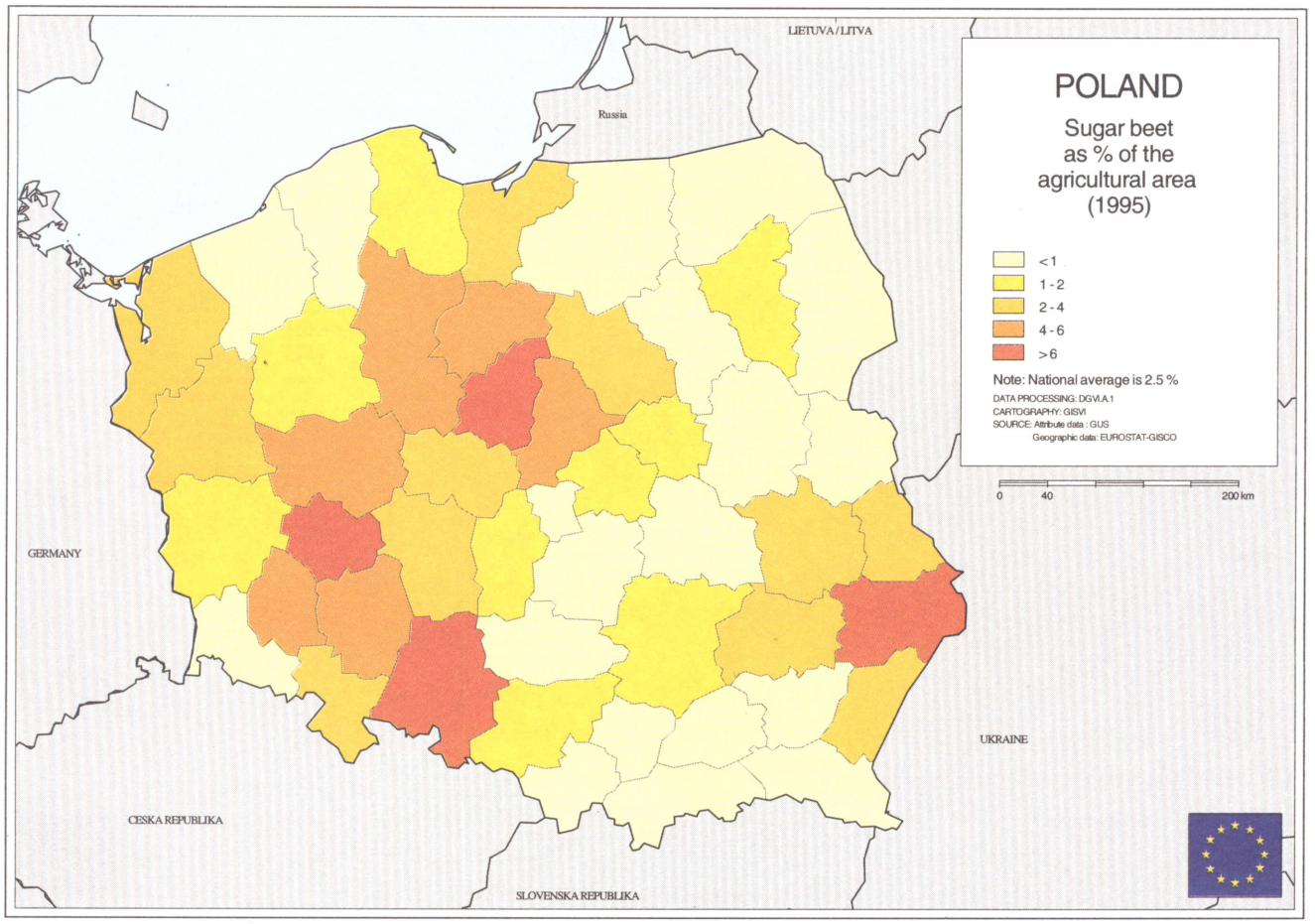
Other crops of economic importance are tobacco and hops. The areas in 1996 were tobacco 18 600 ha (-20% from 1992) and hops 2 451 ha (+22% on 1992). The production quantities in 1996 for tobacco were 41 5000 t and for hops 3 200 t.

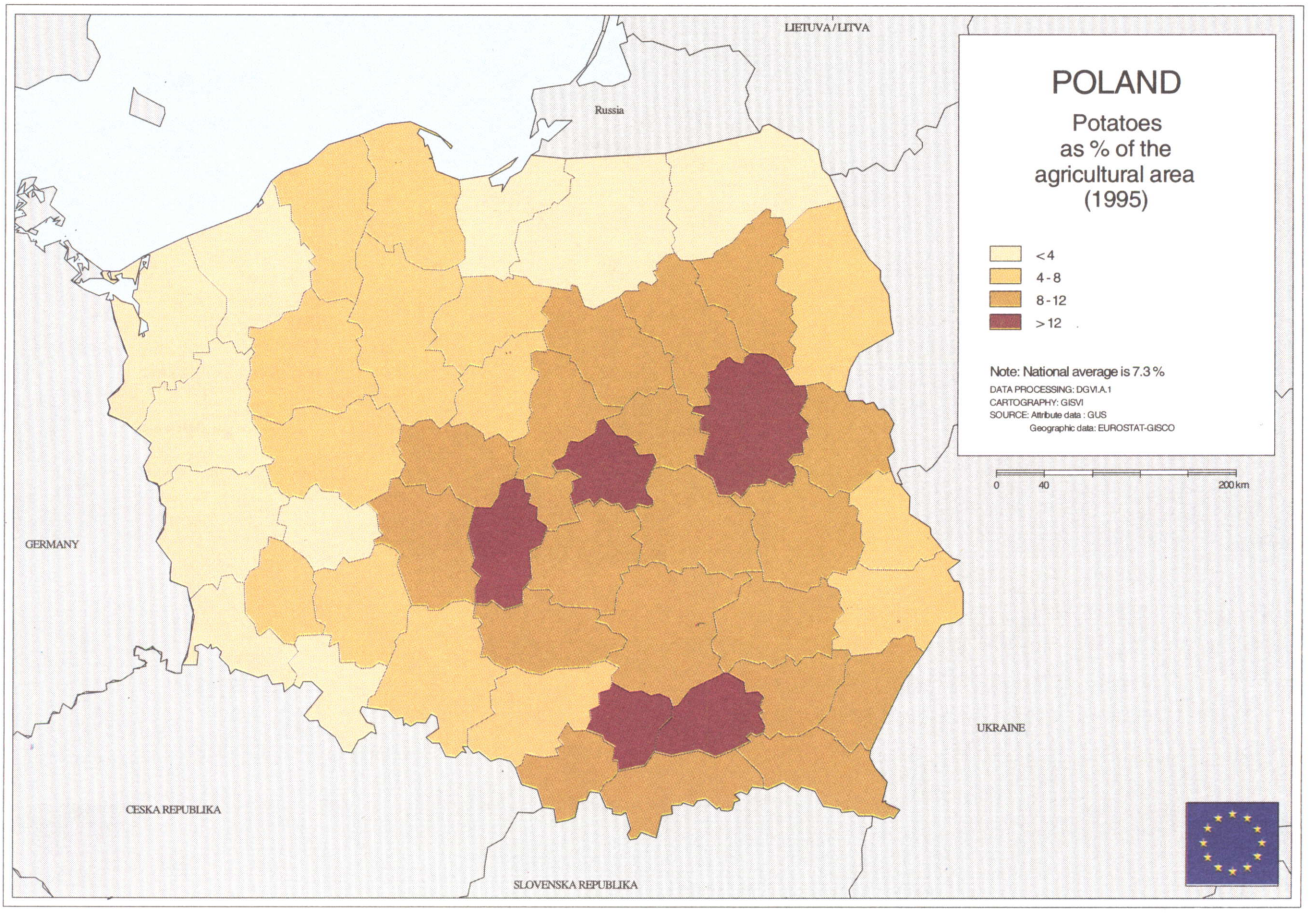

LIETUVA/LITVA
Russia
GERMANY
CESKA REPUBLIKA
SLOVENSKA REPUBLIKA
UKRAINE
POLAND
Arable land as % of the agricultural area (1995)
<50
50 - 60
60 - 70
70 - 80
>80
Note: National average is 76.3 %
DATA PROCESSING: DG VI.A.1
CARTOGRAPHY: GISVI
SOURCE: Attribute data : GUS
Geographic data: EUROSTAT-GISCO
0
40
200 km

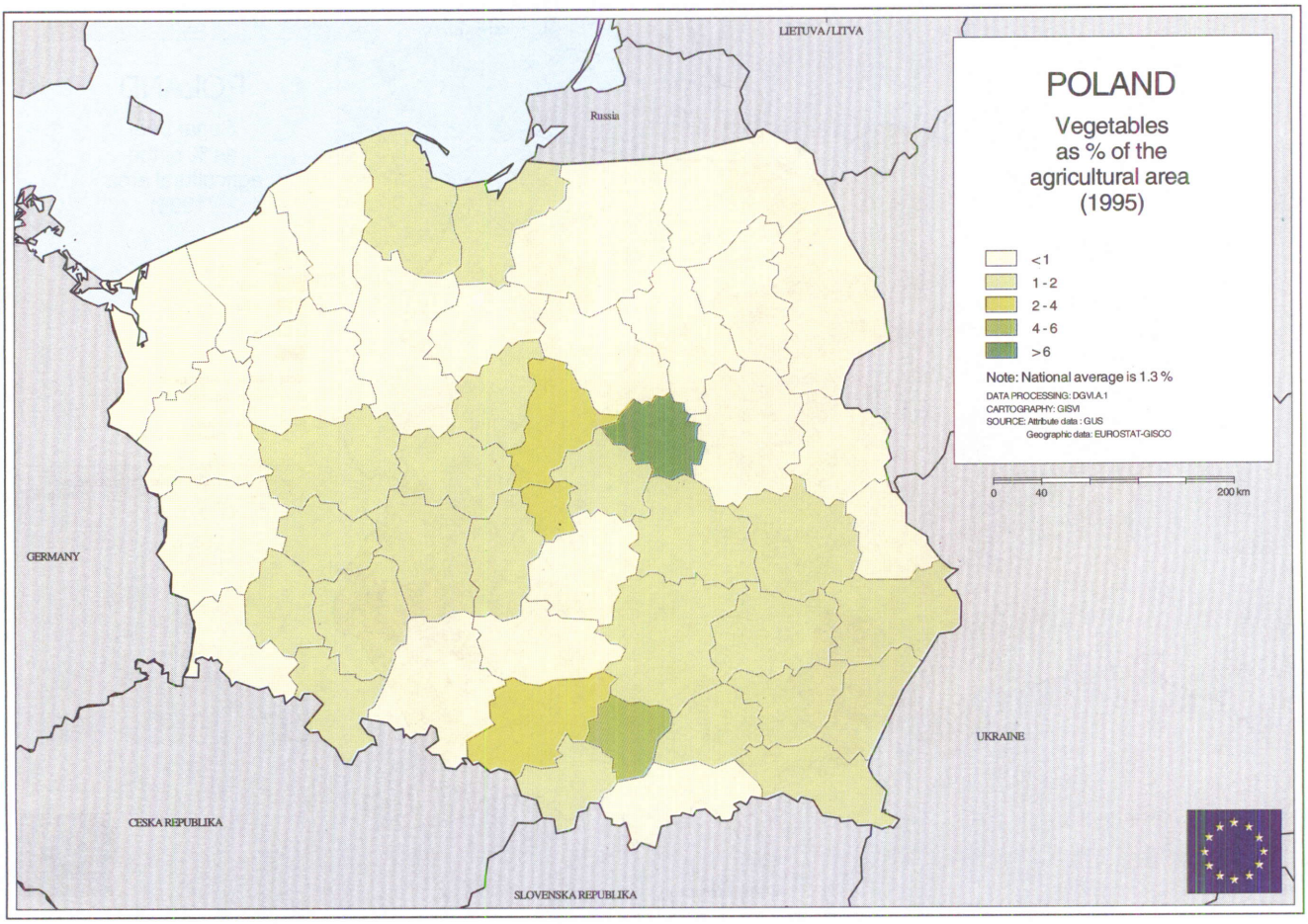

LIETUVA/LITVA
Russia
GERMANY
CESKA REPUBLIKA
SLOVENSKA REPUBLIKA
UKRAINE
POLAND
Idle and set aside land as % of the agricultural area (1995)
<5
5 -10
10 - 15
15 - 20
>20
Note: National average is 9.7 %
DATA PROCESSING: DG VI.A.1
CARTOGRAPHY: GISVI
SOURCE: Attribute data : GUS
Geographic data: EUROSTAT-GISCO
0
40
200 km

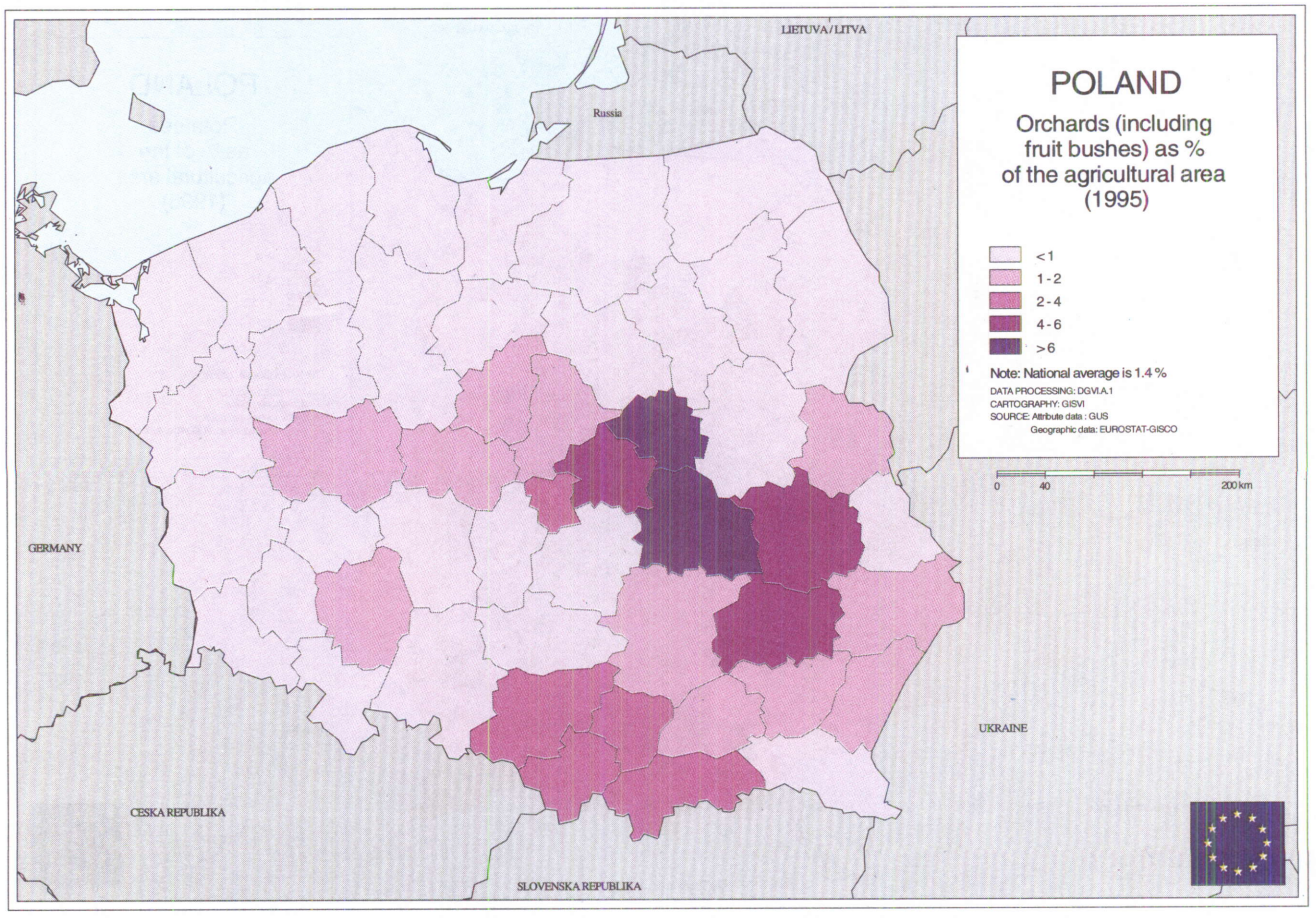

LIETUVA/LITVA
Russia
POLAND
Cereals
as % of the
agricultural area
(1995)
<30
30 - 40
40 - 50
50 - 60
>60
Note: National average is 47 %
DATA PROCESSING: DG VI.A.1
CARTOGRAPHY: GISVI
SOURCE: Attribute data : GUS
Geographic data: EUROSTAT-GISCO
0
40
200 km
GERMANY
UKRAINE
CESKA REPUBLIKA
SLOVENSKA REPUBLIKA


LIETUVA/LITVA
Russia
POLAND
Rapeseed
as % of the
agricultural area
(1995)
<0.5
0.5 - 2.0
2.0 - 4.0
4.0 - 6.0
>6.0
Note: National average is 1.5 %
DATA PROCESSING: DG VI.A.1
CARTOGRAPHY: GISVI
SOURCE: Attribute data : GUS
Geographic data: EUROSTAT-GISCO
0
40
200 km
GERMANY
UKRAINE
CESKA REPUBLIKA
SLOVENSKA REPUBLIKA


LIETUVA/LITVA
Russia
GERMANY
CESKA REPUBLIKA
SLOVENSKA REPUBLIKA
UKRAINE
POLAND
Sugar beet
as % of the
agricultural area
(1995)
<1
1 - 2
2 - 4
4 - 6
>6
Note: National average is 2.5 %
DATA PROCESSING: DGVI.A.1
CARTOGRAPHY: GISVI
SOURCE: Attribute data : GUS
Geographic data: EUROSTAT-GISCO
0
40
200 km


LIETUVA/LITVA
Russia
GERMANY
CESKA REPUBLIKA
SLOVENSKA REPUBLIKA
UKRAINE
POLAND
Potatoes
as % of the
agricultural area
(1995)
<4
4 - 8
8 - 12
>12
Note: National average is 7.3 %
DATA PROCESSING: DGVI.A.1
CARTOGRAPHY: GISVI
SOURCE: Attribute data : GUS
Geographic data: EUROSTAT-GISCO
0
40
200 km


LIETUVA/LITVA
Russia
POLAND
Vegetables as % of the agricultural area (1995)
<1
1-2
2-4
4-6
>6
Note: National average is 1.3 %
DATA PROCESSING: DGVI.A.1
CARTOGRAPHY: GISVI
SOURCE: Attribute data : GUS
Geographic data: EUROSTAT-GISCO
0
40
200 km
GERMANY
UKRAINE
CESKA REPUBLIKA
SLOVENSKA REPUBLIKA


LIETUVA/LITVA
Russia
POLAND
Orchards (including fruit bushes) as % of the agricultural area (1995)
<1
1-2
2-4
4-6
>6
Note: National average is 1.4 %
DATA PROCESSING: DGVI.A.1
CARTOGRAPHY: GISVI
SOURCE: Attribute data : GUS
Geographic data: EUROSTAT-GISCO
0
40
200 km
GERMANY
UKRAINE
CESKA REPUBLIKA
SLOVENSKA REPUBLIKA

2.1.3 Livestock

The economic transformation process affected the livestock sector more than the crops sector. State farms in particular let their livestock production fall and concentrated on crops. Falling incomes together with the elimination of consumption subsidies severely reduced meat consumption. The ratio of feed to livestock prices deteriorated and there was a lack of capital leading to the liquidation of breeding herds (table 2.1.3-1).

Pigmeat production avoided the worst depression though there has been some fluctuation in particular due to high feed prices in some years. Poultry production was badly affected initially but has more than recovered, a process that had already started in 1994. Cattle and particularly sheep numbers were severely cut. The fall in beef production has slowed down in recent years. For milk, the first sign of a small increase occurred in 1997 whereas sheep and goat meat production in 1997 was less than 40% of that in 1996, much of this still due to destocking (figure 7).

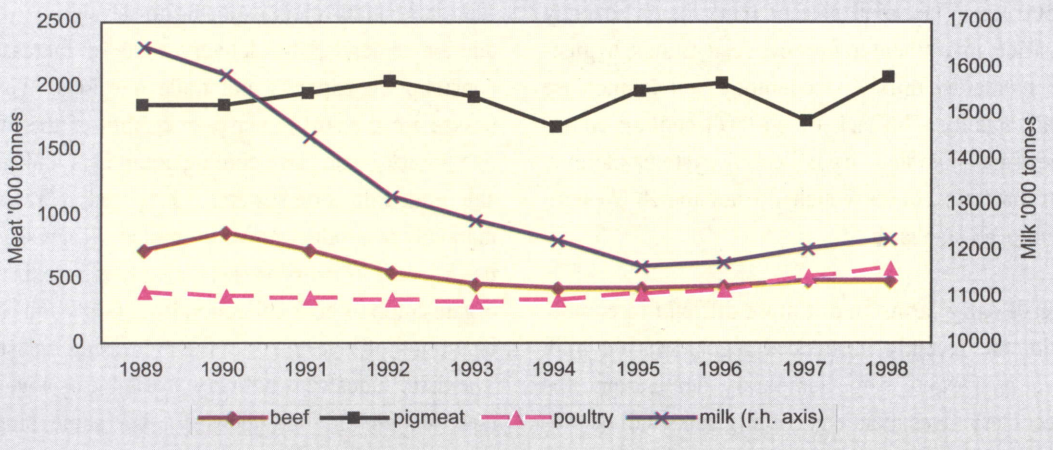
2.1.3.1 Milk and milk products

There are two major dairy regions in Poland where milk is produced in surplus to household requirements (high proportion of deliveries). In the North-east, there is extensive production of some potential and a traditional dairying area in the Central West. Milk production is also important in the south east but very little is delivered to dairies (see following maps).

Table 2.1.3-1 Livestock numbers ('000)

	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998(e)
cattle	10733	10049	8844	8221	7643	7696	7306	7150	7303	7380
o.w, dairy cows	4990	4919	4577	4257	3983	3863	3579	3461	3487	3500
pigs	18835	19464	21868	22086	18854	19467	20383	17964	18135	19250
poultry	66188	71512	61307	59443	54680	53330	53618	51740	56300	58500
o.w, lay, hens	51621	48458	41402	38886	36240	36665	38699	41700	42500	
sheep & goats	4409	4158	3234	1870	1268	870	713	552	491	490
horses	973	941	939	900	841	922	636	569	515	

Figure 7. Evolution of livestock production



2.1.3-2 Dairy herd structure

No. of farms with dairy cows	% of total farms	Average no. of heads per cattle farm	% of the national dairy cow herd in the herd size category						
			1-2	3-4	5-9	10-19	20-49	50-100	= 100
1309	64.0	2.6	37.5	24.8	23	6.8	1.2	1.2	5.4

The structure of dairy farms underlines the importance of this sector on farm income (table 2.1.3-2). Some 25% of Poland's milk is produced by almost 1 mio individual farms holding 1 to 3 cows, 50% of the milk is produced in the category "3 to 9 cows". Most cows are still milked by hand and half the dairy farmers market less than less than 7200 litres per year.

Total milk production declined from 16.4 mio t in 1989 to a low point of 11.3 mio t (- 31%) in 1995. The production in 1997 at 11.6 mio tonnes and the forecast 12.3 mio t in 1998 shows the recovery is well underway. The overall reduction of milk delivered for processing was even higher (- 45%), having an impact on the delivery ratio which is only 53% and as low as 30% in some regions. Linked to the small farm size, the on farm use and direct farm sales for consumption again became more attractive compared with processing (table 2.1.3-3).

The total number of dairy cows fell from 5.0 mio head in 1989 to 3.5 mio head in 1997. The average yield per cow is approximately 3500 kg/year (EU 5500 kg). The small size of dairy herds severely restricts investment to improve feed rations, hygienic standards, milking technology and to increase milk quality. The lack of on-farm cooling equipment and suitable dairy collecting systems increase the bacteria counts which do not match Western European standards.

Small dairy farms find it more difficult to comply with the recently introduced regulations on milk quality. Despite some temporary derogations, the necessary investment e.g. cooling tanks will be prohibitively expensive and will force many out of milk production.

More positively, some specialisation of milk production does take place often stimulated by subsidised credit and a good premium for milk of high quality. Forecasts indicate that consumption of dairy beverages, cheeses and ice creams will increase. The genetic potential of the dairy cows is better than the results currently obtained and increases in production could come from better husbandry and nutrition rather than an increase in cow numbers.

Additionally, the Polish government supports the restructuring and modernisation of the dairy industry and dairy farms. Farms with more than 5 cows and a yearly milk production of not less than 18 000 l are supported by preferential credits to modernise and extend their milk production. Preferential credits are also granted to the dairy processing industry for modernising investments to improve product quality and marketing.

The dairy industry is expected to develop as production expands, the delivery ratio of increases, consumption expands and trade develops. Weaknesses are the still rather poor quality of the milk due to lack of on-farm cooling equipment and suitable milk collection systems. Compared to Western markets the product range is limited. Progress can be expected to focus on increasing herd size, better organisation of milk collection from farms and concentration of investment in the processing industry. The dairy industry is not very profitable as a whole (see section on food industry), but some bigger

Table 2.1.3-3. Milk and milk products balance sheet

fluid milk		**1989**	**1990**	**1991**	**1992**	**1993**	**1994**	**1995**	**1996**	**1997**	**1998**
dairy cows	000	4990	4919	4577	4257	3983	3863	3579	3461	3487	3500
yield	kg/cow	3291	3222	3159	3093	3176	3167	3256	3387	3450	3505
fluid milk prod.*	000 t	16420	15848	14457	13166	12651	12234	11653	11722	12032	12269
stock change*	000 t	0	0	0	0	0	0	0	112	34	0
imports*	000 t	0	8	6	33	32	263	252	265	300	361
exports*	000 t	0	692	0	22		994	867	924	946	1031
available	000 t	16420	15163	14462	13177	12683	11503	11038	10952	11351	11599
utilization											
feed	000 t	761	761	1002	961	953	913	701	701	701	670
processing	000 t	8004	6984	6468	5346	5110	4861	4823	5089	5706	5900
food (liquid milk)	000 t	6451	6898	5739	5697	5654	5585	5441	5386	5013	5021
others	000 t	1204	519	1253	1173	966	144	73	-224	-68	7
kg/capita	kg	170	181	150	149	147	145	141	140	130	130
selfsufficiency	%	100	105	100	100	100	106	106	107	106	106
cheese											
production	000 t	454	335	296	286	315	352	354	380	438	455
stock change	000 t	0	0	-17	1	1	-1	2	0	2	-2
imports	000 t	5	13	15	17	12	7	9	7	8	8
exports	000 t	3	20	6	6	6	17	13	18	26	33
available	000 t	456	328	322	296	320	343	348	369	418	432
kg/capita	kg	12.0	8.6	8.4	7.7	8.3	8.9	9.0	9.6	10.8	11.2
selfsufficiency	%	100	102	92	97	98	103	102	103	105	105
butter											
production*	000 t	290	272	248	207	187	160	154	154	171	172
stock change*	000 t	0	-8	-10	17	-5	-9	10	-12	1	10
imports*	000 t	11	4	40	38	20	3	0	0	7	3
exports*	000 t	0	18	8	1	19	8	10	13	2	3
food*	000 t	301	266	291	227	193	164	135	154	175	162
others*	000 t	0	0	0	0	0	0	0	0	0	0
kg/capita	kg	7.9	7.0	7.6	5.9	5.0	4.3	3.5	4.0	4.5	4.2
selfsufficiency	%	96	102	85	91	97	98	114	100	98	106
skim milk											
production	000 t	174	174	145	132	157	112	128	121	121	123
stock change	000 t	-3	7	-32	-22	2	3	-3	1	1	-1
imports	000 t	7	0	3	2	2	4	2	5	9	5
exports	000 t	59	72	85	123	125	112	98	77	111	112
feed and food	000 t	125	95	95	34	32	0	35	48	18	17
food	000 t										
others	000 t	0	0	0	0	0	0	0	0	0	0
kg/capita	kg	3.3	2.5	2.5	0.9	0.8	0.0	0.9	1.2	0.5	0.4
selfsufficiency	%										

Sources: * FAO Data

plants have developed while the performance of smaller plants is rather poor.

Traditionally Poland was not active in the trade of dairy products. Imports of very attractive foreign dairy products have developed significantly since 1992 but in 1994, exports expanded and the balance of trade is now positive.

Consumption, in particular of butter, strongly decreased (from 7.9 kg/capita in 1989 to 4.2 kg/capita in 1997) as did liquid milk consumption. However consumption of cheeses and fresh dairy products is going up.

Cheese imports increased significantly in 1993 but declined from 1994 which resulting in a net trade surplus of around 10 000 t. From 1994 cheese exports started to increase to reach 26 000 t in 1997, a net surplus of 18 000 t. Exports of Skim Milk Powder (SMP) increased to 125 000 t in 1993, and after dipping were back up to 111 000 t in 1997 t. This product represented about 50% of the value of exports in 1996 followed by cheeses and ice creams with a share of around 18% each. Exports of cheese are mainly Cheddar, Gouda and Edam.

2.1.3.2 Beef meat

Beef is a by-product of milk production in Poland. Nearly all cows are a dairy breed and 85% are Black and White/Friesians. The average carcase weight is low (189 kg in 1997), despite a large increase in recent years. Output in carcass weight was 720 700 t in 1989, increased to 856 000 t in 1990 due too massive destocking and has subsequently fallen to 487 000 t in 1997. The main reason for the decline has been the difficult situation in the dairy sector. The national specialised beef cattle herd is extremely small (4500 cows). Most "quality" beef is obtained by crossing dairy cows with beef bulls and annually some 500 thousand such crosses are bred. Prices are poor so that despite the export market in live animals to the EU, some 35 % of all calves born are slaughtered (table 2.1.3-4).

Beef meat consumption per capita fell from 17.2 kg in 1989 when it was subsidised to around 10.0 kg in

Table 2.1.3-4. Beef balance sheet

		1989	1990	1991	1992	1993	1994	1995	1996	1997	1998
cattle	000	10733	10049	8844	8221	7643	7696	7306	7150	7303	7380
imports live	000	0	0	41	160	153	120	13	1.0	7	7
exports live	000	660	1016	642	385	241	354	350	348	384	348
slaughters*	000	3356	3963	3890	3488	3372	3025	2688	2659	2575	2682
average weight	kg	215	216	183	157	136	139	156	164	189	182
production*	000 t	720	856	710	546	458	422	419	435	487	489
o.w. indigenous	000 t	862	1075	820	581	470	455	472	492	558	551
balance	000 t	142	219	110	35	12	33	53	57	71	62
stock change*	000 t	3	5	0	-10	0	0	-2	-3	1	0
imports*	000 t	100	2	48	72	50	42	12	25	9	9
exports*	000 t	164	119	95	53	37	41	48	49	63	72
utilization	000 t	653	734	663	575	471	423	385	414	431	426
kg/capita	kg	17.2	19.3	17.3	15.0	12.3	11.0	10.0	10.7	11.2	11.0
selfsufficiency (1)	%	132	147	124	101	100	107	122	119	129	129
selfsufficiency (2)	%	110	117	107	95	97	100	109	105	113	115

First transformation included
(1) based on "indigenous" production taking into account trade of life animals transformed in carcass
(2) based on production without taking into account trade of life animals
Sources: * FAO Data

2.1.3-5 Pig herd structure

No, of farms with pigs	% of total farms	Average no, of heads per pig farm	% of the national pig herd in the herd size category							
			1-9	10-19	20-49	50-99	100-199	200-499	500-1000	>1000
1090	53.3	16.2	13.7	15.4	24.4	14.5	8.5	5	3.3	15.3

1995. The downward trend has stopped and some modest recovery is expected.

The main exports, in particular to the EU, are live cattle up to 300 kg live weight. In 1996, nearly 258 000 calves up to 160 kg and nearly 68 000 animals between 160-300 kg were exported to the EU (nearly 80% to Italy). Live imports of cattle have undergone a structural change. Although they increased in value between 1995 and 1996 as the number of high quality pedigree cattle increased, the imports of unfinished cattle - generally from the east - went down ten fold. The unit prices received for exports of bovine livestock were three times higher than those paid for imports.

Structural policy for the beef sector involves government help for the establishment of a high quality beef herd based on local breeds crossed with imported beef breeds. It is hoped that the pastures which remain on former state-owned farms can be used. The government supports the creation of beef cattle farms and imports of good livestock, with preferential credits and technical assistance. The implementation of the already approved EU compatible carcase classification system should help to improve the quality of marketed meat.

Historically, due to the substantial foreign trade in live animal (imports from the east and exports to the EU), together with substantial calf slaughterings, prime beef production has had little relationship with cow numbers. Should the beef market improve, a large increase in production could soon be possible independent of the size of the dairy herd. The main difficulties for small farms is the necessary investment for efficient husbandry techniques is prohibitively expensive given the low price of beef. However for larger farms where unit costs are lower there may well be more potential especially if there is sufficient low cost pasture.

2.1.3.3 Pigmeat

Poland is one of the leading pigmeat producers in Europe (equivalent to France and Spain). However as with other sectors, production is highly fragmented. Some 1.3 million farms are involved in production with an average herd size of 16 (table 2.1.3-5).

Production since 1989 (1.7 mio tonnes) has been erratic, being particularly affected by drought in 1992 and 1994 and high cereal prices in 1996/97. Production in 1997 was again 1.7 million tonnes but is forecast to rise substantially to 2.1 million tonnes in 1998. As for quality, most of the pigs slaughtered are quite heavy (110 to 120 kg liveweight) and do not fully comply with the preferred lean pigmeat in Western Europe. Given the production structure, the use of modern husbandry and feeding techniques is difficult which has a negative influence on quality (table 2.1.3-6).

Pork is the by far most preferred meat by consumers (two thirds of all meat consumption) and utilisation[2] has remained quite stable over recent years fluctuating around a level of around 49 kg per capita.

[2] Utilization does not equate to domestic human end consumption because it is derived from production plus net trade which only includes pigmeat at the 1st transformation level; live pigs and further processed pigmeat is not covered.

Table 2.1.3-6. Pigmeat balance sheet

		1989	1990	1991	1992	1993	1994	1995	1996	1997	1998(f)
pig number	000	18835	19464	21868	22086	18854	19467	20383	17964	18135	19250
imports live	000	377	119	19	54	8	75	19	0	0	
exports live	000	0	2	1	6	8	0	37	67	67	
total slaughters	000	20421	19958	22343	23624	22836	19946	22664	23505	20438	23380
average weight	kg	91	93	87	86	83	84	87	86	84	112
production	000 t	1854	1855	1947	2036	1903	1681	1962	2020	1724	2062
o.w. indigenous	000 t	1820	1844	1946	2031	1903	1675	1964	2026	1730	2062
balance	000 t	-34	-11	-2	-4	0	-6	2	6	6	0
stock change*	000 t	30	-30	30	-50	-8	59	0	0	0	10
imports*	000 t	19	31	37	42	58	110	52	45	45	55
exports*	000 t	58	41	14	16	17	41	101	178	178	270
utilization	000 t	1845	1814	2000	2012	1936	1810	1914	1887	1591	1857
kg/capita	kg	48.6	47.6	52.3	52.5	50.4	47.0	49.6	48.9	41.2	48.0
selfsufficiency (1)	%	99	102	97	101	98	93	103	107	109	111
selfsufficiency (2)	%	101	102	97	101	98	93	103	107	108	111

First transformation included
(1) based on "indigenous" production taking into account trade of life animals transformed in carcass
(2) based on production without taking into account trade of life animals
Sources: IERiGZ; * FAO Data

An EU compatible classification system has been applied since 1996 and after 1 year was applied by 157 companies. Only quality grades E and U are eligible for intervention.

The net trade in pigmeat turned positive again in 1995. Some 45 000 tonnes of higher quality pigmeat are imported annually while recorded exports were 178 000 tonnes in 1997 and half as much again (270 000 t) is expected in 1998. Almost all pigmeat exports go to Russia and other former Soviet Union States formerly as half carcasses but now largely as processed products. The net trade of pigmeat is substantial at 133 000 t in 1997.

2.1.3.4 Poultry

Poultry meat production fell from 383 000 tonnes in 1989 to 306 000 tonnes (-20%) in 1993 due to a severe depression in the sector. In the wake of major organisational changes and privatisation of the poultry and feed industries, the production of poultry meat and eggs has been increasing since 1994. Much of this has involved investment in large production facilities and in feed production technology. Production is expected to grow 20% per year between 1996 and 1998. The main objectives of the industry are seen to be increasing the scale, structure and efficiency of production, particularly through accelerating integration (table 2.1.3-7).

The current meat production structure is 74% broiler chickens, 6% hens, 16% turkeys, 2% ducks and 6% geese. Turkey production is developing rapidly and duck production decreasing. The waterfowl market depends largely on exports particularly geese with the ground-feeding poultry market depending on domestic demand which at present shows no sign of slowing down. Consumption is expected to rise from 9.9 kg/capita in 1995 to 15.5 kg/capita in 1998.

