

# **Horticulture Innovation Australia**

## **Final Report**

### **Custard Apple Dispatch System (CADS)**

Patti Stacey  
Custard Apples Australia Inc

Project Number: CU12001

## **CU12001**

This project has been funded by Horticulture Innovation Australia Limited using the custard apple industry levy and funds from the Australian Government.

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## Summary

Following a Tropical Fruit Forum in Cairns in 2005, Graeme Forsythe & Assoc. worked with the Australian Custard Apple Growers Association and developed an electronic dispatch system. This system was used by growers in the Jadefruit Marketing group for some years. Each year, adjustments to the system were made to make it more user friendly.

Custard Apples Australia (CAA) realized that the aggregated data that was able to be extracted out of the system was very useful for the custard apple industry. It gave figures of throughput of production by state, by market, by variety, by month. As grower returns also went through this system, the value of production could also be obtained.

CAA considered the system was appropriate for all custard apple growers to use the system. Grower confidentiality was assured, with only Graeme Forsythe & Assoc having access to the raw data.

The CADS project commenced in October 2012, with the objective of collecting more accurate production figures from the custard apple industry and to establish the value of production of custard apples through actual growers' returns. This project was designed to build on the electronic dispatch system already in use, and make it available for the whole Custard Apple industry.

The electronic system was developed by Graeme Forsythe & Associates, in which growers were asked to enter dispatch data and wholesalers enter return prices, or payback data, using an online system.

Reports of quantity of trays of fruit produced and the value of those trays, was extracted from this data.

This online system had been trialed successfully by a small sector of the industry over the past few years and was extended to the whole of industry over the life span of the CADS project.

The CADS was progressively upgraded based on user feedback. From CADS it has been possible to generate aggregated industry reports of throughput and value. Approximately 30% of custard apple production went through the CADS system in 2015. From these figures, CAA has been able to see how production is progressing and evaluate the value of the industry. Comparisons with past seasons has shown that production is on the increase with only a slight drop in price returns. Such data helps the industry to plan R&D projects. Individual growers that use the system can extract their own data also which is very helpful in evaluating their own farm.

## **Keywords**

Custard apples

Electronic dispatch

Marketing

Record keeping

Data collection

Industry value

## **Introduction**

The Custard Apple Dispatch System (CADS) project was to develop an online data capture system for the Custard Apple industry. The project was conducted over three years.

Lack of accurate production figures and lack of knowledge of the value of industry production, has caused difficulty in preparing strategic plans and forecasting the progress of the Custard Apple Industry. The industry does not have accurate data on production and value.

Following a Tropical Fruit Forum in Cairns in 2005, Graeme Forsythe & Assoc. worked with the Australian Custard Apple Growers Association and developed an electronic dispatch system. This system was used by growers in the Jadedfruit Marketing group for some years. Each year, adjustments to the system were made to make it more user friendly.

Custard Apples Australia (CAA) realized that the aggregated data that was able to be extracted out of the system was very useful for the custard apple industry. It gave figures of throughput of production by state, by market, by variety, by month. As grower returns also went through this system, the value of production could also be obtained.

The CADS was designed by Graeme Forsythe and Associates, and is an online data management programme. The strategy of using an online system allows for data to be seamlessly captured from efficiently generated data.

The objective of this project was to collect more accurate production figures from the custard apple industry and help establish the value of production of custard apples through using actual grower return data.

CADS is a computer programme in which growers enter dispatch data and wholesalers enter payback data through a confidential online portal. Reports of quantity and value can be extracted from this data.

Growers access the system via an online site using a unique and confidential password. They put in production data to be sent to their wholesalers. Wholesalers access the system via an online site using a unique and confidential password. They put in return figures for the fruit they have received which is sent back to the grower via the system. The dispatches are compliant with the Horticultural Code of Conduct.

From CADS it is possible to generate aggregated industry reports of throughput and value. Graeme Forsythe generates aggregate reports from all the data entered into the system. There are a number of types of reports that could be generated from this system. For the industry (CAA), figures on production and the value of that production are generated annually - by variety, grade, and market. These reports give CAA more accurate data on production and value of the industry. For the grower, they can generate their own reports via the system - on average returns by variety, grade, and sizes.

CADS has been placed on a dedicated horticulture data collection web site – [www.freshproducelink.com.au](http://www.freshproducelink.com.au).

A generic data collection form has been developed to allow all custard apple growers to use the site and custard apple growers are given access to the site via a user name/password link.

## Methodology

Graeme Forsythe developed, administered and maintained the CADS. He worked with Patti Stacey from Custard Apples Australia (CAA) in developing CADS and the reports to be generated from CADS.

