

# Methyl Bromide: Quarantine and Pre – shipment uses.



**Multilateral Fund**  
for the Implementation of the Montreal Protocol



**National Ozone Unit**  
**Ministry of Environment and Natural Resources**



# **Methyl Bromide: Quarantine and Pre -shipment uses**

**Compilation of National Laws and Regulations  
on use of Methyl Bromide in Sri Lanka**

(Along with the Sinhala and Tamil Translations)

**Author**

**JANADARI RAJAGURU**

Attorney at Law (BA)

Consultant

National Ozone Unit

Ministry of Environment and Natural Resources

**Editor**

**Dr. W.L. SUMATHIPALA**

Director

National Ozone Unit

Ministry of Environment and Natural Resources



## Acknowledgments

This publication on Methyl Bromide: Quarantine and Pre-shipment uses is presented by the National Ozone Unit, Ministry of Environment and Natural Resources.

I am especially grateful to Dr. W.L. Sumathipala Director, National Ozone Unit of the ministry of Environment and Natural Resources for reading entire book and making very Valuble suggestions devoting his precious time and steering me in the right direction to Compile this publication. And my special thank are offered to all the other staff members of the National Ozone Unit for their contributions and assistance. In concluding my sincere thanks goes to Ms. K.Jeevarani *Attorney at Law* for preparation of the document in Tamil language. Finally I thank C.P. Printers and its staff for printing this book handsomly.

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ISBN No 978-955-9120-97-1

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National Ozone Unit,  
Ministry of Environment and Natural Resources  
No.342  
Kotte Road,  
Pitakotte

---

Tel: (94 11) 2811417 Director: (94 11) 2811248 Fax No: 2811417

E-Mail: [ozone@noulanka.lk](mailto:ozone@noulanka.lk)

[WWW.noulanka.lk](http://WWW.noulanka.lk)

## Preface

The Ozone Layer which is situated 20-50km above the earth's surface acts as a protective shield that filters out the dangerous Ultra-Violet radiation originating from the Sun. Through scientific research it has been established that some anthropogenic activities involved in using certain chemical have contributed to the depletion of the Ozone Layer. These chemicals are commonly known as Ozone Depleting Substances (ODS)

In 1987 world, as a result of recognizing the need to protect the Ozone Layer from further depletion, signed the Montreal Protocol on Substances that Deplete the Ozone Layer with the View to protect the Ozone Layer from human activities.

Since 1989 Sri Lanka joined hand to this effort and combined its effort to protect the Ozone Layer and to create a safe environment for the future.

Methyl Bromide (MeBr) is one of the commonly used Ozone Depleting Substance (ODS) in Sri Lanka. In compliance with the Montreal Protocol Sri Lanka has took action to reduce and control Methyl Bromide (MeBr) uses and now has reached Zero level consumption of Methyl Bromide (MeBr) in non Quarantine and Pre shipment purposes. But the statical data now shows that the use of Methyl Bromide (MeBr) for Quarantine and Pre shipment (QPS) purpose has been increased and therefore Sri Lankan Government, considering that as a considerable issue, has given its prior attention to ensure that the Quarantine and Pre shipment (QPS) exemption is duly applied in Sri Lanka.

The purpose of this book is to detail the interpretation of quarantine and pre shipment (QPS) for the due application of Quarantine and pre shipment exemption (QPS) and to raise the awareness among stakeholders on the Quarantine and Pre shipment (QPS) application. Publishing this book is also a contribution towards the very limited study materials available for the benefit to a persons concerned with relating to control of Methyl Bromide (MeBr).

This publication has been made possible by the financial support provided by the Multilateral Fund (MLF) through United Nations (UNDP) Development Programme.

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## What is Methyl Bromide?

Methyl Bromide (MeBr) is a toxic pesticide and odorless, colourless gas that has been used as a soil fumigant and structural fumigant to control pests across a wide range of agricultural sectors. Because of its ability to cause poisonings, neurological damage and reproductive harm, EPA (Environmental Protection Agency USA) classifies Methyl Bromide (MeBr) as a Toxicity Category I compound, the most deadly category of substances.

Methyl Bromide (MeBr) as a fumigant is recognized as an important tool for the control of some pests and diseases, particularly in quarantine plants and plant derived materials. In some cases the quarantine use of Methyl Bromide (MeBr) is critical for preventing spread of plant pests that could have huge economic and/or environmental consequences.

Methyl Bromide (MeBr) is also a potential ozone depleting gas. As a result of these properties, Methyl Bromide (MeBr) is of particular concern in two Multilateral Agreements the Montreal Protocol on Substances that Deplete the Ozone Layer and the International Plant Protection Convention.

## What are MP and IPPC?

The Montreal Protocol aims “to protect the Ozone layer by taking precautionary measures to control equitably total global emissions of substances that deplete it, with the ultimate objective of their elimination on the basis of developments in scientific knowledge, taking in to account technical and economic considerations and bearing in mind the developmental needs of developing countries.” Typically this is being achieved through agreed controls on production and consumption of all Ozone Depleting Substances.(ODS). This protocol has developed in 1985 and entered in to force in 1989 and now it has 192 contracted parties.

The International Plant Protection Convention (IPPC) aims at “Securing common and effective action to prevent the spread and introduction of pest of plants and plant product, and to promote appropriate measures for their control.” In practice IPPC focuses primarily on quarantine issues

related to plants.

The International Plant Protection Convention is a Multilateral Treaty for cooperation on plant protection and health. Article 1 para 1 of the Convention defines its purposes as "securing common and effective action to prevent the spread and introduction of pest of plants and plant products" adopted in 1951, entered into force in 1952 and has since then been amended twice. The Convention is deposited with the Food and Agriculture Organization of the United Nations (FAO) and is implemented through the cooperation of member state governments and regional plant protection organizations. FAO established the convention secretariat in 1992. As of August 2007, the convention had 164 contracting parties.

## MP phase out strategies for Methyl Bromide (MeBr)

Methyl Bromide (MeBr) was recognized as an Ozone Depleting Substances (ODS) under the Montreal Protocol (MP) and control measures for the chemical were introduced in the Copenhagen amendment in 1992 under Article 2H of the protocol (*see figure 1*). Agreed control measures required parties to phase out the production and consumption of Methyl Bromide (MeBr) by 1st January 2005 for developed countries (Article 2 countries according to the MP) and by 1st January 2015 for developing countries (Article 5 countries according to the MP). Three categories of Methyl Bromide (MeBr) use are exempted from phase out under the control measures:

- Use as a chemical feedstock;
- Uses that the parties to the Montreal Protocol deem "critical" under decision IX/6 of the parties to the Protocol subsequent to complete phase out; and
- Use for Quarantine and Pre shipment (QPS) under decisions VI/11, VI/5 and XI/12 of the Protocol.

Under the 1999 amendment, parties to the Montreal Protocol (MP) are required to provide the ozone secretariat statistical data on the annual amount of Methyl Bromide (MeBr) used for Quarantine and Pre

shipment (QPS) purposes. Parties are also urged to implement procedures to monitor the use of Methyl Bromide (MeBr) for Quarantine and Pre shipment (QPS) purposes by commodity quantity (Decision XI/13(6)) The Montreal Protocol (MP) has urged all countries to take action to ensure that the Quarantine and Pre shipment (QPS) exemption is correctly applied and the alternative treatments are developed.

### Article 2H: Methyl bromide

1. Each party shall ensure that for the twelve-month period commencing on 1 January 1995, and in each twelve-month period thereafter, its calculated level of consumption of the controlled substance in Annex E does not exceed, annually, its calculated level of consumption in 1991. Each Party producing the substance shall, for the same period, ensure that its calculated level of production of the substance does not exceed, annually, its calculated level of production in 1991. However, in order to satisfy the basic domestic needs of the Parties operating under paragraph 1 of Article 5, its calculated level of production may exceed that limit by up to ten per cent of its calculated level of production in 1991.
2. Each party shall ensure that for the twelve-month period commencing on 1<sup>st</sup> January 1999, and in the twelve-month period thereafter, its calculated level of consumption of the controlled substance in Annex E does not exceed, annually, seventy-five per cent of its calculated level of consumption in 1991. Each Party producing the substance shall, for the same periods, ensure that its calculated level of production of the substance does not exceed, annually, seventy-five per cent of its calculated level of production in 1991. However, in order to satisfy the basic domestic needs of the Parties operating under paragraph 1 of Article 5, its calculated level of production may exceed that limit by up to ten per cent of its calculated level of production in 1991.
3. Each party shall ensure that for the twelve-month period commencing on 1<sup>st</sup> January 2001, and in the twelve-month period thereafter, its calculated level of consumption of the controlled substance in Annex E does not exceed, annually, fifty per cent of its calculated level of consumption in 1991. Each Party producing the substance shall, for the same periods, ensure that its calculated level of production of the substance does not exceed, annually, fifty per cent of its calculated level of production in 1991. However, in order to satisfy the basic domestic needs of the Parties operating under paragraph 1 of Article 5, its calculated level of production may exceed that limit by up to ten per cent of its calculated level of production in 1991.
4. Each party shall ensure that for the twelve-month period commencing on 1<sup>st</sup> January 2003, and in the twelve-month period thereafter, its calculated level of consumption of the controlled substance in Annex E does not exceed, annually, thirty per cent of its calculated level of consumption in 1991. Each Party producing the substance shall, for the same periods, ensure that its calculated level of production of the substance does not exceed, annually, thirty per cent of its calculated level of production in 1991. However, in order to satisfy the basic domestic needs of the Parties operating under paragraph 1 of Article 5, its calculated level of production may exceed that limit by up to ten per cent of its calculated level of production in 1991.
5. Each party shall ensure that for the twelve-month period commencing on 1<sup>st</sup> January 2005, and in each twelve-month period thereafter, its calculated level of consumption of the controlled substance in Annex E does not exceed zero. Each Party producing the substance shall, for the same periods, ensure that its calculated level of production of the substance does not exceed zero. However, in order to satisfy the basic domestic needs of the Parties operating under paragraph 1 of Article 5, its calculated level of production may, until 1<sup>st</sup> January 2002 exceed that limit by up to fifteen per cent of its calculated level of production in 1991; thereafter, it may exceed that limit by a quantity equal to the annual average of its production of the controlled substance in Annex E for basic domestic needs for the period 1995 to 1998 inclusive. This paragraph will apply save to the extent that the Parties decide to permit the level of production or consumption that is necessary to satisfy uses agreed by them to be critical uses.
- 5 bis. Each party shall ensure that for the twelve-month period commencing on 1<sup>st</sup> January 2005 and in each twelve-month period thereafter, its calculated level of production of the controlled substance in Annex E for the basic domestic needs of the Parties operating under paragraph 1 of Article 5 does not exceed eighty per cent of the annual average of its production of the substance for basic domestic needs for the period 1995 to 1998 inclusive.
- 5 ter. Each Party shall ensure that for the twelve-month period commencing on 1<sup>st</sup> January 2015 and in each twelve-month period thereafter, its calculated level of production of the controlled substance in Annex E for the basic domestic needs of the Parties operating under paragraph 1 of Article 5 does not exceed zero.

Figure: 1

## Sri Lanka under the obligation of Montreal Protocol.

Sri Lanka ratified both the Vienna Convention and the Montreal Protocol on 15th December 1989, and acceded to all its subsequent amendments. All member countries to Montreal Protocol (MP) are obliged to phase out the consumption and production of all chemicals identified as Ozone Depleting Substances (ODS).

But the obligation under the Montreal Protocol (MP) depends on the category which the country is classified as all member countries has been categorized in to two groups for the purposes of the Protocol. Thus the developing countries or countries with annual Ozone Depleting Substances (ODS) per capita consumption below 0.3kg are categorized as an Article 5 countries while developed countries or countries with annual Ozone Depleting Substances (ODS) per capita consumption above 0.3kg are categorized as Article 2 countries. Since the national Ozone Depleting Substances (ODS) per capita consumption is far below this level, Sri Lanka is identified as an Article 5 country. Article 5 countries should freeze their annual consumption and / or production of Methyl Bromide (MeBr) at its average of 1995, 1998 level in the year 2002. A total phase out should be achieved by the year 2015.

Following schedule (*see figure 2*) is applicable to Article 5 countries for the phase out of production and / or consumption of Methyl Bromide (MeBr). *Figure 3* shows the reduction of consumption or production of Methyl Bromide (MeBr) Article 5 countries comparatively with Article 2 countries.

Base level:	Average of 1995-98
Freeze:	January 1, 2002.
20 per cent: reduction	January 1, 2005.
100 per cent: reduction	January 1, 2015 (with possible critical use exemptions).

**Applicable to production and consumption, amounts used for Quarantine and Pre shipment (QPS) applications exempted**

Figure:2

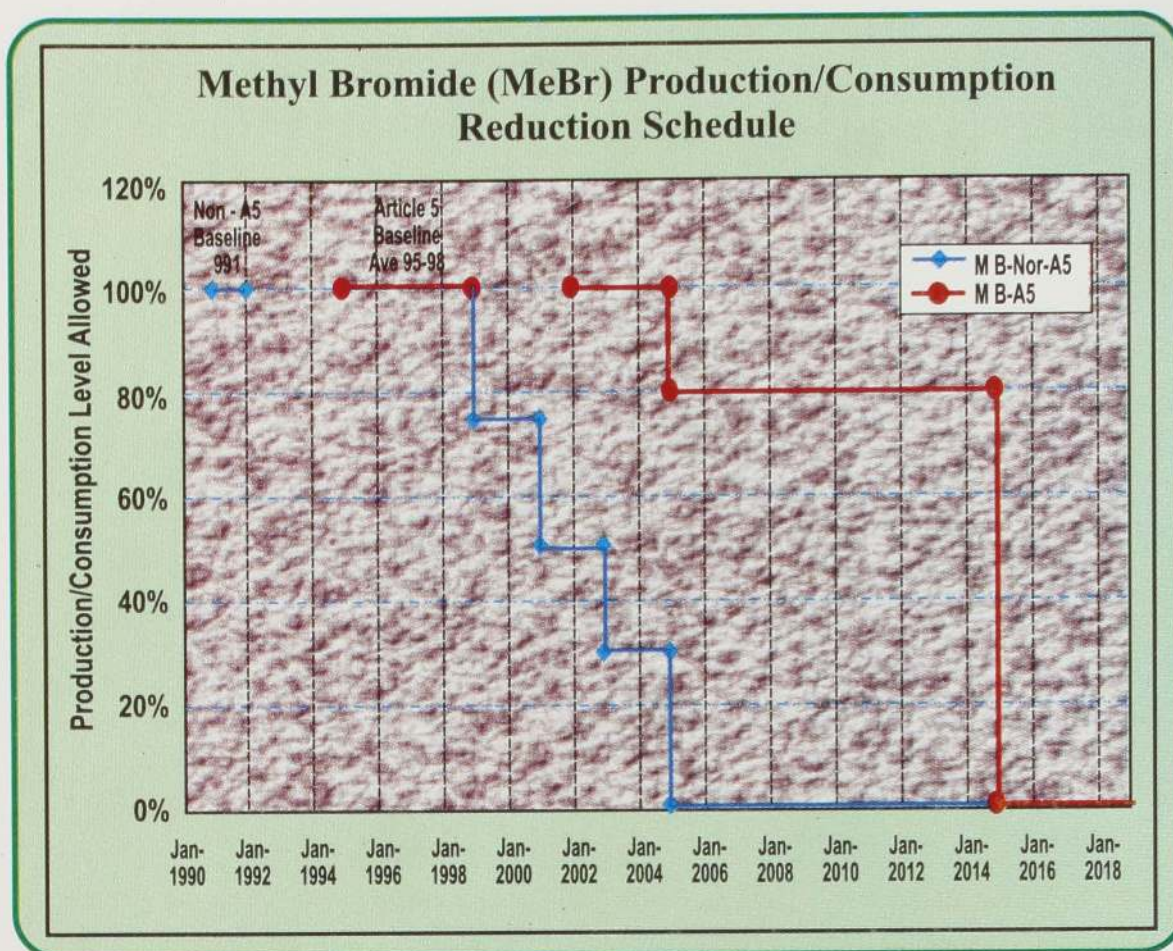


Figure: 3

## Sri Lanka took action to phase out of Methyl Bromide (MeBr)

Sri Lanka used Methyl Bromide (MeBr) as a fumigant extensively for pest control (insects, nematodes, microorganisms and weeds) primarily for soil fumigation, for durable and perishable commodities for warehouses and stored products, for archival materials, and for Quarantine and Pre shipment treatments.

