NOTES TO PROVISIONS

***DRAFT* CODE OF PRACTICE FOR THE MANAGEMENT AND CONTROL OF PANAMA DISEASE TROPICAL RACE 4**

Introduction

Fusarium wilt tropical race 4 ("Panama disease") is a soil borne fungal disease affecting bananas. The disease can live in soil for decades, has to date proved it cannot be eradicated and, due to its spread pathways, can easily be spread from one property to another. These spread pathways arise through the movement of infected plant material, soil and water. In fact, anything that can move plant material, water and soil can also spread Panama disease so the list of carriers of the disease can be large and includes persons, machinery, equipment and animals. Therefore, the spread will likely occur where any carrier has been in contact with infected plant material, soil or water.

Panama disease-affected plants rarely produce marketable bunches and without appropriate interventions, banana production on affected plantations becomes economically unviable. The consequences of widespread Panama disease infection need to be taken into account given what the industry means to State and Commonwealth economies. According to Hort Innovation, (*2018 – Banana Enterprise Performance Comparison*) banana production contributed $1.3 billion to the economy and the industry supported more than 18,000 full-time and part-time jobs (including supply chain) in Australia.

The Queensland Government, through Biosecurity Queensland, has been responsible for the management of the response to Panama disease incursions in north Queensland. The initial action undertaken as a result of the identification of the disease was an emergency response declared in 2015. State-wide programs and zoning requirements established under the *Biosecurity Act 2014* ('the Act') replaced the emergency response in 2016 and remain currently in place to date. An administrative framework, the Panama disease program, provides oversight to surveillance and compliance activities as well as response actions sanctioned under the legislation. The Panama disease program is a collaborative undertaking involving the Australian Banana Growers Council ("ABGC"), Biosecurity Queensland ("BQ") and the continued support of north Queensland commercial banana growers.

Following a series of meetings between ABGC and BQ, the administrative management of the TR4 Program will shift from Government to an industry run model. ABGC will assume responsibility for

delivery of the program with all necessary assistance provided by BQ. This re-alignment of duties provides an opportunity for industry, operating within parameters set by biosecurity laws, to take responsibility over its own destiny.

An important step in realising an industry-led approach to regulation is the development of a code of practice for the management of the disease.

This Draft *Code of practice for the management and control of Panama disease tropical race 4* (the 'Code') has been developed by the ABGC and is written in plain English to be easily understood by all readers.

The Code is divided into three chapters. Chapter 1 deals mainly with formal matters necessary for the establishment of the Code and its ongoing relevance. Chapters 2 and 3 are similar to the current risk minimisation requirements found in BQ's - *Biosecurity Manual 2022* (sections 12 and 12A) and the procedures that accompany a destruction notice issued under section 58 of the *Biosecurity Regulation 2016* (a 'destruction notice'). These current and proposed provisions are only enlivened following the identification of Panama disease on a banana plant. The current outcome is the destruction of the known and suspected diseased plant at its source and mandated phytosanitary measures designed to control any potential spread of the disease. This has to date proved to be effective.

However, these current provisions are reactive in nature, that is, they are used to address an issue that has already occurred. This reactionary approach, representing a business as usual model, will not support ongoing biosecurity for and viability of the banana industry. This is due to, amongst other matters, changes in climate, including more severe cyclones and rain events disturbing soil, and an increase in intrastate and international incursions of pests and diseases. These factors are contributing to new outbreaks and the spread of diseases in agricultural industries including the banana industry.

Currently, there are no proactive mandated measures required of a banana grower other than a grower's general biosecurity obligation ("GBO") under the Act. Whilst there are a number of helpful guides currently available to growers to use and explain ways of how to discharge their obligations, there is little in the way of imposing a positive requirement for growers to adopt best practice principles to meet their GBO.

To address the change in risk factors and to require growers to implement best practice principles, the Code proposes that the current regulatory requirements, other than requirements dealing with the destruction of banana plants, be available to all growers irrespective of whether they have been issued a destruction notice. Where a grower of a property not subject to a destruction notice chooses to use these provisions, it will assist the grower in averting future outbreaks of banana

pests and diseases including Panama disease. To that end, Chapter 2 accommodates, where appropriate, existing best practice biosecurity risk minimisation requirements.

As mentioned previously, Chapter 1 of the Code contains formal matters necessary for the establishment and understanding of the Code. For example, Chapter 1 outlines the scope of the Code and defines important terms used throughout. Because of these necessary matters, Chapter 1 is an integral part of the Code.