Since 1992, Poland has had a negative trade balance in poultry meat mainly as a result of increased imports of chicken cuts from the USA (total imports in 1997 were 66 000 t). These have stabilised recently at around 50 000 tonnes. In 1996, exports of mostly ducks and geese mainly to the EU

Table 2.1.3-7. Poultrymeat balance sheet

		1989	1990	1991	1992	1993	1994	1995	1996	1997	1998
poultry number	000	66188	71512	61307	59443	54680	53330	53618	51740	56300	58500
total slaughters*	000	259700	233300	242500	228550	213850	268700	266200	329200	308500	
average weight	kg	1.47	1.51	1.40	1.41	1.43	1.24	1.37	1.25	1.69	
production*	000 t	383	352	340	322	306	332	365	410	520	575
stock change*	000 t	0	0	19	0	0	0	0	0	5	0
imports*	000 t	0	3	17	55	74	61	36	45	66	70
exports	000 t	20	21	17	13	15	15	18	26	38	45
utilization	000 t	363	334	359	364	366	378	383	429	553	600
food*	000 t	363	334	359	364	365	382	382	429	548	600
processing+others	000 t	0	0	0	0	1	-4	1	0	5	
kg/capita	kg	9.6	8.8	9.4	9.5	9.5	9.9	9.9	11.1	14.2	15.5
selfsufficiency	%	106	105	95	88	84	88	95	96	94	96

First transformation included
Sources: IERiGZ; * FAO Data

Table 2.1.3-8. Eggs balance

		1989	1990	1991	1992	1993	1994	1995	1996	1997	1998
animal number*	000	51621	48458	41402	38886	36240	36665	38699	41700	42500	
average weight	kg	8.7	8.7	8.7	8.7	8.6	8.8	9.1	9.2	10.1	
production*	000 t	447	422	362	340	310	322	351	383	428	461
stock change*	000 t	2	10	-20	-2	-10	-4	2	-15	0	0
imports*	000 t	0	4	56	58	58	18	3	3	4	6
exports*	000 t	10	9	1	3	0	0	1	1	0	1
utilization	**000 t**	**439**	**427**	**397**	**393**	**359**	**336**	**354**	**370**	**432**	**467**
hatching*	000 t	24	21	21	20	20	19	20	21	24	25
food*	000 t	411	404	375	371	337	315	332	347	407	440
others	000 t	4	3	2	2	2	2	2	2	1	1
kg/capita	kg	10.8	10.6	9.8	9.7	8.8	8.2	8.6	9.0	10.5	11.4
selfsufficiency	%	102	99	91	86	86	96	99	104	99	99

Sources: IERiGZ; * FAO Data

rose from around 15 000 tonnes in previous years to 26 000 tonnes. Despite being 7 times lower in quantity than pigmeat, it exceeded it in value.

Affected in much the same way as poultry meat, egg production is showing an important revival. Egg annual production fell from 447 000 t in 1989 to 310 000 tonnes in 1993 (-30%). Production in 1997 had recovered to 428 000 tonnes with a substantial increase expected for 1998.

Although household demand is static, there is increasing demand for eggs for processed products such as pasta, ice cream and confectionery (table 2.1.3-8).

2.1.3.5 Other livestock

The sheep population in 1996 at 551 600 heads was only 13% of that in 1988. The massive reduction in stock was caused by the lack of a stable market for meat and a big fall in demand. Big flocks on state-owned farms kept for sheepmeat production disappeared in line with the break up of these units. Main breeds of sheep are Merino (43%) and the Polish Lowland (30%). Experts anticipate a gradual recov-

ery in the population with an emphasis on meat production and encouraging sheep husbandry on mountain and upland areas. Per capita sheepmeat consumption is low and most domestic production is exported, either to the Middle East or the EU (table 2.1.3-9).

The goat population at a third of the sheep is kept mainly on small farms. The market for goat dairy products is not particularly stable.

Horses are still an important factor for Polish agriculture and used as a source of draft, mainly in the eastern parts of the country. The horse population was 973 000 in 1989 and experts expect numbers to be no more than 450 000 in 2000 (-46%). There is a substantial live export market to the EU, mainly for slaughter. In 1996, this amounted to the equivalent of 109 000 heads only around 4 000 of which were for sport or breeding purposes.

2.1.4 Forestry

In Poland, forest and woodland accounts for 8.8 million hectares, or 29% of the land area, compared to 35% for the EU (1996 figures). The proportion of afforested land is comparable to that in France or Germany. Coniferous species account for 80% of the wooded area, and there is a high proportion of young plantations.

Only a small proportion (17%) of Poland's woodland area is owned and managed by private individuals, with the rest under the control of the state forest management service. When former state farms are sold off or leased, any afforested area is often transferred directly to the state. Up to May 1998, 73,000 hectares of forest had been transferred from state farms to the state forestry service.

Table 2.1.3-9. Sheep and goat meat balance sheet

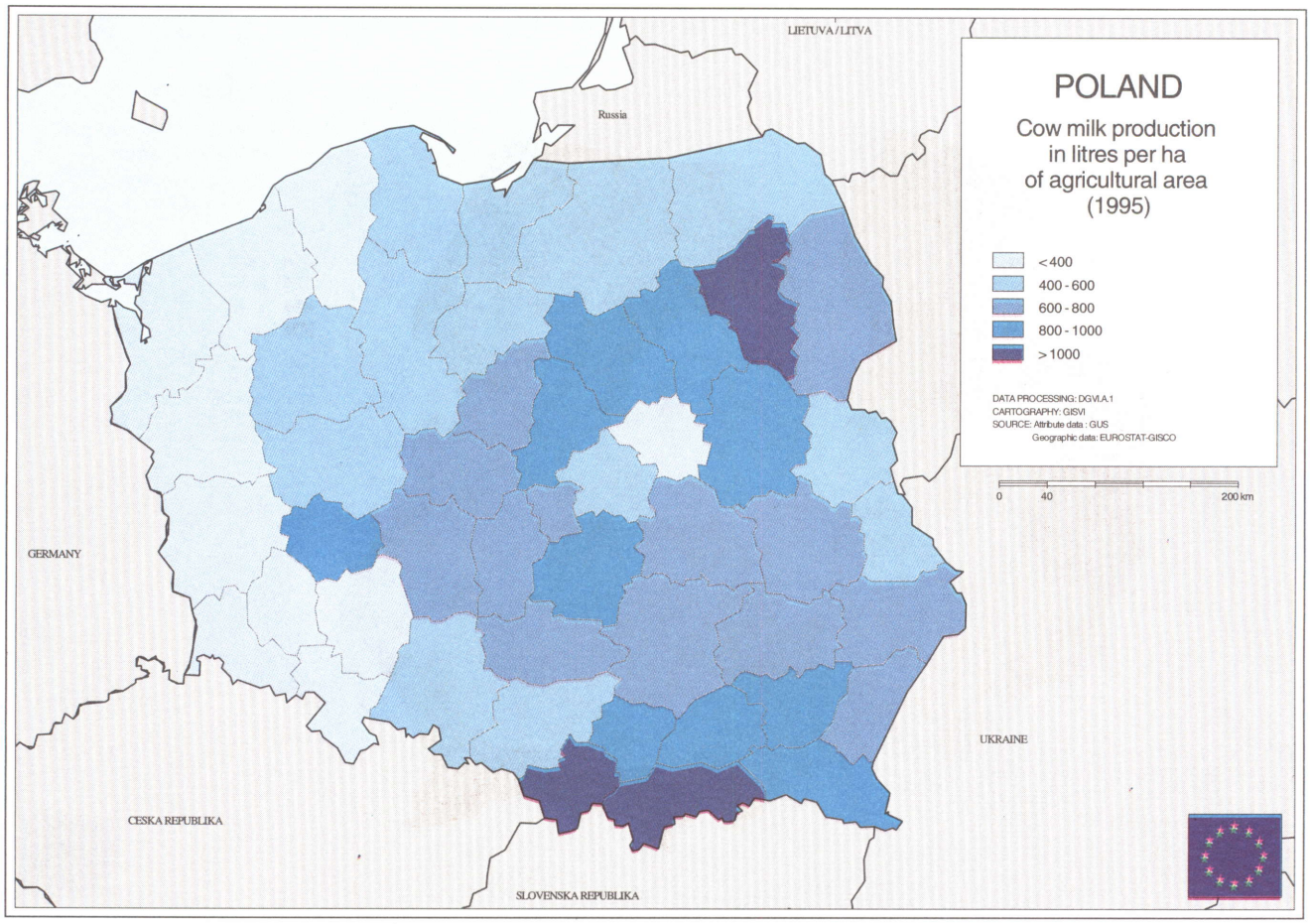
		1989	1990	1991	1992	1993	1994	1995	1996	1997	1998
animal number	000	4409	4158	3234	1870	1268	870	713	552	491	490
imports live	000	1	0	1	1	4	1	1	0	0	0
exports live	000	888	753	1339	900	687	411	324	269	203	200
total slaughters*	000	1348	1893	1325	1322	783	325	186	103	250	250
average weight	kg	17	15	25	17	22	26	33	58	20	20
production*	000 t	22	29	33	23	18	8	6	6	5	5
o.w. indigenous	000 t	37	40	66	38	33	19	17	22	9	9
balance	000 t	15	11	33	15	15	10	11	16	4	4
stock change*	000 t	0	0	-5	5	0	0	0	0	0	
imports*	000 t	0	0	0	0	0	0	0	0	0	
exports*	000 t	0	0	0	0	0	0	0	0	0	
utilization	**000 t**	**22**	**29**	**28**	**27**	**18**	**8**	**6**	**6**	**3**	
kg/capita	kg	0.6	0.7	0.7	0.7	0.5	0.2	0.2	0.2	0.1	
selfsufficiency (1)	%	168	141	237	138	187	226	274	368		
selfsufficiency (2)	%	101	101	118	82	100	100	100	102		

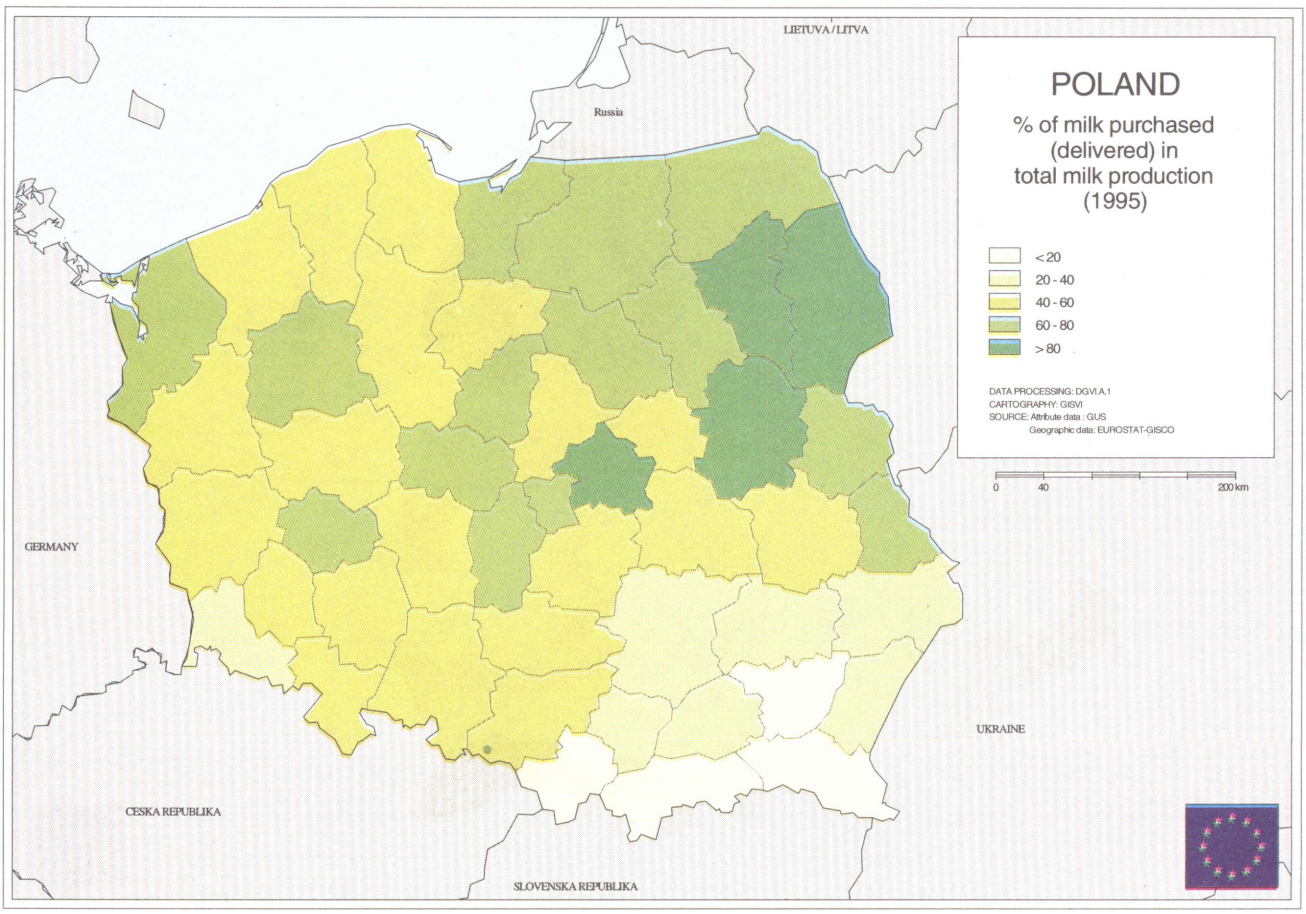
First transformation included

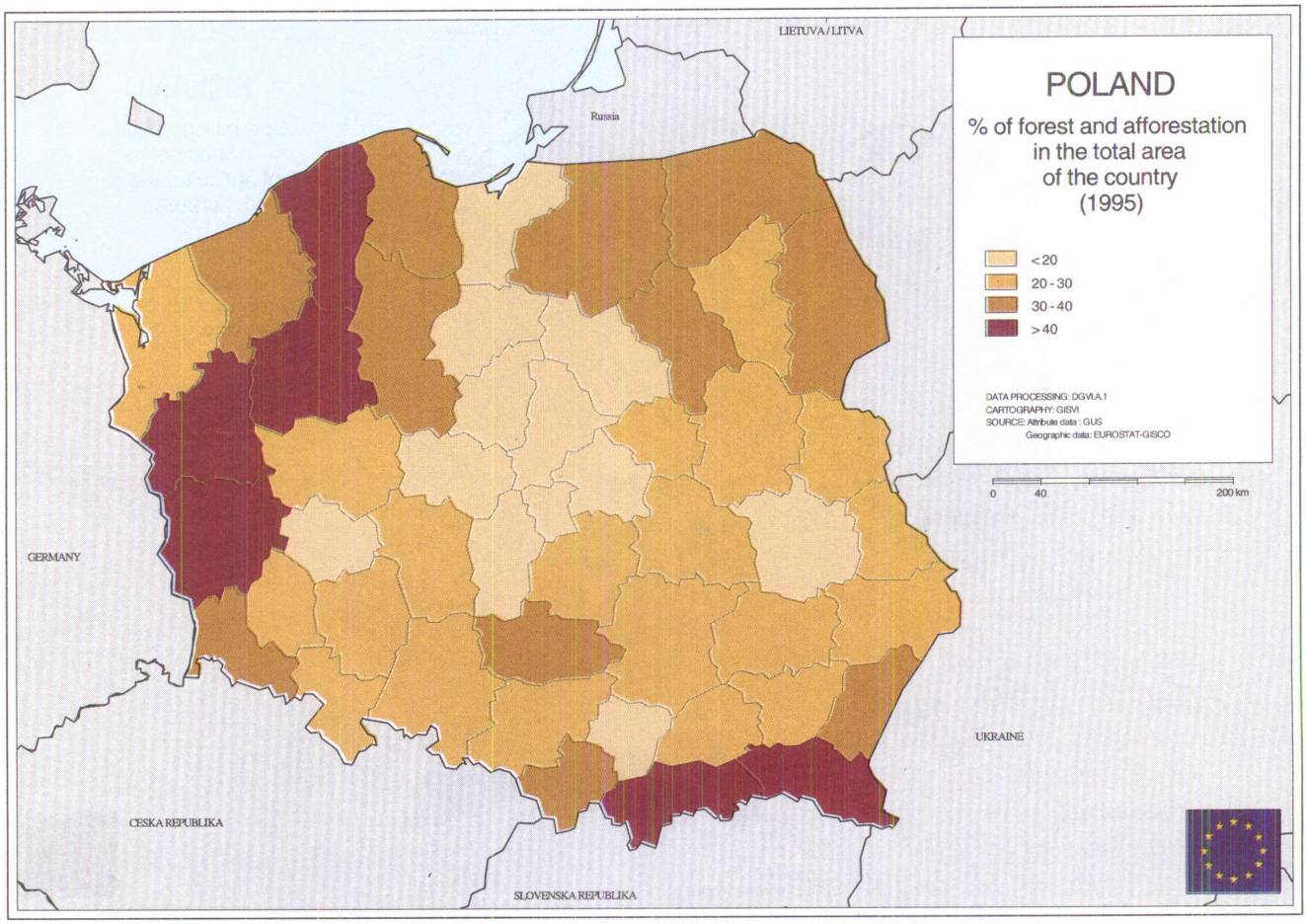
(1) based on "indigenous" production taking into account trade of life animals transformed in carcass

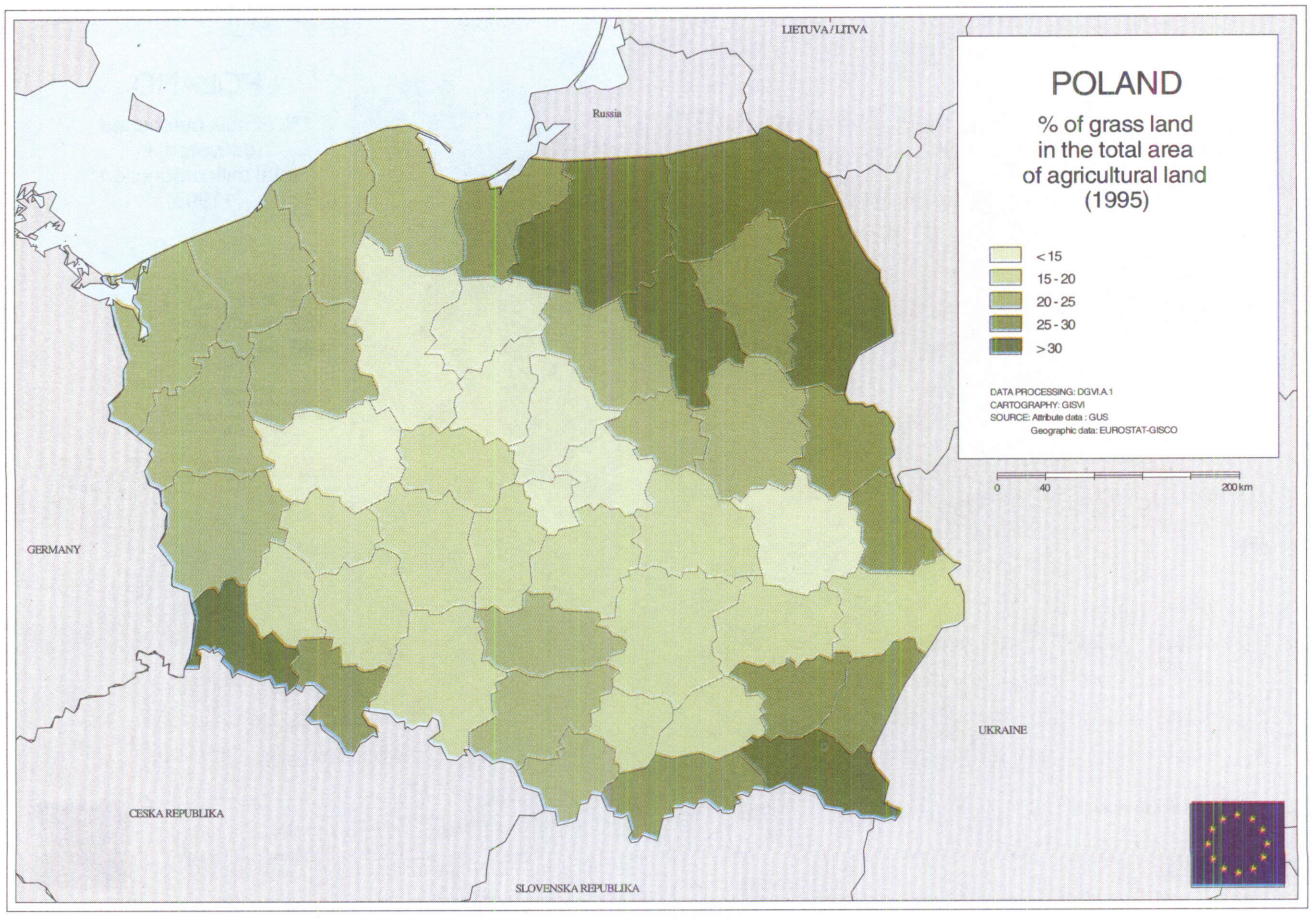
(2) based on production without taking into account trade of life animals

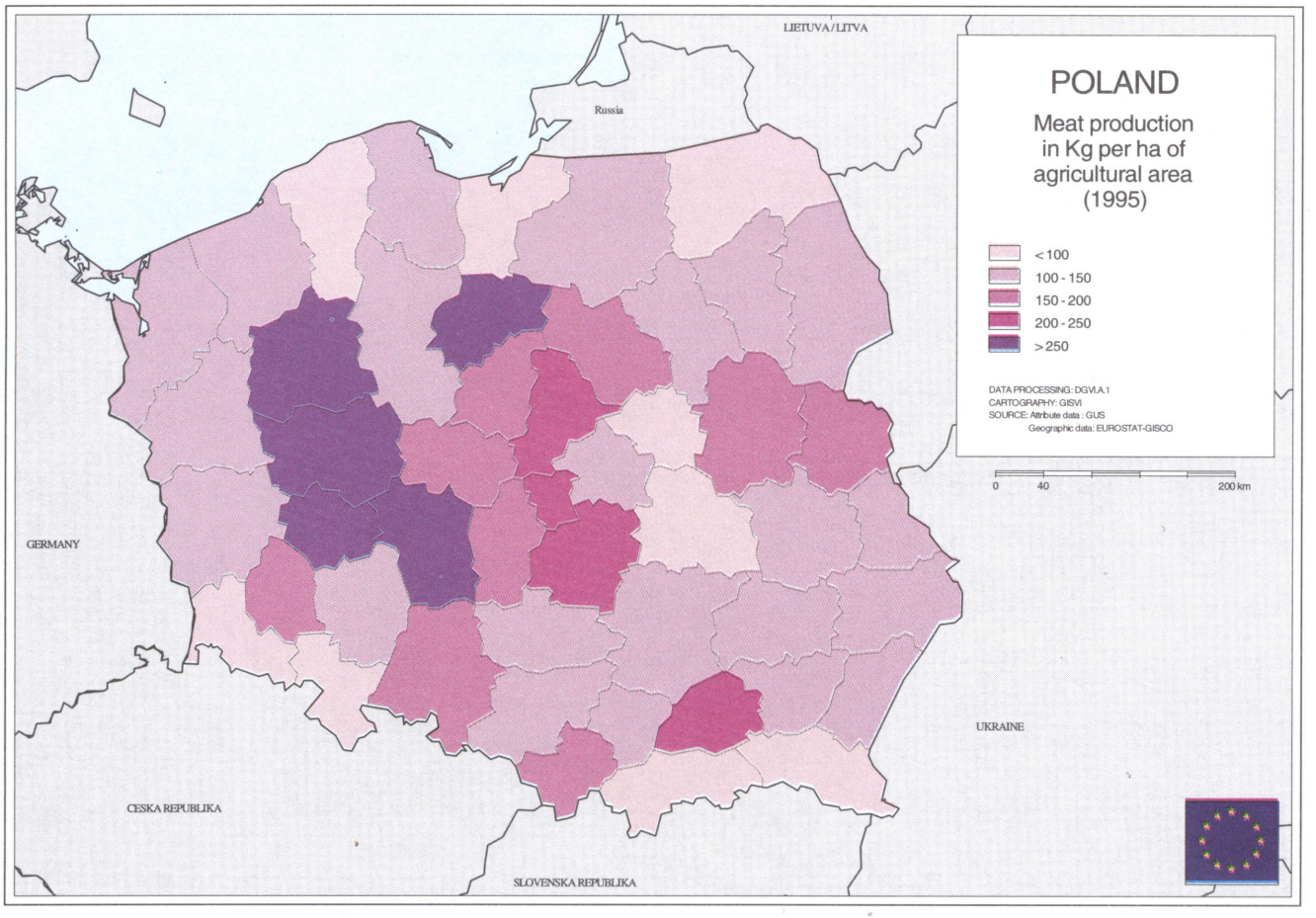
Sources: IERiGZ; * FAO Data


LIETUVA/LITVA
Russia
GERMANY
CESKA REPUBLIKA
SLOVENSKA REPUBLIKA
UKRAINE
POLAND
Cow milk production in litres per ha of agricultural area (1995)
< 400
400 - 600
600 - 800
800 - 1000
> 1000
DATA PROCESSING: DG VI.A.1
CARTOGRAPHY: GISVI
SOURCE: Attribute data : GUS
Geographic data: EUROSTAT-GISCO
0
40
200 km


LIETUVA/LITVA
Russia
GERMANY
CESKA REPUBLIKA
SLOVENSKA REPUBLIKA
UKRAINE
POLAND
% of milk purchased (delivered) in total milk production (1995)
< 20
20 - 40
40 - 60
60 - 80
> 80
DATA PROCESSING: DG VI.A.1
CARTOGRAPHY: GISVI
SOURCE: Attribute data : GUS
Geographic data: EUROSTAT-GISCO
0
40
200 km


LIETUVA/LITVA
Russia
GERMANY
UKRAINE
CESKA REPUBLIKA
SLOVENSKA REPUBLIKA
POLAND
% of forest and afforestation
in the total area
of the country
(1995)
<20
20 - 30
30 - 40
>40
DATA PROCESSING: DGVI.A.1
CARTOGRAPHY: GISVI
SOURCE: Attribute data : GUS
Geographic data: EUROSTAT-GISCO
0
40
200 km


LIETUVA/LITVA
Russia
GERMANY
UKRAINE
CESKA REPUBLIKA
SLOVENSKA REPUBLIKA
POLAND
% of grass land
in the total area
of agricultural land
(1995)
<15
15 - 20
20 - 25
25 - 30
>30
DATA PROCESSING: DGVI.A.1
CARTOGRAPHY: GISVI
SOURCE: Attribute data : GUS
Geographic data: EUROSTAT-GISCO
0
40
200 km



2.2 Agricultural trade

2.2.1 Agricultural trade within global trade

Total exports and imports represented respectively 30.6 % and 19.0 % of GDP in 1997. The trade balance went negative in 1991 and has since continually deteriorated with the deficit reaching 14.2 billion ECU in 1997 (table 2.2.1-1).

Within global external trade, agricultural products (commodities and processed products from the first 24 chapters of the combined nomenclature) represent a significant part: 13.0% for exports and 11,0% for imports in 1997. Agriculture has maintained its share of exports but its share of imports is reduced.

Since 1990, total imports have grown at 2.6 times the rate of exports and agricultural imports at three

Table 2.2.1-1. Trade of all products and agricultural products with all countries (mio current ECU)

	1990	1991	1992	1993	1994	1995	1996	1997	Annual rate 97-90 (%)
Exports									
All	11251	12028	10183	12067	14524	17504	19258	23132	11%
Agriculture	1495	1992	1490	1430	1757	1919	2173	2933	10%
% agriculture	13%	17%	15%	12%	12%	11%	11%	13%	
Imports									
All	7485	12528	12288	16070	18171	22209	29172	37367	26%
Agriculture	523	1680	1524	1911	2050	2284	3143	3351	30%
% agriculture	7%	13%	12%	12%	11%	10%	11%	9%	
Trade balance									
All	3766	-500	-2105	-4003	-3647	-4706	-9914	-14235	
Agriculture	971	312	-33	-481	-293	-364	-971	-418	

Source: CIHZ

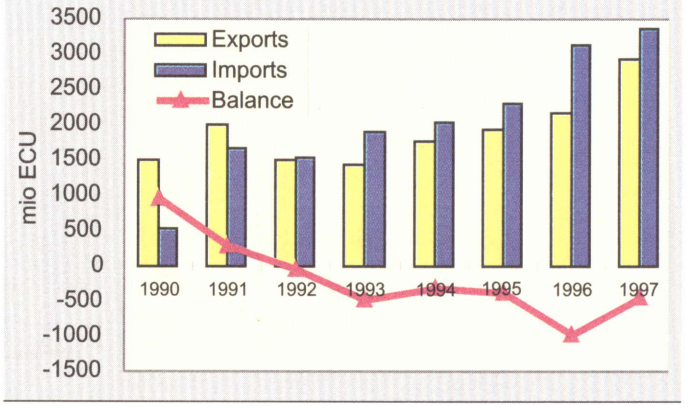
Table 2.2.2-1. Polish exports and imports of agri-foods products by partners in 1996

Group/Commodities	Exports (mln ECU)								Imports (mln ECU)								Balance (mln ECU)						
	TOTAL	TOTAL	EU 15 %	CEFTA	EFTA	Ex USSR	USA	Other	TOTAL	TOTAL %	EU 15	CEFTA	EFTA	Ex USSR	USA	Other	TOTAL	EU 15	CEFTA	EFTA	Ex USSR	USA	Other
I. ANIMAL PRODUCTS																							
A. Live animals	138.1	6.4%	126.5	0.8	0.2	0.5	0.3	9.7	33.4	1.1%	25.4	4.8	0.0	0.6	0.5	2.0	104.7	101.1	-4.0	0.2	-0.2	-0.2	7.6
1 Horses	62.5	2.9%	61.7	0.1	0.1	0.0	0.2	0.3	1.0	0.0%	0.8	0.0	0.0	0.2	0.0	0.0	61.5	61.0	0.1	0.1	-0.2	0.2	0.3
2 Livestock	57.4	2.6%	52.5	0.6	0.1	0.0	0.0	4.1	7.0	0.2%	6.4	0.2	0.0	0.3	0.0	0.1	50.4	46.2	0.4	0.1	-0.3	0.0	4.1
3 Sheep	10.4	0.5%	9.7	0.0	0.0	0.0	0.0	0.6	0.0	0.0%	0.0	0.0	0.0	0.0	0.0	0.0	10.4	9.7	-0.0	0.0	0.0	0.0	0.6
4 Other	7.8	0.4%	2.5	0.1	0.0	0.5	0.1	4.5	25.4	0.8%	18.3	4.6	0.0	0.1	0.5	1.9	-17.6	-15.7	-4.5	0.0	0.4	-0.4	2.6
B.Processed products (5-11)	568.0	26.1%	186.5	5.8	1.5	287.4	25.3	60.5	181.5	5.8%	92.9	21.3	0.9	5.2	27.7	33.6	386.4	93.6	-15.5	0.6	282.2	-2.4	26.9
5 Red meat and offals	95.2	4.4%	44.2	0.3	0.3	46.7	0.0	2.8	99.8	3.2%	52.1	13.4	0.0	0.0	4.6	29.7	-4.6	-7.9	-13.1	0.3	46.7	-4.5	-26.9
6 Poultrymeat and offals	65.7	3.0%	63.3	0.0	0.7	0.3	0.0	1.4	40.3	1.3%	11.3	3.3	0.0	0.0	23.0	2.8	25.4	52.0	-3.3	0.7	0.3	-23.0	-1.3
7 Meat products	182.6	8.4%	14.3	0.2	0.1	154.9	12.1	0.9	9.1	0.3%	6.0	2.1	0.0	0.1	0.1	0.7	173.5	8.3	-1.9	0.1	154.8	12.0	0.2
8 Animal fats	13.1	0.6%	0.5	0.8	0.0	11.7	0.0	0.1	2.9	0.1%	2.2	0.5	0.0	0.1	0.0	0.1	10.2	-1.7	0.3	-0.0	11.5	-0.0	0.0
9 Milk. cream and ice-cream	152.0	7.0%	55.0	2.2	0.4	40.3	1.3	52.9	14.8	0.5%	7.6	1.7	0.6	4.8	0.0	0.1	137.2	47.3	0.5	-0.2	35.5	1.3	52.8
10 Butter	21.9	1.0%	3.1	0.1	0.0	18.0	0.0	0.7	0.6	0.0%	0.5	0.1	0.0	0.0	0.0	0.0	21.3	2.6	0.1	0.0	18.0	-0.0	0.7
11 Cheeses and curds	37.5	1.7%	6.1	2.2	0.0	15.5	11.9	1.7	14.1	0.4%	13.2	0.2	0.3	0.1	0.0	0.3	23.4	-7.1	1.9	-0.3	15.4	11.9	1.5
12 Other animal products	41.2	1.9%	29.1	0.8	0.7	3.1	1.3	5.8	176.7	5.6%	131.4	7.5	0.3	3.5	10.2	23.9	-135.6	-102.2	-6.7	0.4	-0.4	-8.8	-18.1
C.Other	134.8	6.2%	87.0	7.1	2.7	26.0	3.6	2.6	191.6	6.1%	57.2	1.8	81.1	21.6	0.4	29.1	-56.8	29.7	5.3	-78.4	4.4	3.2	-26.4
13 Fish and crustaceans	78.4	3.6%	49.1	2.8	2.7	13.1	2.7	2.3	175.5	5.6%	45.2	1.7	80.8	21.6	0.4	25.4	-97.2	3.8	1.1	-78.1	-8.4	2.3	-23.2
14 Fish products	56.4	2.6%	37.9	4.2	0.0	12.9	0.9	0.4	16.1	0.5%	12.0	0.0	0.3	0.0	0.0	3.7	40.4	25.9	4.2	-0.3	12.9	0.9	-3.3
Total I (1-14)	882.0	40.6%	429.1	14.4	5.1	316.9	30.6	78.6	583.3	18.6%	306.9	35.3	82.4	30.9	38.7	88.6	298.7	122.2	-20.9	-77.3	286.1	-8.2	-10.1
II. CROP PRODUCTS																							
D. Raw materials	190.1	8.7%	111.2	9.2	5.0	63.2	0.2	1.3	998.7	31.8%	487.1	43.9	1.8	81.3	113.8	270.8	-808.6	-375.9	-34.7	3.1	-18.1	-113.7	-269.4
15 Cereals	10.5	0.5%	0.3	0.1	0.0	10.0	0.0	0.1	582.5	18.5%	295.0	21.5	1.5	75.5	103.3	85.8	-572.0	-294.7	-21.4	-1.5	-65.5	-103.3	-85.7
16 Oilseeds	12.4	0.6%	11.5	0.0	0.0	0.7	0.0	0.1	119.4	3.8%	57.8	17.2	0.0	4.4	7.2	32.8	-107.1	-46.3	-17.2	-0.0	-3.6	-7.2	-32.7
17 Fresh potatoes	9.8	0.5%	0.0	0.2	0.0	9.2	0.0	0.4	4.0	0.1%	3.6	0.0	0.0	0.0	0.0	0.3	5.8	-3.6	0.2	0.0	9.2	0.0	0.0
18 Fresh fruits	74.8	3.4%	36.3	3.3	1.8	32.9	0.1	0.4	237.2	7.5%	83.1	3.6	0.1	1.0	2.9	146.5	-162.3	-46.8	-0.3	1.7	31.9	-2.8	-146.0
19 Fresh vegetables	59.5	2.7%	43.0	4.8	1.8	9.4	0.0	0.3	30.9	1.0%	26.1	1.3	0.0	0.4	0.1	2.9	28.6	17.0	3.5	1.8	9.0	-0.1	-2.6
20 Flowers	23.0	1.1%	20.0	0.7	1.3	0.9	0.1	0.1	24.6	0.8%	21.5	0.2	0.1	0.0	0.4	2.5	-1.6	-1.5	0.6	1.2	0.9	-0.3	-2.4
E.Processed products (21-29)	753.4	34.7%	410.4	19.9	11.1	251.5	9.7	48.2	696.5	22.2%	329.3	87.1	6.6	14.9	14.6	243.9	56.9	81.1	-67.2	4.4	236.7	-4.9	-195.8
21 Vegetable fats and oils	19.8	0.9%	9.2	0.0	0.1	7.3	0.0	1.2	172.2	5.5%	102.9	25.0	1.4	5.0	0.1	37.9	-152.4	-93.7	-25.0	-1.3	2.4	-0.1	-36.7
22 Cereal milling products	18.0	0.8%	4.1	1.4	0.0	12.0	0.2	0.3	29.0	0.9%	9.8	12.7	0.0	6.1	0.2	0.3	-11.0	-5.6	-11.3	-0.0	5.9	-0.0	0.0
23 Cakes and meals	22.1	1.0%	22.1	0.0	0.0	0.0	0.0	0.0	201.4	6.4%	47.8	0.6	0.1	1.1	1.1	150.7	-179.3	-25.7	-0.6	-0.1	-1.1	-1.1	-150.7
24 Starch. croups. malt	12.2	0.6%	10.0	0.0	0.9	0.3	0.0	0.8	45.4	1.4%	25.7	18.6	0.0	0.7	0.3	0.0	-33.2	-15.7	-18.6	0.9	-0.4	-0.3	0.7
25 White sugar	38.0	1.7%	6.2	0.4	0.0	4.1	0.0	27.2	15.2	0.5%	11.7	3.1	0.0	0.2	0.0	0.1	22.8	-5.6	-2.7	0.0	3.8	-0.0	27.1
26 Molasses	40.6	1.9%	35.2	1.7	0.7	0.1	1.9	1.0	0.0	0.0%	0.0	0.0	0.0	0.0	0.0	0.0	40.6	35.2	1.7	0.7	0.1	1.9	1.0
27 Confectionery	205.4	9.5%	22.2	5.8	0.3	165.8	1.9	9.2	117.3	3.7%	97.0	4.4	3.9	0.6	8.0	3.4	88.1	-74.8	1.4	-3.6	165.3	-6.2	5.8
28 Fruit products	271.8	12.5%	229.4	4.7	7.1	23.6	3.8	3.0	70.2	2.2%	22.2	1.4	1.2	0.6	3.4	41.3	201.5	207.2	3.2	6.0	23.0	0.4	-38.3
29 Vegetable products	125.5	5.8%	72.0	5.8	1.9	38.2	2.0	5.5	45.6	1.5%	12.2	21.2	0.0	0.6	1.4	10.1	79.8	59.8	-15.5	1.9	37.6	0.5	-4.7
30 Other crop products	166.8	7.7%	40.2	11.1	1.3	101.7	2.8	9.6	243.8	7.8%	175.1	9.4	3.1	2.9	8.3	45.0	-77.0	-135.0	1.7	-1.8	98.8	-5.5	-35.4
Total II (15-30)	1110.2	51.1%	561.8	40.1	17.3	416.4	12.7	59.1	1938.9	61.7%	991.5	140.4	11.5	99.1	136.7	559.7	-828.7	-429.8	-100.3	5.8	317.4	-124.1	-500.6
TOTAL (I + II)	1992.2	91.7%	990.9	54.5	22.4	733.4	43.2	137.6	2522.2	80.2%	1298.5	175.6	93.9	129.9	175.4	648.3	-530.0	-307.5	-121.1	-71.5	603.4	-132.2	-510.7
III.OTHER PRODUCTS	180.3	8.3%	37.9	9.0	2.4	106.3	4.4	19.5	621.2	19.8%	176.4	11.8	6.6	1.6	33.4	391.3	-440.9	-138.5	-2.8	-4.3	104.7	-29.0	-371.8
31 Coffee. cacao. tea	55.8	2.6%	13.0	4.3	0.0	35.4	0.2	2.8	365.2	11.6%	38.7	0.3	4.5	0.1	0.9	320.6	-309.4	-25.7	4.0	-4.5	35.2	-0.8	-317.9
32 Tobacco and preparations	34.4	1.6%	15.2	1.3	0.1	6.0	0.0	11.7	130.2	4.1%	40.8	0.5	0.1	0.1	29.2	59.5	-95.8	-25.6	0.8	0.1	5.9	-29.2	-47.8
33 Spirits and alcoholic drinks	58.1	2.7%	5.8	0.7	0.5	41.9	4.1	4.5	52.9	1.7%	34.8	4.5	0.1	1.4	1.2	11.0	5.1	-29.0	-3.9	0.4	40.6	3.0	-6.5
34 Waters and non-alcoholic drinks	18.6	0.9%	1.6	0.1	0.0	16.5	0.1	0.3	13.5	0.4%	8.6	4.7	0.0	0.0	0.2	0.0	5.1	-7.0	-4.6	-0.0	16.5	-0.1	0.3
35 Other	13.5	0.6%	2.3	2.7	1.7	6.6	0.0	0.2	59.3	1.9%	53.5	1.8	1.9	0.1	1.8	0.2	-45.9	-51.2	0.9	-0.2	6.5	-1.8	0.0
Total III (31-35)	180.3	8.3%	37.9	9.0	2.4	106.3	4.4	19.5	621.2	19.8%	176.4	11.8	6.6	1.6	33.4	391.3	-440.9	-138.5	-2.8	-4.3	104.7	-29.0	-371.8
TOTAL (I + II + III)	2172.5	100.0%	1028.9	63.6	24.8	839.7	47.7	157.1	3143.4	100.0%	1474.9	187.5	100.5	131.6	208.9	1039.6	-970.8	-446.0	-123.9	-75.8	708.1	-161.2	-882.5
SHARE by partner	**100%**	**47%**	**3%**	**1%**	**39%**	**2%**	**7%**	**100%**	**47%**	**6%**	**3%**	**4%**	**7%**	**33%**									

Source: CIHZ

times the rate of agricultural exports. Following the same trends as global trade, agricultural trade has increased consistently since 1992 with imports at a faster rate. As a result, the agricultural trade balance, which was in surplus at 971 mio, ECU in 1990 became negative at -33 mio ECU in 1992 and deteriorated to –418 mio ECU in 1997 (figure 8). The peak in agricultural imports in 1996 was partly due to unusually large imports of cereals and oilseeds.