Phase out of Methyl Bromide (MeBr) began in Sri Lanka in the year 1999 following a period of fundamental studies to find out suitable substitutes for Methyl Bromide (MeBr) and technically and economically feasible methods of using of Methyl Bromide (MeBr). Two major projects funded by the Multilateral Fund of the Montreal Protocol through UNDP were successfully completed in Sri Lanka with the intention of phasing out of Methyl Bromide (MeBr). Those projects were to eliminate the use of Methyl Bromide (MeBr) in all remaining uses, emphasizing fumigation, excluding Quarantine and Pre shipment (QPS) applications and to recommend regulatory and other measures that the government of Sri Lanka will put in place to ensure the phase out of use of Methyl Bromide (MeBr).

As a result at present in Sri Lanka the overall quantity of Methyl Bromide (MeBr) used has been reduced to zero in non Quarantine and Preshipment (QPS) purposes, and put in place prospective alternatives to Methyl Bromide (MeBr) for the phase out of its use in Sri Lanka. But the Quantity of Methyl Bromide (MeBr) used under the Quarantine and Pre shipment (QPS) exemption has being increased gradually and that has been currently determined as a considerable issue to which now Sri Lankan government has given its attention.

### **Enforcement of Laws and Regulations governing the import of Methyl Bromide (MeBr)**

Introduction of Import and Export Licensing system for Methyl Bromide (MeBr) is the first regulation imposed in Sri Lanka in relation to the phase out of Methyl Bromide (MeBr) this regulation was enforced by the Gazette Extra Ordinary No 1007/14 dated 24th December 2007 brought under the Import and Export Control Act No. 1 of 1969, ensuring that importation of MeBr do not take place without the knowledge and approval of the competent authority.

Accordingly no person is permitted to import Methyl Bromide (MeBr) in to the country without obtaining a license issued by the controller of import and export.

Every application for a license to import of Methyl Bromide (MeBr) should be made to the controller of import and export with the recommendation of the Registrar of Pesticides (ROP). The Registrar of Pesticides (ROP) shall issue such recommendations only upon satisfactory verification of the legitimacy of the use of previous stock. Satisfactory verification of the legitimacy of the use of previous stock should mean a certification given by a competent government authority. The controller may issue a license subject to conditions as may be deemed necessary and such conditions shall be set out in the license.

Through those prevailing import and export control regulation by now Sri Lanka was enable to maintain the import of Methyl Bromide (MeBr) at zero level but as a precaution for future importation and in order to

effectively enforced the obligations under the Montreal Protocol (MP) in Sri Lanka, Sri Lankan government has taken action for complete elimination of import of Methyl Bromide (MeBr) by the year 2015 only import of Methyl Bromide (MeBr) for 'Critical' 'Quarantine and Pre shipment' purposes is permitted after the year 2015 in terms of the provisions of the Gazette Extra Ordinary No. 1363/29 dated 22nd October 2004 published under Import and Export control Act No. 01 of 1969.

“Critical uses”, “Quarantine” and “Pre Shipment uses” shall have the respective meanings assigned to them in the Montreal Protocol on Substances that Deplete the Ozone Layer, as amended from time to time. Accordingly competent authority should duly identify the interpretation for 'Critical' 'Quarantine and Pre shipment uses' provided under the Montreal Protocol (MP) and is responsible for the due application of Quarantine and Pre shipment (QPS) exemption.



## “Critical”, “Quarantine” and “Pre - shipment” Uses

### How MP defines the words “Critical” and “Quarantine” and “Pre - shipment” Uses?

- "Critical" Uses

Decision IX/6 of the Montreal Protocol defines the term “Critical Uses” and it applies the following criteria and procedures in assessing a critical Methyl Bromide (MeBr) use for the purposes of control measures in Article 2 of the Protocol:

- a. That a use of Methyl Bromide (MeBr) should qualify as “critical” only if the nominating party determines that:
  - i. The specific use is critical because the lack of availability of Methyl Bromide (MeBr) for that use would result in a significant market disruption; and
  - ii. There are no technically and economically feasible alternatives or substitutes available to the user that are acceptable from the standpoint of environment and health and are suitable to the crops and circumstances of the nomination;
- b. That production and consumption, if any, of Methyl Bromide (MeBr) for critical uses should be permitted only if:
  - i. All technically and economically feasible steps have been taken to minimize the critical use and any associated emission of Methyl Bromide (MeBr).
  - ii. Methyl Bromide (MeBr) is not available in sufficient quantity and quality from existing stocks of banked or recycled Methyl Bromide (MeBr), also bearing in mind the developing countries' need for Methyl Bromide (MeBr)
  - iii. It is demonstrated that an appropriate effort is being made to evaluate, commercialize and secure national regulatory approval of alternatives and substitutes,

taking into consideration the circumstances of the particular nomination and the special needs of Article 5 parties, including lack of financial and expert resources, institutional capacity, and information. Non-Article 5 Parties must demonstrate that research programmes are in place to develop and deploy alternatives and substitutes. Article 5 Parties must demonstrate that feasible alternatives shall be adopted as soon as they are confirmed as suitable to the Party's specific conditions and/or that they have applied to the Multilateral Fund or other sources for assistance in identifying, evaluating, adapting and demonstrating such options;

- iii It is demonstrated that an appropriate effort is being made to evaluate, commercialize and secure national regulatory approval of alternatives and substitutes, taking into consideration the circumstances of the particular nomination and the special needs of Article 5 parties, including lack of financial and expert resources, institutional capacity, and information. Non-Article 5 Parties must demonstrate that research programmes are in place to develop and deploy alternatives and substitutes. Article 5 Parties must demonstrate that feasible alternatives shall be adopted as soon as they are confirmed as suitable to the Party's specific conditions and/or that they have applied to the Multilateral Fund or other sources for assistance in identifying, evaluating, adapting and demonstrating such options;

And also to request the Technology and Economic Assessment Panel to review nominations and make recommendations based on the criteria established in paragraphs 1 (a) (ii) and 1 (b) of the present decision and it also says that the present decision will apply to Parties operating under Article 5.

- “Quarantine” and “Pre - shipment” Uses

Most Methyl Bromide (MeBr) by volume, which is used under the Quarantine and Pre shipment (QPS) exemption, involves quarantine treatments targeting quarantine pests. The scope of these treatments is carefully defined by regulatory authorities. The definition of “Quarantine” under the Montreal Protocol (MP) includes control of “quarantine pests”

Decisions VI/11, VII/5 and XI/12 of the Montreal Protocol (MP) explains the terms “Quarantine “ and “Pre shipment” and how they relate to the Quarantine and Pre shipment (QPS) exemption under the Protocol. In summary;

(a) “Quarantine applications” with respect to Methyl Bromide (MeBr), are treatments to prevent the introduction, establishment and/or spread of quarantine pests (including diseases”, or to ensure their official control, where:

I. Official control is that performed by, or authorized by, a national plant, animal or environmental protection or health authority;

II. Quarantine pests are pests of potential importance to the areas endangered, not yet present there, or present but not widely distributed and being officially controlled:

(b) “Pre shipment” applications are those non quarantine applications applied within 21 days prior to export to meet the official requirements of the importing country or existing official requirements of the exporting country. Official requirements are those which are performed by, or authorized by, a national plant, animal, environmental, health or stored product authority”

## Definitions under IPPC

The convention works with the following definitions relevant to quarantine:

- ❖ “Quarantine pest” a pest of potential economic importance to the area endangered, and not yet present there, or present but not widely distributed and being officially controlled:
- ❖ “regulated non Quarantine pest” whose presence in plants for planting affects the intended use of those plants with an economically unacceptable impact and which is therefore regulated within the territory of the importing contracting party;
- ❖ “Regulated pests” a quarantine pest or a regulated non quarantine pest
- ❖ “Official control” The active enforcement of mandatory phytosanitary regulations and the application of mandatory phytosanitary procedures with the objective of eradication or containment of quarantine pests or for the management of regulated non quarantine pests.
- ❖ “Phytosanitary” (agreed interpretations) any legislation, regulation or official procedure having the purpose of preventing the introduction and/or spread of quarantine pests, or to limit the economic impact of regulated non quarantine pests.

## Determining that a Methyl Bromide (MeBr) treatment falls within the Quarantine and preshipment (QPS) exemption under the Montreal Protocol (MP)

If a quarantine pest of the importing country is present in a consignment, or it is determined officially that there is a risk that it could be present, then under the "quarantine" provisions of the Quarantine and Pre shipment (QPS) exception, the consignment of goods may be treated with Methyl Bromide (MeBr) to control that pest.

If the pests that may be present in an exported consignment are not quarantine pests and treatment is carried out within 21 days of export, as required by certain official bodies of the exporting or importing country, then under the Montreal Protocol (MP), Methyl Bromide (MeBr) treatment may come under the "Pre shipment" provisions of the Quarantine and Pre shipment (QPS) exemption.

In both cases, countries are urged to use alternatives where they are technically and economically feasible, even if a Methyl Bromide (MeBr) treatment would be permitted under the Quarantine and Pre shipment (QPS) exemption.

**Logic Diagram for assisting in determining whether a treatment should be categorized as a "Quarantine" treatment, "Pre shipment" treatment or neither.**

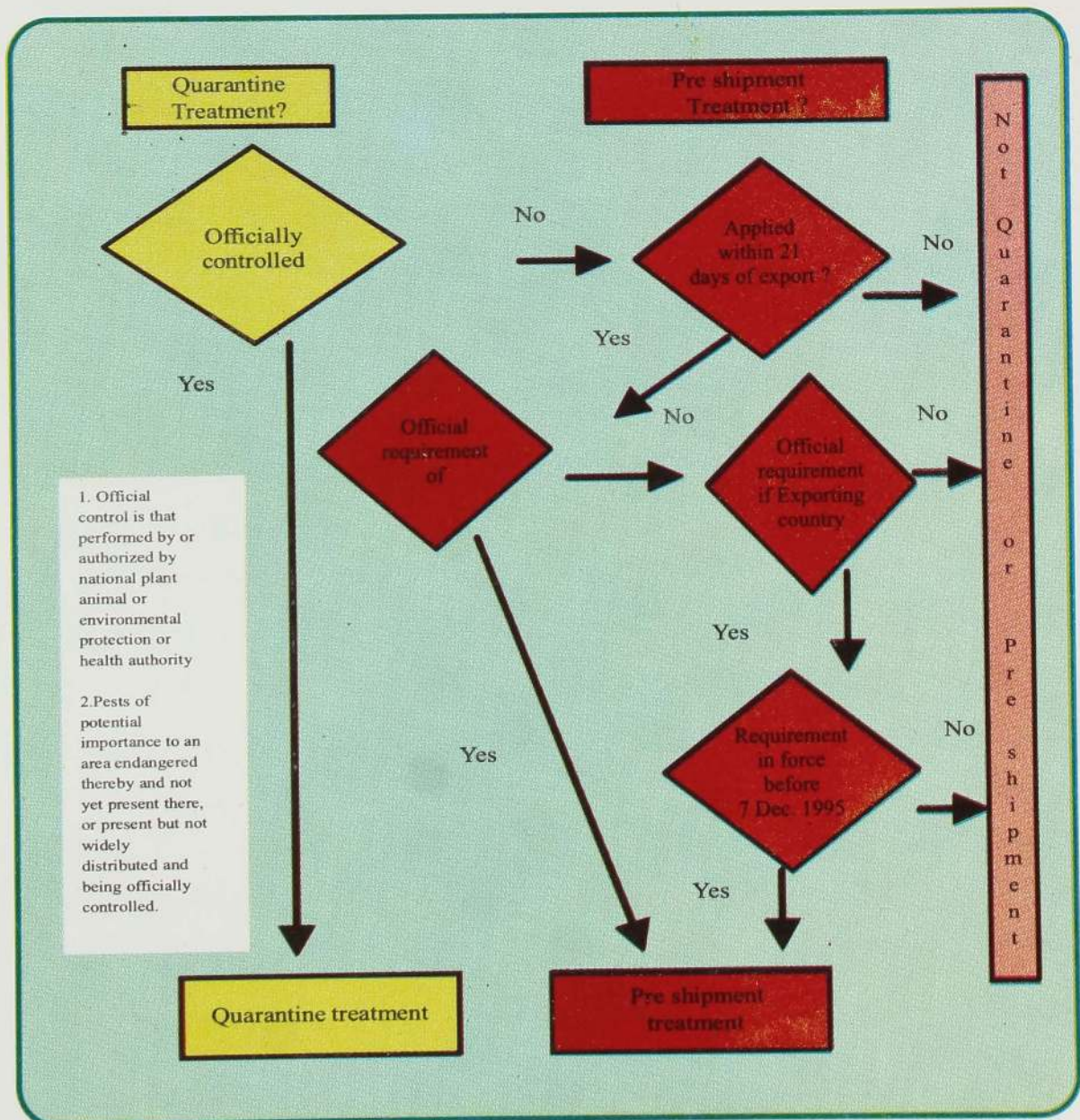


Figure: 4

## Example that may fall under "Quarantine" use

### Official treatment in country of origin:

A Methyl Bromide (MeBr) treatment required by official phytosanitary requirements of an importing country against a quarantine pest known to infest a particular commodity; *Eg:* The khapra Beetle is a quarantine pest in a number of importing countries. Typically Methyl Bromide (MeBr) is specified for its control. As a result the treatment of packed commodities subject to infestation by the khapra beetle for shipment from a country where the khapra beetle is known to be established to a country free from the pest. Methyl Bromide (MeBr) is one of two treatment options approved in ISPM No 15 for the treatment of wood packaging material to help control the spread of quarantine pests, such as Asian longhorn Beetle, in the USA.

### Official treatment of arrival:

Official treatment of imported consignments where a quarantine pest is detected; *Eg:* Methyl Bromide (MeBr) treatment for grape fruit from Florida found to be infested with the Caribbean fruit fly on arrival in Japan. The reason was that the Caribbean fruit fly is a quarantine pest for Japan and MeBr is specified as a control measure.

### Official treatment within a country:

Official treatment of a commodity transported within a country from an area where a quarantine pest is present to an area where it is not present or not widely distributed, and under official control; *Eg:* Methyl Bromide (MeBr) treatment of fresh fruit shipped in to Western Australia from Queensland as a precaution against Queensland fruit fly, which is a pest established in Queensland Australia as the fruit fly is not present in Western Australia and is under official control as a quarantine pest.

### Eradication of quarantine pests from an area:

Treatment of an established quarantine pest with a view to its control and eventual eradication from a country. *Eg:* Methyl Bromide (MeBr)

treatment of dry wood termites in houses and in other structures in Southern Queensland, Australia.

## Example that may fall under Pre shipment use

### Pre shipment treatment of exports in country of origin:

Treatment of a cargo prior to shipment to meet the official requirement of the importing country or existing official requirements of the exporting country; *Eg.* Methyl Bromide (MeBr) treatment of wheat shipments destined for Kenya. The treatments against Cosmopolitan grain pests are carried out in the seven day period prior to export. This is categorized as a Pre shipment application because treatment with Methyl Bromide (MeBr) is an official import requirement of the Kenyan Government for Wheat imported in to Kenya. It is carried out within 21 days of export. Although Kenyan authorities recognize Propane as an alternative to Methyl Bromide (MeBr) for this application, the existence of alternatives does not invalidate the exemption.

### Example that may not fall within the QPS exception

- ❖ Pre shipment treatment carried out greater than 21 days prior to export
- ❖ Treatments carried out for contractual reasons, not officially required or authorized
- ❖ Treatment of land that will grow a crop for export with the land free of quarantine pests recognized at the export destination.

### Alternatives and emission control

Although exempted from control measures leading to phase out under the Montreal Protocol, the Methyl Bromide (MeBr) used in Quarantine and Pre shipment (QPS) applications, still affects the Ozone Layer if it leaks out to the air during fumigation or is vented after the treatment. When considering the definitions of "Quarantine" and "Pre shipment" the parties to the Montreal Protocol (MP) decided, in applying these

definitions all countries are urged to refrain from use of Methyl Bromide (MeBr), and if used parties are urged to minimize the emissions and the use of Methyl Bromide (MeBr) through containment and recovery and recycling methodologies to the maximum extent possible. In many Quarantine and Pre shipment (QPS) situations for which Methyl Bromide (MeBr) can be used there are also approved and feasible non Methyl Bromide (MeBr) alternatives.

For quarantine purposes there are currently only two internationally adopted phytosanitary treatments. These treatments are both for wood packaging material in ISPM No 15 and are a Methyl Bromide (MeBr) treatment and an alternative which is heat treatment.