Chapter 2 is based on the approach outlined in subsection 26(3) of the Act. By that subsection, for a grower to discharge his or her GBO, the grower may either follow the way set forth in the chapter or follow equal or more superior alternatives. Subject to whether a grower receives a destruction notice, Chapters 1 and 2 represent a voluntary industry-based code. Regardless of the voluntary nature of the chapters, the effect of subsection 26(3) of the Act is to require a grower to implement measures, whether code stipulated or otherwise, to discharge the grower's GBO.

Chapter 3 is based on the approach outlined in subsection 26(4) of the Act. Under that subsection, Chapter 3 prescribes mandatory measures a grower must comply with in order to discharge the grower's GBO. Chapter 3 is activated when a grower receives a destruction notice.

Given their proven capacity to address biosecurity risks associated with Panama disease outbreaks, Chapters 1 and 2 are called up and made mandatory when a grower receives a destruction notice. Upon becoming mandatory Chapters 1 – 3 represent a mandatory industry-based code.

Notes to provisions

Chapter 1 - Preliminary

Section 1 describes the application of the Code. This section provides that Chapters 1 and 2 of the Code apply where a law identifies an area of Queensland as a place where Panama disease exists or may exist. Section 7 of the *Acts Interpretation Act 1954* provides that a reference in an Act to a law includes a reference to statutory instruments made or in force under the law. Currently, there are surveillance programs made under the Act to assist in containing and preventing the spread of the disease. The area of coverage for these programs extends throughout the entire State of Queensland. Accordingly, Chapters 1 and 2 will apply to the entire State.

This section also provides that Chapters 1, 2 and 3 apply where a commercial banana grower receives a destruction notice. This notice is issued to a grower by the chief executive Department of Agriculture and Fisheries or an inspector appointed by the chief executive where there is knowledge or belief that Panama disease is present on a grower's banana plant or land occupied by the grower. The notice requires the grower to destroy disease affected plants and or other plants that pose a biosecurity risk.

Section 2 defines particular terms used frequently in the Code.

Section 3 outlines the effect of Chapter 2 by restating the effect of subsection 26(3) of the Act discussed previously.

Section 4 outlines the purposes of the Code which are twofold and follow the general intent of the Code by requiring growers in areas where Panama disease exists or may exist to firstly, adopt risk minimisation procedures either by following Chapter 2 or equivalent or better ways. Secondly, requiring growers avoid exacerbating Panama disease on their property by complying with Chapters 1, 2 and 3.

Section 5 provides how the purposes of the Code are to be achieved, including by, providing growers with necessary risk minimisation requirements to effectively contain and control the spread of Panama disease.

Section 6 clarifies that any inconsistency between a Code provision and a requirement under another law, the Code provision is of no force or effect to the extent of the inconsistency. For example, an inspector appointed under the Act may issue a permit or approval to a grower. That permit or approval may be inconsistent in effect with a requirement of the Code. The Code requirement is of no effect to the extent of that inconsistency.

Section 7 provides for an annual as well as a five yearly review of the Code.

Section 8 provides that the Dictionary in section 36 defines words used in the Code.

Chapter 2 – On-farm biosecurity

This Chapter prescribes measures representing a layered approach to on-farm biosecurity. A layered approach to biosecurity is an essential component of any grower risk reduction and mitigation strategy. These sanitary and phytosanitary measures, when implemented by a grower, will assist in protecting plants from risks arising from the introduction, establishment and spread of Panama disease.

Part 1 Zoning

A facet of the layered approach to biosecurity is the division of a grower's property into zones. Zones are based on the level of biosecurity required to minimise the risk of diseases entering onto or spreading from a grower's property.

Division 1 Farm Zones

Section 9 provides the purposes of partitioning a grower's farm into zones. As discussed previously, the purpose is to prevent Panama disease entering a grower's property and where it has entered, control the spread of the disease from reaching unaffected areas of the property and other growers' properties.

Section 10 introduces the concept of *Clean Zones* into the Code. The section describes when a clean zone should be established (within three months of commencement of the Chapter), the types of boundaries needed to separate it from other areas, where it is to be situated on a property and signage required to notify persons of its existence and purpose.

The section also requires sanitary measures like decontamination facilities to be used by people, vehicles and machinery to rid them of carriers of Panama disease like planting material or parts of banana plants from spreading to the Clean zone and other areas of the property.

The section notes that whilst barriers are required to prevent unauthorised entry into the zone, nothing in the Code prevents emergency personnel (as defined) from entry to any part of a grower's property for the purposes of discharging their lawful duties.

