

## **Future Orchards 2012**

### **Orchard walk notes**

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## **“Varietal Strategies for Future Success”**

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From an industry perspective we have grown up in an apple and pear world where we could access whatever varieties we needed to ensure our business could survive. The farmer next door was seen as a competitor and we continually tried to get an advantage that would allow us to maintain our independence.

In the past 10 to 15 years the number of buyers of our products has reduced, their size in terms of operations and influence is ever increasing. This has resulted in much greater competition between all involved for access to an ever-decreasing number of outlets. This has put downward pressure on prices, as price is the point of differentiation with the resultant negative impact on profitability for growers. Longer lines of fruit are required to ensure that the shelves are stocked year round. This by default has resulted in the development of alliances in the supply chain and the birth of category managers.

Globalisation is not new it is suggested that it began following the completion of the first circumnavigation of the earth in 1521 and was at its peak in the late 1890's and into the early 1900's. The First World War brought it to halt, and local market protectionism policies introduced by a number of governments to a large degree brought about the great depression in the late 1920's into the 1930's. By the late 1940's global trade was underway again but it is estimated that current global trade in percentage terms is just over half of what it was in the 1890's. With this in mind it is clear that trade between countries is going to continue to increase. Category managers supplying retailers are going to look wherever they can to source product at the best (for them) price.

Consolidation of retailers is ongoing and their power is surely going to increase. Variety management provides the industry with the opportunity to engage effectively with retailers and their suppliers. It can only succeed if it adds value to all aspects of the supply chain, in particular for growers and consumers. Transparency of the processes for all involved is vital if a distinction is to be made from the traditional system. Variety management to be successful needs to bring discipline to the production and supply system to ensure a consistent product is delivered to consumers on a long-term basis.

The arrival of variety management through the use of trademarks, plant breeders rights and plant patents has altered the process by which growers make their variety planting decisions. This process until now has been dominated by anecdotal evidence of a variety's performance and relative value. Tighter control of varieties means that the freedom to plant any new variety anywhere and do what you like with it is largely gone. Growers now need to develop a new approach in making their variety planting decisions based on much clearer evidence of a variety's performance and relative value.

With this in mind it is hard to imagine that new varieties will become established in the market without planning, support and commitment. Growers will need to adapt to this new environment and understand that a collective approach will be required to facilitate their success with new varieties.

### **What Information is Required?**

The introduction of variety management has posed many new questions for growers and the answers to some of these are still being found. The following list of issues is not exhaustive but it covers a number of areas that need to be considered when assessing the potential of a new variety:

- What are the variety's distinguishing characteristics, can the differentiation be delivered through the supply chain to consumers?
- Can the variety be produced to the required specification in your location? (Does it store well enough that packing and travel to the market will see it arrive in a state that gives it the required shelf life?)
- What level of intellectual property protection (IP) will be in place? (USA Plant Patent, Plant Breeders Rights and Trademarks) will/are plantings to be controlled/managed? Will the IP be defended?
- What is the marketing plan, is it local, regional or global (production targets and market outlets, who controls where the promotional dollars are spent & why, as these \$'s need to support the price)
- Who is managing the variety what is their background in this role are they an existing industry participant? (Will you have an opportunity to participate in the decision making process with regard to the variety)
- Will you be able to get some surety that it will be profitable when it begins to bear? (Will there be enticements for early adopting growers?)
- Who else is going to plant it (where in the world) and what will be the impact in the market place.
- What will it cost to be involved? (Nursery tree & production royalties, minimum/maximum plantings per grower?)
- Is there R&D support for the variety; are there funds available for additional R&D work if required?
- Will you and the other participants (packers/marketers/retailers etc. be committed to the program. (Contractually?)

### **How do you get access to this information?**

The key sources of information are the entity that packs and markets/sells your fruit along with your regular industry network, meetings, newsletters, the Internet and journals.

Are you locked into a particular packing/marketing system either morally or legally? If you are then you had better get close to them to see what varieties they may be considering. It may be that you are happy for this decision to be made for you, as historically this has been quite effective and profitable.

If you are not locked into a packer/marketer then you will need to build your awareness of what is happening in the industry and consider which alliances you may or may not need to join. To do this will require travel from the orchard and certainly take you outside the normal scope of your operations. This will ultimately dictate what varieties you may be able to grow in the future.

