

Consultation on Pesticides Regulations

Overview of comments on Bermuda Citizens Forum
and responses to prioritization questionnaire



GOVERNMENT OF BERMUDA
Ministry of Health



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Pesticides Regulations Consultation

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Executive summary

The Ministry of Health has started engaging stakeholders regarding pesticide regulation. Between 28th June and 4th August 2024, stakeholders participated in the consultation through discussion on the Bermuda Citizens Forum, a prioritization survey and direct submissions to the Ministry. A total of 21 stakeholders responded through one or more channels. Respondents included farmers, golf course operators, landscapers, pest control professionals, NGOs and other members of the public. In the next step, stakeholders will be invited to focus groups to discuss the prioritized topics in more detail.

In summary, the main concern raised was the need to ensure that professional pesticide applicators are appropriately trained in the use of pesticides. Mandatory certification and licensing are seen as effective tools to confirm applicators' competency in order to protect the safety of applicators, our food, water, the community and the environment. This was reiterated in more detail in response to our questions regarding capacity building and accountability, including some concrete suggestions.

Importation is also considered an important area, as Bermuda's unique circumstances call for careful consideration of the substances that are allowed to be imported. At the same time, access to effective pesticide products is crucial for Bermuda's farmers and others.

While some respondents argued that entirely new pesticide legislation was needed, others thought that the Pesticides Safety Act 2009 provides a solid basis that can be complemented with new regulations and modernized and amended where necessary.

Most respondents agreed that Integrated Pest Management (IPM) should be encouraged for all pesticide users in Bermuda wherever appropriate. It was acknowledged that IPM requires proper education to be effectively employed and that it needs to integrate pesticide use in a balanced approach.

In response to the question concerning transparency and accountability in the pesticide industry, a range of suggestions were made: Respondents noted improvement potential in the approach to importation and the related application process, as well as the categorization of pesticides. There was consensus that the proper application, storage and disposal of pesticides need to be ensured. A significant number of respondents commented on applicators' responsibility to keep accurate records.

Overall, respondents expressed that any regulations need to be clear, stringent and properly enforced to create transparency and accountability.

Overview and recommendations for prioritization

The purpose of this report is to (a) summarize comments provided by members of the public on the online consultation platform (Bermuda Citizens Forum), the prioritization survey and through direct communication with the Ministry and (b) provide guidance for the focus groups and discussions in the next phase of consultation. The first part of the document provides a summary of the submitted comments. Details of all comments and submissions can be found in the Appendix.

One goal of this first consultation phase was to understand which areas stakeholders regard as priorities. The four most chosen priorities were “Individual licensing” and “Training” (each chosen by five out of twelve respondents), “Importation” (four respondents) and “Pesticide use” (three respondents). Training and certification are seen as effective and necessary tools to ensure the correct application of appropriate products. This will protect the safety of applicators (who have the most exposure to pesticides), our food, water and the community. Importation is considered an important area as Bermuda’s unique circumstances call for careful consideration of the substances that are allowed to be imported. At the same time, access to effective pesticide products is crucial for Bermuda’s farmers and others.

In the next consultation phase, we will discuss these prioritized aspects in more detail in focus groups with different stakeholders. The following provides an overview of the comments submitted in the first stage of the consultation process.

Capacity building

What mechanisms can be implemented to facilitate knowledge sharing and capacity building among stakeholders, including training programs and educational resources, to promote the safe and responsible use of pesticides in Bermuda?

Respondents pointed out that certification of registered pest control and fumigation operators is already in place in Bermuda, including annual inspection visits, certification of safety equipment and recalibration of monitoring devices. Some training for pest control workers is also provided by the University of Florida.

A large number of respondents agreed that comprehensive training for pesticide applicators is essential and that there should be mandatory certification or licensing that ensures that all commercial pesticide applicators have the necessary knowledge to handle pesticides safely. This should include continuing education and training, proven ongoing practical experience and regular relicensing based on specified requirements. It should be clearly defined what type of training and licensing is required for applicators to be authorized to use which types of pesticides and methods. Concrete suggestions included using online resources, partnering with an established institution in the United States (U.S.), collaboration between Government and pest control companies, and involving the Government agronomic trainee in training for pesticide licensing.

There should also be community outreach and education for the general public to provide factual information and to create awareness of the benefits and risks of pesticides. Consumers should be able to make informed purchasing decisions around toxic chemical products and have knowledge about the products they use in their homes. The public also needs to be educated about the broader implications of pesticide use in the environment.

It was suggested that performance metrics be developed to evaluate the impact of these initiatives.

Scope

Does Bermuda require an entirely new pesticides control regime or should existing laws be used alongside new Pesticides Regulations to close critical gaps in controls? Please provide your rationale.

There was support for creating new pesticides legislation. The following reasons were mentioned: the Pesticide Safety Act was written 15 years ago and may be outdated (many terms and standards have changed); splitting responsibilities between two Ministries is inefficient and may lead to gaps; the Minister of Health seems to be too dominant in the Act; would be best to start fresh. Other respondents thought that the Pesticides Safety Act 2009 provides a good basis that can be effectively complemented with new regulations. There were suggestions to review existing regulations and pragmatically determine further action: keep relevant parts; discard redundant or outdated provisions; update provisions where necessary; integrate modern, science-based approaches to IPM.

Overall, it was stated that pesticides should be Government regulated and that there should be a regular review of the legislation and its impact. However, there was a proposal to limit the scope of the Pesticides Safety Act 2009 to reduce regulatory compliance burdens concerning pesticide use on businesses and regulators. Concrete alternative suggestions were to limit the scope of the Act to restricted use pesticides (based on the U.S. EPA's classification), add a Bermuda specific short list of additional restricted pesticides and exempt OMRI Organic and Safe Synthetic Pesticides.

Some stakeholders expressed a desire for a holistic approach to regulations rather than selecting one or two priorities. It was suggested to build on a guiding principle or an overall vision for pesticide use. It was highlighted that consultation should include relevant stakeholder groups such as applicators but could also benefit from including environmental experts.

IPM (Integrated Pest Management)

How can the Pesticides Regulations be designed to encourage the adoption of integrated pest management (IPM) practices, which prioritize non-chemical pest control methods and minimize the use of pesticides, while ensuring the effectiveness of pest management strategies in Bermuda's unique context?

Most respondents agreed that IPM should be encouraged for all pesticide users in Bermuda whenever appropriate. Although IPM is expected to reduce the use of pesticides, some pesticide use is inevitable. There should be a balanced approach to setting realistic targets. It was emphasized that IPM doesn't necessarily "prioritize non-chemical pest control methods and minimize the use of pesticides", but it rather integrates pesticide use with biological and cultural practices that strive to control the pest as well as prevent the development of pesticide resistance, thereby maintaining the efficacy of the pesticide. IPM and traditional pest control methods should be used in conjunction with each other. One respondent questioned why pesticide use should be reduced and requested more background information.

