



Integrated Pest Management Policy example, based on St Helena's 2014 Pesticide Policy.
February 2017

PESTICIDE POLICY INTEGRATED MANAGEMENT OF PESTS, WEEDS AND DISEASES

A Policy for all Members of the
Bermuda Community: farmers, gardeners, government
departments, public health officials, consumers, hotels, golf
courses, landscapers, bee keepers, pesticide importers and
users, and environmentalists

Introduction:

(Add an introduction outlining Bermuda's situation with regard to pests and pesticide use, and why a policy is needed)

Pesticides are valuable tools for public health protection, environmental management and agricultural production but only when used in a responsible manner. Integrated pest, weed and disease management (IPM for short) provides the framework for responsible management.

IPM is a combination of common sense and science, which emphasizes the maintenance of pest populations below threshold levels, the threshold being determined by the situation. For the agriculture sector this means the growth of a healthy crop, with thresholds set by the value of the crop; for public health, pests can be seen as symptoms of bad hygiene or management and the threshold could be zero tolerance. IPM is therefore an approach to pest management rather than a set of prescriptive recipes, and the IPM "toolbox" has a variety of tools in it which come in three main types in a hierarchy of interventions – firstly cultural methods of control, secondly biological control and finally pesticides.

Abbreviations used in this document:

IPM Integrated Pest Management
MRL Maximum Residue Levels

(Add other abbreviations as needed)

Definitions used in this document:

Biosecurity: *(definition to be added)*

Integrated Pest Management: the careful consideration of all available pest control techniques and subsequent integration of appropriate measures that discourage the development of pest populations and keep pesticides and other interventions to levels that are economically justified and reduce or minimize risks to human health and the environment.

Maximum Residue Limit (MRL): means the maximum concentration of a residue that is legally permitted or recognized as acceptable in or on a food or agricultural commodity or animal feedstuff.

Pest: a living organism (such as an insect, animal, bird, plant or disease) which results in economic or environmental (land, sea and sky) loss, nuisance or causes damage to human or animal health.

Precautionary Principle: *“If an action or policy has a suspected risk of causing harm to the public, or to the environment, in the absence of scientific consensus that the action or policy is not harmful, the burden of proof that it is not harmful falls on those taking that action.” (Wikipedia)*

Residue: any specified substances in or on food, agricultural and other types of commodities or animal feed as well as in environmental media including soil, air and water resulting from the use of a pesticide. The term includes any derivatives of a pesticide, such as conversion products, metabolites, breakdown products, reaction products and impurities considered to be of toxicological or eco-toxicological significance. The term "pesticide residue" includes residues from unknown or unavoidable sources (e.g. environmental contamination) as well as known, authorized uses of the chemical.

(Add other definitions as needed)

Our Vision

Our national Vision for Bermuda takes a Precautionary Principle approach for an effective IPM program, based on good stewardship and holistic land use practices, to minimize the effects of invasive species and pesticide use on our land, native plants, animals, food supplies, clean air, fresh water resources, and the marine environment.

The purpose of the pesticide policy is to provide the basis for promoting effective and sustainable pest, weed and disease management practices on Bermuda through improved pesticides management. It expresses the intention to actively consider a range of methods, including the introduction of new biological control agents and the availability of a comprehensive range of modern pesticides to target key problem species. The IPM Framework adopts a broad approach to pest management based on prevention through integration of cultural, biological and chemical methods.

Boundaries

The pesticide policy applies to plant protection products, defined as those pesticides used to protect plants and plant products from pests, diseases and weeds, and also to pesticides used for public health protection, including control of ants and cockroaches. It does not cover 'biocides' such as wood preservatives or disinfectants, or veterinary medicines such as sheep dip chemicals. Where the term "pesticides" is used in this document it refers only to plant protection and public health products.

