



## Major boom underway for Aussie almonds

The humble almond is healthy, versatile and very cost-effective to grow. The Australian almond industry is also going through a major planting boom, which will see the industry double in size in the coming decade.

Australia is now the second biggest almond growing region in the world, behind the USA. We exported our almonds to 52 countries in 2017, and these exports were worth \$464 million in 2016-17.

And with a major planting boom underway, this is only the beginning, according to Almond Board of Australia Industry Development Officer Brett Rosenzweig.

“The industry is currently just under 40,000 hectares. Our projections indicate another 10,000 hectares will be planted in the next three years,” Brett said.

“The main areas of expansion have been in the Riverina (NSW) and Sunraysia (Vic).

“In addition to this, 27% of commercial orchard plantings are not yet bearing almonds, and 30% are not yet fully mature.

“So regardless of any future plantings, Australian almond production will continue to trend upwards in coming years towards more than 120,000 tonnes – and may be significantly larger if orchard development continues as planned.”

So what makes Australian conditions so good for growing almonds? Almond trees are best-suited to a Mediterranean climate. They like cold and rainy winters – without frost – and hot, dry summers, particularly during harvest time in February and March. They also need well-drained soils and access to irrigation water. These conditions are perfectly emulated in the Southern part of the Murray-Darling Basin in South Australia.

“Most other parts of Australia are either too mild in winter, too cold in summer, too humid, have too much summer rainfall or irrigation water is limited,” Brett said.

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## Editorial...

Olivier Marchioro  
Managing Director Staphyt Group

### Dear Friends of Peracto,

Our traditional newsletter is the best way to communicate and inform you about our daily activities and interesting topics from our research business, but also to communicate changes.

On behalf of Staphyt Group I would like to inform you that our colleague Managing Director Ian Macleod finished working with Peracto at the end of October.

For 34 years Ian was the face of Peracto, working closely with our clients and employees. Together with Buz Green they built up the company to become one of the leading CROs in Australia and New Zealand today.

During his 34 year career Ian contributed significantly to agronomic research and development in Australasia, engaged himself in various national and international organisations, and played a big part in improvements within the agricultural industry.

In his daily work, Ian was very focused on meeting clients expectations by delivering the highest standards for trial quality and timeliness.

We would like to thank Ian for his contribution over the last 34 years and for the smooth transition of Peracto into the Staphyt Global group.

Our colleagues Phillip Frost (Technical Director), Paul Munro (New Zealand Manager) and Bruno Maurer (Business Unit Manager) are your main contacts to Peracto and we place great confidence in all three and their Peracto teams to continue to be a top quality provider for their clients and a preferred employer in both Australia and New Zealand!

Wishing all of our valuable clients, stakeholders and associates the very best for the upcoming festive season. We look forward to working with you all again in 2019.

Olivier Marchioro  
Managing Director Staphyt Group



*The Peracto team during their biennial staff conference in July.*

  
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# Major boom underway for Aussie almonds

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There are two other major drawcards which make almonds a very attractive crop to invest in; they are versatile to use and they are cheap to grow.

“Almonds are a healthy food that can be used for snacking, a substitute for flour, or as part of the Mediterranean diet for healthy living,” Brett said.

“They have a variety of other uses including whole, raw kernel, sliced and diced, almond meal, almond oil and almond milk.

The entire almond can also be utilised. The hull and shell can be used as stock feed which can actually help to reduce the core temperature of cattle on hot days. Almond compost can also be applied back into the orchards.

Projects are also underway to build machinery which will be able to remove the hull during harvesting, thus leaving it as compost in the orchard.



Researchers are also working on projects to use the hull and shell for electricity generation at almond-cracking plants, Brett said.

Almonds are also generally the cheapest nut crop to grow.

“Almonds are the quickest nut crop to get into production, with the first yield expected at around 3-4 years

after plantation, so they have an earlier break-even point compared to other crops,” he said.

Almonds are also renowned as very efficient water converters – meaning they produce a high value return per megalitre of water applied.

“Some 99% of orchards also use efficient drip irrigation that allow for precise timing and rates of irrigation,” Brett said.