It was noted that IPM requires a higher level of management for the person using it. This involves scouting and properly identifying pests, determining economic thresholds, understanding pest life cycles and relevant weather conditions, resistance management, pesticide chemistry, etc. All these aspects require proper education in IPM; the availability of appropriate training (for professionals and the public) was an area of focus for respondents. It was also suggested to include IPM in the training that should be

mandatory for licensing. General IPM concepts and methods need to be tailored to the local Bermuda context. This could be done in partnership with universities. It was suggested that pesticide users should monitor and report usage regularly to guide improvement in IPM. One respondent noted that some low cost IPM methods are good for the environment as well as financially (e.g., utilizing thresholds before implementing controls and choosing pest resistant plant varieties).

There were some suggestions around creating a framework for IPM in Bermuda. One recommendation was to create and adopt an IPM policy and program similar to St. Helena's. There was an interest in the Government providing leadership in IPM, including building coalitions and partnerships that link with communities and public agencies. There was a request to create guidelines for when management action is needed to maximize profitability while minimizing environmental costs, pest management manuals, pesticide safety publications and a website. One respondent was critical of Government involvement in this topic due to a lack of expertise compared to professionals in the field and associated costs for research, regulations, monitoring, data collection, etc.

Accountability

What specific provisions should be included in the Pesticides Regulations to ensure transparency and accountability in the pesticide industry, including enforcement mechanisms and penalties for non-compliance?

Importation & sale

Overall, respondents noted some improvement potential in the approach to importation and the application process. In general, that process needs clear guidelines and should be efficient rather than time-consuming. There were suggestions to reduce the number of individual applications made for pesticides, for example, creating a standard approval list for all golf courses that is based on thorough research or excluding "general use" pesticides that are readily available for sale in Bermuda from the application process. On the other hand, it was suggested that questions about intended application and applicator qualifications should be asked as part of the application process for pesticide importation.

It was noted that the importation of restricted use pesticides should be stringently regulated. Although there is some debate about the need to regulate the importation of general use pesticides, it was acknowledged that an additional layer of regulation to account for Bermuda's unique circumstances is justified. It was suggested that the Government should become the sole importer, distributor and seller of all toxic products (including pesticides). It was recommended that there be an audit of the chemicals that are currently being permitted for use in Bermuda. There were questions about specific pesticides such as RoundUp, neonicotinoids and concerns about inert ingredients in pesticides that are not regulated.

Several comments were made concerning categorizing pesticides. It was suggested that the U.S. EPA's system of pesticide categorization or the Globally Harmonized System of Classification and Labelling of Chemicals (GHS) be used. Pesticides could be regulated based on their category, e.g., limiting pesticides other than those designated as "general use" for purchase and use by licensed individuals who have demonstrated their competency to use them safely. It should be clarified which pesticides are on restricted, prohibited and approved lists in Bermuda and where the most current version of these lists can be found. Also, the definitions of the relevant terms and their implications need to be clear.

Pesticide application, storage and disposal

There was consensus that proper application of pesticides should be ensured. There were comments about the public's rights regarding pesticide spraying, specifically about residents/neighbourhoods "opting out" of spraying in their area, information about chemicals being sprayed and mandatory sign-posting when spraying is being carried out.

It was suggested that the government lab or another lab conduct regular soil sampling and product testing. However, there were concerns about the costs and administrative burden of such testing compared to the benefits. It was noted that the required resources do not exist in Bermuda, and as long as label instructions are followed and proper training and licensing are in place, there should be no issues.

It was also noted that signage should be visible on the exterior of any building where chemicals are stored. It was suggested that all toxic chemical pesticides should be stored at a central government location (e.g., government marketing center). That location could also be employed for disposing of pesticides, returning empty containers and for reviewing applicator logs.

Record keeping

A significant number of respondents commented on applicators' responsibility to keep accurate records. This should be done for accountability purposes, but can also be valuable in determining the effectiveness of a pesticide in a certain situation. It was mentioned that application information should be kept for at least one year, information should be provided within 24 hours if requested by regulatory authorities and failure to keep or provide records should result in warnings, penalties or loss of license.

Information to be recorded includes: applicator name, license number, date, weather, product, active ingredient, volume used, area of application, target pest, other relevant observations. It was suggested that an app or website could be used to simplify and digitalize the process; thereby, some information (e.g., location, temperature) could be recorded automatically. Another suggestion was to make it mandatory to file this information in a public database or use another way of reporting. One respondent questioned whether it was necessary to record all this information and what would be done with it.

Training, licensing & certification

There was broad consensus that there should be mandatory training on proper use of pesticides for every commercial pesticide user as well as required licensing. Training and certification are seen as effective and necessary tools to ensure the correct application of appropriate products. This will protect the safety of applicators (who have most exposure to pesticides), our food, water and the community. Licensing requirements need to be clear and enforced to be meaningful and there should be follow up for training and licensing every couple of years. It was mentioned that Bermuda already has licensing in place for pesticide applicators, and all pest control companies are inspected annually.

It was suggested that training and licensing requirements could be aligned with another jurisdiction (specifically Florida or South Carolina). Another suggestion was for training and certification to use or build on the existing Bermuda National Standards for Landscape Gardeners. Given a multinational workforce, the need for training in multiple languages was highlighted. All applicators need to be able to read labels and dosage instructions.

Several respondents argued that people should not be able to purchase or apply (at least certain professional or restricted use) pesticides without a current license (as is the case in other jurisdictions).

However, one respondent questioned whether it was necessary to be so restrictive and argued that people should be able to buy low-risk products for their home from retail.

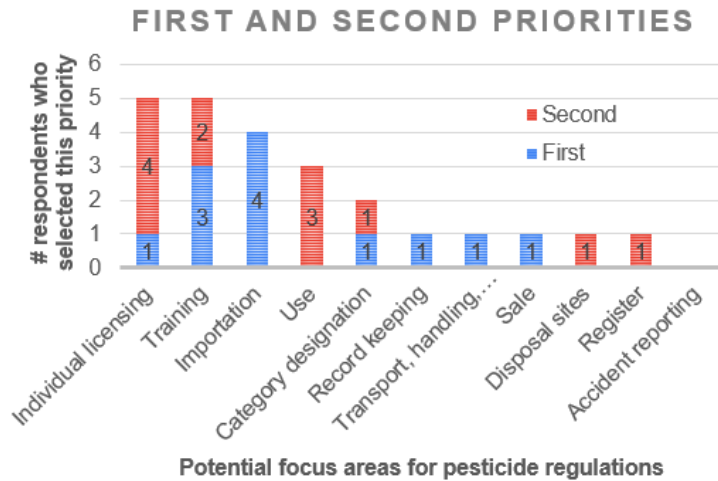
Other topics

Across the various topics, respondents expressed that any regulations need to be clear, stringent, and properly enforced to create transparency and accountability. This includes enforcement of training and licensing requirements as well as compliance inspections to ensure that restrictions on pesticide labels are followed, proper record keeping is maintained, and pesticides are properly disposed of. However, it was noted that the administrative burden needs to be considered in order to avoid increasing costs for farmers or the Government.

Several other environmental and health topics were discussed, including the potential impact of “sprayed” vegetation in the material being composted at Marsh Folly for use by home gardeners and the potential threat of some pesticides for bees.

It was suggested to incentivize the use of natural farming methods and practices by way of grants. Those making efforts to restore biodiversity should be compensated; a carbon capture scheme should be created.

