

Profile of the Atherton Tablelands Citrus Industry

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Summary

A comprehensive grower survey was conducted to quantify the current size and value of the rapidly growing citrus industry within the Atherton Tablelands region. This is the most complete and accurate assessment of this regions citrus industry and provides valuable data to assist with strategic decision making for future citrus industry research, development and extension (RD&E) activities.

Key Findings:

- 124 growers
- 310 422 trees
- Total area of 1133 hectares
- Australia's largest lime production region
- Australia's largest pummelo production region
- Queensland's largest red-fleshed orange production region
- Continuing expansion for lime, lemon, mandarin, grapefruit & pummelo categories
- Estimated \$55.7 million gross value of production

Having detailed information on the Atherton Tablelands citrus industry will be invaluable for providing guidance for future RD&E and biosecurity activities.

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Background

Citrus has been an important yet under-recognised industry for the Atherton Tablelands region. Collecting accurate information of the size and value of this industry in this region has been difficult due to several factors including continuous expansion, varietal change and redevelopment activities, especially within the past ten years.

Development Horticulturists in Mareeba conducted this survey to increase the detail of information currently available for the industry. This is the largest and most comprehensive survey carried out for citrus in the Atherton Tablelands growing region in recent times. The information collected is deemed critical for both the Department of Agriculture and Fisheries (DAF) and Citrus Australia (CA) in providing accurate data for guiding RD&E activities and increasing our biosecurity knowledge and awareness.

Research methods

A total of 124 growers were identified through a range of channels; existing DAF records, local knowledge and discussions with local agronomists and consultants. Three key growing areas were identified; Mareeba, Dimbulah and Central Tablelands (Refer to Figure 1). The Mareeba area covers from Bilwon and Koah, west to Chettle Rd and south to the Mareeba Shire Council area boundary. The Dimbulah area covers all farms west of Chettle Rd and the western Tablelands Regional Council boundary. The Central Tablelands area is defined within the Tablelands Regional Council area, however only extends as far south the Atherton-Herberton Rd and east along Marks Lane.

Phone was the primary form of communication used to complete the survey questionnaire. The survey questionnaire is attached in Appendix A. Where required, follow up emails and farm visits allowed for clarification of information and further discussions. Some interviews were conducted face-to-face at local events. Microsoft Excel was used to collate and analyse the survey results. Brisbane market prices from October 2017 to September 2018 were used to estimate the value of each category (Ausmarket Consultants, 2018). Individual farm details and survey responses will remain confidential.