Context

The policy is consistent with the UK's National Action Plan for Sustainable Use of Pesticides (Plant Protection Products) which was published in February 2013 to meet the obligation on Member States under Article 4 of EU Directive 2009/128/EC establishing a framework for the sustainable use of pesticides. Main objectives include adoption of IPM nationally. **(check this for applicability to Bermuda).**

At the local level, through its promotion of cultural and biological methods of control in place of a reliance on pesticide applications, the pesticide policy strongly supports... **(add appropriate local detail such as support for Bermuda's vision, health goals, tourism goals including green branding and high value destination branding, etc.)**

Overarching outcomes are to:

- Safeguard our people from the adverse effects of pesticides;
- Protect our environment, and particularly our water supplies and endemic species;
- Promote sustainable food production and storage compatible with green branding;
- Safeguard and maintain the health of our island's pollinators.

Our Guiding Principles

We will be guided by the following principles in achieving the policy vision:

Safety: safety is paramount: for consumers of fresh produce and water, animals and the wider environment, and of people applying pesticides.

Community based approach: pest control practices don't just affect the person or area in which they are applied.

Options: with a focus on alternate options, enough pesticides and other methods need to be available so that farmers and public health workers can select the right one for their needs in each situation.

Sustainability: the inevitable development of pesticide resistance or accumulation of residues must be avoided.

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The Approach To Be Taken

The core elements of our approach to biosecurity are:

We will strengthen our knowledge of pests, weeds and diseases.

Knowledge is an important element of IPM and pesticide management. Correct identification of the problem allows selection of the appropriate solution. Where possible, natural enemies and bio-control agents are utilized, thus avoiding overuse and misuse of pesticides resulting in protection of the farmer, pesticide applicator, the end-consumer of produce, members of the community and the natural environment. Consideration needs to be given to potential biological 'escapees', eg. kiskadees.

We will use pesticides within the framework of integrated pest management.

Experience has shown that reliance on pesticides isn't sustainable. Regimes of routine pesticide spraying applied in an attempt to prevent pests and diseases results in rapid development of pesticide resistance and uncontrollable pests. This makes farming uneconomic, as well as threatening water supplies, the environment and public health.

We recognize that safety is paramount.

Pesticides are dangerous chemicals and every user has a duty of responsibility for their application. The risks apply to the pesticide user, the consumer of water and local produce, and the environment.

Our decisions will be evidence-based.

Decisions with regards pesticide sales and use on the island will be made based on scientific evidence and in-line with international standards.

We will use IPM to manage the agro-ecosystem in such a way that pests remain below economic damage levels.

Preventing conditions favourable to the build-up of pests and diseases is the most cost-effective way. This relies on regular scouting or monitoring to detect early stages, and strategic use of pesticides as part of the IPM tool-box. All stages of production are addressed, from soil preparation, through to growing healthy crops, to post-harvest loss prevention.

We will use IPM to manage the urban environment in such a way that pests do not adversely impact public health.

In the urban environment the presence of pests is an indication of a management problem of some sort. Good management includes cleanliness, good housekeeping, good hygiene standards, adequate sanitation, pest-proofing, efficient waste management and maintenance of facilities, structures, plant and equipment.

We will apply the IPM approach to protect our endemic species.

Pests and weeds also threaten our protected areas and survival of rare endemic species, which often occur in very low numbers. Pesticides are a useful tool for conservation but risks of misuse can have serious consequences in terms of potential loss of biodiversity. IPM is particularly appropriate in this context, applying the hierarchy of interventions, considering firstly cultural methods of control, then biological before considering the application of pesticides.

Our Strategic Objectives

There are six strategic objectives to achieve the vision by **(insert date)**.

1. **Choice of control methods:**

Pest managers (farmers, landscapers, golf course managers, gardeners, private pest control companies, conservationists and public health officials) need to have access to a range of pest management tools in order to be able to make appropriate choices. This refers to all methods in the hierarchy of interventions: cultural, biological and chemical methods of pest control.

In the cases where chemicals are indicated as the most appropriate management method, pest managers need to have a reasonable selection to choose from, including, where available, pest and crop specific, biological pesticides, and alternative products from different, and less hazardous, chemical groups in order to reduce the risk of pesticide resistance developing.

2. **Local solutions:**

Bermuda's landscape, climate and soils are unique, as is the complex of pests and weeds, which have been introduced to the island. Local solutions build on the experience and knowledge of pest managers in Bermuda and are site-specific, adapting lessons learned off-island to what we know works for us.