Appendix A: Prioritization of regulations




Respondents to prioritization survey:

- Pedro Aguiar, Private Island (landscaper)
- Martin Brown, Brown and Co, (landscaper)
- Jiana Caldwell, Department of Health (regulator, government official)
- Steven De Silva, Corporation of Hamilton
- Michelle Cooper, Brown and Co (landscaper)
- Troy Furbert, Bermuda Fire and Rescue Service (emergency services)
- David Kendell, Ministry of Health (regulator, government official)
- April Naude, Goslings (member of the public)
- Roger Pacheco, Pacheco & Sons Farm (farmer)
- Kim Smith, Bermuda Environmental Sustainability Taskforce (NGO)
- Stewart Swanson, Agronomic Consultant (consultant)
- Tom Wadson, Wadson's Farm (farmer)

Appendix B: Responses on Citizen Forum

Capacity building:

 From "Consultation on Pesticides Regulations"
[Go to the project](#)

What mechanisms can be implemented to facilitate knowledge sharing and capacity building among stakeholders, including training programs and educational resources, to promote the safe and responsible use of pesticides in Bermuda?


Posted by

 [Government of Bermuda](#) Bermuda on June 27, 2024

Current status

PROPOSED

Comments (6)

 Commenting is not possible because this project is currently not active.

Most recent ▾

 [Stewart Swanson](#) 2 weeks ago

Capacity Building

As I mentioned under IPM, the higher management level needed for a successful IPM program will involve the user's receiving education and training on pest identification, their life cycles, the weather conditions favorable for pests, resistance management, pesticide chemistry, the proper way to scout for pests, and cultural control practices.

The government is hiring an agronomic trainee, who will have some responsibilities involved with the agricultural sector. This position could easily entail an educational program for IPM and also training for a pesticide licensing program.

 [Justin Tavares](#) 2 weeks ago

Mr. Dill hit the nail on the head. Pest control companies have been handling training and education internally for years. If the Government wants to sponsor additional training, whether for stakeholders or the general public, I'm sure the pest control companies would be happy to collaborate.

 [Reginald Dill](#) 3 weeks ago

There is a yearly inspection by Dept. of Health for all licensed pesticide operators in Bermuda.

Inspectors who have license with the Florida State Department of Agriculture provide any additional training during their yearly MANDATORY inspection visit.

All registered pest operators in Bermuda were recently in class during the third week of May for Pest control and fumigation recertification given by Eric Hobelman of Douglas Products and Morgan Traylor of Target Specialty Products

All safety equipment needed to be present and certified and all monitoring devices had to be recalibrated

The university of Florida also provides classes for those who are licensed in Bermuda.

There is also the Bermuda Government Pesticide Safety Act 2009

Store bought pesticides must be used only according to the label instructions which most people don't do

 [Kenton Brunson](#) 4 weeks ago

1. Mandatory Certification and education courses
2. Educational Resources including guidelines, online resources, etc.
3. Partner with university experts from NC State, University of Florida, etc.
4. Public Awareness Campaigns for community outreach
5. Performance Metrics: Develop metrics to evaluate the impact of these initiatives.


 [Kim Smith](#) 1 month ago

I trust that consideration will be given even to things like the bug sprays used in our homes. They do not come without risk... definitely to the bugs, but also to us humans. Look at the label and research the ingredients. It is important to know that only the active ingredients are listed on the label and are the only ingredients in a formulation that are tested and regulated. That is of particular concern and significance since the active ingredients are usually only about 1-2% of the whole formulation. I don't like bugs in my house either but sure want to know the risks to my health from the products that are sold in Bermuda.

 [Christopher Fortnum](#) 1 month ago

All commercial applicators should have to obtain a license by demonstrating their knowledge of safe pesticide handling. Continuing education credits obtained through seminars online would be the cheapest, most efficient way to share and expand knowledge. A commercial applicator that fails to obtain the minimum number of credits during the license period would not be eligible to renew his/her license. A system like this operates in North Carolina as well as other states in the U.S.

Scope:

 From "Consultation on Pesticides Regulations"
[Go to the project](#)

Does Bermuda require an entirely new pesticides control regime or should existing laws be used alongside new Pesticides Regulations to close critical gaps in controls? Please provide your rationale.

Posted by

 [Government of Bermuda](#) Bermuda on June 27, 2024

Current status

PROPOSED

Comments (5)

 Commenting is not possible because this project is currently not active.

Most recent ▾


 [Stewart Swanson](#) 2 weeks ago

Scope


I tend to agree with the rest of the comments made in this section about essentially starting from scratch to develop safe and sane pesticide regulations. The present "regulations" although never enacted have a major flaw in that the decision-making responsibility is split between at least two different government agencies, which at the least is somewhat inefficient. At present each individual or entity must apply for the importation and use of a given pesticide. This again is a costly, time-consuming, and inefficient process. A list of allowable pesticides should be developed, based on active ingredients, and approved materials should be available to everyone, with the caveat that, as Pedro Aguiar proposed, categories for licensing and use could be established to ensure that the products are being used properly. In the U.S. you must have a pesticide license to purchase and use a restricted use pesticide. I do think that every commercial user of pesticides should be trained and licensed.

 [Justin Tavares](#) 2 weeks ago

Bermuda needs an entirely new pesticides control regime. The last regulations were written 15 years ago and never enacted; it would be better to start with a clean slate so that all stakeholders are on the same page. A lot of verbiage and standards have changed since 2009. For example, GHS compliant label requirements have changed, including signal words and pictograms. Tackling this issue with an updated mindset would be better versus being influenced by outdated laws and regulations.

 [Kenton Brunson](#) 4 weeks ago

1. Standard Approval List: A new system should include a standard approval list for all golf courses that have been thoroughly vetted through University research.
2. Review of Current Laws: A review and overhaul will help eliminate outdated provisions and integrate modern, science-based approaches to IPM.
3. Regulation: Establish clear, stringent regulations that include mandatory certification, mandatory reporting and inspections. This creates transparency and accountability.
4. Stakeholder Collaboration: The development of a new regime should include golf course operators, landscapers and environmental experts.

 [Pedro Aguiar](#) 4 weeks ago


It might be easier to start from a clean slate. Using the information from EPA to classify the pesticides in 4 tiers.
GENERAL USE would be the current products we can get from Garden Centers or Hardware Stores and any other OMRI organic products.
PROFESSIONAL USE would need training and certification of professional from Landscaping Companies, Golf Courses, Farmers maybe.
RESTRICTED USE all products used by pest control companies and anyone who is applying pesticides in public areas, Schools, Parks.
PROHIBITED USE all other products that in our context are considered prohibited.

I can not stress enough that comprehensive training is of Paramount importance. Maybe have a tiered approach depending on the uses mentioned above.

 [Christopher Fortnum](#) 1 month ago

If the Pesticide regulations have not been implemented then perhaps a clean sheet would be the best option. Use the best, most applicable parts of the old regulations while discarding the redundant. That would be my suggestion but I have no idea about the practicalities of doing this.

IPM:

 From "Consultation on Pesticides Regulations"
[Go to the project](#)

How can the Pesticides Regulations be designed to encourage the adoption of integrated pest management (IPM) practices, which prioritize non-chemical pest control methods and minimize the use of pesticides, while ensuring the effectiveness of pest management strategies in Bermuda's unique context?

