

Case Studies on Alternatives to Methyl Bromide

Technologies with low environmental impact



United Nations Environment Programme
Division of Technology, Industry and Economics
OzonAction Programme



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CONTENTS

Message from UNEP's Executive Director	7
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Introduction	8
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Control of soil-borne pests

1: Peppers and eggplant in Israel: solarisation	11
2: Tomatoes in Morocco: integrated pest management and grafted plants	14
3: Tomatoes in New Zealand: substrates and <i>Trichoderma</i>	18
4: Tomatoes in Brazil: substrates in seedtrays	21
5: Tomatoes and cucurbits in Egypt: certified organic methods	24
6: Watermelons in Mexico: mulch and soil amendments	27
7: Strawberries in Jordan: solarisation with IPM	30
8: Strawberries in Uruguay: integrated pest management	34
9: Strawberries in Scotland: natural substrates	37
10: Tobacco seedbeds in Argentina: floating seed-trays	40
11: Cut flowers in Colombia: integrated pest management	44
12: Cut flowers in Côte d'Ivoire: natural substrates	49
13: Cut flowers in Mexico: soil amendments and biological controls	52

Control of pests in commodities and structures

14: Grains exported from Australia: IPM and nitrogen treatment	55
15: Stored grains in Cyprus: hermetic storage	58
16: Grain storage facilities in Australia: diatomaceous earth	62
17: Food warehouses in Hawaii: integrated pest management	65
18: Papaya exports from the Cook Islands: heat treatment	68

Annexes

1: About the UNEP DTIE OzonAction Programme	71
2: Contacts for Implementing Agencies	73
3: Glossary and Units	74
4: Index	76

A Word from the Chief of UNEP DTIE's Energy and OzonAction Unit	82
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A Message from UNEP's Executive Director

Methyl bromide is a toxic chemical used to control a broad spectrum of pests in soil, commodities and structures. In the early 1990s, scientists identified methyl bromide as one of the substances contributing to ozone depletion and in response, the Parties to the Montreal Protocol on Substances that Deplete the Ozone Layer agreed in 1997 to a global phase-out schedule. Achieving this phase out is one of the last remaining challenges for ozone layer protection.

Fortunately, the methyl bromide phase out offers a win-win-win situation for agriculture, the environment and human health: carefully-chosen alternative techniques can be cost-effective, protect the ozone layer and improve worker safety at the same time.

UNEP's Methyl Bromide Technical Options Committee (MBTOC) has identified effective alternatives for the vast majority of methyl bromide uses and many of these are in commercial use around the world. Global efforts are now underway to implement these alternatives. Yet, there is the potential for methyl bromide to be replaced with other toxic pesticides that will continue to pose risks to human health and the environment.

Methyl bromide phase out will require a shift towards more environmentally sustainable agricultural practices. Such behavioral changes will come through sustained awareness-raising, training and capacity-building activities to provide farmers with the knowledge and tools needed to adopt alternatives successfully. It will occur only if farmers and policymakers have practical examples of successful alternatives to methyl bromide.

UNEP's *Case Studies on Alternatives to Methyl Bromide* comprises 18 case studies that illustrate non-chemical alternative techniques successfully used for the major crops/commodities using methyl bromide. Based on data collected by more than 30 experts from around the world, each case study contains information on the alternative technique, comparison of yields and performance, comparison of costs, acceptability to regulators and consumers and applicability to other regions and uses. Sources of further information are also provided so that readers can contact organisations and technical experts to obtain more detailed information.

These case studies demonstrate that non-chemical alternatives are not only cost-effective but are also safer for farm workers, local communities and the environment. They show that export producers using these techniques can compete in the international marketplace, where consumers are becoming increasingly concerned about pesticide use.

It is hoped that this document, along with UNEP's other technical resources, will help National Ozone Units in developing countries successfully meet the first methyl bromide control measure required by the Montreal Protocol – the 2002 freeze on methyl bromide consumption and production. Farmers, extension agencies, researchers and other stakeholders can also use these case studies to identify and adopt alternatives to methyl bromide that will maintain agricultural productivity while protecting the global environment.



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