



Pesticide Use in the Slovak Republic



Pesticide use, issues and how to promote sustainable agriculture in Slovakia

PAN Germany is part of an international network of more than 600 citizens groups working to oppose the misuse of pesticides and to promote sustainable agriculture and ecologically sound pest management. PAN Germany provides information on pesticide risks and campaigns for Alternatives.

CEPA – Centre for Environmental Public Advocacy is a Slovak NGO, promoting sustainability by focusing on transparent and good usage of public (also European) finances. CEPA warns of their improper use and offers sustainable alternatives (e.g. – agriculture, energy, rural development). CEPA is a member of Friends of the Earth and CEE Bankwatch network.

**Fact Sheet
2004**

Slovak Agriculture

The Slovak Republic or Slovakia (SR) has been a member state of the EU since May 1st. It is a small country with 5,379 mil. inhabitants. Basic statistics show that Slovakia covers a total area of 49 035 km², of which 49,9% is accounted for agricultural land. According to the OECD and EUROSTAT statistics, Slovakia is characterized as a rural country. About 48% of the population live in rural areas, 40% in transitive areas and only 12% in urban areas.¹

In 2002 agriculture accounted for 4,1% of the Gross Domestic Product, while in 1995 it accounted for 5% and in 1990 for 8%.² The employment rate in agriculture also declined noticeably from 12% in 1990 to 7% in 2001 (total loss of jobs: approx. 106.000). Compared to the average income in the SR, incomes within the agricultural sector are 26,3% lower.³

The farming structure is dominated by large corporate farms. In 2001 corporate entities cultivated 90% of the agricultural land, with an average size of 1241 ha. In the same year, small holdings (average size 39,2 ha) cultivated just 10% of agricultural land.⁴ 2.44 million ha of agricultural land were registered in the year 2002. Regarding the total acreage of agricultural land, arable land covers 58,78%, fol-

lowed by meadows and pasture land (36,17%).⁵ On the one hand, one can constitute an increasing cultivation of cereals (the most important crop), oil-



seeds and vegetables and on the other hand, a decreasing cultivation of forage plants, potatoes, maize and leguminous plants.⁶

Ecological agriculture in Slovakia is not developed very well - in 2002 only 11 eco-corporate entities and 65 eco-farmers cultivated 47576 ha (2% of total agricultural land).⁷

Figure 1 shows the development the eco-farming sector has experienced over the last years. Referring to Mr.

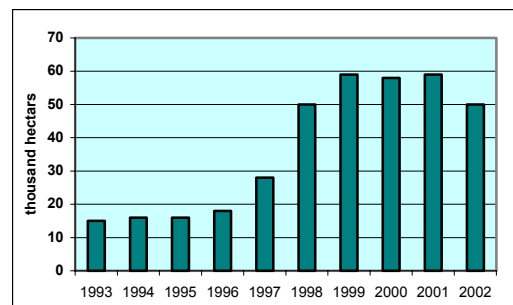


Figure 1: Ecological farming in Slovakia

Source: Ministry for Environmental Protection (2004): Report on the state of the environment in 2003

¹ Ministry of Agriculture (2004): Sector operational program – Agriculture and Rural Development!
² Ministry for Environmental Protection (2004): Report on the state of the Environment in 2003
³ Ibidem
⁴ Ministry of Agriculture (2003): Green report 2002

⁵ Ibidem
⁶ Ministry of Agriculture (2004)
⁷ Ministry for Environmental Protection (2004)

Dusan Janovicsek, director of the Slovak ecological farmers association *Ekotrend*, more than 90% of organic products are exported.⁸

Pesticide Use

Farmers with holdings over 10 ha are required to report pesticide use data. 3995 tons of pesticide products were applied in the SR in 2002 (2118,6 t of herbicides; 660 t of fungicides; 279 t of insecticides; 938 t of others).⁹ Compared to 2001 this meant an increase of 17%. The 10-year history of pesticides use can be seen in