Posted by

 [Government of Bermuda](#) Bermuda on June 27, 2024

Current status

PROPOSED

Comments (8)

 Commenting is not possible because this project is currently not active.

 [Stewart Swanson](#) 2 weeks ago

IPM

Integrated Pest Management (IPM) should certainly be encouraged for any and all pesticide users throughout the country. IPM doesn't necessarily "prioritize non-chemical pest control methods and minimize the use of pesticides" as stated in the IPM idea section heading.

Rather, IPM integrates pesticide use, with the use of biological and cultural practices that strive to not only economically control the pest, but also to prevent the development of resistance in the pest populations, thereby maintaining the efficacy of the pesticide. This is even more important when there are limited chemical control options for pests.


The use of IPM takes a higher level of management for the person trying to pursue this strategy. Scouting and properly identifying pests is essential, and economic thresholds need to be determined. An economic threshold describes the pest population that will cause enough damage to warrant control measures being implemented. Pest life cycles and favorable climatic conditions need to be understood to successfully implement an IPM program.

In an agricultural crop, cultural methods, such as rotating between different crops, selecting pest-resistant varieties, and planting pest-free rootstock may prevent the onset of pest problems. If a significant population of pests occurs the first chemical option is the use of pest specific chemicals or pheromones for trapping or mating disruption. Pest specific chemicals, unlike broad spectrum pesticides, will help prevent the development of resistance. Broad spectrum pesticides may kill most or all of the beneficial insects, which are an important hedge against the buildup of resistance.

The higher management level needed for a successful IPM program will involve the user's receiving education and training on pest identification, their life cycles, the weather conditions favorable for pests, resistance management, pesticide chemistry, the proper way to scout for pests, and cultural control practices.

 [Justin Tavares](#) 2 weeks ago

IPM practices are absolutely something that every pesticide user should be aware of and use when appropriate, but given Bermuda's unique environment and structures (Bermuda stone especially), IPM is not something that can be regulated as such. If anything, it should be used in conjunction with traditional pest control methods.

 [Kenton Brunson](#) 4 weeks ago

As a golf course operator dedicated to maintaining the highest standards of course conditioning while prioritizing environmental sustainability, we recognize how important IPM is. Pesticide regulations can be designed to encourage pesticide users through the suggested strategies: 1. Balanced Approach for Regulations: Set realistic targets for pesticide reduction while recognizing the necessity of pesticides for golf courses, parks, residential areas, etc. 2. Training: Implement mandatory training and certification programs for all pesticide applicators. People should not be able to purchase/apply pesticides without a license. We suggest using the State of Florida or South Carolina as a guideline for testing. 3. Research: Refine non-chemical control methods tailored to Bermuda. Partner with universities to ensure that the solutions are practical and effective. 4. Enhanced Monitoring: Pesticide users should be reporting usage on a monthly basis. Regular reporting will guide improvement in IPM.

 [Richard Watkinson](#) 4 weeks ago

@Kenton Brunson As a professional in the field with knowledge of IPM, you are in the best position to adapt to and apply new methods as they become known/proven. Having Government create rigid point-in-time regulations will not help you and may significantly hinder progress in this area.

- 1) Setting targets implies long term monitoring and data collection by a Tax Payer funded Government Dept.
- 2) Requiring license to purchase pesticides implies that all supermarkets, hardware stores and garden nurseries have to stop selling all pesticides. Nobody will be able to buy bug spray for use around their house.
- 3) Who will pay for this research to be done? Answer = The Tax Payer.
- 4) Ditto for #2. More costs for Tax Payers.

If you want Government to do something, you have to be prepared to pay for it in the form of increased taxation.

 [Richard Watkinson](#) 4 weeks ago


Of all the things that Government should be dealing with, this is not a priority...

 [Pedro Aguiar](#) 4 weeks ago

IPM practices will reduce our use of Pesticides, for sure, but one must understand that the use of Pesticides is pretty much inevitable at some point. I believe that training of professionals and private citizens is paramount so we can all understand how to implement IPM practices and therefore be better prepared to act accordingly.

 [Christopher Fortnum](#) 1 month ago


Integrated Pest Management programmes are a good way to reduce the volume of pesticides used and should be implemented by all users. Utilizing thresholds before controls are implemented and choosing pest resistant varieties of plants are some practical, low cost methods which are good for the environment and business finances. Despite what some people believe, pesticides are a necessary tool to sustain our way of life. Sadly, there is a lot of emotion involved in debates about pesticides and precious little facts.

 [Malachi Symonds](#) 2 months ago

Why are you trying to promote less pesticides? Or non-chemical methods of controlling pests and diseases? I'd love to have a meeting or a write up to understand this in depth. I'm not saying im against it but I need to understand why you are trying to regulate a dying industry even more.

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Accountability:

 From "Consultation on Pesticides Regulations"
[Go to the project](#)

What specific provisions should be included in the Pesticides Regulations to ensure transparency and accountability in the pesticide industry, including enforcement mechanisms and penalties for non-compliance?


Posted by

 [Government of Bermuda](#) Bermuda on June 27, 2024

Current status

PROPOSED

Comments (9)

 Commenting is not possible because this project is currently not active.

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 [Stewart Swanson](#) 2 weeks ago

Accountability

Pesticide application information should be recorded and kept by the user for at least one year. This is the usual practice in a lot of places, and it serves to ensure that the pesticides were used properly and can also be valuable in determining the effectiveness of a pesticide for the given pest that it is used against. For the agricultural sector some pesticide labels have plant back restrictions, as well as other directions including pre-harvest intervals and field reentry timing.

Compliance inspections should not be that great of a burden since the number of golf courses and farm entities is rather small. The exception perhaps, is the number of landscape maintenance companies and the governmental use of pesticides.

As far as the comments on soil and food testing are concerned, Bermuda does not have the facilities or personnel to address this effectively. If the label of a pesticide is followed properly there should not be any concerns about adverse conditions because the pesticide registrants have spent years testing the products and their usage. The important aspect in my opinion is that users be trained and licensed in the proper use of pesticides.

 [Justin Tavares](#) 2 weeks ago

Bermuda has licensing in place for pesticide applicators and all pest control companies are inspected annually. It should be the responsibility of each licensed business to keep records of pesticide usage to be produced within 24-hours if requested by regulatory authorities. Penalties should include warnings and fines.


 [Kenton Brunson](#) 4 weeks ago

1. Mandatory Reporting
2. Mandatory Licensing & Certification
3. Compliance inspections



[Richard Watkinson](#) 4 weeks ago

@Kenton Brunson Please see my reply to Pedro below. What you are suggesting is creating an additional administrative burden on the stewards of our land (farmers in particular) which will increase their costs which get passed on their customers. That admin burden also implies the creation of another government department to manage the whole process which implies additional TAXATION that we all will have to pay. Government doesn't magic money out of thin air -they extract it from tax payers. In order to prosper, we need less government not more.

 [Pedro Aguiar](#) 4 weeks ago

The accountability process should be simplified and in my opinion digitalized. An app/website should be created for control/accountability. The applicator would only have to input his license number and what Pesticide has been used and the target pest to treat, the app/website would tag/record the time, date, GPS location and weather at the time of application.



