Planting survey for the Australian Prune Industry

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NSW Department of Industry and Investment

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New South Wales Primary Industries

Final Report on HAL Project DP08001
Planting survey for the Australian Prune Industry

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Purpose of this report:

Highest priority was given by the prune industry to an evaluation of industry resources. This was seen as preliminary to planning for future development of the Australian Prune Industry.

This report records the result of a survey of prune growers in Australia. Data collected included the area planted to prunes, the number and age of trees and up to date grower details.

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Horticulture Australia Limited
Dried Prune Industry
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Contents

Media Summary

The Australian prune industry has never had access to accurate planting statistics. To date there have been no accurate figures on area planted to prunes, number of trees and varieties planted. Past statistics have been based on estimates and to an extent anecdotal evidence.

Production figures and prune grower lists have previously come from packers who receive dried fruit from prune growers. These production figures do not take into account growers who in some years only sell to the fresh fruit market.

The Australian Bureau of Statistics (ABS) has production and planting figures for plums and prunes grouped together. These figures do not relate to those for prunes only. Prune production in Australia averages around 4000 ton per year, far lower than the combined numbers from ABS. 2003 ABS data (Appendix 2) does not correlate well with data collected in this survey. Historical data was also obtained from The Australian Prune Industry Manual.

In 2008 mailing lists indicated that there were approximately 130 prune growers in Australia. Each of these growers was asked to complete a survey form (Appendix 1) and was either interviewed by the investigator or returned the information to her. Statistics were then compiled and a new mailing list formed. Information about growers who had left the industry was also collected from Yenda Producers and Angas Park Fruit Company.

These new statistics have shown that production in the growing areas of South Australia (Barossa Valley and Riverland) and Young NSW have declined and the Riverina area of NSW and Victoria has grown. There are no new plantings of prunes in South Australia and very few in Young. The majority of new plantings are found in the Riverina. In this region 41.2% of trees are five years old and under.

Future research for the Australian prune industry should focus on the Riverina where issues such as irrigation, dehydration and climate change will become more important in the future. With the threat of climate change it may also be necessary to look at other areas of Australia that would be suitable for prune production.

Technical Summary

To remain globally competitive the Australian prune industry must plan for future growth.

In order to plan for future development industry needs accurate statistics on current plantings. In the past industry has relied on inaccurate estimates of planting areas. There is also a need for an accurate mailing list of Australian prune growers. This list is needed to maximise any benefit derived from future innovations, and ensure the needs of all industry participants are considered.

A survey form was issued to all known prune growers (appendix1). The mailing address for these survey forms was based on old industry mailing lists.

Seventy growers in Australia provided information for this survey. Eight of these responses were to advise that they were no longer growing prunes. Eleven growers known to be still growing prunes did not respond to the survey. Packers and other industry members advised of 58 producers who had left the industry.

The information was collected in person, posted, given via telephone or emailed to the principal investigator. Some growers were unable to be contacted (10) and one grower declined to complete the survey. Eighty four percent of Australian prune growers, known to be currently growing prunes are represented in the statistics.

There are 72 known prune growers in Australia, 46 in the Riverina area of New South Wales (NSW) and Victoria (Vic), 21 in Young NSW and 5 in the Barossa Valley and Riverland areas of South Australia (SA). The Riverina area includes Griffith, Yenda, Yoogali, Beelbangera, Bilbul, Hanwood, Darlington Point and Coleambally in NSW and Cobram in Victoria.

In Australia there is a total of 1195 hectares (ha) planted to prunes. There are 887 ha in the Riverina, 314 ha in Young and 14.8 ha in SA. These trees range in age from zero to 80 years. The majority of new plantings are found in the Riverina where 41.2% of trees are five years and under, and only 1.37 % over 25 years old. The figures are different in Young and South Australia. In Young only 13 % are five years and under and South Australia has no new plantings. In Young and South Australia 34.7% are over 25 years old.

