
Welcome



Monitoring of Fruit &
Vegetables
For Organic Traders

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Organic Retail-Market in Germany

(only organic products)



	2006	2007
• Turn-over (organic food without cosmetics in billion Euro):	1,4	1,59
	+13,6%	
• Organic-Shops:	2.000	

BNN-Monitoring of Fruit & Vegetables

Initiated in April 2002



- **To guarantee credibility of Organic Market**
 - **Compliance with legal requirements**
 - **Improve quality assurance systems**
 - **Identify fraud**
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BNN-Bench-Mark-Value



**BNN-Benchmark-Value for each substance is
0,010 mg/kg (analytical variance: 50%).
Exceeding of a total of two pesticide agents
is not allowed.**

Exceptions for:

- Substances allowed (EEC) No. 2092/91 Annex II.B
 - Inorganic total bromide (Benchmark-Value 5 mg/kg)
 - Dithiocarbamates in brassicaceae & liliaceae
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BNN-Benchmark-Value

- **BNN- Benchmark-Value is a benchmark and not a limit and therefore should not be interpreted as a MRL**
 - **Exceeding the BNN-Benchmark-Value mostly points to errors in process control**
 - **Exceeding the BNN-Benchmark-Value does not necessarily prove conventional origin**
 - **Does not change the definition of organic products**
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Associated issue: Temptation to fraud?

- 1. If market is growing rapidly and the products are in short supply**
 - 2. Anonymous relationship between supplier and customer**
 - 3. High prices**
 - 4. Technical developments e.g. 1350 pesticides worldwide (Greenpeace)**
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started 2003



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- **Participants: 28 organic trade companies (D, A, E, F, CH)**
 - **an additional cross-company quality assurance system with its main focus on pesticide residue analysis**
 - **First and so far only system where companies exchange pesticide residue data without anonymizing results**
 - **coordinated and risk orientated sampling**
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Funding



- **The costs of running the Coordination Office are borne by participants (fixed, annual contribution)**
 - **The costs for residue analyses are settled directly with the laboratories by the participant in the monitoring system.**
 - **The frequency of analysis is derived from the company's turnover of fruit and vegetables in the previous year in proportion to the total turnover of the participating companies.**
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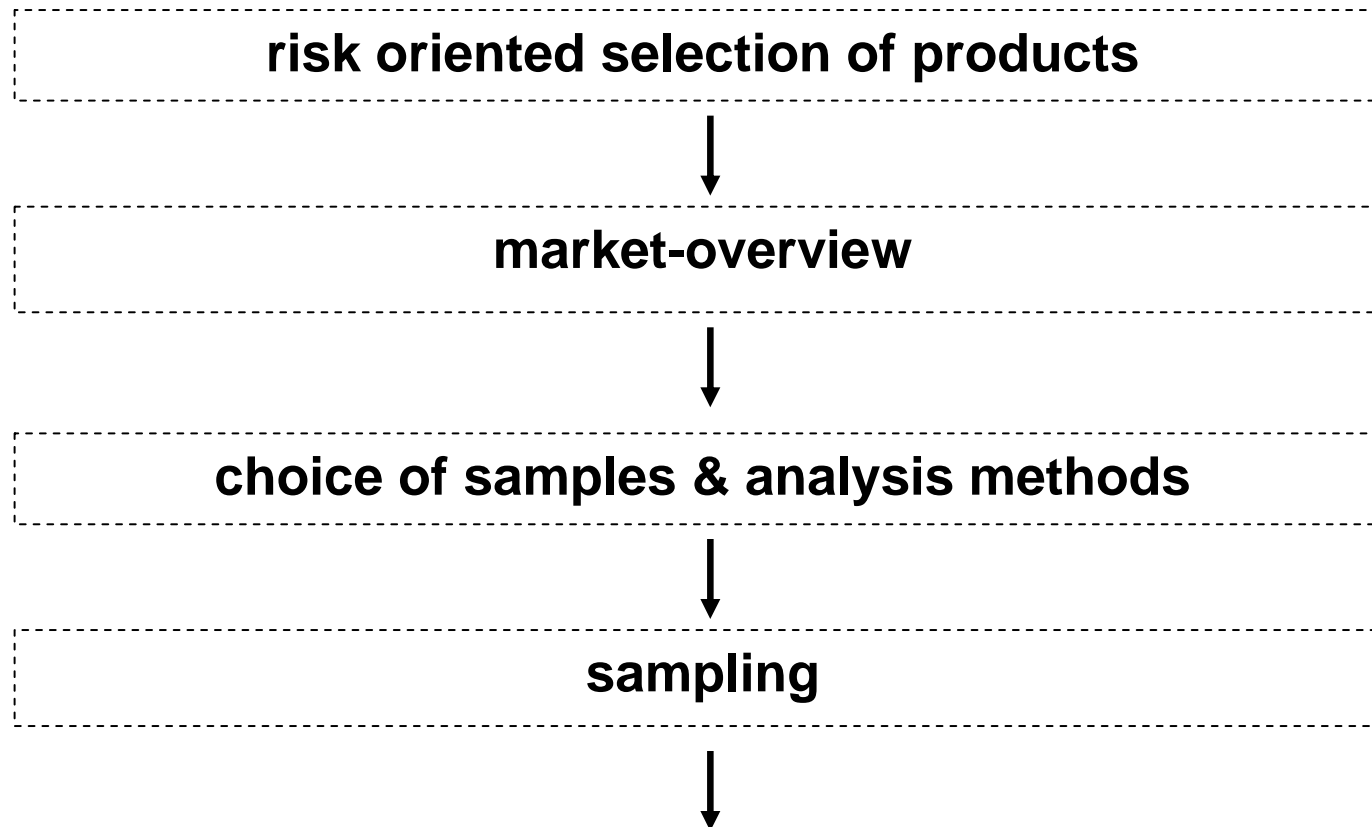
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Laboratory Approval