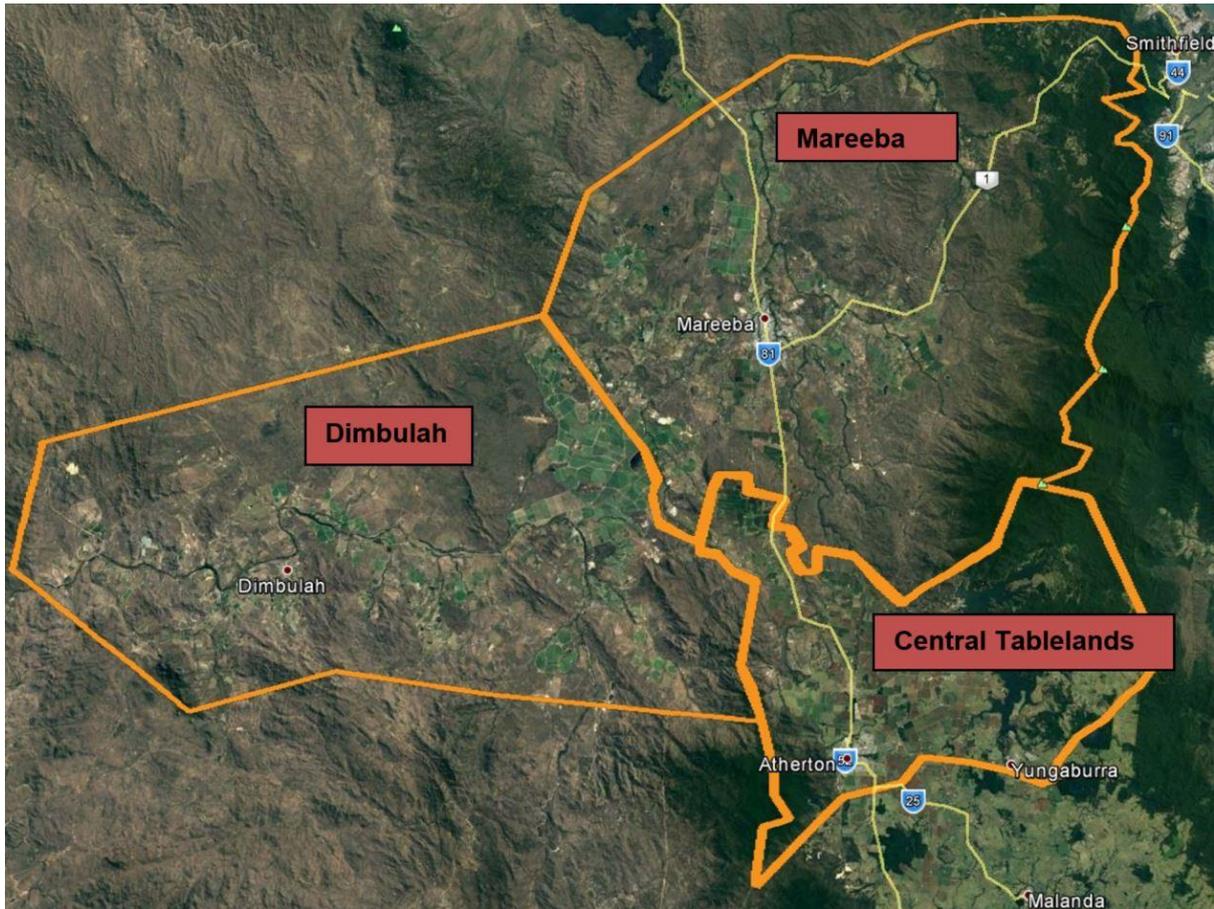


Figure 1: Map of key citrus growing areas within the Atherton Tablelands greater region

This survey has accounted for the majority of citrus growers in the region, however it is recognised there are a small number of growers who could not be contacted or identified. Industry figures calculated from multiple industry, government and grower sources should be recognised as best estimates only. Data collection for this report was completed on October 26th 2018.

Industry overview

The Atherton Tablelands citrus industry is made up of a total of 124 growers spread across 1133 hectares. The Mareeba area has the greatest number of farms (472 ha across 65 farms), however the Dimbulah area as the greatest amount of land under citrus production (644 ha across 56 farms). The Central Tablelands area is small in comparison to the other growing areas (15 ha across 3 farms) (Refer to Figure 2).

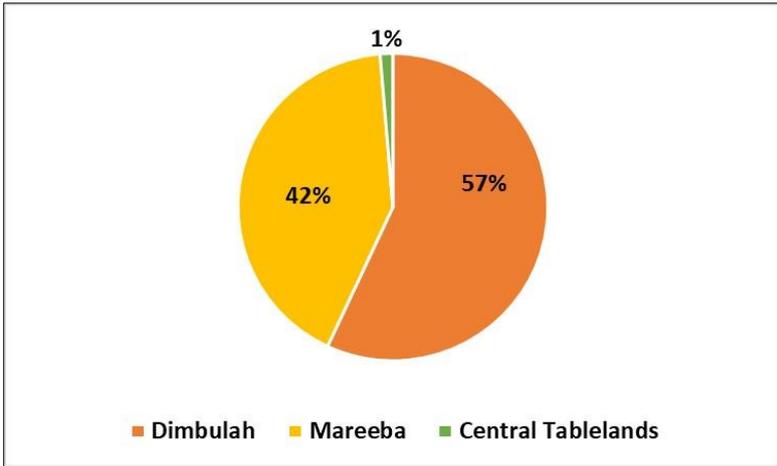


Figure 2: Distribution of total citrus area across Atherton Tablelands region

The citrus farming landscape across the Atherton Tablelands is unique. Small orchards are prominent with citrus being regularly grown in addition to other fruit trees, particularly mango and avocados. Growers in this region have at least one other additional agricultural commodity on the farm to complement their citrus (e.g. crop or livestock). Rather than the traditional large scale citrus businesses found in southern production regions, the majority of growers in this region have citrus orchards of less than 5 hectares in size (refer to Figure 3).