Growers accessed CADS via an online site( [www.freshproducelink.com.au](http://www.freshproducelink.com.au) ) using a unique and confidential password. They put in production data to be sent to their wholesalers.

Wholesalers accessed CADS via an online site using a unique and confidential password. They put in return figures for the fruit they have received which was sent back to the grower via CADS.

Graeme Forsythe generated aggregate reports at the end of each season from all the data entered into CADS. There are a number of types of reports that he generated from CADS.

For the benefit of industry (via CAA), figures on production and the value of that production were generated weekly, monthly, annually - by variety, grade, market. These reports gave the industry more accurate data on production and value of the industry.

Custard Apple growers generated their own reports via CADS, including average returns by variety, grade, size.

The CADS improves business efficiency for growers and communication to and from wholesalers.

CAA identified other growers, other than those in Jedefruit Marketing, who market large quantities of custard apples to participate from the commencement of the CADS project.

As the project continues, all other growers have been encouraged to participate in CADS.

Quality data will be assured as the growers are entering actual dispatches being sent to their wholesalers.

CAA directors assumed responsibility for the CADS promotion work and initial training. Workshops were conducted by Patti Stacey in Nth Queensland, South East Queensland and Nth NSW.



As an encouragement for growers to participate in using CADS, growers have access to aggregated industry level reporting each week showing quantities dispatched from each origin region by variety, count size, pack type and class to each wholesale market and associated values.

Growers also have access to their own data in reporting formats that will assist their business management with the option of downloading their data in spread sheet format.

## Outputs

- CADS has been placed on a dedicated horticulture data collection web site – [www.freshproducelink.com.au](http://www.freshproducelink.com.au).
- A generic data collection form has been developed to allow all custard apple growers to use the site and custard apple growers are given access to the site via a user name/password link.
- Articles were placed in several editions of The Custard Apple newsletter over the duration of the project.
- Workshops were conducted in 3 growing regions: Mareeba – 2 growers, Glasshouse Mts – 3 growers, and Alstonville – 2 growers.
- Each year, new growers used CADS.
- Graeme Forsythe delivered end of season reporting via spreadsheets of each seasons production and value by variety, grades and markets.
- Approximately 30% of production for each season was generated through CADS.

## **Outcomes**

At the end of the 2015 season, Graeme Forsythe generated data reports to Custard Apples Australia. These included production totals by variety, tray sizes and destination states. Value of production figures by variety, by month were also generated.

With figures from the custard apple levies collection of DAFF, CAA was able to work out the percentage of production that was collected by CADS. From this percentage, a value was then put on the whole custard apple production for the season. Comparisons were made with previous seasons.

A total of 51,415 trays were processed through CADS in the 2015 season, approximately 30% of total production.

The aim has been to capture at least 60% of custard apple production through CADS. Growers using CADS found they could generate data from their own production and do year by year comparisons.

## **Evaluation and Discussion**

The CADS system works well and information generated by inputs is invaluable for both industry and the growers.

Uptake of use of CADS has been slower than anticipated. This has been due to a number of reasons:

- Poor access to internet services is a large reason for growers to shy away from an electronic system. CAA feels this will improve with time especially with the roll out of the NBN.
- Lack of computer knowledge by many growers have made them reluctant to get involved with an online system. As younger growers enter the industry, CAA is hoping this will also increase use in CADS. Also, as knowledge of the usefulness of CADS is spread, so will the number of growers using CADS increase.
- Lack of confidence by growers of confidentiality of their information, even though a confidentiality agreement has been offered.

Even though there has been a slow uptake in the use of CADS, the information generated out of CADS is invaluable to the industry in that it helps evaluate the production increase, market trends and price fluctuations. It is also used to cross check other data received from other sources.

## **Recommendations**

1. CAA feels it is imperative for the CADS system to continue. Although data generated only covers a third of production, these figures have helped CAA to determine industry values and trends in production.
2. Custard Apples Australia would like to continue this project as it is felt 3 years has not been enough time to create change amongst growers.
3. A future project would spend more time in consulting with growers and giving individual guidance.

## Appendices

### **No. 1 – Article printed in 2012 Summer edition of The Custard Apple newsletter**

#### CUSTARD APPLE DISPATCH SYSTEM (CADS) – Patti Stacey

One of the areas identified by Custard Apples Australia as having little accurate information on, is data on production and the value of the Custard Apple industry. Both these things are needed when planning future R&D and marketing programs. Six years ago, following a Tropical Fruit Workshop in Cairns attended by Bruce Sloper and myself, ACAGA joined Graeme Forsythe in developing a data dispatch system for custard apples. The members of the Jedefruit Custard Apple Marketing group (J-CAM) were used to trial this system which was referred to as "the portal". The main function of this system was to send dispatch information on consignments to the wholesaler and the wholesaler returned prices on the same system. The grower could then gather data on the production and returns of fruit sent to market. It has proved to be very effective.