There has been a shift over recent times in production figures from the different prune growing regions. Production has declined in Young and SA and increased in the Riverina. Sixteen growers in Young, 17 growers in the Riverina and 25 in SA have left the industry. Much of this shift in production is a result of severe drought on dry land prune production at Young and water allocation shortfalls as a result of drought in SA.

Production data from the Prune Manual shows that in 2001, 46.7% of prune production came from the Riverina, 43.4% from Young and 10% from South Australia. This compares to this 2007/08 figures from this survey Riverina 91.6%, Young 8% and South Australia 0.4%.

Now that there is a planting database for the Australian prune industry it will be easily maintained and updated as growers move in and out of the industry. In the future R&D should focus on issues in the largest growing region, the Riverina. These issues will include climate change, irrigation and the availability of drying facilities.

Introduction

The aim of this project was to provide accurate planting statistics for the Australian prune industry. Industry statistics available at present are based on estimates and the data is not reliable. Member mailing lists are based on details from packers when dried fruit is presented for sale.

For the Australian prune industry to plan for future growth and development it is vital that current planting sizes, ages, varieties and grower details are known. To maximise the benefit derived from future innovation development, it is important that planning includes the needs of all industry participants.

Some prune growers within the industry have been isolated because to date, accurate statistics have been unavailable. Creating a database of all prune growers within Australia will lead to better distribution of information about innovations funded by the prune industry to all participants. There will be greater collaboration within the industry, field days will be better attended and innovation uptake will be improved.

Other information was also collected in this survey:

- Paid pollination usage
- Grower issues
  Growers were asked what training they would like or what industry issues were of importance to them
- Production figures
  Growers were asked how many tons they produced in 2007/08
- Dehydration capacity
  Growers were asked if they had their own dehydrator and if so what capacity it operated at.
- Correspondence received

The database generated by this project will be easy to maintain and update.

Materials and Methods

According to outdated industry mailing lists there were 134 prune growers in Australia. These growers are located in three regions of Australia, the Riverland and Barossa Valley regions of South Australia, Young in New South Wales and the Riverina areas comprising the Murrumbidgee Irrigation Area and Cobram in Victoria.

Prior to visiting the prune production regions of Australia growers were provided with information about the planting survey through the publication, 'The Vine', at a presentation at the Annual Prune Association conference in October 2008 and in the grower newsletter 'The Shaker'. Each grower was sent a copy of the survey form (Appendix 1) and a date when the principal investigator would visit.

Each growing region was visited by the project leader. Wherever possible growers were visited and statistics collected in person. A visual assessment of the trees was made. Global Satellite Positioning (GPS) coordinates were recorded at each orchard. These coordinates will be used to accurately locate each prune orchard on a map that will be the property of the prune industry. When it was not possible to speak to growers survey forms were left or posted to growers.

The project leader was advised by packers and other industry members if growers were no longer growing prunes or had not supplied dried prunes to packers. The growers no longer active in the prune industry were deleted from the mailing list.

The majority of growers were surveyed (84.7%). Those who still had not responded at the time of writing this report will be contacted over the next twelve months and their details added to the database which will then be updated. It is anticipated that yearly production figures collected from packers will also be added to the database.

All individual grower statistics will remain confidential, except for correct postal address. Results are for region figures only.

Results

1. Prune planting areas

Table1.

Age of trees	Area planted to prunes (hectares) Riverina	Young	South Australia	Australian Total
0-5	343.48	38.1	0	381.58
6-10	356.63	40.43	0	397.06
11-15	81.85	40.77	3	125.62
16-20	47.31	28.84	0.2	76.35
21-25	25.63	37.63	0	63.27
26+	11.79	127.81	11.6	151.2
Total	**866.69**	**313.58**	**14.8**	**1195.08**

