

Dutch supermarket residue campaign

Using print and online media to inform consumers about residue issues, Dutch environmental groups are successfully campaigning for supermarkets to reduce residue levels tolerated in fresh fruit and vegetables. **Hans Muilerman** reports on their strategy and progress.

Dutch environmental and consumer groups first drew public attention to the serious risks to children from residues of neurotoxic pesticides in fresh produce with a major report in 2000¹. However, subsequent letter-writing efforts failed to persuade supermarkets to take residues seriously, indeed letters were often unanswered. Campaigners were frustrated by a lack of published government data on residues and on retail chains selling produce with excess residues. They decided a different strategy was needed.

Environmental organisations Natuur en Milieu (N&M), Milieudefensie (Friends of the Earth, Netherlands) and the consumer association Goede Waar & Co joined forces to increase public awareness and exert pressure on supermarkets. Within the Dutch supermarket sector there are a wide range of attitudes to pesticides. A small number are proactive in making improvements regarding pesticide problems and will engage constructively in dialogue. At the other extreme are companies which refuse to engage in dialogue. The largest section, in the middle, wait to assess changes in public attitudes and in regulations before deciding how to modify their practice. The NGOs aimed to generate public debate about the middle and bottom end companies and to use a public platform to persuade companies to change. A key part of the strategy was to carry out independent testing and assessment of residues in fruit and vegetables, a programme which was started in 2002, part funded by the Dutch Environment Ministry.

Website resource

The main resource for the campaign is the 'Know What You're Eating' website² which allows consumers to check how the eight largest supermarkets (in terms of market share in the Netherlands (NL)) rank in terms of residues. The website, which went online in 2003, lists: key demands to supermarkets and government; summaries of scientific research on health concerns; company, government agency and media responses to results; and updates on news and policy responses. It provides practical information on avoiding the most contaminated fruit and vegetables. Links provide contact information for all major supermarkets encouraging consumers to contact them directly. There are also links to retail outlets selling organic food.

Ranking residue contents

Every two to four months the campaigners choose a specific fruit or vegetable, purchasing samples from five stores of each of the eight supermarket chains across the country. This gives 30-40 samples, depending on whether all supermarkets are selling the selected item. Sampling strictly follows EU methodology and samples are analysed for around 120 pesticide active ingredients at a commercial laboratory.

Each residue found is scored as follows:

- Residue below MRL = 1 penalty point
- Neurotoxic pesticide (organophosphate and/or carbamate) = 2 penalty points
- Residue above MRL, or, of pesticide not authorised for use in NL = 4 points
- Residue of pesticide not authorised for use in NL, and, above MRL = 8 points

Neurotoxic compounds score double as consumption of more than one may have cumulative effects on the nervous system. This concern is not currently addressed in Dutch or EU risk assessment, unlike the US which has tightened its assessment system to take account of risks posed by mixtures of neurotoxins in children's diet³.

Presenting the results

The testing can only give a snapshot each time and does not claim to be representative. However, most samples from one

supermarket produced similar results suggesting that the small sample might provide a good picture of performance. Sourcing is increasingly concentrated with more and more produce coming from a small number of big producers possibly explaining the rather uniform 'quality'. This comparison of residue data among retail outlets is not currently published either by the Dutch government or supermarkets themselves. In the celery tested (see table 1), the Dirk van den Broek chain scored the worst of seven companies with 24 points, while the Albert Heijn samples were completely residue-free and scored zero penalty points. Plus and Super de Boer chains were joint second with eight points each and Edah scored 21. The website provides an overview table of all items sampled since 2003. Entries are highlighted in red when a chain offered produce containing illegal pesticide residues. The website also indicates the number of organic products for sale from each company. While no one company consistently rates best, the two German-owned discount stores Aldi and Lidl scored particularly poorly in the first series of tests.

Table grapes were found to be badly contaminated in 2003, especially grapes from Southern Europe, in which 60% of samples exceeded MRLs and an average of seven different pesticides was found in those samples containing residues. Brazilian and African-sourced grapes contained fewer residues than Italian ones.

