

# Cultivar availability



Jon Roberts

Growers must seek support around cultivar assessment. By Jon Roberts

**C**onversations with growers during the Roadshow in February highlighted their uncertainties regarding access to current cultivar information. This includes difficulty in gathering information on what to plant, and identifying a master list of cultivars that itemises the specifications, comparisons, and by whom they are managed.

## So, what could be the root cause of this scenario?

### Confidentiality of protected cultivars

Before the era of protected cultivars there was easy access to comprehensive cultivar information supplied by technical extension staff in the industry. Growers had access to objective information per citrus type, with cultivar characteristics such as early or late ripening, and seedlessness in the cultivar reports. Extension staff, nurseries, and private consultants could provide this information to growers who were then able to choose what to plant. Now, many cultivars are protected, and information is confidential unless cultivar companies have allowed CRI technical staff to publish the objective evaluation data of mainstream cultivars. At earlier development stage cultivars are normally not published and information can only be gained from the cultivar company managing the variety.

### Many more cultivars to consider

Previously, there were fewer cultivars. In the Eastern Cape midlands area, for example – where I started farming in the 1980s – the planting choice was between navels – Washington or Palmer. There were no early or late selections. Some “early adopter” growers took a leap of faith and planted the first satsumas (Mihowase or Owari) and lemon, (Eureka only). The area was not a mainstream Valencia area, but a few old clones or Delta were planted on a small scale. This totalled seven cultivars from which to choose.

### Since the 1980s several new trends in consumer demand have led to an increase in available varieties

- The growth in demand for Easy Peelers (most significant).

- Increased demand for lemons in the last decade.
- Oranges – mainly Navels – have decreased/flat-lined, with earlier and later varieties becoming more important due to better demand in the shoulders of the season.
- Grapefruit has flat-lined and newer, better-tasting hybrids have been bred to hopefully revitalise this citrus type.
- Growers sought to extend the season earlier and later to flatten peaks in production, especially in market windows that were oversupplied. In turn:
  - o This improved efficiency in packing facilities working over a longer period.
  - o Growers sought to improve cash flow by supplying fruit through a longer season.

The shifts in demand for different citrus types coincided with a requirement from a more discerning market for earlier, later, seedless, pigmented, and other characteristics.

New cultivars planted in the late Mandarin sector, especially, had such spectacular success that many plant breeders joined the rush to breed the next “New-New” Mandarin or seedless lemon. Now, the Citrus Foundation Block (CFB) carries 492 cultivars, 90% of which are experimental. When evaluated, many will probably show little value.

However, the remainder still comprises about 40 varieties. This makes deciding what to plant a lot more complex than the approximately seven cultivars that our fathers had in the 1980s.

Add to this plant protection, royalty structures, and restrictions that also need to be factored into your decision-making, when considering if the proposed added value of the cultivar over others is worth the added cost.

## What has caused the protection of most newly-discovered or -bred cultivars and why do they require royalties to be paid?

Plant breeding companies, mostly aligned to government or universities in the 1960s–80s received less and less funding over the last few decades and have had to protect their IP and charge royalties to survive in the present day. Growers who have made discoveries of new successful varieties have also followed this path to assist ever-increasing cost inputs in their businesses.

All these factors have increased the complexities in the transfer of cultivar information to growers. However, the information is available. There is just a lot more of it and one needs to be aware of where to access it.

### Citrus Research International (CRI)

All cultivars – open and protected – that are released by cultivar companies for evaluation, are evaluated in trial sites in each region, by the CRI evaluators in the CRI Citrus Improvement Scheme (CIS). These cultivars are evaluated annually during the picking season to determine factors like the time of ripening, seedlessness, internal quality. These variety maturity lists contain the most comprehensive and updated cultivar information available in SA. They also detail the cultivar company that manages protected cultivars. This evaluation data – available to all CGA levy-paying entities – is written up annually, and can be accessed via the following channels:

- Presentations at the CRI Symposium that highlight recent developments and evaluations for all commercial cultivars per region.
- CRI regional workshops, where the same presentations are presented.
- Your local CRI extension officer, for a recommended person to provide specific cultivar information. Previously

there were only a few CRI extension staff covering the whole country, but with the increase in levies in the previous cycle, this has improved dramatically. Many more extension staff are available in each area for CRI information transfer.

- Downloads from the CRI website (register with CRI to access it as a grower). This will give you downloads of all maturity tables that include all the commercial cultivars available. These are broken down per ripening time per area. There are also cultivar fact sheets for all commercial cultivars that are kept updated, giving descriptions, characteristics, yield, quality, area suitability, rootstock choice information, etc.

### Consultants

Most consultants keep abreast of cultivar developments for their areas and the citrus types in which they consult. If not, they will find the information for you or direct you to someone who can.

### Cultivar companies

Cultivar companies will have information about the cultivars they manage and may assist you with information on their cultivars to note in the experimental pipeline.

Remember to compare this information with the objective information supplied by the CRI, as they are completely independent of cultivar companies. Cultivar companies promote their cultivars according to their own evaluation data. But this may not compare the cultivar’s performance against cultivars that they do not manage. Hence, it’s best to analyse data from comparative evaluations done by the CRI.

### Once you have accessed all the documented information

When you have selected your short list of candidate cultivars, it is always important to follow this up with field visits to see the cultivars (if they grow in your area). This could

be done by arranging visits with the CRI evaluators at trial sites in your area, or with local growers who have planted them and are willing for you to view them or possibly share their related experiences with you. Certain cultivar companies require that their cultivars be viewed in the presence of their representatives (consult your CRI extension officer). There should be no shortcuts in planting a cultivar without first checking factors like its performance in your area/microclimate. For the most accurate data, setting up your own comparative trial sites on the farm is worthwhile but time-consuming. Protected cultivars require prior agreement with the owner. I am aware of many growers who have followed this route with great success.

### Fact-based decisions

I’ve heard some growers talk about decisions they’d made based on hearsay – like a casual discussion around the braai. Then there are growers who make a decision after only listening to the subjective advice of a cultivar agent.

Growers are advised to only use objective, independent, comparative cultivar data analysis. In SA it’s available from the results of the CRI cultivar evaluators, headed by lead evaluator Johan Joubert at CRI Nelspruit.

A new planting has a potential lifespan of 30–40 years. The ever-increasing cost of preparation and bringing a cultivar to bear are well known. So, for peace of mind, put in the required effort when planting that new orchard. **D**