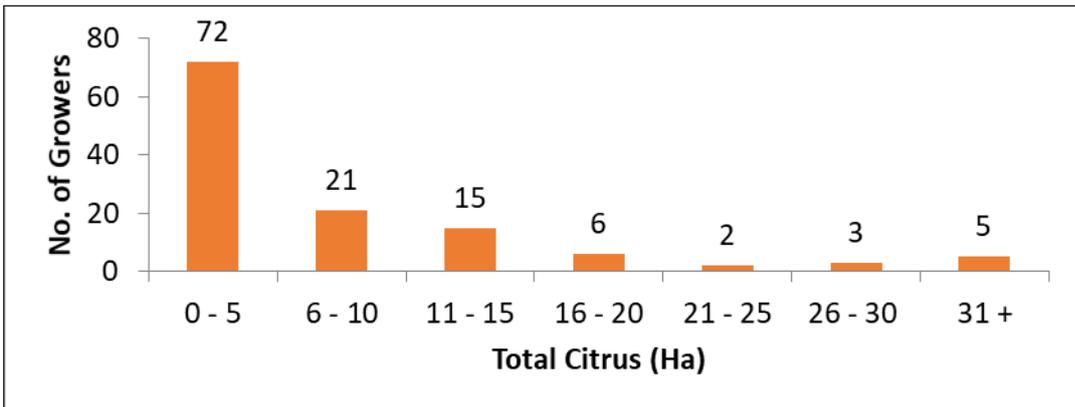


Figure 3: Frequency distribution of number of growers x orchard size in the Atherton Tablelands

In total, there are currently 1133 hectares of citrus grown in the Mareeba-Dimbulah region, valued at approximately \$55.7 million (refer to Appendix B). Limes are by far the most prominent citrus category grown in this region, followed by lemon, pummelo, mandarin, orange and grapefruit (refer to Figure 4).

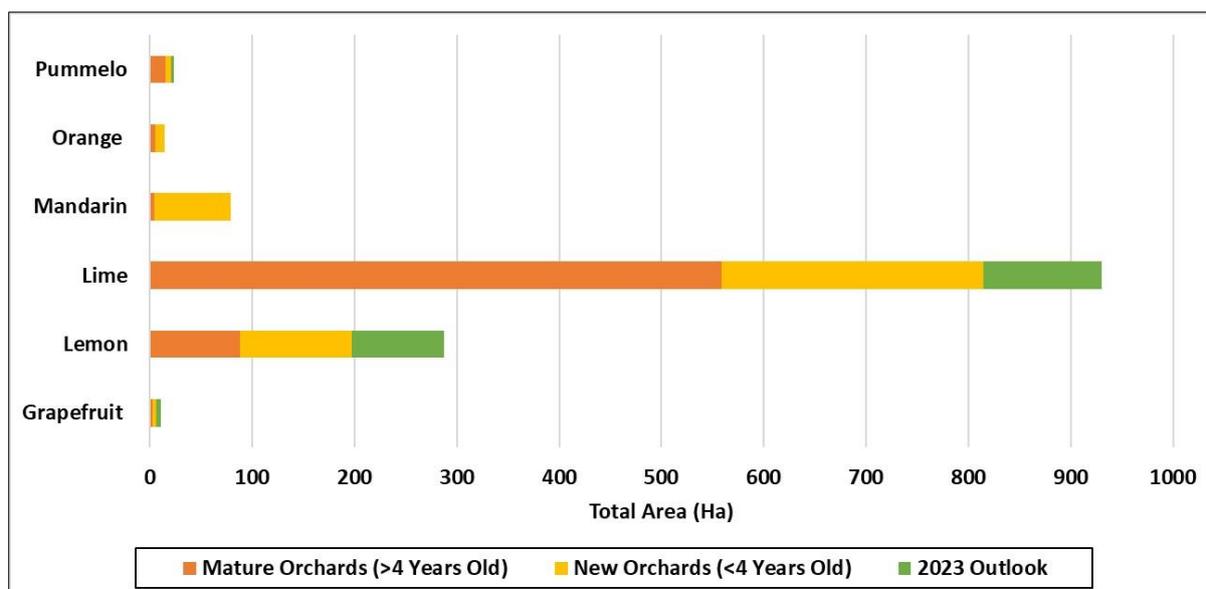


Figure 4: Current size and predicted growth of the Atherton Tablelands Citrus Industry 2018-2023

Lime category

Survey results found there are 815 hectares of limes grown in the Atherton Tablelands region (refer to Figure 4). Approximately two thirds of these plantings are mature, and one-third new orchards. This is significantly greater than both the Queensland (261 ha) and Australian (320 ha) lime totals previously published (Citrus Australia, 2017). The Tahitian cultivar dominates this category (99.7%) followed by Finger (0.2%) and Kaffir (0.1%). It is estimated that over 11 680 tonnes of limes are produced in this region annually, worth approximately \$47.9 million (refer to Appendix B). Survey results indicated an additional 115 hectares of Tahitian limes will be planted over the next five years (refer to Figure 4). Continued growth in the lime category is expected, as new and proposed orchards reach full production.