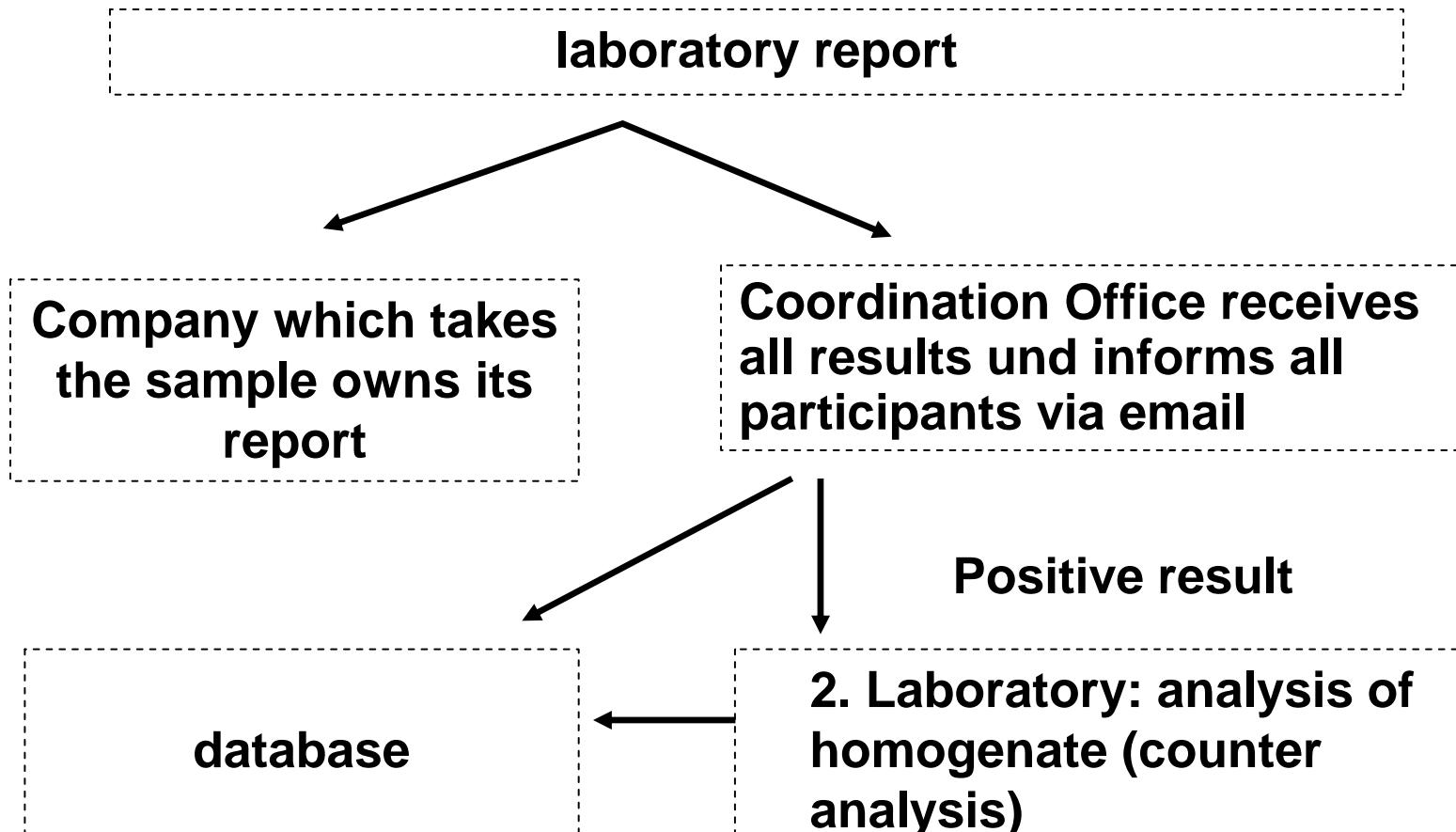


- **Laboratories must be approved by BNN Scientific Advisory Council:**
 - Check of analytical competence and capacity to evaluate residues in organic products**
 - **At the moment: Eurofins Dr. Specht Laboratorien, SGS Institut Fresenius, GALAB Laboratories, Lufa-ITL, UIS Iberica, Agrobiolab**
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BNN-Monitoring of Fruit & Vegetables Procedure



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BNN-Monitoring of Fruit & Vegetables

Positive Results

