

Banana Post-Entry-Quarantine Fees and Charges (Phase 1 Transition, 1-7-2025)

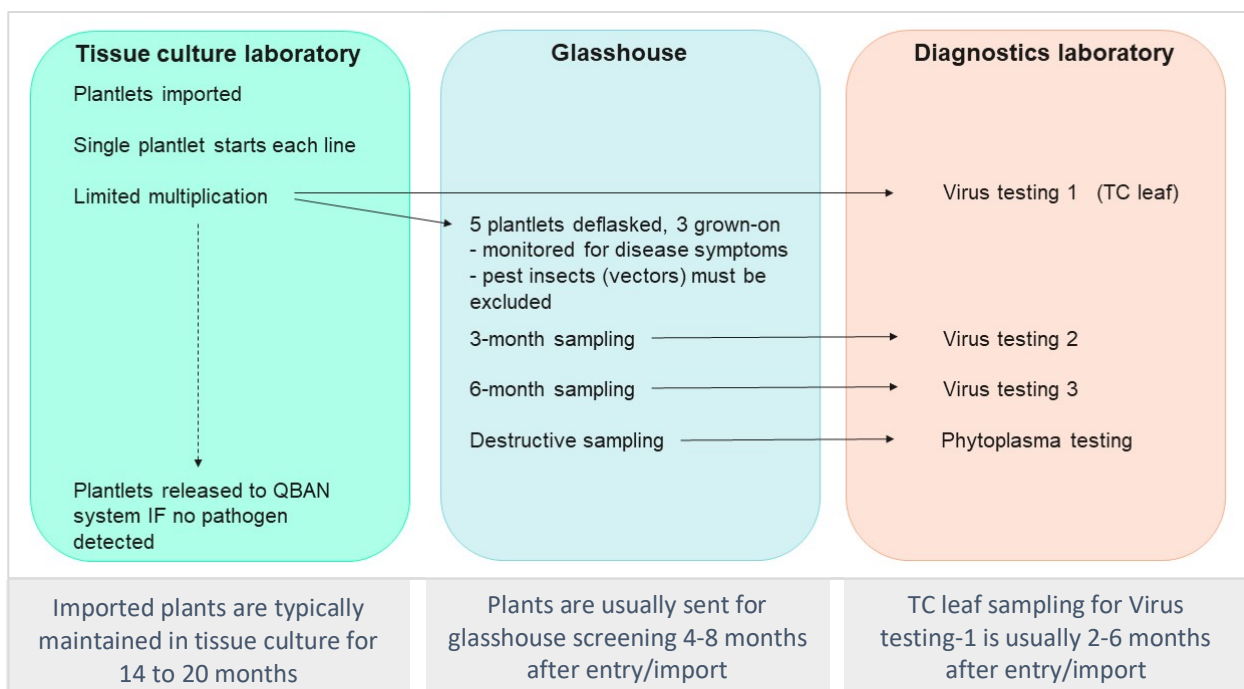
Overview of Banana Post-Entry-Quarantine (PEQ)

The importation of high-risk nursery stock such as *Musa* spp. (i.e. banana) is subject to a range of regulatory controls and measures to minimise the risk of exotic pests and diseases entering, establishing or spreading in Australia.

Banana cultivars for use as nursery stock must be imported into Australia as tissue culture plantlets. On arrival, plantlets are maintained under biosecurity control, while Post-Entry Quarantine (PEQ) screening and testing is undertaken. Material can only be released from biosecurity control on completion of the PEQ screening process and if no quarantine pests or diseases are detected.

The banana PEQ process usually takes 14 to 20 months and requires:

- PEQ tissue culture and diagnostic services currently provided by QLD Department of Primary Industries (QLD DPI) AND
- PEQ greenhouse and visual disease screening services provided by Federal Department of Agriculture, Fisheries and Forestry (DAFF, Mickleham, Victoria).



Historically, all banana PEQ services were provided by QLD DPI with support from Hort Innovation projects through industry R&D levies/funding. These projects facilitated the importation of large numbers of banana varieties for industry research and evaluation purposes, and assisted development of the Australian Banana Germplasm Collection. Private importers also accessed the pathway through these same services.

