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in the Tropics and Subtropics”

**Strategy in Ozone Depletion Substances in Agriculture in
Developing Countries (Montreal Protocol)**

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Abstract

In 1974, the experts of the University of California claimed that the man-made chemicals known as chlorofluorocarbons (CFCs) were damaging the stratospheric ozone layer.

Methyl bromide (MB) and Carbon Tetrachloride (CTC) ‘represents’ the Ozone Depletion Substances (ODS) used in agriculture. MB and CTC are the highly effective fumigants used to control insects, nematodes, weeds, and pathogens in more than 100 crops, in forest and ornamental nurseries, and in wood products. Its primary uses are for soil fumigation, post-harvest protection, and quarantine treatments.

About 2800 metric tons of methyl bromide each year is used in the world — about 75 percent to fumigate soil before planting crops, about 11 percent to fumigate harvested commodities during storage and export, and about 6 percent to fumigate structures such as food processing plants, warehouses, and museums, as well as antiques and transport vehicles. The remaining 8 percent goes to the production of other chemicals.

There is a similar situation with CTC and other OD (Ozone Depletion) substances used in agriculture.

There is some interest in recovery, reclaiming and recycling technologies to upgrade the fumigation and soil preparation methods with focus to phase out the ODS in agriculture.

The amendment of the Montreal Protocol specify precise schedules for the reduction and phase out of ODS, there are many advantages in moving straight to viable ODS alternatives rather than trying to recover, reclaim or recycle ODS.

The UNIDO Vienna together with the Institute of Tropical and Subtropical Agriculture, CUA Prague, professional supervision implemented workshop with the field trial on ‘Alternatives to Methyl Bromide in Soil Disinfection’ in the Dominican Republic, held in Santiago de los Caballeros in November 2000. Technicians and farmers from the Dominican R. participated in the field trial.

The UNIDO Vienna together with the Institute of Tropical and Subtropical Agriculture, CUA Prague, professional supervision prepared the project document for the UNDP Executive Committee of the MFI of the Montreal Protocol ‘Phase out of the Use of Carbon Tetrachloride (CTC) as Fumigant in Grain Storage in DPR of Korea’ Pyongyang, North Korea, March 2002.

The results and information of the above mentioned projects are presented.

Keywords: Carbon tetrachloride alternatives, developing countries, environment, field test, fumigant, Methyl bromide, Montreal Protocol, ozone depletion substances, pesticide