- a) **Maximum Residue Level (MRL) is exceeded**
(MRL + 50 % analytical variance):
 - National regulations are followed

 - b) **BNN-Benchmark-Value is exceeded:**
 - counter analysis to eliminate the possibility that the laboratory made a mistake
 - subsequent supplies/lots are analysed in any case.
 - Investigation of residue origin/cooperation with certification bodies
 - BNN-Monitoring participants have agreed not to trade the affected product
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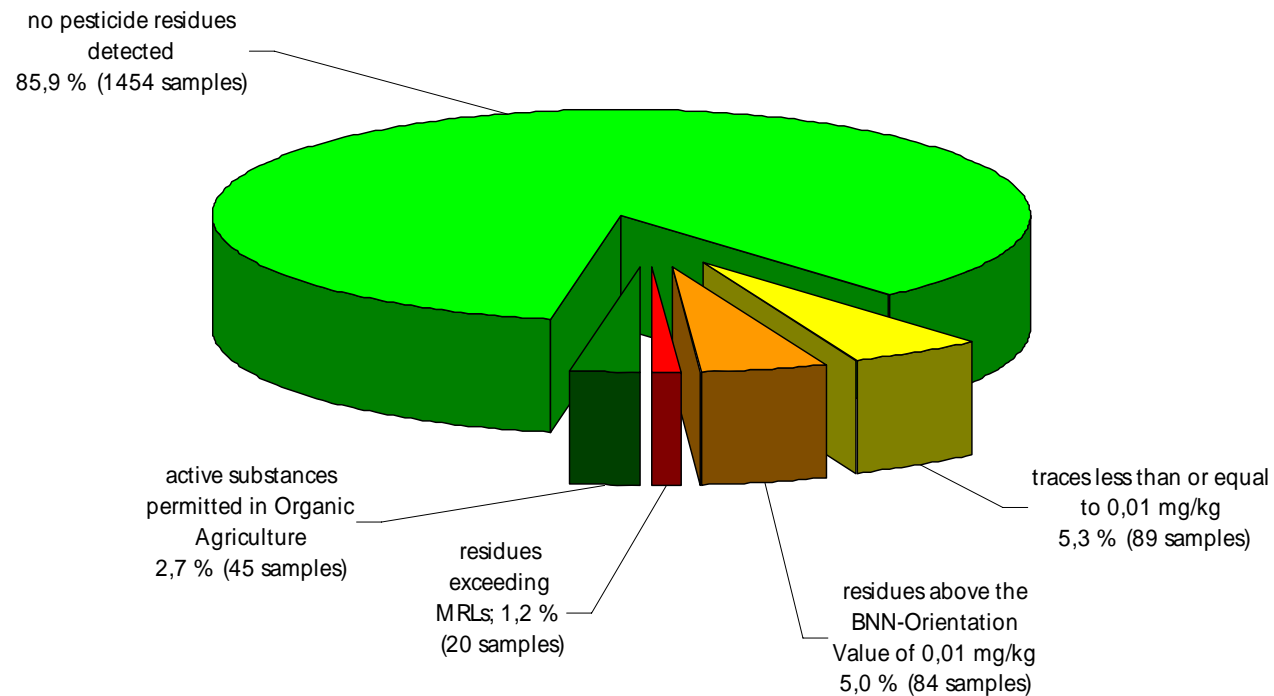
Five categories for evaluation