Section 11 introduces the *Production zone* and the requirements about this zone. The provision explains that this is the zone where the farming of bananas occurs and as with the Clean zone, a grower should establish this zone within three months of commencement of the Chapter. Similar to the Clean zone, the Production zone must be fenced, must have decontamination facilities and sufficient signage to deter unauthorised entry into the zone.

Because there is a greater level of risk for potential spread of a pest or disease from a Production zone to other areas of land due to the presence of crops and soil disturbances, the provision requires that any risk items (defined in section 36) used in the zone that cannot be decontaminated, must be left in the zone.

Division 2 Regulating Movements and Waste Management

This Division adopts accepted sanitary and phytosanitary measures necessary to enhance on-farm biosecurity.

Section 12 will help prevent the spread of the disease entering the Production zone by requiring all essential farm vehicles (defined in section 38, noting that it does not include farm machinery) are prohibited from entering the zone. The section explains how that objective is to be achieved.

Section 13 outlines procedures that must be followed in moving machinery out of a Production zone. A grower should ensure that vehicles and machinery are cleaned to the greatest extent

possible before the move is undertaken. The dictionary in section 36 defines the terms 'clean' to include decontamination and disinfection and 'decontaminate' to mean to rid clothing, footwear and machinery from soil, plant material and other growing media.

A grower should take a reasonable and practical approach to the cleaning of a machine or vehicle. For example, it might be reasonable and practical to take hub caps off a vehicle to flush out any growing media within the vehicle hubs. It would be reasonable and practical to clean out all crevices in the engine well under the bonnet of a vehicle or clean the under chassis of the vehicle. It would, however, not be reasonable nor practical to break open a sealed unit of a machine for cleaning purposes.

The section also provides for the procedures involved in moving a machine from one Production zone to another Production zone on a grower's property. These procedures include the cleaning of the machine where it is to be transported by another vehicle or moved over a non-permeable barrier spread out on the ground to be traversed.

The section also provides that any disposable items used in the move are to remain in the Production zone and a record is to be kept of the movement.

Section 14 requires a grower to manage any wastewater (a potential carrier of the Panama disease) generated on the property so that it doesn't enter the property's Clean zone, a waterway (a potential pathway for the spread of diseases) or other growers' properties.

Section 15 requires growers to manage all waste plant materials, growing media or decontamination water in the Production zone by way of having a dedicated on-farm area for its disposal or engaging the services of biosecurity waste contractors.

The section also provides that disposable items (defined in section 36 to include, amongst other things, bunch bags, waste irrigation hardware and cleaning tools) can be left in the Production zone or taken to a refuse facility by the grower.

Section 16 regulates the movement of persons from a Production zone. This section requires persons, who have been in the Production zone, to undertake decontamination before proceeding to a Clean zone. Decontamination is required because clothing, including footwear, are carriers of the Panama disease where they have plant material or growing media on them.

Section 17 provides that fruit in a Production zone may only be harvested if it is grown by a healthy plant above ground, the fruit is clean and packed in clean containers.

Part 2 Miscellaneous

This Part deals with ancillary matters necessary to ensure disease identification, containment and traceability.

Section 18 deals with staff and contractor biosecurity training. That training will provide employees and contractors with an overview of the grower's on farm biosecurity practices and procedures required to be complied with by all who work on the property. A grower is required to keep a record of training delivered.

Section 19 requires a grower to take all reasonable and practical steps to ensure earthworks carried out on the property are undertaken in suitable conditions to avoid dispersal of dust into the environment. This requirement is designed to prevent the spread of the Panama disease by windborne dust particles.

Section 20 requires growers to undertake surveillance of their banana plants every four months for signs of the Panama disease. This proactive measure requires industry to contribute to current government-run and future ABGC-run surveillance activities. Increased surveillance has the potential to reduce the risks of new outbreaks on an uninfected property or the spread of the disease on already partly infected properties. This provision aligns with biosecurity's general principle that biosecurity is a shared responsibility and industry, through this Code, will play a greater role in biosecurity preparedness and response.

Section 21 describes the types of records a grower must keep for 24 months either in written or electronic form.

Chapter 3 - Mandatory Provisions

Chapter 3 prescribes mandatory requirements a grower must follow on the receipt of a destruction notice. These provisions are similar in nature and effect to those found in Sections 12 and 12A of the Biosecurity Manual and the appendix to the destruction notice.

Part 1 Preliminary

Section 22 provides that a grower will fail to discharge his or her GBO if he or she does not follow or contravenes a Chapter 3 provision. This requirement is in line with subsection 26(4) of the *Biosecurity Act 2014*.