“It’s a really exciting time to be working in the almond industry, and we can only see things getting better from here.” 🌿



## Almond facts

- In 2017 almond crop in Australia was 79,461 tonnes.
- Approximate number of commercial almond trees in Australia – More than 11 million
- For every one tonne of almonds sold in Australia, 2.4 tonnes are exported.
- 48.1% of Australian households purchased almonds during the 2017/18 marketing year.
- Total area planted to almonds in 2000 in Australia – 3,546 hectares.
- Total area planted to almonds in 2017 in Australia – 39,662 hectares (11-fold increase)



# Helping crops flourish naturally – BIOTEAM

**A European-based Staphyt research team which has spent the past six years testing and evaluating biological products across Europe is yielding great results.**

Bioteam has been operating since 2012. Staphyt was the first contract research organisation in the world to dedicate itself solely to biologicals, namely biostimulants and biopesticides. They are now the most comprehensive biological research service in Europe.

But first let's go back to the start. What do we mean when we talk about biostimulants and biopesticides? A biostimulant is a material derived from biological (natural) origin that, when applied to a plant, seed, or soil, enhances the plant's ability to thrive. Biostimulant products include humic and fulvic acids, seaweed extracts, protein hydrolysates, amino acids and microbial inoculants.

Conversely, a biopesticide is a

naturally-based pesticide, found in minerals, bacteria, plants or animals.

So why would we want to use biologicals in farming? Because agriculture currently faces a twin challenge – to feed a growing population while also minimising the environmental impact of cropping systems. To put it simply, more than ever before, people want their food grown in a sustainable, organic way, free from chemicals.

Other claimed benefits of biostimulants:

- **Improves efficiency of nutrient use**
  - Improved mobilisation of nutrients in soil
  - Improved uptake of nutrients
  - Transport, storage and assimilation
- **Improves abiotic stress tolerance**
  - Improved plant performance under physical or chemical stress (i.e. heat, cold (flooding or drought) salinity

- **Improves crop quality traits**

- Nutritional value (colour/cosmetics), shelf life, size, grade

(Source: Dr Brian Cornelios, Agricen)  
 Other claimed benefits of biopesticides:

- **Inherently less toxic than conventional pesticides.**
- **Generally affect only the target pest and closely related organisms**
- **Often effective in very small quantities**
- **Often decompose quickly, resulting in lower exposures**

(Source: United States Environmental Protection Agency)

Bioteam comprise a diverse team of experts in physiology, plant pathology, agronomy and product regulation. They work with clients right throughout Europe and beyond who want to learn more about using, marketing and selling biological products.



Bioteam Project Manager Mireille Piron shares her thoughts on the role of biologicals into the future.

### Tell us a bit about your history working with biologicals?

Including my time at Bioteam, I have worked in the biologicals field for more than 20 years. I began by working with beneficials in greenhouse crops (i.e. tomato, cucumber, eggplant and sweet pepper), before extending into bioinsecticides, biofungicides and biostimulants – conducting field trials. This gave me a great understanding of the value of biologicals, for both the agricultural industry, and for our health. My time working in the field has also convinced me that using biologicals will create more sustainable crops – something that all companies involved in agronomy should be interested in.



### Do you see biocontrol and biostimulant products becoming a larger part of Staphyt business?

Yes. There is no doubt about that! The biocontrol and biostimulant markets have continued to grow at a much faster rate than traditional crop protection and fertilizer segments in recent years. I don't believe the biologicals market has reached its peak yet. Consumer demand for environmentally-friendly products continues to grow in most countries.

### Do you think the Australasian biologicals market is changing?

As with anywhere in the world, companies in Australia and New Zealand are working with biologicals. For some

of them, this is core research activity, while for others it is the combination of a product portfolio to offer an integrated pest management strategy for farmers.