- no pesticide residues detected
- traces ≤ 0.010 mg/kg (analytical variance)
- residues > 0.010 mg/kg (analytical variance)
- residues exceeding MRLs
- substances permitted in Organic Agriculture/Annex II.B without exceeding MRLs

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Results

Pesticide residues in fruit and vegetables from Organic Agriculture

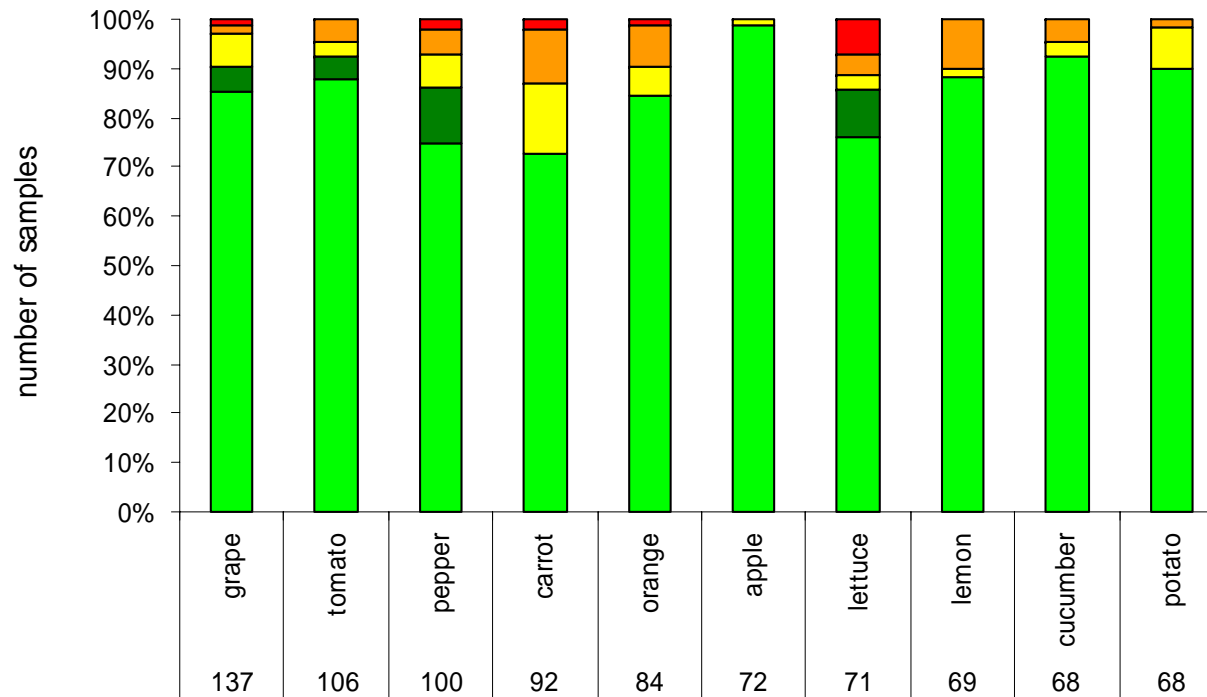


July 2003 - January 2008
1692 samples

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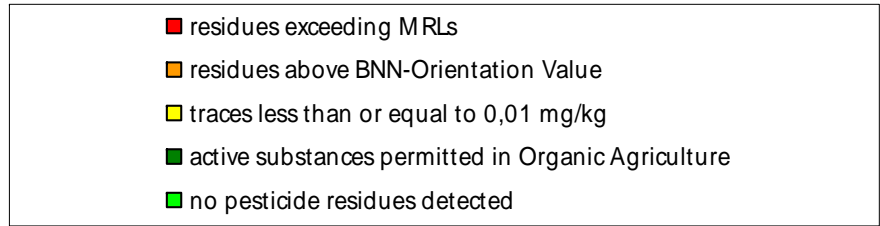
Results

