



Australian Government  
Rural Industries Research and  
Development Corporation



HINCHINBROOK BANKSIA

Product: **Hinchinbrook banksia, Silver banksia**

Botanical name: *Banksia plagiocarpa*



Industry &  
Investment

Quality specifications for  
**Australian wildflowers**



***Banksia plagiocarpa* is a relative newcomer to floristry.**

It originates in the tropical coastal area of northern Queensland (Hinchinbrook Island and the mainland nearby). The flowers are typically metallic grey to bluish grey, but may also be yellowish.

Each cylindrical to conical flower head is composed of hundreds of tiny individual florets arranged in vertical rows. Each flower head is fully open when the pin-like styles are all sticking out. However, the market generally prefers fully formed flower heads with a rounded top and no florets yet open.

Immature cones (or candles), fully formed flower heads and the woody cones that follow can all be marketed. The foliage is very attractive, with both leaves and stems densely covered with rusty red hairs. It can be marketed as a separate product, in sleeved bunches of 5 stems.

There is some variability between grower selections. Those with superior flower forms and colours, straighter stems and a lesser tendency to produce bypass shoots should be grown in preference to others. A stronger focus on grading is needed to maintain prices and demand.

The flower head is easily damaged, so careful handling and packing are important.

Owing to its tropical origin, *Banksia plagiocarpa* tolerates high summer rainfall but seems to be adaptable to a range of climates. Adequate water and fertiliser are needed for good-quality flowers and foliage. It is very sensitive to high phosphorus levels, which can result in severe iron chlorosis symptoms in the leaves, spoiling presentation at market entry, and even plant death.

Young growing tips may suffer damage and distortion from tiny bud mites, which will have long since disappeared by the time the deformed and twisted leaves become apparent. However, such damage can alarm quarantine inspectors in some overseas markets.

**More than 1 flower head may form at the tip of a stem. Secondary blooms should be carefully removed when they are young.**

This banksia is prone to developing bypass shoots near the bloom at the stem tip; these should be removed when they are small, because trimming them around harvest time results in unsightly stubs on the flowering stem.

**Flowering season:**

February to October, with peak flowering in April to June. Some flowers are available throughout the year.

**Typical vase life:**

28 days.

Export can reduce the vase life, especially if the transport conditions are not cold, the product dries out, or transport takes too long.

**Other products to which this specification can be generally applied:**

Other *Banksia* species, such as *B. robur*.

◀ *This specification also applies to Banksia robur.*



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## STAGES OF OPENING

**The stages shown apply to the product at market entry.**

*Pay attention to the weather, time of year, and mode and duration of transport, because the flowers will continue to open during transport. You must consult with your target market to ensure that the flowers arrive at the desired stage.*



**Stage 1**  
Immature stage ('candle'): unacceptable to markets



**Stage 2**  
Slightly immature stage (tip of bloom still pointed) – early harvest stage, preferred by only a few markets

## COMMON DEFECTS

**Common defects to be avoided at market entry:**

- Deformed or asymmetrical flower heads
- Damaged flower heads
- Distorted, dried or damaged leaves
- Poorly coloured foliage due to nutritional deficiency
- Borer holes
- Dried out flower heads
- Flower heads too small
- Bypass shoots or secondary flower heads
- Bent stem or flower head offset



Immature secondary blooms



Bypass growth  
– trim before marketing



Short curved stem  
– do not market



Foliage missing from stem immediately below bloom  
– do not market



**Stage 3**

**Prime stage to market:  
tip of bloom is fully swollen; flower  
purplish (not green)**



**Stage 4**

**Ready to market (latest stage):  
mainly for domestic market; top of  
flower head flattening**



**Stage 5**

**Overmature stage:  
unaccepted by many markets**



**Borer damage  
– discard**



**Bent bloom – discard**



**Ugly stubs**



**Head offset from stem, ugly  
stubs at base of bloom – discard**



**All leaves stripped  
– do not market**



**Dried out flower head – do not  
market**



**Leaves deformed by bud mites  
– discard**



**Poor foliage colour  
– discard**

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## FLOWERS

**Appearance** Bluish grey rather than green.  
Flower head fully formed and at final size.  
Size (diameter) and length must be proportional to stem length.  
No bypass shoots or secondary blooms.  
Flower head follows in a straight line from the stem (and is not offset from the stem at more than 15°).

**When to harvest** Flower head fully formed, with the top rounded rather than pointed, and no styles reflexed (export and domestic markets).  
Avoid harvesting when flowers are wet.

**Damage** No asymmetrical, deformed or damaged blooms.

**Contamination** Product free of grit and soil, weeds or weed seeds, living or dead insects, and signs of insects or spiders, such as webbing.

**Pests and diseases** No insects, insect damage or disease.

## LEAVES

**Appearance** Fresh and crisp.  
Not dull or wilted.  
Minimum discolouration (<2% by area and affecting <10% of leaves); no yellowing.

**At harvest** Remove leaves from the lower 10–15 cm, or half, of the stem.

**Damage** Minimum evidence of pests, disease or other blemishes, such as mechanical damage. Leaves entire (no insect feeding damage).  
No spiders or spider webs.  
Free of visible chemical residues.

