

# Bravo™ Apple Quality Specification – 2018 Season

The following quality specifications must be met for ANABP 01<sup>(1)</sup> apples to be sold under the Bravo™ apple brand. These specifications apply for the 2018 season.

The aim of the quality specification is to ensure both retailers and consumers are provided quality Bravo™ apples meeting these standards.

## General

All ANABP 01<sup>(1)</sup> apples must be treated with 1-Methylcyclopropene (SmartFresh™) within 7 days after picking.

The use of DPA is **not permitted**.

Waxing of ANABP 01<sup>(1)</sup> apples is **not permitted**, unless authorised in advance and in writing, by WA Farm Direct as the sole Licensed Marketer of all ANABP 01 fruit.

## Harvest Maturity Indices

Maturity Indices	Requirement	Interpretation
Flesh firmness	Harvest at a pressure no less than 7.5kg	Average greater than 8.0kg at harvest. (minimum 7.5kg)
Sugar content(TSS)*Brix	No fruit less than 13 Brix	Average ≥13.5 Brix at harvest

## Quality Parameters After Packing

Fruit Quality Characteristics	Requirement	Tolerance	Interpretation
Eating characteristic	Free from foreign taints	Nil	Crisp, sweet, firm, juicy.
Fruit Appearance & shape	No misshaped / malformed fruit. No milky coating or surface residue.	Nil	Generally round. Fruit to be free from residue.
Skin Colour	At least 80% of the surface area to be black/dark burgundy colour.	Nil	80% of the surface area to be black/dark burgundy colour. No more than 20% may include red/orange or cream colour.

## Apple Sizing

Description	Apple Count	Carton/kg	Fruit Diameter mm
<b>X-Large</b>	44	6 or 12	88-90
	50	6 or 12	85-87
	54	6 or 12	82-84
<b>Large (Market preferred)</b>	60	12	79-81
	65	12	78
<b>Medium (Market preferred)</b>	70	12	75-77
	76	12	72-74
<b>Small</b>	82	12	69-71
	90	12	66-68
<b>X-Small</b>	102	Small Hat bin 180kg	60-65

## Quality: Defect Assessment

### Major Defects

Total defects in this category must not exceed 3% i.e. maximum 3 defective apples per 100

Defect	Allowable level	Interpretation
Bitter pit	Nil	
Bruising	One bruise 10mm or less per apple	Superficial or Discoloured Bruising
Core rot / Water core	Nil	
Cracks (healed)	One crack 5mm or less per apple	Cracks may include calyx or stalk cavity splitting
Decay	Nil	
Greasiness	No more than 3 apples in 100	
Hail marks	No more than 3 apples in 100	
Storage disorders	No more than 3 apples in 100	
Sunburn	No more than 3 apples in 100 with minor colour bleaching	
Russet	No more than 3 apples in 100	Russet area is no larger than a 20-cent coin.
Unhealed damage <ul style="list-style-type: none"> <li>• Insect damage</li> <li>• Cuts</li> <li>• Punctures</li> <li>• Cracks</li> </ul>	Nil	

### Minor Defects

The total of major and minor defects listed must not exceed 8% i.e. 8 defective apples per 100 with maximum of 3 of the 8 apples having a Major Defect.

Defect	Allowable level	Interpretation
Chemical burn	Nil	
Dirty fruit	No more than 3 apples in 100	Dirt, dust or leaf litter
Fusicadium or Venturia (Black Spot)	Nil	
Insect damage	No more than 2 apples in 100	A healed injury
Insects	Nil	No live or dead insects
Lenticel pit/spot	No more than 3 apples in 100	
Skin blemish	No more than 7 apples in 100 may have a single mark	Blemish doesn't detract from the appearance of the fruit

## Glossary of terms

**Bruising** – skin marks and possible indentation of the fruit resulting from pressure; as

- **Superficial bruising** – temporary marks (not discoloured) that disappear when removed from packaging; or
- **Discoloured bruising** – dark coloured obvious indentions resulting in permanent flesh and appearance damage.

**Cracks (unhealed)** – any unhealed fruit or skin splitting which exposes the flesh.

**Cuts** – break of the skin exposing the flesh.

**Defect** – a permanent abnormal development of the fruit, either external or internal, caused by physiological or physical factors that impact on any stage of fruit development including at harvest and during storage.

**Flesh firmness** – the pressure required, measured in kilograms, to depress the flesh of the fruit (with skin removed) using an 11mm penetrometer probe.

**Greasiness** – greasy/oily feel of the skin resulting from fruit being picked too late; with maturities too advanced or retarded.

**Insect damage** – any damage or defect to the external or internal parts of the fruit, caused by an insect.

**Lenticels** – the small dots (pores) on the skin of fruit whereby apples breathe and transpire. Apple lenticels can be distinctive and decorative and appear as raised circular or elongated areas.

**Puncture** – break of the skin exposing the flesh.

**Russet** – any superficial brown netting type skin marks with rough or smooth texture which detracts from the appearance of the fruit.

**Skin blemish** – a superficial skin mark including mechanical injury and healed superficial skin damage that will not affect storage quality of the fruit or detract from the appearance.

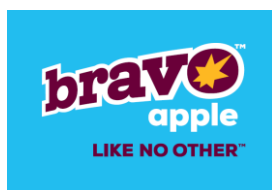
**Storage disorders** – any abnormal physiological condition which affects skin or flesh e.g. skin shrivel (wrinkling of the skin because of dehydration in storage) scald, lenticel breakdown or flesh browning.

**Sugar content** – is the measure of the percentage of total soluble solids (%TSS) of juice extracted from the fruit using a refractometer.

**Sunburn** – where the fruit surface is permanently discoloured as a bronze, burnt brown or scalded white appearance; which may lead to flesh discoloration and reduce shelf life.

**Residue** – milky white coating that may or may not be attributed to harvest sprays and dipping.

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