The current Hort Innovation project BA21002 (New varieties for Australian banana growers) required a review of banana PEQ service delivery options. Subsequently, Hort Innovation through the banana Strategic Industry Advisory Panel determined that R&D levy funds should no longer be used to support dedicated banana PEQ facilities (in line with other horticultural commodities) and requested that this project facilitate the transition to provision of PEQ services on a complete fee-for-service basis. Consequently, PEQ services provided through dedicated banana QLD DPI PEQ facilities are being transitioned to alternative providers.

Transition planning is currently underway. Future imports will be grown at the DAFF multi-commodity PEQ facility in Mickleham, Victoria for greenhouse pathogen screening. Discussions with AgriBio in Bundoora, Victoria regarding their role in delivering the tissue culture PEQ services for banana are well advanced. The QLD DPI continues to support the banana industry and alternative service providers with banana PEQ diagnostic services through the transition period.

PEQ Bookings - Important information

Advance planning is required to secure bookings for PEQ services for processing newly imported banana cultivars. PEQ bookings are required 6-12 months in advance for PEQ tissue culture, diagnostics and greenhouse services. Bookings must be made before submitting an import permit application.

The initial contact point for PEQ bookings is PEQPlants@aff.gov.au

Estimated fees and charges for Banana PEQ (2025/2026)

The importer is liable for all fees and charges for PEQ services.

Estimations of banana PEQ fees and charges for future importation of a single banana cultivar are provided below. QLD DPI Tissue Culture and Diagnostics costs will be lower per cultivar if more than one cultivar is screened at the same time. Changes in fees and charges may occur as the transition to other service providers is progressed.



Banana PEQ service	Service Provider	FFS estimate per cultivar
Tissue culture ¹	QLD DPI	\$8,807 to \$14,275
Diagnostics ²	QLD DPI	\$7,008
Greenhouse ³	DAFF Mickleham	\$10,871 to \$14,721
Total PEQ cost per cultivar		\$26,686 to \$36,004

Typically for each imported cultivar i) on arrival at the PEQ tissue culture laboratory four accession lines will be established from single plantlets and the remaining plantlets will be retained as back-ups; ii) three accession lines will be sampled for tissue culture (TC) leaf testing (Virus testing 1); and iii) two accession lines will undergo PEQ greenhouse screening (Virus testing 2 and 3 and Phytoplasma testing).

1. QLD DPI Banana PEQ - Tissue Culture (TC)

- Service includes plant tissue culture, application for AIMS directions (movement and release documentation), TC leaf sampling, transfer of plants for glasshouse screening and release of TC plants from biosecurity control if no pests or pathogens are detected.
- Cost per cultivar is reduced when multiple cultivars are imported as one batch/consignment.
- Final charges are dependent on actual time required for processing, which depends on the quality of the imported plants and the performance of a given cultivar in tissue culture (i.e. how quickly the cultivar multiplies).
- See Appendix 1 for further TC Service details, and range of times for different cultivars to progress through different stages of PEQ screening.
- Contact: bananaPEQ@dpi.qld.gov.au
- Under Phase 2 transition plans, tissue culture services are expected to transition to AgriBio. Confirmation of AgriBio FFS costs is pending.

2. QLD DPI Banana PEQ – Diagnostics

- Cost per cultivar is reduced when multiple cultivars are imported as one batch/consignment. For example, diagnostics cost is \$3,856 per cultivar where 3 cultivars are imported as one batch/consignment. Diagnostics cost is \$3,225 per cultivar where 5 cultivars are imported as one batch/consignment.
- Costing is based on testing for:
 - a. 2 accessions of 3 plants each per cultivar, pooled for virus testing but tested individually using 2 tissue types for phytoplasma testing;
 - b. 3 virus sampling times (TC, 3 months and 6 months); and
 - c. Phytoplasma - Sequencing of 6 amplicons per cultivar from the phytoplasma nested PCR. Actual costs for phytoplasma indexing will be charged, so are likely to be lower than listed here as not all tests require Sanger sequencing (\$84.05/amplicon).
- See Appendix 2 for further Diagnostics Service details.
- Contact: bananaPEQ@dpi.qld.gov.au
- Diagnostics charges will likely increase more than CPI in 2026-27; the FFS charges will be re-evaluated to bring them in line with current costs.