Figure 1. Age of trees & hectares planted to prunes in Australia 2009

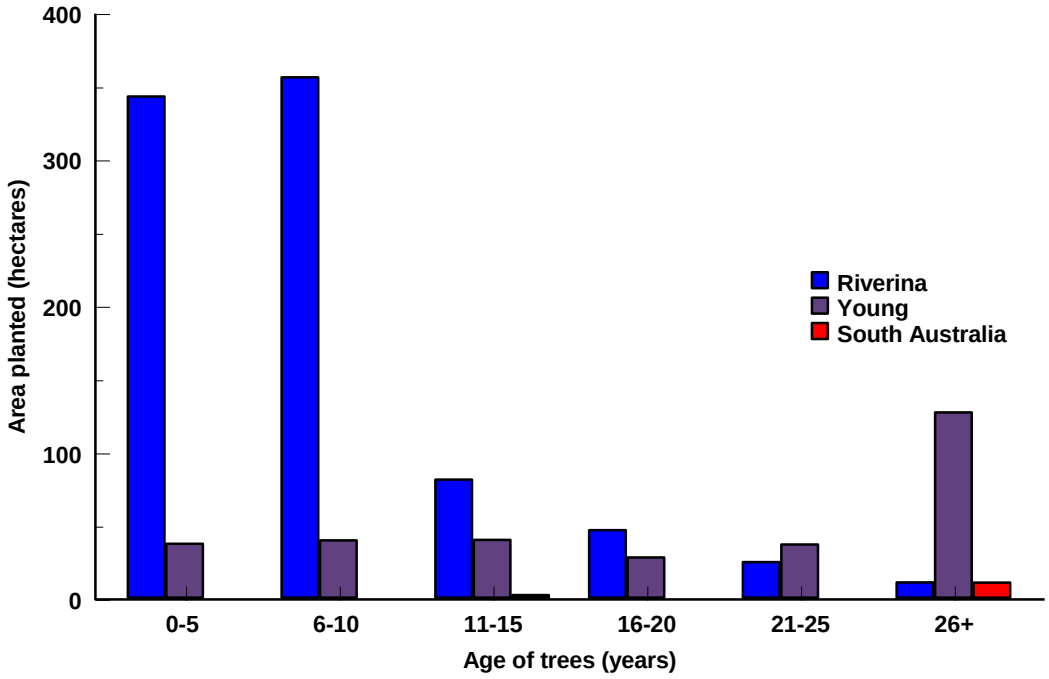
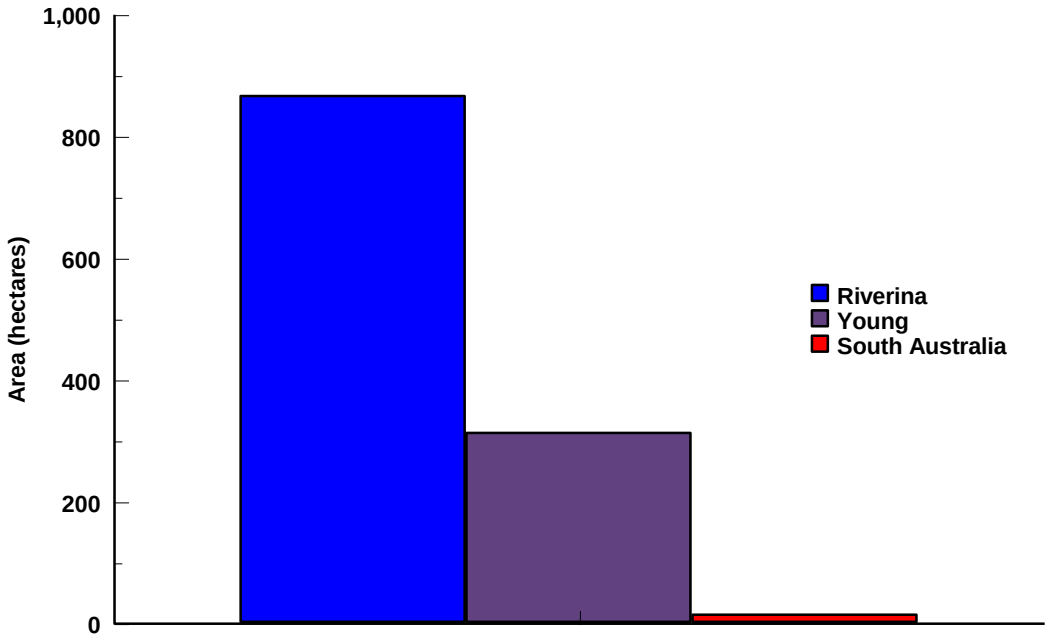