Custard Apples Australia has decided to roll this system out to the whole of industry. Under a HAL project, Graeme Forsythe has been commissioned to develop "the portal" into the Custard Apple Dispatch System (CADS).

Graeme Forsythe will develop, administer and maintain the system. Growers will access the system via an online site using a unique and confidential password. They will put in production data to be sent to their wholesalers. Wholesalers will access the system via an online site using a unique and confidential password. They will put in return figures for the fruit they have received which will be sent back to the grower via the system.

Graeme Forsythe will generate aggregate reports from all the data entered into the system.

There are a number of types of reports that could be generated from this system. For the industry (CAA), figures on production and the value of that production could be generated weekly, monthly, annually - by variety, grade, market. These reports will give CAA more accurate data on production and value of the industry. For the grower, they can generate their own reports via the system - on average returns by variety, grade, sizes.

This approach to capturing industry data is the most logical for custard apples with many smaller producers. It differs from systems such as Infocado where dispatch data is captured independently of transactional based dispatch and payback forms. The approach will improve business efficiency for growers and communication to and from wholesalers.

Grower's trialing the system now will continue to use it. CAA Inc will identify other growers marketing larger quantities & CAA Inc members to participate from commencement. All other growers will then be encouraged to participate. Quality data will be assured as the growers are entering actual dispatches being sent to their wholesalers.

In the first year of the project, the aim will be to get all Jadefruit Custard Apple Marketing (JCAM) Members, all members of CAA Management committee and at least 4 large growers outside of these 2 groups, to be using the dispatch system. This should equate to at least 50% of Australian production.

In the second year of the project, the system will be promoted to the industry at large through grower workshops. With the generated reports from the system, it is believed growers will see value in being part of the system, providing it can be shown complete security of their data.

In the third year of the project, additional participation will be sort aiming for all members of CAA to participate. Additional data will be generated.

Growers can be assured that CADS is a secure system – their own data will only be accessed by themselves. The data generated for reports will be aggregated from all data on the system. No individual data will be identified.

Growers wanting to know more and who are interested in participating in CADS, please contact Patti Stacey.

## **No. 2 - Article printed in the Summer edition of The Custard Apple newsletter**

Custard Apple Dispatch System (CADS) – Patti Stacey

The CADS project is to develop an electronic data capture system for the Custard Apple industry.

Lack of accurate production figures and lack of knowledge of the value of industry production, has caused difficulty in preparing strategic plans and forecasting the progress of the Custard Apple Industry. The industry does not have accurate data on production and value.

The Custard Apple Dispatch System has been designed by Graeme Forsythe and Associates, and is an electronic system. The strategy of using an electronic system allows this data to be seamlessly captured from efficiently generated transactional documentation.

The objective of this project is to collect more accurate production figures from the custard apple industry and to establish the value of production of custard apples through actual grower's returns.

The electronic system is a system in which growers enter dispatch data & wholesalers enter payback data using the confidential electronic system. Reports of quantity and value can be extracted from this data.

This system has been trialled successfully by a small sector of the industry over the past few years, and will be progressively upgraded based on user feedback. From this system it will be possible to generate aggregated industry reports of throughput and value.

Growers access the system via an online site using a unique and confidential password. They put in production data to be sent to their wholesalers. Wholesalers access the system via an online site using a unique and confidential password. They put in return figures for the fruit they have received which is sent back to the grower via the system. The dispatches are compliant with the Horticultural Code of Conduct.

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CADS has been placed on a dedicated horticulture data collection web site – [www.freshproducelink.com.au](http://www.freshproducelink.com.au).

A generic data collection form has been developed to allow all custard apple growers to use the site and custard apple growers are given access to the site via a user name/password link.

At the end of the 2013 season, Graeme Forsythe generated data reports to Custard Apples Australia. These included production totals by variety, tray sizes and destination states. Value of production figures by variety, by month were also generated.

A total of 23,000 trays were generated through the system in the 2013 season, approximately 20% of total production.

The aim is to capture at least 60% of custard apple production through CADS. For the 2014 season, CAA will conduct workshops and give individual instructions to growers interested in using CADS in 2014.

Confidentiality of information placed in CADS is paramount to growers and the industry. CAA is working on confidentiality agreements between CAA and the growers using CADS.

By the end 2015, it is hoped that:

- a large percentage of the industry will be generating their production figures through CADS
- that data generated from this information will give individual growers a more accurate idea of their own production and value
- give CAA more accurate figures to work with when developing R&D and Marketing programs and strategic plans.