Most treatments are specific to particular quarantine pest in commodities from a given origin. Often alternative treatments are given. However it is also recognized for certain pest and/or commodities no viable and approved alternative treatment to (MeBr) currently exists.

In 2007, a draft international standard (ISPM) entitled “developing a strategy to reduce or replace the use of Methyl Bromide (MeBr) for phytosanitary purposes” was developed and sent out for a member consultation. This draft recognizes that Methyl Bromide (MeBr) is needed in certain cases but it also outlines the many ways National Plant Protection Organizations can work together to help reduce emission of Methyl Bromide (MeBr) in to the environment including the reduction of use, the use of alternatives and the recycling and recapture of the fumigant.

❖ When Methyl Bromide (MeBr) has to be used, it is important to adopt best practice procedures in carrying out the fumigations. This includes minimizing emissions of Methyl Bromide (MeBr) gas through leakage by ensuring good ceilings in the fumigation enclosure and adjusting dosages, where permitted, to the lowest that can achieve the level of quarantine security sought.



## මීතයිල් බ්‍රෝමයිඩ් : නිරෝධායන සහ පූර්ව නැව්ගත කිරීම්

### මීතයිල් බ්‍රෝමයිඩ් යනු කුමක්ද?

මීතයිල් බ්‍රෝමයිඩ් යනු විස සහිත පලිබෝධනාශකයකි. එය ගණ්ධයක් හා වර්ණයක් රහිත වායුවක් වන අතර පසට දුම් ගැස්සවීමේ කාරකයක් වශයෙන් සහ කෘෂිකාර්මික ක්ෂේත්‍රයේ බහුවිධ පරාසයක් තුළ වසංගත මැඩලීම සඳහා ව්‍යාප්තවන දුම්කාරකයක් වශයෙන් යොදාගනී. වායුවේ ඇති විස සහිත වීම, ස්නායු කෙරේ වන හානි සහ ප්‍රජනන හානි සලකා බලමින් ඇමරිකා එක්සත් ජනපදයේ පාරිසරික ආරක්ෂණ නියෝජ්‍ය ආයතනය මගින් මීතයිල් බ්‍රෝමයිඩ් වඩාත් අන්තර්ජාතික රසායන ද්‍රව්‍යයක් ලෙස විස සහිත බාණ්ඩයේ අංක 1 ගණයට වර්ගීකරණය කර ඇත.

සමහර වසංගත සහ ලෙඩ රෝග විශේෂයෙන් පැලෑටි සහ පැලෑටි ඇති කරන මූල ද්‍රව්‍යයන්හි නිරෝධායන වසංගත පාලනය සඳහා වැදගත් දුම් කාරකයක් වශයෙන් මීතයිල් බ්‍රෝමයිඩ් හඳුනාගෙන ඇත. නිරෝධායන වසංගත සඳහා මීතයිල් බ්‍රෝමයිඩ් යොදා ගැනීම වැදගත් සාධකයක් වන්නේ බොහොමයක් අවස්ථාවලදී විශාල වශයෙන් ආර්ථික හා පාරිසරික බලපෑම් සිදුකරන ශාක වසංගත ව්‍යාප්තවීම මැඩලීම සඳහා යොදා ගැනීමේදීය. මීතයිල් බ්‍රෝමයිඩ් ඕසෝන් වියනට හානිකරන වායුවකි. ඒ අනුව මීතයිල් බ්‍රෝමයිඩ් ප්‍රධාන බහු පාර්ශවික ගිවිසුම් දෙකක අවධානයට යොමුවී ඇත. ඒවා නම් ඕසෝන් ක්ෂයකාරක ද්‍රව්‍ය පිළිබඳව වූ මොන්ට්‍රියල් සන්ධානය සහ ජාත්‍යන්තර ශාක ආරක්ෂක සම්මුතිය යි.

### MP සහ IPPC යනු මොනවාද?

මොන්ට්‍රියල් සන්ධානයේ අරමුණ වනුයේ පූර්ව ආරක්ෂක ක්‍රියා මාර්ග මගින් සහ ඕසෝන් ස්ථරයට හානි කරන ද්‍රව්‍ය ගෝලීය වශයෙන් විමෝචනය වීම පාලනය කිරීම මගින් ඕසෝන් ස්ථරය ආරක්ෂා කිරීමයි. ඒ අනුව “අරමුණු සහගත විද්‍යාත්මක වර්ධනය විද්‍යාත්මක දැනුම මත විද්‍යාත්මක වර්ධනය යන පදනම මත තාක්ෂණික සහ ආර්ථිකමය කරුණු සලකා බලමින් සහ සංවර්ධනය වන රටවල අවශ්‍යතාද සැලකිල්ලට ගනිමින් ඕසෝන් ක්ෂයකාරක ද්‍රව්‍ය වලින් වන ගෝලීය පිටවීම් හා හානිය අඩුකරමින් ඕසෝන් ස්ථරය සුරැකීම සඳහා අවශ්‍ය පාලන ක්‍රමවේදයන් අනුගමනය කිරීම” එහි මූලික අරමුණ ලෙස විග්‍රහ කර ඇත. ඕසෝන් ස්ථරයට හානිකරන රසායන ද්‍රව්‍යන්හි නිෂ්පාදනය සහ පරිභෝජනය පාලනය කිරීම මගින් මෙම තත්ත්වය ලඟාකර ගැනීම මොන්ට්‍රියල් සන්ධානයේ ප්‍රධාන ඉලක්කය වෙයි. 1983 වසරේ දී මොන්ට්‍රියල් සන්ධානය බලගැන්වෙන අතර මේ වන විට ඒ සඳහා

පාර්ශවකාර රටවල් 193 ක් සම්බන්ධ වී ඇත.

ජාත්‍යන්තර ශාක ආරක්ෂක සම්මුතියෙහි ප්‍රධාන අරමුණ වනුයේ ශාක වසංගත ඇතිවීම, ව්‍යාප්තිය වැළැක්වීම සහ ඒවා පාලනයට නිසි පිළියම් වර්ධනය කිරීම සඳහා පොදු සහ බලාත්මක ක්‍රමයක් ස්ථාපිත කිරීමයි. ජාත්‍යන්තර ශාක ආරක්ෂක සම්මුතිය යනු ශාක ආරක්ෂණය සහ සෞඛ්‍ය සඳහා වූ සහයෝගිතාවය සඳහා වන බහු පාර්ශවික ගිවිසුමකි. එහි පළමු වගන්තියේ 1 වන ඡේදය එහි අරමුණු විග්‍රහ කර ඇත. එනම් "ශාක සහ ශාකමය නිෂ්පාදනවල වසංගත ඇතිවීම සහ ව්‍යාප්තිය වැළැක්වීම සඳහා පොදු සහ ප්‍රභල ක්‍රමවේදයක් ස්ථාපිත කිරීම" වශයෙනි. මෙම සම්මුතිය 1951 වසරේදී ආරම්භ වූ අතර 1952 වසරේදී බලාත්මක තත්වයට පත්විය. වර්තමානය වන විට මෙම සම්මුතිය දෙවරක් සංශෝධනයට ලක් කර ඇති අතර 2007 වසර වන විට සම්මුතියට ගිවිසුම්ගත පාර්ශවයන් -164ක් සම්බන්ධ වී ඇත.

## මීතයිල් බ්‍රොමයිඩ් ඕසෝන් ක්ෂයකාරකයක් වශයෙන් දක්වනුයේ කෙසේද?

මොන්ට්‍රියල් සන්ධානයට සන්ධානයේ 2H වගන්තිය යටතේ 1992 වසරේදී ගෙන එන ලද කෝපන්හේගන් සංශෝධනය මගින් හඳුන්වා දුන් රසායනික පාලන ක්‍රමවේදයන්ට අනුව මීතයිල් බ්‍රොමයිඩ් ඕසෝන් ක්ෂයකාරකයක් වශයෙන් හඳුන්වා දී ඇත. එම සඳහන් පරිදි එකඟ වූ පාලන ක්‍රමවේදයන්ට අනුව සංවර්ධිත රටවල් 2005 ජනවාරි 1 දින වන විට මීතයිල් බ්‍රොමයිඩ් නිෂ්පාදනය සහ පරිභෝජනය බැහැර කළ යුතුය. (මොන්ට්‍රියල් සන්ධානයේ 2 වන වගන්තියට අයත් රටවල්) සංවර්ධනය වන රටවල් 2015 ජනවාරි 1 දින වන විට මීතයිල් බ්‍රොමයිඩ් නිෂ්පාදනය සහ පරිභෝජනය සම්පූර්ණයෙන් බැහැර කළ යුතුය. (මොන්ට්‍රියල් සන්ධානයේ 5 වන වගන්තියට අයත් රටවල්) එහෙත් මෙකී පාලන ක්‍රමවේදයන්ට යටත්ව මීතයිල් බ්‍රොමයිඩ් භාවිතය පාලනය කිරීමේදී පහත සඳහන් කර ඇති භාවිතයන් ව්‍යතිරේඛී තත්වයන් ලෙස එම වගන්තියෙන්ම දක්වා ඇත.

- ❖ රසායනික සත්ව ආහාර (chemical feedstock) වශයෙන් භාවිතය
- ❖ මොන්ට්‍රියල් සන්ධානයේ IX/6 නිර්ණායකය යටතේ අත්‍යවශ්‍ය භාවිතය
- ❖ මොන්ට්‍රියල් සන්ධානයේ නිර්ණායක VI/VII, VI/5 සහ XI/12 යටතේ නිරෝධායන සහ පූර්ව නැව්ගත කිරීම් සඳහා භාවිතය.

### Article 2H: Methyl bromide

1. Each party shall ensure that for the twelve-month period commencing on 1 January 1995, and in each twelve-month period thereafter, its calculated level of consumption of the controlled substance in Annex E does not exceed, annually, its calculated level of consumption in 1991. Each Party producing the substance shall, for the same period, ensure that its calculated level of production of the substance does not exceed, annually, its calculated level of production in 1991. However, in order to satisfy the basic domestic needs of the Parties operating under paragraph 1 of Article 5, its calculated level of production may exceed that limit by up to ten per cent of its calculated level of production in 1991.
2. Each party shall ensure that for the twelve-month period commencing on 1<sup>st</sup> January 1999, and in the twelve-month period thereafter, its calculated level of consumption of the controlled substance in Annex E does not exceed, annually, seventy-five per cent of its calculated level of consumption in 1991. Each Party producing the substance shall, for the same periods, ensure that its calculated level of production of the substance does not exceed, annually, seventy-five per cent of its calculated level of production in 1991. However, in order to satisfy the basic domestic needs of the Parties operating under paragraph 1 of Article 5, its calculated level of production may exceed that limit by up to ten per cent of its calculated level of production in 1991.
3. Each party shall ensure that for the twelve-month period commencing on 1<sup>st</sup> January 2001, and in the twelve-month period thereafter, its calculated level of consumption of the controlled substance in Annex E does not exceed, annually, fifty per cent of its calculated level of consumption in 1991. Each Party producing the substance shall, for the same periods, ensure that its calculated level of production of the substance does not exceed, annually, fifty per cent of its calculated level of production in 1991. However, in order to satisfy the basic domestic needs of the Parties operating under paragraph 1 of Article 5, its calculated level of production may exceed that limit by up to ten per cent of its calculated level of production in 1991.
4. Each party shall ensure that for the twelve-month period commencing on 1<sup>st</sup> January 2003, and in the twelve-month period thereafter, its calculated level of consumption of the controlled substance in Annex E does not exceed, annually, thirty per cent of its calculated level of consumption in 1991. Each Party producing the substance shall, for the same periods, ensure that its calculated level of production of the substance does not exceed, annually, thirty per cent of its calculated level of production in 1991. However, in order to satisfy the basic domestic needs of the Parties operating under paragraph 1 of Article 5, its calculated level of production may exceed that limit by up to ten per cent of its calculated level of production in 1991.
5. Each party shall ensure that for the twelve-month period commencing on 1<sup>st</sup> January 2005, and in each twelve-month period thereafter, its calculated level of consumption of the controlled substance in Annex E does not exceed zero. Each Party producing the substance shall, for the same periods, ensure that its calculated level of production of the substance does not exceed zero. However, in order to satisfy the basic domestic needs of the Parties operating under paragraph 1 of Article 5, its calculated level of production may, until 1<sup>st</sup> January 2002 exceed that limit by up to fifteen per cent of its calculated level of production in 1991; thereafter, it may exceed that limit by a quantity equal to the annual average of its production of the controlled substance in Annex E for basic domestic needs for the period 1995 to 1998 inclusive. This paragraph will apply save to the extent that the Parties decide to permit the level of production or consumption that is necessary to satisfy uses agreed by them to be critical uses.
- 5 bis. Each party shall ensure that for the twelve-month period commencing on 1<sup>st</sup> January 2005 and in each twelve-month period thereafter, its calculated level of production of the controlled substance in Annex E for the basic domestic needs of the Parties operating under paragraph 1 of Article 5 does not exceed eighty per cent of the annual average of its production of the substance for basic domestic needs for the period 1995 to 1998 inclusive.
- 5 ter. Each Party shall ensure that for the twelve-month period commencing on 1<sup>st</sup> January 2015 and in each twelve-month period thereafter, its calculated level of production of the controlled substance in Annex E for the basic domestic needs of the Parties operating under paragraph 1 of Article 5 does not exceed zero.

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## මොන්ට්‍රියල් සන්ධානය ආරක්ෂා කිරීම සඳහා ශ්‍රී ලංකාවේ වගකීම

ශ්‍රී ලංකාව 1989 දෙසැම්බර් මස 15 දින ඕසෝන් වියන ආරක්ෂා කිරීම සඳහා වන වියනා සම්මුතියට සහ ඕසෝන් වියනට හානිකර ද්‍රව්‍යය පාලනය කිරීම සඳහා වන මොන්ට්‍රියල් සන්ධානයට එකවර අත්සන් තබන ලදී. වර්තමානය වන විට වියනා සම්මුතිය සහ මොන්ට්‍රියල් සන්ධානය සඳහා පසුව සිදු කරන ලද සියළුම සංශෝධනයන්ටද ශ්‍රී ලංකාව එකඟතාවය පළ කර ඇත.

මොන්ට්‍රියල් සන්ධානය යටතේ වන පාර්ශ්වීය රටක වගකීම සහ බැඳීම රටවල් වර්ගීකරණය මත තීරණය වෙයි. රටක වාර්ෂික ඒක පුද්ගල ඕසෝන් ක්ෂයකාරක ද්‍රව්‍ය පරිභෝජනය කිලෝ ග්‍රෑම් 0.3 ට වඩා අඩු රටවල් විශේෂයෙන් සංවර්ධනය වෙමින් පවතින රටවල් මොන්ට්‍රියල් සන්ධානය යටතේ වගන්ති: 5ට අයත් රටවල් ලෙසද වාර්ෂික ඒක පුද්ගල ඕසෝන් ක්ෂයකාරක ද්‍රව්‍ය පරිභෝජනය කිලෝ ග්‍රෑම් 0.3 වැඩි රටවල් විශේෂයෙන් සංවර්ධිත රටවල් මොන්ට්‍රියල් සන්ධානය යටතේ වගන්ති: 2ට අයත් රටවල් ලෙසද වර්ගීකරණය කර ඇත. ශ්‍රී ලංකාවේ ඕසෝන් ක්ෂයකාරක ද්‍රව්‍යය ඒක පුද්ගල පරිභෝජනය ඉහත කී මට්ටමට වඩා ඉතා පහළ මට්ටමක පවතින බැවින් එකී වර්ගීකරණයට අනුව ශ්‍රී ලංකාව වගන්ති: 5 යටතට ගැනෙන රටක් ලෙස හඳුනාගෙන ඇත.

ශ්‍රී ලංකාව ඇතුළු මොන්ට්‍රියල් සන්ධානයේ වගන්ති: 5 යටතට ගැනෙන රටවල් තම වාර්ෂික මිනයිල් බ්‍රෝමයිඩ් පාරිභෝජනය සහ නිෂ්පාදනය 1995/1998 වසර වල සාමාන්‍ය අගයෙන් 80% ක මට්ටමට 2002 වසරේදී රඳවා ගැනීමට සහ 2015 වසර වන විට 100 % ක නිෂ්පාදන සහ පරිභෝජන මට්ටමට ලගා වීමට අවශ්‍ය ක්‍රියාමාර්ග ගත යුතුය.

