Final Report

Consultancy to develop a Business Plan for a National Pome Fruit Breeding Company

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Summary

The project funded a consultancy to develop a business case and concept plan for a new pome fruit breeding company. The model upon which this business case was to be based follows the one used to form InterGrain Pty Ltd. This entity was formed after the aggregation of a number of state grain breeding programs, GRDC and a large corporate breeding/commercialisation company; which is one of three commercial entities has successfully commercialised grain breeding in Western Australia. As such, the project looked at the feasibility of the establishment of such a company and whether or not it provided a better option (compared to existing pathways) for providing the Australian apple and pear industry with a reliable supply of internationally competitive apple and pear varieties.

The rationale for this aggregation was based on the withdrawal of state sector investment in wheat breeding over an extended period of time, and the recognition that the merging of the more local programs into fewer, more cost-effective, entities with the ultimate goal to be self-sustaining needed to occur. The greater critical mass that an international breeding/commercialisation entity brought to grain breeding in the case of Intergrain has been replicated with the strategic alliance of other international/breeding entities making similar arrangements.

The global and Australian grain breeding arena took on an increasingly corporate R&D approach, and it is the replication of this more deliberate commercial approach that this pome fruit feasibility project attempted to develop a business case for.

The initial consultancy reported favourably on the opportunity to establish an Apple Breeding company. The interim report and recommendations were presented to the partners (APAL, DAFWA, Fruitwest and HAL on 23 October 2013). The partners therefore agreed to extend the project to include an implementation stage to put arrangements in place for the establishment of a Company.

Withdrawal of three parties (HAL, APAL and FWCL) from the proposed company resulted in DAFWA examining the potential viability of WAAA establishing a sole shareholder company. Following analysis of the impacts of such an approach on DAFWA cash flows, a decision was made to proceed with an expression of interest (EOI) to identify potential commercial investors in apple breeding. DAFWA decided that the EOI would not limit investment to a share limited company structure, but rather invite potential investors to outline their preferred method of engagement in apple breeding.

A EOI draft has been prepared, but DAFWA have subsequently made the decision that an EOI is not the optimal manner in which to proceed and will present an alternative approach to HIA in July 2015.
Keywords

Apple, Pear, Breeding
Introduction

In the last five years, the Australian apple and pear industry formally reviewed its investment in apple and pear breeding several times. These reviews included the Thorne Report in 2008, the Prevar Business Case in 2009 and, most recently, the Pear Breeding Business Case in 2011. Each of these reviews was approved by the Apple and Pear IAC with the support of the Board of Apple and Pear Australia Limited (APAL). These reviews all concluded that the Australian apple and pear industry should maintain its investment in breeding new, world competitive, varieties of apples and pears.

Discussion as to the most efficient and effective way to structure a modern breeding apple and pear breeding program has been ongoing for some time. The rationalisation of a number of state breeding programs in the pome fruit and wider tree fruit plant breeding arena raised speculation as to what a truly national coordinated breeding program would look like, and indeed if it was even feasible. The federal government generally views breeding as an industry initiative which can be supported through the matching mechanisms of levies or voluntary contributions.

During the decade 2000 to 2010 the grains industry rationalised and restructured its breeding programs across Australia. One of the outcomes of this restructuring was InterGrain Pty Ltd. The following is a summary of this grain focussed initiative;

InterGrain Pty Ltd was formed in October 2007 when the Western Australian State Government, through the Western Australian Agriculture Authority (WAAA), and the Grains Research and Development Corporation (GRDC) transferred the wheat breeding program from the Department of Agriculture and Food (DAFWA) to InterGrain. In 2009/10, WAAA and GRDC agreed to expand the InterGrain business and transferred the barley breeding program from DAFWA to InterGrain.

In August 2010, Monsanto joined InterGrain as an additional shareholder with the purchase of 19.9% equity share. The involvement of Monsanto is based on a collaboration which involves:

- Exchange of germplasm
- Access to high throughput molecular technologies; and
- Access to new biotech traits in the long term.

This new financial investment and the collaboration agreement will ensure that InterGrain maintains its position as a leading cereal breeding business through the delivery of improved varieties to Australian grain growers.

The past decade has seen radical changes in the structure and ownership of wheat breeding in Australia, all aimed at the rapid production of superior varieties. The speed to market in an extremely competitive market is crucial - it is a key risk minimisation strategy.

Both the global and Australian breeding space has taken on an increasingly corporate R&D approach in the Aust grains Industry, and a merging the many small and local breeding programs into fewer, more cost-effective entities with the ultimate goal to be self-sustaining. The withdrawal of public state sector investment in wheat breeding over the last two decades, to a model that endeavours have a reliable source of income to sustain their breeding operations, over the life of cultivar development and commercialisation.

