



Scheme Overview

PLANT PRODUCTION BIOSECURITY SCHEME

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Scheme Overview

Plant Production Biosecurity Scheme

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Updates

The Plant Production Biosecurity Scheme (PPBS) is a science-based framework to help producers identify, control, manage and avoid biosecurity risk. The scheme and standards are based on work undertaken early in 2018 in following experience early in the myrtle rust response that underscored the crucial role that plant producers play in early detection of pests, their containment and slowing their spread following a pest incursion. Subsequent discussions identified the opportunity to develop a systematic approach to plant production industry biosecurity risk management.

Revisions will be ongoing as PPBS experience and/or new science inform the need for change. Revisions published on the Scheme's website [to follow] and participants advised of the changes and new documents, so they can ensure that they are referring to the most recent documents.

Those wishing to provide recommendations for change should send these in writing to PPBS or by email to [in the interim office@nzppi.co.nz].

Acknowledgements

The PPBS acknowledges and is appreciative of the support of many industry members and stakeholders who assisted in the development of the scheme; the Ministry for Primary Industry's funding of the design phase, the guidance of project Steering and Working Groups, feedback and advice from industry members and stakeholders, and Kiwifruit Vine Health's generously allowing the PPBS to extract from and draw heavily upon their work and the Kiwifruit Plant Certification Scheme.

Disclaimer

While this standard's objective is to allow certification of plant producers and confidence that the plants they produce have been grown under conditions of high biosecurity risk and hazard management, there remains the possibility a proportion of plants may contain biosecurity pests. PPBS accepts no liability for claims regarding the presence of pests in any plants produced by registered and/or certified producers. While the objective of this standard and guidelines is to minimise the potential risk pest, no party can guarantee that adherence to these standards and guidelines will reduce such risk to zero.

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Scheme Overview

an introduction to and overview of how the scheme works

Overview

1. Introduction

Plant producers operate in an environment where they are exposed to significant and continual pest¹ threats - not only from established pest species but also from new incursions. A 2015 publication² addressing New Zealand pest management, concluded that “*New Zealand is under increasing pressure from terrestrial and aquatic pests, weeds and diseases that threaten the country's ecosystems and economy. Ongoing improvement in existing pest management methodologies and novel approaches are required.*” It continued: “*Surveillance and pest monitoring are needed to increase the chances of early interception of invasive species or to confirm their eradication.*”

New Zealand’s experienced pest incursions in increasing numbers over the last 50 years as international trade and travel have grown. *Phytophthora cinnamomi*; *Pythium* and *Fusarium* species are ubiquitous, and New Zealand plant producers manage these, and other endemic pests, daily. Plant producers work hard to protect their nurseries committing a good deal of resource to the process - time, effort and money.

Offshore threats continue to grow, and in the last decade, incursions have occurred in other countries that have had devastating consequences over large areas. Significant exotic pests currently include *Xylella fastidiosa*, *Ceratocystis fimbriata*, *Cryphonectria parasitica* (Chestnut blight), *Phytophthora ramorum* (Sudden Oak Death) and *Candidatus Liberibacter asiaticus* (Citrus greening). These and others present a critical risk to plant producers, the environment, the horticultural industry and the economy.

Plant producers are at the frontline in the battle to improve pest management strategies. Nurseries present a smorgasbord for pests; we’ve thousands of plants, in many cases over a wide range of species, and in a juvenile state when they’re often most vulnerable. Nursery growing conditions are ideal pest incubators! These factors provide both opportunity and threat - experience early in the myrtle rust response underscored the crucial role that plant producers play in early detection and slowing the spread following a pest incursion. It also underscored the threat that a pest incursion response poses to plant movements and to individual producers who have a pest detected on their nursery; and the adverse impact of nursery closure and/or disruption that movement controls can have on the affected producer, their families and staff, local communities and other nearby nurseries.

Additionally, as we ship plants to our customers, our biosecurity hazards are readily spread. Whether our customers are nearby or further afield, the nursery stock distribution pathway has the potential for pests to be rapidly spread throughout New Zealand – and into the environments of our customers.

These hazards can spread to:

- food, viticulture and forestry production – orchards, greenhouses, markets gardens, vineyards and forests;
- the natural environment - conservation, revegetation and restoration programmes;
- the built environment - landscape, amenity, infrastructure, retail and home garden markets; and
- other production nurseries.

This **Plant Production Biosecurity Scheme (PPBS)** is a systematic approach to nursery production and plant producer industry biosecurity risk management. It’s a comprehensive science-based framework to help producers identify, control, manage or avoid biosecurity hazards in their nursery and production

¹ Any species, strain or biotype of plant, animal or pathogenic agent that adversely impacts plants in commercial production or the natural environment.