Codes of Best Practice for the different fields of use will guide users, both amateur and professional, public health, environmental and agricultural sectors.

3. **Legislation and regulation:**

Bermuda is vulnerable to the risks of pesticide misuse and overuse. The introduction of comprehensive pesticide legislation will address management of pesticide imports, sales, use, transport, storage and disposal as well as these issues and be based on international standards, with clear responsibilities and mechanisms of compliance and enforcement.

In addition, the legislation will set Maximum Residue Levels (MRLs) for all foods treated with pesticides in line with EC Regulation 396/2005 which provides a harmonized system of setting MRLs. MRLs are not safety limits but reflect the largest amount of pesticide expected to be found in that crop when it has been treated in line with good agricultural practice. Occupational Exposure Limits will be established, in line with the UK's Control of Substances Hazardous to Health Regulations 2002 (as amended). (**check this for applicability to Bermuda**).

4. **Approved list of pesticides:**

Bermuda's pest and weed complex is unique and requires a unique range of pesticides to tackle it. We will develop an island-specific regulatory system for pesticides, deciding which products are approved for sale and use from the range of products globally available, based on agreed criteria such as safety, environmental hazard, cost-benefit and efficacy.

5. **Public awareness and support:**

Everyone benefits when pesticides are used safely within an Integrated Pest Management framework due to the positive impacts on water, food, public health and the environment. A

program of public awareness and communication will ensure a well informed public, of people who understand the risks associated with the use of pesticides and the benefits to be gained from taking an IPM approach to pest, weed and disease management.

Further, government will work closely with local traders to ensure understanding of the policy in terms of permitted imports and sales, as well as providing guidance on standards of suitable personal protective clothing for purchase.

6. Capacity:

Producers, and any person applying pesticides as a public service (government or private), needs to be trained in the safe use, storage and disposal of pesticides. Technical support and advice on IPM practices and alternatives to pesticides needs to be provided, through government officers or the private sector.

Included under capacity is data collection and information on pesticide use and sales on the island, which has the dual function of providing a knowledge basis for pest management decisions, as well as a regulatory role.

7. Implementation and Measuring Performance:

The pesticide policy guides the action of all stakeholders on pest management issues. Implementation will be delivered through organization work plans in Agriculture, Environment and Public Health sectors, and will be overseen through a national action plan. A set of milestones and performance indicators will be developed in order to track progress in delivering the objectives.

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Compliance and Enforcement

The main provisions of the new legislation is to regulate what pesticides can be imported into the island, and how they are sold, used, stored, transported and disposed of. Professional use products will only be available to holders of a certificate in the safe use of pesticides and the risk assessment process. Disposal of pesticides (used containers and out of date products, etc) as a category of hazardous waste is covered under the ... ***(add as applicable)***.

A Pesticide Board will be established to create and periodically review the approved list of pesticides, ensuring that it is up-to-date and readily available for traders, pesticide users and members of the public. Statutory members will include representatives from Public Health, Environment, producers, pesticide importers and interested members of the public. Enforcement responsibilities will lie with Pesticide Board.

There will be an established program for the routine testing for pesticide residue which will be include (but not be limited to) locally produced fresh produce, soil and water as a means to monitor compliance and to identify areas of concern.

How We Will Help Stakeholders Comply

The regulatory risk assessment and risk management process is very effective at identifying and mitigating risk. This risk-based approach will also ensure that use of the most hazardous pesticides is reduced to a minimum. However the regulatory process relies upon the fact that all pesticides are used responsibly.

Public awareness of pesticide risks and issues is therefore essential, promoting compliance for amateur users and making non-compliance of professional users unacceptable. Training will be given in the safe use of pesticides and IPM and provision of technical support. All regular users of pesticides (not just government employees) will be encouraged to undergo regular health monitoring to ensure they meet with the established Occupational Exposure Limits.

The Institutional Framework

Responsibility for implementing the Pesticide Policy lies with... ***(complete with appropriate local details)***.-

A combined database will be established for pesticide use by government departments, including product used, dose rates, location, dates and times, operator and environmental risk assessments.