These more deliberate approaches to wheat breeding technology have created the opportunity for increased funding needed in wheat breeding consistent with the existing seed distribution systems. Commercial breeders are attempting to secure up their respective channel to markets through a series of
In 2013 organisations interested in breeding apple and pear varieties (APAL, DAFWA, Fruit West and HAL) met to discuss how they might progress a nationally focussed apple and pear fruit breeding entity in Australia, based on the InterGrain model. An outcome from that meeting was to develop a terms of reference that would form the basis of a feasibility study into the potential of this concept. In short, to investigate whether an InterGrain model, or similar could be successfully applied to pome fruit breeding in Australia. This project funded the work of an experienced consultant to develop a Business Case/Feasibility Analysis for a national breeding/commercialisation entity to conduct pome fruit tree fruit breeding operations in Australia.
Methodology

The project team appointed Mr Bryan Whan, former CEO of Intergrain as the consultant to drive this project against the Terms of Reference provided below (agreed between HAL, DAFWA and APAL). This decision was made given Mr Whan's has unique skills, experience and track record in this area through his leadership in the establishment of Intergrain.

It was also envisaged at the commencement of the project that Dr Whan would also conduct the implementation phase (Phase II) of the project. He was be engaged to conduct this work and provide professional advice as required through Whan Investments Pty Ltd.

The three parties (DAFWA, HAL, APAL) created a Terms of Reference document for the Phase I Feasibility Study (see below). This set out
- a potential vision and purpose for a new entity
- a potential series of chapter headings and a description of what should be provided under these headings

Phase II (implementation) would put the necessary arrangements in place to establish a Fruit Breeding Company.

Phase III would appoint an Interim Executive Chair for the Company. The Chair will then represent the company (as opposed to shareholder) interests in negotiations with potential partners and shareholder.

Assessment of DAFWA’s fruit Intellectual Property and breeding pipeline would be undertaken as part of the project, as a critical precursor to assignment to a commercial entity.

Finally, Phase IV would translate information collected and created in Phases I-III into an expression of interest in investment in apple breeding activities. Investors would then be invited to nominate which aspects of the program they would like to invest in and to propose an ownership or partnership model for that investment.

Terms of Reference
A. Background and Context

Apple and Pear Australia Limited (APAL), Fruit West, Horticulture Australia Limited (HAL) and the Department of Food and Agriculture, Western Australia (DAFWA) share a vision for the development of a national, commercially-focused pome fruit breeding program, based on modern genetic techniques, that will deliver globally competitive varieties for Australian growers.

The preferred structure for the breeding program is a jointly-owned company. As a first step towards establishing the company, a consultant is required to develop a high level business case and concept plan to assess the feasibility and establish the operating principles for such a company. Before any decision to invest can be made, the parties wish to see that the proposed company will meet with the needs and expectations of all the apple and pear fruit stakeholders. Additionally should there be potential for other stakeholders to engage in this entity, the concept plan will need to explore this possibility.

This document provides the Terms of Reference that the consultant should address in preparing a
quotation for the project. It will also provide a guideline for the actual preparation of the business plan by the preferred tenderer.

B. Indicative Vision and Objectives for the Company
The following give an indication of the role and objectives of the company. These may need to be refined as the concept plan unfolds. Note: “pome fruit” in the first instance refers to apple and pears, and is used as a starting point only.

2.1 Vision
Our vision is to be the most successful commercial pome fruit breeding company in Australia by delivering pome fruits varieties that satisfy the global market, and leverage a commercial strategic alliance to develop and sustain pome fruit production in Australia.

2.2 Objectives
· To provide the Australian pome fruit industry with access to elite varieties that will enable growers to compete effectively in domestic and international markets.
· Utilising modern breeding practices and world's best practise, sustain internationally competitive pome fruit breeding programs
· To leverage the commercial acumen provided by a leading international pome fruit breeding/commercialisation entity delivering a market driven that is profitable and ultimately self-funding. This may be funded through a mixture of industry, government and private funding.
· To provide a path to market for pome fruit varieties and other intellectual property developed by the Company and its collaborators.
· To provide flexibility to compete in a competitive environment with rapidly evolving technologies and production and marketing sectors.

C. Terms of Reference
The following is a list of headings that will become the chapter headings for the business case.

C.1 The opportunity.
Describe the proposed program and the benefits it will bring to Australian growers. Describe why this model would be an improvement upon the current status quo provided to Australian growers.

C.2 Partners
The initial partners.
Who the initial partners (DAFWA, APAL, FruitWest, HAL) are. Are there other stakeholders that need /want to be engaged?
What would each of these stakeholders bring (such as germplasm, people, facilities, skills, cash for investment etc), to such a model?
What are the current gaps?
Can near to market products be rapidly commercialised to provide cash flow of the company in the short to medium term.

