

## Results of residue studies on pesticides-treated foodstuffs in 2005



A joint study by  
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## History of research on import containers since 2002

- **2002:** measurements of import containers  
**conclusion:**  
fumigants frequently detected in import containers
- **2004:** emission studies on fumigated goods  
**conclusions:**
  1. 75% of fumigated goods emit fumigants
  2. some foodstuffs and medicines contain fumigants, likely to affect composition of the product

## New Results in 2005

- monitoring import containers in the period 2002-2005



- residue studies on fumigated food stuffs

## 2002 – 2005: monitoring import containers

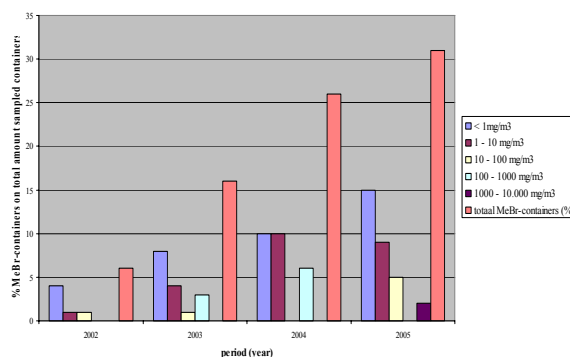


- **Conclusions**
  1. increase in number of treated import containers
  2. increase in concentration of fumigants in import containers
  3. increase in use of methylbromide

## Amount of Me-Br containers (%)

- 2002: 6%
- 2003: 16%
- 2004: 26%
- 2005: 31%

Concentration MeBr in process of time in the containers 2002 - 2005



## Residue studies on fumigated food stuffs

- Workshop 2004 ended:



### Planning 2005:

- Emission testing of treated foodstuffs
- Analysis of treated food samples on residual pesticides

## Residue studies on fumigated food stuffs

Carried out 2005:

- No emission studies on food stuffs
- Development of methods of analyzing fumigant residues
- Measurement of fumigant residues in treated food samples

## Development of analyzing methods for fumigants

### Purpose:

- analyzing methods for residues of methylbromide, chloropicrin, and phosphine



### Results:

- methods available for methylbromide and phosphine
- method for chloropicrin unstable: not available

## Fumigant residue measurements on food samples

### Purpose:

1. Are there methylbromide and phosphine residues present in food samples ?
2. Is there a risk for people (esp. consumers)?



## Samples

- 23 food samples investigated:  
all methylbromide-treated, one of them also phosphine-treated



## Results

- Methylbromide and phosphine residues detected in 30% of the samples
- Exceeding of Dutch residue limits in 17% of investigated food samples
- Oral exposure by consumption



## Intake risks

- Only calculated for methylbromide in the investigated samples ➡

residue concentrations do not exceed oral exposure limit (per sample)

**HOWEVER.....**



## Limitations

- limited number of samples, not representative
- Methylbromide often used together with chloropicrin, but no analysis method available for chloropicrin
- Matrices influence the extent of recovery
- Fumigants may react with compounds, resulting in unknown reaction products
- Oral exposure limit for phosphine not available
- No exposure limits for combinations of fumigants available

**Number of limitations  
exceeding the number of results!**

**What's going to happen now?**