Testing in May 2005 revealed that several supermarket chains were selling strawberries containing residues of unauthorised pesticides. Endosulfan was found in Dutch-grown strawberries sampled from Aldi, even though it has been banned in the Netherlands since 1987. The fungicide myclobutanil was found in samples from three supermarket chains despite having been withdrawn from Dutch use in 2000 because of risks to aquatic ecosystems. Eighteen different pesticides in total were

Table 1. Residues in celery purchased in stores of Bas van der Heijden/Dirk van den Broek supermarket, sampled June 2004

Store location (street, town)	Produce origin	Residues under MRL (ppm)	Residues above MRL (ppm)	Penalty points
Vuldersbrink (10/6) Harderwijk	Holland	0.28 piperonyl-butoxide		1
Amsterdamseweg (10/6) Amersfoort	Holland	0.28 piperonyl-butoxide 0.09 pirimicarb		3
Pr. Mulderslaan (11/6) Oudenbosch	Holland (Spain)*	0.04 vinclozolin (illegal in NL)		4
Schoonhout (11/6) Etten Leur	Holland (Spain)*		0.07 vinclozolin (over MRL, illegal in NL)	8
Zambesidreef (11/6) Utrecht	Holland (Spain)*		0.09 vinclozolin (over MRL, illegal in NL)	8
Total penalty score				24

*This produce was labeled Holland Class 1 although grown in Spain

found in these samples. Although maximum permitted levels were not exceeded, the average number of residues increased, with six different residues found in some samples from three supermarkets, of particular concern where neurotoxic compounds with similar modes of action may be consumed together. Eight of the pesticides found were either not permitted in Dutch strawberry production or in Dutch agriculture in general. Eleven of the 40 samples contained no residues, showing that residue-free strawberry production is possible. More transparency on production methods used for this crop and a supportive policy from government is needed to encourage safer production.

The campaign's testing shows that mandarins are the most heavily contaminated of all fresh produce on sale in Dutch supermarkets. Testing of mandarins in October/November 2005 (all sourced from Spain) found an average of six residues per contaminated sample with two stores of the supermarket C-1000 selling samples containing 10 different pesticides. The average number of residues per sample has increased since 2002/2003 when government monitoring found an average of four. The fungicide imazalil was found in all samples, a systemic compound contained in the fruit flesh as well as peel. Imazalil is not only a serious skin and eye irritant but has also been linked to negative effects on development and possible carcinogenicity. In one Aldi store it was found at 3.4mg/kg when the WHO limit Acute Reference Dose (ARfD) for consumption in one sitting is 0.05 mg/kg bodyweight. A toddler eating two of the contaminated Aldi mandarins would exceed the ARfD by 48%. The insecticide chlorpyrifos was found in 39 of 40 samples. The government health agency has previously raised concerns about children's exposure to chlorpyrifos residues in food.

The website also presents information from the Dutch government residue monitoring 2000-2002. Table 2 lists the fruit found with most and least residues. Official data clearly shows that on average 21% of imported fruit and vegetables exceed Dutch MRLs, whereas only 5% of Dutch grown produce exceed Dutch MRLs. Apples are the exception as Dutch apples are more contaminated than imported ones. Campaign organisations recommend consumers to buy organic produce where possible or 'Milieukeur', the Dutch label for reduced pesticide produce grown using more sustainable methods than conventional produce.

Campaign demands

The campaign's key demand to supermarkets is to ensure that only residue-free produce is sold. They argue that it is unacceptable to sell contaminated fresh produce when even conventional farming can deliver residue-free produce. The campaign urges companies to do more residue testing, to exert more pressure on suppliers and to ask suppliers to test produce too. It requests disclosure of country of origin on all pro-

duce labels or shelves and information on production methods for each type of fresh produce in an easily accessible website.

The key demands to government are: more transparency on residue data; 'name and shame' company/location of stores with residues exceeding MRLs; better controls and tougher penalties for infringement; clear and honest responses to consumer requests for information on residues.

The website encourages consumers to demand supermarkets to make public their test results, so that consumers can exercise real choice. In 2004, 7,000 consumers contacted the Minister for Agriculture to demand transparency of food residue data.

