

**FACTORS CONTRIBUTING TO SUCCESSFUL PHASE OUT OF
METHYL BROMIDE IN TOBACCO PRODUCTION IN MALAWI**

BY

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1.0 INTRODUCTION

Malawi has been implementing a project to phase out 111 Ozone Depleting Potential (ODP) metric tonnes of Methyl Bromide (MeBr) in the tobacco sector and promote the adoption of three alternative technologies to Methyl Bromide namely Float Tray System, Basamid and Metham Sodium in raising tobacco seedlings. The summary of the project details are as follows:-

Project Title	:	Phase out of all non-essential and Non-QPS Methyl Bromide in Malawi
Project Number	:	00033725 (formerly MLW/01/G61)
Start Date	:	April, 2001
End Date	:	December, 2004
Implementing Agency	:	Agricultural Research and Extension Trust (ARET)
Executing Agency	:	United Nations Development Programme
Total Funding	:	US\$2,999,824
Source of Funding	:	Multilateral Fund

The project has since been extended to May 31, 2006 when it will close down all its activities.

2.0 PROJECT BACKGROUND

The Government of Malawi had its country programme for the protection of the Ozone Layer presented and approved at the 13th Executive Committee Meeting of the Multilateral Fund in July, 1994 in the United States of America. Malawi is party to the Vienna Convention and Montreal Protocol for the protection of the Ozone Layer and ratified the convention and the protocol in March, 1985 and April, 1990 respectively.

Methyl Bromide is one of the Ozone Depleting Substances (ODS), which is being phased out worldwide. Malawi is the second largest user of MeBr in Africa after Zimbabwe. The total MeBr use in Malawi is

estimated at 130.7 tonnes and is mainly used in the tobacco industry (111 ODP tonnes) and grain storage (19.8 ODP tonnes).

Malawi has therefore been implementing the project to phase out the 111 ODP tones that are used in the tobacco industry and promote the use of alternative technologies. The alternative technologies that have replaced MeBr include Basamid, Metham Sodium (Herbifume) and Floating Tray System. The Multilateral Fund for the implementation of the Montreal Protocol through the United Nations Development Programme (UNDP) is funding the project. The Minister of Agriculture launched the project on 9th May, 2001. By implementing the project, Malawi met its commitment of totally phasing out all non-essential and non-critical uses of MeBr by 31st December, 2004. The Agricultural Research and Extension Trust (ARET) is the implementing agency where as the government through the Environmental Affairs Department coordinates the activities of the project and UNDP Malawi facilitates the implementation of the project.

3.0 PROJECT GOAL AND OBJECTIVES

The goal of the project is to phase out MeBr used for tobacco seedbed sterilization in the tobacco sector and introduce ozone friendly technologies. The objectives of the project include the following:-

- 3.1 To phase out 111 ODP metric tonnes of MeBr in the tobacco sector.
- 3.2 To promote ozone friendly alternative technologies to MeBr.
- 3.3 To train farmers how to use the new technologies
- 3.4 To demonstrate to farmers effectiveness of the new technologies
- 3.5 To provide legal framework for banning MeBr
- 3.6 To ensure availability and sustainability of the new technologies in Malawi
- 3.7 To ensure back-up services for farmers

4.0 INSTITUTIONS INVOLVED

The Institutions involved in the implementation of the project include the following:-

- 4.1 Multilateral Fund – Donor
- 4.2 UNDP Malawi – Facilitator
- 4.3 Environmental Affairs Department (EAD) – Coordinator on behalf of Government

- 4.4 Agricultural Research and Extension Trust (ARET) – Implementing Agency
- 4.5 Ministry of Agriculture – Overseer
- 4.6 Tobacco Association of Malawi (TAMA) – Collaborator
- 4.7 National Smallholder Farmers Association of Malawi – Collaborator
- 4.8 Tobacco Control Commission – Collaborator
- 4.9 Agricultural Development and Marketing Corporation – Collaborator
- 4.10 Coordination Unit for Rehabilitation of Environment (CURE)
- 4.11 Ministry of Finance (Treasury)
- 4.12 Pesticide Control Board

5.0 PHASE OUT TARGET AND ACHIEVEMENTS BY YEAR

The following table shows the targets of ODP in metric tonnes per year and also the ODP tonnes achieved per year. By the 31st December, 2004, Malawi had achieved the phase out of 111 ODP tonnes of MeBr used in the tobacco sector.