Figure 8. Agricultural trade balance



2.2.2 Analysis by category of product

Trade in 1996 key products (figures in % of total exports or imports) were:

Firstly exports (in % of value of total exports): on the animal side, live animals (6.4%), meat and meat products (16.4%) and milk (9.7%) were significant. As regards crops, of importance were fresh fruit (3.4%), fresh vegetables (2.7%). Among the vegetables, processed products (34.7%), confectionery (9.5%), fruit products (12.5%) and vegetable products (5.8%) had large parts. Finally spirits and alcoholic drinks at 8.3%.

As regards imports (in % of value of total imports): animals and animal products are much less important. In the crops, 1996 was an unusual year as imports of cereals (18.5%), mostly wheat were unusually high. Also significant were oilseeds (3.8%) in particular soya, and fresh fruit (7.5%) mostly citrus products. Of crop processed products (22.2%), particularly important were vegetable oils and fats (3.8%), cakes and meals (6.4%) and confectionery (3.7%). Of the "other products", coffee, cocoa and tea (11.6%) and tobacco (4.1%) have an important share (table 2.2.2-1).

2.2.3 Analysis by partner

EU-15 is Poland's most important agricultural trading partner. However the EU's share is diminishing at an accelerating rate. The EU took 60% of Polish exports in 1989 which was down to 39% in 1997. As regards Polish imports, the share of the EU was more or less maintained in 1997, dropping by 1% to 46% though it too seems in decline (figure 9).

Figure 9. Agrifood trade by partner

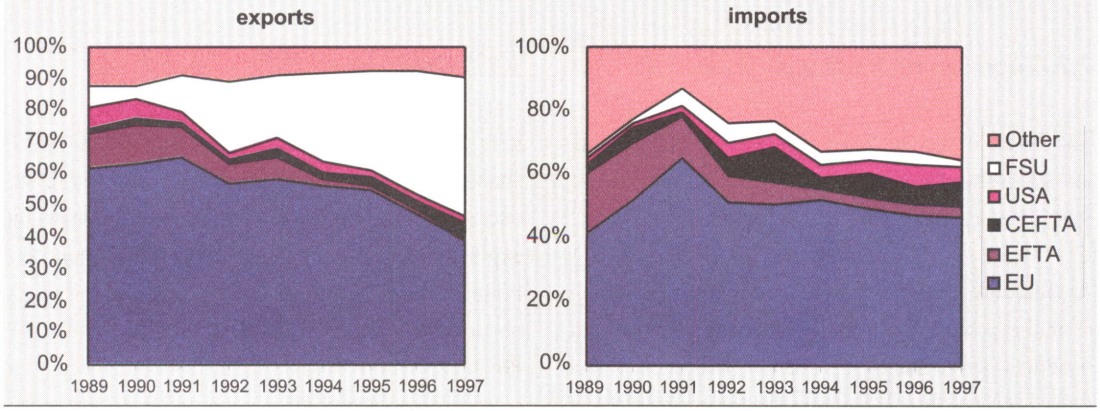
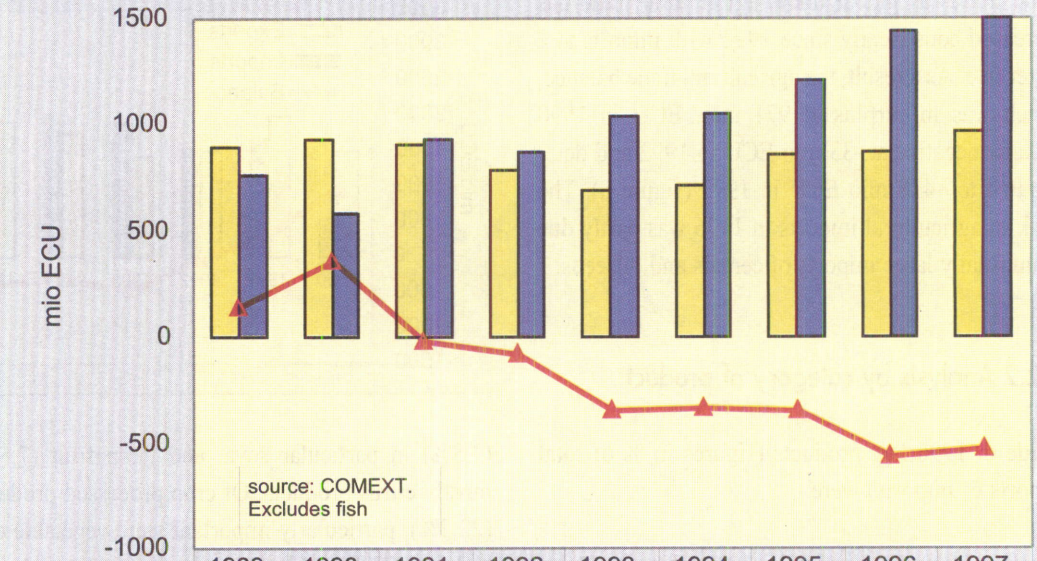


Figure 10. Agrifood trade with the EU



	1989	1990	1991	1992	1993	1994	1995	1996	1997
Exports	895	931	908	787	691	720	864	870	973
Imports	760	577	932	869	1037	1051	1208	1441	1500
Net trade	135	354	-25	-83	-347	-331	-343	-570	-527

It is the former Soviet Union in second place to which Polish exports have increased considerably, in particular processed products. With an average share of Polish agrifood exports of around 24 % in 1992-94, this increased to 44% in 1997, in contrast to the stagnation of trade with the EU.

CEFTA countries play a minor but increasing role in the Polish agricultural trade, amounting to a 5.0% share of Polish exports and a 7.0% share of Polish imports in 1997.

2.2.4 Agricultural trade with the EU

The balance was traditionally positive for Poland, but according to official statistics became negative from 1991 (figure 10).

Agricultural imports from the EU have increased over the period. Particularly important are animal products (pig meat and "other products"). As regards crops, cereals were particularly important in 1996 but oils cakes and meals and confectionery are also significant.

Of agricultural exports to the EU, important products are live animals, animal processed products, and crop processed products in particular processed fruit products. Total exports decreased to a low point in 1993 but have since increased as exports of in particular fresh vegetables, and crop processed products in particular cakes and meals, confectionery and fruit products have picked up.

2.2.5 Unofficial trade

It is only by using official statistics that a precise analysis of trade can be made. However, these statistics miss out on unofficial personal imports and exports. According to some sources, for Poland this trade is most important for agricultural products, particularly on the German and eastern borders. On Poland's western border, the trade is mostly retail in character and preferred exports to the EU are tobac-

Table 2.2.5-1. Number and size of individual holdings in 1988 and 1996

		Total farms	distribution (%) of farms according to farm area				
			1 - 5 ha	5 - 10ha	10 - 20ha	20 - 50ha	> 5 ha
1988	'000 farms	2168	1159	637	372	n.a.	n.a
	%	100%	53%	29%	17%		
1996	'000 farms	2041	1130	521	307	75	8.9
	%	100%	55%	26%	15%	4%	0%

		Total farms	distribution (%) of U.A.A. according to farm area					Avg farm size (ha)
			1 - 5 ha	5 - 10ha	10 - 20ha	20 - 50ha	> 5 ha	
1988	000 ha	15280	3731	5247	6302	n.a.	n.a.	7.0
	%	100%	24%	34%	41%			
1996	000 ha	16141	3403	4237	4650	2249	1602	7.9
	%	100%	21%	26%	29%	14%	10%	

U.A.A. - Utilised Agricultural Area

co, meat and meat products. Some estimates are that the trade on the Western border alone is over 1000 million ECU. The trade on the eastern border is a wider assortment of goods, but the overall value is even greater. The western border trade can be expected to decline as price differentials diminish. The overall conclusion is that Poland's agri-food trade balance appears to in surplus and the balance with the EU, rather than being –527 mio ECU in 1997 could well be positive by at least 500 mio ECU.

Even if the agricultural trade between the EU and Poland could be described as positive for Poland (taking account of unofficial trade) it seems the balance for Poland has deteriorated between 1990 and 1997 despite the Europe agreements and the inbuilt asymmetry that should work in favour of CECs.

2.3 Farm Structures

The farm size is small and changes in farm structures are rather slow. The average farm size only increased from 7.0 ha in 1988 to 7.9 ha in 1996 though this is faster than longer term trends. The number of holdings above 1 hectare went down by 6% to a total of 2.04 million Table 2.2.5-1). The number of holdings between 1 and 2 hectares even increased slightly. Medium sized holdings up to 15 ha decreased in numbers and their share of land use. These holdings seem to reduce their land area to the amount needed to cover their consumption needs and some surplus for local sales (table 2.2.5-1).

While very small holdings increase slightly, and medium sized holdings decrease in number and share of land use, the number of larger holdings has increased, partly due to the demise of state farms. According to projections made by Paszkowski et al 1997 based on the trend of changes in farm structure between 1990 and 1995, by 2005, just over half of Polish agricultural area would be farmed on holdings of greater than 15 ha (figure 11).

This result for 2005 can be regarded the maximum restructuring that will take place by this date. According to other observers, given that most of the state farm restructuring has already taken place, the trend will now probably slow down. As a result, farms >15 ha will probably only have around 40% of the share of agricultural land at this date at the very most. This forecast agrees with an unpublished estimate of Paszkowski of around 42% of agricultural land in this >15 ha category in 2005.

The public view of MAFE is that in the medium term only 400 000 to 500 000 farms are sustainable. A study by the IERiGZ (Wos) showed that only

Figure 11. Number of farms and land use by farm size (1996 – 2005)

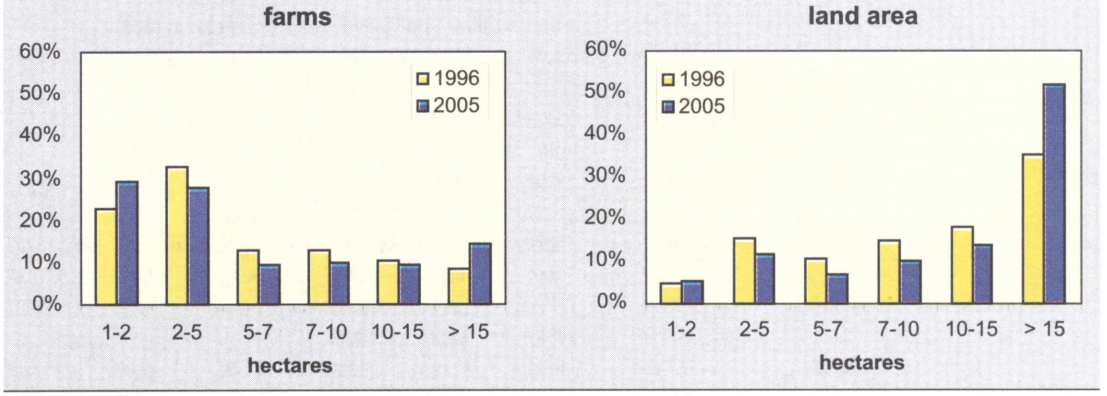


Table 2.2.5-2. Fragmentation of land in Poland in the private sector in 1996

	Farms with number of plots					Number of farms with distance from the site of farm to the furthest plot (in km)			
	1	2 - 3	4 - 5	6 - 9	> 10	< 2	2 - 5	5 - 10	> 10
Number of farms	336915	832177	455987	293260	127428	113362	669068	163137	79933
%	16.5	40.7	22.3	14.3	6.2	55.4	32.7	8.0	3.9

Przemiany agrarne. Naradowy Spis Powszechny 1996. Warsaw 1997, p.15

200 000 to 300 000 agricultural holdings could generate enough capital to expand. In a survey of farmers carried out during the 1996 census, only 17.2% of farmers responded positively when asked if their farm had development potential. Yet given the strong cultural attachment to "small scale farming" in many areas, typified in south east Poland, significant changes to the size and number of small holdings cannot be expected. This phenomenon has a strong social impact. If this population stay attached to their land on increasingly unsustainable holdings, then important rural development policies will be necessary.

Another physical handicap to efficient cultivation of plots is the fragmentation of farms into small plots. Some 43% of farms are split into 4 or more plots and on 45% of farms, the furthest plot was more than 2 km away (table 2.2.5-2). As farm size increases it seems the holdings become increasingly fragmented.

2.3.1 Structure of land ownership

Farming was not comprehensively collectivised in Poland (table 2.3.1-1 and following maps). Several attempts between the 1950s and the 1980s were defeated as a result of continuous resistance by the farm population. Successive communist governments finally accepted the private farm as the main base for food production in Poland.

There were some state owned farms however, mainly concentrated in the northern and western parts of Poland where they made up almost 40% of agricultural land use in 1990 compare with the national average of 18% (as high as 60% of land use in some voivodships). Although most of this land is still state owned, much of this is now rented to private managers so that the land managed by the state sector is reduced from around 20% in 1990 to 7.5 % in 1996 These farms used to be important employers and had important service activities such as repair shops and grain storage.

Table 2.3.1-1. Total land area* by user

	1988		1996						
	000 ha	%	000 ha	%	No. of farms '000	No. of farms %	Avg land area (approx.) ha	Avg agricultural area (author estimate) ha	Change in land change of each category %
Total Polish Land area	31268		31269		3067	100%			
o.w. Private	17161	80%	19193	92%	3065	100%	6,3		12%
o.w. Individual holdings	16052	75%	17492	84%	3060	100%	5,7		9%
o.w. Individual farms	15280	71%	16141	78%	2041	67%	7,9	7,0	6%
o.w. Individual plots	772	3,6%	1351	6,5%	1019	33%	1,3		75%
o.w. Co-operatives	839	3,9%	549	2,6%	2,47	0,1%	222,4	203,3	-35%
o.w. Public sector	4276	20%	1572	7,6%	2,0	0,1%	779,6	619,6	-63%
o.w. State farms	4276	20%	1560	7,5%	2,0	0%	798,8	636,0	-64%
o.w. Other land	9832	46%	10504	51%					7%
Total farm land	21437	100%	20765	100%					

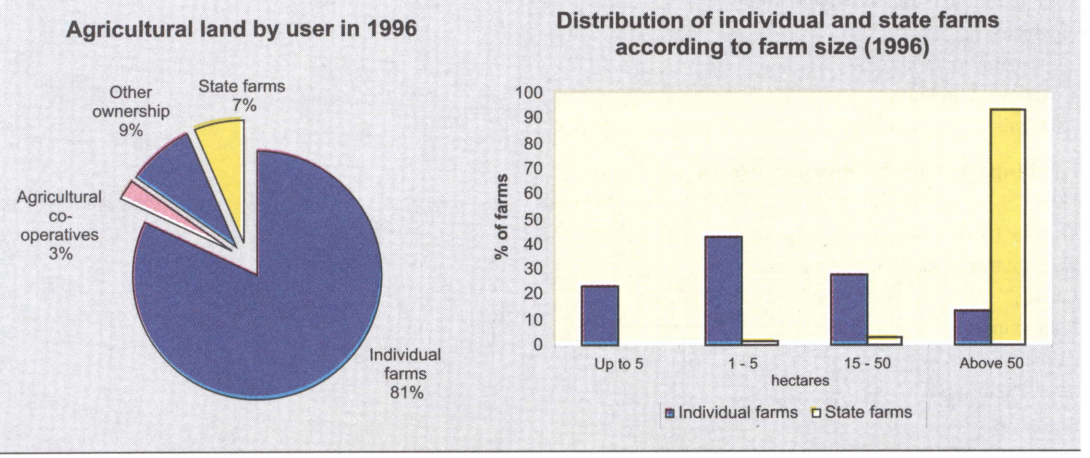
*Relates to land area (not to the utilised agricultural area). Estimate of agricultural area based on Paszkowski, personal communication.

Table 2.3.1-2. Changes in agricultural land use (1970-1996)

Percentage of Agricultural Land/ Year	1970	1975	1980	1985	1990	1996
According to Ownership						
Total: o.w.	100	100	100	100	100	100
State	15.4	17.2	19.4	18.5	18.4	18.8
Cooperative	1.4	3.1	5.0	3.9	3.9	2.3
Individual	75.1	72.6	69.3	72.1	71.9	75.1
According to Land Use						
Total: o.w.	100	100	100	100	100	100
State	15.4	17.1	19.5	18.7	18.6	6.7
Cooperative	1.3	2.9	5.4	4.1	4.0	2.7
Individual	81.0	79.0	74.5	76.5	76.0	82.1

(Source: Paszkowski et al)

Figure 12. Land use by user and farm size by category (1996)



The co-operatives, like the state owned farms were also concentrated in the mid-western part of Poland. The co-operative share in land use fell from 3.9% in 1988 to 2.6% in 1996.

Private farms are the dominant feature of Polish agriculture particularly in the centre, the south and even more so in the east of the country (see following maps). In the south, non-agricultural income is traditionally fairly well established and agriculture is a part time occupation for many. However in the central and eastern parts of the country, this non-agricultural income plays a smaller role. Although the proportion of land owned privately has only increased slowly from 72% in 1990 to 75% in 1995, in terms of land use, this has increased from 76% to 82% (table 2.3.2-1; figure 12).

2.3.2 Land privatisation

From the beginning of the transformation process in the State sector in 1992 to the end of 1994 the Agency of State Agricultural Property (AWRSP) took over about 90% of agricultural assets from the state-owned farms. This was mainly land expropriated after the Second World War and constituted the base to establish the state-owned farms in the following years. In total, 4.5 mio ha of land (incl. 3.5 mio ha of arable land) was taken over by the Agency. Up to the end of 1997, the Agency had sold 581 thousand ha of land with 2890 thousand hectares remaining in the State Treasury Agricultural property Stock. This land was disposed mainly through lease with much smaller amounts disposed through administration, management and perpetual use. The Agency still has to dispose of 650 thousand hectares on this date (of which only 346 000 ha is agricultural land. Of the land sold, almost 75% went to natural persons. The State Treasury resources also comprise premises for processing, agricultural services, storage and trade. At the end of 1997, the AWRSP held assets of 1 900 MECU (including land), an inventory worth 340 MECU and liabilities of 520 MECU (table 2.3.2-1).

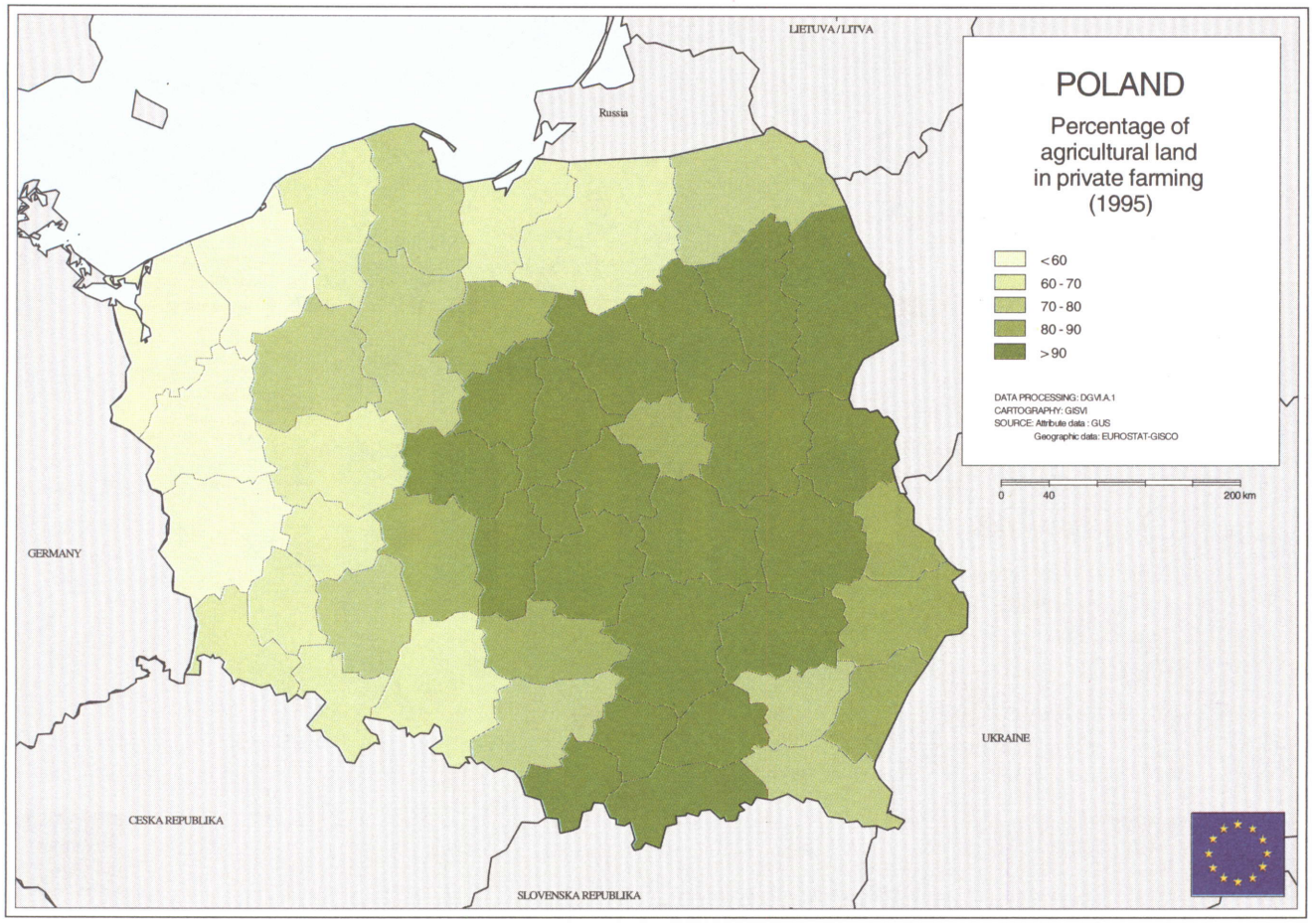
However, the indebtedness problem still remains to be solved. Accumulated debts together with the unsolved ownership question constitute the major obstacles in privatisation of former state-owned farms. Like many co-operatives in the new German Länder, the future for the large scale State-owned farms very much depends on how historical debts will be treated, given their influence on economic performance.

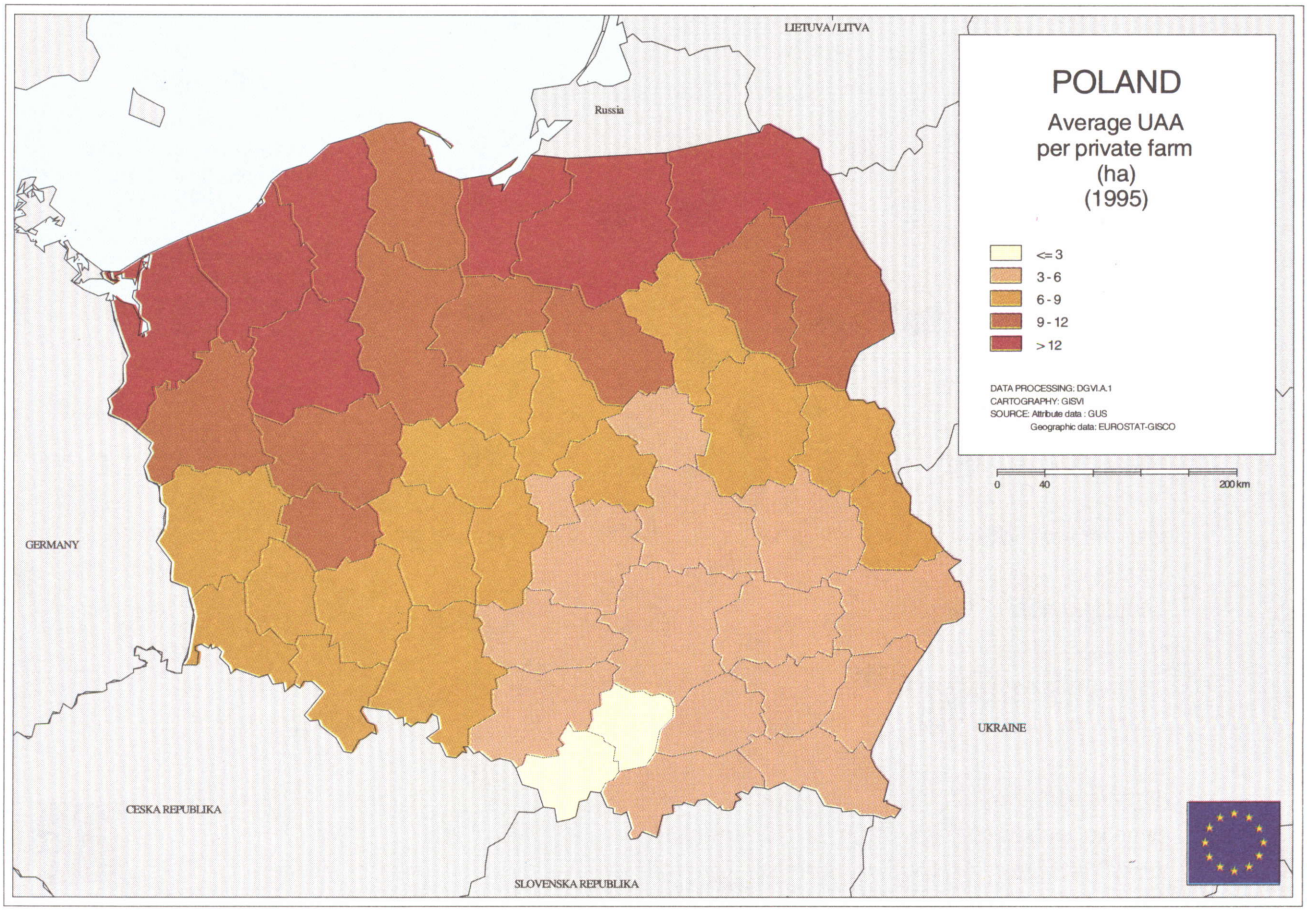
At the beginning of the transformation process, based on the Law on Co-operatives of 1990, it was

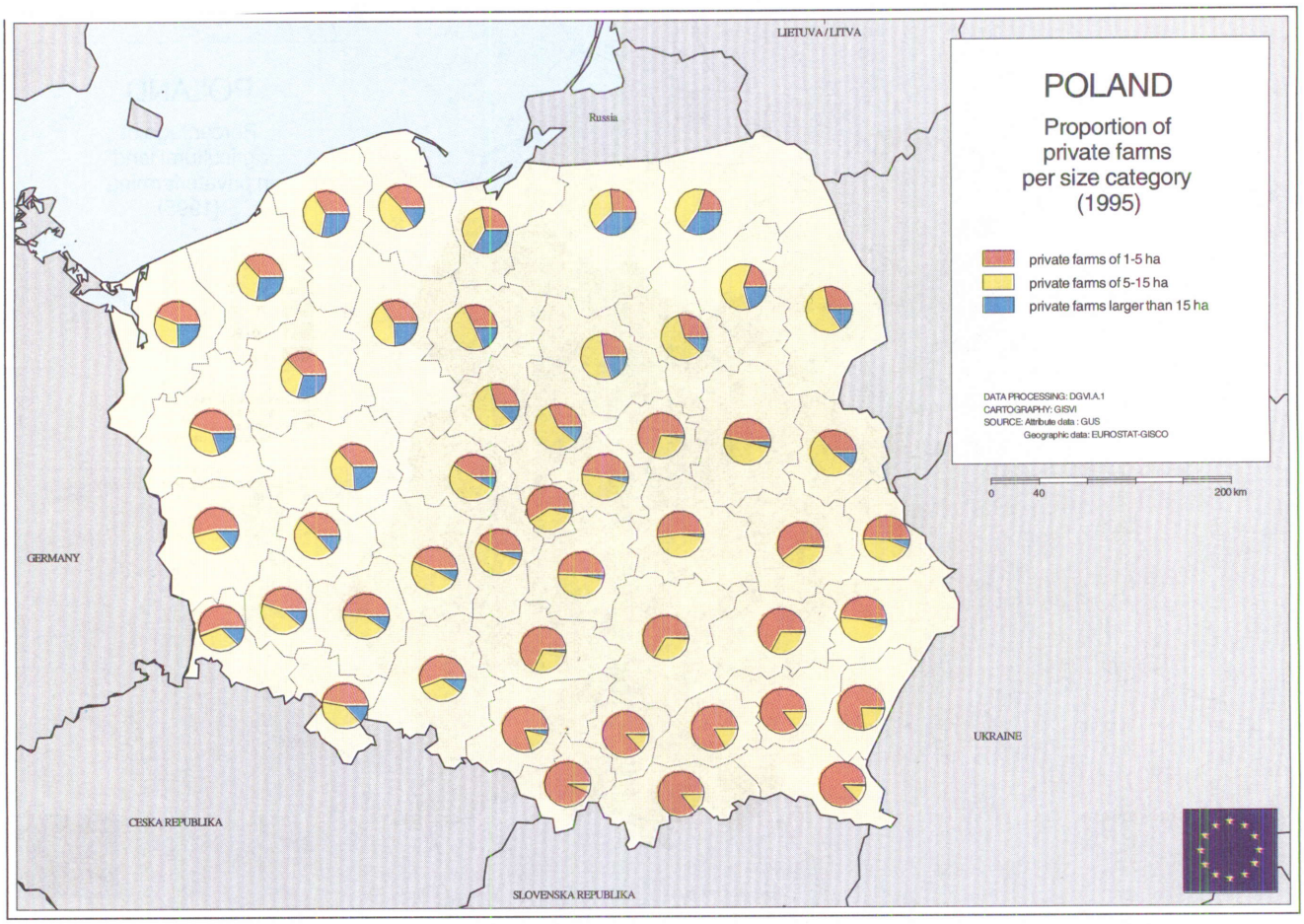
Table 2.3.2-1. Land Taken Over into APA Stock and its Redistribution 1992 - 1997 (000 ha)

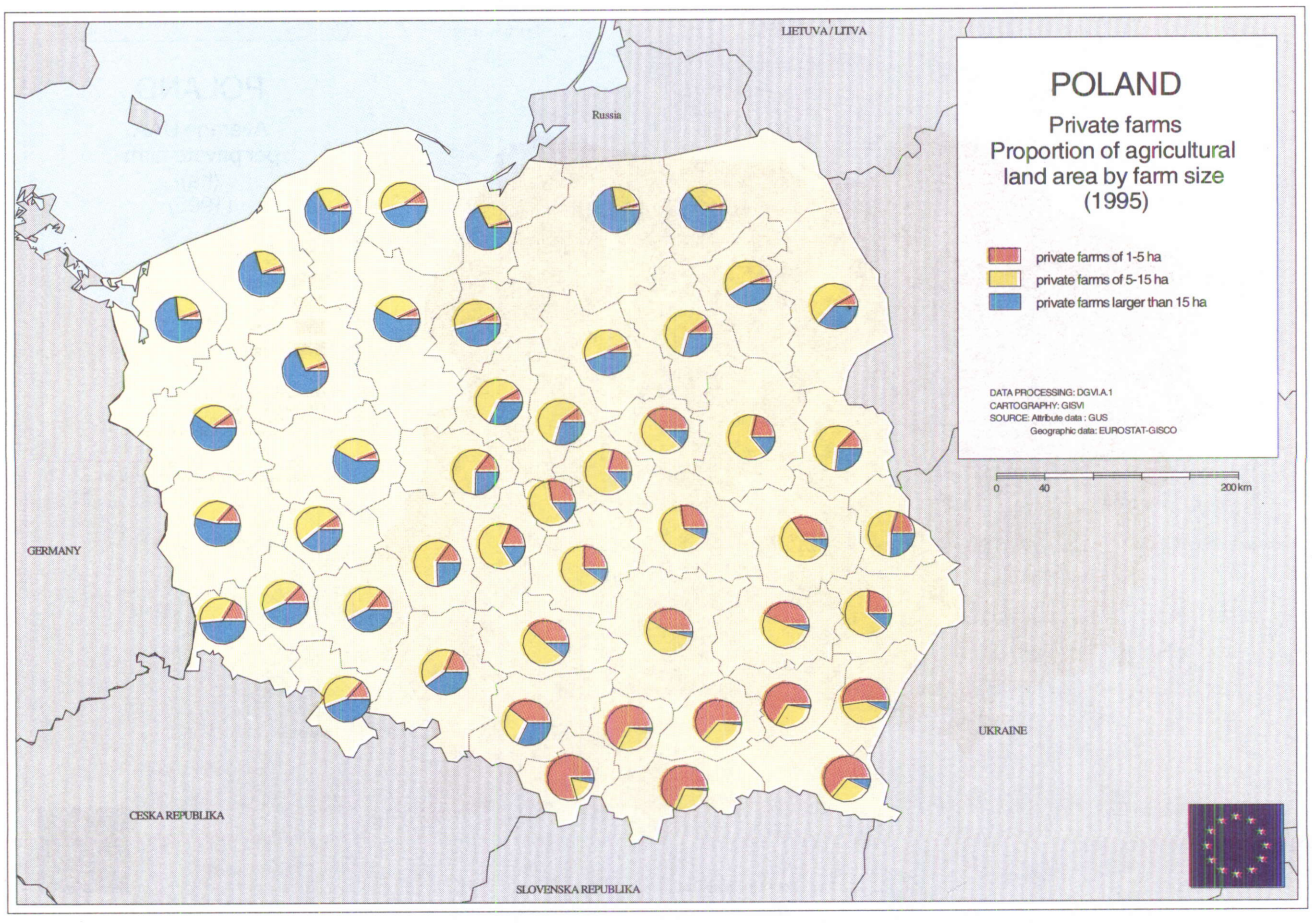
	1992	1993	1994	1995	1997
Total land taken over into APA stock	1432	3300	4232	4413	4592
of which:					
Former state farms	1369	3028	3728	3741	3752
National Land Fund	59	260	436	538	579
Others	4	12	68	134	262
Land from APA stock redistributed through:					
Sale	10	59	124	240	581
Transfer (free of charge)	0	8	21	51	107
Contribution in kind to companies	0	0	7	8	9
Lease	49	900	1981	2744	2890
Management	0	2	20	41	106
Administration	0	93	374	333	249
Awaiting disposal	1373	2238	1705	996	650

Source: AWRSP 1997


LIETUVA/LITVA
Russia
POLAND
Percentage of agricultural land in private farming (1995)
< 60
60 - 70
70 - 80
80 - 90
> 90
DATA PROCESSING: DG VI.A.1
CARTOGRAPHY: GISVI
SOURCE: Attribute data : GUS
Geographic data: EUROSTAT-GISCO
0
40
200 km
GERMANY
UKRAINE
CESKA REPUBLIKA
SLOVENSKA REPUBLIKA


LIETUVA/LITVA
Russia
POLAND
Average UAA per private farm (ha) (1995)
<= 3
3 - 6
6 - 9
9 - 12
> 12
DATA PROCESSING: DG VI.A.1
CARTOGRAPHY: GISVI
SOURCE: Attribute data : GUS
Geographic data: EUROSTAT-GISCO
0
40
200 km
GERMANY
UKRAINE
CESKA REPUBLIKA
SLOVENSKA REPUBLIKA


LIETUVA/LITVA
Russia
POLAND
Proportion of private farms per size category (1995)
private farms of 1-5 ha
private farms of 5-15 ha
private farms larger than 15 ha
DATA PROCESSING: DGVI.A.1
CARTOGRAPHY: GISVI
SOURCE: Attribute data : GUS
Geographic data: EUROSTAT-GISCO
0
40
200 km
GERMANY
UKRAINE
CESKA REPUBLIKA
SLOVENSKA REPUBLIKA


LIETUVA/LITVA
Russia
POLAND
Private farms
Proportion of agricultural land area by farm size (1995)
private farms of 1-5 ha
private farms of 5-15 ha
private farms larger than 15 ha
DATA PROCESSING: DGVI.A.1
CARTOGRAPHY: GISVI
SOURCE: Attribute data : GUS
Geographic data: EUROSTAT-GISCO
0
40
200 km
GERMANY
UKRAINE
CESKA REPUBLIKA
SLOVENSKA REPUBLIKA

decided to liquidate all co-operative unions, to restore full democratic independence through obligatory new elections in all primary co-operatives and to make possible the splitting of existing co-operatives into two or more new co-operative units. These legal changes resulted in a significant decrease of co-operative membership creating a serious problem for most of the primary co-operatives and contributing to their disintegration. The total number of members in rural co-operatives decreased from 7973 in 1989 to around 2 500 in 1996.