Figure 2. **Total hectares planted in each prune growing region 2009**



2. Numbers of trees planted

Table 2. **Age & number of trees planted in Australia**

Age of trees (years)	**Riverina**	**Young**	**South Australia**	**Australian Total**
0-5	99649	9400	0	109049
6-10	102996	8919	0	111915
11-15	18497	10965	479	29941
16-20	11389	10008	309	21706
21-25	6054	9325	0	15379
26+	3324	23287	3000	29611
Total	**241909**	**71904**	**3788**	**317601**

Figure 3. Total number of prune trees planted in Australia

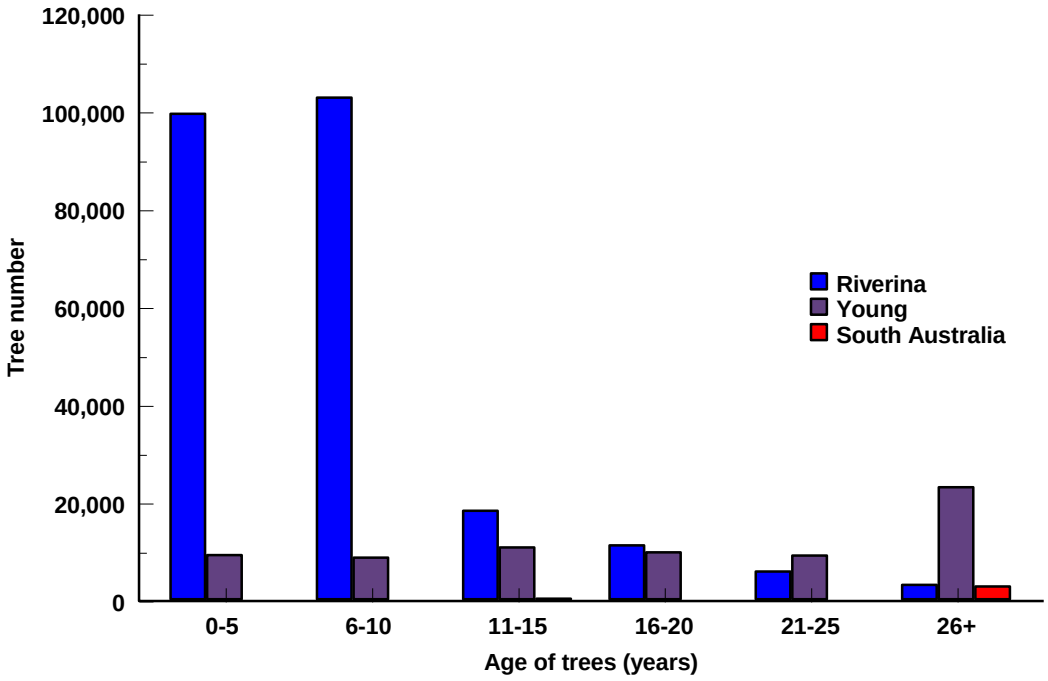
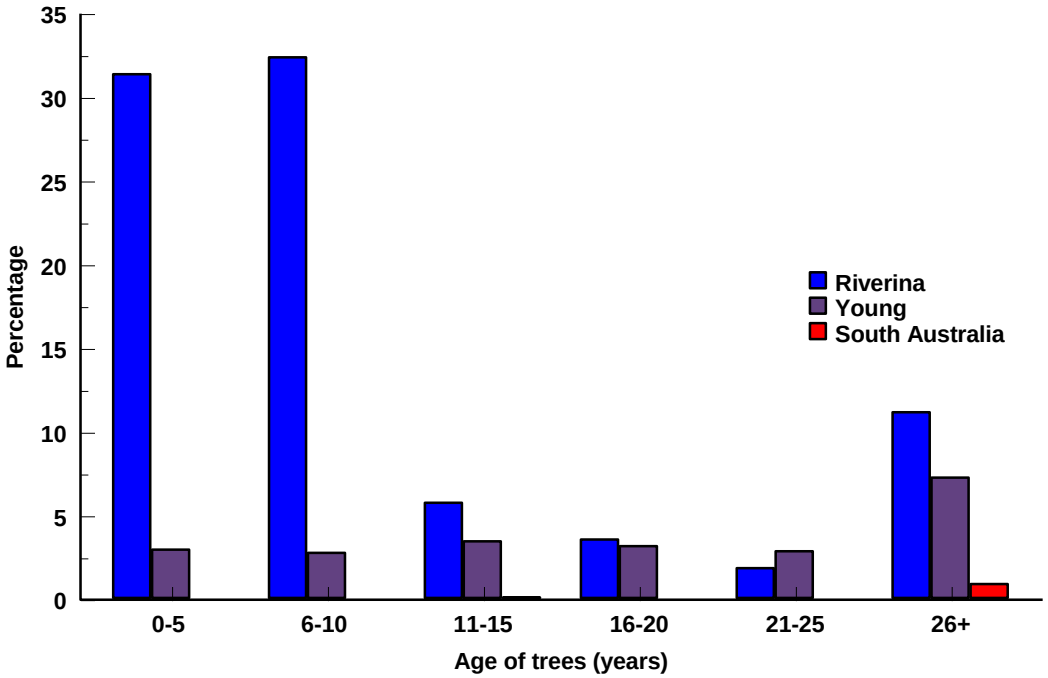
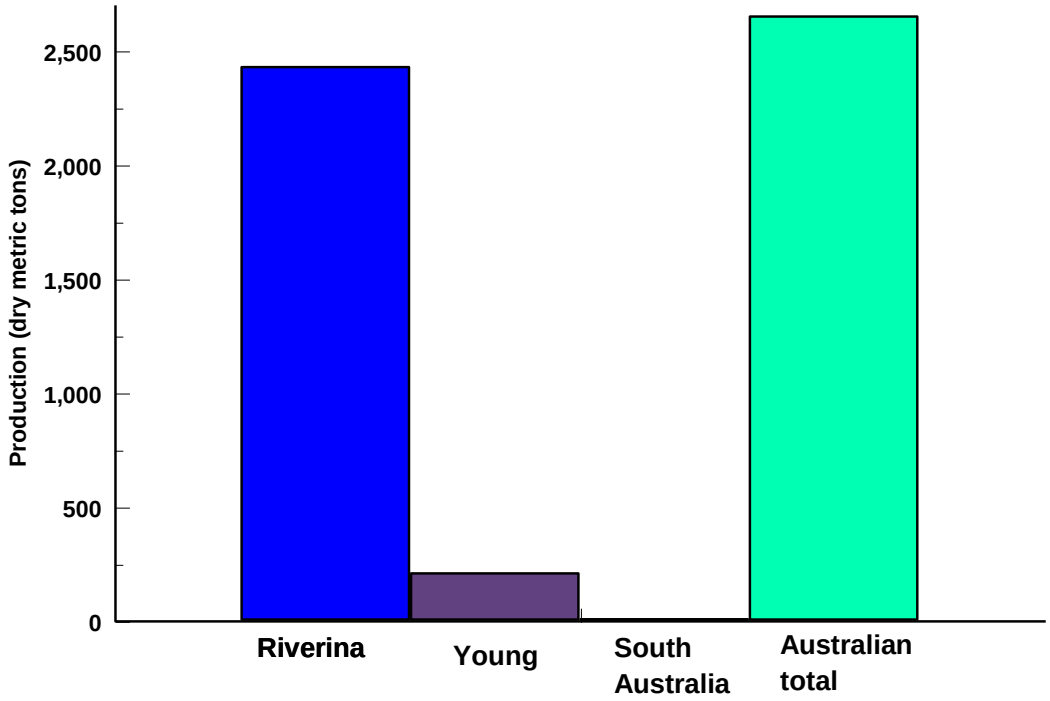