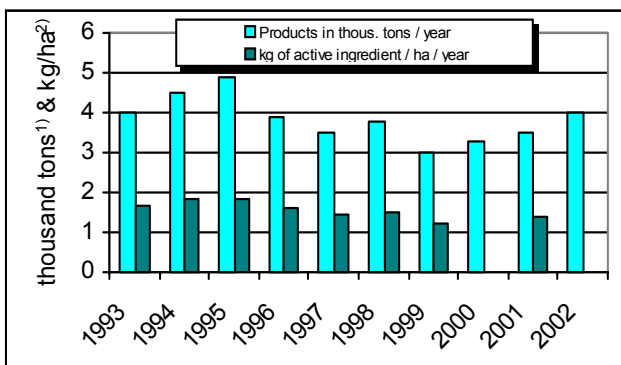


Figure 2: Pesticide use in Slovakia

Source: 1) Ministry for Environmental Protection (2004): Report on the state of the environment in 2003;
2) 1. GFA Terra/Avalon (2003): Inventory of Agricultural Pesticides Use in the Danube River Basin Countries. Draft Report, UNDP/GEF Danube Regional Project: „Policies for the control of agricultural point and non-point sources of pollution, and “Pilot project on agricultural pollution reduction, (Project Outputs 1.2 and 1.3), unpublished, Hamburg

Figure 2. The intensity of pesticide use is also presented in Figure 2, about 1,5 kg active ingredients/ha pesticide were applied on average. After the EU accession an increased use of agrochemicals is expected because farmers are now subsidized by the EU.

Registration, authorisation and usage control of pesticides

The Central Inspection and Testing Institute for Agriculture (UKSÚP), namely the Department for Plant Protection, is responsible for the

⁸⁾ Janoviček, D (2003): Interview on ecological agriculture in Slovakia, *Ekotrend*, August 2003

⁹⁾ Ministry for environmental protection (2004): Report to the state of environment

¹⁰⁾ Ministry of Agriculture (2004): Official publication num. 67; part 14 - Register of plant protection products

¹¹⁾ Uhnak J, Szokolay A, (2003): Analyze of the monitoring and control system of pesticides residuals in fruit and vegetables in SR, published by Greenpeace Slovakia

national registration and the authorisation process of pesticides. The list of authorized products published in the official publication of the Ministry of Agriculture. Since 2001 the number of registered pesticide products has more or less stabilized to 600 and the number of active ingredients to 300.¹⁰

Pesticide residues in food and environment

Pesticides residues (PRs) in food are controlled by the State veterinary and food administration, especially by the Department for Plant Products and Department for Animal Products.

There are two sources of information on pesticide incidences in food: the regular monitoring scheme, based upon a representative „food basket“, and secondly, the official control of domestic and imported food and feedstuffs. In 2003, the official food and feedstuff control detected 54 different kinds of pesticides in 13,165 domestic samples and 62 different pesticides were detected in 7,734 imported product samples. In 16 cases residues exceeded the maximum residue limit, MRL (Table 1).

The official monitoring from 2002 analysed 39 different pesticides and the residues did not exceed their MRLs. However, these results are not representative, because at the same time there were about 300 different pesticides authorized.¹¹

Pesticides residues in water are regularly controlled by the Slovak Hydrometeorological Institute (SHMU), Departments for Groundwater and Department for Surface Water Quality. Concerning ground water, PRs have been

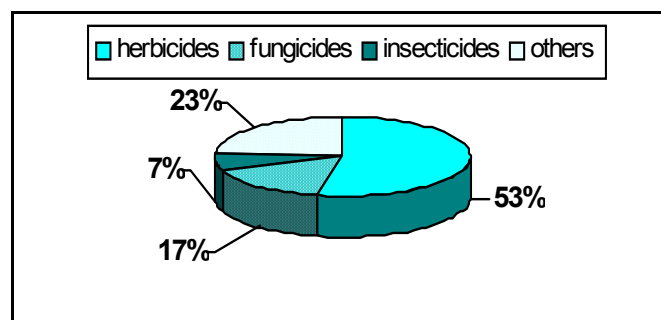


Figure 3: Authorized pesticide products in Slovakia, 2002

Source: Ministry for Environmental Protection (2004): Report on the state of the environment in 2003

Table 1: Pesticide residues measured in domestic and imported food 2003*

Pesticide residues	N	< MRL	% MRL	> MRL	% MRL	
						domestic products
Bromadiolon	1	0	0	1	100	Meat products
Cypermethrin	400	3	0,8	1	0,3	Cerals and oil prod.
Fenvalerate	304	0	0	2	0,7	other food
Chlordane	401	6	1,5	7	1,7	fruits and fr.products
all samples	13165	761	5,8	11	0,08	
						imported products
Beta HCH	549	4	0,7	1	0,2	milk and m. products
Cypermethrin	158	2	1,3	1	0,6	other food
Endosulfan	146	2	1,4	1	0,7	other food
Orto-fenylfenol	38	8	21,1	1	2,6	fruits and fr.products
Procy-midone	162	4	2,5	1	0,6	other food
all samples	7734	311	4,0	5	1,6	