To obtain an efficient and truly private co-operative movement compatible with market economy principles, further changes in the scope of co-operative legislation are needed.

2.3.3 Family farm income

Methodological note: The results presented here are based on a sample of around 1300 family farm. Unlike the EU 15 Farm accounting data network (FADN) the Polish sample is self selecting and represents better performing farms than the average. Up to 25-30% better according to some estimates. The family farm types represented contribute around 80 % of the production and farm 82 % of the utilised agricultural area in Poland. To be harmonised with the EU15 FADN approach, the results have been weighted by region and by average farm area for Poland and by region, by economic size and type of farming for EU15. In Europe, the weighting procedure applies only to professional farms. In Poland, it applies to all farms, giving a higher weight to small farms which are so numerous. The weighted Polish results presented here may therefore take more account of small farms than the EU 15 results. An alternative approach not used here is to use arithmetic averages of the sample, which are usually between 2 to 3 times higher[3] and in such a way makes the Polish farm income look nearer to the EU15 farmer income. Given these difficulties, any comparison between Poland and the EU15 should be made with caution. Nevertheless, an analysis of the cost and output structure allows interesting conclusions.

In 1996, the family farms provided an average income equal to 2 500 ECU[4], that is 7 times lower than the European average income. This is 8 to 10 times lower than the German or the French average incomes but closer to the Portuguese family income observed in 1995 (table 2.3.3-1).

The Polish income per hectare, when direct subsidies are excluded (which are low in Poland), is comparable to the equivalent European or French average family income and 3 to 10 times higher than Portugal or Germany.

Table 2.3.3-1. Output, cost and family farm income in Poland compared to EU 15

Results in ECU	Poland 1996	EU 15 1995
Utilised Agricultural Area	**8.7**	**32.1**
Output (production)	8219	56831
Crop output	4430	25772
Livestock output	3787	28272
Other output	3	2787
Current subsidies	28	8396
Global Output	**8247**	**65227**
Intermediate Consumption	4456	31028
of which farm use	1975	2082
Taxes	144	147
Depreciation	876	7933
External Factors	265	8705
Wages	133	3978
Rent paid	57	2315
Interest paid	76	2412
Family Farm Income	**2506**	**17414**
Family Farm Income without Subsidies	2479	9018
Family Farm Income/ ha	**288**	**542**
Family Farm Income without Sub./ha	285	281

Sources : FADN 1995 and IERiGZ, 1997

[3] Because the sample selects mostly market oriented farms, which do not represent the majority of polish farms.
[4] This income is 3 to 4 times higher for farms of more than 15 hectares.

Table 2.3.3-2. Structure of the average Polish farm in 1996

Crops	Livestock
– 4 or 5 hectares of cereals	– 4 or 5 cattle of which 2 or 3 cows
– 1 or 2 hectares of other crops such as potatoes. sugar beet and rape	– 10 to 12 pigs
– 2 hectares of forage crops included meadows	– around 20 poultry

Source: IERiGZ

Table 2.3.3-3. Use of the global output in Poland compared to Europe

Structure in %	Poland 1996	EU 15 1995
Global output	100.0	100.0
Intermediate Consumption/Global Output	54.0	47.6
Farm use/ Intermediate consumption in %	44.3	6.7
Taxes/Global Output	1.7	0.2
Depreciation/Global Output	10.6	12.2
External Factors/Global Output	3.2	13.3
Wages/Global Output	1.6	6.1
Rent paid/Global Output	0.7	3.5
Interest paid/Global Output	0.9	3.7
Family Farm Income/Global Output	**30.4**	**26.7**

Sources : FADN 1995 and IERiGZ, 1997

Table 2.3.3-4. Labour productivity

	Poland 1996	EU 15 1995
Utilised Agricultural Area in ha	8.7	32.1
Annual Work Unit	1.36	1.53
Utilised Agricultural Area/Annual Work Unit	6.4	21
Output (production) in ECU	8219	56831
Output/AWU	6043	37144

Sources : FADN 1995 and IERiGZ, 1997

The analysed sample shows small farms, most of them not specialised at all and typically cultivate several crops and breed various livestock, but on a small scale (table 2.3.3-2).

The family farms seem to be profitable, giving a return of 30% of global output. But it is based on two main factors.

- First, approximately 45 % of output is used for intermediate consumption.
- Secondly, few "external factors" are used, such as wages, rent paid and interest paid[5]. These expenses represent 3 % of the output, which is 4 times lower than in EU15 countries. Levels of depreciation are also low.

The low depreciation and use of credit show a low propensity to invest and combined with the high intermediate output illustrate the difficulty of modernisation (table 2.3.3-3).

In reference to all these elements (low capacity for self-financing, high recourse to farmhouse consumption and farm use, recourse in some cases to external resources, hidden unemployment), most Polish family farms are characterised by a structural inertia which seems to continue.

Two further elements also help to explain the maintenance of this farm structure:

Firstly, agriculture serves as employment buffer to the Polish economy. Agricultural labour productivity in Poland is low compared to other EU countries (see annual work unit per farm or per ha in Table 4). Secondly, the total household income is higher than these calculated here due to external resources such as wages from other family members, pensions and social insurance not accounted for here (table 2.3.3-4).

2.3.4 Farming organisations

Poland has an institutional infrastructure with a certain number of agencies managing different aspects of Polish agricultural policies under the central responsibility of the Ministry of Agriculture and Food Economy and an emerging structure of farm-

[5] Farmers do not ask for credits because the interest rate is high, and banks are reluctant to lend money to the agricultural sector. So the alternative is to self-finance themselves, which is limited due to the level of the released income.

ers' organisations which play an increasing role in the formulation and implementation of agricultural policy.

The establishment of the National Agricultural Chamber Council in 1997 has been an important step in the process of creating a professional agricultural self-government body in Poland.

There exists a wide range of associations representing the interests of agricultural producers. The National Council of Co-operatives represents the co-operative farms, which currently has 19,000 members from all sectors of agriculture. The Federation of the Agricultural Producers' Union represents inter-professional organisations, which cover the basic sub-sectors in Polish agriculture. KZRKiOR (National Union of Farmers, Farmers' Circles and Organisations) is a rural trade union and a member of the post-communist coalition SLD. Between 1989-1997 the organisation was represented in Parliament. Other influential farming organisations are rural Solidarity which is represented in parliament in coalition with Solidarity and also Farmers Self Defence.

2.4 Rural Development

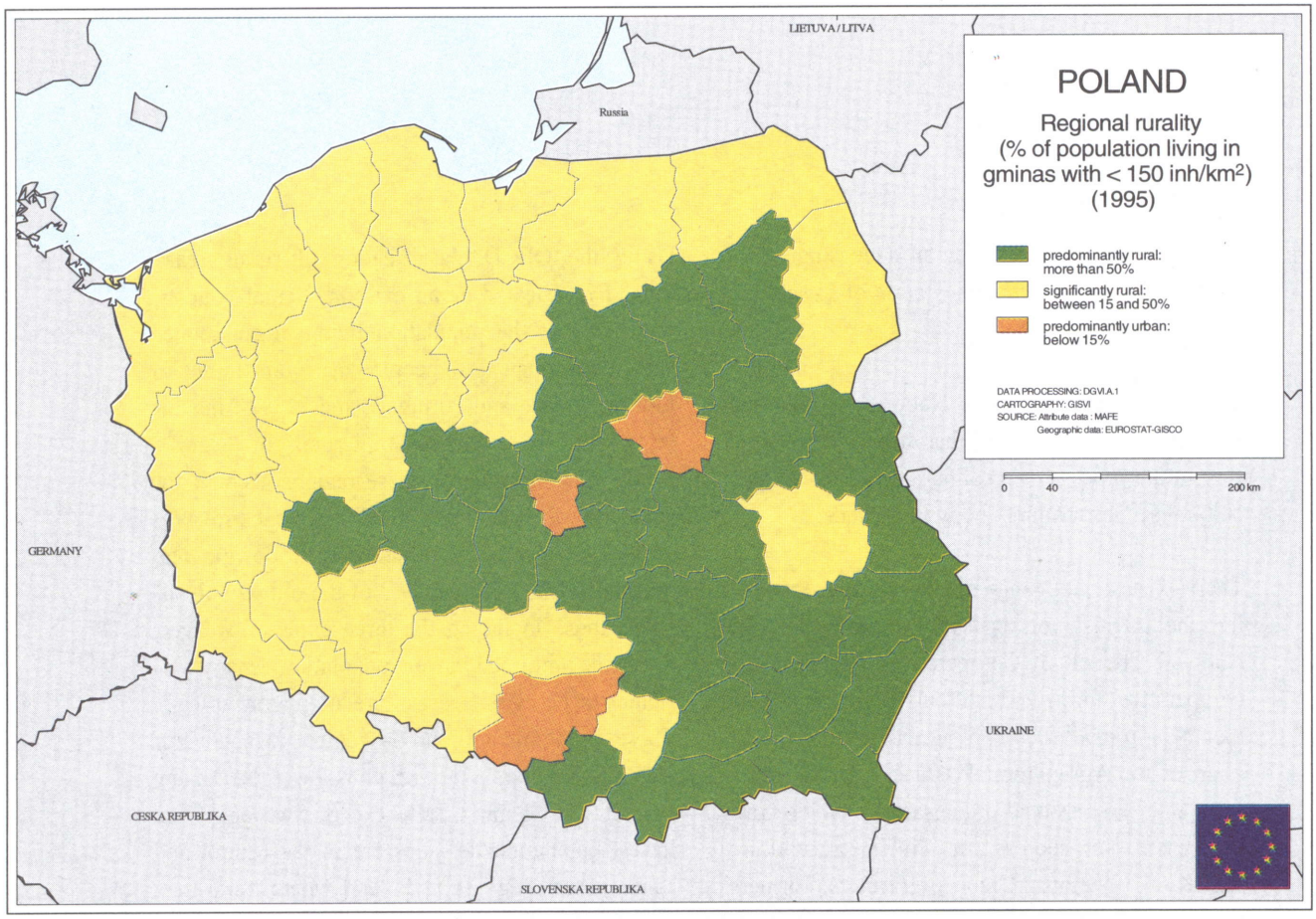
2.4.1 The regional and rural economy

In Poland there are a few large cities, the three biggest being Warsaw (1.6 million people), Lodz (0.8 million), and Kracow (0.75 million), surrounded by an extensive rural hinterland where the majority of Poland's 38 million inhabitants live and work in a network of villages interspersed with small towns. Rural Poland is characterised by small widely dispersed settlements, with more than 80% of villages having less than 500 inhabitants.

Using the OECD classification of rural areas[6], Poland is revealed as an extremely rural country, with 38% of the population living in communes with fewer than 150 people/km^2 (comparable to France, Greece and Portugal), and 81% of inhabitants living in "predominantly rural" or "significantly rural" regions[7]. These regions account for 96% of the total land area (the EU averages are 49% of population and 87% of land). The following map on rurality shows that only 3 of the old 49 voivodships, those including the three cities of Warsaw, Katowice and Lodz, have a population density sufficient to be classified as "predominantly urban". These predominantly urban regions account for 19% of total population, which is lower than in any current EU Member State except Sweden[8]. The lowest population densities are in the central and south-eastern regions of Poland where more than half the total population live in communes which have less than 150 people/km^2. The average age of the rural population is higher than in urban areas, largely due to out-migration to towns and cities in search of work.

The rural voivodships vary greatly in their structure, economy and demography. Regions where much of the land was previously farmed as large state collective enterprises (principally in the north and west) tend to have higher unemployment levels than average as the privatisation of these big farms has led to sharp decreases in the agricultural workforce, and there are few alternative employment opportunities for the ex-farm workers. Whilst the agricultural output of these regions is relatively high, due to the generally greater levels of technical expertise, commercial management and productivity on these farms as compared to the very small individual holdings found elsewhere, the regions as a whole tend to be amongst the poorest in Poland, since there is little non-agricultural activity outside the main towns. This tends to create a two-tier soci-

[6] Based on population densities, where the smallest administrative unit is classified as rural if the population density is less than 150 people/km^2.
[7] In the OECD classification, "predominantly rural" regions are defined as those where at least 50% of the total population live in rural communes, and "significantly rural" regions are those where between 15 and 50% of the total population live in such communes.
[8] Luxembourg was not divided into separate regions for the classification.



ety with great disparities between families with earned income and those dependent on the state.

In voivodships where farms are much smaller and have remained in private hands rural dwellers' activities tend to be more diversified. Although agricultural income levels are very low, it appears that younger farm families often also have other sources of income, and that due perhaps to the historical structure of small, individually managed holdings, the labour force is more flexible (although not necessarily any better trained). The 1996 GUS Census estimated that only 12% of the 2 million private farms derive their income exclusively from farming. Older farmers, who comprise a significant part of the population of these areas due to persistent outmigration of the young, are frequently entirely dependent upon their farms and state pensions, and must survive on very low incomes.

Agriculture is the most important source of employment in rural areas, and accounts for 44% of total employment in the predominantly rural regions, and 22% in the significantly rural voivodships. The proportions of the population employed in industry and services are correspondingly much lower than in the urban areas. This extremely high level of agricultural employment (26% for the country as a whole) is one of the biggest challenges facing Poland as it seeks to modernise and restructure the agricultural sector without destroying rural communities.

Rural areas have significantly higher unemployment levels than urban areas. For example, in 1993, whilst the urban unemployment level was 10.8%, the official unemployment figure for rural areas[9] was 17.7%. Since 1993 overall unemployment levels have decreased (the 1997 figure was 10.5%) but rural unemployment levels are still increasing in many areas, and in some rural voivodships is as high as 30%. In addition, hidden unemployment, due to inefficient labour use and under-utilisation of the available labour on farms, is estimated to be as high as 6-800,000 (approximately 3% of the total potential Polish workforce), so the actual levels of

[9] Using the OECD rural indicators classification, "rural areas" here are defined as predominantly rural and significantly rural regions.

unemployment in rural areas are considerably higher than the official figures.

2.4.2 Rural handicaps

Rural areas in Poland suffer from a number of constraints which restrict development and reinforce rural communities' isolation and remoteness. The dispersed settlement pattern makes the provision of infrastructure and services difficult, and lack of access to transport in rural areas only exacerbates the disparities with urban centres.

The poor quality of rural infrastructure restricts the possibilities for development and constrains the lives of rural people. The road network is in bad condition and many villages do not have a tarmac access road. Almost 20% of farmers have difficulty in cultivating their fields due to poor access. In eastern Poland, nearly 30% of villages have no paved roads. For several years the Ministry of Telecommunication has been implementing a special programme to extend the telephone network throughout rural areas. Even so, in 1997 the number of telephones in rural areas was only approximately 5 per 100 inhabitants.

A major sanitation infrastructure programme for rural areas was instituted in 1994, but there are still major problems with water quality and sewerage. Almost half of the rural population is supplied by wells, 66% of which do not meet drinking water standards, principally due to high levels of nitrate and bacterial contamination. 17% of piped water in rural areas also failed to meet the standards. Sewerage systems in rural areas are the subject of considerable ongoing investment, but few villages are currently connected to mains drainage and 74% of total sewage (human and animal waste) from farm holdings remains entirely untreated and goes directly onto the land (In 1993 the total length of sewerage pipelines was less than 3% of that of water pipelines). The lack of adequate sewerage facilities is linked to the poor water quality found in many rural settlements.

A major handicap for rural people, which has knock-on effects throughout the entire rural economy is access to the education system. The state system consists of 8 years of general education from 7 to 15 years of age, followed by attendance at a grammar, technical or vocational school. New proposals will change this to 6 years of primary school, 3 years of junior high and then either 3 years of grammar/secondary school or two years of vocational school. In rural areas normally one school catering for all pupils aged up to 15 is available locally. Then pupils must travel to a grammar, secondary or vocational school. Although tuition costs are met by the state, families must pay for travel, and frequently also accommodation as it is often not possible to commute daily from rural areas. This is an additional burden on the rural population and significantly reduces the numbers of students who continue their education beyond the age of 15. More than half (58%) of all farmers have no secondary-level education at all, nor any formal agricultural training.

Amongst those who do complete their secondary education, agricultural vocational schools are the most common choice, as they tend to be the closest and most easily accessible, but their limited curricula do not offer the best preparation for young rural people who will have to address the challenges to come. A report on the agricultural schools concluded that they should be upgraded to the status of secondary schools, that their curricula should be broadened to prepare students for a wider range of jobs, rather than concentrating solely on farming, and that subjects such as marketing and business management should be introduced. This report has however not yet been implemented.

In rural areas, only 2% of the population have a university-level education, compared to around 7.5% for Poland as a whole, and those working in agriculture are 5 times less likely to have completed any

form of higher education than people working in other sectors. There are not yet any signs of an improvement in this imbalance as although rural communes represent 38% of the total population, only 2% of students currently in higher education come from these areas.

The remoteness and lack of infrastructure of rural communities affects many other aspects of rural life. For example, access to health care, both generalist and specialist, is much more difficult and time-consuming, schools and shops are harder to reach and offer limited choice, banking, advisory and other professional services are less accessible. It is quite simply more difficult for people to meet and so information exchange and knowledge transmission tends to be slow. This has important implications for example in the adoption of new techniques in agriculture where peer activity plays a key role.

A considerable constraint which is currently limiting agricultural restructuring and modernisation is the lack of a full and effective land registry. At present there are three separate systems operated by three different ministries, none of which constitute a complete operational land register containing all the information necessary in a market economy. The Ministry of Interior and Public Administration is responsible for a land register which contains a description of land plots and their "holders" but does not grant legal title or ownership, and does not cover the whole country in a consistent fashion. The Ministry of Justice is responsible for the district property registers which contain details of ownership and property rights, but coverage is incomplete and out of date (only about 30% of property is currently included). The Ministry of Finance holds a fiscal register used to determine property taxes. In addition, a fourth ministry, the Ministry of Agriculture and Food Economy, is responsible for surveys of agricultural land and soil quality and for the calculation of taxes on rural property.

This complex situation causes problems in the land market, which slows down farm consolidation and restructuring, results in a lack of collateral to obtain credit for investment, and creates uncertainties for land managers which affect their long-term decisions.

In April 1998 the Surveyor General presented a draft programme to modernise the land registry system and to create an integrated system linking together a Real Estate Cadastre (containing physical details of property), a Real Estate Register (containing details of property rights and ownership) and a Fiscal Cadastre (containing valuations and tax liabilities). This will provide security for property buyers and sellers, will facilitate the process of land consolidation, strengthen the financial position of local authorities and support the operation of the market economy. It will however take considerable time and resources to implement the new system.

The current agricultural tax system can also act as a deterrent to economic development. Farmers are exempt from income tax, unless they produce certain specialised crops such as vegetables or mushrooms or also have non-agricultural activities in addition to farming. Instead, they pay a "land tax", equivalent to the price of 250kg of rye per hectare of agricultural land, directly to the gmina. The implications of this are that there is a lack of incentive to diversify or develop more profitable enterprises, as farmers wish to avoid being reclassified for tax purposes. The gmina authorities have the flexibility to reduce the tax if they consider that it is too high for some of their farmers. However, the rate per hectare must be the same for all farmers within the gmina, which results in a loss of income for local government, and a consequent restriction on their activities to the detriment of the entire community, if the rate is reduced to take account of the poorest farms. This system also acts as a disincentive for some farmers to register their land officially, as they fear becoming liable for more taxes.

There are proposals to reform the agricultural tax system, by switching to a method based on income level rather than a flat-rate for farms of more than 50 ha from the year 2001. In addition it is proposed to introduce value-added tax on agricultural output from 1999, which would permit farmers to reclaim tax on their purchased inputs. One of the barriers facing these reforms (apart from reluctance from the farming community) is the widespread lack of formal farm accounts. Projects have been set up, operated through the voivodship agricultural advisory offices, to introduce farm accounting techniques onto farms.

2.5 Agriculture and the environment

2.5.1 The impact of farming on the environment

In general, agriculture is less intensive in Poland than in most current EU Member States, and the rural areas support a rich variety of wildlife and range of habitats. Modernisation programmes, investment and education will also tend to increase the levels of inputs used, as farmers seek to increase productivity. The MAFE has recommended that fertiliser levels should be increased to be equivalent to the EU, in order to ensure equal agricultural production conditions.

Fertiliser use is not spread evenly across the country, with the majority of small private farms operating at near-subsistence level, using traditional extensive production methods, whilst larger farms, particularly former state farms are more likely to use higher input levels.

Livestock farming is an important sector of Polish agriculture, but stocking densities have declined considerably as a result of the economic transition process. 27% of the land area is considered to be in a "natural" or "extensively managed" state, with approximately 11% designated as of international importance.

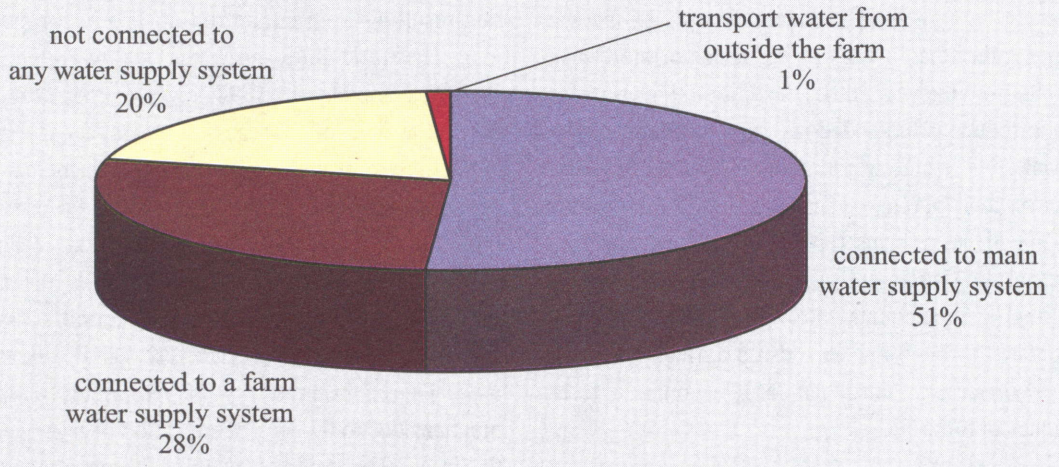
In certain areas of the country, groundwater pollution resulting from nitrate run-off is a major problem. The Agriculture and Water Quality Protection Project, completed in 1996, revealed that farmers have a low level of awareness of the impact of farming activity on water quality, and also of the harmful consequences of using contaminated water supplies for drinking, dairy hygiene or food production. This illustrates the fact that one of the key risks to the environment from agricultural activity is not the absolute levels of fertilisers and pesticides used, but environmentally inappropriate farming practices due to the lack of education of farmers on this issue. This could be addressed through the provision of relevant training and advice. The biggest source of groundwater contamination, however, remains pollution from rural households rather than agriculture.

In June 1996, the Agricultural Property Agency signed an agreement with the National Fund of Environment Protection and Water Economy establishing a financial framework for the construction of drainage and sewage treatment. Despite some success in reducing pollution loads in water, much more investment will be required to reach minimum acceptable standards across the country.

Soil monitoring carried out by the State Inspection Office for Agricultural Produce, Purchase and Processing (PISiPAR) since 1995 shows that 2% of soil is contaminated by heavy metals, and that this pollution is principally the result of industrial rather than agricultural activity.

Soil quality is not high, and in most areas is acidic, requiring considerable liming in order to maintain fertility. Around 1.8 million hectares of arable land were lying idle in 1997, and there is considerable risk of soil erosion in some areas. Anti-erosion measures will help to address both water quality and the constantly worsening water balance.

Figure 13. The water supplies to farms 1996



Source: MAFE 1996

2.5.2 Water resources

The water balance of Poland as a whole is precarious, with the average annual rainfall of less than 600 mm often insufficient to satisfy agricultural water requirements. The situation is most critical in the central part of the Mid–Poland Lowlands, where the worsening water balance coincides with loss of soil through wind erosion (figure 13).

The availability of enough good quality water is a major problem in Poland (see section 2.4.2). Only 61% of farms are connected to the main water supply system, the rest rely on wells. Nitrate concentrations in about 60% of rural wells exceed both Polish and EU standards.

Poor agricultural and rural waste management practices contribute significantly to the deterioration of surface and ground water quality, affecting urban populations which depend on these sources for drinking water. It is estimated that 90% of the nitrate pollution in ground water derives from agricultural sources.

Flooding in July and August 1997 caused extensive property damage, but this was concentrated around the rivers in southern and western Poland and did not significantly disrupt overall industrial or agricultural production. Only a very small proportion of agricultural land was under water long enough for crops to be destroyed.

2.6 Upstream activities

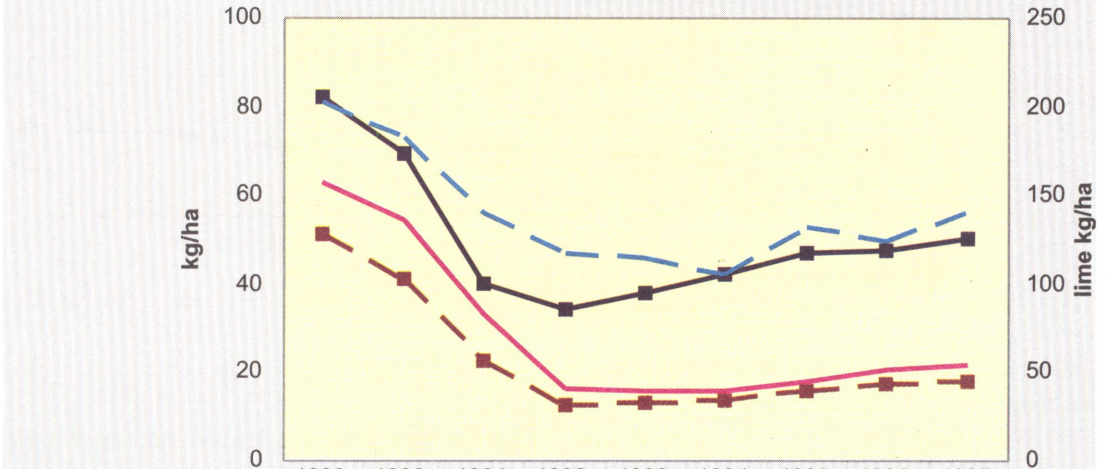
2.6.1 Inputs

In general, the government in Poland does not directly support the production of agricultural inputs. Subsidies still exist for inputs which stimulate biological progress in agriculture (certified seeds, seed potatoes, new animal breeds) and prevent further increases in soil acidity (lime production and transportation). There are also credit subsidies for input purchases e.g. fertilisers, seeds and pesticides. Of the three types of subsidised credit available, these latter credit subsidies are the so called "operational credits", the planned spending on which has been reduced in the 1998 budget.

2.6.1.1 Fertilisers

After 1990, as a result of lower subsidies for the production of mineral fertilisers and a worsening price ratio between fertilisers and agricultural prod-

Figure 14. The evolution of fertiliser and lime use



	1989	1990	1991	1992	1993	1994	1995	1996	1997
Nitrogen	82	68,9	39,9	33,9	37,7	42	46,6	47,6	49,9
Phosphorus	50,9	40,7	22,3	12,2	12,8	13,5	15,5	16,9	17,3
Potash	62,6	54,3	32,9	16,0	15,3	15,6	17,6	20	21,1
Lime (r.h. scale)	202	182	139	117,0	115	105	132	124	139

Source: IERiGZ (*Estimate for 1997/98)

ucts, fertiliser use rapidly decreased but a recovery is discernible. This decrease was more pronounced in the state-farm sector than on individual farms. Preferential credits and the improved price ratios of fertilisers to agricultural products have stimulated the recent increase in demand. As in most countries, fertiliser use varies from region to region the range in Poland being 29 to 138kg of Nitrogen, Phosphate and Potassium (N.P.K.) per hectare. Many producers have maintained their preference for nitrogen (short-term effect) at the expense of P and K fertilisers (long-term effect). In 1996, the ratio of NPK use was 1.0:0.4:0.4.

Given the sandy and acidic nature of the soils, lime use is important to maintain good yields. Although having been economised in the short term, lime use is also recovering.

Due to a delayed decision on subsidised credits for inputs in 1998, fertiliser and lime use may be lower than it otherwise would have been (figure 14).

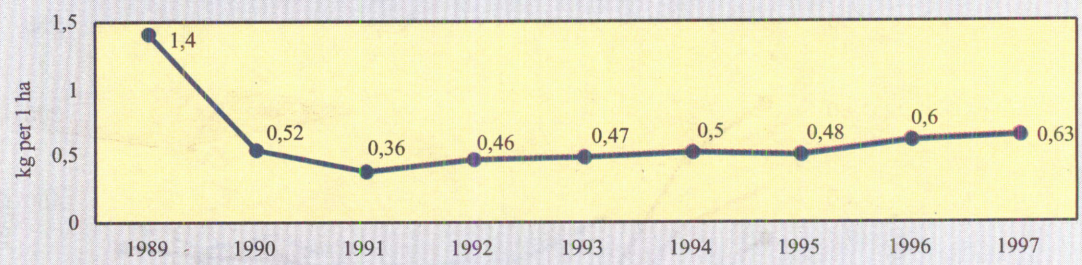
2.6.1.2 Plant protection materials

As for fertiliser use, the application of plant protection products decreased drastically between 1989 and 1993. Despite the slow recovery in the use of these products, current levels are still well below the EU average. In 1997, the supply of pesticides totalled 8950 tonnes while their application increased from 0.60 kg to 0.63 kg of active ingredient per ha of arable land and orchard. In recent years it appears that the areas on which pesticides are used (+13% in 1996) is increasing faster than the quantity used expressed in tonnes. Herbicides, especially grain herbicides, have the biggest share of the total supply. Domestic production of pesticides far exceeds imports, although the import market share is growing (figure 15).

2.6.1.3 Machinery

The small size of most Polish farms where the fields are often small, irregularly shaped and scattered makes widespread mechanisation difficult.

Figure 15. Pesticide use in Poland



Before 1990 state farms and co-operatives cultivated around 19% of farmland and owned more than 50% of domestic machinery in agriculture. However, by 1996 the proportion of private farms purchasing machinery was substantially higher.

During 1987 – 1996, tractor ownership increased by 26.9%. In 1996, there was 1 tractor per 14 hectares of agricultural land. However only 5.9% of the total number of tractors were made in the period from 1991 to 1996.

Concentration of production in the machine industry is declining. In 1996, there were approximately 400 domestic producers of machinery, including state factories and newly developed medium and small-scale units often based on joint venture with foreign capital. The state-owned Agromet-Motorimport company is the largest Polish exporter and importer of farming machinery.

In the period from June 1996 to June 1997, prices for some agricultural machinery such as potato harvesters, combine harvesters and manure spreaders increased more than the price index for agricultural products and services. Production and sales of agricultural machinery during the first half of 1997 declined by 3.0% and 3.2% respectively, due to the worsening price ratio of agricultural machinery to agricultural products.

2.6.1.4 Energy

Fuel and energy markets are becoming more stable. The demand for solid fuels is gradually declining mainly due to the changes in production technologies and more common use of natural gas in households. According to the 1996 agricultural census, 99.8% of farms have access to 220V electricity whereas 76.6% of farms use 380V electricity. In comparison, only 14% of all farms are connected to a natural gas network. Energy prices were gradually raised in real terms during 1990-1996.

At the beginning of 1997, fuel prices were liberalised and there are plans to liberalise electricity prices within the next few years. At the same time, the excise tax was reduced for diesel imports. Despite discussions on various proposed subsidy systems, the issue of fuel subsidies to farmers has still not been resolved.

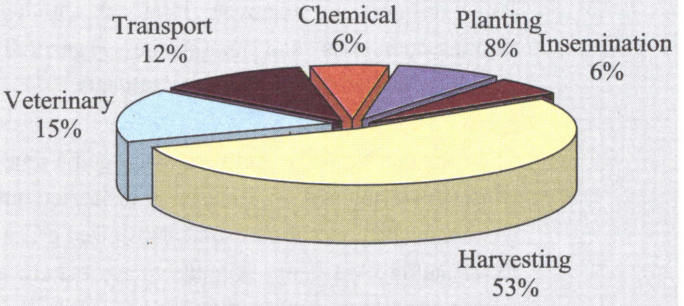
2.6.1.5 Services

Private units primarily provide agricultural services. The only exception is insemination services, which are provided by public bodies.

Since 1989, expenditure on agricultural services, as a proportion of production costs has decreased. In 1993, veterinary costs as a percentage of animal production costs peaked at 2.7% and since then have marginally fallen.

In 1996, despite a substantial price growth, the supply and demand on the agricultural services market decreased. It is estimated that the value of services purchased by producers in 1996 (in fixed prices) was higher than 1995, but 8.8% lower than 1989. In comparison to 1995, the most substantial growth for agricultural services in 1996 was observed in purchases of chemical services (9.0%) and crop harvest services (7.0%) (figure 16).

Figure 16. Sales of agricultural Services to Individual Farms 1996



Source: MAFE 1996

2.6.1.6 Seeds

Prior to 1989 the seed market was dominated by state-owned enterprises under the management of one centrally-controlled organisation. Since then some enterprises underwent privatisation or transformed into commercial joint-stock companies. Currently there are over 5,000 enterprises involved in the market.

The number of registered seed varieties, primarily foreign seed varieties is constantly growing. There has also been an increase in the acreage planted with certified seeds. Unfavourable weather conditions in 1996 resulted in a slight reduction in production and market deliveries. Consequently, foreign trade of certified seeds declined with seed imports exceeding seed exports.

In comparison, the vegetable seed market is more favourable than the agricultural seed market. Vegetable seed production is increasing. The domestic market remains in equilibrium, whereas foreign trade in vegetable seed is growing.