Top Ten Products



number of top 10 products: 867

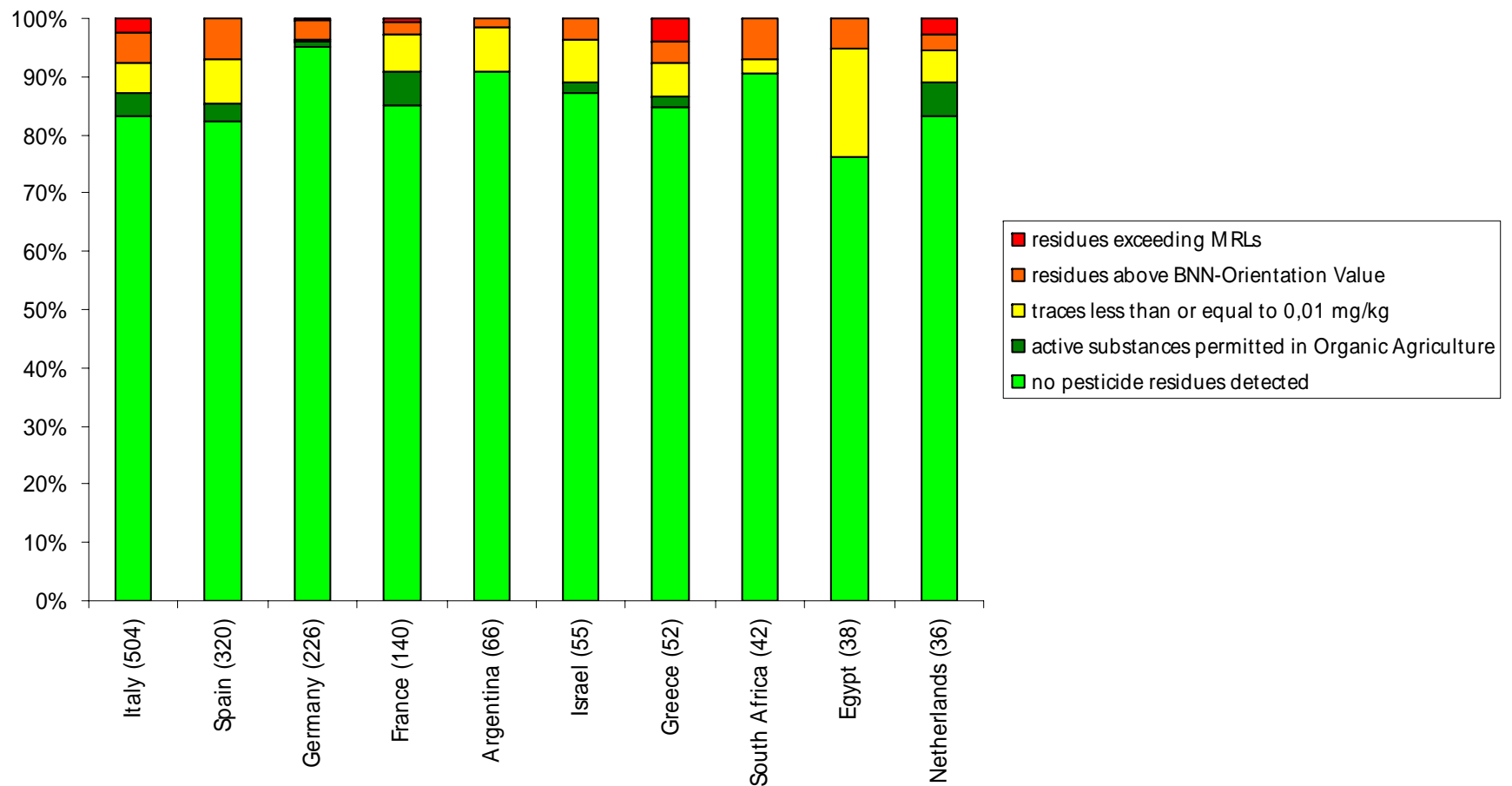
July 2003 - January 2008



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Results

residues in top 10 countries



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Case study 1



- **Organic Oyster mushrooms: 0,02 - 0,14 mg/kg Chlormequat**

As Chlormequat is a growth regulator in grain, most probable origin of the contamination is the substrate (straw).

Measures:

Certification body did a lot of research, took lots of samples but did not find the source of contamination.

No evidence that conventional straw was used, no residues in straw or irrigation water. **Problem unsolved.**

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Case study 2



- **Organic Oranges:** 0,04 mg/kg ortho-Phenylphenol, 0,02 mg/kg Brompropylat

Result of Investigation: brushes as source of contamination or commingling with conv. oranges?

