

# Rockmelon and honeydew information kit

Reprint – information current in 1997



## REPRINT INFORMATION – PLEASE READ!

For updated information please call 13 25 23 or visit the website [www.deedi.qld.gov.au](http://www.deedi.qld.gov.au)

This publication has been reprinted as a digital book without any changes to the content published in 1997. We advise readers to take particular note of the areas most likely to be out-of-date and so requiring further research:

- Chemical recommendations—check with an agronomist or Infopest [www.infopest.qld.gov.au](http://www.infopest.qld.gov.au)
- Financial information—costs and returns listed in this publication are out of date. Please contact an adviser or industry body to assist with identifying more current figures.
- Varieties—new varieties are likely to be available and some older varieties may no longer be recommended. Check with an agronomist, call the Business Information Centre on 13 25 23, visit our website [www.deedi.qld.gov.au](http://www.deedi.qld.gov.au) or contact the industry body.
- Contacts—many of the contact details may have changed and there could be several new contacts available. The industry organisation may be able to assist you to find the information or services you require.
- Organisation names—most government agencies referred to in this publication have had name changes. Contact the Business Information Centre on 13 25 23 or the industry organisation to find out the current name and contact details for these agencies.
- Additional information—many other sources of information are now available for each crop. Contact an agronomist, Business Information Centre on 13 25 23 or the industry organisation for other suggested reading.

Even with these limitations we believe this information kit provides important and valuable information for intending and existing growers.

**This publication was last revised in 1997. The information is not current and the accuracy of the information cannot be guaranteed by the State of Queensland.**

This information has been made available to assist users to identify issues involved in the production of rockmelon and honeydew. This information is not to be used or relied upon by users for any purpose which may expose the user or any other person to loss or damage. Users should conduct their own inquiries and rely on their own independent professional advice.

While every care has been taken in preparing this publication, the State of Queensland accepts no responsibility for decisions or actions taken as a result of any data, information, statement or advice, expressed or implied, contained in this publication.



Queensland Government



# *Before you* **START**

*If you have never grown rockmelons or honeydews before, then you will find this section very useful. It is a brief checklist of the essential things you need to know before you start. It will help you make the right decision about growing rockmelons or honeydews. Where the term melons is used it refers to both rockmelons and honeydews.*

*The information here is brief and to the point. More detail on important areas is provided in other sections of the kit. Symbols on the left of the page will help you make these links.*

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## **An overview of the Queensland rockmelon and honeydew industry**

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Queensland grew about 1500 hectares of rockmelons in 1994-95, producing about 36 416 tonnes worth \$26 million. Honeydews were grown on about 230 ha. The Bowen–Burdekin (Dry Tropics) area produces about 55% of the rockmelon crop, 25% comes from the Bundaberg–Burnett region, and most of the remainder from the Chinchilla–St. George region. Honeydews are produced mainly in the Bowen–Burdekin area with the balance from the Bundaberg–Burnett districts.

Queensland produces about half of Australia's rockmelons and almost all the honeydew crop.

Queensland melons are produced all year. Harvesting starts in the Dry Tropics in May and finishes in south-west Queensland in April. The only competition for Queensland melons over winter and spring comes from the Northern Territory.

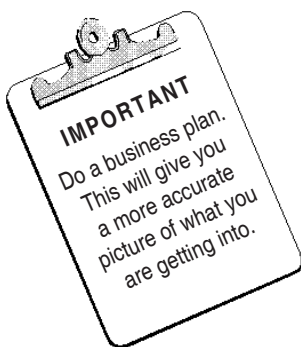
Most rockmelons and honeydews are sold in Brisbane, Sydney and Melbourne, but some are consigned to all the major Australian markets. There is a small export trade, mostly to New Zealand and south-east Asia.

## **The melon plant**

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Rockmelons and honeydews are a vigorous, prostrate annual melon with a vining or running habit. They have tendrils that twine around other plants and weeds. These crops have an extensive but shallow root system. Careful management of nutrition, soil moisture and pests and diseases is essential if heavy yields of good quality fruit are to be produced. Their dense foliage means that thorough pesticide application is very important. The vines generally produce separate male and female flowers that are pollinated by honey bees.

Rockmelons and honeydews are members of the cucurbit family that also includes chokos, cucumbers, grammas, gourds, pumpkins, squash, watermelons and zucchinis.



Pest and disease management  
Section 4 page 30

## **Know what you are getting into**

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Here are some of the important things you need to know.