² Goldson, SL. et al 2015. New Zealand pest management: current and future challenges - Journal of the Royal Society of New Zealand, 2015, 45 (1), pp. 31 - 58

processes. It will protect the producer, their customers, the environment and the New Zealand economy from the inadvertent introduction and dispersal of a pest.

Plant Producers who achieve Certification to the Core Standard and any applicable Specific Modules demonstrate their production is undertaken under conditions of strong biosecurity risk and hazard management. In doing so, they provide assurance that their plants have been raised in conditions that minimise the introduction and spread of pests.

2. Mission

Mission

To support a professional approach to biosecurity across the plant production industry, which minimises biosecurity risk, builds industry and producer resilience, trust and social licence, and harnesses the critical skills and observations that exist in the industry to protect and grow New Zealand.

The Scheme will assist plant producers and their customers to:

- Build trust with stakeholders and customers, and social licence with the public.
- Lift biosecurity professionalism and standards
- Increase likelihood of early detection pest organisms
- Reduce the likelihood of the domestic spread of pest organisms
- Preserve response options in the event of future pest incursions
- Enable rapid recovery following a biosecurity event.

Participants in the Scheme will implement programmes that:

- Implement measures that will help protect plant producers, their customers and the environment from pests.
- Facilitate best management practices to reduce pest risk in the production and distribution of nursery stock.
- Facilitate traceability through nursery production and distribution networks.
- Reduce business risk and uncertainty by providing a robust framework on which business decisions can be based.
- Enhance their ability to produce and move plants around New Zealand efficiently within the regulatory framework and industry standards.