එකී ක්‍රියාමාර්ග අනුව යමින් මොන්ට්‍රියල් සන්ධානය යටතේ වගන්ති 5 ට අයත් රටවල් මිනයිල් බ්‍රෝමයිඩ් නිෂ්පාදනය සහ පරිභෝජනය පාලනය කිරීම පහත සැලැස්මට අනුව සිදු කරයි. (සටහන 2 බලන්න) මොන්ට්‍රියල් සන්ධානයේ වගන්ති: 5 ට අයත් රටවල මිනයිල් බ්‍රෝමයිඩ් නිෂ්පාදනය හා පරිභෝජනය අඩු කිරීමේ සැලැස්ම මොන්ට්‍රියල් සන්ධානයේ වගන්ති: 2ට අයත් රටවලට සාපේක්ෂව පහත සටහන 3 මගින් දක්වා ඇත.

මොන්ට්‍රියල් සන්ධානයට ගෙන එන ලද 1999 සංශෝධනය යටතේ සියළු පාර්ශ්වකරුවන් නිරෝධායන සහ පූර්ව නැව්ගත කිරීමේ (QPS) අරමුණ සඳහා මිනයිල් බ්‍රෝමයිඩ්වල වාර්ෂික භාවිතය පිළිබඳ සංඛ්‍යාත්මක දත්ත මහ ලේකම් කාර්යාලය වෙත සැපයීම අවශ්‍ය වේ. ප්‍රමාණාත්මක වශයෙන් නිරෝධායන සහ පූර්ව නැව්ගත කිරීමේ (QPS) අරමුණ සඳහා මිනයිල් බ්‍රෝමයිඩ් භාවිතය පිළිබඳ උපදේශනයට හා මෙහෙයවීමට නිසි ක්‍රමයක්

ස්ථාපනය කිරීමට මොන්ට්‍රියල් සන්ධානය මගින් පාර්ශවකරුවන් පොළඹවා ඇත. (xi/13(6) නිර්ණායකය)

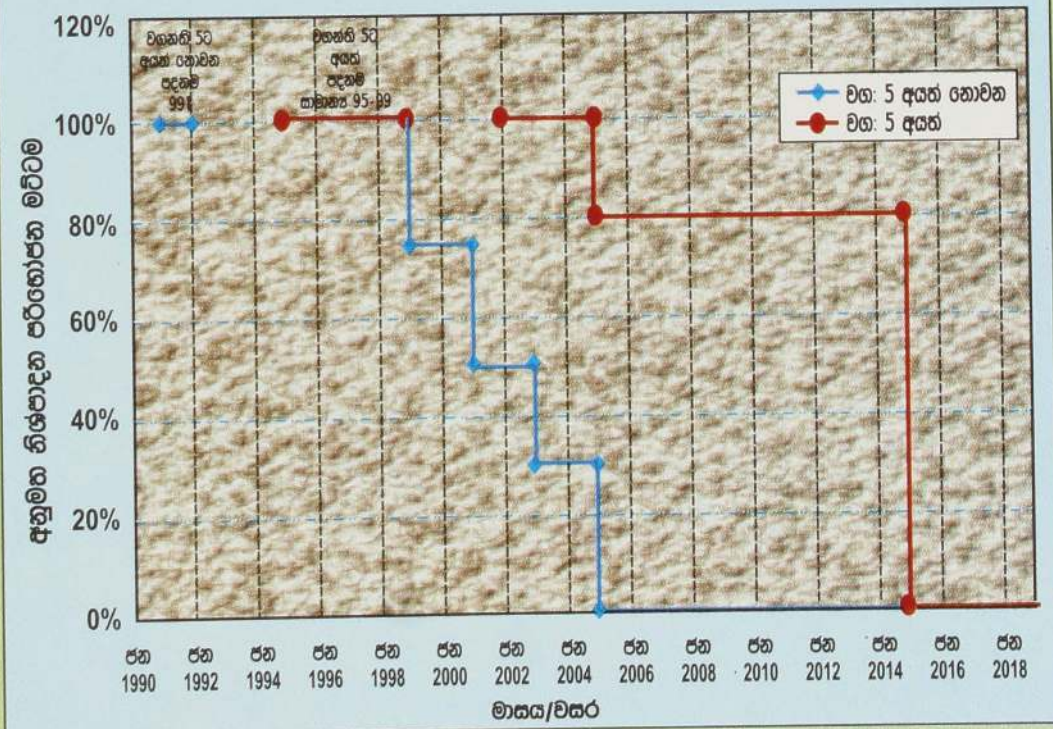
**වගන්ති 5ට අයත් රටවල්**

පදනම	1995/1998 සාමාන්‍ය
අඩු කිරීම	01. 01. 2002
20% අඩු කිරීම	01. 01. 2005
100% අඩු කිරීම	01. 01. 2015 (අත්‍යවශ්‍ය භාවිතයන් සඳහා හැර)

නිරෝධායන සහ පූර්ව නැව්ගත කිරීම් සඳහා වූ ප්‍රමාණයන් නොසලකා හැර ඇත.

සටහන 2

**මිනයිල් බ්‍රෝමයිඩ් නිෂ්පාදනය/පරිභෝජනය අඩු කිරීම් සැලැස්ම**



සටහන 3

### ශ්‍රී ලංකාවේ මීතයිල් බ්‍රෝමයිඩ් භාවිතය

ශ්‍රී ලංකාවේ මීතයිල් බ්‍රෝමයිඩ් ධූමකාරකයක් ලෙස භාවිතා කළ අතර ප්‍රධාන වශයෙන් පලිබෝධනාශකයක් ලෙස කෘමීන්, පත්‍රවන්, කෂුද්‍ර ජීවීන් සහ වල් පැලෑටි මර්ධනය සඳහා බහුලව භාවිතා විය. මූලික වශයෙන්ම පාංශු ධූමකාරකයක් ලෙස සහ කල්පවත්නා සහ විනාශ වන ද්‍රව්‍ය ගබඩා කිරීම සහ ගබඩාගත නිෂ්පාදන, පෞරාණික ද්‍රව්‍ය සහ නිරෝධායන සහ පූර්ව නැව්ගත කිරීම් කටයුතු සඳහා මීතයිල් බ්‍රෝමයිඩ් යොදා ගැනුණි.

ලංකාවේ මීතයිල් බ්‍රෝමයිඩ් පාලන ක්‍රියාදාමය වසර කිහිපයක පූර්ව අධ්‍යයනවලින් පසු 1999 වසරේ දී ආරම්භ වූ අතර ප්‍රධාන වශයෙන්ම මීතයිල් බ්‍රෝමයිඩ් සඳහා ආදේශක හඳුනාගැනීමටත් ඒ සඳහා අවශ්‍ය නිවැරදි තාක්ෂණික ක්‍රමවේදයන් වර්ධනය කිරීම සඳහා අවශ්‍ය ක්‍රමෝපායන් හඳුනාගැනීමටත් පියවර ගැනුණි. ඒ අනුව මොන්ට්‍රියල් සන්ධානය සහ එක්සත් ජාතීන්ගේ සංවිධානය හරහා බහුපාර්ශවීය අරමුදල මගින් ප්‍රතිපාදනය ලැබූ ව්‍යාපෘති දෙකක් ශ්‍රී ලංකාව තුළ මීතයිල් බ්‍රෝමයිඩ් භාවිතය පාලනය කිරීම සඳහා සාර්ථකව ක්‍රියාත්මක වී ඇති අතර සමස්ථයක් වශයෙන් වර්තමානයේ ශ්‍රී ලංකාව තුළ නිරෝධායන සහ පූර්ව නැව්ගත කිරීම් වලට නොවන අරමුණු සඳහා මීතයිල් බ්‍රෝමයිඩ් ආනයනය බන්දු වේ මට්ටමට අඩුවී ඇත. එහෙත් නිරෝධායන සහ පූර්ව නැව්ගත කිරීම් සඳහා වන ආනයනයන්හි ක්‍රමික වර්ධනය මේ වන විට පාලන අධිකාරීන්හි දැඩි අවධානයට යොමු වී ඇති කරුණකි. මෙකී තත්වය පාලනය කිරීමට අවශ්‍ය ක්‍රමෝපායන් විධිමත් කිරීමට ශ්‍රී ලංකාව මෙන්ම වෙනත් රටවල්වල ද අවධානය යොමු විය යුතු බවට මොන්ට්‍රියල් සන්ධානය අවධාරණය කරයි.

### මීතයිල් බ්‍රෝමයිඩ් පාලනය සඳහා අදාළ වන ශ්‍රී ලංකාවේ නීති

1969 අංක 01 දරණ ආනයන සහ අපනයන පාලන පනත යටතට ගැනෙන 1994 දෙසැම්බර් 24 දිනැති අංක 1007/14 දරණ අතිවිශේෂ ගැසට් පත්‍රය මගින් මීතයිල් බ්‍රෝමයිඩ් ආනයනය සහ අපනයනය ආනයන අපනයන බලපත්‍ර ක්‍රමය යටතට ගෙන ඇත. එකී රෙගුලාසිය මගින් නිසි අධිකාරයක දැනුම සහ අවසරය නොමැතිව මීතයිල් බ්‍රෝමයිඩ් ආනයනය සිදු නොවන බව තහවුරු කෙරෙන අතර ආනයන සහ අපනයන පාලන පනතේ ප්‍රතිපාදන යටතේ කිසියම් තැනැත්තෙකු විසින් එහි නිශ්චිතව දක්වා ඇති නිසි අධිකාරයක හෝ පාලකවරයා විසින් නිශ්චිතව දක්වා ඇති කොන්දේසි යටතේ හැරුණු විට මීතයිල් බ්‍රෝමයිඩ් රට තුළට ආනයනය කිරීම හෝ රටෙන් පිටතට අපනයනය කිරීම තහනම් කර ඇත.

මීතයිල් බ්‍රෝමයිඩ් ආනයනය සඳහා වන බලපත්‍රයක් සඳහා අයදුම්පත්‍රය පලිබෝධනාශක රෙජිස්ටාර්වරයාගේ අනුමැතිය සමග ආනයන අපනයන

පාලකවරයා වෙත ඉදිරිපත් කළ යුතුය. පළිබෝධනාශක රෙජිස්ටාර්වරයා විම නිර්දේශය පූර්ව තොග වල උචිත භාවය පිළිබඳ නිසි පරීක්ෂණයකින් පසුව සිදු කරයි. පූර්ව තොගවල උචිත භාවය යන්නෙන් අදහස් වුනයේ එකී තොග නිසි අධිකාරයක සහතිකයක් යටතේ යොදවා ඇති බවට සහතික වීමකි. ආනයන අපනයන පාලකවරයාට විම ආනයන අපනයන බලපත්‍රය අවශ්‍ය කොන්දේසි වලට යටත්ව නිකුත් කිරීමේ අධිකාරය ඇත.

1969 අංක 01 දරණ ආනයන අපනයන පාලන පනත යටතේ ගෙන එන ලද 2004 ඔක්තෝම්බර් මස 22 දිනැති අංක 1363/29 දරණ අතිවිශේෂ ගැසට් නිවේදනයට අනුව නිරෝධායන සහ පූර්ව නැව්ගත කිරීම් සහ අත්‍යවශ්‍ය භාවිතය යන ව්‍යතිරේඛයන් සඳහා හැර අන් කිසිදු කාරණයක් සඳහා මිනයිල් බ්‍රෝමයිඩ් ආනයනය 2015 ජනවාරි 01 දිනෙන් පසුව තහනම් කර ඇත. අත්‍යවශ්‍ය භාවිතය සහ නිරෝධායන සහ පූර්ව නැව්ගත කිරීම් යන ව්‍යතිරේඛයන්හි අර්ථ නිරූපණයන් ඒවාට මොන්ට්‍රියල් සංධානය මගින් සපයා ඇති අර්ථ නිරූපණයන්ට සහ වරින්වර කරන ලද සංශෝධනවලට යටත් කර අර්ථ නිරූපණය කර ඇත.

## මොන්ට්‍රියල් සන්ධානයට අනුව "අත්‍යවශ්‍ය භාවිතය", "නිරෝධායන සහ පූර්ව නැව්ගත කිරීම්" යන්නට ලබා දී ඇති අර්ථ නිරූපණයන්

### අත්‍යවශ්‍ය භාවිතය (Critical uses)

මොන්ට්‍රියල් සන්ධානයේ IX/6 වන තීරණය අත්‍යවශ්‍යය ප්‍රයෝජන (Critical uses) යන්න අර්ථ දක්වයි. මොන්ට්‍රියල් සන්ධානයේ 2 වන වගන්තිය යටතේ දැක්වෙන පාලන නියමයන් සඳහා මිනයිල් බ්‍රෝමයිඩ්වල අත්‍යවශ්‍ය භාවිතය තීරණය කිරීමේදී පහත සඳහන් නිර්ණායකයන් සහ ක්‍රියාමාර්ග යොදා ගැනේ.

- අ) මිනයිල් බ්‍රෝමයිඩ්හි භාවිතය "අත්‍යවශ්‍ය" යන්න තීරණය කරනු ලබන්නේ අයදුම්කාර පාර්ශවය පහත සඳහන් කරුණු තහවුරු කරන්නේ නම් පමණි.
  - i විම භාවිතය අත්‍යවශ්‍ය වනුයේ විම ප්‍රයෝජනය සඳහා වන මිනයිල් බ්‍රෝමයිඩ් ප්‍රමාණය හිඟකමේ ප්‍රතිඵලයක් වශයෙන් සැලකිය යුතු වෙළඳපොළ බිඳ වැටීමක් සිදු වී තිබීම.
  - ii පාරිසරික හා සෞඛ්‍යමය අංශයෙන් පිළිගත හැකි තාක්ෂණික හෝ සකසුරුවම් සාධ්‍ය විකල්පයක් හෝ යෝජිත තත්වයන්ට සහ අස්වැන්නට ගැලපෙන ආදේශකයක් නොතිබීම

ආ) මීතයිල් බ්‍රෝමයිඩ් නිෂ්පාදනය හෝ පරිභෝජනය අත්‍යවශ්‍යය ප්‍රයෝජන සඳහා අවසර ලැබෙනුයේ පහත කරුණු වලට අනුගත වේ නම් පමණි.

- i මීතයිල් බ්‍රෝමයිඩ් හි අත්‍යවශ්‍යය ප්‍රයෝජනය සඳහා සමස්ත මීතයිල් බ්‍රෝමයිඩ් පිටවීම අවම කිරීමට තාක්ෂණික සහ සුක්ෂම සාධක ක්‍රියා මාර්ග ගෙන තිබීම.
- ii ප්‍රමාණාත්මක සහ ගුණාත්මක ප්‍රතිවක්‍රීකරණය කරන ලද හෝ පවත්නා ගබඩාකරන ලද මීතයිල් බ්‍රෝමයිඩ් නොතිබීම.
- iii වීම තීරණයන්ට අනුව සහ වගන්ති 5 ට අයත් රටවල අවශ්‍යතාවයන් වනම් මූල්‍යමය සහ විශේෂඥ සම්පත් ආයතනික ශක්තිය සහ තොරතුරු සැලකිල්ලට භාජනය කරමින් යෝග්‍ය නිසි උත්සාහයන් වාණිජමය සහ ආරක්ෂිත ජාතික විධිමත් අනුමත කිරීම් සහ සැලැස්මක් යොදා ඇති බවද පෙන්නුම් කළ යුතුය.

විකල්ප සහ ආදේශක වැඩි දියුණු කිරීම් සහ ඒවා සවල තත්වයකට ගෙන ඒම පිළිබඳ සමීක්ෂණ වැඩසටහන් ක්‍රියාත්මක වන බව වගන්ති: 5 ට අයත් පාර්ශවයන් පෙන්නුම් කළ යුතුය.

සන්ධානයේ වගන්ති 5 ට අයත් රටවල් වීම සාධක විකල්ප වඩා වම පාර්ශවයේ විශේෂිත කොන්දේසි වලට ගැලපෙන බව තහවුරු වූ සැනින් චිකි විකල්ප ක්‍රම වෙත යන බව පෙන්නුම් කළ යුතුය. සහ/හෝ ඔවුන් විවැනි විකල්ප හඳුනා ගැනීමට විශ්ලේෂණය කිරීමට සහ යොදා ගැනීමට සහ ඔප්පුකර ගැනීමට සහාය සඳහා බහු පාර්ශවීය අරමුදලට හෝ වෙනත් මූල්‍යයන්ට යොමු කර තිබිය යුතුය. තවද වම තීරණයේ දක්වා ඇති වගන්ති 1 (අ)(ii) සහ 1 (ආ) මත පදනම්ව වම යෝජනාවන් විමසා බැලීමට සහ නිර්දේශයන් නිකුත් කිරීමට තාක්ෂණික හෝ ආර්ථික තක්සේරු කම්පුවක් සඳහා ඉල්ලීමක් කළ යුතුය.

