

EU Subsidies Have Led to a Significant Increase in Pesticide Use and Crop Productivity in Poland

International Pesticide Benefits Case Study No. 49, December 2011

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In the 1990s, Poland transitioned from a centrally planned to a market economy. One change was the removal of government subsidies for the purchase of pesticides, resulting in a sharp increase in the price of pesticides (10-20 fold) followed by a 60% decline in the volume of pesticide use [1]. Consequently, the volume of agricultural production in Poland declined by 5% over the period 1990-92 to 2002-04 [2].

In 2003 Poland voted to join the European Union (EU). However, Polish farmers were concerned that they would not be able to compete with other EU member countries because of low productivity — cereal yields in Poland were 50% lower than the EU average. Low pesticide use in Poland was cited as one of the major factors accounting for lower yields; the use of pesticides in Poland on an average per acre basis in the 1990s was about 67% lower than the average in the EU [3].

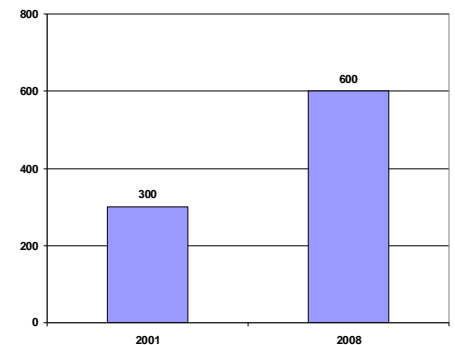
During Poland's preparation for EU membership, Polish agriculture benefitted from EU funds allocated under pre-accession policies. Total annual budgetary support to Polish agriculture was almost €2.5 billion for 2005, of which around 47% was nationally financed, the remainder coming from EU funding [2]. These funds from the EU were aimed at bringing agricultural practices in Poland in line with those of other EU countries.

In the first five years of accession, Polish farmers received over €10 billion from the EU and the Polish budget. As a result, farmers had more funds to buy pesticides and greater opportunities to sell their crops. This led to an increased demand for pesticides. In this way, accession to the EU influenced an upward swing in pesticide usage in Poland [3]. Sales of pesticides in terms of volume were almost three times higher in 2008 than in 2003 [3]. Crop protection pesticide sales were about \$300 million in 2001 and increased to \$600 million in 2008.

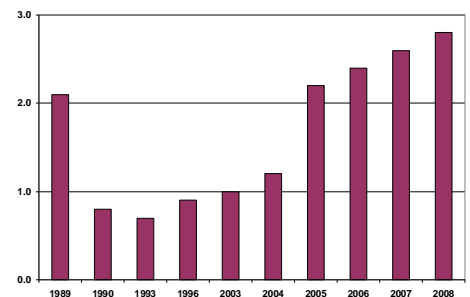
The increase in pesticide use has contributed to increased crop yields [2]. Cereal yield in Poland increased by 13% while the total volume of fruit harvested increased by 50% between 2001 and 2008 [4]. Within 5 years of membership in the EU, the export of agri-food products from Poland increased from €4.0 billion to €11.3 billion, whereas imports increased from €3.6 billion to €9.8 billion, with the surplus increasing from €0.4 billion to €1.5 billion [5].

References

1. Adamczewski, K., G Skrzypczak, Z. Woznica and A. Blecharczyk. 1998. The situation and outlook for inputs of plant protection products and weed control in Polish agriculture. *EPPO Bulletin*. 28:135-139.
2. OECD. 2008. *Environmental Performance of Agriculture in OECD Countries Since 1990: Poland Country Section*. Paris, France.
3. Matyjaszczyk, E. 2011. Selected aspects of plant protection in Poland, five years on from EU accession. *Outlook on Agriculture*. 40(2): 119-123.
4. Ministry of Agriculture and Rural Development. 2009. *Agriculture and Food Economy in Poland*. Warsaw, Poland.
5. Kowalski, A., M. Wigier, P. Chmieliński. 2010. Adjustment of Poland's agriculture and food sector to challenges of agricultural policy of the European Union. *Applied Studies in Agribusiness and Commerce*. 4:39-44.



Crop Protection Product Sales
(Million \$): Poland
Source: Phillips McDougal



Volume Sales of Crop Protection
Products (2003 = 1): Poland