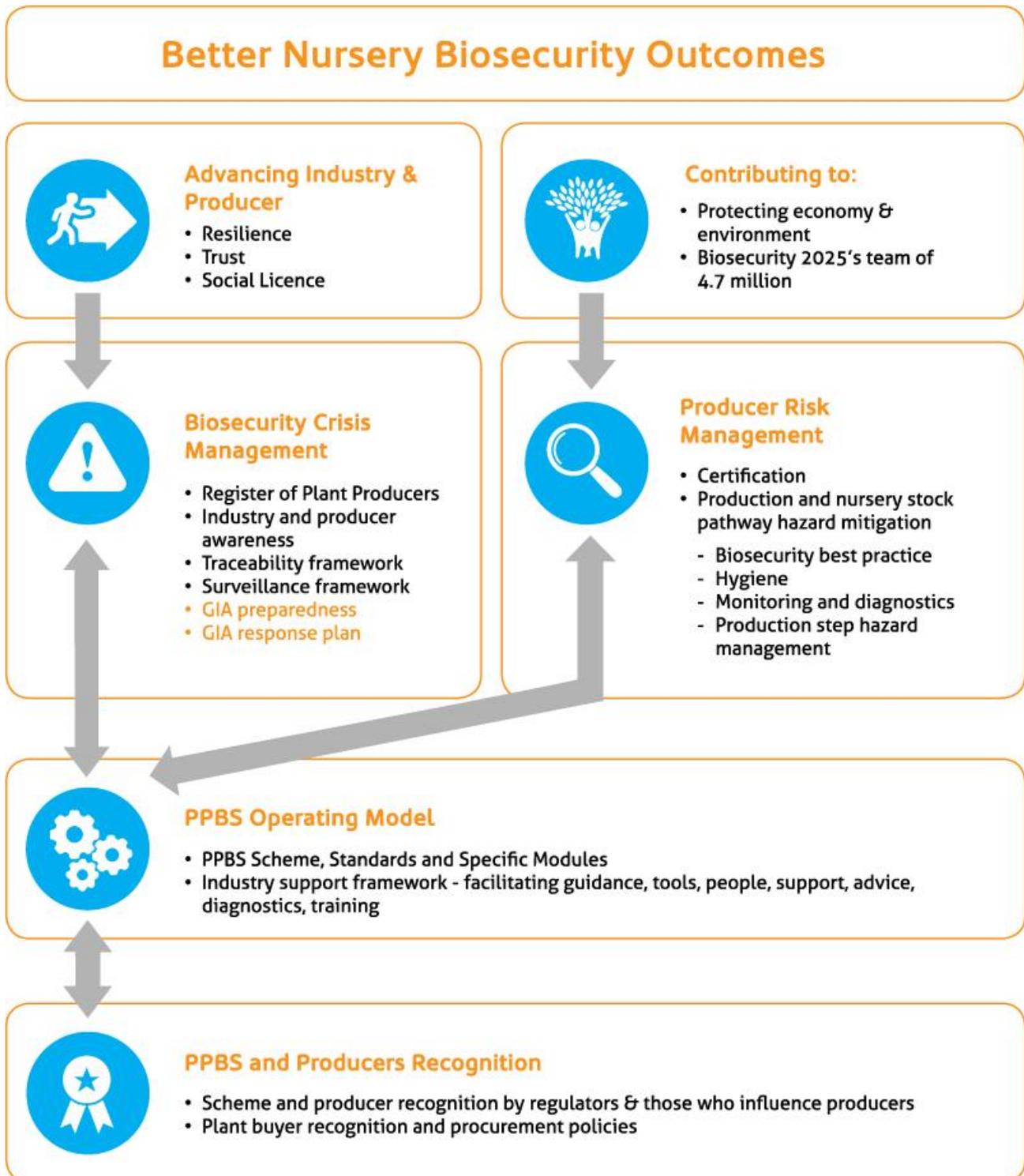
3. Principles

The principles below guide development, participation and decision-making through the PPBS.

1. All plant producers have a role to play in biosecurity.
2. Plant producers are well-positioned to detect a new pest early, manage pests in their nursery, and prevent them being spread to their customers and the environment.
3. The PPBS is a risk-based biosecurity management framework informed by the best available science and information. It harnesses, encourages and promotes innovation in nursery practice.
4. It recognises that a proactive approach to identifying and managing biosecurity risks at the earliest intervention point prevents risk, protects producers and lessens impact.
5. The PPBS embraces a pragmatic approach, it must work and be workable, it must support and help productivity and add value for producers.
6. Recognition of the PPBS by regulators, plant buyers and the public builds trust and social licence, benefits producers and mitigates regulatory impact in an incursion.
7. Broad participation and a collaborative approach among producers, customers and industry and biosecurity stakeholders strengthens biosecurity outcomes.
8. The PPBS is industry-led drawing upon the critical skills, observations, experiences and shared learnings among producers, their customers and industry stakeholders.
9. Decision making is transparent, communications open and producer participation welcome.

4. The PPBS and Nursery Biosecurity Outcomes

This diagram captures key relationships among the PPBS, the engagement of producers and the interests of stakeholders. While GIA is not part of the Scheme, reference is made to GIA to demonstrate how the scheme might align with or link potential plant producer GIA participation.



5. Scope

5.1. Plant Producers

The Scheme's scope applies to all plant producers undertaking nursery production of plants within New Zealand. The Scheme defines a "**plant producer**" as "any person, business or entity engaged in producing plants, or, parts of plants for sale, their own use, or, for movement outside of the property".

This includes formal for-profit nurseries, part time, lifestyle and hobbyist growers, community nurseries and those staffed by volunteers, landscapers, retailers, food producers and others who grow some of their own plants and entities that hold plants for an extended period (for example, garden retailers, landscapers and plant brokers).

Home gardeners, plants swapped among garden club members, or sold at school and charitable events are not within the Scheme's scope. However, the Scheme will develop guidance for these groups so that they can contribute to national efforts to grow biosecurity – for example through Biosecurity 2015.

Other entities in the plant production and nursery stock supply chain are also recognised as being exposed to and presenting biosecurity risk when plants are held and aggregated for periods of time. These entities are encompassed by the Scheme and include garden retailers, some landscapers, plant brokers and distribution depots. Guidance will be developed to help them undertake risk management, including stock inspections and monitoring.

The Scheme takes a systems-based approach to biosecurity risk management protocols for all plant species and all pests, and includes nursery inputs, plant production, and nursery outputs and their distribution and transportation.

The Scheme provides assurance that certified producers have high biosecurity risk management practices in place and that the plants they produce have been raised in conditions that ensure they are practically free of pests at the time of sale and/or distribution by the producer.

5.1.1. Target Organisms

A **pest** is defined as – Any species, strain or biotype of plant, animal or pathogenic agent that adversely impacts plants in commercial production or the natural environment.

The **Core Standard** (refer Section 6.3) does not specifically identify pests of concern. It instead employs the concept of "Practical Freedom"

"A consignment, field, or place of production, without pests in numbers or quantities in excess of those that can be expected to result from, and be consistent with, good cultural and handling practices employed in the production and marketing of the commodity" (ISPM5)

to ascribe a high level of biosecurity confidence in the producer, their nursery and plants they produce.

In the future however, the Core Standard may identify target organisms as our understanding of biosecurity risks to the plant production industry evolves.

Specific Modules (refer Section 6.3) will very likely identify pests of concern and place additional requirements on producers who grow the plant species and/or supply the industry or ship plants through the pathway of interest.

5.2. Design Principles

The plant production industry is extremely diverse. It comprises a few thousand producers across a wide range of markets, customers and distribution networks, enterprise size, ownership and commercial models and plant species. Producer's awareness of and expertise in biosecurity hazard and risk management varies.

