

Replacements for MeBr in soil fumigation

In China, a project funded by the Multilateral Fund and implemented by UNIDO has tested four alternatives to the use of methyl bromide (MeBr) in soil fumigation. The project was based on the idea that the development of a comparable agricultural system without using MeBr requires the integration of multiple alternative technologies as well as extensive research to achieve a similar spectrum of efficacy and reliability. In order to implement alternatives to MeBr, an integrated pest management (IPM) strategy would be required. IPM utilizes pest monitoring techniques, establishment of pest injury levels and mix of strategies and tactics to prevent or manage pest problems, in an eco-friendly and cost-effective manner.

Alternatives to the use of MeBr for soil fumigation that are environmentally acceptable and cost-effective, were identified and demonstrated. Viable alternatives were found for 94.4 per cent (1,302 t ODP) of the total tonnage used for soil fumigation in China in 1998. No alternatives were found for the other 5.6 per cent that is mainly used for cultivating ginseng. The use of products from natural origin, e.g. antibiotic abamectin, and bio-fumigation, a novel technique for soil treatment using organic materials, are among the most promising MeBr alternatives. The fumigant 'Dazomet' has also been envisaged as a viable alternative in the production of strawberry, vegetables and in tobacco seedbeds. The use of substrates and soil-less cultivation are the best alternatives in certain crops, particularly strawberry and tobacco seedbeds.

Plant breeding and the introduction of new and resistant cultivars of strawberry and vegetables will also help. *Contact: Mr. Liu Yi, Deputy Director, Foreign Economic Cooperation Office, State Environment Protection Administration, Beijing, China. Fax: +86 (1) 6615 1776. (Website: www.unepie.org)*