Australia already has a total of 17.2 million hectares of organic agricultural land, mostly grassland/grazing areas, and the use of biopesticides is rapidly gaining acceptance (Graham Centre for Agricultural Innovation, 2014). However, the number of registrations for use of biologicals is still relatively low when compared to synthetic pesticides. 🌿

### Snapshot of services offered by Bioteam:

#### Regulatory and Scientific Consultancy

- Complying with regulatory requirements
- Project management, dossier preparation
- Assisting with your submission for national regulation

#### Laboratory and Glasshouse Studies

- Early research trials
- Screening efficacy tests for early-stage products
- Product evaluations

#### Biological Field Studies

- Efficacy trials to determine the best formulation, application method, dose and frequency
- Good Experimental Practice (GEP) trials
- Practical value trials
- Marketing and commercial platforms





*Bruno and his family are loving their time living in Tasmania so far.*

# Australasian and European continents closer together

**Bruno Maurer has relocated from Poland to take up the role of Peracto Business Unit Director, Australasia.**

**Do you think growing up on a farm is what sparked your curiosity in agriculture and therefore your educational and career trajectory?**

I grew up on a farm in a little village in Germany. My parents ran our family farm, which they had inherited from their parents.

I was the youngest of three sons and ever since I can remember, it was assumed that I was the child who would stay on the farm to continue the family tradition. My Dad taught me to drive a tractor at age four. My entire childhood was spent either in a wheat field, or hanging around with dairy cows.

My dream was always to take over the farm from my parents but I wanted to do it in a modern way ... so I decided to study agriculture first. But after completing my university studies the idea of returning to a small farm didn't feel like enough for me – I wanted to spread my wings and take on something bigger!

That is when I decided to seek employment in plant protection research at Bayer.

## Where has your career taken you up until now?

My true romance with agriculture began at Bayer. I worked at Bayer – in both Germany and Poland between 1990 -1994. I was actually the youngest Bayer employee to be sent to Poland to open their subsidiary. After I left in 1994, I stayed in Poland to pursue other opportunities – this included setting up my own business, working for wholesaler BayWa, and then at an agricultural magazine called Top Agar. I accepted the role of Managing Director at Staphyt in 2005.

## What is your new position at Peracto?

I join Peracto as Business Unit Director, Australasia. I bring with me 13 years of similar job experience in Poland, having managed a team of 40+ employees. My motivation – to live and work in Australia! I also believe I have the enthusiasm, motivation and communication skills to bring the Australian and the European continents (Peracto and Staphyt) closer together.

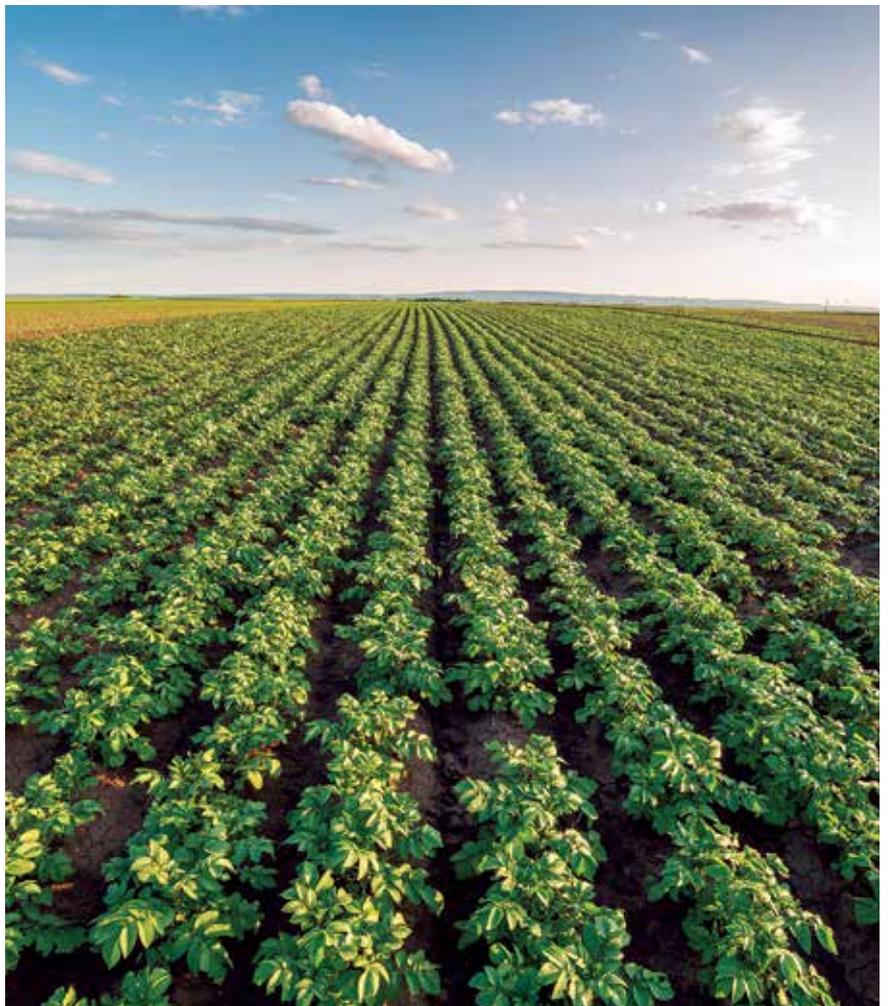
## What do you see as your key goals and challenges in your role at Peracto?