The Scheme's design acknowledges this diversity and can be used by all plant producers, from the smallest to largest nursery, by commercial and community nurseries irrespective of what they grow or who they supply. The Core Standard focuses on core biosecurity best practice encompassing management and staff responsibly, nursery hygiene, crop monitoring and traceability. It includes examples of biosecurity hazards and management measures for nursery inputs, through the production cycle and in nursery dispatch and transportation.

Where necessary and desired, Specific Modules manage concerns about a specific pest, plant species, industry or distribution pathway that are additional to those in the Core Standard. These may be incorporated as a module within the Scheme, by reference to other biosecurity schemes or through mutual recognition. Examples may include myrtle rust, kiwifruit nursery stock and plants supplied for restoration of offshore islands.

5.2.1. Hazard assessment methodology

The Scheme is aligned with **HACCP methodology** (Hazard Analysis and Critical Control Points) to provide a framework to identify and manage risk within the nursery production process

HACCP is systematic and preventative approach to managing risk that is widely used in many industries, it scales with enterprise complexity and has been adopted as the standard risk management tool for food safety.

The key principles of the HACCP approach are to identify all potential hazards in a production system and identify intervention points where these hazards can be controlled, prevented or reduced. This preventative approach to hazard management is proven to be successful in many production industries and has been adapted to provide a framework for the Scheme.

Scheme elements scale readily to accommodate enterprise and nursery diversity and complexity - the measures that a small nursery need adopt will be fewer (or less complex) to manage the hazards they face or present.

