



Department of
Primary Industries and
Regional Development

Table grape stakeholder alignment workshop

Sydney – 23 October 2018

Minimum maturity standards for table grapes

– The WA experience

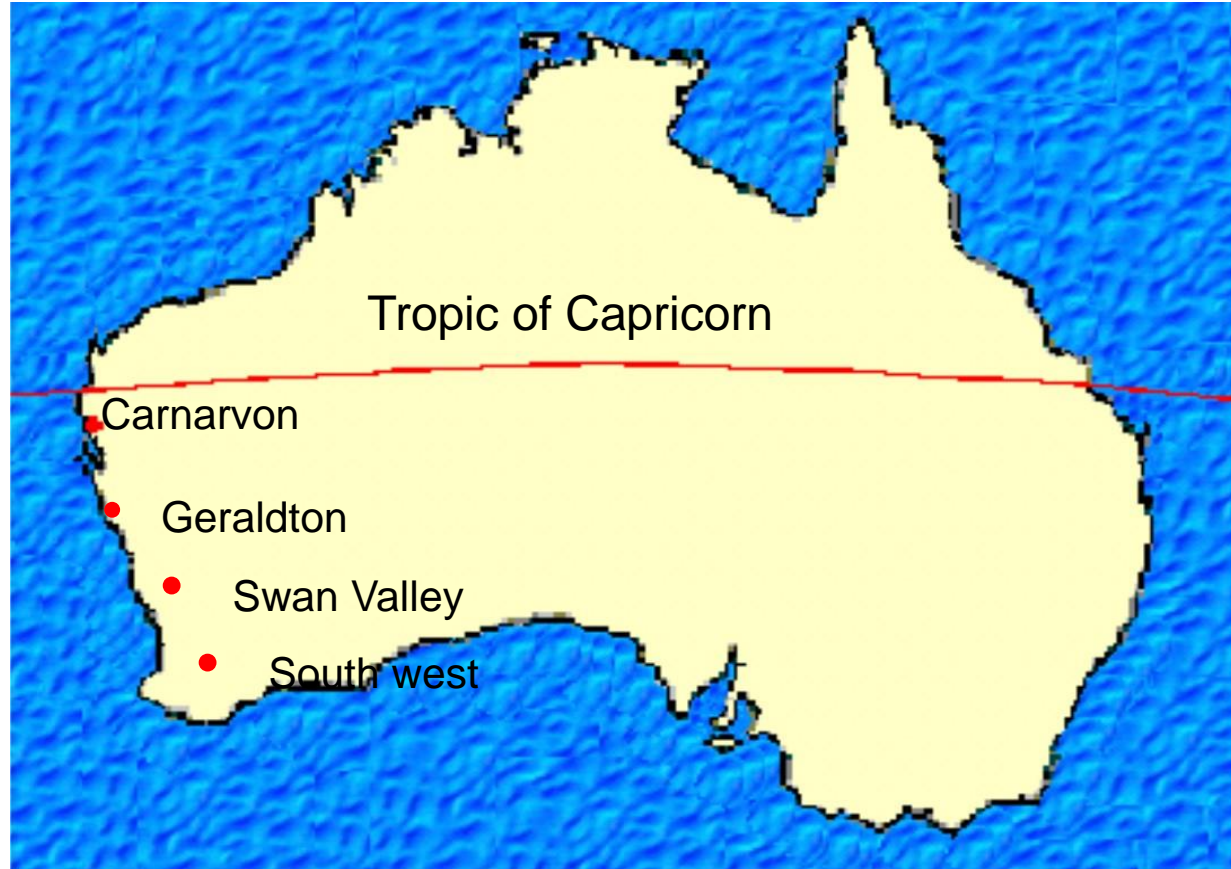
Colin Gordon, Senior Technical Officer

Acknowledgements

- **APC Table Grape Producers' Committee**
- **Horticulture Australia**
- **Table grape growers in Western Australia and Victoria**
- **Coles, Woolworths, Herdsman Fresh & Geraldton Fruit & Vegetable Supply**
- **Ian Cameron – Formerly Department of Agriculture & Food, Western Australia;**
- **Sue Wills – Formerly of Department of Agriculture & Food, Western Australia**
- **Kristen Pitt – Formerly Department of Primary Industries, Victoria**
- **Dr Vijay Jayasena – Formerly Curtin University of Technology, Food Science and Technology, School of Public Health**

