



THE TRUFFLE & WINE CO

MANJIMUP ~ WESTERN AUSTRALIA

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The Truffle Business

HELPING YOU SUCCEED



Choose Your Friends Carefully

**Alf Salter, Chairman
The Truffle & Wine Co.**

The above applies in personal relationships, but is equally and possibly more important in business relationships.

I am continually surprised to find how little due diligence people entering the truffle industry have done. This has resulted in many people making poorly informed decisions, often based on what the European experience has been. Australia is not Europe and it is unlikely that much of the European experience will be helpful to grow truffles in Australia.

Over the years many consultants have emerged in our industry and most of these have had limited experience in truffle production and certainly no record of success - there has been insufficient time to establish a successful record. Much of the success in our industry has been a result of good luck in choosing a location and a climate which was conducive to production of healthy host trees and a soil which fostered good mycorrhizal growth.

For those considering working with a consultant there are some important guidelines to follow:

- Avoid short termism - if you are going into the truffle business, you are in for the long term. You will not likely get a commercial return for 10 to 12 years and you have to carry the truffière maintenance and asset carrying costs for that time. It's a long time without positive cashflow!
- Make sure if you use advisers that they have long term and coherent strategies that match your own objectives and time frames. It is a good idea to check their credentials and to make sure they have a record of success that matches their rhetoric - talk is cheap and poor advice can be terminal.
- Beware of populism - seek out what you NEED to hear, not what you WANT to hear. Good advice often comes with short term pain, but long term gain. Much of the advice that has been offered in the truffle industry has been self-serving for the advice giver and based on opinion rather than fact.

At TWC we are happy to help and provide advice on anything which can be supported by facts - which isn't much. We are also happy to tell you what we do not know!

Truffle Formation and Weather

The Australian Bureau of Meteorology has been monitoring a temperature drop in the Pacific Ocean off South America since August 2017, and predicts that Australia will experience a weak La Niña event during the 2017-18 summer and autumn.

La Niña and El Niño are major drivers of Australian weather – particularly in eastern Australia. La Niña and El Niño events both result from a complex interaction between the winds, clouds and ocean temperatures over the Pacific.

Differences in ocean temperatures between the western and eastern sides of the Pacific Ocean drive the direction and strength of the trade winds that cycle between South America and eastern Australia.

When the ocean temperatures off South America are cooler than normal the trade winds move more strongly and pick up and shift more moist air towards eastern Australia leading to more rain.

However, when the ocean temperatures off South America are warmer than normal the trade winds are weakened and can sometimes start moving in the opposite direction (from Indonesia to South America). This results in an El Niño event, which generally leads to drier and hotter conditions for Australia.

As a result of the weak La Niña, the rainfall outlook for January to March shows large parts of eastern and western Australia are more likely to have a wetter than average three months. In terms of temperatures, days and nights are likely to remain warmer than average for parts of south eastern Australia (southern Victoria, NSW and Tasmania) and south-western Australia. This has certainly been true for south-eastern Australia, which has experienced an early start to summer heat. For example, Tasmania's average maximum temperature in November 2017 was nearly four degrees above normal while Melbourne endured nine consecutive days over 28 degrees. December also remained warm in many truffle-growing areas of south-eastern and western Australia.



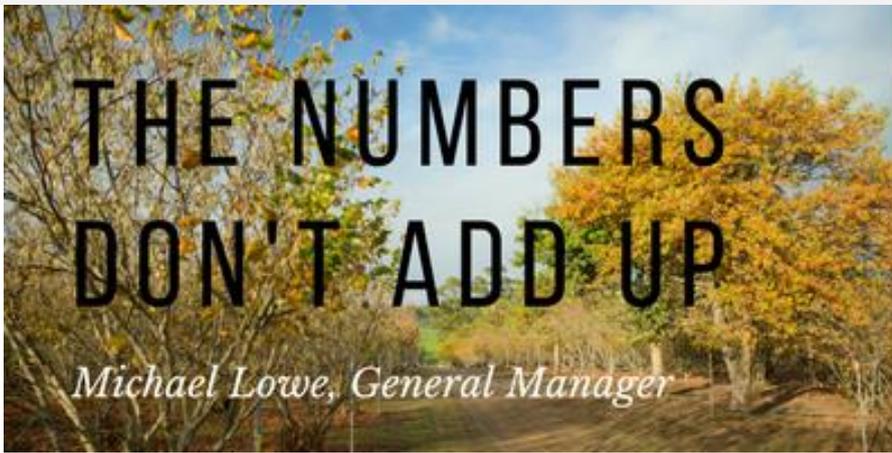
What does this mean for truffle production across Australia this coming season?