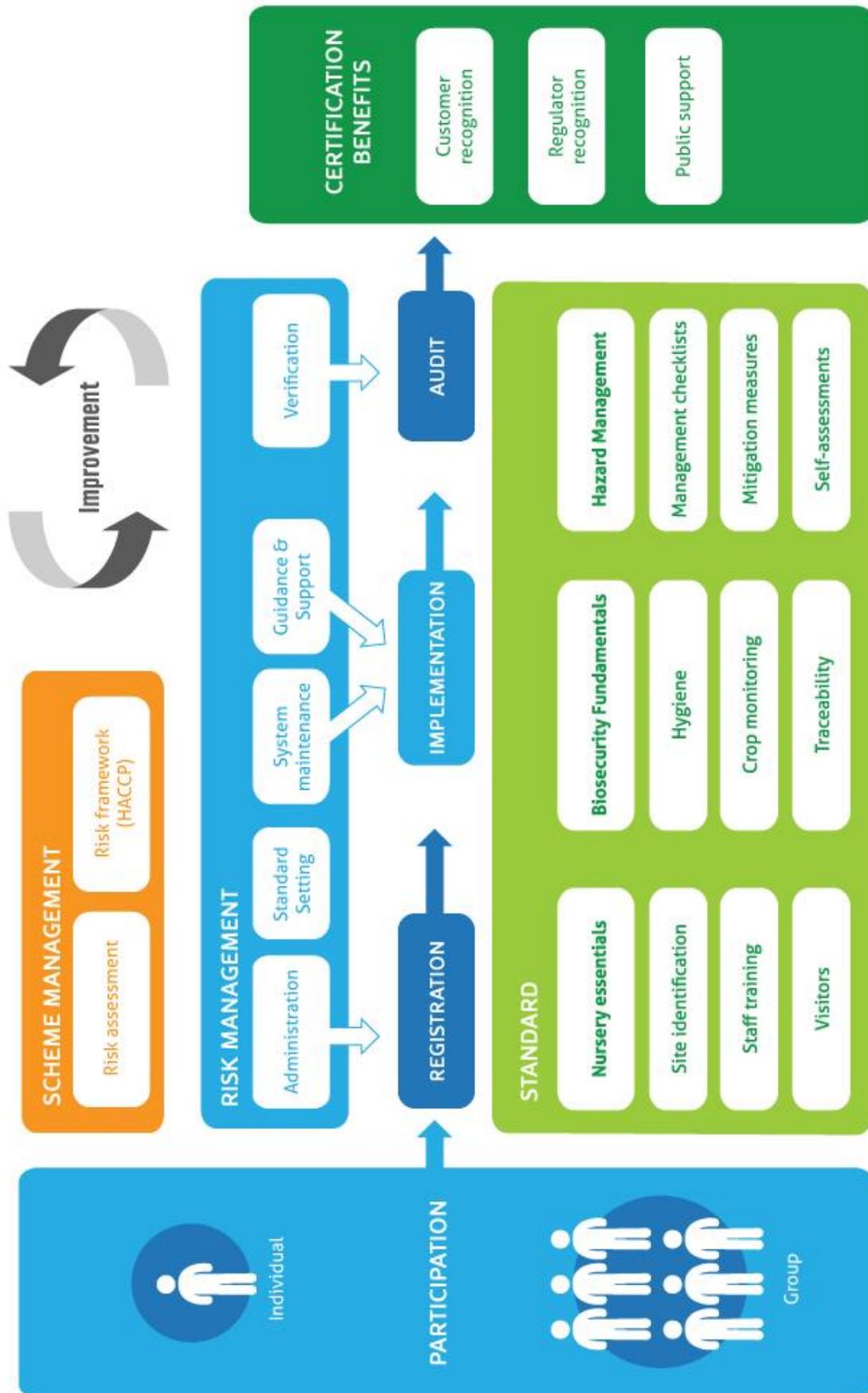
6. How the Scheme works

6.1. Framework



Governance and Leadership	People with the knowledge and authority to make decisions
Policies and purpose	The basis for decision making to meet the long-term goals
Roles and responsibilities	Specific tasks or duties
Planning and control	Sets out the goals and steps to achieve the outcome
Training	The skill and knowledge required
Standards and guidance	Documents that provide the requirements, specifications, and instructions covering the practices and processes for certification.
Equivalence	A system that has been compared and is recognised as achieving the same or better outcomes.
Verification	Audits and inspections for obtaining and evaluating evidence and to determine the extent to which the standard have been met.
Recognition	Formal acknowledgement that required standards have been met
Validation	Collecting evidence that the standard consistently achieves the outcomes
Monitoring	Checking the quality or consistency of an outcome over time.

6.2. Scheme Flow Diagram



6.3. Standards and Guidance

The Scheme focuses on outcomes and provides tools that will assist producers to meet those outcomes including:

- A **Core Standard** that is applicable to a wide range of producers, nurseries, species and pests. It is organised to prompt a producer to identify **biosecurity hazards** that apply to each production step and identify and record others where applicable. It includes:
 - Nursery essentials - basic requirements including location and contact details, staff and management responsibilities, training, signage and visitor management.
 - Biosecurity management fundamentals – key requirements to ensure production areas remain free of pests and pathogens; hygiene, crop monitoring and traceability.
 - Hazard management through the production process – hazards and mitigation guidance through transplant, growing and product dispatch processes
 - Audit and record requirements.
- The **Core Standard** is organised to prompt a producer to identify **biosecurity hazards** that apply to key tasks and production steps in their nursery. They may select from several potential identified hazards for each production step and identify and record others where applicable.
- A **Core Standard Hazard Management Checklist** is provided to assist producers in identifying key risk management methods and records and to assist self-assessments and preparation for external audits.
- To assist producers working with the Scheme a **Nursery Manual** template is provided. It helps producers record how they meet requirements of the Core Standard and any applicable Specific Modules.
- The Core Standard is supplemented, where necessary and desired, by **Specific Modules** for issues of concern to or about a specific pest, plant species, industry or distribution pathway. These may be incorporated as a module within the Scheme, by reference to other biosecurity schemes or through mutual recognition. The myrtle rust module (below) is one of these, and in time others may include, for example, kiwifruit nursery stock and plants supplied for restoration of offshore islands.

While **certification to a Specific Module** is intended to be only available to producers who are certified to the Core Standard (as Specific Modules outline measures that are additional to the Core Standard), a **transition period** is facilitated for two years post Scheme implementation where producers can have their compliance to a Specific Module recognised in advance of, and while they work towards, certification to the Core Standard.

- A **Myrtle Rust Module** that pertains to plant producers who grow plants belonging to the plant family *Myrtaceae*. It supplements the Core Standard and describes specific biosecurity measures to manage the risk of a nursery becoming infested by or spreading myrtle rust

Industry and producer support mechanisms – in addition to the Standard and associated materials the Scheme framework will build and/or facilitate considerable resource in people, guidance materials, tools, diagnostics and training engagement. Work is envisaged to include:

- Identify gaps and opportunities and develop guidance materials and tools to assist producers.
- Collate biosecurity related reference/research materials and provide online access to same.
- Improve access to diagnostics – collate, establish access, identify opportunities/needs.
- Identify training needs and establish connection for provision of same.

6.4. Nursery Manual

The Nursery Manual is a template that nurseries may complete to demonstrate how they meet the Scheme Core Standard. Where applicable, it will be supplemented by Manual components for Specific Modules. It is designed to make engagement with the Scheme as simple as possible; it is fully aligned with Core Standard and Specific Modules, includes prompts that guide the user to identify how relevant criteria are met, and provides a simple format to enter this information.

The use of the Nursery Manual template is not mandatory, but it is essential that the producer undertakes and records an analysis of the biosecurity hazards they face, the measures they adopt to manage consequential risks, and builds a body of evidence to show how they manage biosecurity hazards and meet the requirement of certification to Core Standard or a Specific Module.