Responses

In the first phase of the campaign, supermarkets were very surprised and denied all claims by N&M. Since there has been little government enforcement for years, the topic of residues was not on the agenda of supermarkets and most of them were not aware of it. Publishing the results of the analysis and 'naming and shaming' did not provoke too much reaction from individual supermarkets but the retailers' association and the Dutch health ministry were very hostile. These last two have claimed for decades that food is safe and saw these claims threatened. The retailers' association lobbied parliament to cut NGO funding.

Campaign actions

The system in the Netherlands allows NGOs much easier access to court than in most other countries. N&M started lawsuits against those supermarkets who had exceeded MRLs. The cases never reached court because the supermarkets started negotiating. Agreements were signed with Laurus (second largest supermarket in NL), Schuitema (third largest) and even the German discounters, Aldi and Lidl. These agreements amounted to promises not to exceed MRLs (and to pay a penalty to N&M if they did), promises to analyse their own products and send a copy to the NGOs. A promise to only sell residue-free produce could not be obtained through the courts.

Naming and shaming together with the court strategy has changed the game by giving NGOs a strong position and making residues a media issue. Continuing to test and negotiate with supermarkets should allow further progress towards residue-free food.

The results of four years of campaigning have been satisfying and at times unex-

pected. Aldi and Lidl discount supermarkets had the worst residue levels in the first sampling series, but due to public naming and shaming and fear of court action, they are now in discussions with the campaign; in fact N&M was the first organisation in NL to negotiate with Aldi, a company who refused for years to talk to stakeholders. Aldi have now introduced a strict monitoring system and threaten suppliers with de-listing for six months if they fail to comply. If they cannot be sure of compliance with the law both Aldi and Lidl sell organic products, which they did several times over the last two years. In February 2005 Lidl announced that it would select suppliers with fewer residue problems and stock a much larger selection of organic produce. The company decided to only stock organic grapes as no suppliers of conventionally grown grapes could deliver residue-free ones.

A report from the Health Council (scientific advisors) advised the government to consider combination toxicity in risk assessment and to take preventative action to protect children and the unborn. The government is hesitating on this but claims it will publish names of companies exceeding MRLs.

Dutch trader organisation DPA, often blamed by the supermarkets for delivering contaminated produce, finally concluded that the residue issue was not going to disappear. They started talks with the NGOs on transparency (companies are forced by the EU Food Directive to analyse their products from 2005 on) and on a new 'dirty dozen', a group of pesticides to be banned voluntarily.

Another outcome of 'Know What You're Eating', is N&M's work to identify the most progressive supermarket in terms of crop management practice. No Dutch supermarket is following the best possible Integrated Pest Management practice, partly because supply comes through traders only interested in obtaining produce at the lowest price. N&M has now persuaded the Laurus supermarket chain to commit to holistic IPM and Integrated Crop Management and will implement this on 10 pilot crops in 2006 season, for Dutch-grown and imported produce. They will use protocols based on ecological principles for crop management, but which have not been widely taken up by farmers for lack of market incentives. This will be an exciting experiment to see if such an approach can succeed in the highly competitive world of mainstream farming and retail.

References

1. Luijk R and Schalk S (*Consumentenbond*) and Muilerman H (*Natuur en Milieu*), *Have we lost our heads? Neurotoxic residues harmful to the developing brain of our children*, Utrecht, Netherlands, 2000.
2. www.weetwatjeet.nl is in Dutch only
3. *Pesticides in food - what's the problem?* PAN Europe Briefing No. 3, September 2004 www.pan-europe.info/publications

Hans Muilerman works on sustainable production and consumption at N&M in the Netherlands and is on the PAN Europe Board, h.muilerman@natuurenmilieu.nl

Table 2. Residues in fruit 2002/3

<u>Most residues</u>	<u>Least residues</u>
1. mandarins	1. Avocado
2. lemons	2. Kiwi
3. grapefruit	3. Plums
4. oranges	4. Passion fruit
5. grapes	5. Mango
6. currants	6. Blackcurrants
7. apples	7. Cherries