

# Pesticide Residue Monitoring in Food of Plant Origin Belgium 2005

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Report of Monitoring Results Concerning Directives 90/642/EEC,  
76/895/EEC and 86/362/EEC and Commission Recommendation  
2005/178/EC



Federal Agency for the  
Safety of the Food Chain  
<http://www.afsca.be>

# Pesticide Residue Monitoring in Food of Plant Origin in Belgium - 2005

## Summary of results

In 2005, a total of 1496 samples of fruits, vegetables, cereals and processed products of plant origin (including baby food) were taken on the Belgian market and analysed for the presence of pesticide residues (table 1).

Table 1: Overview of the results of the pesticide residue monitoring programme 2005.

Samples	analysed	without residues	with residues at or below MRL	with residues exceeding MRL	with residues exceeding MRL (%)	Products origin					
						BE		EU		Other	
						total	>MRL	total	>MRL	total	>MRL
Fruits & vegetables	1322	583	635	104	7,9 %	821	60	254	25	247	19
Cereals	24	21	4	0	0 %						
Processed products	150	143	26	0	0 %						
<b>TOTAL</b>	<b>1496</b>	<b>747</b>	<b>685</b>	<b>104</b>	<b>7%</b>						

**Fruit & vegetables** : 1322 samples of fresh or frozen fruit and vegetables were analysed in 2005. No residues were found in 44% of them. 104 samples exceeded the national or EU harmonized Maximum Residue Levels (MRL). Relatively high percentages of MRL exceeding were found in berries and small fruit (grapes, raspberries, currants), stone fruit (peaches, nectarines), leaf vegetables (lamb's lettuce, fresh herbs), fruiting vegetables (paprika) and stem vegetables (celery). Note that in this report exceedings were counted without taking into account the analytical uncertainty of the result. The percentage of exceedings in 2005 (7,9%) is higher than in 2004 (4,8%) (figure 1). This may be explained by the improvement of the analytical performance of the laboratories (increased number of pesticides searched for and higher sensitivity of detection). More exceeding were observed on imported products (8,8%) than on Belgian products (7,3%). Out of a list of 200 different pesticide residues sought in fruit and vegetables, a total of 72 were found at least once during the monitoring programme. The most frequently found pesticide residues are fungicides : iprodion, maneb-group, propamocarb, carbendazim, tolyfluanid, pirimicarb, thiabendazole and procymidone.

<b>Fruit</b>	<b>% &gt; MRL</b>
Berries and small fruit	11,3%
Stone fruit	11,1%
Citrus	7,0%
Miscellaneous fruit	7,0%
Pome fruit	1,0%
<b>Vegetables</b>	<b>% &gt; MRL</b>
Leaf vegetables and fresh herbs	12,7%
Fruiting vegetables	10,1%
Stem vegetables	9,5%
Root vegetables	9,2%
Potatoes	3,3%
Legume vegetables	3,2%
Brassica vegetables	1,2%

Table 2 : MRLs exceeding by group of products in 2005

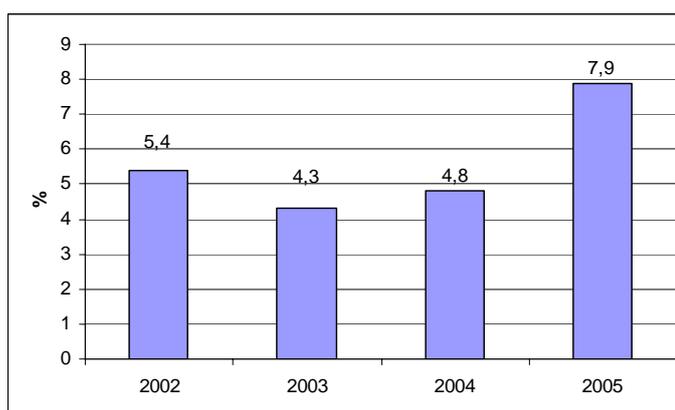


Figure 1: MRLs exceeding (%) in fruit and vegetables in Belgium from 2002 to 2005

**Cereals**: 24 samples of cereals were analysed in 2005. Out of 31 pesticide residues sought for, dichlorvos, malathion and bromide were detected but none of them exceeded the MRL.

**Processed products:** 150 samples of processed products were analysed. Chlormequat was found in pears syrup and flour; a trace of lindane was found in chocolate. No exceeding of MRL was observed.

### **Organisation of monitoring programmes and sampling**

- **Responsibilities:** The Federal Agency for the Safety of the Food Chain, under the responsibility of the Minister of Public Health, is the competent authority for the monitoring of pesticides residues in foodstuffs (<http://www.afsca.be>)
- **Drafting of the monitoring plan:** Several factors were taken into account: the importance of the foodstuff in diets, the exceeding in previous years, the RASSF messages, the pesticides authorised in Belgium, the analytical and budgetary possibilities and all other useful information. All the groups of fruits and vegetables are included in the programme and a rolling programme is applied for less important commodities. The coordinated programme of the European Commission was included in the national programme.
- **Sampling:** Sampling was done by trained officials according to directive 2002/63/EG, at auctions, importers, wholesalers, processors and exceptionally in retail.
- **Measures taken:** In case of infringement, the responsible company/person is identified. When the exceeding of MRL is in the analytical uncertainty, a warning is issued. When the exceeding is higher, an official report is made and sent to the responsible company/person and also to the legal service. The legal service proposes a fine. If the fine is not paid, or in case of repeated offences, the matter is taken to court. When the dietary intake calculations indicate a risk for the consumer (evaluated following document SANCO/3346/2001) then a national and international rapid alert is issued and measures to protect consumers are taken (tracing and recall of the foodstuffs for destruction). In 2005, two RASSF messages were issued by Belgium: one for carbaryl on apricots imported from Chile and one for mepronil on lambs lettuce grown in Belgium.

### **Quality insurance**

- The three officially recognised laboratories involved in the monitoring programme 2005 are ISO 17025 accredited for the most important analytical methods and commodities, and accreditation was gradually extended. Multi-residues methods and sometimes specific individual methods were performed on samples. All certificates of accreditation can be found on the website of the Belgian Organisation for Accreditation (<http://belac.be/>). The laboratories take into account EU Quality control procedures (ref. SANCO/10476/2003).
- Two laboratories participated in the European Commission's Proficiency Tests 7 with good results.

### **Other information**

- An MRL is not a toxicological endpoint. An exceeding of MRL represents rarely a hazard for the consumer. MRLs exceeding reflects the non respect of the good agricultural practice (product authorised on the crop, dose, delay before harvest, ...)
- The scope of the monitoring programme is to enforce the legislation. It does not provide for a total random analysis, as more samples are taken of food items expected to contain pesticides or to exceed MRLs. For example, grapes were followed closely, due to the number of exceedings observed in the past.