**"නිරෝධායන සහ පූර්ව නැව්ගත කිරීම්" Quarantine and Pre shipment**

නිරෝධායන සහ පූර්ව නැව්ගත කිරීම් (QPS) යන ව්‍යතිරේඛය යටතේ මීතයිල් බ්‍රෝමයිඩ් විශාල ප්‍රමාණයක් නිරෝධායන ප්‍රතිකර්ම සඳහා නිරෝධායන වසංගත ඉලක්ක කොට ගෙන යොදා ගැනේ. මෙම ප්‍රතිකර්මයන්හි අවකාශය සුක්ෂමව ව්‍යවස්ථාපිත අධිකාරීන් විසින් නිර්වචනය කර ඇත. මොන්ට්‍රියල් සන්ධානය යටතේ නිරෝධායන යන නිර්වචනයට නිරෝධායන වසංගත මර්ධනයද ඇතුළත් වෙයි.



මොන්ට්‍රියල් සන්ධානයේ VI/11 ; VII/5 සහ XI/12 යන තීරණයන් නිරෝධායන සහ පූර්ව නැව්ගත කිරීම් යන වචන පැහැදිලි කරන අතර ඒවා නිරෝධායන සහ පූර්ව නැව්ගත කිරීම් (QPS) යන ව්‍යතිරේඛයට සම්බන්ධ වන අයුරුද පැහැදිලි කරයි.

සංකෂිප්ත වශයෙන්

- (අ) මීතයිල් බ්‍රෝමයිඩ් සම්බන්ධයෙන් නිරෝධායන යොදා ගැනීම යනු හදුන්වාදීම, සංස්ථාපනය සහ/හෝ නිරෝධායන වසංගත ව්‍යාප්ත වීම සඳහා වන ප්‍රතිකර්ම හෝ නිසි මර්ධනයන් තහවුරු කිරීම වෙයි.
  - i මර්ධනය (Official control) ජාතික ශාක, සත්ව හෝ පාරිසරික ආරක්ෂා කිරීමේ හෝ සෞඛ්‍යමය අධිකාරිය විසින් හෝ ඒ මඟින් බලය පැවරීමෙන් සිදු කරන ලද මර්ධනයක් නම්.
  - ii නිරෝධායන වසංගත එකී ප්‍රදේශයට වැදගත්කමක් දරන්නක් සහ එහි දැනට නොපවතින හෝ පුළුල් ලෙස ව්‍යාප්ත නොවූ සහ මර්ධනය කරන ලද වසංගතයක් නම්
- (ආ) 'පූර්ව නැව්ගත කිරීම් සඳහා යොදා ගැනීම යනු නිරෝධායන නොවන යොදා ගැනීම් වන අතර අපනයනයට දින 21කට ප්‍රථම ආනයනික රටේ නිල කොන්දේසියකට (ඉල්ලීමකට) හෝ අපනයනික රටේ පවත්නා නිල කොන්දේසියකට අනුව යොදා ගැනීම වෙයි.

නිල ඉල්ලීමක් යනු ජාතික ශාක, සත්ව, පාරිසරික සෞඛ්‍යමය හෝ ගබඩාගත නිෂ්පාදන පිළිබඳ අධිකාරියක් විසින් කරන ලද හෝ එහි බලය පැවරීමෙන් කරන ලද ඉල්ලීම් හෝ කොන්දේසියක් විය යුතුය.

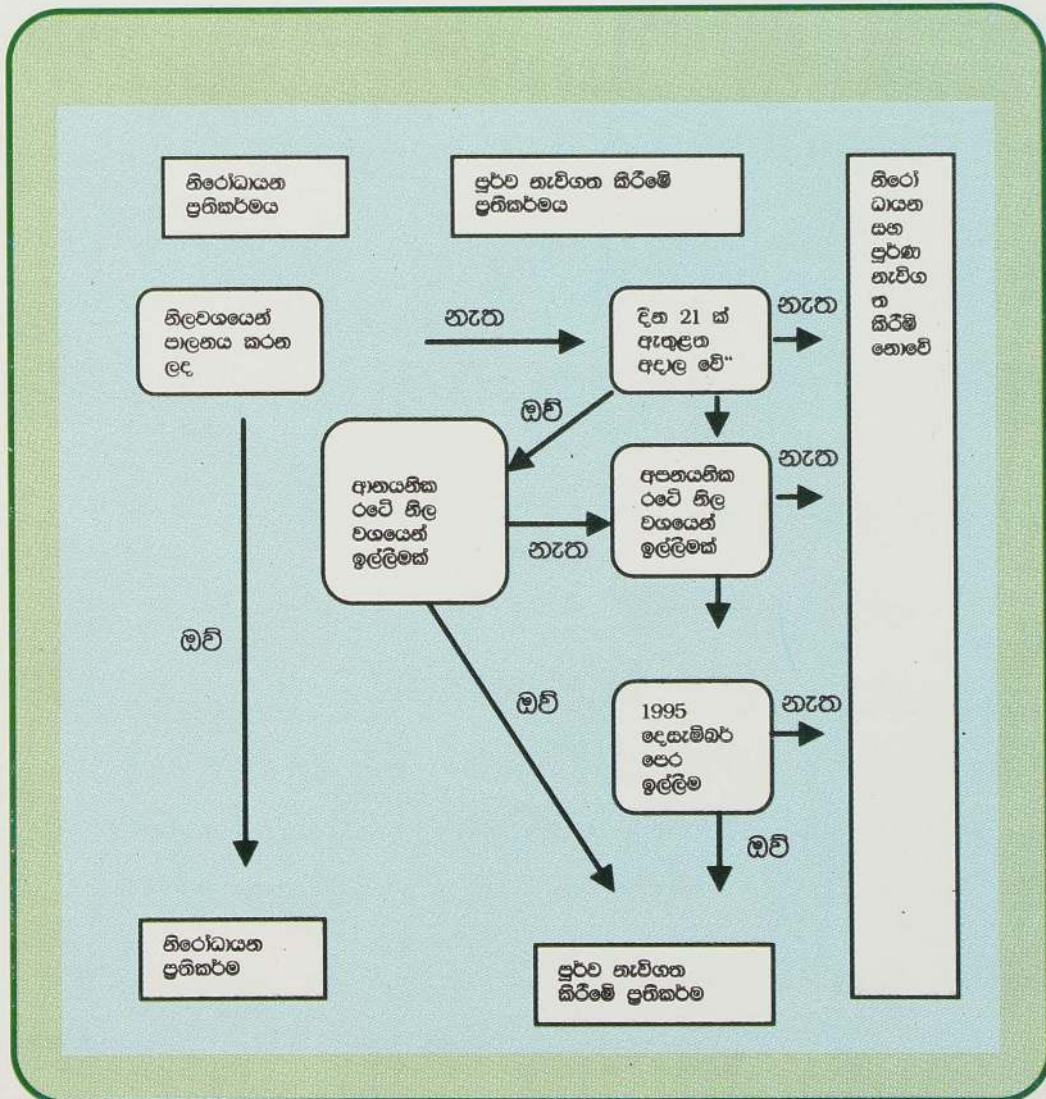
### IPPC යටතේ නිර්වචන

'නිරෝධායන' යන්න සම්මුතිය විසින් පහත ආකාරයට නිර්වචනය කර ඇත.

- ❖ 'නිරෝධායන වසංගත' ප්‍රදේශයේ ප්‍රභල ආර්ථික වැදගත්කමක් දරන සහ ඒ මඟින් අවධානමට ලක්වූ සහ වර්තමානයේ නොපවත්නා හෝ පුළුල් ලෙස ව්‍යාප්ත නොවූ මර්ධනය කරන ලද වසංගතයක්.
- ❖ 'පාලිත නිරෝධායන නොවන වසංගත' ශාක/පැලෑටි වැවීමට බලපාන ආර්ථිකමය වශයෙන් පිළිගත නොහැකි බලපෑමක් ඇති සහ එහෙත් එම ආනයනික ප්‍රදේශය තුළ පාලනයට ලක්කරන ලද්දකි.

- ❖ 'පාලිත වසංගත' නිරෝධායන වසංගත හෝ පාලිත නිරෝධායන නොවන වසංගත වෙයි.
- ❖ 'නිල පාලනය' අනිවාර්ය කොන්දේසි වල ක්‍රියාකාරී බල ගැන්වීම සහ අනිවාර්ය ක්‍රියා පිළිවෙත් යොදා ගැනීම, නිරෝධායන වසංගත මුලින්ම නැති කිරීම හෝ මර්ධනය වීම වැළැක්වීම හෝ පාලිත නිරෝධායන වසංගත කළමනාකරණය අරමුණු කොට ගෙන ඇත.
- ❖ phytosanitary (චකඟවන ලද අර්ථ නිරූපණය) යම් ව්‍යවස්ථාවක්, රෙගුලාසියක් හෝ නිල ක්‍රියා පිළිවෙතක්, නිරෝධායන වසංගත මර්ධනය සහ/හෝ ව්‍යාප්තවීම වැළැක්වීමට සහ/හෝ පාලිත නිරෝධායන නොවන වසංගතයන්හි ආර්ථිකමය සීමා කිරීම අරමුණු කර ගැනෙයි.

### නිරෝධායන හා පූර්ව නැව්ගත කිරීමේ ප්‍රතිකර්ම හඳුනාගැනීම පහසුවන රූප සටහන



## මොන්ට්‍රියල් සන්ධානය යටතේ නිරෝධායන සහ පූර්ව නිව්ගත කිරීම් (QPS) ව්‍යාතිරේඛයට යටත් වන මිනයිල් බ්‍රෝමයිඩ් ප්‍රතිකර්ම හඳුනා ගැනීම.

ආනයනික රටේ නිරෝධායන වසංගත වර්තමානයේ භාර ගෙන ඇත්නම් හෝ ඒ අවස්ථාවේ අවධානමක් ඇති බව නිල වශයෙන් හඳුනාගෙන ඇත්නම් නිරෝධායන සහ පූර්ව නිව්ගත කිරීම්(QPS) යන ව්‍යාතිරේඛයේ නිරෝධායන ප්‍රතිපාදන යටතේ එම භාණ්ඩ සඳහා මිනයිල් බ්‍රෝමයිඩ් යොදා ගත හැක.

අපනයනික භාණ්ඩ තොගය වසංගත අවස්ථාවේ දී පවතී නම් වය නිරෝධායන වසංගතයක් නොවන අතර ප්‍රතිකර්මය අපනයනය කර දින 21 ක් ඇතුළත ආනයනික හෝ අපනයනික රටේ නිසි අධිකාරියක් හෝ ඉල්ලීමක් මත සිදු කරයි නම් එම මිනයිල් බ්‍රෝමයිඩ් ප්‍රතිකර්මය මොන්ට්‍රියල් සන්ධානය යටතේ වන නිරෝධායන සහ පූර්ව නිව්ගත කිරීම් (QPS) ව්‍යාතිරේඛයේ පූර්ව නිව්ගත කිරීම් ලෙස සැලකේ. එම අවස්ථා දෙකෙහිදීම රටවල් අවසරලත් තාක්ෂණික හා ආර්ථිකමය වශයෙන් සාධ්‍ය විකල්ප භාවිතා කිරීමට පොළඹවා ඇත.

### නිරෝධායන භාවිතය යටතේ උදාහරණ කිහිපයක්

#### 1. මූල රටෙහි නිල පිළියම්

යම් විශේෂිත වූ කාණ්ඩයක් යටතේ උපද්‍රව කරන නිරෝධායන වසංගත මැඩලීම සඳහා ආනයනික රටේ නිල වශයෙන් වූ ඉල්ලීමක් වශයෙන් මිනයිල් බ්‍රෝමයිඩ් පිළියම.

උදා :- Khapra Battle යන නිරෝධායන වසංගතය මැඩපැවැත් වීම සඳහා මිනයිල් බ්‍රෝමයිඩ් අත්‍යවශ්‍ය වූ අවස්ථාවකදී එම උපද්‍රව්‍ය පවතින රටකින් එම Khapra Battle උපද්‍රවය සමග ඇසුරුම් කරන ලද භාණ්ඩ වලට පිළියම් යෙදීමට මිනයිල් බ්‍රෝමයිඩ් භාවිතය එකී භාණ්ඩ එම වසංගතයෙන් තොරව වෙනත් රටකට නිව්ගත කිරීමට අත්‍යවශ්‍ය සාධකයක් වීම.

#### 2. ලඟා වීමේ නිල පිළියම්

නිරෝධායන වසංගතයක් ලෙස හඳුනාගත් පසු ආනයනික භාණ්ඩ තොගය සඳහා නිල වශයෙන් පිළියම් යෙදීම.

උදා :- ෆොලොරිඩාවෙන් ගෙන එන ලද මිදි තොගය ජපානයට ලඟා වීමේදී කැරිබියන් පළතුරු මැස්සා (Caribbean Fruit Fly) විසින් උපද්‍රව කර තිබුණි. එයට හේතුව වූයේ කැරිබියන් පළතුරු මැස්සා ජපානයේ නිරෝධායන වසංගතයක් වීමයි. මෙය පාලනය සඳහා මිතයිල් බ්‍රෝමයිඩ් අත්‍යවශ්‍ය සාධකයක් වීම.

### 3. රට තුළ නිල පිළියම්

යම් භාණ්ඩ ප්‍රමාණයක් නිරෝධායන වසංගතයක් පවතින ප්‍රදේශයකින් රට තුළ වීම වසංගතය නොපවතින හෝ පුළුල් ලෙස ව්‍යාප්ත නොවූ සහ නිල වශයෙන් පාලිත ප්‍රදේශයකට ප්‍රවාහනය කරයි නම් නිල පිළියම.

උදා :- ඕස්ට්‍රේලියාවේ Queensland වලින් බටහිර ඕස්ට්‍රේලියාවට නැව්ගත කළ පළතුරු වලට පූර්ව පිළියමක් වශයෙන් මිතයිල් බ්‍රෝමයිඩ් පිළියම යෙදීම. මන්ද පළතුරු මැස්සා (Fruit fly) Queensland හි ව්‍යාප්ත වූ නිරෝධායන වසංගතයක් වන අතර මෙය බටහිර ඕස්ට්‍රේලියාවේ නොමැති හෝ පුළුල් ලෙස ව්‍යාප්ත නොවූ නිල වශයෙන් පාලිත අවස්ථාවක් වීම.

### 4. යම් ප්‍රදේශයකින් නිරෝධායන වසංගතයක් පළවා හැරීම.

යම් රටක් තුළ ව්‍යාප්ත වූ නිරෝධායන වසංගතයක් පාලනයට හෝ රට තුළින් පලවා හැරීමට පිළියම් යොදා ගැනීම.

උදා :- ඕස්ට්‍රේලියාවේ නිවෙස් වල සහ වෙනත් ස්ථාන වල ව්‍යාප්ත වූ වියලි ලී වලට උපද්‍රව කරන වේයා පාලනය කිරීමට පිළියම් වශයෙන් මිතයිල් බ්‍රෝමයිඩ් අත්‍යවශ්‍ය සාධකයක් වීම.

### පූර්ව නැව්ගත කිරීම් යටතේ නිදර්ශන කිහිපයක්

පූර්ව නැව්ගත කිරීම සඳහා පිලියම්, ආනයනිකව කරනු ලැබූ නිල වශයෙන් වන ඉල්ලීමකට හෝ අපනයනය කරන රටේ පවතින නිල අවශ්‍යතාවයක් සපුරාලීම සඳහා, භාණ්ඩ තොගය දියත් කිරීමට ප්‍රථම පිලියම් යෙදීම පූර්ව නැව්ගත කිරීම් යටතට ගැනෙයි.

උදා :- පිටි නැව්ගත කිරීමකට මිතයිල් බ්‍රෝමයිඩ් පිලියම යෙදීම. අපනයනය කිරීමට දින 7 කට පෙර කොස්මො පොලිටන් ග්‍රේන් විසංගතය (cosmopolitan grain pests) මැඩලීම සඳහා පිලියම් යෙදවීම. මෙය පූර්ව නැව්ගත කිරීම් කොටසට ලා සැලකෙන්නේ කෙන්නාවට පිටි අපනයනය කිරීම සම්බන්ධයෙන් කෙන්නා ආණ්ඩුවට නිල ආනයන අවශ්‍යතාවක් තිබීම නිසයි.

