Australian Truffle Industry Association

“The National Voice for the Australian Truffle Industry”

TruffleCare™ Industry Best Practice

TruffleCare™ is a whole of supply chain continuous improvement, best practice program that is based on the successful Australian Olive Industry's Code of Best Practice.

The TruffleCare™ ‘Test and Trial’ Pilot Program encompasses a selection of seven (7) key business risk management elements (Sections), matched to participant roles in the supply chain, including truffle growers, graders, consolidators and marketers.

The program will initially focus on sustainable production and marketing of Australian mature-ripe black truffles (*Tuber melanosporum*), pending development of maturity standards for other truffle species approved for production in Australia.

TruffleCare™ signatories (participants) are not expected to be initially proficient or compliant in all program areas, rather they are encouraged to undertake ATIA accredited training programs and work systematically towards achieving full compliance over time, following the Continuous Improvement Cycle.

In this edition of the TruffleCare™ Newsletter, we take a closer look at Section 3: Environmental and Biosecurity Best Practice.

Environmental and Biosecurity Best Practice

Let's take a closer look at Section 3: Environmental and Biosecurity Best Practice across these six main topics:

- Environmental Considerations;
- Biosecurity Considerations;
- On-farm Biosecurity Awareness and Preparedness;
- Biosecurity Online Training (BOLT);
- Biosecurity Plan for the Truffle Industry; and
- The ATIA Truffle Biosecurity Checklist

Environmental considerations

A useful framework has been developed for understanding and measuring the sustainability of Australian horticultural production and setting goals for the future, including:

Water – Securing reliable, viable access to sustainable water resources. Responsible and efficient use of allocated water to optimise production per unit of water. Objective measures guide more efficient water use. Increased adoption of water recycling and reuse. Manage water run-off and discharge to minimise impacts on downstream environments.

Land Management – Implementing best practice land management in horticultural production. Soil health and productive capacity is maintained or improved. Nutrient applications are matched to crop need. Movement of soil, nutrients and chemicals into the environment is minimised. Maintain biodiversity values on the property in a regional context by taking into account native vegetation, wildlife and ecosystems in business planning. Australian horticultural crops have effective pollination and protect pollinator species.

Climate - Australian horticulture understands and manages the risks of climate change and extreme weather variability and builds resilience to natural disasters. Increased use of horticultural plants and green space cools our cities and mitigates climate extremes.

Carbon capture – Horticultural crops and production systems are designed to minimise greenhouse gas emissions.

Energy - Energy is used efficiently with an increased proportion from renewable sources.

Food Waste - Increase the proportion of produce that meets first grade quality and increase utilisation of lower grade produce in order to reduce food waste in the production system.

Packaging – Packaging use is minimised, recyclable, compostable or reusable.
Farm Waste - Reduce, reuse or recycle on-farm waste.

Biosecurity Considerations

Plant biosecurity is a series of proactive measures that aid in protecting production areas from harmful insects, weeds, and various plant diseases. They are collectively referred to as ‘plant pests,’ that have the potential to adversely affect plant health.

The recent incursion of the insect pest **Polyphagus Shot Hole Borer** or **PSHB** (*Euwallacea fornicates*), assumed through the WA Port of Fremantle is a good example of the constant biosecurity threats confronting the Australian truffle industry.

This tiny beetle is native to southeast Asia and bores into tree trunks, stems, and branches. PSHB establishes a symbiotic relationship with a *Fusarium* fungus,

farming it inside the tree as a food source for the beetle and its larvae. In susceptible trees the fungus kills vascular tissue causing *Fusarium* dieback and tree death.

There are over 400 Reproductive Host Species in which the beetle can breed and multiply including English Oak (*Quercus robur*) and Cork Oak (*Quercus suber*) meaning it is a potential threat to truffle host trees and future industry viability.

On-farm biosecurity best practices play a pivotal role in maintaining Australia's reputation of producing high quality products. Truffle producers maintaining a pest-free environment can capitalise on this reputation and use it as a trade asset to gain leverage into global and local markets. Additionally, biosecurity practices can act as security against regulatory imposition of farm quarantine measures.

Experience has demonstrated that significant biosecurity / plant health threats to Australian horticulture can result from:

- Movement of machinery and workers on and off farms – if we can't get this right with known pests and risks what hope do we have if an exotic pest or disease such as Sudden Oak Death (*Phytophthora ramorum*) enters Australia?
- Propagation and distribution of nursery stock without adopting adequate plant health protocols (especially for fungal and bacterial diseases) - this includes host plants that may be sourced by neighbours.
- Illegal importation of plant material to gain an economic advantage.

A question for truffle growers - do you always source certified disease-free inoculum verified host trees?

Click the image of the PSHB below to view the **Pest Profile** on the Department of Agriculture, Fisheries and Forestry (DAFF) website:

On-farm Biosecurity Awareness & Preparedness

Truffle growers have an important role to play in protecting their property and the entire Australian truffle industry from biosecurity threats.

Here are six (6) easy ways you can reduce the threat of new pests impacting on your livelihood. Each of these practices should be embedded in
your truffière everyday management as they make good business sense by reducing the risk of spreading pests. Don't put your livelihood at risk by neglecting orchard biosecurity.

1. Be aware of biosecurity threats
Make sure you and your truffière workers are familiar with the most important exotic truffle and host tree pest threats. Conduct a biosecurity induction session to explain required hygiene practices for people, equipment and vehicles in your truffière.

