

TPF COFFS HARBOUR

Freeze-Drying

ABN: xxxxxxxxxxxx



Farm Evolution

What is Innovation? The introduction of a new thing or new method.

Quite a simple concept within itself, but for me the flow on effect over many years has manifested to the point where my company stands today.

Innovative practices have been a contributing factor to the continued success of the Mock family farm business for nearly 100 years, you could say “its in the blood”.

Back in the 1920’s my grandfather conducted a small mixed fruit orchard on the outskirts of Melbourne. During day-to-day operation he noticed, by chance, two distinct and exceptional examples of apples and pears. Knowing that these characteristics would be well received in the market place they were both propagated and given the Mock name.

One being the ‘Mock Gravenstein’. A unique red summer apple, previous examples had little or no red colour. The other being a William pear that is red in colour, which has been further refined and is commercially produced today known as the Sensation Pear.

Both these products gave him a market edge and helped to develop his brand and added to his sustainability. At this time no Plant Breeders Rights (PBR) existed to protect ownership of such new varieties, legal procedures are now available and can prove to be very lucrative.

As Melbourne expanded the farm was forced to relocate to a more rural area. This allowed for rationalization of the products grown and apples became the main focus, a very consistent commodity which enjoyed an undersupply with good prices for many years, lots of hard work but good rewards, a very easy time to be complacent.

During this time my parents had the foresight to identify that chemical usage on farm was detrimental to both humans and soil health. We are talking the late 1960’s nearly 20 years before the first organic certification was introduced into Australia. After investigating safer farming systems, the Biodynamic enhanced organic method was identified as the most viable and practical system.

This innovation required considerable courage and the word “pioneer” has been used to describe my father as to the input and knowledge he provided in the development and refinement of the Australian Biodynamic farming system that continues strongly today, and which, has gained international recognition.

So what started as an innovation for personal and farm health reasons has allowed me to be at the forefront of the booming organic market sector, a market that did not exist when the innovation was implemented.

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It is important to note that all these major changes were conducted at times when our business was strong and capable of committing resources to a new direction as well as withstanding the uncertainty of that change.

What were radical innovations in the past for my predecessors has transpired to normal procedures for me. Entering organic farming as a teenager did not strike me as radical or alternative, just the normal way of farming. Producing certified biodynamic apples opened doors to the export markets in both Europe and Asia. Sales and marketing was easy; the production of quality produce was the challenge with few alternatives to chemical pest and disease controls available. As a result a significant percentage of the crop was outside the product specifications for fresh fruit sales i.e. waste.

In our business it's not what you sell but what you don't sell that determines your bottom line, hence value-add to the waste component of production.

Having confidence in the organic market and identifying both a void in the market and strong demand for certified organic value-added products we investigated and researched the process options available. Apple juice was one option but was already a competitive market that was price driven, lets not reinvent the wheel.

Dried organic apple was in demand but the current production systems relied on the use of Sulphur Dioxide (SO₂) to control oxidization, the discoloration of the fruit during the drying process. Sulphur Dioxide is not permitted within the organic standards and without it's use, the finished dried products presentation is not well received by the consumer.

We then researched drying methods that didn't require the use of SO₂ and Freeze-drying was identified. Freeze-drying is a system of drying whilst the product is frozen, it requires no preservatives, has high nutrition retention and the dried product retains excellent shelf life. Generally only applied to high value commodities due to the costly nature of the process. There were no commercial facilities dedicated to organic fruit operating in Australia and as it turns out, the world. Very little practical information was available, mainly only generic text references. The bureau of statistics had no records relating to Freeze-dried fruit. We had no lead to follow.

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From the little information available we were able to construct a prototype. The initial samples were used to gauge consumer reaction and to achieve a ruling as to the compliance to the national organic standards. All was positive. Further investigation of suitable machinery proved unviable due to limited production capability, excessive capital investment and unsustainable running costs. With these factors in mind affordability, efficiency and commercial yield, a custom design was drafted.

Our design incorporates a heat recycling system that achieves energy savings of 75% compared to existing models, which electrically heat the module. This efficiency coupled with computer controlling is what makes the whole system viable.

With the new design proving successful, the costing was then put under the microscope; which 'stacked up ok' supported by the fact that the raw material was available at a low base price. An acceptable retail price was achieved.

At this point we thought the hard work was done... then came all the things we hadn't given much consideration to, like packaging type, pack size, box size, units per box all the simple things you normally take for granted, things that are industry standards; for example, eggs are sold by the dozen. The distributors and consumers soon answered most of these questions.

So the processing arm of the farm Totally Pure Fruits started as a means of maximizing the farm returns without actually increasing the farms production, has evolved to become the core business and in turn helping the sustainability of not only our family farm but many of our colleagues in addition.

Our freeze-drying system continued to evolve to the point where we can ensure consistent quality and supply and keep the balance between supply and demand. This has proved quite challenging at times... keeping up with demand!

The future direction as per Totally Pure Fruits business plan is to replicate our innovative niche processing facility in key regions throughout Australia so as to broaden the range of products, which can be supplied in commercial volume. A major factor in this is the proximity to quality raw materials and the logistics to major markets. As our Freeze-drying units are Australian designed and made, computer controlled, efficient and user friendly, the opportunity exists to address the worldwide shortage of freeze-drying capacity. Quite an evolution from humble beginnings.

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My advice to anybody entering the unknown world of innovation is to grow slowly.

Subtle changes will have to be made, generally dictated by the market place.

Keep dept manageable. It's often the only obstacle you cannot over come.

Find knowledgeable people, the *experts* not the *salesmen*.

Surround yourself with staff and associates that share your belief and passion.

Identify the point of no return because once you have a tiger by the tail its hard to let go.

Believe in your product, stay focused on the specific goal, it's easy to get side tracked by new opportunities because innovation leads to innovation.

Be courageous... and.... Hang on and enjoy the ride!

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