Almost half of all fruits, vegetables and cereals grown in the European Union are contaminated with pesticides. Five percent of food items tested contain concentrations that exceed legal limits for individual pesticides. In addition, contaminated drinking water, dusts and spray drift contribute to human exposures.

Pesticides are used widely in agriculture for crop protection, and they are also applied in homes and gardens. Despite European policies to reduce pesticide use, the total EU-wide pesticide consumption has not decreased. Climate change, newly resistant strains, and monocultures are creating pressures for increased use of pesticides.

A growing body of scientific evidence now demonstrates links between exposures to hazardous pesticides and potentially serious adverse impacts on human health. Currently licensed pesticides include known and suspected carcinogens, neurotoxicants and reproductive toxicants. Infants, children, pregnant women and the developing foetus are particularly vulnerable to pesticides.

The Collegium Ramazzini urges the EU to adopt strong legislation to protect public health and the environment against adverse effects of pesticides.

In regard to the proposed Regulation on the placing of plant protection products on the market, the Collegium recommends:

- Apply stringent “cut-off” criteria as hazard triggers to eliminate the most hazardous pesticides from food products and the environment
- Approve substances for use in the cultivation of food and feed only if they are not carcinogenic, mutagenic, or toxic for reproduction (categories 1, 2, and 3 under the provisions of the current Directive 67/548/EEC)
- Likewise, no substance should be approved, if it is considered to be endocrine disrupting, or causing developmental neurotoxicity or immunotoxicity
- Any derogation or dispensation from this legislation should be granted only when residues of the active substance concerned in food and feed can be assured to remain below the limit of determination using the most sensitive method; and
- The EU should support the development and implementation of safer and more effective ways to manage pests.

The European opportunity

A unique opportunity exists in the European Union this fall to enact advanced policies to control pesticide use with the aim of protecting human health and the environment. The new legislation will set the stage for pesticide use in Europe for many years to come, and it will likely have important implications also beyond Europe.

The new EU legislation will appropriately employ “cut-off” criteria to trigger bans of pesticides of high persistence and toxic potential. However, this approach is severely weakened in the draft text, because it allows pesticides with serious toxic potentials to be approved for seven years at a time.
Likewise, the legislation should prohibit pesticide use in all public areas, including residential areas and recreation grounds, hospitals and health care facilities. Aerial spraying is the most worrisome type of pesticide application and must be restricted to exceptional situations.

A strong EU pesticide legislation can become an important step toward eliminating pesticide hazards worldwide, in agreement with the Rotterdam convention. The strengthened legislation should also include means to promote non-chemical alternative methods of pest control.

**Pesticide usage in the European Union**

The annual application of synthetic pesticides to food crops in the EU exceeds 140,000 tonnes. This amount corresponds to 280 grams per EU citizen per year. More than 300 different pesticides are known to contaminate food products sold in the EU. One out of twenty food items exceeds the current EU legal limit for an individual pesticide. Over 25% of fruits, vegetables, and cereals are known to contain detectable residues of at least two pesticides. Processed food and baby food are also commonly contaminated.

Current approval of pesticides mainly relies on detailed risk assessments and the application of specific rules and restrictions to pesticide uses. The frequent occurrence of serious contamination of food products, feed, drinking water, and the environment call for a stringent approach to the control and surveillance of pesticide use and exposure.

**Health risks to consumers**

Pesticides in current use are now known or suspected of not being as safe as previously thought, whether individually or as combinations of compounds. Several approved pesticides are considered carcinogenic and may contribute to the development of malignant diseases, such as breast cancer, colon cancer, leukaemia, and lymphomas.

A large number of pesticides are toxic to the nervous system. Many of them may adversely affect the development of the brain and are suspected of causing degenerative disease of the nervous system in adults.

Endocrine disruption and other types of reproductive toxicity can adversely affect the development of reproductive organs and impair reproductive function and fertility.

Children and pregnant women are at particular risk. Pesticides can impact on human development, and such effects are likely to be irreversible and may even cross generations.

New information is continuously emerging on adverse health effects of pesticides, thus disputing the validity of current approvals and legal residue limits. New legal instruments are therefore needed to facilitate appropriate action to substitute, ban, or restrict previously approved pesticides, as new health hazards are recognized.

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The Collegium Ramazzini is an international scientific society that examines critical issues in occupational and environmental medicine with a view towards action to prevent disease and promote health. The Collegium derives its name from Bernardino Ramazzini, the father of occupational medicine, a professor of medicine of the Universities of Modena and Padua in the late 1600s and the early 1700s. The Collegium is comprised of 180 physicians and scientists from 35 countries, each of whom is elected to membership. The Collegium is independent of commercial interests.