

# Message in a bottle

Following PAN Europe's high profile investigation, Elliott Cannell, Coordinator of PAN Europe, asks why bottles of wine sent for laboratory analysis were found to contain such high numbers of pesticide residues.

In March 2008, PAN Europe joined with Greenpeace Germany, Friends of the Earth Austria, and Mouvement pour le droit et le respect des générations futures (MDRGF), to investigate the presence of pesticides in wine. Across Europe campaigners visited discount retailers, high street supermarkets, specialist wine shops and wine merchants before dispatching bottles of wine for laboratory analysis. A few weeks passed. And then the results started to arrive.

Interest in the investigation swamped PAN Europe for over a fortnight. As each day passed news of the project spread further and yet more journalists called to ask for information. Together the NGOs had succeeded in demonstrating the widespread contamination of conventional wines. 100% of conventionally produced wines analysed, including wines made in France, Germany, Austria, Italy, Portugal, South Africa, Chile and Australia, were shown to contain pesticides. One bottle contained 10 different residues, while the average number of pesticides was more than four per bottle. Almost half of all conventional wines tested contained pesticides classified by the European Union as being carcinogenic, mutagenic, reprotoxic or disruptive to the endocrine system – including three French Cru Classé vintages purchased at more than €200 per bottle. All of the samples of conventional wine analysed contained pesticide residues.

After the media hubbub subsided a few key questions remained. Not least: 'why were synthetic pesticides found to be so widespread among wines?'

Conventional wisdom suggests that processed foods are on average less contaminated than fresh fruits and vegetables. EU monitoring data consistently show

processed food products to have both a lower incidence of pesticide contamination as well as less frequent MRL exceedances. But the data from the PAN Europe wine study found 100% contamination of conventional wines – a far higher incidence than would be expected even for grapes.

In 2005 the French Ministry of Agriculture published an investigative report into the presence of synthetic pesticides in French wines. By analysing grapes destined for use in the wine making process, and then testing the resultant wines produced, the study concluded that around one third of the pesticides included in the analysis were 'systematically' transferred into wine. Iprodione showed the highest rate of transfer and was present in 100% of wine samples made from grapes contaminated with the pesticide. Procymidone (93%), azoxystrobin (90%), iprovalicarb (86%) and pyrimethanil (85%) also showed a high presence among wine samples prepared from contaminated grapes.

Evidence that certain synthetic pesticides commonly detected in grapes are systematically transferred into wines goes some way towards explaining the high incidence of wine contamination. But to understand more we must also examine the manner in which wines are made. In Europe, and beyond, wines are commonly made from grapes grown by different farmers located in the same region, thus creating the possibility of a 'cocktail effect'. Grapes free of pesticide residues may be mixed with grapes contaminated with pesticides, and then with grapes carrying different pesticide residues. This may substantially decrease the probability of preparing a vintage free of pesticides, while increasing the incidence of multiple contamination.

Two years after the French study, the European Commission published a 10 year overview of the use of pesticides in European agriculture. The EU study shows that grapes receive 4.7kg of synthetic pesticides per hectare – a higher dose than any other crop except potatoes. In fact despite accounting for 3.5% of the total EU agricultural area, grapes receive 15% by weight of the synthetic pesticides applied to all major crops. The Commission's data also document changes in the types of pesticides applied to grapes between 1993 and 2003. These trends, together with the high doses of synthetic pesticides applied to grapes, may also be central to understanding the root causes of wine contamination.

Since 1993, the volume of inorganic sulphur, a relatively non-hazardous substance traditionally associated with European grape



Francois Veillerette, President of MDRGF and Board Member of PAN Europe speaking at the media conference in the European Parliament on 26 March. Background Hiltrud Breyer MEP (Greens/EFA)

production, applied to grapes in the EU has declined by 39%. Meanwhile the average dose of synthetic pesticides applied to grapes has risen by 22%. In addition, over the period 1993 to 2003, European grape producers adopted the use of new synthetic fungicide compounds never before applied to grapes grown in Europe. Morpholine fungicides (dimethomorph), strobilurine fungicides (azoxystrobin), anilide fungicides (fenhexamid), carbamate fungicides (iprovalicarb), and phenylpyrrole fungicides (fludioxonil) have all been adopted into European grape production over the past 15 years. Furthermore, the use of pyrimidine fungicides, such as cyprodinil, fenarimol or pyrimethanil, has increased by a factor of 30 since 1992.

Given the systematic transfer of synthetic pesticides into wines, coupled with the increasing use of such agrochemicals in the production of grapes, and the mixing of grapes from different farms in the production of wine, it is perhaps unsurprising that the wines tested showed such a diversity of residues – or that 100% of bottles analysed contained pesticides. What remains unclear though is the European appetite for pesticide free wine. For how much longer will consumers tolerate such extensive contamination of Europe's most culturally important drink?

For full results of PAN Europe's wine study, visit [www.pan-europe.info](http://www.pan-europe.info)

#### References

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