2.6.2 Banking system

Poland is probably one of the most under-banked countries in Europe. The ratio of bank deposits to GDP is only around half that of the Czech Republic, Spain and Portugal. There is still a high degree of State ownership. The challenge for Poland over the next few years is to privatise and restructure the sector to compete with international banks when the market opens in 1999. The banks are small in Western terms and are subject to geographical and sectoral segmentation. Forced consolidation/merger is the subject of much debate.

BGZ SA (Bank for Food Economy) and the co-operative banks dominate rural finance. BGZ is majority owned by the government. It is financially troubled due to bad loans and is now supported by deposits of some co-operative banks and restructuring bonds from the Ministry of Finance. The 1994 co-operative banking law plans to make BGZ the national apex of all co-operative banks, a second tier of 9 regional banks, with 1322 (third quarter 1997) co-operative banks at the base of the pyramid. This will reduce the direct involvement of BGZ in lending, a trend which is already apparent.

However the restructuring strategy is not clear and seems to be progressing slowly. While many of the co-operative banks are increasing their profitability, others face difficulties which are made worse by the problems in the agricultural, agrifood and co-operative sectors. The most important problems seem to be lack of capital, poor organisation, fragmentation and the low value of most of the lending transactions. In the first three quarters of 1997 there were 3 bankruptcies and 57 consolidations. Nevertheless, overall the situation is improving.

2.6.3 Credit to the agricultural industry

Polish farmers use relatively little debt in their farming operations[10] and rural businesses generally use their own funds to finance investments.

There are close linkages between banks and Agency of Restructuring and Modernisation of Agriculture (ARMA) which distributes some subsidised credits to agriculture via banks. Credits to agriculture is (rather was) the speciality of Polish agriculture policy and preferential credits are (were) the main instruments of this policy. Some 75% of credits to the agricultural sector are subsidised. Until the end of 1997 ARMA offered almost 40 credit lines for different purposes. About half the loan volume was for purchasing crops after harvest which some experts consider could be replaced by a developing reliable warehouse receipt system. The system was also criticised for indirectly supporting the banking sector and for subsidising projects of lower viability (table 2.6.3-1).

The situation of agriculture crediting is set to be completely changed because in the 1998 budget ARMA is offering only 8 lines of credits

- land purchasing,
- restructuring and modernisation of milk sector,
- young farmers, younger then 41 years - for setting up new farms and equipping existing ones,
- creating and equipping farms within the programme settlement of farmers on the State land,
- investment credits,
- creation of new labour stands (places of work),
- programme for group exploitation of machines,
- production reinstallation on the areas affected by disasters.

According to the 1998 budget, the cut for agriculture and credit subsidies is substantial. However a combination of budget payments and own resources should make sure that ARMA can bear the payments for investment credits borrowed before the end of 1997. The so called "operational" credits e.g. purchase of seeds and fertiliser fare the worst. The 1998 budget for this line is 133 mio ECU compared with 163 mio ECU in 1997. While this cut was welcomed in some quarters (Ministry of Finance), others feel it is too sharp and could slow down modernisation trends.

2.7 Food industry

In 1996, the average employment in the food industry was 462 000. The food industry accounted for 6.0% of GDP in 1997. Large enterprises of above 50 people employed 75% of the total. In recent years the number of small and medium sized enterprises (SMEs) has increased, a trend favoured by the government. Of the 1481 enterprises of more than 50 people, 22 % were in dairy production 21% in meat production and processing and 10% in fruit and vegetable processing. Labour productivity is considerably lower than in western Europe which

Table 2.6.3-1. The number and amount of investment credits granted 1994-1996

	number		mio zl	
	000	% of total		% of total
Total	110.8	100%	3.539.7	100%
of which				
Basic investment credits	52.2	47.1%	1.680	47.5%
Credits for young farmers	26.3	23.7%	1.009	28.5%
Credits for land buying	22.9	20.7%	261	7.4%
Branch and regional credits	8.2	7.4%	514	14.5%

[10] Equity financing accounts for about 97.6% of investments, even for farmers with more than 25 ha.

indicates that technical adjustment will be necessary in the coming years.

2.7.1 Privatisation and restructuring

Before 1989, the Polish food processing industry was part of the centrally planned and organised economy. The program for restructuring since 1989 was instrumental in liberalising prices and reducing market controls and more recently has been successful in transferring ownership of the state-owned industries into private property Table 2.7.1-1 and figure 17). The sales of state enterprises were only 7.5% of the total sales in 1997 (table 2.7.1-1).

There has been enormous investment in the industry (see later section) but some parts are still neglected, particularly the first stage processing sector. Despite the introduction of state of the art technology on green field sites, it is estimated that the average technological lag in the entire food processing industry still amounts to over 10 years (figure 17).

Measured by the number of people employed, the average share of foreign ownership in the industry was 5.9% at the end of 1996. The largest shares were in the production of oils and fats (17% of those employed), production of animal feed (12.7%), production of beverages (10.5%) and the processing of fruits and vegetables (9.5%).

Profitability in the industry tends to be greatest for highly processed items, particularly alcoholic beverages and confectionery. The tends in profitability shows that by 1996 the industry had turned around from the situation in 1993 with the potato, fruit and vegetable and sugar sectors all showing much better results (figure 18).

Table 2.7.1-1. State of food industry privatisation at the end of 1996

	Privatisation process followed or result																	
	Completed		process		In the programme		Voucher Liquidation		Liquidation based on Parliamentary Act		Bankruptcy		State enterprise		Total			
		%		%		%		%		%		%		%		%		
Meat	10	15%	2	3%	22	32%	8	12%	4	6%	7	10%	15	22%	68	100%		
Poultry					5	16%	15	47%	10	31%	2	6%			32	100%		
Sugar	1	1%	57	72%			10	13%	6	8%	3	4%	2	3%	79	100%		
Potatoes	1	8%			3	23%	3	23%	3	23%			3	23%	13	100%		
Fruit + veg	1	2%	1	2%	4	10%	12	29%	10	24%	6	14%	8	19%	42	100%		
Cereals			5	6%	19	23%	16	19%	10	12%	8	10%	25	30%	83	100%		
Oils	3	38%			1	13%	2	25%					2	25%	8	100%		
Freezing		0%	1	3%	3	9%	2	6%	2	6%	5	16%	19	59%	32	100%		
Confectionery	4	19%			2	10%	7	33%	8	38%					21	100%		
Concentrates	3	33%					6	67%							9	100%		
Breweries	10	33%	2	7%	2	7%	14	47%	2	7%					30	100%		
Spirits													26	100%	26	100%		
Tobacco	4	57%	3	43%											7	100%		
Feed					6	21%	11	38%	3	10%	3	10%	6	21%	29	100%		
Other	3	5%					26	45%	29	50%					58	100%		
Total	40	7%	71	13%	67	12%	132	25%	87	16%	34	6%	106	20%	537	100%		

Source: MAFE and own calculations of URBAN.

Figure 17. Proportion of the food industry in the private sector (%)

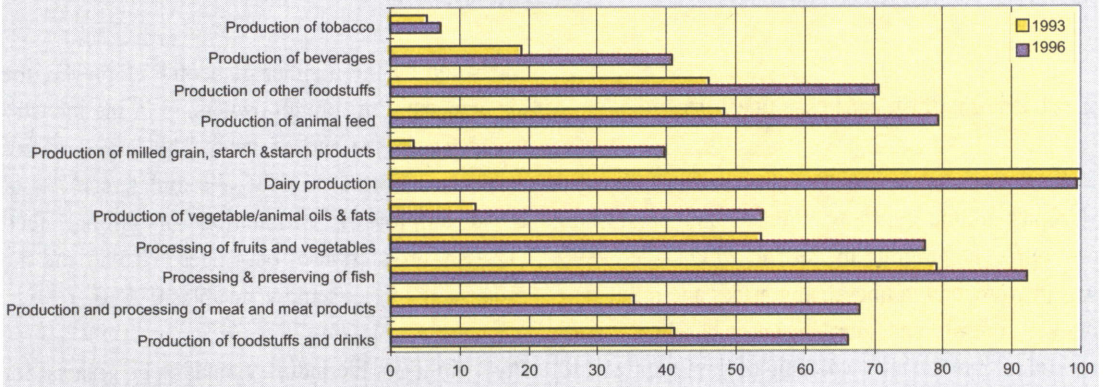
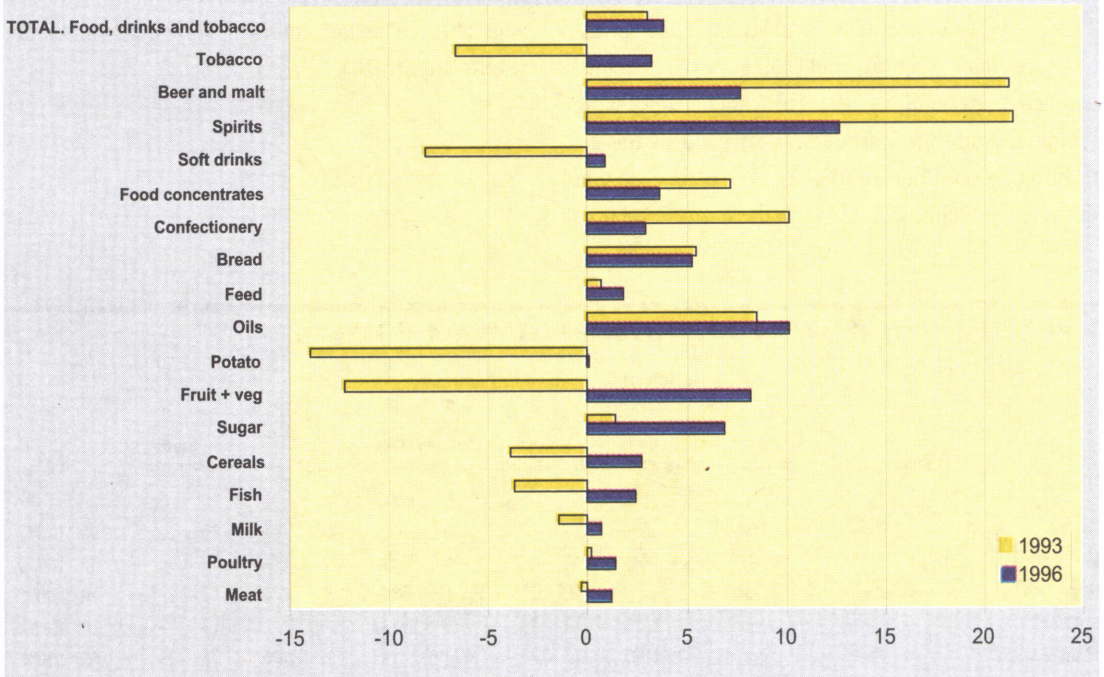


Figure 18. Profitability of the Food and Drinks industry in 1993 and 1996 (% of net income)

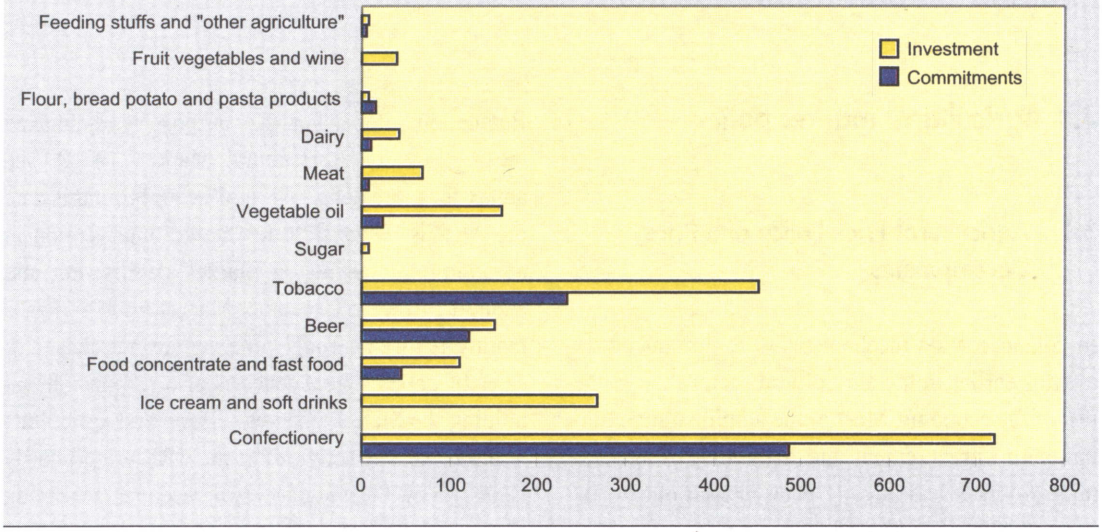


2.7.2 Investment

Since economic transition, of foreign investments in industry of over 1 million $ (0.9 million ECU), 24% was spent on the food industry. In 1996, total investment in the food industry (businesses of more than 50 people) was 1.1 billion ECU, 63% of this was spent on machinery and technical equipment. By the end of 1997 a total of around 3.0 BECU had been invested in the industry with a further 1 BECU committed.

Although the need for modernisation and renewal investments arises in all the agro-food processing sectors, they are most urgently needed in the processing of the main vegetable products, storage of fruit, dairies and in the production of compound feedstuffs. It would be necessary to modernise old slaughterhouses, which were mainly (65%) estab-

Figure 19. Direct foreign investment in the agri-food industry to the end of 1996 ('000 ecu)



lished before 1935 and located in the centre of towns. In general, they do not yet meet western European sanitary, veterinary and environmental standards. Some progress is also required in dairy production.

Most of the resources were concentrated on confectionery, tobacco and soft drinks (figure 19). As far as foreign capital is concerned 34% was from the USA and 14.5% from Germany.

2.7.3 Future developments

According to a World Bank report in 1997, there are several areas where Polish agri-industrial enterprises could improve their profitability and competitiveness both domestically and on foreign markets.

The large number of small farms and the absence of a wholesale marketing system mean it is very difficult for the processing industry to obtain large shipments of standardised raw materials. This is particularly true of milk, cereals and fruit. There is presently not enough reliable information on the quality attributes of agricultural goods. This will have to change if consumers are to be convinced that Polish products are at least equal to those of the other countries in quality, safety and environmental impact. Growing compatibility with the pertinent EU directives is a crucial part of this process. The report further identifies pressures to further differentiate consumer products and pressures for mergers and acquisitions. This latter pressure will be particularly high for undifferentiated products where economies of scale might be important e.g. sugar and dairy processing.

3. Agricultural and rural policies

3.1 Agricultural market policy

3.1.1 Agricultural Price Policy and Price Developments

In Poland, market mechanisms were introduced six months earlier in the agricultural sector than in the rest of the economy. Most of the administrative limitations to procurement and marketing of agricultural products had already been phased out by 1st August 1989. The second stage of price liberalisation took place in January 1990. From this date price controls and the buying-in monopoly of the State ceased to exist giving the possibility of free price arrangements for farmers and food processing industries. However, farmers continued to deliver some of their production to public procurement organisations using the existing marketing infrastructure and secure contract prices.

As a consequence of the drastic transition measures, mainly from price liberalisation and the parallel reduction of consumer subsidies, hyperinflation occurred, particularly in autumn 1989 and January 1990. Expectations of higher prices led to delayed sales of agricultural and processed food products; consequently, supply shortages emerged despite sufficient production. This brought about consumer price increases on the now liberalised markets. For that reason the Polish government brought in price stabilisation measures by selling relatively low priced food from stocks and food aid, this broke the steep inflation trend.

Due to the fact that inflation could not be stopped immediately and given the increasing deterioration of the terms of trade for agriculture between 1989 and 1991 (see table 3.1.1-2), the government had to increasingly concentrate on agricultural income problems rather than stabilising short-term market fluctuations alone. For this purpose it established the Agency for Agricultural Markets (ARR, see annex for more details) in mid 1990. From this date the ARR is responsible for market intervention in agriculture, focusing on market stabilisation and support of farmer's income. Market intervention is mainly realised through intervention purchases or sales of goods. The Agency is also responsible for holding the State's reserves of food and agricultural products. The activities of the ARR are primarily financed by the budget. Own revenues stemming from sales of intervention products cover another part of its expenditure. In 1997, the ARR received 329,8 mio PLN (89,6 mio ECU) from the government to cover the outlays on its intervention purchases and for the management of its stocks. Of this amount, most was destined to finance the holding of State reserves.

As shown in the following table (table 3.1.1-1), in 1997 the budget expenditure for the agricultural sector amounted to 3,4 bio ECU (9,8% of the total budget expenditure). By far the biggest part (72%) of agricultural budget expenditure is destined for the farmer's social security system.

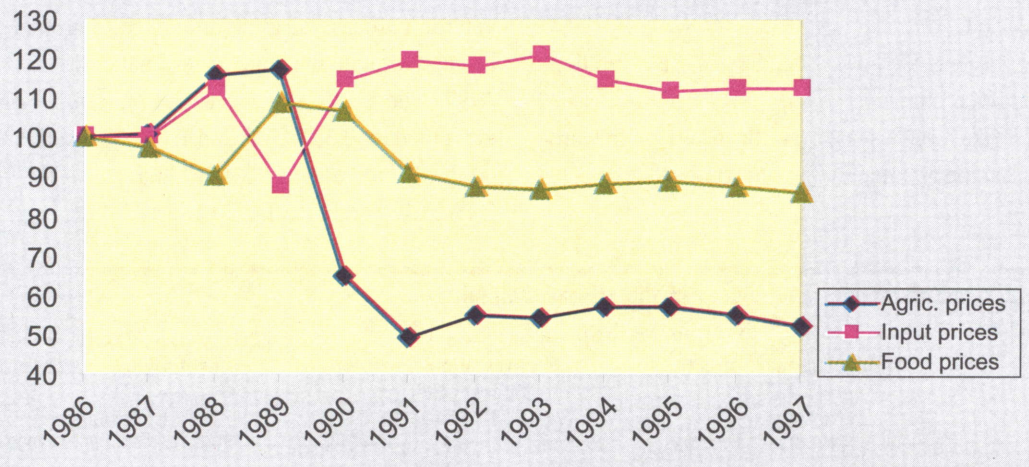
The stabilisation activities of the ARR apply to wheat, rye, butter, skimmed milk powder, pigmeat and beef, sugar, potato starch and occasionally honey and hops. However, intervention measures are of more importance for the grain, dairy and pig meat markets. For market stabilisation, a price range is fixed in which prices are allowed to fluctuate. If the market prices exceed these limits then direct market intervention or decisions to apply such measures are made. The ARR can intervene in external trade but until 1994 this was mainly in the form of import-activities and to a much lesser extent on the export side. Minimum and intervention prices are of course important instruments for the stabilisation of "normal" seasonal price fluctua-

Table 3.1.1-1 : Total budgetary expenditure associated with agro-food policies

	in mio PLN				in mio ECU			
	1991	1994	1997	1998	1991	1994	1997	1998
Price and income support	186	349	331	325	142	129	89	83
Reduction of input costs	326	522	1 248	1 311	249	193	336	337
General services	344	790	1 384	1 277	263	293	372	329
Education, culture and art	92	257	546	617	71	95	147	159
Social measures (pension fund)	1 510	4 809	9 011	11 080	1 154	1 784	2 422	2 850
Total agriculture	2 458	6 726	12 521	14 609	1 879	2 495	3 366	3 758
Total budget expenditure	24 186	68 865	127 554	143 441	18 489	25 546	34 289	36 896
Share of agric, in total expenditure	10.2	9.8	9.8	10.2	10.2	9.8	9.8	10.2

Source : Own calculations based on Budget Law

Table 3.1.1-2. Evolution of prices in real terms 1986-1997 (1986 = 100)



1994 = provisional; 1995 = forecast
Source: Own calculations on OECD data

tions, but in periods of drastic market disturbance (record harvests, severe droughts) their stabilising impact could be judged as relatively low in the context of the available budget and compared with the impact of border protection.

The amended law on establishment of the ARR and the Constitution of ARR, granted by the Council of Ministers in November 1996 constitute the basic legal acts to regulate the scope and forms of intervention activities of the ARR which are specified in the "Annual programme of intervention activities". The Programme comprises a list of products subject to ARR's activities, intervention prices and financial resources required for the intervention.

Starting from 1997 intervention purchases of agricultural raw materials and processed products by the ARR are carried out in a situation when their average market prices during two subsequent weeks remain at the level of 90% of intervention prices. The period when the intervention takes place is as follows:

- wheat and rye - July 15 to October 30;
- butter - May 1 to October 30;

- SMP - June 1 to September 30;
- other products - in periods of market surpluses.

Intervention selling of agricultural products takes place when their average market prices during two subsequent weeks exceed their intervention prices by at least 10% (table 3.1.1-3).

3.1.1.1 Cereals

For cereals the government establishes a minimum and a maximum price within which market prices at the farm gate level can fluctuate. The minimum price:

- is announced before the beginning of the harvest period;
- represents the lower boundary of the institutional price limits;
- is fixed each season as the result of the programme adopted by the government.

The ARR support this minimum price by purchasing at an intervention price somewhat higher than the minimum price but under a price ceiling defined by the government. In the first two seasons of application of minimum prices, i.e. 1992/93 and 1993/94, the intervention price was fixed at 30% above the minimum price level in the first year and at 20% in the second year. In 1997, the intervention price ceiling was fixed at 15% of the minimum prices.

Over the last years the ARR has become a major force in the price formation process in the grain sector. Intervention is still dominated by direct action, either by the Agency itself or by its agents (authorised warehouses). In 1994-1996, the intervention purchase of grain amounted to around 6% of total production and an estimated 12-13% in 1997. The costs of intervention in grain market amounted to: 0.39 ECU/t and 1.15 ECU/ha in 1994, 2.03 ECU/t and 6.13 ECU/ha in 1995 and 2.12 ECU/t and 6.12 ECU/ha in 1996[11].

Table 3.1.1-3 Comparison of institutional prices in the EU and Poland

	EU SUPPORT PRICES						POLAND SUPPORT PRICES		
	Effectives support prices (green ECU) ECU/tonne (*)			Effectives support prices (market ECU) ECU/tonne (*)			Institutional support prices ECU/tonne (*)		
Main Products	**1995/96**	**1996/97**	**1997/98**	**1995/96**	**1996/97**	**1997/98**	**1995/96**	**1996/97**	**1997/98**
Common Wheat	119	119	119	125	128		104.3	135.6	141.3
Rye	119	119	119	123	128		67.5	94.9	98.7
Sugar beet	48	48	48	49	48				25.1
Beef (R3 carcase)	2780	2780	2780	2850	2822		1534		
Pigs (carcase)	1509	1509	1509				1242	1229	1440
Raw cow's milk: 3.7% fat	285	285	285	291	288		123	141	147
Skimmed-milk powder	2055	2055	2055	2089	2080		1227	1384	1440
Butter	2954	2954	2954	3008	2989		1595	1624	1760
ZL/ecu exchange rate							3.26	3.54	3.75

Notes

EU
Cereals: intervention price (includes monthly increments)
Sugarbeet: basic price
Beef: Avearge support price (80% of the intervention ptrice 3475.0 ECU)
Pigmeat: Grade U carcase basic price
Milk: Average support price (92% of the indicative price of 309.8 ECU/t)
Skimmed milk powder (SMP): Intervention price
Butter: Purchase price (90% of the intervention price of 3282 ECU/t)

Poland
Cereals: intervention price
Sugarbeet: procurement price "A" quota

Pig: ARR procurement price.
Milk: minimum price
Skimmed Milk powder: intervention price
Butter: intervention price

[11] Information Bulletin of ARR No 2/1998.

The different forms of intervention applied in 1997 can be summarised as follows[12]:

- **Direct purchases by the ARR for operational reserves**
  These are purchases by ARR warehouses or by some businesses selected on a tender basis. In 1997, 264 000 t of cereals (20% of total grain intervention) were purchased directly.

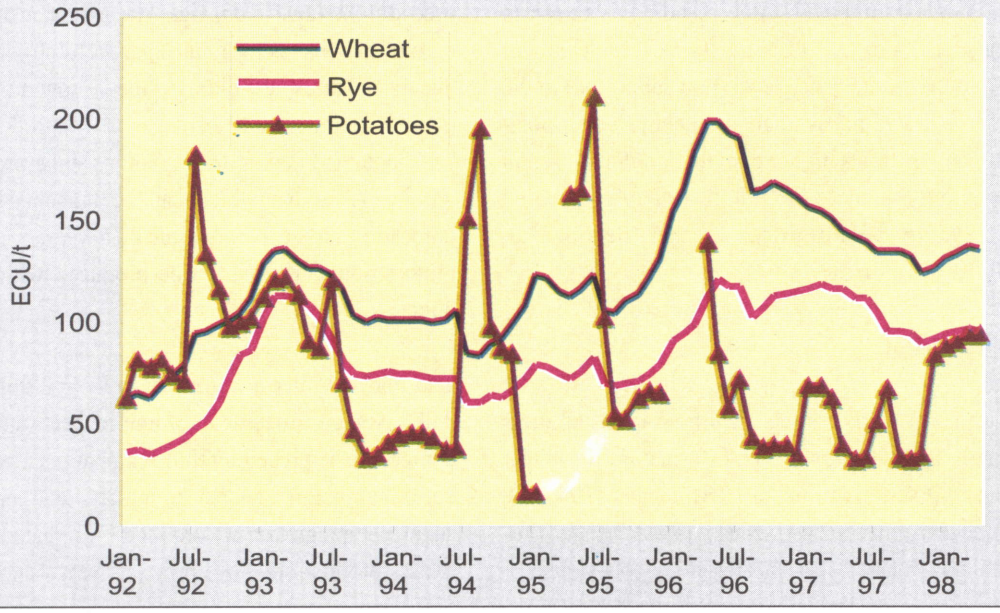
- **Purchases through the system of authorised warehouses**
  Purchases of grain by authorised warehouses are financed through their own financial resources or preferential credits which are based on ARR credit guarantees. These warehouses are obliged to apply the intervention prices and to store grain for a minimum 3 months. The ARR guarantees repurchase of grain provided that the warehouse after a specified period of storage is not able to get a price that would cover costs of storage and credit. By 6 October 1997, 750 000 t of cereals (58% of total intervention) were purchased through this form of intervention.

- **Indirect intervention through the system of credit guarantees granted by the ARR**
  The purpose of this system is to facilitate businesses access to preferential credits for purchase and storage of grain. By 6 October 1997, credit guarantees amounted to 101,4 mio PLN (around 27 mio ECU).

- **"Additional" purchases financed through bank credits**
  In 1997, the Minister of Finance authorised the ARR to take credit for purchase of 300 000 t of wheat and rye to 15 October 1997.

Recent price developments point to a certain upward trend. Procurement prices expressed in ECU tended to increase from July 1990 (see figure 20).

Figure 20. Producer prices of cereals and potatoes



[12] In July 1998 a new system of support for grain procurement was introduced. The Agency for Agricultural Markets (ARR) will pay subsidies to grain trading companies who will in turn buy wheat and rye (suitable for human consumption) from farmers. To win a tender the company must pay minimum prices to farmers (510 zl/ton of wheat or 360 zl per ton of rye and agree not resell the grain before the end of December 1998. The objective is to allow more grain to be purchased than was possible under the previous system. The scheme is financed from a reduction of the budget of ARR for intervention buying.

3.1.1.2 Processed Potatoes

Until 1989, potato production was supported by a State procurement price, fixed mainly for the quantities processed and exported. From 1993, direct potato purchases were phased out and the system of granting export subsidies was modified, adjusting the extent of these subsidies according to changes in world market prices. During the first quarter of 1993, the export subsidy was set at 300 PLN/t (around 150 ECU/t) of potato starch contained in processed products. In 1997, the ARR purchased within the framework of its intervention activities 13 500 t of potato starch at 1 400 PLN/t from potato starch producers selected on a tender basis. In the second half of the year 1 000 t of starch was sold at 756 PLN/t for exports. In addition, the Agency concluded a contract for a sale of 4 000 t of starch at 950 PLN/t until end of May 1998.

Significant changes in potato yields were reflected in high fluctuations in potato prices (see figure 20). After high yields in 1993 and a corresponding decline in producer prices, the summer drought in 1994 and the forecasted low yields caused significant increases in potato prices, leading to a peak in August 1994 of 543 PLN/t (198 ECU/t). This was around the market price level (non supported) in the EU. In 1994/95 the average producer price for potatoes was 3,8 times higher than in 1993/94 at around 436 PLN/t (about 147 ECU). In 1996/97 compared to 1995/96 potato prices further declined to 240 PLN/t (68 ECU).

3.1.1.3 Sugar

Polish sugar market is regulated by An Act on Sugar Market and Ownership Transformation in Sugar Industry (Official Journal of 16 September 1994, with subsequent amendments). Since 1994/95 sugar production in Poland has been subject to quota system.

There are two types of quotas: "A" and "B" quotas. "A" quota is a maximum amount of sugar which can be produced during one sugar campaign and sold in the domestic market from 1 October to 30 September of the following year. "B" quota is a maximum amount of sugar which can be produced during a given sugar campaign and exported with subsidies either as sugar or processed products with sugar content above 20 per cent, in the period of 1 January to 31 December of the subsequent year[13]. An excessive production volume over the level of "A" and "B" quotas is called "C" sugar. It can only be exported, also as processed products with sugar content above 20 per cent, however with no export subsidies.

Quotas are set annually by the Council of Ministers by a special regulation initiated by the Minister of Agriculture. "A" and "B" quotas for season 1996/97 were respectively 1 630 thousand tonnes and 122.9 thousand tonnes. Quotas for 1997/98 season have been set at a level of 1 630 thousand tonnes ("A" quota) and 118.3 thousand tonnes ("B" quota).

Each year prior to the date of 31 October of the year preceding a sugar campaign, the Minister of Agriculture establishes for four Sugar Holdings and producers outside the holdings, the following limits: (a) maximum amount of sugar to be produced as "A" quota; (b) maximum amount of sugar produced within "A" quota which can be launched in the domestic market in a quarter of a year; (c) maximum amount of sugar to be produced within "B" quota.

The above limits are arrived at by multiplying a daily average processed volume of beet and sugar content in the preceding three campaigns by a number of campaign days (assuming an equal length of sugar campaign for all producers), reduced by an excess production above previous year's quota[14]. In

[13] The period for which the quotas are set, facilitate the fulfilment of Polish GATT UR commitments on volume of subsidised sugar exports.

[14] In practice the shares (%) of particular sugar plants in total sugar production in the last three years are calculated and referred to A and B quotas. Thus, production limits for particular sugar plants within the quotas are arrived at.

turn, Sugar Holdings set the limits for their co-owned constituent businesses.

Sugar producers are allowed to sell rights to their granted limits or part of the limits to Sugar Holdings and other producers, provided they let the Minister of Agriculture know without delay.

In case a producer fails to undertake sugar production in a given campaign, the allocated production limit is obligatorily transferred to producers overtaking his raw material base, with an intermediary of the Minister of Agriculture.

The ARR can purchase sugar from sugar producers, outside "A" quota using it for supplementing state reserves. Purchased sugar can be sold by ARR in the domestic market without penalties. The decision to sell sugar on the domestic market is made by the Chairman of the Agency with an approval of the Minister of Agriculture.

Sugar exports are subsidised from a fund created of levies collected by sugar plants on the sales of sugar in the domestic market. The levies amount up to 7% of the value of sold sugar (2% in 1995/96 season and 1% in 1996/97 season). Funding raised in this way is collected by the Agency of Restructuring and Modernisation of Agriculture (ARMA). On exporting, the sugar plant in question sends documentation on transactions made within the granted limit ("B" quota) along with an application for refunds. During the season the Agency makes advance payments of refunds. In 1996/97 season the advance payment was 170 PLN (49 ECU) per tonne. At the end of the season the value of total funding raised is divided by the amount of "B" quota exported sugar, and thus, the rate of refund per tonne is calculated. A maximum refund must not exceed the minimum sales price (1330 PLN/380ECU per tonne in 1996/1997 season).

At the initiative of the Minister of Agriculture and Food Economy with an agreement of the Minister of Finance, the minimum price of sugar for the domestic market is set annually by 1 August, to be in force from 1 October to 30 September of the following year.

Minimum procurement beet price is set by sugar plants, in consultation with the farmers unions and farmers representatives. Prices should be established by 31 August of the year prior to harvesting.

Minimum procurement prices of sugar beet vary between quotas. In 1997/98 the procurement prices were as follows: 98-107 PLN/t ("A" quota), 65-75 PLN/t ("B" quota) and 45-65 PLN/t ("C" sugar). In 1998/99 the prices will be: 105 PLN/t, 75 PLN/t and 45-65 PLN/t respectively.

In contrast to the EU, Poland has no levies charged to beet or sugar producers to cover the costs of disposing of the sugar surplus from the market. Sugar producers are obliged to pay penalties in case of failing to comply with Act on sugar market regulation and ownership transformation in sugar sector. Sugar producers who sell sugar on the domestic market above their set limit are obliged to pay penalties equal to 100% of value of the excess amount. The penalties are recouped for the state budget.

Additionally, producers supplying the domestic market below the minimum price, are obliged to pay penalties equal to 100% of value of the sold sugar calculated at the minimum price. Again these penalties are transferred to the state budget.

3.1.1.4 Milk and dairy products

As in the EU, price stabilisation through intervention on markets for milk and dairy products are concentrated on processed products such as skimmed milk powder (SMP) and butter. State intervention for price stabilisation fixes minimum prices for milk and intervention prices for butter and SMP which were introduced in 1992 and is channelled through dairies. The ARR buys butter and SMP at intervention prices only from those dairies which

are paying at least the minimum price to farmers for first class milk with 3,5% fat content. In October 1997, about 69% of the Polish dairy plants met this requirement.

Butter and SMP intervention purchases are normally undertaken during the surplus production months of May to October. During a deficit season (November - April) the ARR releases intervention stocks. Intervention purchases and sales are conducted on a tender basis. An evaluation and selection of the most technically and financially superior bids is done by the Commission appointed by the President of the ARR based on:

- volume of foreign trade in SMP including firms' experience in trade in agri-food products,
- the hitherto co-operation of firms with the ARR regarding intervention purchases of dairy products,
- costs of storage,
- financial standing of firms.

In 1993-97, the share of butter intervention purchases in total production was around 7-15%. For SMP this figure was about 18%. The costs of intervention in dairy market amounted to: 0.9 ECU per cow in 1994, 3.7 ECU per cow in 1995 and 10.8 ECU per cow in 1996[15]. (figure 21).

3.1.1.5 Meat

Intervention activities in the meat sector are in general limited to pork. Since the transition, the first direct intervention in the meat market was undertaken in the first quarter of 1993 as a consequence of indirect repercussions of the 1992 summer drought leading to higher feed prices. These in turn led to increased slaughterings. For this reason, the ARR was authorised to defend a price level of around of 14 500 Zl (0.65 ECU) per kg for live pigs at the beginning of 1993. In 1993, the quantity in intervention storage amounted to 65 400 t of pig half carcasses which was roughly 8% of total registered purchases (in carcass weight).

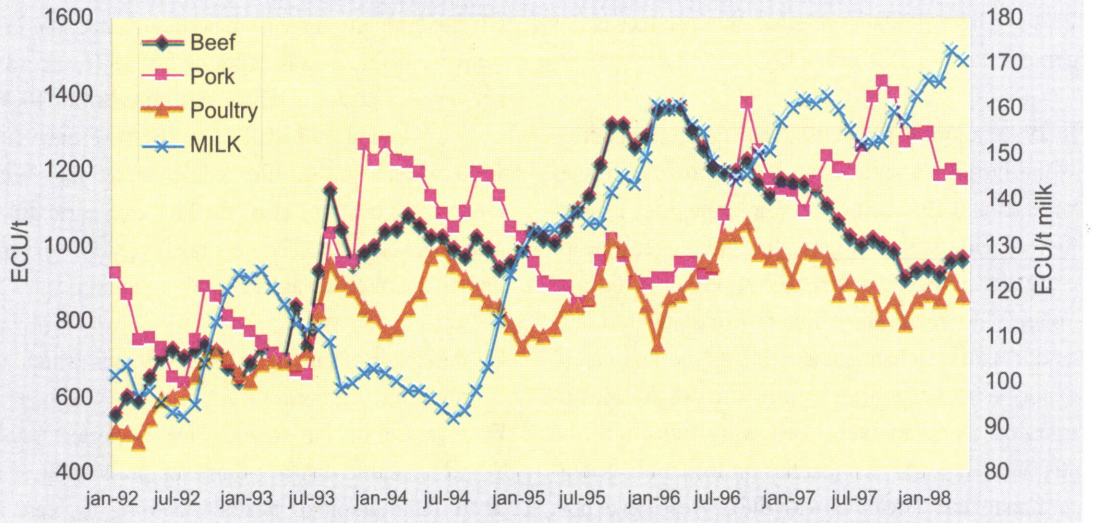
In 1994, the meat market was characterised by a low supply of livestock from domestic production. To counteract an excessive price increase in the second half of 1994, the Agency sold 18 000 t of meat between July and October, 94% of which was pigmeat. At the same time, 3 500 t of pork and 6 900 t of beef was purchased from regions with local surpluses of live cattle to replenish stocks.