Figure 4. Percentage of trees planted in each prune growing region



3. Prune production figures

Figure 5. Prune production figures for 2007/08 (dry metric tons)



In the 2007 /08 season 91.66% of Australian prune production was in the Riverina, 7.96% in Young and 0.38% in South Australia. These figures do not take account of fruit sold to the fresh markets.
Some growers in Young (10) supply fresh fruit for use in alcohol production.

4. Prune varieties planted

Older plantings, trees twenty years and older, are d'Agen plums. New plantings include van der Merwe, d'Agen clones 707, 698, 303 and Sutter. Some Moyer's are grown in the Riverina. There are small plantings of d'Agen clones 642 and 652.
The main rootstocks used for younger plantings are Marobolan H29C, Marianna and PR2.

Figure 6. Age of trees & prune varieties planted in Australia

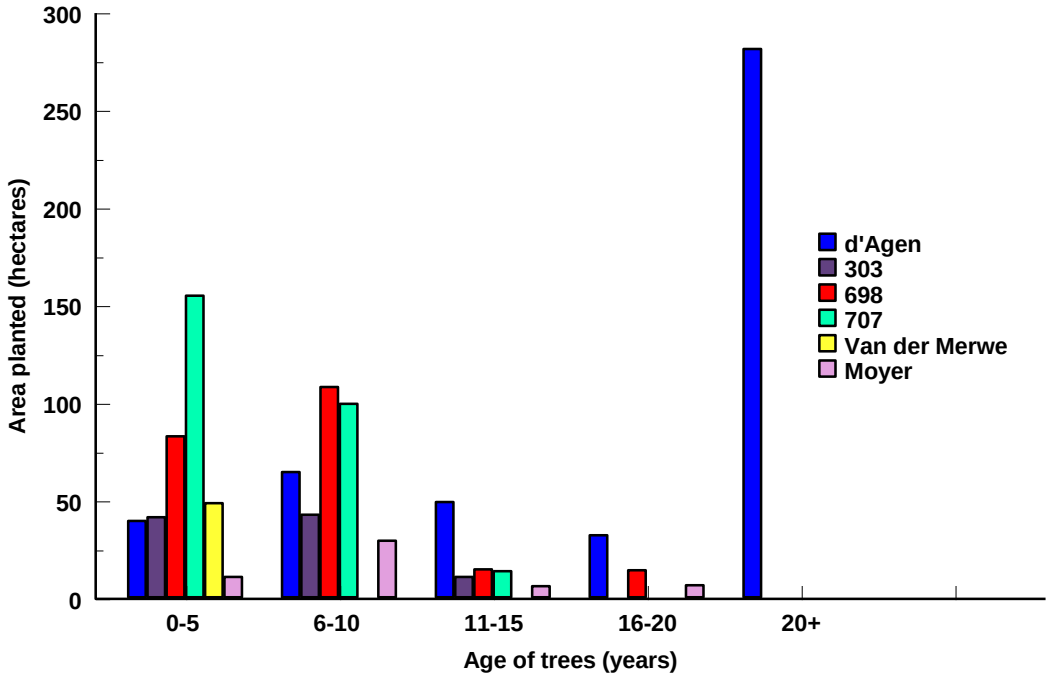
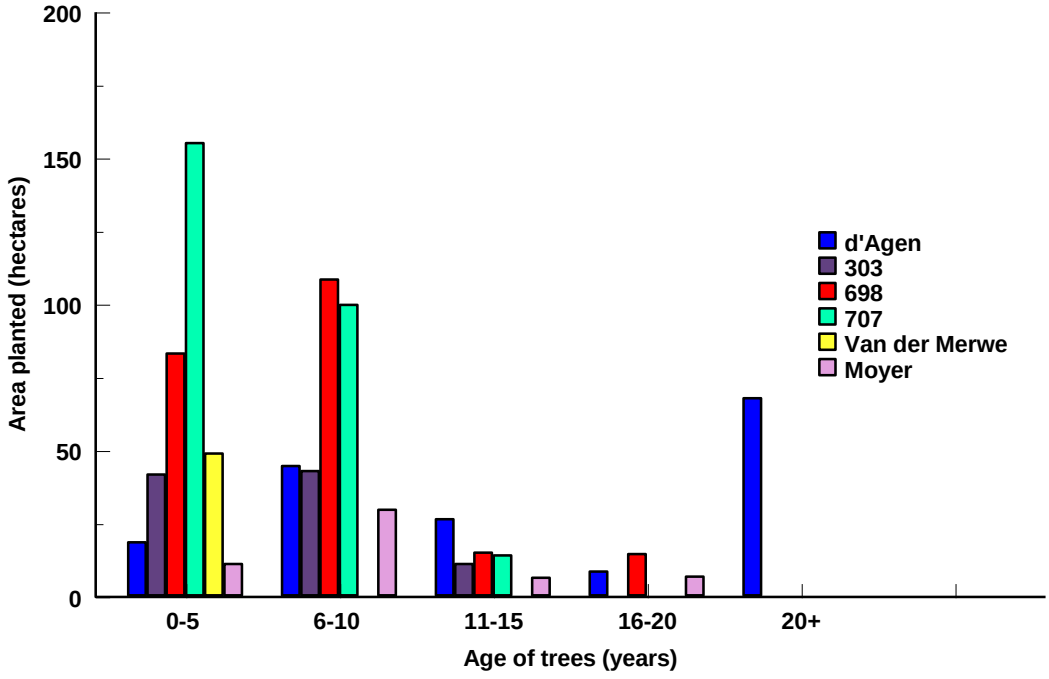