- A high level of management skill and knowledge of the crop is needed to grow and market melons successfully. Poor management of cultural operations can seriously reduce yield and quality. Do a business plan. This will give you a more accurate picture of what you are getting into.
- Failure to control diseases such as powdery and downy mildew will result in lower yields and poorer quality fruit. Powdery mildew is worse in dry conditions, while downy mildew is more common in wet weather. Several viruses can reduce yield and quality substan-

tially. These viruses are carried by aphids and infection early in the crop can cause a complete crop failure.

- Too much rain, especially near harvest time, can result in serious fruit breakdown and poor quality fruit with a low sugar content.
- Excessive nitrogen use, especially close to harvest, will result in soft, poor quality fruit.
- Losses from postharvest diseases can be severe if fruit are not treated after harvest. Losses will be greater after wet weather.
- Some melon varieties, particularly honeydews and hybrid rockmelons, are highly susceptible to plant collapse caused by sudden wilt or gummy stem blight infection. Almost all the crop can be lost.
- Poor irrigation management can result in plant losses from sudden wilt as well as split fruit and melons with a low sugar content.



Market price information  
Section 6 page 9

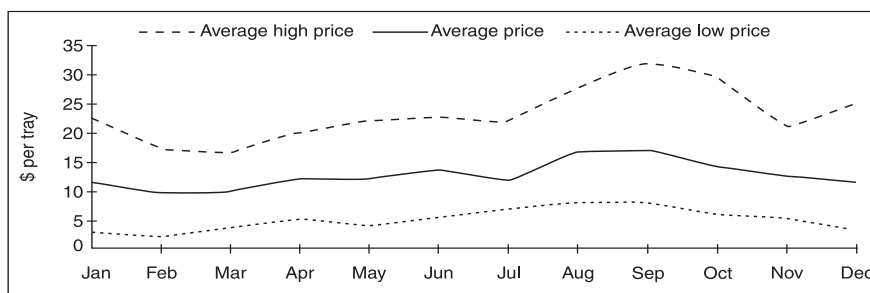
## What you can expect to make

### Yields

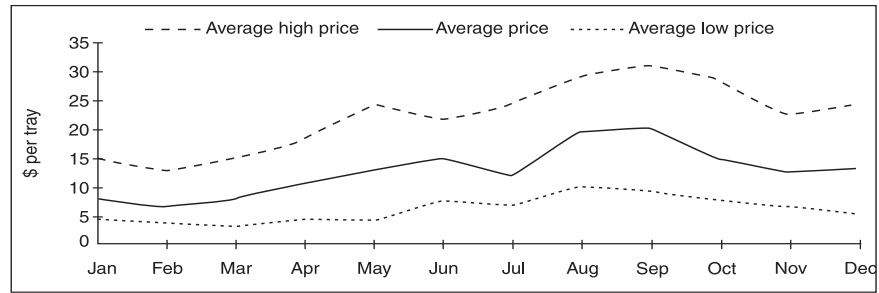
Yields can vary considerably depending on climatic conditions, pests and diseases, and whether melons are grown on the ground or on plastic mulch. Melons are usually sold in trays or cartons. Yields range between 1000 and 2500 trays per hectare. For budgeting purposes, a good average yield would be 1800 trays for rockmelons and 2000 trays for honeydews.

### Prices

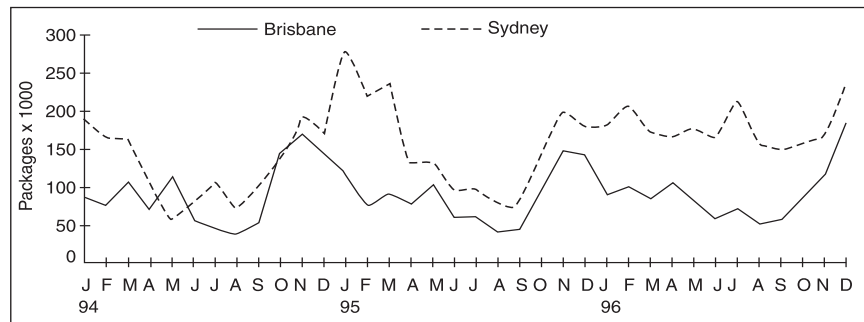
Prices vary from \$3 to \$30 per tray, with an average of \$13 per tray. The break even price is about \$11 per tray for a crop yielding 1800 trays per hectare. The following graphs show average prices and throughput at the Brisbane and Sydney markets for 1994 to 1996. The bigger the variation above or below the average price, the greater the opportunity or risk involved.