Table 1 – Lime Category Overview

113 Growers	558 ha Mature	257 ha New	Proposed +115 ha by 2023	71.9% of Local Citrus hectares	11 680 Total Estimated Volume (tonnes/yr)*	\$47.9 million Category**
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*Best estimate only, ** Based on 2017/2018 Brisbane Market Price (AusMarket Consultants, 2018)

Lemon category

Survey results show there are 197 hectares of lemons grown in the Atherton Tablelands region (refer to Figure 4). The main varieties grown are Eureka (68%), Eureka Seedless (19%), Lisbon (13%) and Meyer (<1%). Lemons in this region represent approximately 20% of the Queensland total of 565 hectares as recorded by CA in 2017. It is estimated that 1977 tonnes of lemons are produced in this region annually, worth approximately \$4.3 million (refer to Appendix B). Lemons on the Atherton Tablelands are expected to have significant growth over the next five years. More than half of lemons in this region are new orchards and it is estimated than an additional 90 hectares of lemons will be

planted before 2023 (Refer to Figure 4). Significant growth in the lemon category is expected with new and proposed orchards yet to reach full production.

Table 2 – Lemon Category Overview

30 Growers	88 ha Mature	109 ha New	Proposed +90 ha by 2023	17.4% of Local Citrus hectares	1 977 Total Estimated Volume (tonnes/yr)*	\$4.3 million Category**
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*Best estimate only, ** Based on 2017/2018 Brisbane Market Price (AusMarket Consultants, 2018)

Pummelo category

Survey results show there are 21 hectares of pummelo grown in the Atherton Tablelands region (refer to Figure 4). This is more than double the currently recorded Australian total of 8.3 hectares (Citrus Australia, 2017). A mix of both white and pink fleshed varieties are grown. The majority of plantings are mature orchards (refer to Figure 4). It is estimated that currently 323 tonnes of pummelos are produced in this region annually, worth approximately \$2.3 million (refer to Appendix B). Growth in the pummelo category is expected, with new and proposed orchards yet to reach full production.

Table 3 – Pummelo Category Overview

7 Growers	16 ha Mature	5 ha New	Proposed +3 ha by 2023	1.8% of Local Citrus hectares	323 Total Estimated Volume (tonnes/yr)*	\$2.3 million Category**
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*Best estimate only, ** Based on 2017/2018 Brisbane Market Price (AusMarket Consultants, 2018)

Mandarin category

Survey results show there are 80 hectares of mandarins grown in the Atherton Tablelands region (refer to Figure 4). The main variety is the Amorette seedless (88%), followed by Afourer (6%), Hickson (4%) and ~2% Emperor, Ellendale and Honey Murcott. The vast majority of current mandarin plantings are new orchards (refer to Figure 4). It is estimated that currently only 244 tonnes of mandarins are produced in this region annually, worth approximately \$782 200 (refer to Appendix B). Currently this region represents only a minor part of the Australian mandarin industry. However if production conditions are favourable and as the new mandarin orchards reach peak production, the value of this category will increase greatly.

Table 4 – Mandarin Category Overview

8 Growers	5 ha Mature	75 ha New	Proposed +1 ha by 2023	7.0% of Local Citrus hectares	244 Total Estimated Volume (tonnes/yr)*	\$782 200 Category**
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*Best estimate only, ** Based on 2017/2018 Brisbane Market Price (AusMarket Consultants, 2018)

Orange category

Survey results show there are 15 hectares of oranges grown in the Atherton Tablelands region (refer to Figure 4). The main varieties are the Navel (35%), Cara Cara (25%), Valencia (22%) with smaller

areas of Marsh (16%) and Joppas (2%). It is estimated that currently only 135 tonnes of oranges are produced in this region annually, worth approximately \$242 100 (refer to Appendix B). The Atherton Tablelands region is Queensland's largest red-fleshed orange producing region. Citrus Australia reported a Queensland red-fleshed orange total of 3 hectares in 2017, yet this survey has identified 3.6 hectares of red-fleshed oranges grown in the Atherton Tablelands region alone (Citrus Australia, 2017). Orange is the only category with no current recorded expansion plans at time of surveying.

Table 5 – Orange Category Overview

7 Growers	6 ha Mature	9 ha New	Proposed +0 ha by 2023	1.3% of Local Citrus hectares	135 Total Estimated Volume (tonnes/yr)*	\$242 100 Category**
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*Best estimate only, ** Based on 2017/2018 Brisbane Market Price (AusMarket Consultants, 2018)

Grapefruit category

Grapefruit is only a minor part of the Atherton Tablelands citrus industry with 7 hectares grown in this region (refer to Figure 4). The main variety grown is the Rio Red (45%) followed by Star Ruby (24%), Marsh (15%) and unclassified (16%). Greater than half of the current grapefruit plantings are new orchards, and by 2023 an additional 4 hectares of expansion is planned. It is estimated that currently 61 tonnes of grapefruit are produced in this region annually, worth approximately \$134 900 (refer to Appendix B). Growth in the grapefruit category is expected with new and proposed orchards yet to reach full production.