In the fourth quarter of 1995 as well as in the first half of 1996, the meat market was characterised by excess supply of meat (mostly pork) which resulted in a decrease in pig prices. In order to prevent further price decline, in November 1995 the ARR started intervention buying of pig carcasses for state reserves paying PLN 4.05 per kilogram of half carcasses to those suppliers who paid at least PLN 2.65 per kilogram for live pigs to pig producers. This price was in force until the end of February 1996. In the period November-February, the Agency had bought around 45 thousand tonnes of pork. Due to a rise in grain prices and resulting lower profitability of pig production, in February 1996 the ARR increased prices of pig carcasses and live pigs to PLN 4.35 and PLN 2.80 per kilogram respectively. Purchases of pig carcasses were continued until the end of the first half of 1996 reaching the level of 117 thousand tonnes (18% of domestic supply in the period concerned). As a result of the ARR intervention activities procurement price of live pigs in June was on average 7% higher compared to that in February.

The ARR also purchased 1.2 thousand tonnes of beef (young cattle) for state reserves. Price of beef was fixed at PLN 5.00 per kilogram provided that cattle producer received PLN 2.80 per kilogram of live weight.

[15] Information Bulletin of ARR No 2/1998.

Figure 21. Producer prices of animal products



The third quarter of a year is characterised by low supply of pork. In 1996, in addition, supply of pork was lowered due to a reduction in pig numbers. This resulted in higher pig prices. Therefore, the Agency intervened in the meat market through sale of frozen pig half carcasses. In the period July to September 1996, it sold around 43 thousand tonnes of half carcasses which was 28% of pork supply in this period.

In the first half of 1997 the ARR purchased around 50 000 t of pig half carcasses including 26 000 t in E and U grades at 5.70 PLN/kg (3.70 PLN/kg live weight) and about 24 000 t in R grade at 5.40 PLN/kg (3.50 PLN/kg live weight) to correct imbalances in the pork market. At the same time 20 000 t of frozen pork was sold in the domestic market and 18 000 t was exported. As a result the average pig procurement price started to rise at the end of the first quarter of 1997 and in June amounted to 3.61 PLN/kg live weight. This was around 31% higher compared to June 1996. In the third quarter of 1997, the ARR started to release pork stocks. In July to November it sold about 45 000 t of frozen pork which accounted for around 10% of supply in the period concerned. The average price for frozen pig half carcasses the ARR received was 5.60 PLN/kg.

In 1997, the ARR also conducted intervention activities aimed at stabilisation of beef market. Due to an increased supply of cattle for slaughter since spring 1996 prices had continued to decline. Therefore, in January to November the Agency purchased almost 19 000 t of quarter beef carcasses which accounted for around 6% of beef supply in this period. The price for compensated quarter carcasses paid to slaughterhouses by the ARR was 5,30 PLN/kg provided that cattle producers received at least 2,90 PLN/kg live weight (I grade). In addition, in July to mid October 1997 the Agency had bought 2 300 t of beef for storage from producers in regions affected by flood. Simultaneously since June 1997 the Agency had been replacing beef stocks. This covered 15 000 t of beef which was destined for exports.

Contrary to the situation in the EU, in Poland pigmeat has been more expensive than beef in recent years. This is partly due to consumer preferences but also a result of the higher subsidies given to the pork sector throughout the 1980s. Moreover, beef is only a by product of milk production and therefore not of high quality. In the first quarter of 1995, farm-gate prices for live cattle amounted to 672 ECU/t which was around 50-55% of the EU

farm gate price for live cows. However, this price ratio cannot be interpreted as an advantage of Poland's beef production, since this product is not competitive in terms of quality.

In 1995, pigmeat production was quite competitive at the farm gate level when Polish producer prices were around 15% below the wholesale price level in the EU. However, this gap could be bigger considering the cereals price ratio between the EU and Poland. Moreover, the efficiency of slaughterhouses and market channels as well as the amount of export subsidies will determine the possibilities of sales on world markets. Following transition, the stepwise abolition of subsidies on feed and agricultural machinery together with the decrease in export subsidies has made Polish pigmeat less competitive compared with previous years. It should be stressed, however, that in 1997 Polish pork prices increased to 1 344 ECU/t carcass weight and exceeded the EU level.

3.1.2 Border measures and taxation

Under the Law on Economic Activity of December 1989, foreign trade has been generally liberalised since 1990. The state monopoly of foreign trade was abolished and state-owned enterprises were no longer privileged by specific trade advantages. The administrative management of foreign trade as well as the central distribution of hard currencies ceased.

CUSTOMS TARIFFS

Poland removed most of its non-tariff protection measures in 1990, maintaining relatively low customs tariffs. As a result, Poland had one of the most liberal customs systems in Europe in the early 1990s. Tariffs for food and agricultural goods were between 5 and 25%. These relatively low levels of border protection proved to be politically unsustainable, since world prices for some products (particularly sugar) reached very low levels, seriously threatening the domestic industry.

As a response to difficulties in food and agricultural trade and of deteriorating farm incomes, the Polish government increased border protection in a stepwise fashion. In the first half of 1991, the average level of customs tariffs was raised from 10.4% to 17.7% and in August 1991 to 26.6%. From 5 July 1993, when a new tariff schedule entered into force, the average customs tariff for food and agricultural products was 21%. The new tariff contains the following changes for agricultural commodities:

- reduction of tariffs for raw materials which are not produced domestically;
- increase of tariffs for such imported goods which could displace domestic production;
- differentiation of tariffs according to seasonal growing patterns (seasonal tariffs for fruit and vegetables);
- introduction of specific tariffs for sugar and products containing sugar.

The new customs tariff was introduced mainly to cope with the later implementation of GATT providing a certain scope for negotiation and future movement. Thus, some tariffs have been set at higher levels than currently necessary or desirable. Poland's tariff schedule includes different conditions for the trade with EU- and CEFTA-countries, taking into account the agreements Poland signed in the past. Generally, tariffs for food and agricultural products are increased according to the level of processing. The agricultural sector is the third most protected at the border after the armaments and car industry.

Accepting the UR GATT rules, Poland assumed a commitment to "bind" fully the submitted tariffs. Poland submitted for binding the highest tariffs (ceilings) which can be used within commodity groups specified in the four-digit CN nomenclature. In some cases (e.g. fruits, vegetables), where tariffs are significantly diversified, they were presented more specifically.

Due to the non-market nature of the Polish economy in 1986-1988, Poland carried out the tariffication process in a different manner than the overwhelming majority of GATT members. Sensitivity of the markets for individual products and the level of tariff rate in the EU was adopted as a basis for tariffication. As a result of this process, tariffs that were presented for binding were much higher than those used at present and closer to the level of actual market protection in the EU. At the same time, in relation to all tariff items recognised as sensitive, Poland was guaranteed the right to apply Special Safeguard Provisions (SSG). These provisions allows for the introduction, by the year 2000, of additional customs duties in the event of excessive quantitative growth or decline in import prices.

Due to an increase in import tariffs for some agricultural and food products in the second half of 1995 and in 1996, and according to UR agreement commitments, Poland had to introduce import quotas for 1996 with access conditions not worse than those before 15 December 1993.

3.1.3 Border tax

In 1992, Poland introduced a 6% border tax to improve the balance of payments. The GATT agreed that this measure could be applied temporarily and requested that this tax would cover all imports. In 1995, this tax was reduced to 5%, in January 1, 1996, it was further reduced 3% and finally eliminated in 1997.

3.1.4 Export measures

While in the pre-transition period Poland's agriculture and food exports were fairly highly subsidised, since 1990 export subsidies were rarely applied and were limited to sugar, SMP, butter and pork. However, exports undertaken by the ARR on the basis of intervention purchases, are partly export sales with losses and can therefore be regarded as a form of indirect export subsidisation.

Export prohibitions are possible to prevent domestic shortages, e.g. in 1992/93, as a consequence of the decline in output caused by the drought. These restrictions were implemented through an export licensing system. Additionally, exports of live ducks, geese and turkeys were banned from 1993 to prevent them being used to improve foreign breeds.

3.1.5 VAT

The introduction of a value added tax (VAT) on July 5th 1993 replaced the former turnover tax. The Polish VAT system consists of the following three levels: 22% for industrial products, 7% for the most food products, exempt are unprocessed agricultural products. A recent proposal not implemented is to levy a 7% VAT rate on unprocessed products with farms of a certain size being able to claim it back.

For imported goods the VAT is calculated on the basis of the import value plus the customs tariffs plus 5% border tax plus (eventually) excise duty.

3.1.6 Excise duty (polish "akcyza")

The excise duty is a special tax payment introduced together with the VAT. The rates are set by the Ministry of Finance. It is applied to some alcoholic beverages, cars, tobaccos and some luxury products.

3.2 Trade policy

Trade policy in the agricultural and food sector is governed by a number of multilateral and bilateral agreements:

- GATT/WTO agreements
- CEFTA agreement
- Europe Agreement
- Free Trade Agreements with Lithuania and with Israel

Under the Law on Economic Activity of December 1989, foreign trade has been generally liberalised since 1990. The state monopoly of foreign trade was abolished and state-owned enterprises were no longer privileged by specific trade advantages. The administrative management of foreign trade as well as the central distribution of hard currencies ceased.

3.2.1 GATT/WTO

Poland acceded to the GATT in 1967. In April 1994, Poland signed the final document of the Uruguay Round and the Declaration on the World Trade Organisation to take effect from 1 July 1995. Presently Poland fully implements the results of the URA covering the commitments on internal support, market access and export subsidies. Due to tariffication process, Polish import tariff rates for a significant number of agricultural products were bound.

Poland's commitments on domestic support are expressed in $ and therefore shielded against the devaluation of the zloty. Total Aggregate Measurement of Support (AMS[16]) is limited to 3.3 bio $ by the year 2000, an amount which seems rather comfortable, considering the high level of support during the reference period 1986-88. Current levels of domestic support are much lower than the commitments (table 3.2.1-1).

The commitments on market access consist of two elements, the provisions on minimum market access and the new tariff rates resulting from the process of tariffication. The base for calculation is the period 1986 to 1989 when Poland's trade was still state managed and controlled.

Due to the non-market nature of the Polish economy in the base period, Poland carried out the tariffication process in a different manner than the majority of GATT members. Sensitivity of the markets for individual products and the level of tariff rates in the EU was adopted as a basis for tariffication. In relation to all tariff items recognised as sensitive, Poland was guaranteed the right to apply Special Safeguard Provisions (SSG). These provisions allow for introduction, in the implementing period, additional customs duties in the event of

Table 3.2.1-1 : Poland's commitment to the Aggregate Measurement of Support (AMS)

Basic quota AMS	Maximum AMS in the years 1995-2000 (in Imo, US-$)					
	1995	1996	1997	1998	1999	2000
4160	4022	3883	3745	3606	3457	3329
Current total AMS	254.5	226.5	–	–	–	–

"–" not yet notified. Source: MAFE

[16] The present footnote aims to clarify the relationship between the Producers Subsidy Equivalent (PSE) and the Aggregate Measurement of Support (AMS).
The PSE refers to the current world market price (expressed in $). Any currency fluctuation or world price movement results therefore in a change in the PSE of a particular agricultural product, from one year to another, even if internal support policies do not change.
The AMS fixes the external price at the level of the base period (1986-88). Therefore, AMS variations result only from changes of internal prices or changes in the volume of production.
However, for the purpose of a rough estimate, it is assumed that the "high" level of the PSE over the reference period 1986-88 compared with the more recent period (cf. annex III) indicates that some margin of manoeuvre is available regarding the commitment on AMS (recent AMS figures are not easily available).

Table 3.2.1-2 : Poland's market access offer to GATT (selected products)

Product	CN-code	Quota in 1995 (t)	Quota in 2000 (t)	Tariff in-quota	Tariff outside quota in the year 2000	EU tariff outside quota in the year 2000 *a*
live cattle	0102	6720[1)]	11165[1)]	20%	12% + max 931 ECU/t	
beef	0202	10560	17545	30%	19% + max 3034 ECU/t	108 a
live hogs	0103	3990	6640	35%	89%; max 412 ECU/t	
pork	0203	27930	46480	30%	76%; max 896 ECU/t	38 a
meat products	1601	5910[2)]	9830[2)]	35%	89%; max 1536 ECU/	
poultry meat	0207	20000	20000	30%; min 0.3 ECU/kg	76%; max 1283 ECU/t	25 a
milk powder	0402	3000[3)]	5000[3)]	40%	102%	70 a
butter	0405	10100	16900	40%	102%; max 2313 ECU/t	136 a
cheese	0406	5000	5000	35%	160%	87 a
eggs	0407	200 mio pc[4)]	353.4 mio pc[4)]	25%; min 0.03 ECU/pc.	64%; min 105 ECU/th, pc	
– durum wheat	1001	280000 5)	280000 5)	20%	25%	148ECU/t
– other wheat				25%	25%	64%; min 96 ECU/t	75 a
rye	1002	150000[5)]	150000[5)]	20%	51%; min 93 ECU/t	95 a
barley	1003	121000	201700	20%	51%; min 93 ECU/t	95 a
maize	1005	250000	250000	20%	12.8% + max 96 ECU/t	95 a
potatoes	0701	160700[6)]	268000[6)]	50%	128%	11.5 a
oilseed extract	2306	21800[7)]	36400[7)]	10%	19%	0
vegetable oil	1507/-12	80000	80000	40%	51%	
tomatoes	0702	10000	16700	20%	40% + max 1200 ECU/t	
cabbage	0704	45000	75000	50%	32%; min 16 ECU/t	
carrots	0706	4000	8000	25%	64%	
cucumbers	0707	10400	17340	60%	48% + max 520 ECU/t	
bananas	0803	20000	33000	20%	51%	
– apples	0808	30000	45000	60%	48% + max 240 ECU/t	
– pears				50%	95%	
sugar	1701	50000[8)]	84000[8)]	40%; min 0.17 ECU/kg	96%; min 0.43 ECU/kg	168
beer	2203	342000 hl	570000 hl	30%; min 0.25 ECU/l	38%; min 0.32 ECU/l	15.4

a – ad valorem rates calculated in DGVI on the base of projected world prices in the year 2000.
1) Quota contains also goods of CN 0201; 2) Quota contains also goods of CN 160241, 160242, 160249, 160250; 3) The quota for skimmed milk includes goods of CN 0402;
4) Quota includes also goods of CN 040700900, 0408 and 3502; 5) In equivalent of processed products; 6) Quota covers also goods of CN 1105 and 3505;
7) Quota covers also goods of CN 1204, 1205 and 1207; 8) In equivalent of processed products; the quota contains also goods of CN 1212, 1702 and 1703
Source: Ministry of Agriculture and Food Economy of Poland

excessive quantitative growth or decline in import prices. Threshold prices and threshold quantities are stated each year in the regulation of Minister of Agriculture and Food Economy. According to WTO notifications in 1996 price based special safeguard measures were taken for a short period from 24 October to the end of year for cut flowers. Actions were also taken in 1997, but only for few working days - from 22 December for cut flowers, white sugar, preserved tomatoes.

Due to increase of import tariffs for some agricultural and food products in the second half of 1995 and the next years, and according to UR agreement commitments, Poland had to introduce import quotas with access conditions not worse than those before December 1993. Quotas, according to commitments, are either constant or yearly progressively increasing. In the table below there are indicated bound tariff rates out of quota and also, for comparison, some EU outside quota bound tariff rates for major products (table 3.2.1-2, 3).

In 1997 most used were the quotas for: meat and edible offal of poultry, egg yolks dried, natural honey, tomatoes fresh (from 1April to 31 May), some kinds of spices, vegetable saps and extracts, some types of tobacco and gelatine.

Table 3.2.1-3 : Tariff quotas opened for 1997 and in-quota import (selected products)

Item	in-quota tariff rate	tariff quota quantity (t)	in-quota imports (t)	share of import in quota quantity (%)
live poultry	50%	925	784	85
bovine fresh	30%	4300	501.38	12
bovine frozen	30%	13354	6154	46
meat of swine fresh, chilled and frozen	30%	35350	24671	70
meat and edible offal of poultry	30% min, 0.3 ECU/kg	31314	30888	99
milk and cream concentrated	40%	4180	0	0
stomachs of poultry	15%	254	83	33
wheat and meslin flour	25%	7450	5165	69
rye flour	25%	1290	0	0
flour, meal, flakes, granules and pellets of potatoes	25% min, 0.2 ECU/kg	400	0	0
starches	35% min, 0.2 ECU/kg	2000	1781	89
rape, colza and mustard oil	45%	7400	2501	34
other edible oil	20%	600	0	0

Table 3.2.1-4 : Poland's commitment on the reduction of export subsidies

Products	Basic level of export subsidy (mio US-$)	Maximum value of export subsidies (mio US-$)		Subsidised exports in base period (1000 t)	Maximum quantity of subsidised exports (1000 t)	
		1998	2000		1998	2000
animal husbandry products	105.3	80.05	67.4	d.n.a.	d.n.a.	d.n.a.
meat products	133.7	101.9	85.6	50.6	43.4	39.8
meat	59.2	45	37.9	51.7	44.5	40.9
poultry meat	15.0	11.4	9.6	16.4	14.0	13.0
skimmed milk	8.7	6.6	5.6	46.8	40.4	37.0
casein	12.9	9.7	8.3	19.4	16.6	15.3
sugar	50.0	38	32.0	132.1	113.7	104.4
molasses	16.0	12.1	10.2	314.7	270.7	248.6
alcoholic products	32.5	24.7	20.8	668.5	574.9	528.1
frozen fruits and vegetables	48.7	37	31.2	158.3	136.3	125.1
fresh fruits and vegetables	51.7	39.3	33.1	251.0	215.8	198.3
processed fruits and vegetables.	164.7	125.2	105.5	216.2	185.8	170.8
potato starch[1)]	10.8	8.2	6.9	43.2	37.2	34.1
sowing material	9.7	7.4	6.2	52.9	45.3	41.8
rapeseed oil	19.1	14.5	12.3	38.4	33.2	30.3
rapeseed	23.5	17.8	12.9	432.3	371.9	341.5
potatoes	22.1	16.8	14.1	455.5	391.9	359.8

[1)] Includes other potato products.

During 1997 there was no in-quota imports of: milk and cream concentrated or containing added sugar or other sweetening matter, egg yolks fresh, eggs dried, cut flowers, cider apples, strawberries, rye flour, flour and other products of potatoes, beet seeds, hop cones, edible oil, potatoes prepared or preserved, flavoured sugar syrups, wine, denatured spirits, egg albumin dried, dextrins.

The Polish schedule of concessions to WTO includes export subsidy commitments for 17 groups of agricultural products, but in fact up to 1997 subsidies were imposed only for sugar (table 3.2.1-4).

According to WTO documentation Poland subsidises export of sugar. According to other sources there are export subsidies applied to the limited

Table 3.2.1-5 : Export subsidy for sugar

year	outlays commitments level (million USD)	quantity commitments level (thousand tons)	real outlays (million USD)	real quantity (thousand tons)
1995	47	127.5	0.1	0.9
1996	44	122.9	15.8	143.0
1997	41	118.3	–	–
1998	38	113.7	–	–

"–" data not yet available

amounts of skimmed milk powder (SMP), butter and pork. However, exports undertaken by the ARR on the basis of intervention purchases, are partly export sales with losses and can therefore be regarded as a form of indirect export subsidisation. The subsidised exports of sugar in 1995 remained well below the value and quantity ceilings stated in the schedule of commitments. Poland accumulated the export subsidy commitments for sugar from the year 1995 and used them in 1996 (table 3.2.1-5).

Temporary export prohibition of wheat and meslin, rye, barley, oats were applied with the effect from 1 January to 31 August 1996 in order to prevent the serious shortage of that products on internal market.

3.2.2 CEFTA

The Central European Free Trade Agreement was signed in December 1992. It replaced the "Visegrad" Agreement from 1991 between Poland, Hungary and former Czechoslovakia. The Agreement entered into force in 1993 after the split of Czechoslovakia into the Czech and the Slovak Republics. In November 1995 Slovenia joined the Agreement. On 1 July 1997 Romania became a sixth member. Bulgaria joined in July 1998.

Presently Poland is entering negotiations with the next applicants: Latvia, Lithuania, FYROM (Former Yugoslav Republic of Macedonia), and Croatia. However the present CEFTA requires that the members have the Association Agreement with the EU and are members of WTO.

The main objective of CEFTA is to gradually establish a free trade area within a period ending up on 1 January 2001.

The Agreement covers free trade in industrial commodities and a restricted liberalisation of trade in agricultural and food products.

For industrial products, all barriers will be abolished by the end of 2000. For agricultural and food products, the initial agreement introduced a system of preferential quotas. Preferences were given for selected commodities on a bilateral basis, for which parties had to decrease tariffs by 10% annually, until a 50% preference was reached. It was later decided to introduce the 50% tariff reduction at once and in some cases an even higher reduction (of 70 %).

In December 1995, agreement was reached on further gradual liberalisation of agricultural and food trade until -after further negotiations- eventually full liberalisation would be reached. However, the original deadline of 1998 was postponed and finally at the CEFTA summit meeting in Warsaw in December 1997 changes were agreed to the grouping of products in different categories with different degrees of liberalisation:

- A listing: duty free and quota free commodities as from 1.4.1998 (breeding animals, horses, rabbits, durum wheat and oilseeds);

- A1[17] listing: duty free and quota free commodities as from 1.1.2000 (from 1.4.1998 until 1.1.2000 still within quotas; sheep and goats, live and meat);

- B listing: common preferential tariffs (poultrymeat 28%, wheat 15%, barley 18%, flour 15%, pastry 20%, some fruit and vegetables 5 to 10%);

- B1 listing: common preferential tariffs still within quotas till 1.1.2000 (cattle, pigs, poultry 10 to 15%, carcass beef and pork 25%, beef and pork cuts 20%, milk powder 37%, all canned meat 15-18%, hops 5%);

- C and D listings with bilateral preferences between CEFTA members.

Sugar and certain dairy products remained outside of the listing.

The CEFTA is based on a principle of "symmetry" of concessions, which means that value of benefits should be equal for each member. Polish trade with CEFTA countries is presently not significant (only 6% of all agri-food trade in 1997). For a number of years, the trade balance has been negative for Poland (in 1997 trade balance was -126 mio USD). However the tendency is positive. In 1992 share of trade with CEFTA in all the agri-food trade was only 1%.

There are some problems in co-operation between member countries of CEFTA in agricultural trade. Although the tariffs are lowered, other aspects of agricultural policy are not harmonised. In 1998 Poland applied the special measures in trade. In previous years, Poland has withdrawn preferential duties for sugar from the Czech Republic where sugar prices are not generally supported to the same level and took similar measures for maize from Hungary. There are also some problems with the certificates of origin. Further liberalisation of tariffs will therefore be difficult without a further harmonisation of agricultural policy.

3.2.3 The Europe Agreement

The Europe Agreement (EA) was signed on 16th of December 1991 and entered into force on 1st February 1994. The trade chapter, however, was covered by an interim agreement and entered into force on 1st March 1992.

The agreement provides the framework for Poland's gradual integration into the EU single market. According to the EA both parties aim to establish a free trade area over a period of 10 years. This is to be established progressively on the basis of asymmetric trade concessions designed to favour Poland's' trade balance with the EU.

1998 is the seventh year of implementation of the commercial part of EA. Since its entry into force the provisions have been modified to take account of the 1994 Uruguay Round Agreement and following the 1995 enlargement of the EU to include Austria, Finland and Sweden. The additional protocol to the EA which sets out the modifications related to agricultural products and foodstuffs was initialled by the Association Committee in March 1997.

Trade in agricultural products is based on reciprocal concessions in the form of reduced tariffs and increasing tariff rate quotas (TRQs) established over two initial 5 year periods, intended to provide better market access potential. The concessions vary for different groups of products, but the EU concessions can be broadly grouped into six categories. Three groups cover products previously included in the Generalised System of Preferences

[17] A1 and B1 listings apply for trade with Slovenia only.

(GSP) system. The first includes products with a TRQ, where TRQs were increased by 10% per year over the 5 year period, accompanied by 50% duty reductions over the first 2 years. Duty on products in the second group, with no TRQs, was reduced by between 30% and 100%. The third category is the global TRQ for imports of live cattle. For non-GSP products concessions consist in the main of a 10% per year increase in TRQ accompanied by a 20% decrease in duty over each of the first 3 years. The last two groups include some fruit and vegetables and processed products, where specific rules apply.

Polish concessions to the EU consist of a reduction of tariffs on 247 agricultural products, mostly products where there is very low domestic production, by 10 percentage points. In addition, Poland agreed to eliminate restrictions and quotas for alcohol imports by 28.2.97 (these were finally eliminated in June 1998), and to eliminate the mobile tariff element of duty on processed agricultural products by 1.1.99.

In spite of the EA's explicit objective of improving Poland's trade balance with the EU, the outcome of the first years of its implementation has been a shift in the opposite direction. The operation of the TRQ system has been criticised by Poland for being overly complicated and bureaucratic. Whilst some TRQs are exhausted very quickly, others are not fully used. The reasons for this are not entirely clear, but may include the appreciation of the Zloty and high demand for certain TRQs resulting in importers being awarded import licences for quantities which may be too small to justify trade. However the rate of quota use is generally increasing over time, and it is hoped that this, together with the implementation of the Adaptation Protocol and the second 5 year phase of agricultural concessions will result in increased Polish exports to the EU.

3.2.4 Free Trade Agreements with Lithuania and with Israel

The free trade agreement between Poland and Lithuania came into force in January 1997. About 56% of all agricultural products included in the agreement are tax free for both countries. Some sensitive products for each of the countries (e.g. sugar, products containing sugar, sheepmeat and some fruits and vegetables) are excluded.

3.3 Producers and Consumers Subsidy Equivalents

3.3.1 PSE and CSE

The Producers Subsidy Equivalent (PSE) and Consumers Subsidy Equivalent (CSE) calculations were developed by the OECD to measure the support/tax to producers and consumers that arises as a result of agricultural policies.

PSE-calculations show that at the beginning of the transformation process in 1989-90, Poland intended to build up a very liberal market economy with low support levels. The result was that overall support to agriculture in the period 1989-1991 was generally negligible, and the market price support (MPS) component negative, implicitly taxing farmers. Since then Poland reinforced the border measures and equivalent price support systems mainly due to increasing competition problems caused by structural deficiencies particularly in the food processing industries. Support to farmers as measured by PSE and in particular the MPS component has therefore increased. Unlike the MPS, the significance of direct payments (DP) in agricultural support has always been low and is presently negligible. The last aggregated component, called "other support" (OS) is dominated by transfers related to the reduction of input costs and general services like research, training and advisory.

Table 3.3.1-1 : PSE and CSE in Poland

	1989-91	1995	1996	1997
Producer subsidy equivalent (PSE)				
Total PSE billion ECU	-0.1	1.6	2.4	
% PSE	0	21	23	22
% PSE (EU)	48	49	43	42
Consumer Subsidy Equivalent (CSE)				
Total CSE billion ECU	1.2	-1.4	-2.4	
% CSE	19	-18	-28	
% CSE (EU)	-44	-34	-22	
Total transfers billion ECU	0.3	3.0	4.5	

Source OECD 1997 (reference period is 1986-1988 for EU12).

A comparison of the PSE of Poland and the EU show that the support of agricultural producers in the EU has been more stable and higher than in Poland though Polish farmers now enjoy substantial support following being implicitly taxed in 1990-91.

The CSE development has been the inverse of the PSE. Consumers were subsidised in 1990-91 before being taxed again from 1992 to a level above the OECD average. The OECD estimates that transfers from taxpayers and consumers as measured by Total Transfers associated with agricultural policies, increased by nearly two thirds in 1996 and accounted for about 4 per cent of the GDP (table 3.3.1-1).

3.4 Prices

3.4.1 Prices and price gap

The following table shows price developments in Poland and the EU between 1993 and 1997. The reader is also referred to the figures in the price development figures in the market policy section. The table is summarised as follows:

For cereals, prices in Poland were between 55% (rye) and 73% (wheat) of the respective EU price in 1993 but rose to be equivalent to EU prices in 1996 and 1997. This is partly due to more favourable world market prices, particularly for wheat but also due to the considerable increase in the Polish guaranteed prices in 1996. For sugar beet, Polish prices are consistently lower at around half of the EU while for oilseeds, due to import protection, Polish prices have been higher than the EU in recent years. For fresh fruit and vegetables, Polish prices are considerably lower, for example only 22% of the EU price (cherries) and 46% of the EU price (cauliflowers). This is in part due to the poorer marketing chain in Poland and explains the good Polish export trade to the EU for these products (table 3.4.1-1).

For animal products, the beef price in Poland is only half that of the EU and partly reflects lower quality and the low demand in Poland but of course the higher support price in the EU. However, pig and poultry meat is at an equivalent price, the lower pig meat price in Poland caused by generally poorer quality carcasses. The milk price in Poland has increased since 1993 and is currently around 50% of that in the EU. For high quality milk (equivalent to that in the EU), a premium is paid by processors which would bring the producer price much closer to the EU level for milk of equivalent quality.

For cereals, particularly wheat, oilseeds and pig and poultrymeat, prices in 1997 were not dissimilar for products of equivalent quality. Sugar beet prices are half that of the EU. Although fruit and vegetable prices are lower in Poland this is likely to be because the Polish prices refer to products for processing, generally of lower quality. Even taking account of the quality differences, the milk and beef prices are higher in the EU than Poland.

Table 3.4.1-1 Comparison of producer prices in the EU and Poland

	EU - PRODUCER PRICES (average weighted prices) ECU/tonne					POLAND - PRODUCER PRICES (average weighted prices) ecu/tonne					Difference (Poland/EU) Difference %				
Main Products	**1993**	**1994**	**1995**	**1996**	**1997**	**1993**	**1994**	**1995**	**1996**	**1997**	**1993**	**1994**	**1995**	**1996**	**1997**
Common Wheat	158	144	138	138	126	115	100	128	166	137	73%	70%	92%	121%	109%
Barley	145	138	133	129	119	104	88	110	153	113	72%	64%	83%	119%	95%
Maize	166	149	157	155	134	102	140	146	136	117	61%	94%	93%	87%	88%
Rye	146	139	121	122	110	81	68	76	111	100	55%	49%	63%	91%	91%
Sugar beet	47	47	46	49	50	21	20	26	27	26	45%	43%	56%	54%	53%
White sugar						273	371	431	517	486					
Main crop potatoes	103	185	230	126	119										
Rapeseed*	189	215	189	208	204	183	231	180	249	234	97%	107%	95%	120%	115%
Tomatoes*	358	391	380	433	401	213	182	119	214	202	59%	47%	31%	49%	50%
Cauliflowers*	401	388	402	412	400	136	252	194	190		34%	65%	48%	46%	
Cucumbers*	451	429	449	472	450	320	252	213	361	216	71%	59%	47%	76%	48%
Apples*	308	371	378	425	391	45	68	131	79	47	15%	18%	35%	19%	12%
Cherries *	1401	1481	1844	1783	1702	105	331	280	383		7%	22%	15%	22%	
Beef (R3 carcase)*	3128	3118	2929	2608	2662	1029	1243	1375	1457	1447	33%	40%	47%	56%	54%
Pigs (carcase)*	1265	1278	1349	1619	1672	1008	1233	1069	1158	1242	80%	96%	79%	72%	74%
Chicken (carcase) *	1360	1344	1170	1328	1290	917	1224	1102	1328	1215	67%	91%	94%	100%	94%
Sheep & Goat (carcase.)*	2587	2769	3091	3629	3757	1753	2234	2580	2755	2834	68%	81%	83%	76%	75%
Raw cow's milk: 3.7% fat*	300	300	296	299	297	108	101	137	147	150	36%	34%	46%	49%	51%
Skimmed-milk powder*	2142	2109	2190	2090	2130	1118	1072	1403	1453	1471	52%	51%	64%	70%	69%
Butter*	3567	3556	3705	3616	3625	1374	1515	1715	1861	2367	39%	43%	46%	51%	65%

* EU producer prices estimated for 1997, Poland fruit prices for 1997 are approximate. Fruit and vegetable prices in Poland generally refer to produce for processing.

3.5 Veterinary and phytosanitary legislation

In the veterinary field, primary legislation (the new Veterinary Act) is in the legislative process. Secondary legislation which can be promulgated by the Government is in preparation independently of the primary legislation but cannot be introduced until the new law is enacted.

The Polish government is in the process of preparing legislation in the fields of national veterinary supervision, animal protection, breeding and reproduction of farm animals and supervision over feeding stuffs, that should bring the legislation in these areas into conformity with the acquis.

Poland has a relatively elaborate infrastructure for veterinary control and inspection, both at the borders and internally. The services are undergoing structural changes, including some decentralisation of the services accompanied by a large reduction of official veterinarians, in particular at head offices and the emergence of a private veterinarian sector. Furthermore the increased fragmentation of the livestock's units may make inspection and overall disease control more difficult. The new veterinary Act, when adopted, will establish the legal base for both the private and public veterinary services.

The facilities at border inspection posts are still inadequate for Community veterinary control. Complete facilities for the inspection of live animals and animal products at the border inspection posts are not yet available and most border checks are limited to controls on certificates and other documents, with the majority of physical checks being undertaken at destination. Currently, the Polish situation does not appear to completely comply with the EU import rules from third countries.

As regards internal measures there is a need for the Polish authorities to ensure Poland's animal health status in respect of certain EU requirements. The system of registration of holdings and identification of animals will need to be adjusted to the EU systems. The concept of regionalisation appears to be only partly applied. Eradication practices regarding notifiable diseases need further exchange of information to establish if they conform to EU legislation.

There will be a need to upgrade certain food processing establishments in particular for the national market to develop acceptable veterinary audit and certification procedures, also for both imports and exports and to maintain an adequately structured, resourced, staffed and trained veterinary sector.

Polish legislation is well developed regarding seed and propagation material and Poland enjoys Community equivalence under Community legislation for a number of products. Poland will need, however, to approximate its legislation to EC requirements for species where equivalency has not been established. A new law on crop protection came into force in July 1995. However, a certain adaptation to EU requirements is still necessary.

The approximation of legislation in the field of plant health should not create major obstacles, although proper implementation will need to be enforced. The control and inspection arrangements appears to be inadequate to ensure the appropriate level of protection. The above mentioned concerns about enforcement of external border control and disease control in the veterinary field are also largely valid in the plant health sector. However it will be necessary to verify if the institutions are able to implement the new legislation.

Concerning pesticide residues and plant protection products, there is a high level of compliance with EC requirements, though proper implementation will need to be assured.

3.6 Rural Policy

3.6.1 Rural development policy

Since 1994 rural development has been increasingly recognised as a priority by successive Polish Governments, due to the high levels of agricultural employment, the need to modernise and develop agricultural practices and the need to create non-agricultural jobs in rural areas.

In 1994, it was one of the 10 key objectives included in the Government's development plan. This "Strategy for Poland" gave four objectives for rural development policy: village renewal including job creation and encouragement of non-agricultural activities; encouraging the modernisation of agricultural structures and processes; supporting the development of socio-economic infrastructure such as co-operatives, commodity exchanges, telephone and road networks and the agricultural advisory service; and lastly recognition of the natural value of villages.

Resources to achieve these policy objectives were dedicated to creating rural non-agricultural employment, long-term assistance for the agricultural sector such as aid for restructuring, education and training activities, and social aid. The Government undertook to limit policies and aid which would delay changes, and to target assistance to those enterprises, organisations and activities which would make most effective use of it. Commitments were also made to support regional development and to strengthen local government through decentralisation.

Various measures have been implemented in accordance with this document, including infrastructure programmes to extend the coverage of water, sewerage, telephone and road networks, and the setting up of a Chamber of Agriculture in each voivodship. State funding has been provided for their establishment and initial running costs, although they are

expected to become self-financing through members' subscriptions. Another concrete result has been the requirement for submission of a business plan and financial accounts before farmers can benefit from state support such as assistance for young farmers. This has accelerated the numbers of farmers enrolling in farm accounts schemes run by the voivodship agricultural advisory services.

In certain areas designated as having high tourism potential, farm tourism is supported by the Agency for Restructuring and Modernisation of Agriculture through interest-rate subsidies on loans granted to provide or upgrade visitor accommodation. An additional incentive is that currently any income derived from providing farm accommodation for tourists is not taxable.

Subsidised credit was available to rural non-agricultural businesses to encourage the creation of non-farming jobs. Loans under this scheme were available at interest rates of 6.8%, further reduced to 1.4% in regions with very high unemployment levels, compared to commercial rates of 20% or more. Due to recent cuts in the agricultural budget, the funds available for this type of subsidised credit are now much lower.

In addition, other measures provide support for land privatisation, the provision of financial services to agriculture, the development of agricultural market infrastructure and the integration of environmental protection into agricultural and rural policy.

Policy measures to assist farms in less-favoured areas are under development. Currently the only preferential treatment for these areas is an exemption from the agricultural tax for land of the poorest quality (land classes V and VI). Measures under consideration include additional interest-rate subsidies for investment loans, assistance for forest protection, land consolidation, water management and tourist accommodation, and specific incentives to encourage the development of non-agricultural employment.

Although progress has been made in developing and adapting rural and structural policies to address the challenges faced by rural areas, some of the support measures currently included in these policies such as those intended to reduce the costs of production, in particular input subsidies, appear to be inconsistent with EU policy.

