

Global Report on Validated Alternatives to the Use of Methyl Bromide for Soil Fumigation



Cover photo

Alternative to methyl bromide: *Float System* (description on pages 17 - 24)

Global Report on Validated Alternatives to the Use of Methyl Bromide for Soil Fumigation

Edited by
R. Labrada
and
L. Fornasari



The designations employed and the presentation of the material in this publication do not imply the expression of any opinion whatsoever on the part of the Food and Agriculture Organization and the Environment Programme of the United Nations concerning the legal status of any country, territory, city, or area, or of its authorities, or concerning delimitation of its frontiers, or boundaries. Moreover, the views expressed do not necessarily represent the decision of the stated policy of the Food and Agriculture Organization and the Environment

This publication may be reproduced in whole, or in part and in any form for educational, or non-profit, purposes without special permission from the copyright holder, provided that acknowledgment of the source is made. FAO and UNEP would appreciate receiving a copy of any publication that uses this publication as a source.

No use of this publication may be made for resale, or for any other commercial purpose whatsoever without prior permission in writing from FAO, or UNEP.

ã FAO and UNEP 2001

Contacts:

Dr. Ricardo Labrada, Weed Officer
Food and Agriculture Organization of the United Nations - Plant Protection Service
Via delle Terme di Caracalla
00100 Rome, ITALY
Tel. +39-0657054079
Fax. +39-0657056347
E-mail: Ricardo.Labrada@FAO.org
Website: <http://www.fao.org/WAICENT/FAOINFO/AGRICULT/AGP/AGPP/IPM/Weeds/Default.htm>
Website: http://www.fao.org/WAICENT/FAOINFO/AGRICULT/AGP/AGPP/IPM/Web_Brom/Default.htm

Mr. Rajendra Shende, Chief
Energy and OzonAction Unit
Division of Technology, Industry and Economics
United Nations Environment Programme
Tour Mirabeau
39-43 quai André Citroën

75739 Paris Cedex 15, FRANCE
Tel. +33 1 44 37 1450
Fax. +33 1 44 37 1474
E-mail: ozonaction@unep.fr
Website: <http://www.uneptie.org/ozonaction.html>

This document is available on the FAO website at:
http://www.fao.org/WAICENT/FAOINFO/AGRICULT/AGP/agpp/IPM/Web_Brom/Default/htm and on the UNEP OzonAction
website at: <http://www.uneptie.org/ozonaction.html>

CONTENTS

	<i>Page</i>
Contents	iii
PREFACE	v
List of Contributors	vii
List of Acronyms	viii
COUNTRY REPORTS	
Chapter I - LATIN AMERICA	1
Alternatives for the replacement of Methyl Bromide in Argentina <i>L. A. Salles, D. A. Sosa & A. Valeiro</i>	3
Effective alternatives to Methyl Bromide in Brazil <i>L. A. Salles</i>	13
Chapter II - NORTH AMERICA	25
Field validation of Methyl Bromide alternatives in Florida fresh market vegetable production systems <i>D. O. Chellemi</i>	27
Chapter III – EUROPE	31
Alternatives to Methyl Bromide for soil fumigation in Spain <i>A. Bello, J.A. López-Pérez, L. Díaz-Viruliche and J. Tello</i>	33
Available alternatives for Italy <i>M. L. Gullino</i>	47
Chapter IV – ASIA	61
Approaches for the reduction of the use of Methyl Bromide and alternatives in Japan <i>A. Tateya</i>	63
CHAPTER V – AFRICA	71
Validated alternatives used in Kenya and Morocco <i>M. Ammati and B. Nyambo</i>	73
CONCLUSIONS AND RECOMMENDATIONS	87

PREFACE

Methyl bromide (MeBr) is a fumigant used to control arthropods, nematodes, pathogens and weed seeds in soil in several crops, such as tomatoes, peppers, eggplants, tobacco, strawberries, ornamentals and other crops.

Some years ago it was discovered that this fumigant is a strong chemical depleting the Earth's ozone layer. Its ozone depletion potential is 0.4, i.e. higher than the admissible threshold of 0.2. In addition, it is also known that bromine released by MeBr is 40 times more aggressive than chlorine in breaking down ozone on a per atom basis.

Governments and international agencies aware of the problem have agreed to establish a programme for phasing out the use of MeBr. Since the fumigant is used in several high-income crops the established phase out gives times to the countries for the development of new alternatives to replace MeBr.

During the last five-seven years some projects and activities have been carried out in several countries which had a high consumption of MeBr as a soil fumigant. The work has been applied field research for the development of new alternatives and demonstrations of those highly effective ones in large plots.

As a result of the above work there are available some published materials on new MeBr alternatives, which describe the feasibility and the disadvantage of each new pest control measure. Some of these publications have come out from several workshops and symposia organized in different countries by UNEP, UNIDO and other organizations.

The main purpose of the present report is to provide information of successfully used alternatives in some countries or regions, where MeBr phase out is going on. Although the report often shows the lack of already validated alternatives, particularly for a region like Africa, the material provides enough elements of the technical and economical success of the use of several alternatives as well as those, which are nearly to be introduced into the agricultural practice.

预览已结束，完整报告链接和二维码如下：

https://www.yunbaogao.cn/report/index/report?reportId=5_12243