N = number of analysed samples,
 < MRL = findings over analysing set sensitivity,
 >MRL = findings over maximum residue limit (MRL)

Number of all analysed pesticides: 54 in domestic products, 62 in imported products

Source: Salgovicova et al. (2003): "Monitoring of food and feed contaminants, 2002 Report", VUP Report, May 2003

analysed since 1982 twice a year and since 1997 only once a year (for financial reasons). In 1997 only 9 different pesticides were found in groundwater-samples, in 2003 this number had already risen to 37¹². Surface water is controlled by the SHMU regularly - within the "National monitoring of water quality in Slovakia", but also via "Controls of water quality" - randomly by SHMU or indicatively if there is a suspicion of contamination by Slovak Environmental Inspection (SIZP).

Concerning regular monitoring, about 60 places in Slovakia were monitored in 2003. The places are chosen by their level of agricultural intensity. Samples were taken 2-6 times a year. At each place from 6 to 28 different pesticides were controlled (Table 2).¹³

¹² Lešinský, D (2004): Personal consultations with Ms.Ing. Luptakova from the Department for Groundwater Quality at the Department for Groundwater Quality at the Slovak Hydrometeorologic Institute

¹³ Lešinský, D (2004): Personal consultations with Ms.Ing. Domeňyova and Ms. Ing. Vancova from the Department for Surface Water Quality at the Slovak Hydrometeorologic Institute

¹⁴ Ministry of Environment (2003): Monitoring of POPs in Slovakia; Final – technical report, No 2, part 1, April 2003

¹⁵ Ibidem

Table 2: Pesticides in Slovakian water 2000-2003*

	2000		2001		2003	
	N	OL	N	OL	N	OL
Surface water	42	0	25	0	26	0
Ground water	1119	1	672	11	935	0
Drinking water	331	0	578	1	994	4
Together	1492	1	1275	12	1955	4

N = number of samples;
 OL = sample with pesticide concentration over limit

* in 2002 no positive findings

Source: Salgovicova et al. (2003): "Monitoring of food and feed contaminants, 2002 Report", VUP Report, May 2003

Persistent organic pesticides

A relatively complex investigation concerning POPs pesticides (e.g. Aldrin, Dieldrin, DDT, DDE, HCB, Heptachlorine, Mirex) was undertaken in a project, supported by the GEF/UNDP, which aimed to support the implementation of the Stockholm POPs treaty (2001): The monitoring of POPs in Slovakia as well as their inventarization. The project was organised by the SHMU and focuses on POPs (Persistent Organic Pollutants) in all different environments. Final results from this report show that there is a tangible decrease of POPs residues in the Slovakian environment and that there are only local places contaminated with POPs above the official limits (e.g. the Zemplin region in east Slovakia).¹⁴

The usage of DDT in agriculture is prohibited in Slovakia since 1974, but residues (although below MRL) can still be found today. Table 3 shows the average DDT concentration in different environmental matrices and demonstrates the cumulative potential of DDT.¹⁵

Table 3: Average DDT Concentration 1995-2001

Environment	average Concentration	number of samples
Water	µg/l 0,0044	12855
Soil	µg/kg 10,49	1933
Stock	µg/kg 31,81	12101
Humans	µg/kg 5138,74	333

Source: Ministry of Environment (2003): Monitoring of POPs in Slovakia; Final – technical report, No 2, part 1, April 2003

Main targets for NGOs' action

1. Widening and reinforcing already existing co-operative networking at the informative, political and practical level
2. Raise awareness - Bringing pesticide-issues into the media,
3. Initiate transparent food controls especially in supermarkets
4. Helping to optimise national controls and the monitoring system to become more effective and flexible
5. Information for consumers and farmers
6. Organisation of training and seminars focused on good (best) agricultural practice
7. Support the widening range of sustainable alternatives (e.g. organic agriculture)

The CEPA decided to try to bundle the capacity, energy and knowledge of all Slovakian NGOs involved in dealing with agriculture/environmental issues. On Friday, 26th March of 2004 representatives from important Slovakian NGOs met and finally founded the Agro-Eco forum, which unifies 15 NGOs from all over the country (e.g. Bird Life, Greenpeace, Friends of the Earth, ...).