[Richard Watkinson](#) 4 weeks ago

@Pedro Aguiar Why does this information have to be recorded? What is the purpose of collecting the information. Who is then going to be charged with reviewing the data and doing something with it?
Please stop suggesting even more invasive regulations that gives Government the excuse to collect even more taxation to employ another department of bureaucrats that don't contribute to Bermuda's overall prosperity.
Every time someone comes up with yet another thing that 'Government should be doing' you have to consider the simple fact - Who is going to PAY FOR IT??? The answer is -WE ARE...

 [Christopher Fortnum](#) 1 month ago

It should written in the regulations that every application of a pesticide be documented to include; Date of application, name of applicator, weather/ temp at time of application, Product name/ active ingredient, volume of pesticide used, area to which pesticide was applied, any other relevant observations.

Failure to keep accurate records should result in loss of commercial applicators license. Applicator must produce these records on demand by the governing authority. This is pretty basic best practice for an applicator but should be required. With accurate record keeping accountability is attainable.



[Alison Gaudette](#) 1 month ago

@Christopher Fortnum Pesticides should be government regulated if they already are not along with frequent soil sampling conducted via a government lab. Incentivise natural farming methods and practices by way of grants. Those that are making the efforts to restore biodiversity should be compensated, there could be a carbon capture scheme created.



[Richard Watkinson](#) 4 weeks ago

@Alison Gaudette Please think about the implications of what you are suggesting.
Who is going to do the soil sampling? Who is going to do the testing? What are they testing for? None of that infrastructure exists so you are suggesting that Government hire a bunch of people and set up lab environments to do this work. Who is going to pay for all the capital expenditure and ongoing salaries?
Where is the money coming from to provide grants or compensation? Who determines who gets the money? More Civil Servants?
Everything you are suggesting means that Government has to extract more money in the form of TAXATION. The only money that Government has to spend is what it raises from tax payers -ie US.

Appendix C: Submission by Bermuda National Trust

Respond by 4th August 2024: • Comment online at: Citizen engagement platform | The Government of Bermuda (forum.gov.bm) 3 • Email enquiries and responses to MOH@gov.bm • Written enquiries and responses can be mailed to: Attn: David Kendell, Permanent Secretary for Health, Continental Building, 25 Church Street, Hamilton, HM12.

In addition, please respond to the survey at this link to indicate your priority areas for Regulations: <https://forms.gle/RaoHZFFUUpubok17>

Please respond to the prioritization survey at this link to indicate your priority areas for Regulations and to sign up for focus group participation: <https://forms.gle/RaoHZFFUUpubok17>

Further, please respond to the following questions:

Whilst it is good to see this finally making some movement forward it is concerning to know that Bermuda does not have any regulations for pesticides after having developed a pesticide safety act more than 15 years ago. On top of that it is concerning to note that while it is finally being addressed there is not the wherewithal to actualize this critical safety legislation that leaves all Bermudians in an unsafe environment.

Trying to prioritize the issues is difficult as they are all interrelated. You cannot expect legislation to be effective if it is not enforced, as an example. You cannot expect people to follow procedures without training. You cannot protect the environment and our people by addressing some parts of the issue and not others.

Scope: Does Bermuda require an entirely new pesticides control regime or should existing laws be used alongside new Pesticides Regulations to close critical gaps in controls? Please provide your rationale.

- The Pesticide Safety Act 2009 can be updated and work effectively with new Pesticides Regulations in place.

Accountability: What specific provisions should be included in the Pesticides Regulations to ensure transparency and accountability in the pesticide industry, including enforcement mechanisms and penalties for non-compliance?

- To be meaningful, licensing requirements must be enforced.
- Education requirements – mandatory training and testing with follow up required every couple years

- Licensing and inspection - Licensing systems rely on strong inspection systems because inspections identify problems and enforce compliance with pesticide legislation. Regular monitoring of record keeping, chemical use, storage and warning the public regarding use and entry times via signage.
- Regular review of the legislation and the impact it is having.

Capacity building: What mechanisms can be implemented to facilitate knowledge sharing and capacity building among stakeholders, including training programs and educational resources, to promote the safe and responsible use of pesticides in Bermuda?

- Create concise documents that demonstrate when and what qualification is required by situation, application method and/or chemical being applied.
- Training will be essential, and a relationship with an existing provider with Bermuda College would only make sense. The University of Florida Extension program has offered in the past, but I am sure there are many options.
- Require testing or follow up training every couple of years, as is the case with First Aid or SCARS in Bermuda.
- Ensure there is a public awareness campaign
- Ensure pesticides and herbicides can only be purchased with a current license.
- Employ the marketing center as a location for returning empty pesticide containers and ask applicators to show their spray log to ensure all use was documented and appropriately aligned with use.
- Make it mandatory to erect signage when spraying is being carried out. The sign should have information including but not limited to
 - Product name
 - Target species
 - Date and time of application
 - Reentry time
 - Reason for spraying
 - Emergency contact information
 - Applicator License number

IPM: How can the Pesticides Regulations be designed to encourage the adoption of integrated pest management (IPM) practices, which prioritize non-chemical pest control methods and minimize the use of pesticides, while ensuring the effectiveness of pest management strategies in Bermuda's unique context?

- Pesticide Safety Publications - Create pest management manuals and a website
- Create guidelines for when management action is needed to maximize profitability while minimizing environmental costs.
- Provide leadership in IPM, including building coalitions and partnerships that link with communities and public agencies.
- Ensure the IPM is a strong part of the training that is mandatory for licensing.

Appendix D: Submission by BEST

Dear Minister Wilson

We are grateful for the opportunity to make a submission in response to the public consultation on Pesticide Regulations in Bermuda. It must be said at the outset, that there is a deep concern that the vital progress needing to be made in this critically important area of health will be reduced given the statement made that foresees that ‘the limitations of current resources (which) will mean that only one or two sets of regulations will be pursued at this time’.

Bermuda’s Pesticide Safety Act 2009 has been without supporting regulations for some 15 years now, save for some put in place for the importation of pesticides, meaning that there are no regulations in force for the other areas outlined in the Act. Those areas being:

- Sale of Restricted Use Pesticides
- Application of Pesticides
- Pest Control Businesses
- Transportation, Handling, Storage and Disposal of Pesticides
- Enforcement
- Miscellaneous (including reporting of accidents involving pesticides, the keeping of records, register of pesticides and training)

By the end of this submission, we hope to have provided a point of view for an order of priority for the development and implementation of outstanding regulations, but this is problematic given the interconnectedness and interdependencies within the system needed to effectively balance the need for, or use of, pesticides in Bermuda with the threats to the environment.

First, I would like to provide some background to our submission, some of which you may remember having received before. Between 2015 and 2017, we did share some of this with you, as well as with other Government Ministers, with members of the Opposition and with the public in different ways.

In 2013, a group was formed to work in collaboration with the Bermuda Environmental Sustainability Taskforce (BEST) to consider the causes of the local and global die-off of honeybees. The group was known as The BUZZ and our work ended up focusing on one of the threats to the bees, which was coming from the use of pesticides, including the group of ‘systemic’ pesticides that includes:

- (i) the ‘family’ of neonicotinoids and
- (ii) any formulation containing glyphosate, the active ingredient in pesticides like RoundUp and Rodeo.