## නිරෝධායන හා පූර්ව නැව්ගත කිරීම් (QPS) ව්‍යතිරේඛය යටතට නොගැනීම සඳහා උදාහරණ

- ❖ අපනයනයට දින 21 ට පසුව පූර්ව නැව්ගත කිරීමක් සඳහා පිළියම් යෙදීම.
- ❖ නිල වශයෙන් වූ ඉල්ලීමකට හෝ අධිකාරියකට හෝ ගිවිසුම්ගත හේතුවක් මත පිළියම් නො යෙදීම.
- ❖ අපනයනය ගමනාන්තයේදී එම රට/ප්‍රදේශය එම අස්වැන්න නිරෝධායන වසංගත වලින් තොරව නිපදවිය හැකි රටන් වේ නම්.

### විකල්ප සහ පිටවීම/විමෝචනය පාලනය කිරීම.

මෙකී ව්‍යතිරේඛයන්ට යටත් කොට වුවද නිරෝධායන හා පූර්ව නැව්ගත කිරීම් මෙන්ම අත්‍යවශ්‍ය භාවිතයන් සඳහා ද මිනයිල් බ්‍රෝමයිඩ් යොදාගැනීම දැඩි ලෙස ඕසෝන් වියනට කරන උපද්‍රව්‍යක් ලෙස හඳුනාගත යුතුය.

නිරන්තරයෙන්ම විකල්ප පිළියම් සඳහා පාර්ශවයන්හි යොමු වීම අත්‍යවශ්‍ය වන්නේද දී ඇති විකල්ප වෙත යොමු වීම වැදගත් සාධකයක් වන්නේද විභේදනය කළ යුතුය. කෙසේ වෙතත් සමහර වසංගත මැඩලීමට වර්තමානයේ මිනයිල් බ්‍රෝමයිඩ් සඳහා සුදුසු සහ විකල්ප මෙතෙක් හඳුනාගෙන නැත.

2007 වසරේ දී ඇති කළ අන්තර්ජාතික තත්ව පදනමෙහි (ISPM) මුල් කෙටුම්පත මගින් මිනයිල් බ්‍රෝමයිඩ් භාවිතය අවම කිරීම සහ ඒ සඳහා විකල්ප යෙදවීම් වලට ක්‍රමවේදයන් දියත් කිරීම තේමාව කොට ගෙන ඇති අතර පාර්ශවීය රටවල අදහස් සඳහා මෙය යොමු කොට ඇත. මෙම කෙටුම්පත යම් අවස්ථාවලදී මිනයිල් බ්‍රෝමයිඩ් අවශ්‍ය බව පිළිගන්නා නමුදු ජාතික ශාක ආරක්ෂක ආයතන වලට ස්වාභාවික පරිසරයට මිනයිල් බ්‍රෝමයිඩ් මෝචනය වීම අවම කිරීම සඳහා එහි භාවිතය අඩු කිරීම, විකල්ප භාවිතය, ප්‍රතිවක්‍රීකරණය සහ දුම්කාරක නැවත ලබා ගැනීම ආදී වූ ක්‍රම ගණනාවක් මගින් සාමූහිකව ක්‍රියාත්මක විය හැකි බවට විස්තරාත්මකව තොරතුරු ගෙන හැර දක්වයි.

මිනයිල් බ්‍රෝමයිඩ් යොදා ගැනීමට සිදු වන අවස්ථාවලදී දුම්ගැස්සීම සඳහා වන හොඳම ක්‍රමවේදය යොදා ගැනීම වැදගත් වේ. මෙයට දුම්ගැස්සීමේ යෝග්‍ය යොදා ගැනීම්, ප්‍රමාණය වෙනස් කිරීම්. (යොදා ගත හැකි අවමය යෙදවීම) ආදී ක්‍රමවේදයන් මගින් මිනයිල් බ්‍රෝමයිඩ් වායුව වායුගෝලයට විමෝචනය වීම අවම කිරීමට පියවර ගත යුතුය.

Tamil Document is prepared by

**K. Jeevarani** - Attorney-at-Law

## மெதையில் புரோமைட் என்றால் என்ன?

மெதையில் புரோமைட் என்பது நிறமற்ற மணமற்ற நச்சுப் பூச்சிக்கொல்லி ஆகும். அவை மண்ணை அச்சுறுத்தும், அமைப்பை அச்சுறுத்தும் பூச்சிகளை கட்டுப்படுத்தி விவசாய பிரிவில் முக்கியமாகப் பாவிக்கப்படும் ஒரு வாயுவாகும். ஏனெனில் இதன் இயலுமான தன்மையானது நஞ்சுட்டல், நரம்பியல் ரீதியான சேதங்களை ஏற்படுத்துவதோடு மீள உண்டுபண்ணக்கூடிய தீங்கிற்கும் காரணமாகும். சுற்றாடல் பாதுகாப்பு முகவர் ஐக்கிய அமெரிக்கா மெதையில் புரோமைட்டை விஷவகையில் மொத்தமானது பெரும்பாலான உயிராபத்து ஏற்படுத்தக் கூடியவகையாகும்.

நோய்களையும், மெதையில் புரோமைட் சில பூச்சி (பிராணி) வகைகளையும் அச்சுறுத்தி கட்டுப்படுத்தக் கூடிய மிக முக்கியமான கருவியாகும். குறிப்பாக தாவரங்களில் தொற்று நோய் பரவாமல் தடுக்க தணிந்து வைத்திருக்கும் போது பூச்சிகளை அண்டவிடாது சில விடயங்களில் இவ்வாறான காலத்தில் MeBr என்பதை பாவிப்பதை கடினமானதும் அவற்றை தாவரங்களின் மேல் தெளிப்பது பொருளாதார/சுற்றாடல் ரீதியான மிகப் பெரிய முக்கியத்துவம் உடையது.

MeBr என்பது மறைந்துள்ள (உள்ளேயுள்ள) ஓசோன் நெருக்கம் குறைந்த ஒரு வாயு இந்த ஆதனங்களின் விளைவானது MeBr முக்கியமாக இரண்டு பல்வகைத்தன்மையான ஒப்பந்த மொன்றியல் புரோடோக்கோல், அத்துடன் அதன் நெருக்கத்தை குறைக்கும், ஓசோன்படை, மற்றும் சர்வதேச தாவர பாதுகாப்பு மரபுகள் என்பவற்றில் என்று கவனத்திற்கு எடுக்கப்பட்டது.

## மொன்றியல் புரோடோக்கோல், சர்வதேச தாவர பாதுகாப்பு மரபுகள் என்பவை யாவை?

மொன்றியல் புரோடோக்கோல் குறிப்பது, “ஓசோன் படைப்பைப் பாதுகாத்து, அதனது நெருக்கத்தை குறைத்து உலகளாவிய ரீதியில் சமமான கட்டுப்பாட்டை எடுக்கக் கூடிய முன் பாதுகாப்பான அளவீடுகளின் நெருக்கத்தைக் குறைத்து, விஞ்ஞான ரீதியான அறிவை கொண்டு அபிவிருத்தியை அடிப்படையாக்கி இறுதியான நோக்கத்தை குறைத்து, அத்துடன் பொருளாதார, தொழில்நுட்ப ரீதியான விடயங்களைக் கணக்கெடுத்து, அபிவிருத்தியடைந்து வரும் நாடுகளில் அபிவிருத்தியை தயாரிப்பில் சம்மதித்த கட்டுப்பாடுகளின் நோக்கத்தை எய்து எல்லா விதமான ஓசோன் விடயங்களிலும் நிகழ்த்தியுள்ளன. இந்த புரோடோக்கோலானது 1985 அமுலுக்கு வந்து இன்று 192 ஒப்பந்த திறத்தவர்களை கொண்டுள்ளது.

சர்வதேச தாவர பாதுகாப்பு மரபரிமை (IPPC) நோக்கானது தாவரங்களுக்கு பூச்சிக்கொல்லிகளை விசிறும்போதும், தாவர உற்பத்தியின் போதும் சில அளவீடுகளை ஏற்படுத்திப் பாதுகாப்பானதும் பொதுவானதும் செயல்முறையானது விடயங்கள் தவிர்ப்பதை கட்டுப்படுத்துகின்றது.

நடைமுறையில் (IPPC) ஆனது முதன்மையானதும் பாதுகாத்து வைக்கக் கூடிய விடயங்களை தாவரங்களுக்கு அமுல்படுத்துகின்றது.

(IPPC) ஆனது பல்வகையான பொருத்தனை தாவர பாதுகாப்பு, தேகாரோக்கியம் சம்பந்தமான கூட்டிக் குறைக்கின்றது. மரபுரிமையின் உறுப்புரை பத்து, 1 ஆனது அதனது நோக்கத்தை தெளிவுபடுத்தும் போது, தாவரங்களின் உற்பத்தியின் அதற்கு பூச்சிக்கொல்லிகளை விசிறுவதற்கு அறிமுகப்படுத்தும் போதும், அதனை தவிர்த்து செயன்முறையானதும் பாதுகாப்பானதுமர்ன பொது வான விடயங்களை கூறுகின்றது. இவை 1951 ஏற்கப்பட்டு, 1952 இல் அமுலுக்கு வந்து இருமுறை திருத்தம் செய்யப்பட்டது. மரபுரிமையானது ஐக்கிய நாடுகளின் உணவும் விவசாய நிறுவனத்தில் முதலிடல் உறுப்பினர்கள், அரசாங்கம் பிரதேச வாரியான தாவர உற்பத்தி நிறுவனங்களில் இருக்கின்றன. உணவு விவசாய நிறுவனம் (FAO) மரபுரிமை செயலாற்றில் 1992 இல் அறிமுகப்படுத்தப்பட்டுள்ளது. 2007 ஆகஸ்டில் 164 ஒப்பந்த திறத்தவர்களை கொண்டிருந்தது. மொன்றியல் புரோடோக்கோல் ஒசோன் படை குறைப்பின் அபாய அறிவிப்பாக எவ்வாறு MeBr விளங்குகின்றது.

மெதையில் புரோமைட் ஆனது ஒசோன் படை குறைப்பிற்கு பிரதியீடாக ஏற்கப்பட்டது. 1992ம் ஆண்டில் ஊழிநொயபநெ திருத்தத்தின் உறுப்புரை 2H ஆனது மொன்றியல் புரோடோக்கோல் எவ்வாறு இராசாயன கட்டுப்படுத்துகிறது என்பதை அறிமுகப்படுத்துகின்றது. (பெட்டி 1 பார்க்க) 2005 ம் ஆண்டு ஜனவரி 1ம் திகதி வளர்ச்சியடைந்த நாடுகளுக்கான MeBr தயாரிட்டு பாவனை சம்பந்தமான ஒப்பந்தமாக (உறுப்புரை) மொன்றியல் புரோட்டோக்கோல் நாடுகளுக்கு) 2015 ஜனவரி 1ம் திகதி அபிவிருத்தி அடைந்து வரும் நாடுகள் (உறுப்புரை 5 மொன்றியல் புரோடோக்கோல் நாடுகள்)

MeBr ஆனது மூவகை பாவனைக்கு தவிர்க்கப்பட்டுள்ளது. கால்நடை வளர்ப்பால் ஒரு இராசாயனப் பாவனை:மொன்றியல் புரோடோக்கோல் “அபாயமானது” என கருதும் தீர்மானத்தின், மொன்றியல் புரோடோக்கோல் IX/6 திறந்தவர்களுக்கு இடையான விடயம். QPS தீர்மானம் VI / II, VI / 5 மற்றும் X1 / 12 என்பன. 1999 திருத்தத்திற்கமைய திறந்தவர்கள் மொன்றியல் புரோடோக்கோலுக்கு அமைய ஒசோன் செயலாம் வருடாந்த தொகையில் MeBr ஆனது QPS நோக்கிற்கானதை விபரம் திரட்டுதல் இறந்தவர்கள் ஏற்கனவே பயன்படுத்திய நடவடிக்கைகளை அமுல்படுத்தி கண்காணிக்க. MeBr QPS நோக்கிற்கான தரம் தீர்ப்பு X1/13(6) )

### Article 2H: Methyl bromide

1. Each party shall ensure that for the twelve-month period commencing on 1 January 1995, and in each twelve-month period thereafter, its calculated level of consumption of the controlled substance in Annex E does not exceed, annually, its calculated level of consumption in 1991. Each Party producing the substance shall, for the same period, ensure that its calculated level of production of the substance does not exceed, annually, its calculated level of production in 1991. However, in order to satisfy the basic domestic needs of the Parties operating under paragraph 1 of Article 5, its calculated level of production may exceed that limit by up to ten per cent of its calculated level of production in 1991.
2. Each party shall ensure that for the twelve-month period commencing on 1<sup>st</sup> January 1999, and in the twelve-month period thereafter, its calculated level of consumption of the controlled substance in Annex E does not exceed, annually, seventy-five per cent of its calculated level of consumption in 1991. Each Party producing the substance shall, for the same periods, ensure that its calculated level of production of the substance does not exceed, annually, seventy-five per cent of its calculated level of production in 1991. However, in order to satisfy the basic domestic needs of the Parties operating under paragraph 1 of Article 5, its calculated level of production may exceed that limit by up to ten per cent of its calculated level of production in 1991.
3. Each party shall ensure that for the twelve-month period commencing on 1<sup>st</sup> January 2001, and in the twelve-month period thereafter, its calculated level of consumption of the controlled substance in Annex E does not exceed, annually, fifty per cent of its calculated level of consumption in 1991. Each Party producing the substance shall, for the same periods, ensure that its calculated level of production of the substance does not exceed, annually, fifty per cent of its calculated level of production in 1991. However, in order to satisfy the basic domestic needs of the Parties operating under paragraph 1 of Article 5, its calculated level of production may exceed that limit by up to ten per cent of its calculated level of production in 1991.
4. Each party shall ensure that for the twelve-month period commencing on 1<sup>st</sup> January 2003, and in the twelve-month period thereafter, its calculated level of consumption of the controlled substance in Annex E does not exceed, annually, thirty per cent of its calculated level of consumption in 1991. Each Party producing the substance shall, for the same periods, ensure that its calculated level of production of the substance does not exceed, annually, thirty per cent of its calculated level of production in 1991. However, in order to satisfy the basic domestic needs of the Parties operating under paragraph 1 of Article 5, its calculated level of production may exceed that limit by up to ten per cent of its calculated level of production in 1991.
5. Each party shall ensure that for the twelve-month period commencing on 1<sup>st</sup> January 2005, and in each twelve-month period thereafter, its calculated level of consumption of the controlled substance in Annex E does not exceed zero. Each Party producing the substance shall, for the same periods, ensure that its calculated level of production of the substance does not exceed zero. However, in order to satisfy the basic domestic needs of the Parties operating under paragraph 1 of Article 5, its calculated level of production may, until 1<sup>st</sup> January 2002 exceed that limit by up to fifteen per cent of its calculated level of production in 1991; thereafter, it may exceed that limit by a quantity equal to the annual average of its production of the controlled substance in Annex E for basic domestic needs for the period 1995 to 1998 inclusive. This paragraph will apply save to the extent that the Parties decide to permit the level of production or consumption that is necessary to satisfy uses agreed by them to be critical uses.
- 5 bis. Each party shall ensure that for the twelve-month period commencing on 1<sup>st</sup> January 2005 and in each twelve-month period thereafter, its calculated level of production of the controlled substance in Annex E for the basic domestic needs of the Parties operating under paragraph 1 of Article 5 does not exceed eighty per cent of the annual average of its production of the substance for basic domestic needs for the period 1995 to 1998 inclusive.
- 5 ter. Each Party shall ensure that for the twelve-month period commencing on 1<sup>st</sup> January 2015 and in each twelve-month period thereafter, its calculated level of production of the controlled substance in Annex E for the basic domestic needs of the Parties operating under paragraph 1 of Article 5 does not exceed zero.