3. DAFF Mickleham – Greenhouse

- Service includes greenhouse grow out, visual disease screening and sampling.
- Fee-for-service for space and husbandry are based on approximations that 6 plants are propagated per cultivar.
- Cost estimates are provided for disease screening undertaken over 7 months (\$10,871) to 10 months (\$14,721), depending on the time taken for plants to reach the required stage



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of growth for tissue samples to be taken for testing. Additional screening time may be needed if plants have delayed growth or display disease symptoms that requires additional testing/screening.

- See Appendix 3 for further Greenhouse Service Details.
- Contact: PEQPlants@aff.gov.au



Appendix 1. Banana Tissue Culture Services - QLD DPI.

Banana PEQ tissue culture (TC) FFS costs are comprised of operating costs (consumables), facility costs, labour costs and the DAFF entry fee charged on arrival. A range of estimated costs is provided:

- Final charges are dependent on actual time (e.g. hours/months) required for processing, which depends on the quality of the imported plants and the performance of a given cultivar in tissue culture (i.e. how quickly the cultivar multiplies).
- It is not possible to predict in advance how quickly a given cultivar will multiply and progress through the different stages of PEQ screening.
- Other factors can also delay progress of a cultivar through PEQ screening, such as detection of pathogens or the presence of off-types.
- The range of costs is based on the time ranges that have been recorded historically for different cultivars to complete PEQ processing at QLD DPI.

As an example, provided good quality tissue cultures are imported, it would be expected that a Cavendish cultivar will multiply well and progress relatively quickly through PEQ screening, and costs would be expected to be closer to the minimum than the maximum estimate, but this needs to be confirmed during processing.

General PEQ TC activities associated with processing: Plant subculture, media preparation, collection and sterilisation of all waste and containers, washing up, record keeping and applications (entry, movement and release applications, import permit, subculture tracking sheet, sterilisation of waste), weekly plant inspection for contamination, equipment maintenance and calibration.

A) Tissue Culture - Entry and establishment (4-6 months)

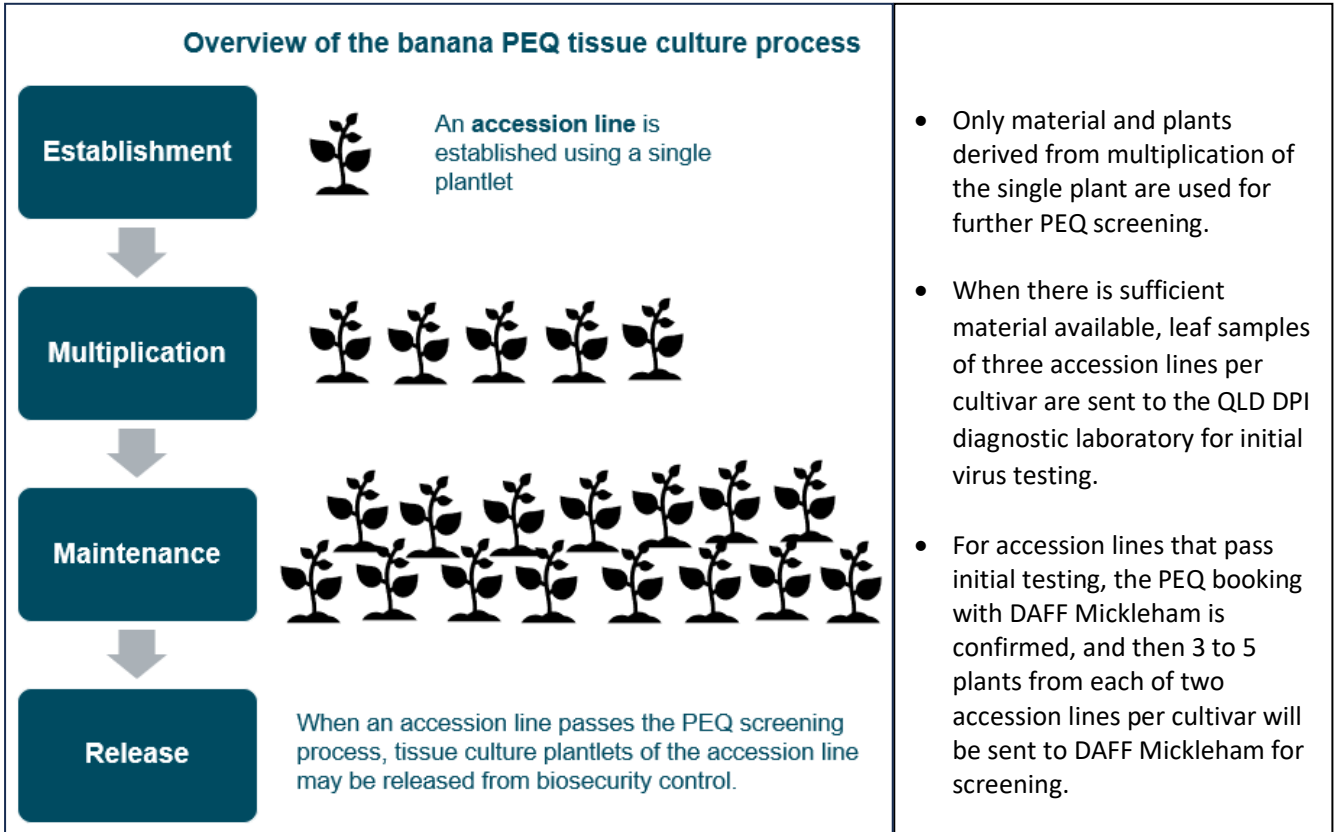
Import arrival and the required DAFF inspection are monitored and entry documentation is verified. Consignment is received into MRF PEQ Tissue Culture Laboratory, inspected and contents verified. A unique identifier, subculture tracking sheet and shelf labels are generated and electronic records are updated. Four single plantlets are selected to create 4 accession lines per cultivar. Plantlets in each accession are clonally multiplied (with frequent subculture) and remaining plants are retained as backups. Detailed records must be kept to ensure traceability of every plantlet in an accession. When there is sufficient leaf material (1g), virus indexing of the TC leaf sample is arranged (confirm PEQ Diagnostics Lab can receive the sample, apply for permit to move leaf sample, collect leaf sample and arrange courier to send to PEQ Diagnostics Lab). Accessions that pass leaf virus indexing continue to be multiplied. Accessions that fail leaf virus indexing must be destroyed.