YEAR	NURSERY BED AREA (HA/YEAR)	TARGET ODP (MT/YEAR)	ACHIEVED ODP (MT/YEAR)
2001	69.5	19.3	20.1
2002	75.3	20.9	22.18
2003	150.4	41.7	34.72
2004	104.8	29.1	34.0
TOTAL	400	111.0	111.0

6.0 COMMON USES OF METHYL BROMIDE IN MALAWI

- 6.1 Tobacco nursery fumigation;
- 6.2 grain storage;
- 6.3 disinfection of warehouses, containers etc.;
- 6.4 Fumigation of structures, food stuffs and perishable goods.

7.0 ALTERNATIVES TO METHYL BROMIDE BEING PROMOTED IN MALAWI

7.1 Chemicals

The chemical alternatives include:

Basamid (Solid formulation) and

Herbifume also called Metham Sodium (Liquid formulation)

7.2 Non-Chemicals

This include Floating Tray System which is also called (Hydroponics or Soilless Culture)

8.0 PROJECT ACTIVITIES

A lot of project activities were initiated and implemented. The activities include the following:-

8.1 Awareness Campaign Programmes

- 8.1.1 TV programmes
- 8.1.2 Radio programmes
- 8.1.3 Press releases
- 8.1.4 Press Conferences
- 8.1.5 SMS Messages on Cellphones
- 8.1.6 Stamping of letters with MeBr Messages
- 8.1.7 Neon display messages at Auction Floors
- 8.1.8 Messages in ARET newsletters

8.2 Promotional materials and activities

- 8.2.1 Calendars
- 8.2.2 T-Shirts
- 8.2.3 Golf-Shirts
- 8.2.4 Bill Boards
- 8.2.5 Conference bags
- 8.2.6 Posters
- 8.2.7 Caps
- 8.2.8 Field Visits
- 8.2.9 Field days
- 8.2.10 Field Demonstrations
- 8.2.11 Training of Trainers (Extension Agents)
- 8.2.12 Farmer Training

8.3 Provision for sustainability

- 8.3.1 Legal framework on MeBr Phase Out in Malawi (MW)
- 8.3.2 Amendments of Environmental Management Act
- 8.3.4 Development of Strategy on MeBr Phase Out in MW
- 8.3.5 Social economic study on MeBr phase out in MW
- 8.3.6 Research on alternative substrates and fertilizers

- 8.3.7 Initiative for local production of pine bark and floating trays
- 8.3.8 Procurement of a pelleting machine
- 8.3.9 Production of manuals on alternatives to Methyl Bromide
- 8.3.10 Study tours
- 8.3.11 Stakeholder workshops

9.0 **ACHIEVEMENTS**

Malawi phased out 111 ODP metric tonnes of MeBr in the tobacco sector. Alternative technologies to Methyl Bromide namely Floating Tray System, Basamid and Herbifume have been adopted by both commercial and smallholder farmers. Many commercial farmers are aware of the alternatives to Methyl Bromide. Many commercial farmers are comfortably using the alternatives to Methyl Bromide. Some smallholder farmers are aware and are able to use alternatives to Methyl Bromide.

10.0 **CHALLENGES AHEAD**

- 10.1 Research into production of substrates using local materials
- 10.2 Production of Float trays locally
- 10.3 Continued farmer training on the use of the new technologies
- 10.4 Availability of inputs mainly Basamid, Herbifume, Floating trays and pine bark compost.
- 10.5 High cost of technologies
- 10.6 Dangers of smuggling Methyl Bromide into Malawi from neighbouring countries
- 10.7 Limited financial resources to support farmer back-up services.

11.0 **CONCLUSION**

Malawi fulfilled her commitment of totally phasing out MeBr use in the tobacco sector by 31st December, 2004. Farmers have adopted the new alternative technologies to Methyl Bromide. ARET will continue advising farmers on how to use the three alternative technologies. Arrangements are in place to make sure that the three alternative technologies to MeBr are readily available in Malawi. Local production of materials initiatives are being put in place.

12.0 **ACKNOWLEDGEMENTS**

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