Figure: 1



மொன்றியல் புரோடோக்கோல் எவ்வாறு இலங்கையில் சிபாரிசு செய்யப்பட்டது. 1989 டிசம்பர் 15 இலிருந்து இலங்கையானது, வியன்னா மரபுரிமையில் ஓசோன்படையை பாதுகாப்பது சம்பந்தமாக உறுதிப்படுத்தி இன்றுவரை அதன் திருத்தங்களை அமுல்படுத்தி கடைப்பிடிக்கின்றது. மொன்றியல் புரோடோக்கோல் இந் நிலையில் தங்கியிருக்கும் நாடுகளின் கடப்பாடுகளையும் வகைப்படுத்திக் கூறுகின்றது. உறுப்புரை 5 ஆனது தகுதி சம்பந்தமாக வருடாந்த நுகர்வு அளவில் ODS 0.3 கி.கிராம், தலைவீதமாக கணிப்பிடப்பட்டுள்ளது. தேசிய ரீதியாக தலைவீதம் இதற்கு குறைவாகவே முனுளு காணப்படுகின்றது. எனவே இலங்கை உறுப்புரை 5 இற்கு அமைந்த நாடாக அடையாளம் காணப்பட்டது. உறுப்புரை 5 நாடுகள் ஆனவை அதனது வருடாந்த நுகர்வு அளவினை 1995, 1998, 2002 ஆநாடாச மொத்தத்தில் குறைத்து

செயல்படுத்துகின்றது. 2015 இல் ஆதன் மொத்த அளவு, நோக்கத்தினை எய்தும். மொன்றியல் மரபுரிமை உறுப்புரை 5 திறத்தவர்கள் மெதையில் புரோமைட் அளவினை பின்வரும் அட்டவணைப்படுத்துகின்றது.

உறுப்புரை 5(i) அமையாத திறந்தவர்கள்

உறுப்புரை 5(1)

அடிப்படை அளவு	1991	அடிப்படை அளவு	மொத்தமாக 1995 - 1998
கட்டுப்பாடு	ஜனவரி 1 1995	கட்டுப்பாடு	ஜனவரி / 2002
25% குறைப்பு	ஜனவரி 1 1999		ஜனவரி / 2005
50% குறைப்பு	ஜனவரி 1 2001	20% குறைப்பு	ஜனவரி / 2015
70% குறைப்பு	ஜனவரி 1 2003		(இயலுமான வரை
100% குறைப்பு	ஜனவரி 1 2005	100%	ஆபத்தான செயற்பாடு
	இயலுமான வகையில்		குறைப்பு
	ஆபத்தான செயல்பாட்டை		
	குறைத்துள்ளது.		

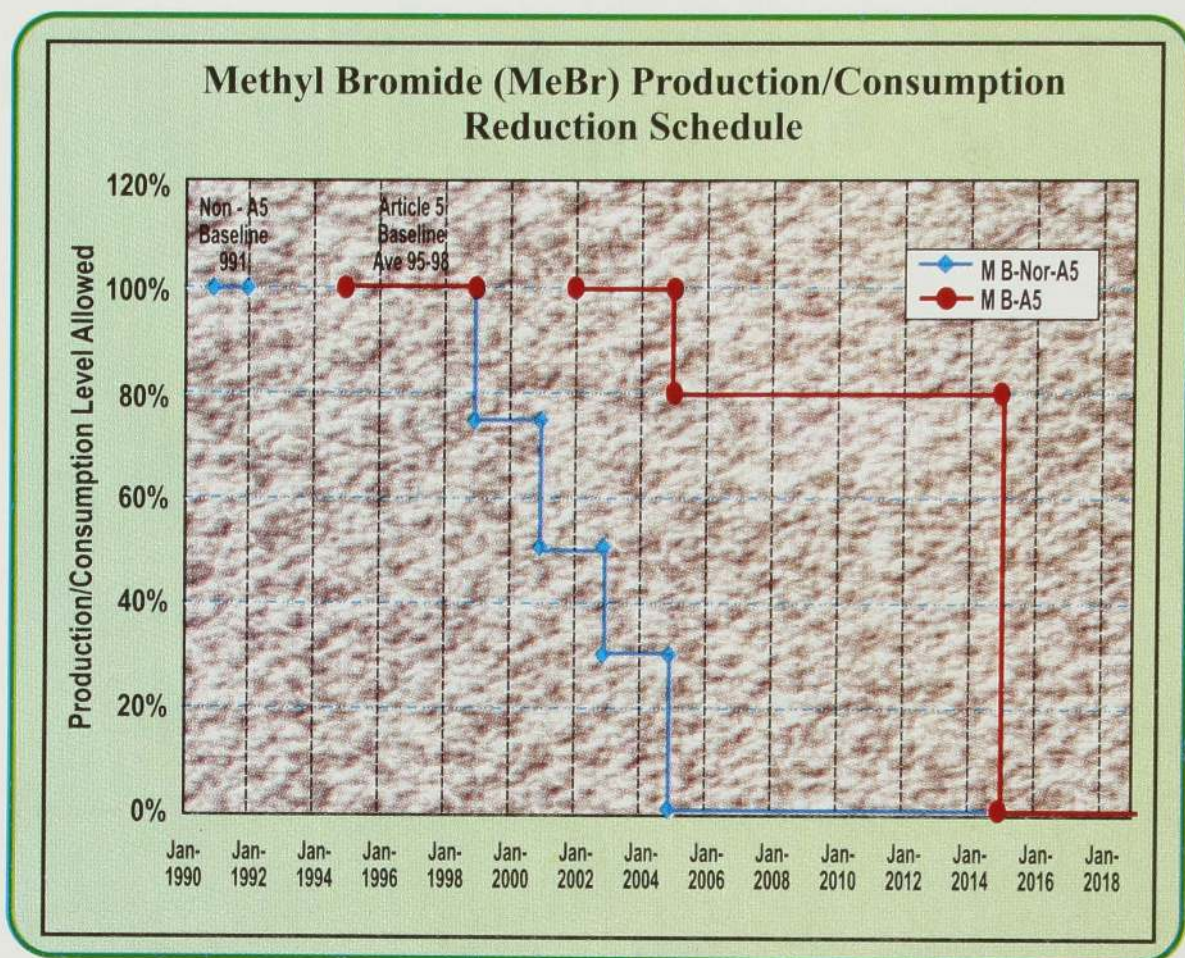


Figure: 3

இலங்கையில் MeBr தோற்றமானது இல்லாமல் செய்ய எடுத்த நடவடிக்கை மெதையில் புரோமைட் ஆனது இலங்கையில் பூச்சி, பிராணிகள் கட்டுப்படுத்தும் வகையில் உபயோகிக்கப்பட்டது. முதன்மையாக மண், மற்றும் அங்கரிக்கப்பட்ட களஞ்சியசாலைகள், ஆவணகாப்பக , பராமரிப்பு காலம், உள்ள இடங்கள் போன்றவற்றில் பாவிக்கப்படுகின்றது.

இலங்கையில் வெற்றிகரமாக இரு திட்டங்களில் அவை நிறைவேற்றப்பட்டுள்ளது. அவை பல்லின நிதி மொன்றியல் புரோட்டோகோல் வழியாக UNDP யால் நிதியமைக்கப்பட்டுள்ளது. இந்த திட்டங்கள் MeBr எல்லாவிதமான பாவனைகளிலும், QPS பிரயோகிப்பதை தவிர்க்கப்பட்டு அங்கீகரிக்கப்பட்ட விதிக் கப் பட்ட அளவீடுகளில் இலங்கை அரசாங்கத்தால் நிச்சயப்படுத்தப்படுகின்றது.

நடைமுறையில் தற்போது இலங்கையில் முழுமையாக நோக்குமிடத்து, MeBr பாவனை ஆனது பெரும்பாலும் குறைக்கப்பட்டு QPS அற்ற விதத்தில் நோக்கங்களுக்கு உபயோகிக்கப்படுகின்ற தரத்தில் உள்ளது. QPS பாவிப்பு தரமானது, மொன்றிரியல் புரோட்டோகோல் நாடுகள் தவிர்க்கப்பட்டு அவை பாவிப்புக்கு எதிரான நடவடிக்கை எடுக்கப்படுவதோடு அதற்கு பிரதியீடான உபகாரங்களையும் நடைமுறைப்படுத்த உதவுகின்றன.

மெதையில் புரோமைட் பாவனை கட்டுப்பாடு சம்மந்தமான இலங்கை சட்டங்கள் விசேட வர்த்தமானி அறிவித்தல் இல 1007 /14 24ம் திகதி டிசம்பர் 2007, இறக்குமதி ஏற்றுமதி கட்டுப்பாடு சட்டம் இல 01 1969, என்பவற்றுக்கு அமைவாக MeBr இன் இறக்குமதி ஏற்றுமதி ஆனது இறக்குமதி ஏற்றுமதி உரிமம்

சம்பந்தப்பட்ட முறைக்கு அமைவானது இந்த ஒழுங்குவிதிகள், குறிப்பிட்ட அதிகாரம் பெற்ற முறையால் அன்றி வேறு விதத்தில் MeBr வாகிக்கப்பட முடியாது. ஏற்றுமதி இறக்குமதி கட்டுப்பாடு சட்டத்திற்கு அமைய எந்த ஒரு நபரும், குறிப்பிட்ட உரிமம் ஒன்றைப் பெற்று, அதன் கட்டுப்பாடுகளுக்கு அமையவன்றி எதையும் ஏற்றுமதி இறக்குமதி செய்யமுடியாது.

MeBr சம்மந்தமான உரிமம் பெறும் எந்தவொரு விண்ணப்பமும், பூச்சிக்கொல்லி பதிவாளர் அனுமதி அங்கீகாரம் அன்றி ஏற்றுமதி இறக்குமதி செய்ய முடியாது. இவை திருப்திகரமான தேவைகளை பூர்த்தி செய்தால் அன்றியும் முன்னைய அளவுகளின் இருப்பினையும் வெளிப்படுத்தினால் மட்டுமே கட்டுப்பாடுகள், நிபந்தனைகளையும் பூர்த்தி செய்வதன் மேல் வழங்கப்படும். 2004 ம் ஆண்டு ஒக்டோபர் 22 ம் திகதி விசேட வர்த்தமானி அறிவித்தல் இல 1363/29 ஆனது இல.01 1969 ம் ஆண்டு, ஏற்றுமதி, இறக்குமதி சட்டம் ஜனவரி 1ம் திகதியிலிருந்து, MeBr இறக்குமதி செய்யமுடியாது. மொன்றிரியல் புரோடோக்கோலின் குறிப்பிட்ட அபாயகரமான பாவனை, பாதுகாக்கப்பட்ட வேண்டியகாலம், கப்பலுக்கு ஏற்றும் முன்னுள்ள நிலை, என்பவவை வாழவில்லை ஒசோன் படை குறைப்பதற்காக மொன்றிரியல் புரோடோக்கோல் காலத்திற்கு காலம் திருத்தப்பட்டன. மொன்றிரியல் புரோடோக்கோலானது “அபாயகரமான, பாதுகாக்கப்பட வேண்டிய காலம்” கப்பலேற்ற முன்னருள்ள காலம் என்பவற்றை எவ்வாறு வரையறுக்கின்றது.

“அபாயகரமான பாவனை: மொன்றிரியல் புரோடோக்கோலானது அதன் வகைகளின் அபாயகரமான பாவனை என்பதை வரையறுக்கின்றது. அவை பின்வரும் வகையில் நடவடிக்கை உடையதாகவும், மெதையில் புரோமைட், பாவனை கட்டுப்பாடு சம்பந்தமாக புரோடோக்கோல் உறுப்புரை 2 குறிப்பிடப்படும்.

(அ) மெதையில் புரோமைட் தகுதியானது, “அபாயகரமானது” என அதனை முன்வைக்கும் திறம் வரையறுக்க வேண்டும்.

i. குறிப்பிட்ட பாவனையானது அபாயமான இடத்தில் மட்டும் பாவிக்கப்படும்.

ii. அங்கே, தொழில்நுட்ப ரீதியான, பொருளாதார ரீதியாக எவ்விதமான பதிலீடுகள் இல்லையென்பதை வரையறுத்து கூறும் போது

(ஆ) ஏதாவது ஒரு அபாயகரமான பாவனைக்கு அதன் உற்பத்தி மற்றும் நுகர்வுக்கு மெதையில் புரோமைட் காணப்பட்டு அனுமதிக்கப்படின்

i. எல்லாவிதமான தொழில்நுட்ப, பொருளாதார முன்னெடுப்பு களை எடுத்தும், அவை அபாயகரமானதுமாக இருக்கும் போது மெதையில் புரோமைட் பாவிக்கப்பட்டபோது,

ii. மெத்திரின் புரோமைட் அதன் சரியான அளவீடுகளின் தரத்தில் உபயோகிப்பது போது அதனை மீளமைக்க முடியும் என அபிவிருத்தி அடைந்து வரும் நாடுகள் கருதும் பட்சத்தில்

iii. மிக அதிக அளவிற்கு ஆதிக்கம் செலுத்தும் என்ற அளவீடுகளில் தேசிய ஒழுங்கு விதிகள் பாதுகாக்கப்பட்டு அங்கீகாரத்தின் மேல் பதிலீடுகள் பயன்படுத்தும்.

குறிப்பிட்ட சந்தர்ப்பங்களில் அதிக கவனம் எடுக்கப்பட்ட உறுப்புரை 5 திறந்தவர்களின் விசேட தேவைகளின் போது, பரிந்துரைக்கப்படும். அவற்றின் கவனமானது, வேறுபடுத்தி பார்க்கப்படும் உறுப்புரை 5 இற்கு அமைவில்லாத திறந்தவர்கள் ஆய்வுகள், நிகழ்வுகள், அபிவிருத்தி செய்யப்படும் போது உறுப்புரை 5 இற்கு அமைவான திறம், அங்கே அவர்கள் தெரிவுகள் பேணப்படும். அத்துடன் தொழில்நுட்ப பொருளாதார கூட்டும் தனது பரிந்துரையை மேற்கொண்டு அங்கீகரிக்கும் அவை பந்தி 1(அ) (ii) 1 (ஆ) தற்போதைய தீர்வு உறுப்புரை 5 திறத்தவர்கள் தொடர்பாக கையாளப்படும். பாதுகாக்கப்பட வேண்டியகாலமும் கப்பலில் சரக்குகளை ஏற்றுவதற்கு முதலுள்ள காலமும் MeBr அலகுகளானது QPS விதிவிலக்கிற்கு உள்ளாக்கப்படாது அது பாதுகாக்கப்பட்ட வேண்டிய காலமும், அவற்றின் கவனிப்பும், இந்த சிகிச்சையால் நோக்கெல்லையானது விதிக்கப்பட்ட அதிகாரங்களால் கவனமாக வகையறுக்கப்பட்ட வேண்டும். மொன்றிரியல் புரோடோக்கோலில் பாதுகாக்கப்பட வேண்டிய பருவம் என்று வளர்ந்து வரும் நோய் தொற்று” என்பவற்றையும் உள்ளடக்கும். மொன்றிரியல் புரோடோக்கோல் தீர்மானம் VI/ II, VII/ 14 XI/ 12 ஆனது, பாதுகாக்கப்பட வேண்டிய காலம் “கப்பலில் ஏற்றப்பட முன்னருள்ள காலம்” என்பவற்றை வரையறுக்கின்றது. அவை எவ்வாறு QPS விதிவிலக்கிற்கு உட்படும் என்பதையும் புரோடோக்கோல் விளக்குகின்றது. அவற்றுள் சாராம்சம்.

(அ)பாதுகாக்கப்பட வேண்டிய கால விண்ணப்பம் MeBr என்பவற்றின் உதவியுடன், குறிப்பிட்ட பூச்சி தொற்றுக்கு எதிரான சிகிச்சை தவிர்க்கப்படுவது, அறிமுகம், நிர்மாணிப்பு அல்லது தூதுதல்.

- 1) .உத்தியோகபூர்வ கட்டுப்பாடானது வரையறுக்கப்பட்டு, அங்கீகரிக்கப்படுவது, தாவர விலங்கு அல்லது சுற்றாடல் பாதுகாப்பு, அல்லது உடல்நல அதிகாரம்
- 2) .குறிப்பிட்ட பூச்சி பிராணிகள் உத்தியோகபூர்வமானது கட்டுப்பாடுகளுக்கு உட்படும்.

(ஆ)கப்பலேற்றும் முன்னரான காலப்பகுதி விண்ணப்பமானது பாதுகாக்கப்பட வேண்டிய காலமல்லாது ஏற்றுமதி செய்ய 21 நாட்களுக்கு முன் குறிப்பிட்ட இறக்குமதி செய்ய 21 நாட்களுக்கு முன் குறிப்பிட்ட இறக்குமதி செய்யும் நாட்டிற்கும் உரிய தேவைகள் பூர்த்தி செய்யப்படும். உத்தியோகபூர்வ தேவைப்பாடுகள் ஒழுங்கமைப்பானது, அதிகாரம் பெற்ற, தேசிய தாவர விலங்கு சுற்றாடல், தேகநலம் அல்லது பாதுகாப்பு, தயாரிப்பு அதிகாரம் மேற்கொள்ளுது.