From our research, it seems likely to us that those systemic chemicals, which are absorbed by the plant, would be a danger to human health as well as to the targeted pests. In was, in fact, a local farmer who alerted us to the dangers of products containing glyphosate.

We urge the Government of Bermuda to begin this effort by establishing a vision for our country as it relates to *how, when* or even *if* we need to use toxic chemicals (like pesticides) within the eco-system of our small island home. Such a vision would ideally be built on a foundation that embraces an approach based on the 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)

A next step could be to consider how we can make/effect any reduction in the use of pesticides, given the overwhelming evidence of negative impacts from them on human and environmental health. One way to accomplish this would be for us to consider creating and formally adopting ***an Integrated Pest Management (IPM) Policy and Program*** as a way to consider and employ alternative options for the management of weeds and pests in Bermuda. Reducing our dependence on toxic products (like pesticides) will also help to address the resistance that both pests and weeds inevitably develop to these products. For instance, jurisdictions that have been heavy users of the weedkiller Roundup have now had to incorporate the use of yet another (Monsanto/Bayer) product (Dicamba) to counteract weed resistance.

Key elements of an IPM would provide for:

- Monitoring of pesticide impacts
- Approval of alternative weed control processes, including the option of mechanical means of removing weeds (which could potentially be made part of a rehab program for non-violent offenders in the prison system or as part of a community service program)
- Public education
- A communication plan and stakeholder input.

Over the past few years, the island of St Helena in the south Atlantic (another British Overseas Territory) has been successful in developing and implementing an island-wide IPM program. We had the opportunity to speak with key staff in St Helena and have reviewed their policy. We are attaching a version that we redrafted for Bermuda so that our government can see what might be involved. We feel confident that the Government could get some guidance from St. Helena as it works on Bermuda’s own program.

As mentioned previously, The BUZZ made a number of submissions to a variety of Government Ministers between 2015 and 2017 without receiving a response from any of them. We have, therefore, no sense of how those submissions were viewed by them. We are hopeful that the current public consultation opportunity might represent a renewed interest in strengthening protections to human and environmental health at risk from the use and abuse of pesticides.

What follows are the questions and concerns that arose during our work and research, grouped under the headings of the Sections covered in the PSA 2009; an approach which we hope makes sense:

1. **Importation:**

a. While this is the only part of the Pesticide Safety Act 2009 that did have regulations put in place, we feel it should be revisited within the current initiative to make any necessary changes, particularly given an approach based on a precautionary approach and in support of an IPM.

b. What value might there be to consolidating the importation and distribution of all toxic products (like pesticides) through the existing Government Marketing Centre, although we would suggest a more fitting name like the Bulk Importation and Distribution Depot ('BIDD'), so that they are the only importer and distributor into the island? This would:

- (i) make it more possible to track every toxic product being brought in, sold and used on the island
- (ii) allow for other controls to be put in place and meaningful reports generated, and
- (iii) allow for monitoring of where training of users is needed.

c. Given the worldwide concern with the systemic pesticides (including RoundUp and Rodeo, what attention has been paid to other 'systemic', pesticides like neonicotinoids? Of particular concern is Imidacloprid, which we were told is being used in Bermuda and might appear under the brand names of Kohinor, Admire, Advantage, Gaucho, Merit, Confidor, Hachikusan, Premise, Prothor, and Winner.

d. A Government presentation on January 12, 2017, included three slides entitled Pesticide Imports to Bermuda. The slides show the pesticides that are Restricted, Prohibited and Approved:

- 22 pesticides were listed as Restricted i.e. these active ingredients are restricted due to environmental or health concerns related to the percentage of active ingredient in the product, the packaging of the product, the formulation of the product, or the intended end use (location) of the product.
- 35 pesticides were listed as Prohibited, i.e. these active ingredients are prohibited from importation due to environmental or health concerns.
- 6 pesticides were shown as Approved.

At the time that information was provided (during the presentation), it differed significantly from the Prohibited Pesticide List available on the Government website, in that the website only presents prohibited and restricted pesticides, and only lists 16 restricted pesticides and 20 prohibited pesticides. We are wondering if this is still the case.

Is the correct version (of these lists) comprehensive in terms of addressing all of the pesticides that enter and are used in Bermuda? If not, why not?

Having clear definitions or descriptions of Restricted, Prohibited and Approved pesticides would be helpful. Also:

- What policy and/or practice is used to make the decision as to the appropriate category chosen?
- How is a decision to approve or deny justified?
- What changes to these lists have occurred over time and why?
- Is the information accessible to the public?

e. From the many scientific reports published around the world in recent years, we are alarmed to learn that of all the chemicals contained in a 'formulation' of a pesticide, it is only the active ingredient (eg. glyphosate in RoundUp) that is subject to testing and regulation. The so-called 'inert' ingredients that make up the balance of the formulation (as much as 98%) are untested and unregulated. For example, the revelation that one of the co-formulants in RoundUp (and Rodeo), POE-tallowamine, is of real concern and suggests that the singular focus on the active ingredient, glyphosate, served to divert the world's concern and attention. The public is entitled to have this type of information. See: <https://www.sciencedirect.com/science/article/pii/S0278691519301814>

Summary:

Glyphosate is the active ingredient in glyphosate-based herbicides (GBHs). Other chemicals in GBHs are presumed as inert by regulatory authorities and are largely ignored in pesticide safety evaluations. We identified the surfactants in a cross-section of GBH formulations and compared their acute toxic effects. The first generation of polyethoxylated amine (POEA) surfactants (POE-tallowamine) in Roundup are markedly more toxic than glyphosate and heightened concerns of risks to human health, especially among heavily exposed applicators.

Beginning in the mid-1990s, first-generation POEAs were progressively replaced by other POEA surfactants, ethoxylated etheramines, which exhibited lower non-target toxic effects. Lingering concern over surfactant toxicity was mitigated at least in part within the European Union by the introduction of propoxylated quaternary ammonium surfactants. This class of POEA surfactants are ~100 times less toxic to aquatic ecosystems and human cells than previous GBH-POEA surfactants. As GBH composition is legally classified as confidential commercial information, confusion concerning the identity and concentrations of co-formulants is common and descriptions of test substances in published studies are often erroneous or incomplete. In order to resolve this confusion, laws requiring disclosure of the chemical composition of pesticide products could be enacted. Research to understand health implications from ingesting these substances is required.

2. **Sale:**

a. What value might there be to restricting the retail sale of toxic products (even like pesticides sold as bug sprays etc.) directly to homeowners, making them only available through the central depot BIDD where personnel would be trained and licensed to advise on the proper use of these products? This would mean that they would no longer be available at nurseries or hardware stores (like Masters and Gorhams) where personnel may or may not be asked or indeed able to provide advice and oversight. This could also assist in the control of misinformation when, for example:

- a person at public meeting stated that RoundUp is not a 'systemic' pesticide, or
- where one person states that systemic pesticides should not be used on food plants/crops, whereas a farmer states that you can use it on food plants as it ceases to be toxic by the time the edible fruit/veg is consumed.