The Scheme also facilitates, where appropriate, the recognition of manuals developed for other quality management purposes.

To minimise duplication for nurseries, where a nursery maintains documented operating procedures that describe how a criterion is met, a Nursery Manual can simply refer to the relevant section of that document (provided all relevant documents are made available and easy to follow during any external audit).

Once systems outlined in a Nursery Manual have been developed and implemented, and certification approved, they must be maintained; for example, the Nursery Manual must be amended when the producer introduces new procedures.

6.5. Records

Records demonstrating implementation of risk management processes, outcomes and any corrective action are essential. The Core Standard and Specific Modules list required records and provide templates for many of these.

6.6. Producer Participation

Registration

Producers register with the scheme owner.

Minimum registration details will be defined in the scheme rules but will be sufficient to identify and locate the nursery for communication, statistics or in a crisis situation.

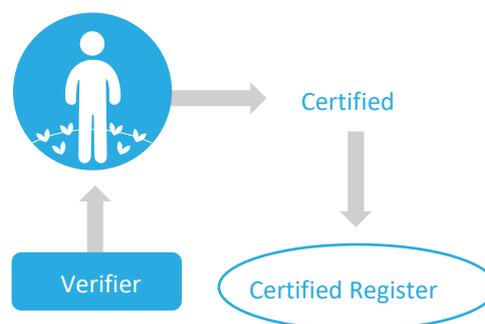
Registration details will be held in a scheme register (database) that is accessible to regulators & the scheme owner.



Individual Certification

An individual producer holds a certificate for their nursery(s).

The producer implements the standard and is externally audited.

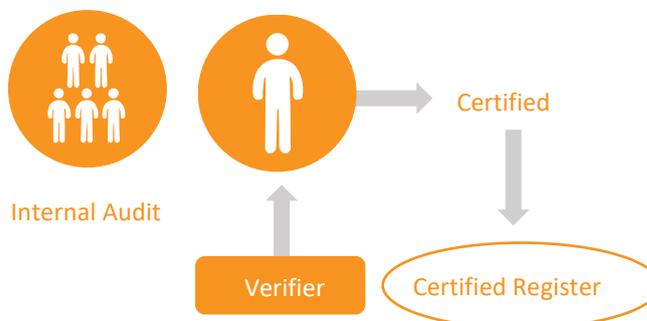


Group Certification

A group of producers operate under a single certificate. The group is managed by a lead organisation that holds the certificate and works with the individual producers to achieve the standard.

The lead organisation undertakes internal audits of all group members.

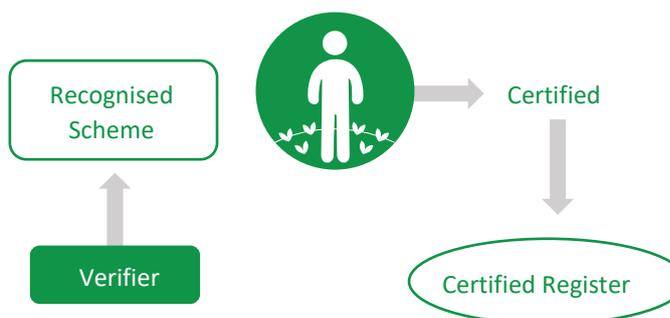
The lead organisation is externally audited & small



Accreditation/Equivalence

Using a benchmarking process, the scheme owner recognises schemes that meet the PPBS purpose & outcomes.

Producers that are certified to the recognized scheme can seek certification the PPBS.



6.6.1. Registration

Participating plant producers first register with the Scheme to enable communication of biosecurity management guidance and contact in case of specific pest action, response or incursion.

Registration information includes:

- Producer and nursery(s) identity
- Nursery location(s), physical and mailing address(es)
- Key points of contact, names, phone numbers, email addresses

Registration provides a channel for biosecurity communications (pest information, guidance and alerts) resulting in a significant increase in biosecurity awareness and management, and early detection of an exotic pest incursion

Additionally, producers are asked to supply and maintain a list of plant genera under production so that biosecurity pest response or incursion actions can rapidly identify and target producers who may be at risk, save time and increase the likelihood of preventing pest spread through the nursery stock pathway.

The register enables biosecurity communication channels through to producers, facilitation of traceability, rapid and targeted comms in a crisis.

Registered producers are expected to implement a suite of basic biosecurity hazard management measures, and an **“Entry Checklist: 20 steps to tick off for better biosecurity management”** is provided for this purpose.

6.6.2. Certification

Following registration, producers work to achieve Certification to the Core Standard and or a Specific Module. Once certified, producers shall maintain the integrity of the Scheme by ensuring its Nursery Manual is up-to-date and all inspections, testing and biosecurity measures have been conducted in accordance with the Core Standard and/or Specific Module.