The National Programme for the Adoption of the Acquis (NPAA) recently presented by the Polish Government follows a similar line to the "Strategy for Poland" in regard to rural development policy. It states that the development and implementation of a coherent structural and rural development policy is a major priority. MAFE has already drawn up a medium-term rural development strategy (adopted in April 1998), which identifies objectives and will form the basis for policy development. The main objectives of the policy will be to improve the structure of farm holdings, to reduce agricultural employment from 27% down to 5-7% (e.g. through early retirement schemes), to assist in adapting agricultural output to market requirements (quality improvement etc.), to support farming in less favoured areas, to support producer and marketing groups, to assist the creation of non-agricultural jobs in rural areas, and to develop rural infrastructure (physical and social). MAFE intends to have finalised the work on policy design by the end of 1998.

The EU funded SAPARD[18] programme which will run from 2000 to 2006 will be used to support implementation of the agricultural and rural development chapters of the NPAA. SAPARD will be implemented using EU Structural Funds' rules following a programming approach identifying priorities for action and appropriate measures to achieve the objectives set. This will complement the Polish Government's own programmes funded out of domestic resources.

[18] Special Assistance Programme for Agriculture and Rural Development.

3.6.2 Regional policy

3.6.2.1 The current situation

Since most of the voivodships are essentially rural, the thrust of regional policy in Poland is for the most part the rural development policy described in Section 3.4.1. One constraint limiting the effectiveness of both regional and rural development policy is poor co-ordination between the different ministries involved. As in many countries, the identification of clear ministerial responsibilities together with more effective inter-ministerial co-ordination procedures would greatly enhance the Government's ability to design and implement regional and rural development policy.

After it became clear that the 1990 Balcerowicz Plan for economic development was not as effective as expected because it did not take into account regional differences, the Polish Government embarked upon an analysis of regional characteristics in order to produce a differentiated regional development policy. This currently operates at three levels, groups of neighbouring voivodships which share similar characteristics, individual voivodship plans, and programmes at the gmina level. In 1994 almost 18.5% of the state budget and 13% of the Labour Fund were allocated to regional policy, although much of the expenditure was determined at central level rather than being the responsibility of the regional authorities.

The state provides direct grant support to assist the implementation of regional development plans, and additional contributions to the budgets of gminas in voivodships facing high unemployment. These subsidies have so far mainly been used for infrastructure investments (such as mains water, sewerage systems and treatment of municipal waste) and measures to address unemployment (such as job creation schemes and provision of training).

State funds have been supplemented by the use of outside resources, such as the PHARE programme which has financed a range of regional and local development measures, including most recently the development and implementation of pilot programmes in Upper Silesia, north-eastern Poland and Malopolska.

3.6.2.2 Regional reform

On 15th July 1998 it was decided that the current regional structure of 49 voivodships will be replaced by 16 larger voivodships as shown in the accompanying map (these will correspond to the EU NUTS II level regions). The gminas will remain unchanged, but an additional intermediate tier of regional administration, the "poviat", will be created, equivalent to NUTS III level. The poviats will be similar to the current sub-regions within existing voivodships (typically current voivodships have around 6 sub-regions, implying around 300 poviats).

The regional reforms do not only cover voivodship boundaries, but also relate to local government finance. The reform is intended to create a sound financial base for local government and to improve the potential for economic development. Currently voivodships and gminas have a combined budget of around 6% of GDP, whilst the central budget stands at around 27% of GDP. The reform will transfer the equivalent of approximately 10% of GDP from the centre to the three levels of local government, resulting in roughly equal expenditure of around 16% of GDP for both the central budget and the combined regional authorities.

The reforms are due to take effect from 1st January 1999, but this is a very tight timescale given the tasks to be accomplished in order to have new regional authorities up and running by that date. Elections for all three levels of local government, voivodships, poviats and gminas, are due to be held on 11th October 1998. The delays in adopting the territorial reform bill have already caused problems as the gmina councils' mandate expired on 20th June, and a special act of Parliament was

required to extend their term of office to the end of 1998.

The control and management of regional development policy will change following implementation of the territorial reform programme which is currently going through Parliament. Structural policy implementation and administration, including rural policy, will be set up on a regional basis, and will operate in a decentralised fashion under the control of the regional authorities, encouraging the participation of the local population, NGOs and social partners.

In addition to local government competencies such as roads and secondary education, many organisations and institutions exerting important influences on rural life are also organised by voivodship, and the reforms will therefore have far-reaching consequences for rural communities. For example, the agricultural advisory services, chambers of agriculture, agricultural and co-operative banks all currently operate at voivodship level, and will have to be adapted to suit the new regional structure.

3.6.3 Forestry policy

A national forestry programme has been introduced which aims to create 700 000 ha of new woodland by 2020 and 1.5 million hectares before 2050. The Government particularly wishes to encourage the planting of poorer quality agricultural land (land classes V and VI) with trees.

Part of the Government's agri-environmental policy is a joint initiative between MAFE and the Ministry of Environment, Natural Resources and Forestry to encourage the planting of trees around farm holdings, and to develop farm-forestry. About 230,000 hectares are expected to be affected by this measure.

As part of the policy of encouraging and developing forestry activities, woodland owners are now obliged to manage their property to protect it from fire and disease, to replant felled areas and to protect forest habitats and species. State assistance is available in the form of tax relief, grants for tree planting, and financial assistance for certain management activities such as fire prevention measures, environmental protection and water management. Some subsidised loans are also available. The average establishment cost of 1 hectare of woodland is 3,800 PLN (1997 prices).

3.7 Agri-environmental policy

3.7.1 Agri-environment measures

The principal environmental problems in Poland are linked to industrial, rather than agricultural activity, and so even though Poland was the first CEEC to develop a national environmental policy, it is only recently that agri-environmental issues have begun to receive much attention. In December 1994, MAFE issued a policy statement stating that agricultural policy should be integrated with environmental protection goals.

Specific activities in the field of agri-environmental policy which have already been agreed and are being implemented include protecting agricultural areas from pollution from other sectors such as industry, improving soil pH through liming where appropriate, establishing a programme to dispose of waste agrochemicals and packaging, investments in rural infrastructure such as waste disposal, improvement of drinking water quality in rural areas, support for the establishment of woodland on farms, and the development of organic farming.

External assistance is available for some of the above measures, for example the PHARE programme has financed measures to assist on-farm investments for water protection, e.g. provision of slurry tanks to protect water sources. Certain activities have been supported through NGOs, for example, a Church Foundation has contributed signifi-

cant funding for the provision of water supplies in rural areas.

In 1995 a Bill was passed relating to the protection of agricultural land. New initiatives in agri-environmental policy in Poland are now directed towards the adoption of the Community acquis, and in particular to measures compatible with Council Regulation 2078/92. A working group within MAFE has identified six priority areas for agri-environmental programmes. These are education, training and demonstration projects, maintenance and restoration of biodiversity in agricultural areas, promotion of organic farming, small-scale water retention measures for agricultural land, prevention of pollution from agricultural sources and preventing and overcoming soil erosion.

The working group plans to implement pilot projects from 2000 on in the areas of biodiversity and landscape protection, promotion of organic farming and promotion of codes of agricultural practice.

3.7.1.1 Protection of natural habitats

Since the mid 1970s the Polish authorities have created an extensive system of protected areas. This is based on the international IUCN[19] classification and consists of nature reserves, national parks, landscape parks and areas of landscape protection. Under the 1991 Statute on Nature Conservation, voivodships and gminas have the power to designate three further types of protected areas: ecologically important; documentation sites[20] and natural landscape zones. These additional categories can include areas under private ownership that are too dispersed and too small to fall into the state classification.

In 1995, 19% of Poland's agricultural land lay within legally protected areas as described in the table below:

Table 3.7.1-1: Protected Areas (1995)

Protection status	Number	Area in hectares
National parks	20	270103
National reserves	1122	121303
Landscaped parks	102	1971533
Areas with protected landscape	344	5820925
Ecologically important area	2111	18748
Documentation sites	75	286
Nature & landscape complexes	90	22207
Natural monuments	26423	
Total	30287	8225104
Total agricultural area ('000 ha)		312685

In 1996 a 21st national park, Park Narodowy Borow Tucholskich, was established.

All activities, including farming, carried out in the national parks are subject to nature conservation guidelines. In other protected areas varying restrictions are imposed on agricultural activity. Licences are issued for some activities, subject to the agreement of the voivodship governor. Despite these restrictions, which are enforced by the 1991 Act on Conservation, there is no system of compensation for farmers within these areas.

"Debt-for-nature" deals in which Poland's outstanding debt is reduced and resources are dedicated to environmental investment have been a feature of environmental policy. Such agreements have been signed with Sweden, Japan, and most recently Italy. As a result of this latest agreement an additional 30 MECU will be dedicated to environmental investment.

[19] International Union for Nature Conservation

[20] Documentation sites are „the not visible at the surface or possible for presentation, important from didactic and scientific viewpoint places of geological formations, concentration of fossils or mineral creations, as well fragments of exploited and not active surface and underground mines". I have taken this definition from Yearly 1997. GUS, Warszawa 1998.

4. Medium Term Outlook

4.1 Economic background

4.1.1 Overall economy

The growth of the agricultural economy relies heavily on general economic growth. Firstly, the development of food demand is to some extent dependent on GDP growth and consumer income. Secondly, agriculture is reliant on efficient upstream and downstream sectors. Thirdly, credit availability depends on interest rates and finally any budgetary outlays which can be devoted to agriculture depend on overall growth.

The share of agriculture in the Polish economy has been declining since transition. Although agriculture plays a crucial social role as an employment buffer (27 % of total employment) its growth is limited by domestic demand and by the trade capacity. Domestic food demand is not likely to grow more than incomes in general and its yearly increase could therefore be around 2%. The increased demand will be partly met by imports, but will also offer opportunities for the domestic agro-food sector in as far as it is able to improve its competitiveness in price and quality. The growth of GAP (gross agricultural product) could be limited to 2 % per year over the period 1998-2003. This would give a cumulated growth for agriculture of around 13 % over the 6-year period 1998-2003. Not all products will develop at the same rate, with consumers being influenced by promotion, convenience, health concerns..... as well as price developments.

In the food processing industry, restructuring and rationalisation of capacity can be expected to continue at a gradual pace, slowly improving efficiency and allowing for more remunerative prices to be paid upstream.

4.1.2 Policy developments

A major problem is the small farm size. Policy to date has brought about little change, nor can it be expected to do so during the forecast period. However, the share of bigger farms, with an agricultural area of more than 15 ha, allowing full-time activity and a good integration in marketing channels, is likely to increase at a slow rate. Their share of the privately utilised agricultural area could increase to 40% in 2000. Nevertheless, the land resources of the former state farms is likely to remain under large scale agriculture, even under private control.

In the run up to EU membership, Poland will have to adapt its market policy by putting in place the same instruments (but not yet necessarily applying them, or applying them at the same level). In the following the main implied changes for some of the main commodity sectors will be reviewed. As a benchmark the Agenda 2000 proposals for reform of the EU's agricultural policy will be used. The time horizon adopted as a working hypothesis for the minimum pre-accession period is up to 2003.

For cereals and oilseeds the preparation for membership would imply introducing a base area and hectare payments based on a fixed reference yield, a set aside instrument and intervention for the main cereals (not only wheat and rye). On accession border protection for oilseeds would have to be abolished, while for cereals it would likely have to be adjusted upwards[21].

[21] If and by how far would also depend on the outcome of the next WTO negotiations on agriculture.

For sugar the market support mechanisms are similar though on accession, border protection would have to be harmonised[22].

Quotas would need to be implemented for dairy milk production. In addition a dairy cow premium based on quota rights would have to be introduced. On accession border measures (tariffs and export subsidies) would have to be adjusted.

For the beef sector, headage payments for suckler cows, bulls and steers, stocking density limits, individual references (suckler premium rights) and regional ceilings (male premia), and an aid to private storage system with a trigger price would have to be introduced. On accession, border measures would have to be aligned to EU levels.

On the structural side a persistent policy feature has been the provision of credit (mainly in the form of interest rate subsidies) for operational as well investment needs to the farm sector channelled through the banking system, though recently this seems to have been reduced, particularly for production related investments. In the run up to EU membership some of the existing instruments will have to be adapted to the Community format, while new ones such as an agri-environmental programme will have to be introduced. An area payments scheme would need to be developed and fitted into the national envelopes proposed for the dairy and beef sectors under Agenda 2000. In addition a more integrated regional and rural policy will have to be developed fitted to the EU's structural fund instruments.

In the field of approximation to EU legislation, further work is needed on the implementation and enforcement of veterinary and phytosanitary requirements and on the upgrading of establishments to meet EU standards.

The Commission Opinion, Accession Partnership and NPAA all recognise that in view of the extremely high proportion of agricultural employment in rural areas, and the current low productivity and income of the majority of farms, rural development is a key priority for Poland in the run-up to EU accession. The Government has committed itself to developing an implementing a comprehensive and coherent rural development policy, and adopted its "Medium-term strategy for rural development" in April 1998.

Priorities are to encourage the creation of non-agricultural employment in rural areas, to improve farm structures and productivity, to develop rural infrastructure and to adapt agricultural production to market requirements. These are all necessary changes to strengthen the rural economy prior to accession.

Institutional changes required prior to accession include the development of procedures and mechanisms for the design, implementation and management of EU Structural Funds' programmes and rural development policies such as agri-environment measures, less-favoured area schemes and the rural Community Initiative (the successor to LEADER). Appropriate financial management, accounting and reporting systems must also be put in place.

The underlying assumption for the commodity projections that follow and which cover the period up to a possible accession, is that Poland will gradually adapt its market and structural policy instruments to the foreseeable Community acquis, but that level of support and of border measures will not increase much above or remain at current levels due to budgetary constraints and GATT commitments[23], and will only be aligned after accession.

---

[22] In general the speed of alignment of border measures to EU levels would depend on the speed of integration into the single market and on the existence of transition periods or arrangements.

[23] It is assumed that GATT commitments will stay at the level reached after full implementation of the Uruguay Round.

4.1.3 Commodity projections

In the farm sector, big structural changes cannot be expected in the privately farmed sector and the small farms size will continue to be a particular handicap for modernisation. This will be particularly important for land dependant activities such as arable crops and grazing livestock but less so to intensive animal production and perhaps fruit and vegetables.

As far as land use is concerned a slight reduction in agricultural area is projected due to a continued reduction in arable land. Some of this land is already lying fallow and that on poorer soils will be absorbed in an afforestation programme. The slight decrease in grassland seen in recent years may also continue, in particular if some of these are also absorbed into forest area.

4.2 Commodity projections (2003)

4.2.1 Crop sector

4.2.1.1 Cereals

The table below presents a tentative balance sheet for total cereals (table 4.2.1-1).

MAIN ASSUMPTIONS :

- area: increase, some shift from the potatoes area plus 350 000 ha of idle land coming back into cereals production over the whole period (of the 1.8 mio ha of arable land idle in 1996).
- yield: starting point at the 1998 predicted yield, then paralleling the historical long-term trend (+ 0.09 t/ha per year).
- imports: increased to level of no stock change;
- feed use: following the development of livestock production and developments in feed potato use;
- other uses: 1998 plus an increase of 2 %/year.
- distribution between cereals: no change in share

In Poland, large fluctuations in production are common. Poland's Uruguay Round commitments do not allow any export subsidy for cereals, so any surplus (largely wheat) would have to be exported at the world price level.

Table 4.2.1-1. Cereals forecast

		1989/90	1996/97	1997/98	1998/99(f)	2000/01	2003/04
area	000 ha	8311	8679	8857	8725	8945	9275
yield	t/ha	3.24	2.91	2.86	2.87	3.05	3.32
production	000 t	26888	25245	25351	25077	27319	30831
imports	000 t	3591	3428	982	1145	2000	882
exports	000 t	80	222	116	84	296	1278
available	000 t	28942	26159	27078	27759	29023	30435
utilization							
o.w. feed	000 t	18859	16062	16900	17900	19017	20270
o.w. seed	000 t	1892	1990	1961	1960	1902	1855
o.w. other uses	000 t	1674	2292	2405	2094	2178	2311
o.w. human	000 t	6517	5815	5812	5805	5926	5999
kg/capita	kg	171	150	149	148	150	150
selfsufficiency	%	93	97	94	90	94	101

4.2.1.2 Potatoes

MAIN ASSUMPTIONS:

- area: the declining trend of the potato area is likely to continue; the decrease between 1998 and 2003 is assumed to be around 250 000 ha, a decrease of roughly 21 %;
- yield: this is very variable and does not show any clear trend; yield is assumed to increase to 19 t/ha over the period.
- imports: the tariff for minimum access is fairly high (50 %), kept at 30 000 t/year.
- utilisation: feed use is very variable over years but there is a clear trend to a reduction as it is replaced by cereals also (table 4.2.1-2).

4.2.1.3 Oilseeds (rapeseed)

MAIN ASSUMPTIONS:

- area: rapeseed, which was mainly grown by state-owned farms, was severely hit by transition problems; it should eventually recover to the higher levels of the past (a peak at 570 000 ha in 1989) by 2002/3 under the influence of increased domestic consumption of vegetable

Table 4.2.1-2. Potatoes forecast

		1989/90	1996/97	1997/98	1998/99(f)	2000/01	2003/04
area *	000 ha	1859	1342	1306	1200	1080	950
yield	t/ha	16	20	17	18	18	19
production *	000 t	34391	27240	22500	21551	19828	18011
stock change	000 t	48	0	0	0	0	0
imports *	000 t	0	35	30	30	30	30
exports *	000 t	789	72	39	78	123	123
available for util.	000 t	33650	27203	22491	21503	19735	17918
utilization							
feed *	000 t	15727	12774	9058	11500	10500	9000
seed *	000 t	4511	3072	2880	2640	2376	2090
food *	000 t	5421	5214	5155	5094	5136	5199
other	000 t	7991	6143	5398	2269	1723	1629
food in kg/capita	kg	143	135	133	130	130	130
selfsufficiency	%	102	100	100	100	100	101

Table 4.2.1-3. Rapeseed forecast

		1989/90	1996/97	1997/98	1998/99(f)	2000/01	2003/04
area	000 ha	570	283	317	400	500	550
yield	t/ha	2.78	1.59	1.88	2.01	2.11	2.26
production	000 t	1585	449	595	805	1056	1244
imports	000 t	3	374	126	160	5	5
exports	000 t	493	0	0	27	120	255
available	000 t	1095	823	798	938	941	994
utilization							
o.w. seed	000 t	50	0	0	27	41	44
o.w. processing	000 t	1096	815	798	938	900	950
o.w. other uses	000 t	-51	0	0	0	0	0
selfsufficiency	%	99	33	43	38	112	125

oils and the rather positive prospects for the world market prices. The first estimates for 1998 show that plantings are again as high as 400 000 ha; This item has shown large variations often due to severe winter weather and is sensitive to the cereal/oilseed price ratio.

- yield: starting point at 95-97 average + increment of .05t/ha/year.In 2002/2003, it is still lower than the 89-91 average.;
- virtually no imports (surplus situation);
- the distribution of total supply between exports and disappearance (domestic crushing) assumes an increased crushing capacity (table 4.2.1-3).

With such a scenario, Poland would considerably regain its traditional export position of rapeseed and rapeseed oil. Domestic prices for oilseeds and oilseed products are already at the level of the world market, therefore the Uruguay Round constraints on imports will not be particularly binding.

4.2.1.4 Sugar

Despite high production costs, Poland still exports sugar due to a high border protection and export subsidies. The new market organisation, very similar to the EU's with production quotas, financing of exports under quotas through a tax mechanism, export of excess quantities without support shows signs of arresting the surplus (table 4.2.1-4).

Rationalisation will be partly encouraged by western investors when many of the high number of factories will close and beet growing will concentrate on the most suitable areas. This should lead to an increase of sugar yields (1.2%/year assumed), up to an estimated level of 5.5 t/ha in 2003, and to a decrease in the beet area.

The net export capacity could be maintained without breaking the GATT commitments by using the opportunity of exporting (small) quantities produced at marginal cost without subsidy.

4.2.1.5 Land use

The table below shows the variations of land use linked to the above prospects for the crops under review (table 4.2.1-5).

Land use for these main crops decreases marginally, from 1997 to 2003/04 which follows the downward trend from 1989. The trend slows down as some presently idle land will come back into production 000 ha. Much of the rest of the land currently fallowed in the state-owned farms, estimated in 1997 at 1.3 mio ha, (1.8 mio ha in 1996) would

Table 4.2.1-4. Sugar forecast

		1989/90	1996/97	1997/98	1998/99(f)	2000/01	2003/04
area	000 ha	423	453	419	380	364	340
yield	t/ha	34.0	39.4	37.5	38.0	39.0	40.5
production	000 t	14374	17846	15719	14446	14202	13775
sugar							
production	000 t	1730	2240	2060	1878	1875	1860
yield	t/ha	4.1	4.9	4.9	4.9	5.2	5.5
yield	% sugar	12.0	12.6	13.1	13.0	13.2	13.5
imports	000 t	13	76			84	84
exports	000 t	117	513			241	194
utilization	000 t	1663	1884			1717	1750
kg/capita	kg	43.8	42.0			42.2	42.5
selfsufficiency	%	104	119			109	106

Table 4.2.1-5. Land use forecast

		1989	1996	1997	1998	2000	2003/04
Cereals	000 ha	8311	8679	8857	8725	8945	9275
Oilseeds	000 ha	570	283	317	400	500	550
Potatoes	000 ha	1859	1342	1306	1200	1080	950
Sugarbeet	000 ha	423	453	419	380	364	340
Total	000 ha	11162	10757	10899	10705	10889	11115

Figure 22. Crop area forecast ('000 ha) 1989-2003

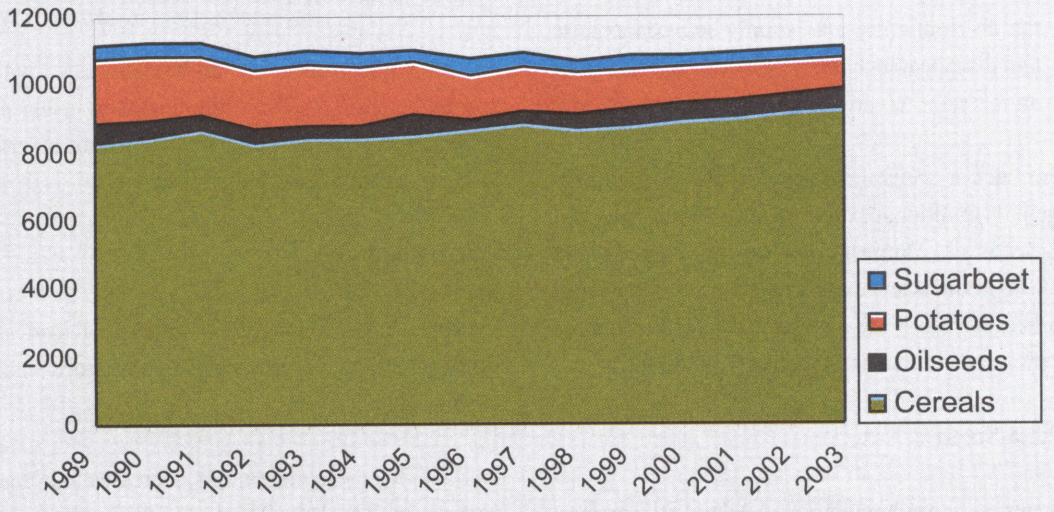
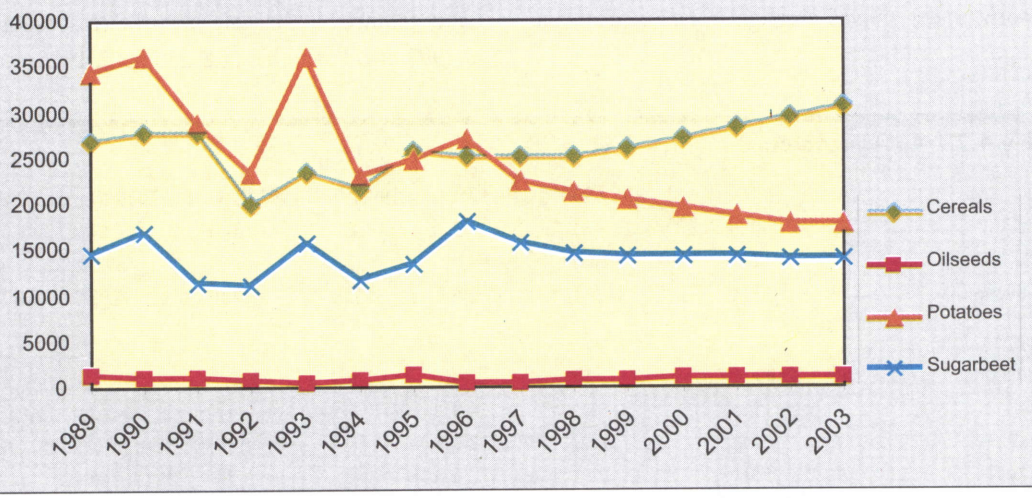


Figure 23. Crop production forecast ('000 t) 1989-2003



remain largely unused for crops and some would go into grassland or forestry. Nevertheless, the overall picture would have to be reassessed if the management structures and incentives develop to such an extent that this land comes back into production (figures 22, 23).

Table 4.2.2-1. Livestock numbers forecast

		1989	1996	1997	1998 (f)	2000	2003
cattle	000	10733	7150	7303	7380	7454	7566
o.w. cows	000	4990	3461	3487	3500	3535	3588
pigs	000	18835	17964	18135	19250	19832	20738
poultry	000	51740	51740	56300	58500	60863	64589
sheep & goats	000	552	552	491	490	496	526

Table 4.2.2-2. Milk forecast

fluid milk		1989	1996	1997	1998 (f)	2000	2003
cows	000	4990	3461	3487	3500	3535	3588
yield	kg/cow	3291	3387	3450	3505	3611	3776
fluid milk prod.	000 t	16420	11722	12032	12269	12766	13551
imports	000 t	0	265	300	361	361	361
exports	000 t	0	924	946	1031	1031	1031
available	000 t	16420	11176	11419	11599	12096	12881
utilization							
feed	000 t	761	701	701	670	684	704
processing	000 t	8004	5089	5706	5900	7300	7300
other	000 t	7655	5386	5012	5028	4113	4876
kg/capita	kg	170	139	128	128	145	150
selfsufficiency	%	100	105	105	106	106	105

4.2.2 Livestock sector

4.2.2.1 Livestock numbers (table 4.2.2-1.)

4.2.2.2 Milk

MAIN ASSUMPTIONS:

- number of cows may now grow, but only slowly at 0.5 %/year.
- milk yield: an increase of 1.5 % per year partially under the influence of the present modernisation programme (table 4.2.2-2).

Under this scenario, milk production in 2003 would still be under the 1990 level (13.5 mio t compared with 16.4 mio t).

The delivery ratio should recover to at least previous levels but this will need considerable investment in new plant. However, in general, the processing and marketing of such quantities are not likely to raise particular problems, due to the dynamism of the downstream sector and to an increased consumption of dairy produce.

4.2.2.3 Beef

MAIN ASSUMPTIONS :

- cattle numbers: may pick up again as the dairy herd starts to grow slowly.
- beef production: Much will depend on the price and on quality. Production is not dependant on cow numbers due to the significant live animal trade and the large slaughterings of calves. (+1.5% year)
- beef disappearance: this has declined severely but could recover with increasing incomes. (+0.2 kg/head/year, +1.8% annually) (table 4.2.2-3)

Table 4.2.2-3. Beef forecast

		1989	1996	1997	1998 (f)	2000	2003
cattle	000	10733	7150	7303	7380	7454	7566
total slaughters	000	3356	2659	2575	2682	2833	2875
average weight	kg	215	164	189	182	185	185
production	000 t	720	435	487	489	504	527
imports	000 t	100	25	9	9	18	18
exports	000 t	164	49	63	72	84	90
utilization	000 t	653	414	431	426	437	455
kg/capita	kg	17.2	10.6	11.1	10.9	11.1	11.4
selfsufficiency	%	110	105	113	115	115	116

Table 4.2.2-4. Pigmeat forecast

		1989	1996	1997	1998 (f)	2000	2003
pig numbers	000	18835	17964	18135	19250	19832	20738
total slaughters	000	20421	23505	20438	23447	23798	24885
average weight	kg	91	86	84	88	88	88
production	000 t	1854	2020	1724	2062	2094	2190
imports	000 t	19	45	45	55	46	46
exports	000 t	58	178	178	270	204	236
utilization	000 t	1845	1887	1591	1857	1936	2000
kg/capita	kg	48.5	48.6	40.8	47.4	49.0	50.0
selfsufficiency	%	101	107	108	111	108	110

Under this scenario, cattle numbers would remain much lower in 2003 than in 1989 (7.6 mio instead of 10.7 mio), as would beef production (527 000 t instead of 720 000 t in 1990). There will be some imports of high quality beef, most "beef" exports will be live animal trade.

4.2.2.4 Pigmeat

MAIN ASSUMPTIONS :

- pig numbers: though likely to be cyclical, the pig numbers will grow (+1.5%/year), responding to good consumer demand. Pig rearing is likely to increasingly favour lighter and leaner animals;
- pigmeat production: would recover from the expected 2.1 mio t in 1998 to 2.2 mio t in 2003;
- pigmeat disappearance: will continue to increase as living standards improve (0.5%/year) (table 4.2.2-4).

Under this scenario, pigmeat production would be substantially higher in 2003 than in 1990 (2.2 mio t instead of 1.85 mio t) and the export trade would continue to grow.

4.2.2.5 Poultrymeat

MAIN ASSUMPTIONS :

- poultry numbers: the minimum was reached in 1993 and a strong growth is now in evidence, benefiting from rationalisation, strong investment in efficient production facilities and some border protection.

Table 4.2.2-5. Poultrymeat forecast

		1989	1996	1997	1998 (f)	2000	2003
poultry numbers	Mio	51.7	51.7	56.3	58.5	60.9	64.6
total slaughters	Mio	260	329	308500	318000	335	355
average weight	kg	1.47	1.25	1.69	1.45	1.50	1.55
production	000 t	383	410	520	575	628	717
imports	000 t	0	45	66	70	80	80
exports	000 t	20	26	38	45	56	64
utilization	000 t	363	429	548	600	652	732
kg/capita	kg	9.6	11.0	14.0	15.3	16.5	18.3
selfsufficiency	%	106	96	95	96	96	98

Table 4.2.2-6. Forecast of balance sheet for the main meats

		1989	1996	1997	1998 (f)	2000	2003
production (*)	000 t	2980	2871	2736	3131	3231	3438
imports	000 t	119	115	120	134	144	144
exports	000 t	243	253	279	387	344	391
utilization	000 t	2889	2730	2582	2888	3031	3191
kg/capita	kg	76	71	67	75	80	83
o.w. beef	kg	17	11	11	11	11	11
o.w. pigmeat	kg	49	49	41	47	49	50
o.w. poultrymeat	kg	9.6	11.0	14.0	15.3	16.5	18.3
selfsufficiency	%	103	105	106	108	107	108

(*) sheep and goatmeat production and utilizations estimated at 1000 t in 2000 and 2003

- poultry production: this should increase from 520 000 t in 1997 to 717 000 t in 2003. + 4.55%/year from 1998.
- poultrymeat disappearance: should further increase due to increasing incomes and good demand. (+0.6kg/year from 1998) (table 4.2.2-5).

Under this scenario, poultrymeat production will be double the 1990 level (717 000 t compared with 352 000 t). Such is the strong demand, trade might still be negative.

4.2.2.6 Total meat consumption

Meat consumption should follow increasing food demand and income. Pigmeat remains by far the most preferred, as in other CEECs, but poultry is catching up fast due to convenience and comparatively low prices. Beef starts from a lower level and will only grow and benefit domestic producers if quality improves (table 4.2.2-6, figures 24, 25).

Figure 24. Animal production forecast ('000 t) 1989-2003

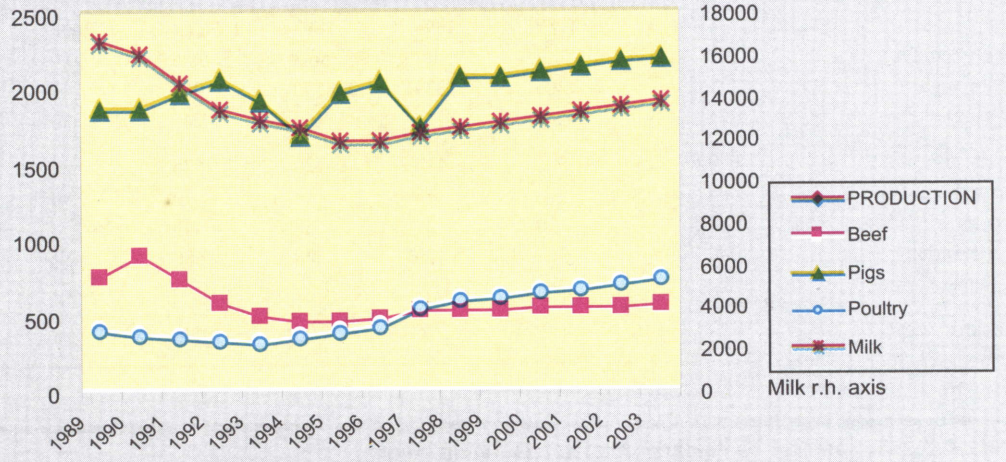
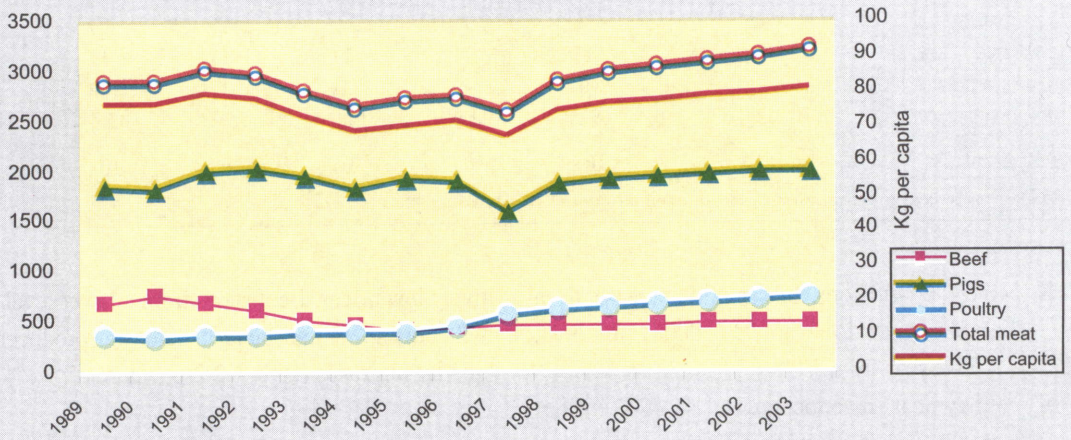


Figure 25. Meat production forecast ('000 t) 1989-2003



Annexes 1: Sources and abbreviations/glossary

Main sources used

1. Agricultural Property Agency of the State Treasury: Guide How to Invest in Polish Agriculture. Warsaw 1997
2. CEFTA Agreement with the additional protocols - legal state for 21.05.1998.
3. DGVI: Agricultural Situation and Prospects in the Central European Countries - Poland, (year 1995)
4. Duczkowska-Malysz, K. Development of rural areas report. MAFE, Warsaw. 1996
5. FAO Technical Co-operation Programme: Assistance in Preparing a Livestock Action Plan in Poland Main Report, vol. I Animal Production in Poland - A Sectorial Analysis. Warszawa 1998
6. FAPA, FAMMU, Ministry of Agriculture and Food Economy: Agriculture and food economy in Poland. Warsaw, September 1997
7. FAPA, FAMMU: Ocena sytuacji produkcyjno-ekonomicznej w rolnictwie w pierwszym kwartale 1998 roku (Assessment of the production and economic situation in agriculture in the first quarter of the year 1998) April 1998
8. FAPA, FAMMU: Polish international trade in agricultural and food products in 1996) Warsaw, May 1997
9. FAPA, FAMMU: Polski handel zagraniczny artykulami rolno-spozywczymi w 1997 roku (Polish international trade in agricultural and food products in the year 1997) Warsaw, May 1998
10. Foreign Trade Research Institute: Foreign economic policy of Poland 1996-1997. Warsaw 1997
11. Glowny Urzad Statystyczny (GUS): Maly rocznik statystyczny 1997 (Yearbook of statistics 1997 - small edition)
12. Glowny Urzad Statystyczny (GUS): Powszechny spis rolny. Aktywnosc ekonomiczna ludnosci zwiazanej z rolnictwem. (Agricultural census. Economic activity of population in agriculture) Warszawa 1997
13. Glowny Urzad Statystyczny (GUS): Powszechny spis rolny. Ludnosc zwiazana z rolnictwem (Agricultural census. Population connected with agriculture) Warszawa 1997
14. Glowny Urzad Statystyczny (GUS): Powszechny spis rolny. Raport z wynikow (Agricultural census. Summary report) Warszawa 1997
15. Glowny Urzad Statystyczny (GUS): Powszechny spis rolny. Zwierzeta gospodarskie. (Agricultural census. Livestock) Warszawa 1997
16. Glowny Urzad Statystyczny(GUS): Powszechny spis rolny. Przemiany agrarne (Agricultural census. Agricultural structure changes) Warszawa 1997
17. Glowny Urzad Statystyczny(GUS): Powszechny spis rolny. Uzytkowanie gruntow i powierzchnia zasiewow. (Agricultural census. Land use and sown area) Warszawa 1997
18. Glowny Urzad Statystyczny: Rocznik statystyczny 1996 (Yearbook of statistics 1996)
19. IERiGZ -Institute of Agricultural and Food Economics, Wyniki Rachunkowosci Rolnej Gospodarstw Indywidualych 1996 (Accounting Results of individual farms in 1996), 1997.
20. INRA Montpellier/Ministère de l'Agriculture, de la Pêche et de l'Alimentation, Structures et Performances de l'Agriculture polonaise, implications pour sa compétitivité européenne et l'adhésion à l'Union Européenne, Avril 1997.
21. Instytut Rozwoju Wsi i Rolnictwa PAN in co-operation with Dipartimento di Analisi Economica e Sociale del Territorio IUAV - Venice (Italy): Monitoring przestrzennego zroznicowania obszarow wiejskich w Polsce (monitoring of the spatial differentiation of the rural areas in Poland) Warszawa 1996.
22. MAFE. Reflections on an Agricultural Modernisation and Rural Development Strategy for

Poland in the Framework of EU Accession. Warsaw. 1998.

