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International database on commodity tolerance (IDCT)

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An important factor for increasing the commercialization of phytosanitary irradiation (PI) is the adoption of generic doses in international and national regulatory frameworks. A limiting factor to accelerating the use of PI is the availability of information on commodity tolerance for the wide range of horticultural products that might be eligible for treatment with generic doses. The International Database on Insect Disinfestation and Sterilization (IDIDAS) was developed by the Joint FAO/IAEA Division of Nuclear Techniques in Food and Agriculture to provide information on the doses of radiation applied for these purposes to mites and insect pests of crops and veterinary and human importance. It includes data on both the doses required for the (PI) of fresh and durable commodities infested with specific pests, and also the radiation doses used to induce sterility in target pests, mainly for the application of the sterile insect technique. The new IDCT database complements IDIDAS with commodity tolerance data for fresh horticultural commodities including fruit, vegetables, flowers, roots and tubers. Tolerance data were extracted from scientific publications available from 1960 to the present. Specific technical information was selected to identify the maximum doses for acceptable quality, the type of radiation source, the dose rate, dose uniformity ration (DUR), and the optimal conditions for handling, storage, and transportation. The availability of this information in the IDCT database greatly facilitates the process of identifying potential trade opportunities using PI and helps highlight where commodity tolerance research has been done or is needed.

Biography

Emilia Bustos-Griffin has worked over 30 years in research on food irradiation as a phytosanitary treatment. Her work has resulted in irradiation doses that have been globally adopted for fruit pests. Her research on free radicals was important for the evaluation of quality in spices and dried food. She has served as an expert in Dosimetry standards with the American Society for Testing and Materials (ASTM) as well as a member of the national expert committee for the Official Mexican Standard establishing doses for the irradiation of food in Mexico. She has been an expert in working groups for the North American Plant Protection Organization (NAPPO) and the International Plant Protection Convention (IPPC) for the elaboration of regional and international standards for the use of irradiation as a phytosanitary treatment. She represented Mexico for more than 10 years in the International Consultative Group for Food Irradiation with the International Atomic Energy Agency.

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