B) Tissue Culture - Multiplication (0-6 months)

Plants are multiplied until there are approximately 10 plants per accession line, then 5 plants are sent to the PEQ glasshouse (confirm PEQ Glasshouse can receive the samples, subculture plants onto rooting media, apply for permit to move plants, and arrange courier to send to PEQ Glasshouse). Two accession lines per cultivar are screened in the PEQ Glasshouse (unless requested otherwise). Plants are grown out in the PEQ glasshouse for 7 months, during which samples are collected at 3 and 6 months for virus indexing and then plants are destructively sampled for phytoplasma. If an accession fails glasshouse screening (or *in vitro* virus indexing), backup accessions can be progressed through PEQ screening; confirm costs with the PEQ Glasshouse manager. For the 2 accessions being screened in the glasshouse, TC plants continue to be multiplied until there are about 100 plants per accession. For the 2 backup accessions, plants are multiplied to about 30 plants per accession.

C) Tissue Culture - Pre-release (2-9 months)

TC plants are maintained in tissue culture until completion of diagnostic testing (and sub-cultured every 4-6 weeks). If accessions pass diagnostic testing, application for release documentation is prepared and submitted to DAFF. When documentation is received, TC plants of cleared cultivars are released from the PEQ Tissue Culture Laboratory and transferred into the MRF QBAN/NIASA Tissue Culture Facility. TC plants can then be transferred to the importer when all PEQ costs are paid.



Appendix 2. Banana PEQ Diagnostics Services - QLD DPI.

Diagnostic testing required as per import permit conditions:

- * Banana wilt associated phytoplasma (BWAP)
- * Banana bunchy top virus (BBTV)
- * Banana bract mosaic virus (BBrMV)
- * Banana streak viruses (BSV)
- * Picorna-like virus
- * Any undetermined rod shaped viruses as determined using molecular testing and immunosorbent electron microscopy (ISEM) viruses.

The QLD DPI multiplex RT-PCR diagnostic test also includes banana mild mosaic virus (BanMMV) and cucumber mosaic virus (CMV). This enables BanMMV-infected lines to be identified before the more labour-intensive virus purification and ISEM diagnostic (for undetermined rod-shaped viruses) and is consistent with a high-health germplasm testing regime.