The WA table grape industry

– Geographically



The WA table grape industry

- An overview

- **Small industry & small market**
- **Closed market until;**
 - 2013 – Imports from California
 - 2015 - Eastern states and territories of Australia 2015 (*In theory only*)
- **Entirely Swan Valley based up until 1989**
- **Expanded into Carnarvon and the South-West 1990**
- **130 growers**
- **Harvest season November-April**

History of table grape consumer studies in WA

- **1986-87** **10 varieties offered in supermarkets**
- **1994-95** **Red globe offered in supermarkets**
- **1996-99** **Crimson Seedless**
- **1998-00** **Consumer studies for the development of the
Table Grape Grading Code**
- **2000-07** **Crimson Seedless & various C.S.I.R.O
hybrids**

Consumer studies 1986 & 1987

- **10 varieties tested**
- **Evaluated in supermarkets**
- **90 consumers participated in each experiment**
- **Consumers asked to compare 3 berries of the same variety at different levels of ripeness e.g. 15.0, 16.0 & 17.0°Brix**

Consumer studies in 1986 & 1987

- Conclusions

- **Consumer acceptance of table grapes increased with higher brix levels**
- **Brix was an acceptable measure of consumer acceptability for most varieties in most seasons**
- **Minimum maturity standards based on **sugar: acid ratios** were only of benefit for “**high acidity**” varieties like Perlette, Flame Seedless and Thompson Seedless**
- **The minimum maturity standards contained in the Agricultural Products Act 1929, were not suitable for the new varieties being grown in the Swan Valley**

History of the 1990's

- **Legislated minimum maturity standards in place**
- **Inspections being undertaken**
- **Under existing code**
 - **Government funded inspectors**
 - **Consignment fails minimum brix level**
 - **Grower notified of rejection, picks up fruit and markets elsewhere**
- **Period with no inspections**
- **Consumer complaints were increasing & sales suffering**
- **Industry said enough is enough**

Introduction of Quality Assurance to horticulture

- **In 1994 SQF 2000™ was developed for Red Globe table grapes in Western Australia**
- **De-regulation of maturity as a result of QA seen as the way to go**
- **By the late 1990's it was obvious that this was not the case**

Industry position

- Prior to 1998, the table grape industry was **not** interested in recognising **acidity levels** or **sugar: acid ratios** as indicators of maturity and acceptability
- **But something needed to be done!!**

Preparing samples for sensory evaluation – Flotation method



Maturity testing of samples



Before and after evaluation sessions

Sensory evaluation groups

General public



Producers

Sensory evaluation groups



Sunraysia region 2006



**Australind SHS, Bunbury
2004**

Sensory evaluation groups



Controlled conditions - Food sensory labs, Curtin University

Sensory evaluation at regional retail store



Crimson Seedless consumer study 2003



Pressure on industry to do something.....

- **APC Table Grape Producers' Committee seen as representing all growers in WA**
- **APC committee was having robust discussions regarding setting minimum maturity standards**
- **Chair of the APC receiving an escalating number of complaints about sour grapes**
- **Committee of 7 tied at 3 for and 3 against introduction of minimum standards**
- **Casting vote by Chair to introduce minimum standards**

The intent of the code.....