Figure 7. Hectares planted to different varieties in the Riverina



5. Dehydration capacity

19 growers in the Riverina have their own dehydrators. This represents 101 drying tunnels with a capacity to dry 310 tons per day. Six growers in Young have dehydrators. This represents 29 tunnels with the capacity to dry 30 tons of prunes per day. Three South Australian growers sun dry their fruit.

6. Use of paid pollination

Only 6 growers use paid pollination. Eleven growers rely on feral European honeybees for pollination. Fifty three growers do not consider pollination by European honeybees to be important.

7. Grower issues:

The following list represents training that growers have requested or issues of concern that they raised:

- Quality assurance
- Rootstocks, winter chill required and suckering
- Quality parameters
- Pruning and budding
- Varieties including later ones
- A study tour to California
- Birds
- Prune consumption statistics
- Improved returns for prunes
- HACCP training
- Storage life of half-dried fruit

8. Industry mailing list and industry correspondence

Eighty four percent of growers receive a copy of the publication the “Vine” and the industry newsletter the “Shaker”. A copy of the new industry mailing list has been forwarded to the APIA secretariat.

Discussion

Accurate planting statistics have been collected directly from Australian prune growers. Industry members will now have access to a complete database that contains information on total hectares planted to prunes, number of trees planted, age of trees, varieties planted, production figures for 2007/08, industry dehydration capacity and an up to date mailing list.