Market Reports prepared by Ministry of Agriculture, Agricultural Market Agency, Institute of the Economics of Agriculture and Food Economy in Poland:

23. Cereals Market - Situation and Prospects. November 1997;
24. Cereals Market - Situation and Prospects. June 1998;
25. Fodder Market - Situation and Prospects. April 1998;
26. Fruit and Vegetables Market - Situation and Prospects. November 1997;
27. International Trade in Agricultural and Food Products - Situation and Prospects. May 1998;
28. Market of Inputs and Services for Agriculture - Situation and Prospects. March 1998;
29. Meat Market - Situation and Prospects. April 1998;
30. Potatoes Market - Situation and Prospects. April 1998;
31. Poultry and Eggs Market - Situation and Prospects. May 1998;
32. Rapeseed Market - Situation and Prospects. June 1998.
33. Sugar Market - Situation and Prospects. May 1998;
34. Ministry of Agriculture and Food Economy: Rynek zboz, roslin oleistych i komponentow paszowych (market of cereals, oilseeds and feeding components) - bimonthly report. Warsaw 1.July 1998.
35. OECD. Creating rural indicators for shaping territorial policy. Paris. 1994
36. OECD. La situation et les politiques agro-environnementales en Pologne et en Hongrie. Paris 1998
37. OECD. Agricultural Policies in Non-OECD member Countries. Monitoring and evaluation 1998. Statistical annex. June 1998.
38. Polish Notifications to WTO
39. Polish Schedule of Commitments to WTO
40. Questionnaire Poland - Information requested for the preparation of the opinion (Avis) on the application for membership of the European Union - Replies. Chapter 2 Agriculture (Volume I). Warsaw 1998
41. S. Paszkowski, W. Poczta, F. Wysocki: Sytuacja strukturalna i produkcyjna rolnictwa polskiego na tle rolnictwa UE (Farm structure and production of Polish agriculture) Poznan, August 1997
42. Sugar Market - Situation and Prospects. October 1997;
43. The World Bank - M.L. Debatisse: Poland: Agriculture in transition - the technical paper. 30 April 1997
44. Translation of the final chapter "Podsumowanie" (Summary of census results) authorized by Wlodzimierz Dabkowski from the Report: Typology of farm system and its characteristics. Results of the 1996 Agricultural census. Poland. Prepared by GUS (pages 156-160)
45. Warsaw voice (weekly English news magazine) - various issues.

Glossary/abbreviations

ARMA	Agency for Restructuring and Modernisation of Agriculture (as well called ARMOR = Agencja Restructuryzacji i Modernizacji Rolnictwa)
ARR	Agencja Ryunku Rolnego (Agency for Agricultural Markets)
BGZ	Bank for Food Economy
CECs	Central European Countries
CEFTA	Central European Free Trade Agreement
CSE	Consumer Subsidy Equivalent
cwe	carcase weight equivalent (for supply balance sheet calculations)
EU	European Union
GAO	Gross Agricultural Output, value of sold production plus own producer consumption
GAP	Gross Agricultural Product, a measure of value added in agriculture (GAP=GAO-IC)
GDP	Gross Domestic Product
GUS	Glowny Urzad Statystyczny (Central Statistical Office)
IC	Intermediate Consumption, costs of inputs of materials and services used by agriculture
lw	live weight (in tables)
MAFE	(Polish) Ministry of Agriculture and Food Economy
NTB	Non-tariff barriers
o.w.	of which (in tables)
p.c.	per capita (consumption)
PSE	Producer Subsidy Equivalent
SAEPR	Sekcja Analiz Ekonomicznych Polityki Rolnej (Agricultural Policy Analysis Unit)
SMP	Skimmed Milk Powder
TAIEX	Technical Assistance Information Exchange Office of the European Commission
UAA	Utilised Agricultural Area
URA	Uruguay Round Agreement
Zl	Polish Zloty

Annex 2: Agricultural Agencies and Organisations

The three main government agencies that support the development of agricultural and the food economy under the central responsibility of the Ministry of Agriculture Food Economy are:

Agricultural Market Agency (ARR)

The Agency was established in 1990 primarily to stabilise commodity markets through state intervention. Nowadays its role has expanded to also include the protection of agricultural producers' income level. The Agency, subsidised by the State budget, operates through seven regional agricultural market agencies, focusing on three main markets i.e. cereals, milk and meat. The scope of the ARR intervention activities are defined in annual programmes which list the products to be covered by the Agency, a forecast of prices according to which intervention is to be conducted, as well as funding for intervention. Proposals are put forward by the ARR Council after analysing market prices and average production costs. The Government, however, takes the final decision. The intervention activities of the Agency are of a commercial rather than an administrative nature. They do not involve grants, subsidies or imposing production quotas and do not replace the market pricing mechanism, but rather support it.

Agricultural Property Agency of the State Treasury (APA/AWRSP)

APA was established in 1991, under the Law on Administration of the State Treasury's Agricultural Real Estate, which gave the property rights of the State's agricultural real estate and the responsibility for the administration, restructuring and privatisation of such property to the Agency. It exercises property rights over all the liquidated state agricultural enterprises and agricultural property transferred from the State Land Fund. Moreover, in compliance with regulations on farmers' social insurance, it purchases agricultural property from retiring farmers. APA, a trust organisation, has been managing the state farms or their assets mainly through: the sale of assets; leasing either to private legal entities or individuals in exchange for an agreed rent; transferring assets to a shareholding company; or establishing a management or administrative contract. The Agency operates from 15 regional branches throughout Poland. Since the very beginning of structural reform, the Agency has taken over 1666 state farms, therefore having an area of 4591.8 thousand hectares at its disposal. By the end of 1997, over 581.3 thousand hectares were sold; 2889.5 thousand hectares were taken on lease. A further 116.1 thousand hectares were allowed to be cultivated by ventures without any charge.

In its selection of the different forms of property disposal, the Agency takes into account demand for land among private farmers, the situation in the local labour market and the claims made by former owners. Since the establishment of the Agency till May 1997, about 4.5 million hectares of land has passed through the State Treasury Agricultural Property Stock, which includes all the former state farmland. Of this, the Agency has sold 513 thousand hectares and only 663.7 thousand hectares is left in the Property Stock.

Agriculture Restructuring and Modernisation Agency (ARiMR)

The Agency, which was established in 1994, financially supports the modernisation of Polish agriculture, through the improvement in production effi-

ciency, quality and competitiveness, and rural development. Financial help in the form of subsidies to investment and turnover credit interest is available to farms, agrifood processing businesses, firms providing services to agriculture as well as investors creating new non-farming jobs in rural areas. Credits subsidised by the Agency are executed through the intermediary of the bank, according to the bank procedures. A condition of obtaining a credit is a submission of a business plan, guaranteeing that the project undertaken will improve efficiency, quality and marketing.

Farmers Social Security Fund (KRUS)

The KRUS was set up under the act on Social Security of Farmers 20 December 1990. The Fund's responsibilities include:

Providing services to persons insured (and to beneficiaries), collecting contributions and the award and disbursement of benefits,

Action aimed at preventing occupational injuries and disease

Action in favour of persons insured (and of beneficiaries) who are unable for a long period of time to work on a farm, initiate and support the development of optional insurance.

There are two types of social security, pensions and insurance in case of accidents, sickness and maternity.

Financial resources of the KRUS are derived from farmers' Social Security contributions Fund from farmers' contributions;
Pension Fund subsidised by the budget,
Administrative fund,
Prevention and rehabilitation fund
Reserve Fund.

Annex 3: The veterinary sector in Poland

A very high animal health status and the protection of agri-food exports, by maintaining high technical and hygiene standards as laid down in the appropriate EU Directives, is the wish and the aim of Poland. The Polish veterinary services also aim to improve general food quality and product safety to protect Poland's own consumers.

The economic importance of agriculture is reflected by the fact that about 27% of all employment is in the agricultural sector. Poland is self-sufficient in most agricultural products; e.g. annual milk production is up to ~ 12 mio t., meat production is nearly 3.0 mio t. and about 450.000 t. of fish are landed annually.

The veterinary supervision of more than 0.9 mio livestock holdings for animal health, and the need to realise a stable-to-table monitoring concept, indicate the importance of creating a fully-functional veterinary sector in the pre-accession period.

In a functional analysis of the veterinary sector at least five sub-sectors are to be distinguished.

1. Veterinary Education and Training Sector

1.1 Four veterinary faculties (Lublin 1944, Warsaw 1842, Wroclaw 1945 and Olsztyn 1966) provide training for veterinary students, who qualify as veterinarians following a study period of 5.5 years (11 semesters). Remarkably, the number of veterinary students has doubled at all four faculties since 1989. A total of about 480 veterinary students are now admitted annually, representing about 0,0013% of the Polish population. This seems sufficient to cover the future needs of the veterinary profession in Poland.

1.2 All four faculties are interested in participating in the evaluation procedure by the European Association of Establishments for Veterinary Education (EAEVE) with regard to the application of the EU training schemes and teaching programmes. A preliminary visit to the Veterinary Faculty of Wroclaw was recently carried out, with satisfactory results.

1.3 Poland has established a veterinary specialisation committee, which has proposed postgraduate training programmes which will be introduced into the teaching programmes of all veterinary faculties. However, systematic postgraduate training was already established about 30 years ago. Since 1994, the former Postgraduate Training Centre for Veterinary Surgeons at the National Veterinary Research Institute in Pulawy switched to training veterinarians employed as state veterinary officials, in close co-operation with the State Veterinary Department. Within the new postgraduate training programmes, graduate veterinary surgeons can specialise in 17 fields of veterinary medicine. For state veterinary officials, specialisation is possible in the disciplines of epizootiology, food hygiene, feed hygiene and animal reproduction, as well as in laboratory techniques.

1.4 To continue professional development (CPD) courses are also held regularly by the regional veterinary chambers, the provincial veterinary inspectorates and the Polish Society of Veterinary Sciences. Various other courses are given by numerous other Polish veterinary associations on special veterinary subjects. This shows that CPD in Poland is very lively. It is supplemented by TAIEX seminars and activities and in-and out country training provided by TAIEX as well as various Phare projects, particularly on

the implementation and application of the EU veterinary acquis.

2. The State Veterinary Sector

2.1 The State Veterinary Administration is split into two levels. The central level, the Veterinary Department, is attached to the Ministry of Agriculture and Food Economy. The Department is headed by a director, who is also the Chief Veterinary Officer (CVO), and has 4 sections (animal health and pharmaceuticals, veterinary public health, organisation and methodology and the secretariat of the CVO). Both the CVO and the head of the National Veterinary Research Institute report to the Minister of Agriculture, but independently from each other. At regional level, however, there is a veterinary sanitary inspectorate in each of the 49 regional administrative bodies ("Voivodeships"). These come under the Ministry of Internal Affairs, with a budget from the Ministry of Finance. At local level, districts have been established as part of the Voivodeships. A total of 265 district veterinary offices have been installed here too.

2.2 Competence for the EU veterinary acquis lies with the Polish veterinary services. At central level, however, the Ministry of Health and Social Welfare has competence for veterinary public health concerning product requirements, placing products on the market and meat preparations. It appears that both central competent authorities are co-ordinating their activities carefully and co-operating closely together.

2.3 The State Veterinary Department, as the competent authority for drafting legislation and preparing the harmonisation of Polish legislation with the EU veterinary acquis, is working hard to meet its targets. Considerable progress has already been made. The Act of 24/04/97 on the control of infectious diseases, meat inspection and veterinary inspection is the basis for implementing national legislation harmonising with the EU veterinary acquis.

2.4 The second task of the State Veterinary Department is to co-ordinate the enforcement of the legislation, which is carried out and applied independently by the regional and district veterinary offices in the Voivodeships. The regional veterinary inspectorates have an animal health and a public health division and direct the district veterinary inspectorates at local level. They are also responsible for the operation of Border Inspection Posts (BIPs) and Regional Diagnostic Institutes. Obviously, not all Voivodeships have BIPs and Institutes. At present, there are 39 BIPs and about 21 regional institutes and 31 sub-regional laboratories. The number of BIPs will be reduced significantly following the accession of Poland and neighbouring Associated Countries to the EU. In future, there will be veterinary BIPs at 6 ports on the Baltic Sea, 5 at airports with international flights and some BIPs (road, rail) on the land borders with Belorussia, Ukraine and Russia (Kaliningrad).
Regarding the considerable independence of the Voivodeship inspectorates, doubts have been raised whether this really results in a harmonised and co-ordinated approach to control measures in the veterinary sector.

2.5 It seems justifiable to carry out detailed appraisals concerning the investment needed to upgrade regional diagnostic capacity and on BIPs, before any further expenditure is made. An observation has been made that the State Veterinary Department (15 official veterinarians) is seriously under-staffed. This does not appear to be the case at regional (246 official vets) or district level (1584 official veterinarians). In total, 2164 veterinarians and about 3000 technicians and auxiliaries are engaged in official veterinary inspection.

2.6 A computerised communication network linking all levels of the veterinary administration

does not exist at present, but the services are keen to install EU-IT systems, such as ADNS, ANIMO, SHIFT and InforVet, as soon as possible.

2.7 The animal health situation concerning OIE List A diseases is satisfactory, except for Classical Swine Fever in the wild boar population, where sero conversion can be observed and virus genome carriers can be found. The domestic cattle herd is free of Tuberculosis, Brucellosis and partly free of Enzootic Bovine Leucosis (only in 22 Voivodeships). Oral vaccination of the fox population against Rabies has been carried out since 1993 and it is hoped that the vaccination campaign can be extended to the whole of Poland. Other diseases such as Swine Vesicular Disease and Brucella Melitensis are monitored quite closely as well as Classical Swine Fever (CSF) in the domestic pig population. Disease monitoring and surveillance plans as well as contingency plans need to be elaborated, although programmes and instructions for practical work in the field exist. A major epidemiological factor in spreading diseases is swill feeding to pigs. However, there is no Polish legislation covering this important matter.

2.8 Animal welfare rules have a long history in Poland, going back to 1928. However, a new animal welfare act has been drafted and the application of EU standards on keeping calves, pigs, laying hens and laboratory animals, as well as on the transport and slaughter of animals, is pending implementation of the draft.

2.9 Veterinary public health rules also have a long history, for example the act on animals and meat slaughtered for human consumption in 1927. However, all this needs to be adjusted to the EU acquis, and EU standards adopted on meat, milk, fish, eggs and all other products of animal origin for human consumption. The introduction of control point/HACCP concepts has already started and the Polish residue monitoring and sampling plan was approved by the EU. With the adoption of the EU Directive on zoonosis control, appropriate control plans will be elaborated.

3. The Private Veterinary Sector

3.1 Alongside the economic and social changes in Poland, the process of veterinary privatisation has taken place. For nearly forty years (1949-1989) private veterinary practice did not exist. All veterinary activities during that period were operated by the State within a uniform structure. However, a free veterinary profession was re-established in 1990 and a veterinary chamber system created. Over 7000 former state-employed vets resigned, became private country veterinary practitioners or found jobs in the pharmaceutical industry or different branches of animal production. Private practitioners were helped financially in various ways to continue operating the former state veterinary clinics. But this did not work in every case, and a few vets could not earn money practising veterinary surgery. Another way of solving income problems was by the State contracting private vets to carry out official veterinary meat inspection tasks or animal health surveillance activities. The private veterinary practitioner is generally involved in the notification of infectious diseases, being the first contact in line with diseased animals.

3.2 The Chamber of Veterinarians has managed the professional activities of private veterinary practitioners since 1990 and co-operates with the State Veterinary Service and the Society of Veterinary Science in the field of training and research. The National Chamber, with 4 elected bodies, is the umbrella organisation for 16 regional Chambers. All vets in practice, state inspection, veterinary education, training and research, as well as in the pharmaceutical sector, are obliged to be members of the Chamber.

The Chamber is a professional regulatory body and its budget is based on membership fees. With about 9635 members, the Chamber has become an observer member to the Federation of Veterinarians of Europe (FVE).

4. Livestock Sector

4.1 Cattle and breeding pigs are ear-tagged, registered to their herds and certified by local administrative authorities before they are moved or transferred from their premises. Health certificates are required if the animals, including poultry, move between regions. However, the administration of records and certificates without a database or the help of a computerised system is a huge problem when more than 900.000 small livestock holders are involved. The existing system should be analysed with regard to EU requirements on animal identification, registration and movement control.

The national livestock herd comprises 7.4 mio cattle, 19 mio pigs, 0.5 mio sheep and goats and 0.5 mio horses.

4.2 An animal health trust fund is held by the Ministry of Agriculture and funded by a levy on animals slaughtered.

4.3 Another important aspect concerning livestock, and in particular the dairy sector, is the adaptation of the small scale/backyard holdings to meet EU standards. At present it appears to be very difficult for these holdings to comply with hygiene standards and the standards for raw milk.

5. Sectors of Industry under Veterinary Legislation

5.1 The permanent maintenance and upgrading of the agri-food sector to keep or reach the corresponding EU technical and hygiene standards adequately is a target which has to be taken very seriously, not only in the meat sector but also for milk, fish, eggs and other products of animal origin or products for animals, like pharmaceuticals, biological products and feed. The introduction of control point/HACCP concepts as well as the application of good laboratory/good manufacturing practices has just started and needs to be taken further by the industries, as new specific training is being provided through a national Phare project.

5.2 However, at present 105 meat plants (red, white and game meat) are listed as EU approved, whereas the approval of 98 dairy plants had not been renewed by the deadline of 30/11/97. In addition, two cattle AI centres are listed, but no other establishments from any of the industries subject to veterinary legislation are approved at the moment. There is no doubt that substantial investment will be needed to prepare the agri-food industries dealing with fish, milk, eggs, etc. for the internal market.

6. Conclusion

Poland has given the veterinary part of the Community agricultural acquis priority and is working intensively to catch up with EU requirements in the veterinary sector, both in approximation and in application and enforcement. Considerable progress has been made but much still remains to be made. Nevertheless, investment in restructuring and upgrading the agri-food industry to make it competitive, and to comply with EU standards, will have an important impact on the development of agriculture in general.

Annex 4: PHARE assistance to Polish agriculture[24]

Phare supports the Government's policy and provides funding for adoption and implementation of the acquis communautaire and rural development. It identifies the following as priorities:

- establishment of a coherent structural and rural development policy to deal with the problem of Poland's agricultural structure;
- implementation and enforcement of veterinary and phytosanitary requirements and upgrading of establishments to meet EC standards; this is particularly important with regard to the inspection and control arrangements for protecting the EU external borders;
- strengthening of the administrative structures to ensure the necessary capacity to implement and enforce the policy instruments of the CAP;
- further restructuring of the agro-food sector to improve its competitive capacity.

Phare assists the Ministry in the adoption and implementation of the acquis communautaire, taking into account the EU's White Paper. More importantly, Phare also assists in the restructuring and modernisation of the services in the field of food quality control and testing, standardisation, veterinary and phyto-sanitary inspection of agro-food products in view of EU requirements. Support is also provided for policy advice and staff training of the Ministry for restructuring and strengthening of the agricultural education, research and extension system. As regards rural development, Phare supports the development of the land market to accelerate land consolidation and land cadastre. Phare also supports the development of wholesale markets, to improve distribution channels. Agricultural professional organisations will be supported, including the development of a market information system. Phare is helping the Ministry to initiate an investment facility directed towards rural co-operatives and the diversification of economic activities in rural areas.

Since 1990, Phare provided 208 million ECU for agricultural reform in Poland. Major projects were:

Supply Programmes (feed and pesticides)	70 MECU
• Agricultural Credit Line	30 MECU
• Aerial Photography	5 MECU
• Transformation of Rural Co-operative	15 MECU
• Reform of Rural Co-operative Banks	12 MECU
• State Farms Privatisation	7 MECU
• Extension services training	7 MECU
• Policy Support	7 MECU
• Modernisation of Marketing and Investment	3 MECU
• Rural Infrastructure Water Supply	4 MECU
• Implementation agricultural acquis	17 MECU
• Rural development	7 MECU
• Legal approximation	8 MECU

Examples of Phare activity

Phare assistance for agricultural restructuring has concentrated on the transformation of rural co-operatives in co-ordination with the World Bank. In rural banking, Phare financed training of Polish bank staff, advisers and auditors for the co-operative banking structure and provided policy advise to the Government on the restructuring of the co-operative banking system, again together with the World Bank. Phare was instrumental to the creation of the National Union of Co-operative Banks and the creation of 3 Regional Co-operative Banks.

The programme on extension services helped rural development staff and farmer committees in the rural sector via financing of pilot projects. The programme on state farm privatisation assisted the

[24] Prepared with the aid of DGIA.

Agricultural Property Agency in the restructuring and privatisation of state farms. A pilot capital fund was set up to help ex-state farm employees to establish their own farm business in selected regions of Poland, thereby privatising state farm assets.

Phare is assisting the Ministry in terms of policy formulation and integration issues and is financing a number of projects concerning commodity trade, quality management in the dairy sector, land consolidation, interprofessional organisations, etc.

The rural infrastructure component is a pilot programme to reduce farm water pollution. The agricultural credit line, via co-operative banks, provides long-term credit of up to 12 years to farmers and food processors. It has provided over 1,000 small loans so far. An aerial photography campaign is currently ongoing to improve land use planning and the land registration system.

Phare activities in the future

As this country report was in the process of being finalised, preparations were underway for programming the 1998 PHARE activities.

The Phare programme is the main financial instrument of the reinforced pre-accession strategy as it was set out in the Agenda 2000. The Phare assistance focuses on the adoption of the Community acquis in particular on the priorities identified in the Accession Partnership and in the National Programme for the Adoption of the acquis.

On the basis of the Accession Partnership, the short and medium priorities and intermediate objectives for agriculture include reinforcement of phytosanitary and veterinary administrations, particularly as regards facilities at external borders, setting up of structures needed for regional and structural policy, alignment with the agricultural acquis, attention to environmental aspects of agriculture and biodiversity.

Furthermore, they include development of the capacity to implement and enforce the CAP, in particular the fundamental management mechanisms and administrative structures to monitor the agricultural markets and implement structural and rural development measures, adoption and implementation of the veterinary and phytosanitary requirements, upgrading of certain food processing establishments and testing and diagnostic facilities and restructuring of the agri-food sector.

European Commission

Poland - Agricultural Situation and Prospects in the Central and Eastern European Countries

Luxembourg: Office for Official Publications of the European Communities

1998 — 122 p., 25 figures, 28 maps — 21,0 x 29,7 cm

ISBN 92-828-3699-1

Venta • Salg • Verkauf • Πωλήσεις • Sales • Vente • Vendita • Verkoop • Venda • Myynti • Försäljning

BELGIQUE/BELGIË

Jean De Lannoy
Avenue du Roi 202/Koningslaan 202
B-1190 Bruxelles/Brussel
Tél. (32-2) 538 43 08
Fax (32-2) 538 08 41
E-mail: jean.de.lannoy@infoboard.be
URL: http://www.jean-de-lannoy.be

La librairie européenne/De Europese Boekhandel
Rue de la Loi 244/Wetstraat 244
B-1040 Bruxelles/Brussel
Tél. (32-2) 295 26 39
Fax (32-2) 735 08 60
E-mail: mail@libeurop.be
URL: http://www.libeurop.be

Moniteur belge/Belgisch Staatsblad
Rue de Louvain 40-42/Leuvenseweg 40-42
B-1000 Bruxelles/Brussel
Tél. (32-2) 552 22 11
Fax (32-2) 511 01 84

DANMARK

J. H. Schultz Information A/S
Herstedvang 10-12
DK-2620 Albertslund
Tlf. (45) 43 63 23 00
Fax (45) 43 63 19 69
E-mail: schultz@schultz.dk
URL: http://www.schultz.dk

DEUTSCHLAND

Bundesanzeiger Verlag GmbH
Vertriebsabteilung
Amsterdamer Straße 192
D-50735 Köln
Tel. (49-221) 97 66 80
Fax (49-221) 97 66 82 78
E-Mail: vertrieb@bundesanzeiger.de
URL: http://www.bundesanzeiger.de

Nur für Veröffentlichungen des Gerichtshofes

Carl Heymanns Verlag KG
Luxemburger Strasse 449
D-50939 Köln
Tel. (49-221) 94 373-0
Fax (49-221) 94 373-901

ΕΛΛΑΔΑ/GREECE

G. C. Eleftheroudakis SA
International Bookstore
Panepistimiou 17
GR-10564 Athina
Tel. (30-1) 331 41 80/1/2/3/4/5
Fax (30-1) 323 98 21
E-mail: elebooks@netor.gr

ESPAÑA

Boletín Oficial del Estado
Trafalgar, 27
E-28071 Madrid
Tel. (34) 915 38 21 11 (Libros)/
913 84 17 15 (Suscripciones)
Fax (34) 915 38 21 21 (Libros)/
913 84 17 14 (Suscripciones)
E-mail: clientes@com.boe.es
URL: http://www.boe.es

Mundi Prensa Libros, SA
Castelló, 37
E-28001 Madrid
Tel. (34) 914 36 37 00
Fax (34) 915 75 39 98
E-mail: libreria@mundiprensa.es
URL: http://www.mundiprensa.com

FRANCE

Journal officiel
Service des publications des CE
26, rue Desaix
F-75727 Paris Cedex 15
Tél. (33) 140 58 77 31
Fax (33) 140 58 77 00

IRELAND

Government Supplies Agency
Publications Section
4-5 Harcourt Road
Dublin 2
Tel. (353-1) 661 31 11
Fax (353-1) 475 27 60

ITALIA

Licosa SpA
Via Duca di Calabria, 1/1
Casella postale 552
I-50125 Firenze
Tel. (39-55) 64 54 15
Fax (39-55) 64 12 57
E-mail: licosa@ftbcc.it
URL: http://www.ftbcc.it/licosa

LUXEMBOURG

Messageries du livre SARL
5, rue Raiffeisen
L-2411 Luxembourg
Tél. (352) 40 10 20
Fax (352) 49 06 61
E-mail: mdl@pt.lu
URL: http://www.mdl.lu

Abonnements:

Messageries Paul Kraus
11, rue Christophe Plantin
L-2339 Luxembourg
Tél. (352) 49 98 88-8
Fax (352) 49 98 88-444
E-mail: mpk@pt.lu
URL: http://www.mpk.lu

NEDERLAND

SDU Servicecentrum Uitgevers
Christoffel Plantijnstraat 2
Postbus 20014
2500 EA Den Haag
Tel. (31-70) 378 98 80
Fax (31-70) 378 97 83
E-mail: sdu@sdu.nl
URL: http://www.sdu.nl

ÖSTERREICH

Manz'sche Verlags- und Universitätsbuchhandlung GmbH
Kohlmarkt 16
A-1014 Wien
Tel. (43-1) 53 16 11 00
Fax (43-1) 53 16 11 67
E-Mail: bestellen@manz.co.at
URL: http://www.austria.EU.net:81/manz

PORTUGAL

Distribuidora de Livros Bertrand Ld.ª
Grupo Bertrand, SA
Rua das Terras dos Vales, 4-A
Apartado 60037
P-2700 Amadora
Tel. (351-2) 495 90 50
Fax (351-2) 496 02 55

Imprensa Nacional-Casa da Moeda, EP
Rua Marquês Sá da Bandeira, 16-A
P-1050 Lisboa Codex
Tel. (351-1) 353 03 99
Fax (351-1) 353 02 94
E-mail: del.incm@mail.telepac.pt
URL: http://www.incm.pt

SUOMI/FINLAND

Akateeminen Kirjakauppa/Akademiska Bokhandeln
Keskuskatu 1/Centralgatan 1
PL/PB 128
FIN-00101 Helsinki/Helsingfors
P./tfn (358-9) 121 44 18
F./fax (358-9) 121 44 35
Sähköposti: akatilaus@stockmann.fi
URL: http://www.akateeminen.com

SVERIGE

BTJ AB
Traktorvägen 11
S-221 82 Lund
Tfn. (46-46) 18 00 00
Fax (46-46) 30 79 47
E-post: btjeu-pub@btj.se
URL: http://www.btj.se

UNITED KINGDOM

The Stationery Office Ltd
International Sales Agency
51 Nine Elms Lane
London SW8 5DR
Tel. (44-171) 873 90 90
Fax (44-171) 873 84 63
E-mail: ipaenquiries@theso.co.uk
URL: http://www.the-stationery-office.co.uk

ÍSLAND

Bokabud Larusar Blöndal
Skólavördustig, 2
IS-101 Reykjavik
Tel. (354) 551 56 50
Fax (354) 552 55 60

NORGE

Swets Norge AS
Østenjoveien 18
Boks 6512 Etterstad
N-0606 Oslo
Tel. (47-22) 97 45 00
Fax (47-22) 97 45 45

SCHWEIZ/SUISSE/SVIZZERA

Euro Info Center Schweiz
c/o OSEC
Stampfenbachstraße 85
PF 492
CH-8035 Zürich
Tel. (41-1) 365 53 15
Fax (41-1) 365 54 11
E-mail: eics@osec.ch
URL: http://www.osec.ch/eics

BĂLGARIJA

Europress Euromedia Ltd
59, blvd Vitosha
BG-1000 Sofia
Tel. (359-2) 980 37 66
Fax (359-2) 980 42 30
E-mail: Milena@mbox.cit.bg

ČESKÁ REPUBLIKA

ÚSIS
NIS-prodejna
Havelkova 22
CZ-130 00 Praha 3
Tel. (420-2) 24 23 14 86
Fax (420-2) 24 23 11 14
E-mail: nkposp@dec.nis.cz
URL: http://www.nis.cz

CYPRUS

Cyprus Chamber of Commerce and Industry
PO Box 1455
CY-1509 Nicosia
Tel. (357-2) 66 95 00
Fax (357-2) 66 10 44
E-mail: info@ccci.org.cy

EESTI

Eesti Kaubandus-Tööstuskoda (Estonian Chamber of Commerce and Industry)
Toom-Kooli 17
EE-0001 Tallinn
Tel. (372) 646 02 44
Fax (372) 646 02 45
E-mail: einfo@koda.ee
URL: http://www.koda.ee

MAGYARORSZÁG

Euro Info Service
Európa Ház
Margitsziget
PO Box 475
H-1396 Budapest 62
Tel. (36-1) 350 80 25
Fax (36-1) 350 90 32
E-mail: euroinfo@mail.matav.hu
URL: http://www.euroinfo.hu/index.htm

MALTA

Miller Distributors Ltd
Malta International Airport
PO Box 25
Luqa LQA 05
Tel. (356) 66 44 88
Fax (356) 67 67 99
E-mail: gwirth@usa.net

POLSKA

Ars Polona
Krakowskie Przedmiescie 7
Skr. pocztowa 1001
PL-00-950 Warszawa
Tel. (48-22) 826 12 01
Fax (48-22) 826 62 40
E-mail: ars_pol@bevy.hsn.com.pl

ROMÂNIA

Euromedia
Str. G-ral Berthelot Nr 41
RO-70749 Bucuresti
Tel. (40-1) 315 44 03
Fax (40-1) 315 44 03

SLOVAKIA

Centrum VTI SR
Nám. Slobody, 19
SK-81223 Bratislava
Tel. (421-7) 531 83 64
Fax (421-7) 531 83 64
E-mail: europ@tbbl.sltk.stuba.sk
URL: http://www.sltk.stuba.sk

SLOVENIA

Gospodarski Vestnik
Dunajska cesta 5
SLO-1000 Ljubljana
Tel. (386) 611 33 03 54
Fax (386) 611 33 91 28
E-mail: repansekj@gvestnik.si
URL: http://www.gvestnik.si

TÜRKIYE

Dünya Infotel AS
100, Yil Mahallessi 34440
TR-80050 Bagcilar-Istanbul
Tel. (90-212) 629 46 89
Fax (90-212) 629 46 27

AUSTRALIA

Hunter Publications
PO Box 404
3067 Abbotsford, Victoria
Tel. (61-3) 94 17 53 61
Fax (61-3) 94 19 71 54
E-mail: jpdavies@ozemail.com.au

CANADA

Renouf Publishing Co. Ltd
5369 Chemin Canotek Road Unit 1
K1J 9J3 Ottawa, Ontario
Tel. (1-613) 745 26 65
Fax (1-613) 745 76 60
E-mail: order.dept@renoufbooks.com
URL: http://www.renoufbooks.com

EGYPT

The Middle East Observer
41 Sherif Street
Cairo
Tel. (20-2) 393 97 32
Fax (20-2) 393 97 32

HRVATSKA

Mediatrade Ltd
Pavla Hatza 1
HR-10000 Zagreb
Tel. (385-1) 43 03 92
Fax (385-1) 43 03 92

INDIA

EBIC India
3rd Floor, Y. B. Chavan Centre
Gen. J. Bhosale Marg.
400 021 Mumbai
Tel. (91-22) 282 60 64
Fax (91-22) 285 45 64
E-mail: ebic@giasbm01.vsnl.net.in
URL: http://www.ebicindia.com

ISRAËL

ROY International
PO Box 13056
61130 Tel Aviv
Tel. (972-3) 546 14 23
Fax (972-3) 546 14 42
E-mail: royil@netvision.net.il

Sub-agent for the Palestinian Authority:

Index Information Services
PO Box 19502
Jerusalem
Tel. (972-2) 627 16 34
Fax (972-2) 627 12 19

JAPAN

PSI-Japan
Asahi Sanbancho Plaza #206
7-1 Sanbancho, Chiyoda-ku
Tokyo 102
Tel. (81-3) 32 34 69 21
Fax (81-3) 32 34 69 15
E-mail: books@psi-japan.co.jp
URL: http://www.psi-japan.com

MALAYSIA

EBIC Malaysia
Level 7, Wisma Hong Leong
18 Jalan Perak
50450 Kuala Lumpur
Tel. (60-3) 262 62 98
Fax (60-3) 262 61 98
E-mail: ebic-kl@mol.net.my

PHILIPPINES

EBIC Philippines
19th Floor, PS Bank Tower
Sen. Gil J. Puyat Ave. cor. Tindalo St.
Makati City
Metro Manilla
Tel. (63-2) 759 66 80
Fax (63-2) 759 66 90
E-mail: eccpcom@globe.com.ph
URL: http://www.eccp.com

RUSSIA

CCEC
60-letiya Oktyabrya Av. 9
117312 Moscow
Tel. (70-95) 135 52 27
Fax (70-95) 135 52 27

SOUTH AFRICA

Safto
Safto House
NO 5 Esterhyzen Street
PO Box 782 706
2146 Sandton
Tel. (27-11) 883 37 37
Fax (27-11) 883 65 69
E-mail: emalstar@ide.co.za
URL: http:/www.safto.co.za

SOUTH KOREA

Information Centre for Europe (ICE)
204 Woo Sol Parktel
395-185 Seogyo Dong, Mapo Ku
121-210 Seoul
Tel. (82-2) 322 53 03
Fax (82-2) 322 53 14
E-mail: euroinfo@shinbiro.com

THAILAND

EBIC Thailand
29 Vanissa Building, 8th Floor
Soi Chidlom
Ploenchit
10330 Bangkok
Tel. (66-2) 655 06 27
Fax (66-2) 655 06 28
E-mail: ebicbkk@ksc15.th.com
URL: http:/www.ebicbkk.org

UNITED STATES OF AMERICA

Bernan Associates
4611-F Assembly Drive
Lanham MD20706
Tel. (1-800) 274 44 47 (toll free telephone)
Fax (1-800) 865 34 50 (toll free fax)
E-mail: query@bernan.com
URL: http://www.bernan.com

ANDERE LANDER/OTHER COUNTRIES/ AUTRES PAYS

Bitte wenden Sie sich an ein Büro Ihrer Wahl / Please contact the sales office of your choice / Veuillez vous adresser au bureau de vente de votre choix

03 11 CH-86-98-007-EN-C

European Commission
Directorate-General for Agriculture (DG VI)

The present report forms part of a series on Central and Eastern European countries published by the Directorate-General for Agriculture at the European Commission.

The country reports aim to provide an analysis of the current situation and the medium-term outlook for the agricultural and agro-food sectors in the accession candidate countries.

ISBN 92-828-3699-1

Office for Official Publications of the European Communities
L - 2985 Luxembourg