## STEMS

**Appearance** Rigid and strong enough to support blooms, without being too heavy and bulky.  
Bend <15°.  
Free of disfiguring trim marks or other blemishes.  
Neatly cut end.

**Length** According to market demand.

## RECOMMENDED HANDLING AT HARVEST

Minimise drying out and exposure to heat – pick when it is cool, preferably straight into buckets of clean potable water, and hold in the shade.

Move cut stems promptly to a cool, shaded packing area and cool quickly.

Hold stems in clean water in a high-humidity cool room (95%) at 2–4°C as soon as possible. Hold for at least 4 hours, and preferably overnight, before processing.

## GRADING AND BUNCHING

**Grading** Flowers are generally marketed as single stems.  
Reject any contaminated stems.  
Sort stems according to length and thickness: flower head proportional to stem length (typically 20% to 25% of the total stem length for larger blooms). Market smaller heads on shorter stems.

**Bunching** Smaller flowers may be bunched in 5s with a single tie.

Stem length	Stem length (cm)	Length of flower head (cm)
	100	18–20
90	15	
80	14	
70	11	
60	8	
50	6	
40	5	



◀ Typical bunches look like this.

## HOLDING AND STORAGE

### Cooling

Effective cooling soon after harvest is important to retaining quality and maximising vase life. There are two options:

- Cool, process, cool – for example, remove field heat by cooling flowers immediately on entry into shed to 10 °C in buckets of solution, process flowers (bunch, grade), and then cool to 2–4 °C by either forced-air cooling (if boxed) or holding overnight in a cool room.
- Process within 1 hour of cutting, and then cool to 2–4 °C by either forced-air cooling for 20–30 minutes (if boxed) or holding overnight in a cool room (if in buckets).

Forced-air cooling of packed flowers is ideal for large volumes of product.

### Temperature and humidity

Hold in a high-humidity cool room (95%) at 2–4 °C.

Another way of achieving high humidity is to cover the flowers with plastic sleeves or plastic sheeting.

### Postharvest solutions

Use high-quality potable water.

Postharvest solution: Hold in high-quality potable water with an added chlorine biocide registered for postharvest use in cut flowers.

Avoid sugar as this stimulates more nectar production, which can lead to problems with botrytis.

Holding solution: Hold at 2–4 °C for up to 4 days.

### Longer-term storage

For longer storage seek professional advice and test in the market before committing product.

## PACKAGING

Pack only dry, cold flowers.

Use sleeves, especially for export product.

Pack with flower heads at each end of the box and stems in the middle to avoid damaging blooms.

Avoid packing too many stems per box.

Especially for export, stems in each box should be approximately the same diameter and length, and flower head size should be consistent.

If shipping bunches, pack them firmly so the product will not move and be damaged.

Use boxes with holes to allow forced-air cooling and to facilitate fumigation.

Minimise water loss, especially for long-distance shipping, by lining boxes with plastic.

Cool flowers to 2–4 °C before transport.

## LABELLING AND DOCUMENTATION

Label boxes and buckets as recommended in *Postharvest Manual*\* or as required by customer.

Ensure box contents are exactly the same as specified in the documentation and on the end of the box.

## TRANSPORT

Refrigerated vehicle at 2–4 °C for long-distance transport.

## COMMON POSTHARVEST PROBLEMS

Refer to *Postharvest Manual*\* for general advice.

### Fungal decay in storage due to botrytis (grey mould)

Use preharvest fungicide sprays during wet weather to reduce the risk of botrytis disease.

Use preharvest insecticide sprays to reduce the pest population at harvest.

### Insects (for export)

Dip flowers that are to be packaged and held for any significant length of time (export product) in a registered fungicide or insecticide solution with added wetting agent for not less than 1 minute, then dry naturally for 2 hours to ensure thorough disinfestation.

### Ethylene sensitivity

*Banksia plagiocarpa* does not appear to be susceptible to ethylene.

## Messages for importers and wholesalers

- Recut stems and place into fresh water containing a registered biocide.
- Cool product before marketing or sending on and keep it cool.
- Maintain good hygiene and keep containers clean.

## Messages for retailers

- Recut stems and place into fresh water containing a registered biocide. Do not mist the flowers.
- Use clean buckets and containers for displays.
- Do not display flowers in areas that are exposed to full sun, draughts, high temperatures or vehicle exhausts, and preferably do not display near fruit and vegetables. Use refrigerated displays if possible.
- Tell the customer how to care for the flowers and emphasise the need for fresh clean water and clean vases.

## Messages for consumers

- Keep vase filled with fresh water. Check daily, as flowers can use a lot of water. Change the water at least every second day. Always use clean vases and clean water.
- Do not display in areas that are exposed to full sun, draughts or high temperatures. Keep as cool as possible without freezing.
- Discard other flower types in the same vase when they reach the end of their vase life.

SUPPORTING INDUSTRY PARTNER:



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\*The *Postharvest Manual* is the manual *Postharvest Handling of Australian Flowers from Australian Native Plants and Related Species*, 2nd edition, 2010. ISBN 978-1-74254-000-9. RIRDC Publication No.10/027.

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