Truffle formation starts in late spring and continues until late summer and into autumn.

A rapid rise in soil temperature during spring and early summer is thought to stimulate truffle formation, particularly when combined with moisture. Italian research (Pacioni et al*) showed new truffles (primordia) were usually associated with a flush of carbon dioxide – possibly coinciding with warm soil temperatures and a re-supply of moisture after a period of drought. This fits with the observation that truffles often form in response to summer thunderstorms.

The weak La Niña therefore might benefit truffle production in 2017-18 through its impact on soil temperatures and higher rainfall. At TWC we have soil moisture and temperature monitors installed across the orchard as well as a weather station and we will be evaluating the data provided by these against past and future truffle production.

* Pacioni G, Leonardi M, Di Carlo P, Ranalli D, Zinni A, De Laurentiis G (2014) Instrumental monitoring of the birth and development of truffles in a *Tuber melanosporum* orchard. *Mycorrhiza* 24, 65–72.



We have all heard the many “guesstimates” of how much Black Truffle was produced in Australia last year ranging from 10 tonnes to 20 tonnes, but what did we actually dig up?

The table below is based on Australian Bureau of Statistics figures for 2017 export of black truffles selling for >= \$300/kg from all Australian ports (locales from which the truffle leaves the country). We know that there are some errors in the data - for instance some of the truffle sent from Melbourne had its origin in WA and we suspect that a small percentage of the WA export came from the East and was sold as WA truffle.

Country	Australian Exports (kg)
USA	2000
France	1666
Japan	894
Hong Kong	649
United Kingdom	428
Singapore	205
Germany	130
Total kg	5972
% Total Exports from WA*	93%

*WA share of total Australian exports

Notwithstanding these errors there are some useful conclusions that can be drawn from this data:

- Exported Truffle (whole, pieces and trim) = about 6,000 kg
- Local sales (Australian) = 1,200 kg (max.)
- Truffle products = about 300 kg.

So we estimate that the total sales of Graded Fresh Black Truffle in 2017 was 7,500 kg.

We can add in a small amount of truffle that was frozen and a smaller amount that may be consumed on the farm or with friends but that leaves us a long way short of 10,000 kg. Or does it?

When commentators theorise about the amount of Black Truffle that Australia has produced are they referring to the amount of saleable truffle that has a commercial value? Or do they mean the total harvest including dirt and unsaleable truffle? Including the latter can add 25% to 35% to the quoted “yield” of truffle, depending on the year.

Overall this issue highlights the need for standard terminology in our industry so we can disseminate information in a consistent manner.

The Truffle & Wine Co.'s prime objective is to maximise the amount of truffle that is sold as a proportion of what we harvest – at the best price possible! Surely this is the only figure which your bank manager and therefore you, should be interested in.

To read more on this, see the article “You Can't Manage What You Don't Measure” in **Issue 03, June 2017**. You can see all of our Industry Newsletters [here](#).



A Dog's Life

Adrian Mielke
Australian Truffle Hunters
australiantrufflehunters@gmail.com

The off season life of our truffle dogs is much as for any well loved family pets. In particular ours have a great back yard filled with each of their favourite toys (and plenty of room to run and play fetch), and shady or sunny spots to snooze. A very well earned rest after a winter working hard along side us humans to bring in the truffle harvest. Of course plenty of walks - and with 5 labs we certainly draw more attention than the average suburban dog owners!

We might train the occasional new party trick to keep their minds and our training skills fresh. Other than that it's really just general maintenance/obedience training, and any opportunities for socialisation and new experiences. After a winter of working off lead, even reminding them of good leash 'manners' is a training opportunity.

We don't actively keep up scent work with them out of season - over the years we've become sure of the fact that once the truffle detection behaviours are established over their first and subsequent seasons, they'll be readily remembered the next winter. It is necessary to start pre-season training about a month or so before we return to the farm. This is when we can sharpen and 'shape' any behaviours that need a tweak, and desensitise to anything novel (new booties are a perfect example). We'll take advantage of the slower early season to remind them what a great smelling, mature truffle really is and leave the immature ones safe in the ground; and also gradually build up the dogs' stamina and concentration so that they, and we, can work for longer sessions (often as long as it takes to go up and back along a row of trees).

But that's 4 months away... back to that lazy snoozing in the sun. ..

The Truffle & Wine Co.

T: +61 459 490 015

F: +61 8 9777 2820

PO Box 422, Manjimup WA 6258

W: www.truffleandwine.com.au