Certification to a Specific Module is only available to producers who are certified to the Core Standard. The Specific Module outlines measures required in addition to the Core Standard.

The Scheme should be notified of any changes that might affect risk management, such as the addition of or substantial modification to production sites or changes in key staff.

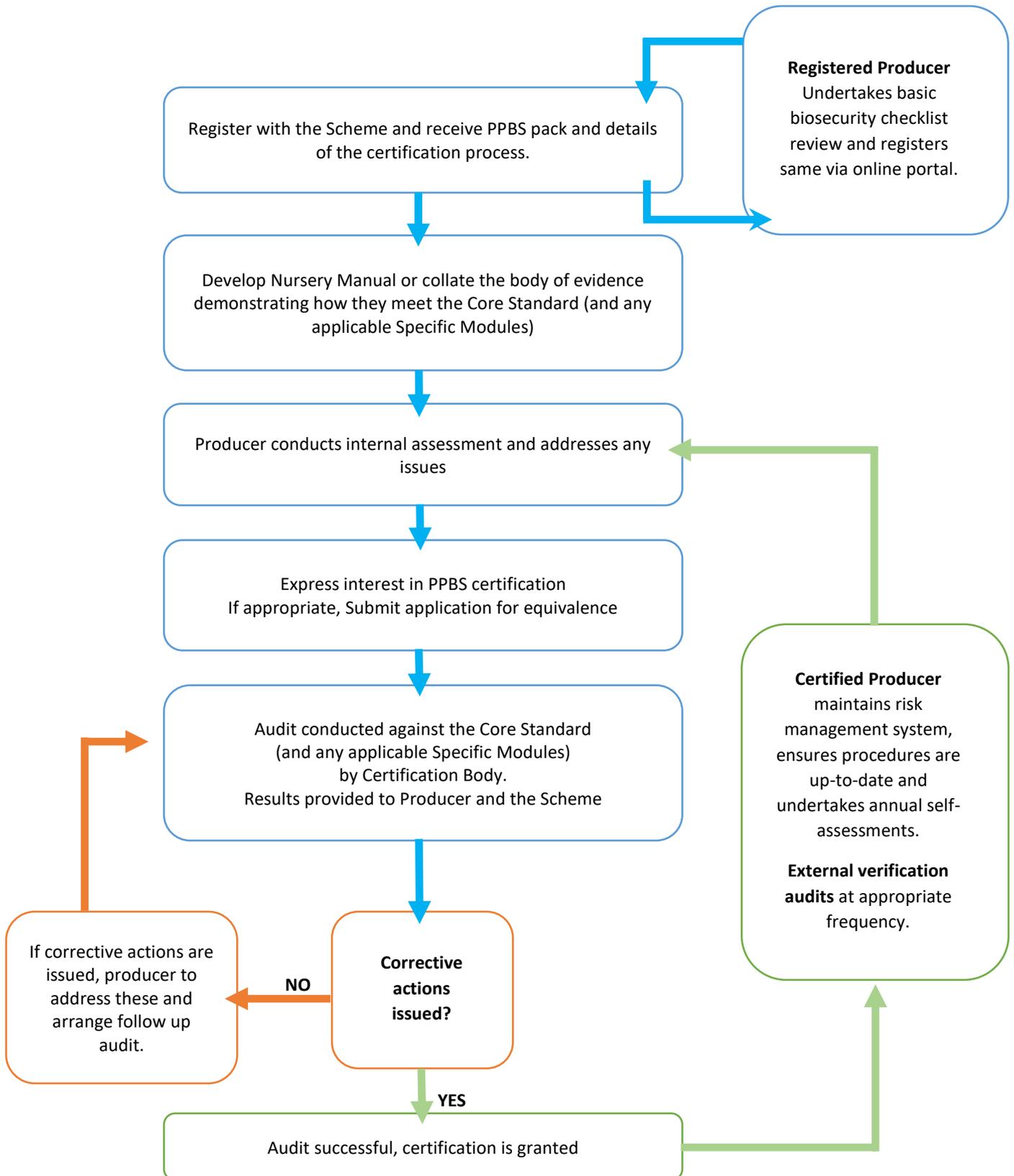
Group certification and accreditation/equivalence with other schemes is also facilitated.

6.6.3. Monitoring and diagnostic testing

The Core Standard requires all producers to maintain their nursery as a place of practical freedom from pests. Practical freedom of pests is established through sound nursery and biosecurity management and verified with routine and systematic monitoring and surveillance. Guidance is available on how this can be undertaken. If pests are detected and are identified, treatment should follow. If pests or signs or symptoms of concern are unable to be identified by nursery staff or competent advisors, diagnostic testing is required. Records shall document monitoring, pest detections, treatment and any diagnostics undertaken.