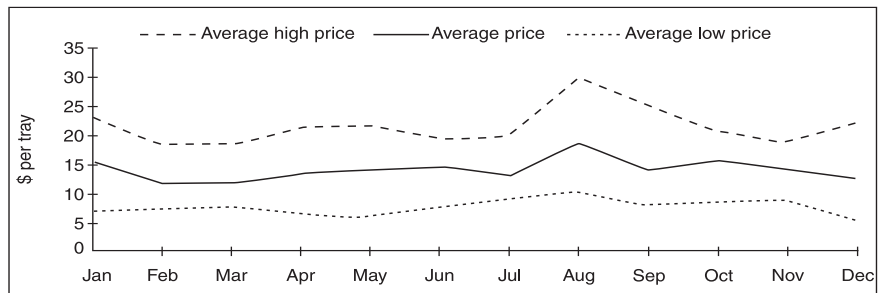
**Figure 1.** Average monthly price of **rockmelons** at the **Brisbae** market 1994 to 1996



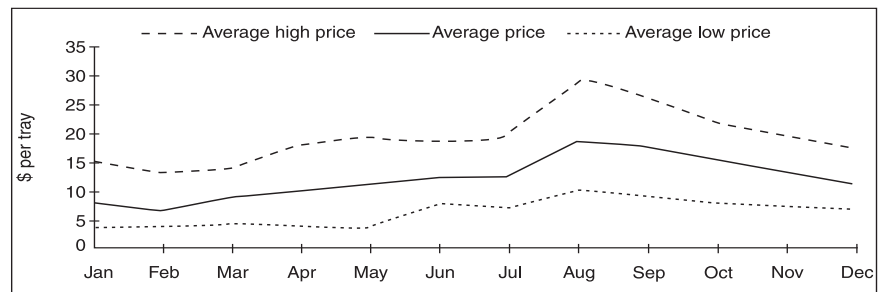
**Figure 2.** Average monthly price of **rockmelons** at the **Sydne** market 1994 to 1996



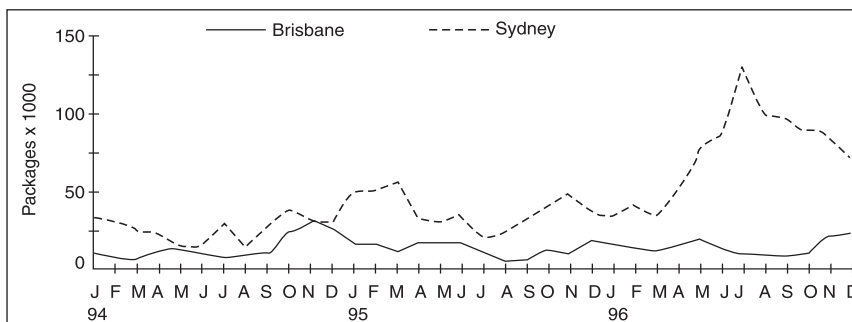
**Figure 3.** Throughput of **rockmelons** at the **Brisbane** and **Sydney** markets 1994 to 1996



**Figure 4.** Average monthly price of **honeydews** at the **Brisbane** market 1994 to 1996



**Figure 5.** Average monthly price of **honeydews** at the **Sydney** market 1994 to 1996



**Figure 6.** Throughput of honeydews at the **Brisbane** and **Sydney** markets 1994 to 1996

### Gross income

At an average yield of 1800 trays per hectare and an average price of \$13 per tray, the gross return would be \$23 400. To arrive at your net income, you need to deduct growing and marketing costs, plus fixed costs such as rates, depreciation, electricity and living expenses.

### Production costs

Table 1 shows the estimated average costs in dollars per hectare for a transplanted crop grown with trickle irrigation and plastic mulch and producing 1800 trays per hectare.

**Table 1.** Estimated average costs in \$ per tray and per hectare

	Costs	
	\$/tray	\$/ha
Total preharvest costs	3.10	5 582
Total postharvest costs	3.97	7 144
Total marketing costs	3.81	6 853
<b>Total variable costs</b>	<b>10.88</b>	<b>19 579</b>

### Gross margin

The gross margin (income after growing, harvesting and marketing costs) for the yield and price averages used here is \$2.12 per tray or \$3821 per hectare. Remember that no allowance has been made for fixed costs, loan repayments or living expenses.