There are more than 15,000km between Europe and Australia! In addition to the physical distance, there are also cultural differences. Work in research and development may look similar between Europe and Australia, but this is not the case at all. My challenge is to ensure we learn from each other everyday and chose the best way forward to get the job done.

Both Europe and Australia have the same ultimate goal – high trial quality and satisfied customers!

## How are you and your family settling into life in Tasmania so far?

My wife is an Australian citizen and for many years I heard a lot of good things, but did not quite believe them all. Then I came here to visit in 2012 – I discovered she was right! I fell instantly in love. Ever since then we have been trying to find a way to live in Australia. When the offer came from Staphyt we didn't hesitate for a moment. At that time we knew very little of Tasmania, but since arriving in January we have found ourselves enchanted. Our three children Boris, Bianka and Rocco have all moved with us. 🌿



# Controlling the environment – Peracto laboratory trials

Peracto in Devonport has a research team that specializes in providing contract trial studies under controlled environment.

These research trials can be carried out in our laboratory in in-vitro or bioassay studies, in plant growth cabinets or in a glasshouse as pot trials. The team can provide guidance or develop trial methodology to meet client objectives.

Principal Research Scientist Dr. Hoong Pung says such small-scale studies can be used to compliment large-scale field trials for screening products for plant disease and pest control.

“Nowadays, with unpredictable weather patterns, doing field trials can be very risky to carry out because desired objectives may not be met due to the weather not being conducive to the disease or pest,” Hoong said.

“In controlled studies, we can control the environment and introduce the desired pathogen or pest – this gives us a success rate of 90% or greater for meeting trial objectives.

“Pot trial results can also be used to compliment field trial data to support product registrations.”



*A new Climatron plant growth cabinet is assisting the Peracto team to control the environment in research trials.*

In order to compare different products or product rates, it is often necessary to test treatments under high and even disease pressure, Hoong said.

“From our laboratory, we have the capability of growing bacterial or fungal cultures, mass producing spores and bulking up inoculum for controlled disease trials,” she said.

“We have carried out many trials on various fungal diseases that cause

seedling damping off, downy mildew, white blister, grey mould, white mould or anthracnose.”

Pot trials can be used to screen many different seed dressing formulations prior to field trials, and to evaluate chemical or biological products in seed treatments, foliar sprays or drench applications.

A new Climatron plant growth cabinet is also assisting the Peracto team to control the environment in research trials. The Climatron provides complete control of temperatures, humidity and lighting and it allows the team to provide an ideal environment to get fungal infections for foliar disease trials.

“With good environmental controls, we can do out-of-season studies in pot trials in this unit,” Hoong said.

A track sprayer cabinet is also used at Peracto to spray plants in pot trials. Spray applications can be made evenly at any spray volume in the cabinet. They can also be used to simulate rainfall to test rainfastness of spray droplets on leaves after spraying. 



*The track sprayer is used at Peracto to spray plants in pot trials.*