

FACT SHEET

FOOD SAFETY AND PESTICIDES

Food safety is a central priority for the plant science industry and tools such as pesticides help to ensure this by protecting food crops from harmful pests and potentially dangerous fungal toxins, which can pose a threat to human health.

The industry takes the issue of food safety extremely seriously and tests its products in a rigorous, prolonged manner. Furthermore, a stringent safety assessment is conducted by national, and in some cases also regional, regulatory agencies. All crop protection products are subject to government approval. Rigid global standards also exist for pesticide approval and use, as defined by bodies such as the Food and Agriculture Organisation of the United Nations (FAO) and the World Health Organisation (WHO) through instruments such as the Codex Alimentarius. Once on the market, crop protection products continue to be re-examined on a regular basis by regulatory agencies.

Maximum Residue Levels (MRLs)

The pesticide industry encourages growers to choose its products with care, use them only when needed, and to use only as much as is required. However, residues may appear in food, and where they do, generally not exceeding approved levels. This is guaranteed through systems of surveillance and highly sensitive detection methods. These checks ensure that produce is safe and poses no threat to human health.

100-fold safety factor

For each pesticide, an Acceptable Daily Intake (ADI) value is derived on a scientific basis and corresponds to the chronic risk. The ADI comprises the amount of potential residue that can be consumed by one person, every day of their life, without posing a risk to their health. This is established by applying a high safety factor - typically 100 - to the "No observed adverse effect levels" (NOAELs) from long-term toxicological testing. A NOAEL is the highest dose that does not cause adverse side effects. The Maximum Residue Levels do not allow our Acceptable Daily Intake to be exceeded.

Maximum Residue Levels (MRLs) mark the authorised pesticide limit in food products and are set individually for each pesticide and each crop. MRLs are trading standards, rather than safety limits, and serve as a check that good agricultural practice is being followed to protect human health and the environment. Consequently, an MRL exceedance does not translate into a safety concern, since residues in food must be demonstrated to be safe. The objective of the pesticide industry and the agricultural sector is to limit the presence of residues and avoid surpassing the MRL under all circumstances.

*If the safety margins applied to the pesticide residue levels allowed under the Acceptable Daily Intake were applied to traffic guidelines, the regulations regarding safe distances between two vehicles would increase **100-fold from 100m to 10 km**.*

