



Tutu bushes

Understanding tutin and the risks

Tutin, a plant toxin found in tutu plants, is a very real issue for New Zealand's honey industry. Everyone needs to know about the risks from tutin and their legal obligations.

This paper includes information on what tutin is, how it can get into your honey, and how to reduce the risk of this happening.

It is part of an education campaign undertaken by MPI and Apiculture New Zealand to raise awareness of the issue. We encourage you to check the resources available and to pass this information on to anyone who may find it useful.



What is Tutin?

Tutin is a **neurotoxin** present in tutu bushes that can get into honey when bees collect honeydew from the tutu plant.

It is neurotoxic to mammals, including humans, but not to bees.

In certain circumstances it can make its way into honey.

Human ingestion of contaminated honey can cause giddiness, exhaustion, vomiting, stupor and coma. **In severe cases death is possible.**

In 2008, Tutin was responsible for poisoning **22 people**, who purchased comb honey from a Whangamata **hobbyist** beekeeper. Other cases of poisoning have also been reported.





Passion vine hoppers on tutu bushes

Tutin and honey

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec

The main risk period is usually during **January to April**, where tutin may be found in comb honey or extracted honey if three situations arise at the same time:

1

Significant concentration of **tutu bushes**, a shrub that can grow up to 20 feet. Mostly found along roadsides, on stream banks and in regenerative native bush.

2

High number of **passion vine hoppers** that feed on tutu sap and secrete honeydew which bees may collect. Adults lay eggs until Autumn, so population is higher in summer.

3

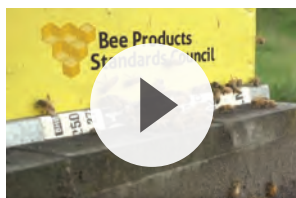
Presence of **honey bees** that feed on this particular honeydew, especially in hot, dry weather in the absence of more attractive food sources.

Is my honey at risk?

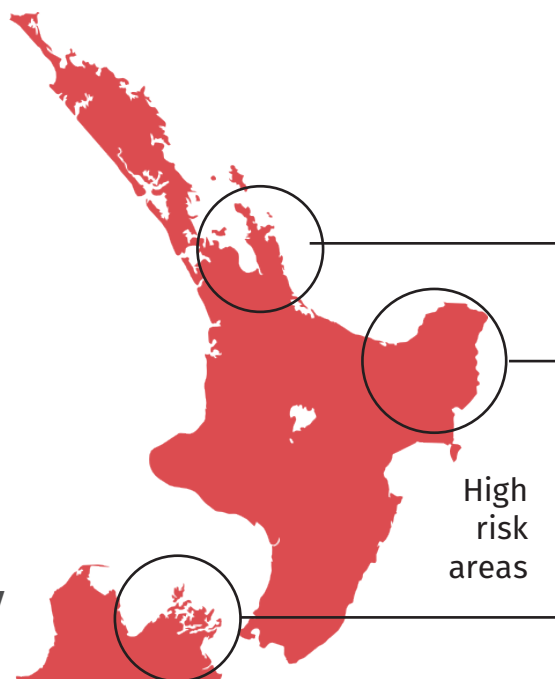
If you have hives in areas close to tutu bushes where passion vine hoppers are prevalent, your honey may be at risk.

Risk areas include all of the North Island and the top of the South Island.

High risk areas include **Coromandel, Eastern Bay of Plenty** and **Marlborough**.



For information and advice on how to mitigate the risks view the educational video <https://tinyurl.com/toxichoney>



What rules apply?

To ensure that no one gets sick, there is a food safety limit for tutin that all beekeepers who sell honey must meet. Standard 1.4.1 and Schedule 19 of the **Australia New Zealand Food Standards Code** sets the maximum allowable level for tutin at **0.7 mg per kg of both honey and comb.**

This came into effect on **12 March 2015** and is legislated. Further, all commercial beekeepers are required by law to comply with rules within the **Food Standard: Tutin in Honey**. See 'Complying with the Standard' over the page for an explanation.

You can access the Standard online at <https://tinyurl.com/tutininhoney>



Who must comply?

All honey for sale or export must comply with the limits set out in the Code.

Beekeepers and **packers** of honey must ensure that they take appropriate measures to not exceed the limit set out in the Code.

MPI recommends that **hobbyist** beekeepers who only produce honey for their own use follow the standard as well.

Donating and **bartering** are forms of trade that must also comply with the standard.

Beekeepers, packers, and exporters are all **liable for prosecution** if someone is poisoned by honey.



Complying with the Standard

The **Food Standard: Tutin in Honey** gives beekeepers **five options** for demonstrating compliance. Beekeepers can select the option most appropriate for them.



OPTION
1

Send samples of all honey produced to a certified laboratory for testing before selling or distributing.

OPTION
2

Harvest honey early. Honey from Supers put into hives on or after 1 July does not need testing if harvested no later than 31 December, which is before the main risk period.

OPTION
3

Demonstrate that tutu is not significantly present within the predictable range of bee foraging. Given bees can forage up to 3km this is a significant undertaking requiring drone or satellite mapping.

OPTION
4

Run your hives in a low risk geographical zone i.e. below 42 degrees South, a line south of Westport on the West Coast and south of Cape Campbell on the East Coast of the South Island where there are no passion vine hoppers.

OPTION
5

Demonstrate you operate in a low risk area with a targeted testing regime. If over three consecutive years your honey has tutin levels below 0.035 mg/kg (and levels in comb below 0.01 mg/kg) you are only required to test one in every ten years thereafter.

Additional information

A guide to compliance provided by MPI explaining what you must do, including information on how testing is done can be accessed online:

<https://tinyurl.com/tutininhoney>

For queries or any additional information, please contact us: animal.products@mpi.govt.nz