2. Use pest-free propagation material
Ensure all propagation material is from trusted sources and truffière inputs are fully tested, pest-free and preferably certified. Keep good records of your truffière inputs.

3. Arrive Clean – Leave Clean

Practicing good sanitation and hygiene will help prevent the entry and movement of pests onto your property. Workers, visitors, vehicles and equipment can spread pests, so make sure they are clean before entering and leaving your property. Have a designated visitor's area and provide vehicle and personnel wash-down facilities.

Download Farm Wash Down Facilities Fact Sheet here

4. Check your truffière
Monitor your trees frequently. Knowing the usual appearance of your truffière and trees will help you recognise new or unusual events and pests. Keep written and photographic records of all unusual observations. Constant vigilance is vital for early detection of any exotic plant pest threat.

5. Abide by the law
Respect and be aware of laws and regulations established to protect the truffle industry, Australian agriculture, and your region.

6. Report anything unusual
If you suspect a new pest in your truffière - report it immediately to the Exotic Plant Pest Hotline.

Biosecurity Online Training (BOLT)

Plant Health Australia's (PHA) Biosecurity Online Training (BOLT) platform provides e-learning courses related to plant biosecurity. Access is free and available to anyone with an interest in biosecurity.

Recommended BOLT courses include:

- **Growers - Pest Reporting and Responses**

A grower's guide to pest reporting and responses.

As a grower, your livelihood depends on healthy and viable production systems. The use of biosecurity practices is a key component of achieving this. The Pest Reporting and Responses course highlights how to report plant pests in Australia and what might happen in response to a plant pest detection.

Pests can have a serious impact on crops and farming practices. By playing your part and reporting anything unusual, you can help reduce the likelihood that new pests are here to stay.

- **Plant Biosecurity in Australia**

This course provides an overview of plant biosecurity in Australia and replaces the previous 'PHA Foundation Course'. It also explains how emergency responses to plant pests are managed under the Emergency Plant Pest Response Deed.

- **Industry Liaison Officer e-learning**

Any individual who will be undertaking the function of Industry Liaison Officer (ILO) or Industry Liaison Coordinator (ILC) during a plant biosecurity response should complete this course.

Sign-up now by clicking here or on the image below.

Biosecurity Plan for the Truffle Industry (Version 1.0 January 2016)

Developed by Plant Health Australia (PHA) in collaboration with ATIA, this key document details key threats to our industry, risk mitigation plans, identification and categorisation of exotic pests and contingency plans.

High priority biosecurity threats

Truffle producers need to know the high priority biosecurity pests and diseases – induct their employees and contractors on how and where to report any suspicious sightings, including:

- **Exotic pests of truffles:** European truffle beetle (*Leiodes cinnamomeus*), Truffle fly (*Helomyza* and *Suilliaspecies*);
- **Exotic fungal competitors of truffles:** Chinese Truffles - *Tuber indicum*, *Tuber sinense*, *Tuber himalayense*;
- **Exotic pests of host trees:** Oak - Polyphagus Shot Hole Borer (*Euwallacea fornicates*), Oak & Hazelnut - Brown marmorated stink bug (*Halyomorpha halys*), Oak, Hazelnut & Pine - Nun moths (*Lymantria monachal*);
- **Exotic diseases of host trees:** Hazelnut – Bacterial Canker (*Pseudomonas Avellanae syn. P. syringae pv. avellanae*), Oak & Hazelnut - Sudden Oak Death (*Phytophthora ramorum*), Oak - Pierce's Disease (*Xyllella fastidiosa*), Hazelnut - Eastern Filbert Blight or Hazelnut Blight (*Anisogramma anomala*), Hazelnut – Hazelnut Rust (*Pucciniastrum coryli*).

ATIA Truffle Biosecurity Checklist

ATIA has produced a Truffle Biosecurity Checklist that includes 22 items covering tree nursery health accreditation, managing biosecurity risk on-farm,
good truffière hygiene and plant health monitoring, and facilitating cross-border trade - it pays to be prepared.

How about undertaking a preliminary self-assessment of your current practices to see how you fare? Then repeat after 12 months to measure your best practice implementation progress.

As part of TruffleCare™ compliance requirements truffle producer participants should:

- Complete the On-farm Biosecurity Preparedness Declaration and return this to the TruffleCare™Administrator for verification.
- Prepare and implement an On-farm Biosecurity Plan using the ATIA Farm Biosecurity Action Planner Template for Truffle Growers.

For further information please contact the TruffleCare™ Administrator at:
trufflecare@truffleindustry.com.au

Upcoming Newsletters

In future TruffleCare™ Newsletters we will provide further details on the truffle sensory training workshops, the Australian Industry Standard for Truffles© (ATIA 2024-draft), as well as other elements of the TruffleCare™ program including those relevant to truffle growers, graders, consolidators and marketers.

We will also provide further updates on the TruffleCare™ 'Test and Trial' Pilot Program that is currently underway. It is not too late to express your interest and join the Pilot Program this season.

Apply Now

THANK YOU FOR SUPPORTING OUR INDUSTRY

I would like to acknowledge the ATIA Best Practice Sub-Committee, including TruffleCare™ Administrator, Peter McFarlane, for their continuing work on this important project.

On behalf of the Best Practice Sub-Committee, I extend many thanks and a warm welcome to the participants who have joined the ‘Test and Trial’ Pilot Program to date. We look forward to working with you closely as we bring the program to life, and as we include your experiences and feedback in the continuous improvement of the program.

Katherine Faull
President
Australian Truffle Industry Association

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