

## The impacts of pesticides on health and the environment

The impact of pesticide use on human health is being addressed as a major priority by the scientific community worldwide, especially in developing countries where these chemicals are widely used in farming activities. Developing countries account for 30% of the global pesticide consumer market and among them, Brazil is the largest individual consumer market, accounting for half of all Latin American pesticide consumption.

The indiscriminate use of pesticides in Brazil – as well as in other countries of the Latin America region – results in severe levels of environmental pollution and human poisoning, as many farmers are unaware of the hazards associated with their use, thus neglecting basic health and occupation safety standards. Studies assessing occupational and environmental exposure to pesticides in Brazil report human contamination levels varying from 3% to 23%. If the lowest percentage number found (3%) is applied to the number of rural workers involved in ranching and farming activities in Brazil – estimated at around 18 million in 1996 – the approximate number of individuals contaminated by pesticides while carrying out their work activities in the country would be around 540,000 workers/year, with 4,000 deaths.

Different related factors play a determining role in reducing or increasing the impacts that each of the above mentioned routes may have on the health of human population, such as: a) low education levels; b) lack of more effective technical monitoring/counseling policies; c) aggressive marketing and sales practices by the pesticide industry producers and distributors; d) unfamiliarity with successful alternative pest control techniques; e) careless pesticide waste and package disposal; f) continued use/exposure to pesticides; g) highly technical content of educational material available to rural populations; h) communication difficulties between farmers and technicians; i) failure on the part of governments to provide farmers with effective continued and technical assistance; and j) lack of effective government control strategies on pesticide selling.

This publication presents contributions from some of the research teams that have been addressing the above mentioned challenges over the past two decades in Brazil and in Latin America. It is a sample of the growing scientific production on health and environmental effects of pesticide use on rural activities and it represents part of the efforts made by the Oswaldo Cruz Foundation and The Mount Sinai School of Medicine to bring professionals and research teams from the whole of Latin America region closer around a major goal: narrowing the link between environmental and health sciences and thus contributing to foster better quality of life and work to all rural workers in Latin America.

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***Guest editors***