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DRAFT Q&A

2017 European Union report on pesticide residues in food

1. What are pesticide residues?

Pesticide residues are the measurable amounts of active substances – chemicals used to protect plants against disease and pests – and the related metabolites or degradation products that can be found on harvested crops or in foods of animal origin.

2. What is the EFSA pesticides report?

The European Union has a comprehensive legislative framework in place governing the use of pesticides. To ensure high consumer protection, legal limits – known as [maximum residue levels](#) (MRLs) – are set on the amount of pesticide residues that can be permitted in food. MRLs have been set for more than 500 pesticides in over 370 food products. To ensure that food placed on the market complies with the legal limits, EU Member States take samples of various food products, which they test for pesticide residues. This data is analysed and published annually by EFSA to give an overview of compliance in the EU and the exposure of European consumers to pesticide residues. In addition, EFSA makes recommendations for future monitoring programmes.

3. What is the main finding of the latest report?

The latest data – collected in 2017 – show that 95.9% of food samples were found to be free of pesticide residues or to contain traces that fall within legally permitted levels. In other words, legal levels were exceeded in 4.1% of samples, a slight increase on 2016 (3.8%). The figure is derived from around 88,000 samples collected from the 28 EU Member States as well as Iceland and Norway.

4. What does “free of pesticide residues” mean?

It means that the analysis of a sample did not detect the presence of quantifiable residues. Technically speaking, this means that the pesticide chemicals were not detected in concentrations exceeding the limit of quantification (LOQ). The LOQ is the smallest concentration of a substance that can be quantified with acceptable precision. For most pesticides the LOQ is between 0.01 mg/kg and 0.05 mg/kg. A concentration of 0.01 mg/kg is roughly equivalent to five teaspoons of sugar diluted in an Olympic-sized swimming pool. In 2017, 54.1% of the samples were found to be free of quantifiable pesticide residues.

5. So where does the figure of 95.9% come from?

In addition to the 54.1% of samples that were residue-free, 41.8% were found to contain residues that fell within legal limits. So, overall, 95.9% of samples fell within legal limits.

6. Why are exceedances higher than in 2016?

This is most likely due to the high number of enforcement samples taken in 2017 (12.1% of the total versus 4.9% in 2016). Enforcement sampling targets pesticides or foods originating from countries where exceedances have been observed in the past, so detection of residues is likelier than with random sampling (see question 9).

7. What about food that contains residues from more than one pesticide?

In line with previous years, in 2017 multiple residues were recorded in just over a quarter of samples. The presence of multiple residues does not constitute non-compliance with MRL legislation as long as individual pesticides do not exceed legal limits. However, products with multiple residues should be assessed carefully by the national authorities (for example, to consider whether combinations of pesticides are being used deliberately to circumvent MRL limits on single substances).

8. Are there differences between samples taken from goods produced within the EU and those from outside?

Most of the tested samples (64.3%) originated from EU Member States, Iceland and Norway; 28.8% concerned products imported from third countries. Legal limits were exceeded in 2.6% of samples for products from EU and EEA countries, compared with 7.6% of samples from non-EU countries. Several non-EU-approved pesticides were found in samples both from within and outside the EU. As these results indicate possible misuses of non-approved substances, EFSA recommends that Member States investigate the reasons and take corrective measures where appropriate.

9. Who decides which foods and chemicals are analysed?

The report contains two data sets:

- The EU-coordinated programme, under which the European Commission obliges reporting countries to analyse a common list of food products and pesticides. Different groups of food products are analysed in a three-year cycle. The samples are taken randomly to get statistically representative results for the food consumed by European citizens.
- National control programmes. The scope of these is defined by the individual Member States. The programmes are “risk-based”, focusing on those products which are expected to contain residues in concentrations exceeding the legal limits. This is the enforcement sampling referred to in question 6.

The figure of 95.9% is derived from the combined findings of the two reports. Results only from the EU co-ordinated programme, which in 2017 covered 11,158 samples from 12 food products, showed that 98.4% of samples fell within legal limits.

10. Does the data suggest there are any risks to European consumers?

As part of its report, EFSA performs an acute (short-term) and chronic (long-term) dietary risk assessment by combining the data from the EU coordinated programme with food consumption information provided by Member States. Using the 2017 data, EFSA concluded that, according to current scientific knowledge, acute and chronic dietary exposure to pesticide residues is unlikely to pose concerns for consumer health.

EFSA is currently finalising a methodology to enable risk assessments that take account of dietary exposure to multiple residues. EFSA will publish two pilot cumulative risk assessments in September.

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