If Specific Modules are applicable, producers must meet monitoring and diagnostic testing conditions prescribed by that module.

6.7. Registration and Certification Process



6.8. Recognising “equivalence”

A producer, or an accreditation scheme provider can apply for the Scheme to recognise “equivalence”. This is applicable where a producer is part of an alternative quality assurance scheme, which achieves the same or greater level of biosecurity risk management as the Core Standard or Specific Module, and where that scheme includes an independent audit requirement.

The Scheme will work with the applicant, and the scheme provider where appropriate, to compare standards and how the scheme operates to assess equivalence.

If the Scheme recognises “equivalence” in terms of risk management practices and site requirements, it will specifically look at the ‘inspection’, ‘testing’, ‘audit’ and ‘site requirements’ of the alternate scheme, and decide if any additional inspection, testing, audit and/or site requirements need to be met.

6.9. Verification

Registered producers are expected to review their biosecurity practice against a simplified checklist on an annual basis. It’s intended to prompt their thinking and increase the likelihood of their undertaking some biosecurity risk management. They are expected to flag they have done so through a web enabled portal, again encouraging engagement and allowing the scheme to interact with them.

Certified producers must undertake internal audits (at least one per year) to ensure that the procedures documented in their Nursery Manual are being followed, or that the collected body of evidence demonstrates how risk is managed and improving the likelihood of a successful external audit.

Scheme **certification** includes a requirement for an external audit by a Certification Body (unless otherwise agreed with the Scheme under an “equivalence” arrangement). Details relating to audit requirements are set out in within the Core Standard and modules.

The Scheme Owner will maintain integrity of the Scheme and the audit process to ensure audits deliver the outcomes expected and are consistent between nurseries.

Performance based auditing

Audit frequency will be on a performance basis. After achieving certification, audit frequency will be at fixed intervals for a period of not more than two years for the producer to establish performance history. Subject to the producer’s audit performance history, audit frequency may then be increased for poor performers or reduced for high performers.

6.10. Documents and Marketing Claims

Producers certified/accredited to the Core Standard are to identify themselves as such though the inclusion of a statement on their nursery’s documentation – product lists, packing slips, invoices, marketing materials etc. Acceptable wording includes “[Producer name] is certified to the Plant Production Biosecurity Scheme Core Standard”. A logo will be made available for optional use on documentation.

Those certified to a Specific Module should follow the identification requirements specified in that module. These may include Scheme identification on plant labels or other means physically attached to individual plants, lots or batches.

6.11. Compliance

Compliance enables producers to provide assurance to their supply chain that they have met the conditions of the Core Standard and they may use this in their sales and promotional materials.

Serious non-compliance may result in a temporary suspension of a producer's ability to claim certification until the issues have been resolved.

6.12. Promoting the scheme and participating producers

The Scheme Owner will promote the benefits of the scheme and identify participating and certified producers through its routine communication and business to business channels.

6.13. Revisions

Revisions to the Scheme, including this Overview document, the Core Standard and Specific Modules, will be on-going and Scheme Owner appreciates feedback that can be used to improve the Scheme. Those wishing to provide recommendations for change should send these in writing to the Scheme Owner [in the interim office@nzppi.co.nz].

Revisions will be published on the Scheme's website and participants advised of the changes and new documents, so they can ensure that they are referring to the most recent documents.

7. Glossary

Biosecurity - Measures taken to prevent the introduction and/or to minimize the risk of establishment and spread of a specific pest

Nursery - A nursery is any property location where a plant producer undertakes the growing of plants. For clarity, if a plant producer operates on more than one site, any reference to the singular “nursery” in this Scheme, also applies to the plural “nurseries”.

Nursery stock - Any plant for planting, propagation or ornamentation including greenhouse, containerized, field grown and tissue culture plants.

Pest - Any species, strain or biotype of plant, animal or pathogenic agent that adversely impacts plants in commercial production or the natural environment.

Plant - Living plants and parts thereof, including seeds and germplasm.

Plant producer - A plant producer is defined as any person, business or entity engaged in producing plants or parts of plants for sale, their own use or for movement outside of the nursery, or nurseries where the producer operates over more than one site.

Practical freedom - A consignment, field, or place of production, without pests in numbers or quantities in excess of those that can be expected to result from, and be consistent with, good cultural and handling practices employed in the production and marketing of the commodity.

Scheme - The Plant Production Biosecurity Scheme (PPBS)

Traceability - The ability to follow a nursery inputs, plants or a group of plants from one point in the supply chain to another.

The Core Standard provides additional definitions.