Section 23 provides that a grower must comply with the provisions of Chapter 2 of the Code when the grower receives a destruction notice. The effect of this section is that Chapter 2 is called up as mandatory provisions like Chapter 3 and a grower must not contravene or act inconsistently with the provisions of those Chapters.

The reason for changing the voluntary nature of Chapter 2 to mandatory is because the processes outlined in Chapter 2 are currently prescribed under the *Biosecurity Regulation 2016* (through calling up the Biosecurity Manual) as risk minimisation requirements and processes. These processes are tailored to address, and have shown to be effective in dealing with, the ongoing potential presence and spread of Panama disease on a property the subject of a destruction notice. This will not have an impact upon a grower who has followed the Chapter 2 provisions prior to receipt of a destruction notice. It is expected that growers who have adopted another equal or more effective way than the Chapter 2 model would need to make minor adjustments to their approach to comply with the Chapter requirements.

Part 2 Procedures following receipt of a destruction notice

This Part deals with the chemical destruction of banana plants infected or suspected of being infected with Panama disease.

Division 1 Destruction of plants within 15 days

Section 24 outlines the purpose of the Division is to have affected plants destroyed within 15 days of receiving a destruction notice.

Section 25 requires a grower to establish and temporarily fence a destruction zone within three business days of receiving a destruction notice. According to section 36, a 'destruction zone' means land within an area measured 10 metres along the row in both directions of a banana plant infected with Panama disease. The area includes the inter-rows and the same number of banana plants in each row either side of the row where the infected banana plant is located.

Section 26 requires destruction of the banana plants in the destruction within 15 days of receipt of a destruction notice. The 15 day requirement to destroy the plants is subject to the state of banana plants in the zone. In effect, section 26 represents an initial destruction phase and is based on the state of the plants, in terms of whether they are wilted (unhealthy) or have been cut down. For these plants, a grower is required to, amongst other things, manually cut the plant up and attend to the corms and chemically treat the stools of the plants. This needs to be accomplished within 15 days of receipt of a destruction notice.

This section also contemplates the situation where banana plants in the destruction zone are standing, that is, they have not been cut down or are not wilted. For these plants, a grower is required to destroy the plant through chemical treatment. The section outlines the manner in which a grower chemically treats a plant as well as the stool of a wilted or cut down plant. The chemical treatment of a standing plant needs to be completed within 15 days of receiving a destruction notice.

However, a standing plant may not be suitably affected by the chemicals before a grower can undertake manual destruction activities. In these situations, the initial 15 day completion timeframe is extended and section 27 provides for that eventuality.

Section 26 also makes clear that fruit from a plant grown in a destruction zone must not be sold or consumed.

Section 27 provides that 10 – 15 days after chemically treating a standing plant in the destruction zone, a grower is required to undertake the manual destruction and final chemical treatment of the stool of the plant as outlined in section 26.

Section 28 requires a grower who has completed the destruction activities mentioned in sections 26 and 27 to cover the plant material in the destruction zone with high grade plastic and secure the plastic to the ground.

Division 2 Follow-up Procedures

This Division prescribes steps a grower must follow to assist in containing the spread of the disease from the destruction zone.

Section 29 provides that a grower must permanently fence the destruction zone to prevent unauthorised entry into the zone from persons or animals and to have sufficient and appropriate signage on the fence forbidding unauthorised entry into the zone. The section also requires the chemical treatment of the perimeter of the zone.

Section 30 prescribes the decontamination procedures a grower must undertake or cause to be undertaken to safeguard against the inadvertent spread of the disease through human movement from the zone.

Section 3*1* describes what needs to be done with waste material generated as a result of activities undertaken in the destruction zone. This includes leaving waste plant material in the zone.

Section 32 requires a grower to maintain a destruction zone. A grower maintains a destruction zone by, amongst other things, chemically treating new banana plant growth and maintaining the integrity of the barrier fence.

Section 33 requires a grower to establish a Clean zone and a Production zone within three months of receiving a destruction notice. This section prescribes the timeframe required of a grower who has not opted into following the Chapter 2 requirements to establish these zones. The establishment of zones is currently a process requirement under the Appendix to the destruction notice.

Division 3 Miscellaneous

Section 34 prescribes the records that a grower must keep under this Chapter. It is important to note, that on the receipt of a destruction notice the record requirements in section 21 of Chapter 2 are called up and made mandatory under Chapter 3.

Section 35 clarifies the effect of existing actions and obligations imposed upon a grower by a destruction notice issued before the commencement of Chapter 3. The effect is that the existing actions and obligations remain unaffected by this Code.

Section 36 defines terms used in the Code.