National links

Responsible ministries and authorization bodies:

UKSUP - Central Inspection and Testing Institute for Agriculture – www.uskup.sk, Tel: +421(0) 2 6442085; Fax: +421(0) 2 64462084; E-mail: f.hrdina@uksup.sk, j.schlosserova@uksup.sk

VUP – Food research institute – www.vup.sk, (food monitoring, statistic); Tel: +421-2-55574622; Fax: +421-2-55571417, E-mail: vup@vup.sk, salgovicova@vup.sk

SHMU – Slovak Hydrometeorological Institute – www.shmu.sk, (water monitoring, statistic); Tel: +421(0) 2 5477 1247, Fax: +421(0) 2 5477 4593, E-mail: SHMU-GR@shmu.sk, Jana.Domenyova@shmu.sk

VUVH – Water Research Institute – www.vuvh.sk, (evaluation of impact of pesticides on water environment, MRL, danger evaluating of active ingredients); Tel: +421(0) 2 59343 111, Fax: +421(0) 2 5441 5743, E-mail: sciasecr@vuvh.sk, kutnik@vuvh.sk

UPKM – Institute of Preventive and Clinical Medicine www.upkm.sk, (humans, tissues and impact of residues, MRL in humans...) Tel: +421(0) 2 59 369 111, Fax:+421 (0) 2 547 71 094, E-mail: sekretariat@upkm.sk

SVPS – State veterinary and food administration – www.svps.sk (food, feed, animals – analyses of pesticides residues, MRL); Tel: +421(0) 2 602 57 215; Fax: +421(0) 2 654 26 320; E-mail: chudy@svssr.sk, buchlerova@svssr.sk,

UVZ SR – Slovak Institute for Public Health – www.uvzs.sk (MRL of residues, impact of pesticides on humans, monitoring of residues in humans)

Tel: +421 (0) 2 492 84 369, Fax: +421(0) 2 443 72 641
mail: fedicova@uvzs.sk

SIZP – Slovak Inspectorate of Environment – www.sizp.sk, (accidents, leakages, emissions, illegal discharging, waste disposal...) , Tel: +421(0) 2 654 22 408; Fax: +421(0) 2 602 92 525; E-mail: sizp@sizp.sk

Ministry of Environment; www.enviro.gov.sk; Tel: +421 (0) 2 5956 2222; Fax: +421 (0) 2 5956 2222; E-mail: info@enviro.gov.sk

Ministry of Agriculture; www.mpsr.sk; Tel: +421 (0) 2 59 266 301; Fax: +421 (0) 2 59 266 311; E-mail: tlacove@land.gov.sk

Ministry of Health; Tel: +421 (0) 2 593 73 111; Fax:+421 (0) 2 547 77 983; E-mail: office@health.gov.sk

NGOs working on sustainable agriculture issues:

CEPA – Centre for Environmental Public Advocacy – www.cepa.sk; (sustainable agriculture and rural development, pesticides) Tel/Fax: +421 (0) 48 419 33 24; E-mail: cepa@cepa.sk, lesinsky@changenet.sk

GREENPEACE – www.greenpeace.sk (chemicals, pesticides, residues in food) Tel:+421(0) 2 55424455; Fax:+421(0)2 55424255; E-mail: info@greenpeace.sk, martin.hojcik@greenpeace.sk

SOVS – Bird Life – www.sovs.sk (bio-diversity, nature protection, agro-enviro measures, eco-friendly agriculture) Tel: +421 (0) 2 55422185 ; Fax:+421(0)2 55422186; E-mail: sovs@sovs.sk, sutiakova@sovs.sk

Daphne – Institute of Applied Ecology – www.daphne.sk (vegetal biodiversity, agro-enviro measures in agriculture, eco-education), Tel:+421 (0) 2 455 240 19; Fax: :+421 (0) 2 456 402 01; E-mail: daphne@changenet.sk, viestova@changenet.sk

Ekotrend – Association of Ecological Farmers in Slovakia – www.ecotrend.sk (ecological agriculture, bio-food production) Tel:+421 (0) 53 4511826; Fax:+421 (0) 34 6216037; E-mail: afra@eafra.sk, janovicek@ecotrend.sk

Ecotoxicological Institute – www.ekotox.sk (private laboratory – ekotoxicity, biodegradability); Tel:+421 (0) 2 4594 5223; Fax:+421 (0) 2 4594 5223; E-mail:etcba@gtinet.sk

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