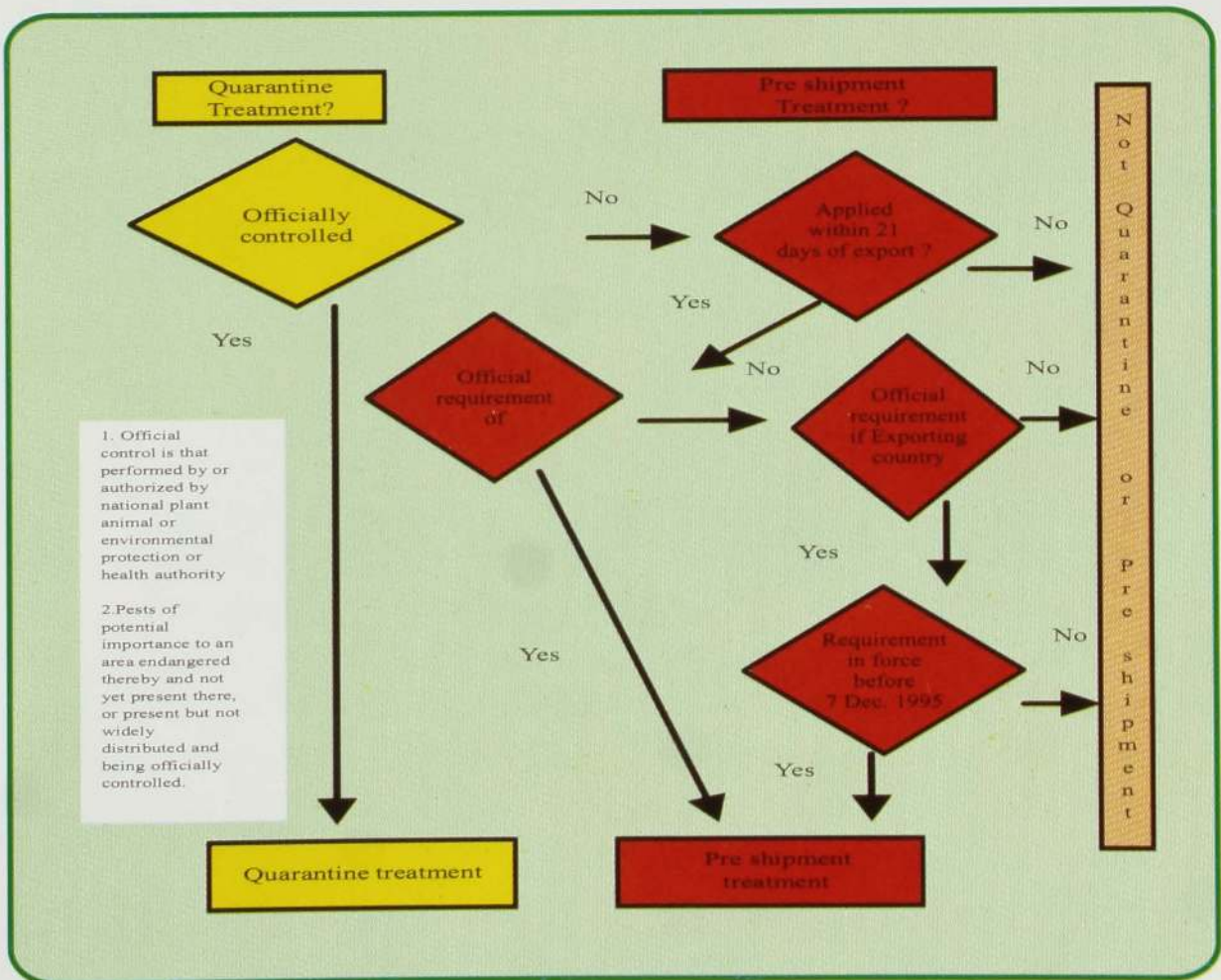
## IPPC இற்கமைவான வரையறை

**Quarantine** என்பதை மரபுரிமையாது பின்வரும் ஏற்ற வரையறுக்குள் செய்யப்படும்.

“Quarantine pest” குறிப்பிட்ட (பூச்சி) பிராணியால் நிகழக்கூடிய பொருளாதார முக்கியத்துவம் அபாயகரமானதால் உத்தியோகபூர்வ தடையை முக்கியத்துவம் இன்றும் செயல்படுத்தாமை அல்லது பெருவாரியாக செலுத்தாமை.

“ஒழுங்கமைக்கப்பட்ட Quarantine அல்லது பூச்சி (பிராணிகளில்) அதன் தோற்றத்தினால் பயிரிடுகையில் தாக்கம் ஏற்படுதல், பொருளாதார ரீதியாக ஏற்றுக்கொள்ள முடியாத தாக்கம் ஏற்படுவதால் எல்லையில் ஒழுங்கமைக்கப்படல்.

“ஒழுங்கமைக்கப்பட்ட பிராணிகள் (பூச்சிகள்) Quarantine பிராணிகள் அல்லது ஒழுங்கமைக்கப்பட்ட Quarantine அல்லாத பிராணிகள் “உத்தியோகபூர்வ கட்டுப்பாடு Quarantine பிராணிகள் அல்லது குவாட்டரின் அல்ல பிராணிகள் மீதான முகாமைரீதியான செலுத்தும் கட்டுப்பாடுகள். “பைலோசெனிற்றரி” ஏதாவது சட்ட, ஒழுங்கு விதி, உத்தியோக பூர்வ நடவடிக்கைகள் செய்யும் நோக்கங்கள் அறிமுகம் குவாட்டரின் பிராணிகள் மீதான வரையறைபடுத்தி பொருளாதார தாக்கங்களை தவிர்ப்பது. மென்நீரியல் புரோடோக்கோலின் கீழ், QPS விதிவிலக்கு இடையில் மெனநயில புரோமைட் சிகிச்சை குறைப்பிற்கான வரையறை Quarantine பிராணிகள், இருப்பின் இறக்குமதி நாடுகள் பெறப்பட்ட பொருட்கள், வரையறுக்கப்பட்டு MeBr சிகிச்சைக்கு உட்பட்டு பூச்சிகளை கட்டுப்படுத்தலாம். ஏற்றுமதி செய்ய 21 நாட்களுக்கு முன் பிராணிகளுக்கு எதிரான சிகிச்சையினை உத்தியே பூர்வ அமைப்புக்கள் வேண்டும். எனவே மொன்நீரியல் புரோடோக்கோலின் படி MeBr சிகிச்சை கப்பலில் பொருளை ஏற்றுவதற்கு முன் நடைபெறும். இவ்விரு சந்தர்ப்பங்களில் தொழிநுட்ப ரீதியாக பொருளாதார ரீதியான பிரதியீடுகளை செய்ப்படுத்தலாம். அதாவது QPS விதிவிலக்குகளில் MeBr சிகிச்சை அனுமதிக்கப்படும். பின்வரும் வரைபடம் கப்பலில் சரக்கு ஏற்றுவதற்கு முன் Quarantine சிகிச்சை செய்வதை வரையறுக்கின்றது.



## Quarantine பாவனை குறைப்பதற்கு உதாரணம்

1. மூல நாட்டின் உத்தியோக ரீதியான சிகிச்சை உத்தியோகபூர்வ சட்ட தேவைப்படின் **MeBr** சிகிச்சையானது, உத்தியோகபூர்வ சட்ட தேவைப்பாடுகளை இறக்குமதி செய்யும் நாட்டிற்கு எதிராக குவாட்டரின் பூச்சி தொடர்பான வியாபார பொருள் சம்மந்தமாக தேவைப்படுத்தும்.

உ + ம்: Khapra Beetle என்பது குவாட்டரின் பூச்சியமும் பல இறக்குமதி நாடுகளில் இவை காணப்படுகின்றது. MeBr அதனது கட்டுப்பாட்டிற்கு மிகவும் உறுதுணையாகின்றது. இந்த சிகிச்சையில் உட்பட்ட வியாபார பொருள் பூச்சுகளின் தொல்லை பிந்தி கப்பலில் இறக்கப்படும் நாட்டில் கொண்டுவரப்படலாம். MeBr இருவகை சிகிச்சையில் ஒரு அங்கியில் செய்யப்பட்ட 15 pm இல 15 இன் கீழ் உள்ள முறைமையாகும். மரத்தாளான பொது செப்பும் போதும் தூவப்படும் போது பூச்சிகளுக்கு சிறந்த சிகிச்சையாம். அத்துடன் ஆசிய நீண்ட செழும்பு உடைய பூச்சிகளும் USA யில் அங்கிகரிக்கப்பட்டது.

2. பொருள் கொண்டுவரப்படும் போது செய்யப்படும் உத்தியோகபூர்வ சிகிச்சை அனுப்பட்ட பொருள்களில் பூச்சிகளை கண்டுபிடித்து அவற்றுக்கு உரிய சிகிச்சையளித்தல்.

உ + ம்: MeBr சிகிச்சையானது புளோரிடாவிலிருந்து வரும் ஐப்பானிலிருந்து கரிபியன் படி பூச்சியை கட்டுப்படுத்தமுடியும்.

3. நாட்டுக்குள்ளே உத்தியோக பூர்வ சிகிச்சை ஒரு நாட்டுக்குள்ளேயே வியாபார பொருள் சம்மந்தமான உத்தியோகபூர்வ சிகிச்சைகள் பூச்சி சம்மந்தமான வழங்கப்பட்டு கட்டுப்படுத்தப்படல்.

உ + ம்: குயின்ஸ்லாந்தில் இருந்து மேற்கு அவுஸ்ரேலியாவிற்கு கப்பல் மூலம் கொண்டுவரப்படும் பழவகையில் காணப்படும் பூச்சி அழிப்பிற்கு எதிரான சிகிச்சைக்கு முன் பாதுகாப்பிற்காக MeBr சிகிச்சை கொடுக்கப்படுகின்றது.

4. பூச்சிகளை குறிப்பிட்ட பிரதேசத்தில் இருந்து முற்றாக நிர் மூலமாக்குதல். நன்கு வளர்த்த பூச்சிகளை அதன் பார்வையிலிருந்து நாட்டை விட்டு முற்றாக வேரறுதல்.

உ + ம்: தெற்கு குயின்ஸ்லாந்து, அவுஸ்ரேலியா ஆகிய இடங்களிலிருந்து வதிவிடங்கள், காய்ந்த மரப்பலகைகள் என்பவற்றின் வதிவிடங்கள், காய்ந்த மரப்பலகைகள் என்பவற்றின் பூச்சி அழிப்பிற்கு ஆநடிச சிகிச்சை அளிப்பது. பொருட்களை கப்பலேற்றுவதற்கு முன் குறைவான பாவிப்பு உதாரணம் மூல நாட்டிலிருந்து ஏற்றுமதி செய்ய முன் கப்பலில் பொருட்களை ஏற்ற முன் செய்யப்படும் சிகிச்சை பொருட்களை ஏற்ற முன் செய்யப்படும் சிகிச்சை உத்தியோகபூர்வ சிகிச்சையில் ஏற்றுமதி செய்யும் நாடுகளுக்கு அல்லது இறக்குமதி செய்யும் நாடுகளில் செய்யப்படும்.

உ+ம்: கோதுமை ஏற்றப்படுவதற்கு முன் கொன்யாவில் ஆநடிச சிகிச்சையளிப்பது கட்டாய விதியாக்கப்பட்டுள்ளன. நோக்குடன் ஏற்றுமதிகளில் தானிய பூச்சிகளுக்கு ஏழுநாட்களில் முன் (ஏற்றுமதிக்கு) சிகிச்சையளிக்கப்படுகின்றது. கென்யா நாட்டில் கப்பலில் சரக்கேற்ற விண்ணப்பிக்கும் போது இது தேவைப்படுத்தப்படுகின்றது. இவை 21 நாட்களுக்குள் செய்யப்பட வேண்டும். அவற்றிக்கு மாற்றீடாக எவ்வித விடயங்களும் செய்யப்பட இயலாது. QPS விதிவிலக்கு இதனை குறைக்காது என்பதற்கு உதாரணம் ஏற்றுமதிக்கு முன்னதாக பொருளை கப்பலேற்ற 2 நாட்களுக்கு முன் சிகிச்சையளிக்கப்படும்.

ஒப்பந்த காரணங்களுக்காக சிகிச்சைகள் செய்யப்படும். உத்தியோகபூர்வ ரீதியாக கேட்கப்பட தேவையில்லை. ஏற்றுமதி செய்யப்படும் பயிர்களை பயிர்செய்யும் நிலங்களில் பூச்சிகளுக்கு சிகிச்சையளிக்கப்படும். மாற்றீடும் வெளியீட்டு கட்டுப்பாடும் கட்டுப்பாட்டு அளவிற்கு மீறும் போது மொன்றீரியில் புரோட் டோக்கோல்படி ஆநடிச பாவிக்கப்படுகின்றது. ஞீரு பிரயோகம் ஆனது ஒசோன் படையில் பாதிப்பினை ஏற்படுத்தும்.

Quarantine கப்பலேற்றமுன் போன்ற சொற்பதங்களின் வரை விலக்கணத்தை நோக்கும்போது .மொன்றீரியல் புரோடோக்கோலானது நாடுகளும் MeBr சிகிச்சையை செய்வதை தவிர்ப்பதை ஊக்கப்படுத்தும் நோக்கிலேயே இவ்வரைவிலக்கணத்தை கொடுத்திருக்கலாம். அதன் மூலம் மீள்பாவனை முறைகளை கண்டுபிடிக்க சாத்தியமாகலாம்.

பல QPS சந்தர்ப்பங்களில் MeBr பயன்படுத்தப்படுகின்றது அவை அங்கீகரிக்கப்பட்டதும், நன்மையானதுமாகும். குவாட்டரின் நோக்கிற்கு நடைமுறையில் சர்வதேச ரீதியாக இரு விதிகள் சிகிச்சைக்கு காணப்படுகின்றன. இந்த சிகிச்சையளிப்பானது மரப்பொதியிடல் சிகிச்சை 15 pm இல 15 மற்றும் MeBr சிகிச்சையும் மாற்றீடாக வெப்பப்படுத்தும், சிகிச்சையும் உண்டு.

பெரும்பாலான சிகிச்சையானது குறிப்பாக வியாபார பொருளில் குவாட்டரின் பூச்சிகளுக்கு மூல நாட்டில் வழங்கப்படுகின்றது. எப்படியிருப்பினும், MeBr நடைமுறை வெளியேற்றத்தில் இவை குறிப்பிட்ட பொருள் அல்லது, குறிப்பிட்ட பூச்சிக்காக செய்யப்படும்.

2007 ஆண்டில் வரையப்பட்ட சர்வதேச தரங்களுக்கு உட்பட்ட ஆவணம் (15 pm) அபிவிருத்தி அத்துடன் MeBr ஐ பாவிப்பது குறைப்பது சம்மந்தமானவையாகும். இவற்றினை நோக்கும்போது, MeBr தேவைப்படுத்தப் பலவகை சந்தர்ப்பங்களில் தேசிய தாவர பாதுகாப்பு நிறுவனம் MeBr பாவனை மூலம் சுற்றாடலுக்கு வெளியேற்றங்களை கட்டுப்படுத்தி அதற்கு மாற்றீடானவைகளை பயன்படுத்தி, மீள்சுழற்சி, மீளமைவுகளை உண்டுபண்ணும், செயற்பாட்டை கவனிக்கின்றது.

MeBr பாவிப்பின் போது, அவற்றை உபயோகிக்கும் விதி முறைகளை ஒழுங்காக கடைப்பிடிக்க வேண்டும். இவை குறிப்பாக வெளியேற்றும் வாயுவை குறைத்து பாதுகாப்பான நிலையை எய்தலாம்.

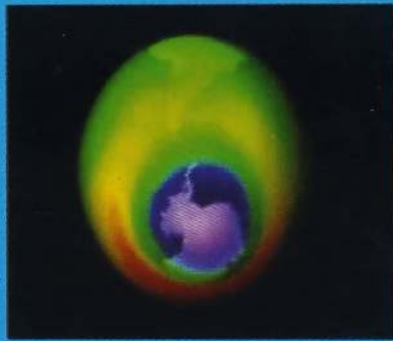
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**National Ozone Unit**  
**Ministry of Environment and Natural Resources**  
No. 342, Kotte Road,  
Pitakotte  
Tel/Fax: (94 11) 2811417  
Email: [ozone@noulanka.lk](mailto:ozone@noulanka.lk)  
[www.noulanka.lk](http://www.noulanka.lk)