In assessing which business you might be involved with you may need to consider the following issues:

- The scope of their operations, local, regional, continental or global.
- The way they communicate with their growers.
- Their industry track record and their ability to develop and implement a production and marketing plan.
- What strategic alliances do they have that will add value?

Growers need to be able to consider and assess marketing plans and contracts effectively as their financial future will depend on it. This may mean that your business needs access to additional expertise with regard to finance and legal issues as legal agreements are sure to be an integral part of gaining access to a managed variety.

Variety management is here to stay, it will take some time before the varieties being managed make up a significant percentage of total production but because of the lead in time required to introduce new varieties it is clearly an issue to deal with today. The ability to coordinate the supply of a specified product is one of the key outcomes going forward if we are to address the continued reduction in consumption of our high quality product. It will take a collective approach to achieve this. Growers are a key part of this process and they will need to where possible take an active role in the process going forward to ensure they are considered as such.

### **How do you get the trees you want after following this process?**

The relationship between growers and nurseries in Australia in many instances could be described as being somewhat similar to how cats and dogs get on. That is if they have grown up together trusting in each other then they get along well and are prepared to work together the other extreme is they are mistrustful of each other and are prepared to blame each other for the state of the relationship.

There is no second prize in this process if you cannot establish a relationship that is similar to the first one described then you are going to up against it from the start. The following analogy has been used previously; “if you had ordered a 60hp tractor and a 40hp one turned up would you accept it” the answer is clearly no. This same rigour needs to be applied to nursery trees as they are the ultimate and only source of income for the business. It is simply not good enough to just call a nursery and place an order for trees without stipulating the specifications that you require. There is absolutely no opportunity to complain about the quality of the trees when they are delivered if no specification was set or the quality of the trees required was discussed with the nursery prior to delivery. I can only urge growers to develop an effective working relationship with their nursery tree supplier. This may be a difficult process but it’s worth the effort to make it work. To assist in the process APFIP has developed a nursery tree specification and tree type’s description for use by the industry.

### **Certification, what is it and what does it mean?**

There are a number of viruses that affect pome fruit that are classified as latent that is they have no visible symptoms. This is somewhat misleading as research both in Australia and overseas has shown they can have significant impact on orchard productivity. The viruses apple mosaic (Ap,MV) apple stem pitting (ASPV), apple stem grooving (ASGV) and apple chlorotic leaf spot (ACLSV) are wide spread in Australian orchards.

The benefits of certified propagating material were highlighted in a research project completed in Australia in 1988 (*Les Penrose et al.*) that compared the performance of three apple cultivars (Jonathon, Richared Delicious & Granny Smith) propagated from using budwood and rootstocks from a virus-tested scheme with trees propagated from sources known to be latently infected with viruses and a mycoplasma. Over a 3-season period;

- Virus tested Jonathon trees out yielded infected trees by 56 per cent ,
- Virus tested Richared Delicious out yielded infected trees by 40 per cent ,
- Virus tested Granny Smith by 41 per cent

This research outcome has been supported elsewhere in the world.

*Wilhelminadorp research station in Holland evaluated the effect of virus on the production of Golden Delicious over 14 years by comparing virus-free and virus-infected trees in the orchard; the results are detailed below.*

*Virus-free: 327 kg per tree*

*Virus-infected: 279 kg per tree (17% less)*

The difference in production per tree over 14 years = 48kg. Multiplied by 2300 trees per hectare = 110,400kg (110 tonnes) which = **7.8 tonnes per year less production from virus infected trees.** The same loss in production was consistent in other varieties and also with pears. This trial looked at production only and did not take into account the fact the fruit quality was also affected by virus.

A survey of key Australian pome fruit growing districts for exotic and endemic pathogens (*F. E. Constable, P. A. Joyce and B. C. Rodoni*) was completed in January

2005. This survey detailed the incidence of the viruses ApMV, ASPV, ASGV & ACLSV. Samples were collected from every major growing area in Australia with a total of 173 trees sampled and tested. 163 samples (94.2%) were found to be infected with one of more of these viruses leaving only 10 (5.8%) samples uninfected with half of these 10 being seedling controls that were virus free.

This is clear proof when considered in conjunction with the 1988 research project that our industry is being severely impacted by the presence of viruses. One of APFIP's objectives is to develop and implement standards for nursery trees and rootstocks. APFIP has registered a certification trademark for this purpose. APFIP Certified rootstocks and nursery trees will meet three criteria; they are virus tested negative for the viruses listed above, are true to type and meet minimum nursery tree standards. The trademark symbol below will be displayed on nursery tree and rootstock tags to indicate that they are certified.



