Montreal Protocol

How “green” are your tomatoes?

Methyl bromide is a colorless, nonflammable and highly toxic gas, which belongs to the family of organic halogen compounds. It is also a broad spectrum pesticide with applications in the control of pest insects, nematodes, weeds, pathogens and rodents.

In agriculture, methyl bromide is primarily used for soil fumigation, as well as for commodity and quarantine treatment. Exposure to this chemical will affect not only the target pests it is used against, but non-target organisms as well. Methyl bromide dissipates rapidly into the atmosphere. Human exposure to high concentrations of methyl bromide can result in failure of central nervous and respiratory systems. It is also a significant ozone depleting substance.

Methyl bromide is therefore one of the listed substances under the Montreal Protocol. The complete phase-out of the substance for horticultural purposes was achieved by 2005 in developed countries. Developing countries still have until 2015. Since 1996, UNIDO has been a driving force behind methyl bromide phase-out projects. As such, it has trained farmers in developing countries on alternative technologies for soil and commodities fumigation and conducted demonstration projects in over 20 countries. The success of these projects convinced the Multilateral Fund of the approach’s validity, which in turn led to the approval of additional investment projects.

UNIDO has supported a wide range of farmers growing flowers, strawberries, tobacco seedlings and horticulture crops, as well as companies involved in the food storage sector. Around 190 projects have been implemented in over 50 developing countries, accounting for the elimination of more than 8,200 tons of methyl bromide.

To further sustain the projects and to ensure a safer environment for the local producers and companies, UNIDO has promoted the adoption of non-chemical alternatives to methyl bromide including grafting, steam pasteurization, soil solarization, soilless cultivation, bio-fumigation, as well as the introduction of an Integrated Pest Management concept. This has also given farmers the opportunity to become - through the adoption of new technologies - more competitive in international markets, by employing green sustainable methods as well as yielding higher quality products. There is now particularly visible progress in the tobacco, cut flower and horticulture sectors.