Measures:

- 1) clear separation during packaging
- 2) clear separation during washing

- **Organic Kiwi: 0,06 mg/kg OPP**
Results of Investigation: Contamination during storage?

unsolved

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Case study 3



- **Organic peaches and nectarines: captan (0.056, 0.078, 0.0175 mg/kg in different lots)**
German MRL exceeded
 - **Measures:**
One participant (importer) started a recall, at the same time as BNN-Monitoring informed via email, another importer kept selling the same peaches. Their customers (wholesalers) were confused and forced them to stop selling
 - **Certification body started investigation: no non-conformity and no contamination source was found**
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Case Study 4



Organic Carrots:

- 0,012 mg/kg Linuron
- 0,021 mg/kg Chlorpyriphos
- 0,027 mg/kg Tefluthrin
- 0,005 Fluazifop
- 0,005 Dicloran

Suspicion of non-conformity therefore Certification

Body suspended certificate; After change to another Control Body in 2006 more residues detected in 2007 !

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Case Study 5



Organic Lemons, 2 samples in November 2006:

- 0,01 mg/kg Malathion & 0,12 mg/kg Dicofol,
- 0,032 mg/kg Chlorpyriphos

Measures:

BNN informed certification body. Answer: certificate suspended since July, certificate withdrawn end of November

Solution: Competent authority will inform BNN systematically about decertifications in future.

BNN-Monitoring of Fruit & Vegetables Results



- **Improvement of quality assurance systems in organic agriculture, transport, storage and processing (case study 2 & 5).**
 - **Tool for suppliers' assessment (database: necessary to follow development of case study 1 & 3)**
 - **Identification of dubious suppliers (case study 4)**
 - **Improved credibility of Organic Market**
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Crucial points



How to make sure that

- **participating companies inform Coordination Office about residue cases and suspicion in all cases**
- **all participating companies always comply with agreed procedures of BNN-Monitoring (case study 3)**

How to improve

- **awareness in Control and Certification Bodies that cooperation with cross-company monitoring systems is a chance to improve Control System funding**
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Improvement of Control Systems



- **Process Control is a very good tool to identify the source of quality problems like pesticide residues ($>0,010$) or even traces ($<0,010$)**
- **Analytical Control in addition to Process Control is a sharp sword for fighting fraud**
- **A network of Certifying Bodies, Control Bodies and cross-company quality assurance systems cooperating in the field of information flow (e.g. information on decertifications) or in identifying quality problems and finding solutions or identifying dubious suppliers - will increase credibility of Organic Markets and ensure fair competition between companies.**

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Improvement of Control Systems



- **International bodies like the IOAS and programs like IFOAM accreditation place requirements on Certifying Bodies for measures like unannounced visits.**
 - **During this unannounced visits a check of unsolved quality problems resulting from the work of BNN-Monitoring or other cross-company quality assurance systems could be done.**
 - **These International Bodies could propose how they may help to make information flow easier (eg in case of decertification or provide information on quality assurance problems)**
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Let's work together to:

- **make fraud as difficult and as dangerous as possible**
 - **to sort out the quality problems organic industry still has**
 - **to improve the quality assurance systems of organic industries worldwide**
 - **to protect credibility of the organic market**
 - **to do what our consumers expect us to do**
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Participating companies

- Biohof Achleitner GmbH
- Bio-Ilios GmbH
- BioTropic GmbH
- Bodan Großhandel für Naturkost GmbH
- Campina Verde ecosol SL
- CBET
- Chiemgauer Naturkosthandel GmbH
- ebl Naturkost
- Ecofit Biofruchtimport GmbH
- C.F. Grell GmbH & Co. KG
- Kornkraft Naturkost und Naturwaren
- Legros Biologique sarl.
- Naturkost Erfurt GmbH
- Naturkost Frischdienst Hannover GmbH
- Naturkost Kontor Bremen
- Naturkost Nord GmbH
- Naturkost Schramm Import-Export GmbH
- Naturkost Ernst Weber GmbH
- Naturkost West GmbH
- Ökoring Handels GmbH
- pax an
Naturwarenhandelsgesellschaft
- Phönix Naturprodukte GmbH
- Pro Natura
- Rinklin Naturkost GmbH
- terra Naturkost Handels KG
- Via Verde Ag
- Handelskontor Willmann für Naturprodukte GmbH

Global Sourcing: An issue of credibility

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**It is not because things are difficult that we
do not dare, it is because we do not dare
that they are difficult**

(Seneca)