Possible Additional Partners.
Identify possible additional partners - including those Australasian agencies which could be included if the program's focus was broadened to deciduous tree fruits (apples, pears, stone fruit, cherries) . For additional partners identify the assets that they would bring to the program.
In particular, it is important to identify sources of “modern genetic techniques” as they apply to breeding tree fruits.

C.3 Program Scope.
Crops:
It is expected that the program would initially focus on apples and pears. However there may be an
opportunity (or not) for other stakeholders who have an interest in plums and other tree fruits. There are (now-lapsed) national programs and collections of germplasm related to apples, apricots, cherries and an active program breeding low chill stone fruit. The consultant needs to consult with possible partners and advise if there are logical inclusions/exclusions and whether a tightly focused program focussing on apples and pears is more appropriate.

**Scope of company operations.** It is expected that the company would operate in the following areas; pre-breeding and germplasm development, breeding (crosses), evaluation, commercialisation.

**C.4 Competitors/ potential collaborators.**

Who are the groups around the world that are doing something similar to what is envisaged here? Strengths and weaknesses of these groups. What are the main niches in which they operate? What competitive advantages do they have related to germplasm, technology, commercialisation etc. Which ones are potential partners (and why)? Which ones should be avoided (and why)?

**C.5 Key issues/ risks faced by the new Company.**

**Structure:**

What form should the company take (Pty Ltd, Ltd by Guarantee, trust etc) and why? Options for company structure and preferred structure. Tax position (see below also on tax).

**Equity:** If the new company was formed how would they be divided between the foundation partners? What shareholding should go to new partners? How would different types of contributions be recognised (e.g. value of a germplasm contribution vs a technology contribution vs a cash contribution)?

**Intellectual property:** how would existing germplasm collections be handled? How would they be best passed to the new company - by assignment (in exchange for equity) or licensed in (in exchange for royalties)? How would royalties be disbursed between partners?

**People:** Do the partners currently have the right people to lead the technical operations of the company? If not where would suitable people come from?

**Technology:** Do the potential partners have between them the technology required for a breeding program based on "modern genetic techniques"? If not, which organisations would such technology come from? What would it cost to access the technology in terms of equity or other payments?

**Entry and exit of partners:** What are the conditions for entry and exit of (i) shareholders and (ii) collaborators/technical partners?

**C.6 Company Structure and Operations**

Describe the possible structure options and detail a preferred structure with an explanation of the benefits of the preferred structure. The analysis of company structures should take into account the tax position of the company and the type of company that is proposed.

For the preferred option describe:

- the appropriate governance model for the company
- the preferred management/staff structure
- provide an action plan for the establishment of the company
- provide a mechanism for the resolution of disputes between shareholders

**C.7 Financial aspects**

Prepare an indicative annual operating budget for the company (first 5 years) based on the preferred governance/management and operating structure described above.

Prepare an indicative financial model for the company together with “optimistic”, “pessimistic” and
“likely” iterations of the model. It is important that all iterations of the financial model are realistic. Include a time to break even analysis and return on investment analysis.

Suggest when and in what form (equity, shareholder's call etc) the parties should supply funds to the company.

Provide a professional summary (possibly outsourced) of the tax position of the company.

A Variation was approved in February 2014: for extension of the project until 25 June 2014 and an increase in budget to enable an implementation phase to the consultancy. Dr Whan's draft report and recommendations were presented to the project partners (APAL, DAFWA, Fruitwest and HAL) on 23 October 2013 - at that meeting it was resolved to conduct a second phase consultancy to put first steps in place to form an Apple Breeding Company. Refer correspondence.

Following approval of the variation, the project drew up a Term Sheet for the preparation of an agreement between the parties to form a fruit breeding company, following presentation of this APAL and FWCL withdrew their interest, and the project proceeded to draw up a shareholder agreement between HAL and WAAA.

After presentation of financial summaries of company costs, projected revenues and required shareholder financial contributions HAL made the decision to not become a shareholder in the company.

The project then conducted an analysis to determine the potential viability of a company with WAAA as the sole shareholder, and DAFWA examined such an option, and its impact on DAFWA cash flows.

Based upon this analysis, and work to date, the DAFWA Director General then made the decision to proceed to the issue of an EOI to seek potential commercial investors.

A draft of an expression of interest draft was prepared by DAFWA which incorporated details of the current DAFWA owned commercial apple varieties, along with a summary of the current pipeline material and germplasm material that are available as the opportunity offered in the EOI.

In a departure from the original goal of company establishment, the draft EOI requests that potential investors indicate their preferred method of investment, rather than restricting that to a shareholding in a company. DAFWA were of the view that this more flexible approach would maximize the potential to attract investment in the program.