### The capital you require

The capital investment to set up a melon production unit, including machinery and equipment, is likely to be about \$150 000. This assumes all equipment is purchased new. Second-hand prices are about half the new prices.



Economics of production  
Section 4 page 2

## **The farm you need**

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Growing the crop  
Section 3

### **Soil**

Soil must be well drained or able to be hilled to provide drainage. A soil with a crumbly surface allows the underside of melons to dry out faster, reducing fruit rot. Most melons are grown on plastic-covered beds.

### **Climate**

Melons need a warm growing season with day temperatures above 20°C, low rainfall during harvest, and protection from wind. The optimum temperature for growth is around 30°C, while cool night temperatures slow growth and reduce fruit size.

### **Slope**

Slope should be minimal to allow even watering and easy access for spray rigs. Uniform slopes are desirable but not essential. Erosion can be a problem on steep slopes while depressions can result in waterlogging.

The slope affects the type of irrigation that can be used. Slopes below 5% are not a limitation but slopes above 5% require soil conservation practices to be used. Slopes above 10% make it difficult to operate machinery safely and to maintain uniform irrigation.

### **Water**

The amount of water required varies from two to four megalitres per hectare. If irrigating from farm dams, you need storage capacity for greater volumes to allow for evaporation and other losses of water.

Rockmelons and honeydews have a medium tolerance to salty water. Yields will be reduced as water conductivity (salt level) increases above 1500 microSiemens per centimetre (mS/cm).

## **The machinery and equipment you need**

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### **Essential**

Table 2 lists the essential and optional machinery and equipment needed for rockmelon or honeydew production. Access to a cool room during harvest is essential. The prices listed are estimates only. Second-hand machinery would cost about half the new prices.



Irrigation and water  
management  
Section 4 page 18

**Table 2. Estimated cost of new machinery and equipment**

<b>Equipment</b>	<b>New prices \$</b>
<b>Essential</b>	
Tractor (30 kW) for planting, cultivation and spraying	30 000
Tractor (45 to 60 kW) for plough, ripper and rotary hoe	50 000
Trailer and/or farm truck	
Bed-former/plastic and trickle tube layer	6 000
Waterwheel transplanter	3 500
Fertiliser applicator and direct seeder	12 000
Creep feed, washing unit and sorting/grading table	12 500
Dip or flood spray	2 000 – 4 000
Spray equipment for crop	12 000 – 15 000
Spray equipment for interrow herbicides	4 000
Half tonne bins (each)	100 – 170
Buckets (each)	5
Pallet jacks	650
Cultivation equipment	20 000 – 25 000
Irrigation equipment \$/ha	2 500 – 4 500
<b>Optional</b>	
Seedling nursery	5 000
Harvest aid (picking boom)	3 000
Grader	5 000 – 12 000
Shed fork-lift	30 000
Bin tipper	1 000 – 5 000
12 to 20 pallet cooling room	25 000
Mulch gatherer	8 300
Slasher/pulveriser	3 000 – 6 000

## **The labour you need**

One person could manage the growing of 10 ha of melons, but extra casual labour would be required for laying plastic mulch and trickle tape, planting and early weed control. Four people would be needed to harvest and pack each hectare of melons.

A standard picking rate is about 20 trays per person per hour, depending on fruit set and harvesting method.

A standard grading and packing rate is about 20 trays per person per hour, depending on the quality of fruit and the equipment being used.

## **Other considerations**

Growing melons involves hard physical work. This includes tractor driving, handling heavy machinery and fertiliser bags, weed control, harvesting, and packing and handling packed cartons.

You need skill to manage finances, staff and the crop. An ability to operate and maintain machinery, and to read and understand chemical labels, is essential. Careful attention to details, and the ability to recognise and treat problems early is necessary to be a successful grower.





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Marketing  
Section 4 page 42

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Knowledge of Integrated Pest Management is highly desirable because pests and diseases are major problems in melon production.

Experience in growing these crops is very valuable because simple mistakes can lead to major losses in marketable yield and quality. Weather conditions can also result in very high or even total loss of rockmelon and honeydew crops.

Quality is the most important factor in successful rockmelon and honeydew production. This starts with good land preparation and variety selection and continues through growing the crop to the careful harvesting, grading and marketing of the melons.

Neither hydroponic nor organic production are well suited to production of rockmelons and honeydews.