3. Application:

a. What are the unintended consequences when the concentrated forms of toxic chemical products aren't properly diluted, or when the user doesn't follow (or even closely read) the instructions provided?

b. What chemical products are being used now in public areas in Bermuda? We no longer have a sense of the current levels of use of RoundUp or other systemic pesticides in Bermuda. Can you confirm that no RoundUp is being sprayed in public spaces like children's playgrounds, hospital grounds, nurseries and schools, old people's homes, parks, railway trails, roadsides?

c. How can neighbourhoods/residents 'opt out' of their areas being sprayed, due to concerns around exposure?

d. The public should know where chemicals are being applied and by whom. Whenever chemical pesticides have been sprayed in any public space, signs informing of the duration and level of risks from spraying should be posted somewhere, somehow.

4. Transportation, Handling, Storage, Disposal:

We suggest that all toxic chemical pesticides be stored at the same BIDD until procured under a regulated system. Further, all unused pesticides/containers should end up back at the BIDD so that they can record particulars of what is being disposed of and then properly dispose of the remaining liquids/granules or containers. We say 'end up back at the BIDD' so that, for convenience sake, the Tynes Bay Waste Facility may continue to be the central place for members of the public to actually drop the products/containers, but then for them to be conveyed over to the BIDD.

5. Enforcement:

Recognizing the general ineffectiveness of conventional attempts at enforcement of policy infractions, who will be responsible for developing creative ways to communicate the new vision and to encourage public participation and adherence to policies?

6. **Miscellaneous** (including reporting of accidents, recording keeping, training:

In terms of record-keeping, every commercial user (including farmers) should have to file a notice of use (it can be brief) giving the location; reason for use; rate of application; and the total amount used. This information should be on a public database and there should be penalties for not filing. In anticipating claims about having to do this, it could be an app on a phone to make it easy. It could be tied to a GIS system so people could see the data easily and incentives considered to encourage compliance.

7. **Additional: Education:**

a. Members of the Bermuda public must be able to make informed purchasing decisions around toxic chemical products, but often there is a sense that if something is simply available 'for sale', then that means that it is 'safe'. What is the commitment to providing general education around safer alternative products to complement the controls that will be put in place with respect to toxic products (like pesticides) that are to be available for sale and use in Bermuda?

In her book 'Silent Spring', Rachel Carson argues "*that people are vulnerable to pesticides not just because the chemicals are dangerous but also because chemical companies and governments have done little to educate the public about the danger. Studies have shown that most Americans are ignorant of pesticides' ability to poison or cause disease, even as they use them in their homes and gardens*".

We are attaching a copy of a document with facts about pesticides under the heading of 'Better Safe than Sorry!'

b. We believe that part of any strategy would need to include educating and inspiring the public. As no change of policy can rely on enforcement alone, and so, at a minimum we recommend developing Public Service Announcements and engaging our young people to spread the word via social media. We need to 'inform and inspire' for meaningful, long-lasting change.

8. **Additional: Health:**

a. How can we be educated about 'bio-accumulation' where health is further threatened by the multitude of toxic chemicals in use simultaneously?

b. As a priority, will there be a programme of ongoing, regular testing of any toxic products (like pesticides) being used in Bermuda?

c. How is a testing lab selected? By availability? capability? price? standards for accuracy?

d. What is the potential impact of including 'sprayed' vegetation in the material being composted at Marsh Folly for use by home gardeners?

e. How can the public access the information kept by the Ministry of Health in respect to the thresholds of safe exposure to toxic products (like pesticides)?

f. What is the response to the recent (Jan 2017) Ecologist article that suggests that RoundUp causes serious liver damage to rats even at the low doses permitted by regulators? http://www.theecologist.org/News/news_analysis/2988500/roundup_residues_in_food_ca_use_fatty_liver_disease.html

g. What is the degree of concern in the Ministry of Health to the action of ‘systemic’ chemicals (like RoundUp/Rodeo/neonicotinoids) which are taken up and into the plant and which would, therefore, travel up into the pollen, nectar and fruit of a plant?

h. As a preventative measure, Dr. Fosker’s National Cancer Control Plan 2024-2030 which is a recent report on cancer in Bermuda, recommends “reducing exposure to harmful chemical and environmental elements, including agricultural pesticides”.

i. How can we heed the warning in a recent article from Sustainable Pulse about the impact on marine environments from Glyphosate, which would be introduced into the water by way of run-off from the land, which happens frequently in Bermuda:

Glyphosate Reduces Ocean Carbon Sequestration and Damages Coral Reefs – New Study

Posted on Apr 2 2024 - 1:49am **by** [Sustainable Pulse](#)

<https://sustainablepulse.com/2024/04/02/glyphosate-reduces-ocean-carbon-sequestration-and-damages-coral-reefs-new-study/>

Something that we feel we didn’t highlight nearly enough in our many, various submissions over the years is the very important question of the health of our soil in Bermuda, given the many years that we have used pesticides and chemical fertilizers. We believe that this information is also critical in considering the impact of pesticides on our food-growing environments.

There are a number of persons in Bermuda who have been studying the Soil Food Web with Dr. Elaine Ingham who is a microbiologist and soil biology researcher in the United States and who is passionate about the way healthy, balanced soil can produce bountiful yields with neither pesticides nor chemical fertilizers. We hope that their knowledge can be put to good use in some way here in Bermuda and perhaps Dr. Ingham could be consulted as part of this initiative.

Please know that we are sympathetic to our authorities’ efforts to make heads-or-tails of the many and often conflicting reports on the safety of toxic products (like pesticides), as well as coping with the often-unrelenting pressure of lobbyists and industry representatives (like Monsanto... now part of Bayer). We hope that the number of questions and concerns gathered and presented here serve to highlight the level of interest in the issue of toxic chemical use in Bermuda, given the threats to human and environmental health. We trust you will remain committed to serving these concerns through the

establishment of an IPM program in Bermuda and to take pride in seeking solutions that reduce or eliminate exposure to these toxic products.

First and foremost, we must protect the health and well-being of our population and environment. We believe that the course you are charting here is unprecedented and extremely valuable... and for that we are grateful.

Becoming a “greener”, more health-conscious destination would also yield dividends to our visitors and therefore could be a benefit to our **tourism** product.

We are looking for your assurance that our concerns are noted and understood and that our government is committed to protecting the health and well-being of our own population and environment. We want our government to be more prudent and to serve our residents better by reducing our exposure to environmental toxins and food contaminants to the greatest degree possible. It is indisputable that human health is rooted in a healthy environment. A quote well worth considering, that "the best way to predict the future is to create it." We would like the future for Bermuda to be bright and healthy, and we believe that you, **our government**, would as well.

In summary, BEST believes in the importance of the following areas of priority:

- The creation of a vision as it relates to the use of toxic chemicals in Bermuda.
- The formal adoption of an Integrated Pest Management program for Bermuda to reduce our dependence on pesticides, certainly as a first-line remedy and as a way to identify alternative options for the management of weeds and pests in Bermuda. Reducing our dependence on toxic products (like pesticides) will also help to address the inevitable resistance that pests and weeds build up to any product, leading to excessive levels of counteraction.
- That there be an audit of the chemicals currently being permitted for use in Bermuda.
- The removal of toxic chemicals from hardware stores, or wherever else they are sold, which provides easy access to persons with little to no understanding of the consequence of misuse or overuse of a toxic product.
- The establishment of a central Bulk Importation and Distribution Depot (BIDD) for chemical products, enabling government to have a complete sense of all that is coming into the island and to track purchasers/users of those products to ensure they have the appropriate training. This could then allow these toxic products to be removed from the shelves of hardware and grocery stores where the personnel are untrained to represent the toxicity of the products.
- That value be considered for a consultation with a leader in soil microbiology and research to provide some advice to assist us in determining the state of our soil health, given the many years of using chemical fertilizers and pesticides. It is anticipated that she can give us information on

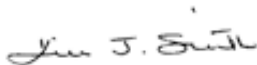
how to ensure that our farming soil has the right balance of organisms and how to get it back in balance when needed.