The Australian prune industry will no longer be reliant on outdated and inaccurate statistics. Figures from the ABS for 2003 (Appendix 2) show total number of prune trees to be 448,515, a figure far above the figure collected in this survey even given the drought and increased number of non-bearing trees in the Riverina. ABS production compared to International Prune Association (IPA) data is very high, 9000 as compared to 2890 ton.

Production data from the Prune Manual shows that in 2001, 46.7% of prune production came from the Riverina, 43.4% from Young and 10% from South Australia. This compares to this 2007/08 figures from this survey Riverina 91.6%, Young 8% and South Australia 0.4%.

The prune industry is now concentrated in the Riverina areas of NSW and Victoria as shown in Table 1 & 2 and Figures 1 – 5. Seven years of drought and the resultant shortfall in water availability have led to a decline in production in Young and South Australia. In both the Young and South Australia growing regions many neglected or abandoned prune orchards were observed. Also in these areas there was little evidence of reinvestment in orchards.

Drought and climatic events (high temperature at fruit set and hail and wind storm) have had a negative effect on prune production.

The large amount of new plantings still to come into full production (381 hectares), particularly in the Riverina will lead to a potential increase in Australian prune production. To support this expected increase in production industry may need to investigate ways of increasing drying facilities.

All growers surveyed now have their mailing address accurately recorded. The five growers who had not been receiving correspondence from APIA will now be kept informed on industry matters. They will have the opportunity to participate in industry field days and conferences, as well have input in industry decision making.

Technology Transfer

The results of this survey will be presented at the national Australian Prune Industry Association conference in Griffith 22nd October 2009.

A summary of findings from the survey will be published in 'the Vine' September - October edition.

A presentation of the results summary will also be given at grower field days in Young and Griffith September 2nd and 3rd.

The results of this survey will be published on the Australian prune industry website, members section.

Recommendations

The largest growing region for prunes in Australia is the Riverina area of NSW and Victoria. The following recommendations to Australian prune industry have resulted from this survey:

- A database is now established and should be updated annually.
- When prioritising industry issues, consideration should be given to the largest growing region. These issues will include climate change, irrigation and the availability of drying facilities.
- With the threat of climate change it may also be necessary to look at other areas of Australia that would be suitable to prune production.
- In the future R&D should focus on issues in the largest growing region, the Riverina.
- Grower issues raised in the survey could be of great benefit to the Prune IAC in determining R&D priorities.

Acknowledgements

The author would like to thank all Australian prune growers who responded to this survey, provided information and allowed access to their orchards.

Production figures and grower addresses were supplied by growers, local branch representatives and packers.

The author would especially like to thank Mr Trevor Piva from Yenda Producers and Mr Colin Farey from Angas Park Fruit Company who provide invaluable assistance in introducing growers, locating orchards and collecting survey information.

Bibliography

1301.0 Year Book Australia, No 85, 2003	Australian Bureau of Statistics
International Prune Association	www.ipaprunes.org Christian Amblard General Secretary IPA
Australian Prune Association	www.ausprune.org.au APIA Secretariat Australian Dried Fruits Association
The Australian Prune Industry Manual	Roy Menzies, Co-ordinating Author NSW Agriculture 2001

Appendix 1

Survey for the Australian Prune Industry

Date:

Grower name:

Grower address:

Property address:

GPS reading (front gate):

Do you use paid pollination or feral honeybees?

Do you receive the Vine and the Shaker?

Does your neighbour receive correspondence from APIA?

Is there any training or information you would like?

Total property yield 07/08:

Do you dry fruit?

Do you have a dehydrator?

If yes how many tunnels and drying capacity?

Block	**No trees**	**Area ha**	**Age years**	**Variety Or clone**	**Rootstock used**
1					
2					
3					
4					
5					
6					
7					
Total					

Appendix 2

Abs stats 2003

		No. surveyed
Number of trees 6 years and under	110,006	91
Number of trees 6 years and over	338,509	201
Prune production (kg)	9,022,129	210

The standard error for this data lies between 10% and 50%, which is extremely high