Table 6 – Grapefruit Category Overview

7 Growers	3 ha Mature	4 ha New	Proposed +4 ha by 2023	0.6% of Local Citrus hectares	61 Total Estimated Volume (tonnes/yr)*	\$134 900 Category**
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*Best estimate only, ** Based on 2017/2018 Brisbane Market Price (AusMarket Consultants, 2018)

Grower feedback

Growers flagged a number of key concerns for their local industry during the surveying process, including:

- Biosecurity threats, mainly Citrus Canker from the Northern Territory
- International imports, particularly Mexican limes
- Fluctuating and often low market prices (below cost of production)
- Rising cost of labour
- Lack of citrus RD&E across the Atherton Tablelands
- Growing presence of large corporations competing with the traditionally smaller, family owned businesses
- Lack of local information available to assist growers with general orchard maintenance, pest and disease issues
- Desire for closer link with Citrus Australia.

Recommendations

The results of this review clearly recognise the current scale of the Atherton Tablelands citrus industry and its continuing development. As a key industry for North Queensland, it is recommended that the following research and development activities in the Atherton Tablelands region be considered in order to support this developing industry.

1. Insect and disease management within the orchard - control methods for mites, guidebook for pests and disease of citrus tailored to this region.
2. Biosecurity surveillance and education.
3. Markets - increased understanding of market cycles, updates of imports from overseas.
4. Fruit ripening and storage best practice.

Acknowledgements

Special thanks and acknowledgement to all of the citrus growers, advisors and agronomists who contributed data to this survey. The full participation by all 124 growers demonstrates the value of this survey.

Reference List

Ausmarket Consultants 2018, '2017/2018 Brisbane Market Prices Grapefruit, Lemon, Lime, Orange, Mandarin, Pomelo'. Compiled by Ausmarket Consultants from information by Market Information Services. Printed October 30th 2018.

Citrus Australia 2017, 'Australian Citrus Tree Census 2017', Citrus Australia.

Appendix A

Interviews were structured around the following list of survey questions.

- Name/Business name
- Farm address
- Phone
- Email
- Total number of trees/Total hectares of each variety of citrus grown
- Tree and row spacing
- Plans to expand
- Other crops grown
- Interest in seedless lemon varieties (if applicable)
- General thoughts on local citrus industry/Key issues

Appendix B

Species	Total area (ha)*	Total no. trees*	Av. trees/ha*	Yield (t/ha)**	\$/Kg***	Volume sold (T) (ha x yield)	Approximate value (\$/kgxTx1000)	% Total Atherton Tablelands citrus area (ha)
Grapefruit (> 4yr)	2.7	630	264	20	2.2	53	117 300	
Grapefruit (< 4yr)	4.0	1 000	250	2	2.2	8	17 600	
Total Grapefruit	6.7	1 630	257		2.2	61	134 900	0.6
Mandarin (> 4yr)	4.8	1 384	337	20	3.2	95	305 600	
Mandarin (< 4yr)	74.5	46 094	516	2	3.2	149	476 600	
Total Mandarin	79.2	47 478	427		3.2	244	782 200	7.0
Oranges (> 4yr)	5.8	1 439	265	20	1.8	117	210 200	
Oranges (< 4yr)	8.9	2 471	284	2	1.8	18	31 900	
Total Orange	14.7	3 910	275		1.8	135	242 100	1.3
Pummelo (> 4yr)	15.6	3 972	265	20	7.2	313	2 253 000	
Pummelo (< 4yr)	5.2	1 500	222	2	7.2	10	75 100	
Total Pummelo	20.9	5472	244		7.2	323	2 328 100	1.8
Lemons (> 4yr)	87.9	24 014	263	20	2.2	1 758	3 868 400	
Lemons (< 4yr)	109.2	30 493	230	2	2.2	218	480 500	
Total Lemon	197.1	54 507	247		2.2	1 977	4 348 900	17.4
Limes (> 4yr)	558.3	134 274	238	20	4.1	11 167	45 784 100	
Limes (< 4 yr)	256.5	63 150	255	2	4.1	513	2 103 300	
Total Limes	814.8	197 424	246		4.1	11 680	47 887 400	71.9
Grand Total	1133.4	310 422				14 420	55 723 600	100.0

*Survey results, ** Best estimates only, *** Ausmarket Consultants 2018