QLD Government gazetted fee for service charges.
* 1 cultivar = 2 accessions
Virus testing 1 (tissue culture sampling, 3 accessions per cultivar)
Sample administration - biosecurity
Multiplex immunocapture assay (BBTV, CMV, BBrMV, BanMMV; IC-(RT)-PCR)
Multiplex immunocapture assay (5 BSV species; IC-PCR)
Viral miniprep and ISEM (additional BSV species, novel viruses/variants)
VMP-RT-PCR for banana picorna-like virus
Virus testing 2 & 3, per timepoint (3 and 6 month glasshouse sampling, 2 accessions per cultivar)
Sample administration - biosecurity
Multiplex immunocapture assay (BBTV, CMV, BBrMV, BanMMV; IC-(RT)-PCR)
Multiplex immunocapture assay (5 BSV species; IC-PCR)
Viral miniprep and ISEM (additional BSV species, novel viruses/variants)
VMP-RT-PCR for banana picorna-like virus
Phytoplasma testing (12 samples per cultivar - 2 sampling sites per plant for 2 accessions)
Sample administration - biosecurity
DNA extraction and quality check, nested PCR
Sanger sequencing of amplicons #

PCR amplicons must be Sanger sequenced to confirm their identity. The amount shown is for Sanger sequencing of six amplicons per cultivar (i.e. one per plant). Invoicing will cover only the actual amplicons sequenced (variable numbers of amplicons may be produced).

ISEM = immunosorbent electron microscopy, PCR = polymerase chain reaction, RT-PCR = reverse transcription-PCR.

Appendix 3. Banana PEQ Greenhouse Services – DAFF Mickleham

1. Post-entry quarantine requirements for banana plants are unique not only because of their physical size, but also because a higher number of plants need to be propagated to meet testing requirements.
2. For the purposes of a cost estimate for bananas undergoing greenhouse growth and pathology screening at the DAFF facility, we estimate that fees will amount to \$10,871 and \$14,721 for 1 banana cultivar. The range in cost estimates take into account the potential for banana to require additional time for growth (e.g. during winter months), but an additional domestic trial is underway to enable us to better gauge potential impacts and optimise practices where possible.
3. A detailed breakdown of DAFF's estimated charges for banana imports is provided below, noting:
 - a. Further information on DAFF's charging guidelines is located here: <https://www.agriculture.gov.au/sites/default/files/documents/biosecurity-2025-26-fees-and-charges.pdf>
 - b. Disease screening is typically undertaken over 7 months, but we have factored the below based on additional months (i.e. 10 months in PEQ) if plants have delayed growth.
 - c. Final charges for time-based activities are dependent on actual time taken to perform the activity and therefore can vary on the final invoice.
4. Enquiries about PEQ bookings and estimated charges should be directed to PEQPlants@aff.gov.au

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DAFF PEQ fees and charges for 1 cultivar (estimated based on 10 months growth) – Greenhouse screening only			
Fees and charges	Unit charge	Units chargeable	Applicable charge
			(1 cultivar)
Inspection by biosecurity officer	In-office fee ordinary hours \$40 per 15 mins	1	\$40
PEQ Plant monthly charge* – Months 1-2	\$373 Per 1m ² per month	2	\$746
PEQ Plant monthly charge – Months 3-5	\$373 Per 1m ² per month	9	\$3,357
PEQ Plant monthly charge – Months 6-7	\$373 Per 1m ² per month	8	\$2,984
PEQ Plant monthly charge – Months 8-10	\$373 Per 1m ² per month	18	\$6,714
PEQ inspections by biosecurity officer - Monthly	In-office fee ordinary hours \$40 per 15 mins	9	\$360
PEQ sampling – 3 months	In-office fee ordinary hours \$40 per 15 mins	2	\$80
PEQ sampling – 6 months	In-office fee ordinary hours \$40 per 15 mins	2	\$80
PEQ sampling – final	In-office fee ordinary hours \$40 per 15 mins	4	\$160
Administration	In-office fee ordinary hours \$40 per 15 mins	5	\$200
			\$14,721

*PEQ Plant monthly charge is comprised of the following charges: (1) Importation charge – plants, charged at \$310 per m² per month, and (2) Husbandry fee – plants, charged at \$63 per m² per month.