We do have concerns about the dominance of the Minister's powers in the legislation since that position is a political appointment and vulnerable to possible changes in leadership. Consistency in the application of policies that have such health implications might better be served by those responsibilities being assigned to the position of the Permanent Secretary. This is likely a moot point for this occasion

Similarly, the legislation is full of instances where a Minister's powers are seemingly more subjective, e.g. "The Minister may...". This is concerning given the degree to which any Minister could likely be challenged: balancing the desire to keep constituents 'happy' and supportive while fulfilling their Ministerial duties. Cynicism and concern go hand-in-hand in these modern times, and we feel that modern legislation needs to be armoured in appropriate and protective ways.

Finally, we want to register our concern about the impact of cross-Ministry responsibilities when it comes to pesticides management in Bermuda, between the Department of the Environment and Natural Resources (under the Ministry of Home Affairs) and the Departments of Health and Environmental Health (under the Ministry of Health). This arrangement, in our minds, represents a vulnerability in the system where the inevitable gaps become the cracks through which much can fall.

Thank you and BEST regards,

A handwritten signature in cursive script, appearing to read "Kim J. Smith".

Kim Smith – BEST

Appendix E: Submission to the Ministry

Subject: Recommendations for Amendments to the Pesticide Safety Act 2009

Dear Minister,

Introduction

In response to the government's Stakeholder Consultation on Pesticides, I am writing to share my views on the Pesticide Safety Act 2009 ("the Act"). While the Act plays a vital role in protecting public health and the environment, it imposes unnecessary regulatory burdens on businesses and regulators. To alleviate these burdens, I propose three alternative approaches for improving the Act. These approaches aim to streamline its application by concentrating on the most hazardous substances, thereby reducing the regulatory compliance burdens associated with safer alternatives.

Importation vs. Use

For clarity, I want to emphasize the distinction between *importation* and *use*. For the purposes of this letter, 'use' includes storage, transportation, mixing, application, and disposal. In other words, it encompasses all activities except for importation.

In my view, no amendments to the Act are necessary concerning the *importation* of pesticides. There is no question that the stringent regulation of the importation of Restricted Use Pesticides is essential for public safety and environmental protection. While there is some debate about the need to regulate the importation of *general* use pesticides (which are already approved by the United States Environmental Protection Agency for use by the general public) an additional layer of regulation to account for Bermuda's unique circumstances is justified in my opinion. The most striking Bermuda-specific peculiarity is that drinking water is collected on roofs. Less unique, but also worth considering, are Bermuda's high population density, proximity of residential areas to farmland, risks of groundwater pollution, and the protection of indigenous biodiversity.

To be clear, the proposals below pertain solely to the *use* of pesticides, not their importation.

Proposal 1: Limit the Scope of the Act to Restricted Use Pesticides

The first option is to limit the scope of the Act to Restricted Use Pesticides (RUPs). This approach would focus regulatory oversight on pesticides that pose the highest risk to human health and the environment, ensuring stringent controls where they are most needed. Such a measure would:

1. **Reduce Regulatory Burdens:** By limiting the scope of the Act to the most hazardous pesticides, the cost to businesses of regulatory compliance and the cost to the government of regulatory administration would be reduced.
2. **Improve Compliance:** Government resources could be directed towards monitoring and regulating substances that genuinely warrant closer scrutiny, optimizing the impact of regulatory efforts. In other words, focusing finite enforcement resources on a narrower set of high-risk

pesticides would enhance compliance rates and ensure more effective enforcement where it really matters.

3. **Be simple to administer.** The US Environmental Protection Agency (EPA) requires that any pesticide classified as a Restricted Use Pesticide (RUP) must clearly display this classification on the front panel of its product label. For the purposes of this Act, an RUP will be defined as any pesticide that the US EPA has classified as a Restricted Use Pesticide.

Proposal 2: Include a Shortlist of Additional Pesticides

The second option is to limit the scope of the Act to RUPs plus a shortlist of additional pesticides identified by the Minister as requiring oversight. This list could include specific general use pesticides that may pose particular risks in certain contexts. This approach offers:

1. **Tailored Regulation:** Allows for a more nuanced regulatory framework that creates regulatory compliance burdens only where they are needed. Maintains stringent controls where necessary while relieving the burden associated with the use of less hazardous substances.
2. **Flexibility:** Empowers the Minister to adjust the list as new information becomes available, ensuring the regulation remains responsive to emerging risks and scientific advancements.

Proposal 3: Exempt OMRI Organic and Safe Synthetic Pesticides

The third option is to exempt OMRI-listed organic pesticides and the synthetic pesticides identified as safe in the attached lists from the usage regulations of the Act. This exemption would recognize the relatively low risk profile of these pesticides and would:

1. **Encourage the Use of Safer Alternatives:** By reducing the regulatory compliance burden associated with low-risk pesticides, businesses would be incentivized to use low-risk pesticides, rather than RUPs, in circumstances where an effective alternative exists.
2. **Streamline Compliance:** Simplifying the regulatory landscape for these substances would reduce the administrative workload for businesses and the government alike.

Conclusion

Revising the Pesticide Safety Act 2009 to focus on restricted use pesticides, with the options of including a targeted shortlist or exempting OMRI organic and safe synthetic pesticides, would achieve a balanced approach to regulation. It would ensure the highest-risk substances are effectively managed while alleviating unnecessary burdens on safer alternatives. I urge the Ministry to consider these recommendations to enhance the effectiveness and efficiency of our pesticide regulatory framework.

Yours faithfully,

[Author requested to remain anonymous]

Attachments

OMRI Organic Pesticides List:

1. Bacillus thuringiensis (Bt)
2. Boric Acid (a.k.a. Orthoboric Acid, Hydrogen Borate)
3. Castor Oil
4. Cinnamon Oil
5. Citronella Oil
6. Clove Oil
7. Copper (various forms)
8. Diatomaceous Earth
9. Garlic Oil
10. Horticultural Oils (including Neem Oil)
11. Hot Pepper Wax
12. Insecticidal Soaps
13. Limonene
14. Peppermint Oil
15. Potassium Bicarbonate
16. Pyrethrin
17. Soybean Oil
18. Spinosad
 - a. subsp. aizawai (Bta)
 - b. subsp. israelensis (Bti)
 - c. subsp. kurstaki (Btk)
 - d. subsp. tenebrionis (Btt)
19. Sulfur

Safe Synthetic Pesticides List:

1. Bacillus sphaericus
2. Diatomaceous Earth (synthetic)
3. Horticultural Oils (synthetic)
4. Insecticidal Soaps (synthetic)
5. Methoprene
6. Pyriproxyfen
7. Spinosad (synthetic)