® *Registered certification trademark of APFIP*

It has always been the strategy of APFIP to not duplicate industry infrastructure so has licensed the use of the certification trademark to businesses that meet the approved user criteria described in the rules for its use. This process is ongoing and additional licensees will be accepted over time. This will ensure that there is the widest possible access for growers to APFIP certified planting material. APFIP has supplied certified M26 and NAKB M9 T 337 rootstocks to its licensees in the first instance as it has become available. The ultimate success of this process is that all the owners of varieties and rootstocks will enter them into the APFIP certified system.

There will be around 80,000 certified M26 rootstocks in total produced by the APFIP licensees this winter for the production of nursery trees. We are still 2 seasons away from commercial availability of certified M9 rootstocks. The first certified quince rootstocks (A, C & BA29) will be distributed to licensees this winter. In the meantime it is important to make contact with the nurseries listed below to discuss your certified nursery tree requirements.

**APFIP Certified licensed nurseries:**

Forest Home Nursery 799 North Huon Road, JUDBURY TAS 7109 03 6266 6272  
Olea Nursery Mitcheldean Road WEST MANJIMUP WA 6258 08 9772 1207  
Tahune Fields Nursery Lucaston Road LUCASTON, TAS 7109 03 6266 4474  
Tangara Nursery 40 Pages Road GROVE, TAS 7109 03 6266 4364  
Hansen Orchards Basin Road, GROVE TAS 7109 03 6264 0200  
Balhannah Nurseries Coldstore Road LENSWOOD SA 5240 08 8389 8600

## What varieties are out there and who do you need to talk to access them?

APFIP operates an independent, secure and efficient variety evaluation network in Australia. To ensure that its independence is not compromised it does not make variety recommendations. Below is a list of varieties that are available or will be available in the foreseeable future to growers, the list is not exhaustive.

Variety	Management Strategy	Who is the Manager/agent
<b>Apples</b>		
Buckeye® Gala cv.	Open	Flemings
Brookfield® Gala cv.	Open	Flemings
Gale Gale	Open	Flemings
Alvina cv. Gala	Open	Tahune Fields
TF Gala	Open	Tahune Fields
Galaxy Gala	Open	ANFIC
Cripps Pink	Open	Anyone can propagate
Ruby Pink cv.	Open	Tahune Fields
Rosy Glow cv.	Open	Flemings
Scifresh cv. (Jazz™)	Controlled	Montague Fresh
Delblush cv. (Tentation™)	Controlled	Oztaste
Nicoter cv. (Kanzi™)	Controlled	Desmond Muir
Nicogreen cv. (Greenstar™)	Controlled	Desmond Muir
Caudle cv (Cameo™)	Controlled	Tahune Fields/Montague Fresh
Sweetie cv.	Open	ANFIC
Honeycrisp cv.	Open	Flemings
Fuji Brak cv. (KIKU™)	Trademark use controlled	ANFIC
Crimson Snow	Controlled	Oztaste/Tangara Nursery
<b>Pears</b>		
Nothing that has excited the world in the past 150 years!		

*cv. indicates that the cultivar has PBR protection. This means that propagation by the grower is prohibited without the approval of the PBR owner.*

### Disease Resistant Varieties

There are a number of disease resistant apple cultivars now under test in Australia including a very interesting selection from QDPI. The commercial place for these has not yet been fully assessed but they offer a significant future opportunity as consumer preferences change.

### Pears, what's in the future?

The future for the expansion of consumption of European pear varieties is somewhat unclear. What is absolutely clear is that there have been no new global European pear varieties in the past 150 years. Nashi/Asian pears make up more than 50% of world production but their market acceptance outside Asia is severely limited. The development of inter-specific pears is of interest. These are pears that are crosses of European x Asian pears. There are a number of breeding programs working in this

area but the most advanced is the HortResearch/Prevar breeding program in New Zealand. The first of these new pears will be fruiting in Australia in the next couple of years. If you are into pears then a visit to New Zealand to look at what's coming would be a worthwhile investment.

### **Conclusion**

Systems for making decisions on variety choices must become a key part of every business that plans to grow apples and pears in the future.