Analysis of the opportunity offered in the EOI was undertaken by DAFWA which included an assessment of costs associated with running the current program, and current and potential royalty streams from commercialized varieties, and how this might influence likelihood of investment, and the value in conducting an EOI process.
 Outputs

1. **Interim report by Bryan Whan**

The interim report reviewed the opportunities and risks, financial and operational issues associated with establishing the DAFWA apple breeding program on a commercial footing. It concluded that the appropriate model was a company limited by shares with Apple and Pear Australia Ltd (APAL), Fruit West Co-operative Ltd (FWCL), Horticulture Australia Ltd (HAL) and the Western Australian Agricultural Authority (WAAA) as foundation shareholders.

2. **Term Sheet for agreement between APAL, FWCL, HAL and WAAA.**

APAL, FWCL, HAL and WAAA met in October 2013 to review the recommendations of the Interim Report and agreed to proceed with the process of forming a company. Bryan Whan prepared a Term Sheet for preparation of an agreement between the parties to form a fruit breeding company.

3. **Shareholders agreement for formation of company**

APAL and FWCL withdrew their interest in becoming shareholders in the prospective company following presentation of the term sheet and a budget at a meeting in January 2014. A Shareholders Agreement for formation of a company with HAL and WAAA as foundation shareholders was prepared by Russell Kennedy and refined by the Western Australian State Solicitor’s Office.

4. **Company Budget spreadsheets**

Five year summaries of operating costs, projected revenues and shareholder financial contributions were prepared for the shareholders meeting in January 2014.

After the HAL board decision of April 2014 not to become a shareholder in the company more detailed budget spreadsheets were prepared to assess the viability of a company with WAAA as sole shareholder.

5. **Analysis of company establishment on DAFWA Cash flows**

DAFWA conducted an analysis of the impact of establishment of an apple breeding company with WAAA as a sole initial shareholder on DAFWA cash flows. It was concluded that the company would require ongoing subsidy of $400-700k pa in addition to the full commitment of WAAA’s royalty revenue from fruit breeding.

After reviewing that analysis and other work to date the Director General of DAFWA decided to proceed to issue an expression of interest in apple breeding to identify potential commercial investors.

6. **Expression of Interest (EOI) Document**

An expression of interest document for investment in apple breeding has been drafted.

DAFWA has decided that the planned EOI is not the best way forward for apple breeding and will present an alternative approach to HIA in July 2015.
Outcomes

The project’s desire outcome was to:

“allow potential investing partners to determine if there is a strong enough business case to attempt to form such an entity based on there being sufficient return to warrant investment”.

The project has not reached the end point envisioned by the project partners but it has delivered its planned outcome. Conduct of the project has enabled the project partners to decide that they did not see a sufficiently strong business case to co-invest in a fruit breeding company.

Evaluation and Discussion

This project has not been the subject of a formal evaluation.

The project team have successfully delivered the agreed outputs of the project and have done so within budget. HIA has shown considerable flexibility and good will in varying outputs as the situation evolved and the shared need of the project partners changed.

The goal of forming a fruit breeding company with all the major industry stakeholders as shareholders was not achieved. The decision not to become shareholders was made independently of, and was beyond the control, of the project team.

The project has enabled an exhaustive and rigorous “learning by doing” examination of the business case for establishment of a Pome Fruit Breeding Company.

The project turned consideration of the formation of an apple breeding company from a hypothetical consideration into a real world business proposition that forced all the project partners to carefully consider the financial and agro-political issues associated with such a company.

The initial desktop business case seemed compelling but it was the process of contract development that really forced prospective investors to examine their motivation and capacity to invest in a company. The internal analyses and imperatives of the prospective investors ultimately proved to be more influential than the desktop business case or recommendations of the project consultant.

Bryan Whan and Andrew Chalet’s work in driving forward the development of a term sheet and Shareholders’ Agreement for formation of a company within six months of the decision to proceed forced all the project partners to carefully consider their positions and make their own decisions about the strength of the business case.
With hindsight, it will always be internal decision making processes rather than an externally
developed business case that will determine whether parties form any business relationship, including a
company. A valuable lesson for the project partners might be that when faced with similar decisions in
the future it is best to proceed straight to the development of a term sheet (and then to drafting a
shareholders agreement if agreement is reached on terms) rather than spend time on a desktop
business case. In six months that process moved four partners with a loosely shared aspirational goal
to a clear understanding of where each of them would or would not invest.

Bryan Whan’s role in this project has clearly demonstrated the value of an independent party to drive
development of the term sheet and Shareholders’ Agreement.

In the absence of investment by APAL, FWCL, or HIA the superimposition of board and company
management costs on a small government breeding program would render it financially unviable as a
stand alone investment. DAFWA is exploring alternative models for the future of apple breeding in
Western Australia. They will be discussed with HIA in July 2015.
Recommendations

1. That DAFWA and HIA hold discussions in July 2015 to consider alternative approaches to the future of apple breeding.

Scientific Refereed Publications

N/A

Intellectual Property/ Commercialisation

No commercial IP generated