- 1. To minimise the volume of sour grapes offered for sale to consumers in Western Australia.**
- 2. To provide consumers with confidence that they will have a pleasant eating experience when purchasing table grapes, and**
- 3. To encourage repeat sales.**

The “New World” of varieties and the standards

- **Rapid change to new exciting proprietary varieties**
- **Reduced capability to do sensory studies**
- **Review breeder information for each variety**
 - ❖ often no recommended minimum;“at it’s best at ???.? brix”
- **Discuss with breeder reps in Australia**
- **Set minimum based on breeder rep info**
- **Obtain approval from breeders/reps to sample & test varieties**
- **Sample, test (sugar & acidity) and taste new varieties to verify suitability of the minimum standard**

BIOSECURITY AND AGRICULTURE MANAGEMENT (AGRICULTURE STANDARDS) REGULATIONS 2013

MINIMUM STANDARDS OF MATURITY FOR TABLE GRAPES 2018/2019

STANDARD VARIETIES

The table below shows the approved minimum standard of maturity for each of the standard varieties listed when tested using the approved method.

The approved method for testing these varieties is to test the brix (sugar level) of the fruit using a refractometer.

	MINIMUM BRIX (SUGAR LEVEL) TO APPLY FROM 1 September 2018 TO 31 August 2019
Sugraone (SUPERIOR SEEDLESS® Brand grapes)	15.0
GRAPAES (Early Sweet™ Brand)	16.0
Prime Seedless	16.0
Sugrathirtyeight (SONERA SEEDLESS® Brand grapes)	16.0
Sugrathirtyfour (ADORA SEEDLESS® Brand grapes)	16.5
Sugrathirtyfive (AUTUMNCRISP® Brand grapes)	16.5
M 13-01 (Magic Seedless® Brand)	16.5
Sugrathirteen (MIDNIGHT BEAUTY® Brand grapes)	16.5
M 51-18 (Millennium Muscat™ Brand)	16.5
ARRA 15 (Sweeties® Brand)	17.0
Sheegene-4 (Luisco™ Brand)	17.0
Sugrasixteen (SABLE SEEDLESS™ Brand grapes)	17.0
Sheegene-9 (Melanie™ Brand)	17.5
Sheegene-20 (Allison™ Brand)	18.0
IFG Nine (Jack's Salute® Brand)	18.0
Sugranineteen (SCARLOTTA SEEDLESS® Brand grapes)	18.0
IFG Eleven (Sugar Crisp® Brand)	18.0
IFG Ten (Sweet Globe® Brand)	18.0
IFG Six (Sweet Sapphire® Brand)	18.0
IFG 31-077 (Sweet Surrender® Brand)	18.0
Sheegene-13 (Timco™ Brand)	18.0
Sheegene-12 (Krissy™ Brand)	18.5
Blagratwo (Melody™ Brand)	18.5
IFG 68-175 (Sweet Celebration® Brand)	18.5
All varieties not listed above or below	16.0

HIGH ACID VARIETIES

The table below shows the approved minimum standard of maturity for each of the high acid varieties listed when tested using the approved method. The approved method for testing these varieties is to test the minimum brix (sugar level) of the fruit using a refractometer or to test the acidity in a laboratory titration test.

	Minimum sugar:acid ratio	MINIMUM BRIX	
		1/09/2018 to 31/12/2018	1/01/2019 to 31/08/2019
Red globe	22:1	15.0	15.0
Flame Seedless	24:1	16.0	16.0
Perlette	24:1	16.0	16.0
Thompson Seedless	24:1	19.5	17.5
Dawn Seedless	30:1	19.5	18.0
M 44-14 (Mystic Seedless® Brand)	30:1	n/a	18.5
Crimson Seedless	28:1	18.0	18.0

Signature of delegated DPIRD officer

Name & Title of delegated DPIRD officer

HORTICULTURE AUSTRALIA PROJECT NO. TG04026
FINISH DATE: 31/08/2007

**PROJECT TITLE: Sensory evaluation of crimson seedless table
grapes**

SENSORY EVALUATION OF CRIMSON SEEDLESS TABLE GRAPES



Ian J. Cameron¹ and Dr Vijay Jayasena²

¹ Department of Agriculture and Food, Western Australia (DAFWA)

² Food Science and Technology, School of Public Health, Curtin
University of Technology

Thank you

Visit dpird.wa.gov.au

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