***All custard apple growers are invited to use the CADS system in the 2014 season and beyond. There is no cost to the grower and the benefits to the growers and the industry are huge.***

What is needed:

- a computer and access to reasonable speed internet
- desire to work electronically with your dispatches
- desire to keep good records and data on your production

Workshops will be held:

- At the Walkamin Research Station in Nth Queensland on Monday 3<sup>rd</sup> February.
- At Maroochy Research Station at a date to be decided
- In northern NSW at a date to be decided.

***Please contact Patti Stacey on 02 66295333 or [pcstacey@bigpond.com](mailto:pcstacey@bigpond.com) if you would like to attend one of these workshops or need further information.***

**No. 3 – Example of CADS dispatch form**

Produce Chain Management System														CADS Track No		N20-00262							
Custard Apple Dispatch Return												Payment Date	01/05/13	Ref No	JPR130023								
Supplier: _____ Fax: _____ No: _____ ABN: _____				Customer: _____ Fax: 03 9396 1758 Barkers Melbourne T/A Danzante Unit 2, 80 Fairbanks Road Clayton VIC 3168 Australia ABN: 35 465 792 130				Supply To: _____ Fax: 03 9396 1758 Barkers Melbourne T/A Danzante Unit 2, 80 Fairbanks Road Clayton VIC 3168 Australia ABN: 35 465 792 130															
Carrier: Hernes Freight Service				Consignment No: 153453				ICA No: N0006-ICA21															
Invoice To: Barkers Melbourne T/A Danzante				Date Code / Batch No: 27 April 2013				Est Arrival Date: 29/04/13				<input type="radio"/> Shipping Advice											
Marketed By: J-CAM NSW Marketing Coordinator				Variety: Pinks Mammoth				Pulp Temp at dispatch (C): 12.00				<input type="radio"/> Priced											
Supplier Freight Cost: _____ Supplier Misc Cost: _____				Promotion Percent: _____ Discount Percent: _____				Comm Percent: _____				<input checked="" type="radio"/> Commission											
Count	Sweet Nature - Grade 1						Generic - Grade 1																
	110	130	160	Qty	Price	Value	110	130	160	Qty	Price	Value	110	130	160	Qty	Price	Value					
5																							
6																							
7		2		2	34.00	68.00		1	1	25.00	25.00												
8		3		3	34.00	102.00		2	2	25.00	50.00												
9	6			6	34.00	204.00	2		2	25.00	50.00												
10	7			7	34.00	238.00	2		2	25.00	50.00												
11	4			4	34.00	136.00	2		2	25.00	50.00												
12	2			2	34.00	68.00	1		1	25.00	25.00												
13	5			5	30.00	150.00	1		1	21.00	21.00												
14	1			1	30.00	30.00	1		1	21.00	21.00												
15							1		1	21.00	21.00												
16	1			1	30.00	30.00																	
17																							
18																							
19+																							
Weight (Kg) 318.00	Total Trays		31	31		1,026.00	Total Trays		13	13		313.00	Total Trays										
	Bulk 10 Kg net						Bulk 10 Kg net		1	1	34.00	34.00	Bulk 10 Kg net										
	Total Packs		31	31		1,026.00	Total Packs		14	14		347.00	Total Packs										
	Total Trays Dispatched				44				Total Bulks Dispatched				1				Total Packs Dispatched				45		
Deductions (No GST)			Amount			Deductions (GST apl.)			Amount			Total Accepted			45			\$1,373.00					
Statutory Levy			\$18.00			Promotions						Deductions (No GST)			\$18.00								
Discount						Commission						Deductions (GST apl.)											
Export Freight						Local Freight						GST			\$0.00								
<input checked="" type="radio"/> N/A		<input type="checkbox"/> I/we, the Customer,				Payback (Net Internal Chrgs)		\$1,355.00				Comments:											
<input type="radio"/> Domestic		<input type="checkbox"/> I/we, the Supplier,																					
<input type="radio"/> Export		accept the terms and conditions displayed on the Shipping Advice Pricing Agreement button.																					

Suppress Email Version No: 1 Date: 01/05/13  
Yes  No

06.06/27/27061



**No. 4 - CADS 2015 Throughput as at 5/9/2015**

Month	Pinks Mammoth	African Pride	Maroochy Gold		Total
March	5,531				5,531
April	12,250	107			12,357
May	7,736	3,418	51		11,205
June	3,131	6,549			9,680
July	1,242	6,124		799	7,366
August	647	3,833			4,480
September	3	796			
Total	30,540	20,827	51		51,418

Value – Average/Unit where Returns have been provided

Month	Pinks Mammoth			African Pride		
	Units	Total	Av	Units	Total	Av
March						
April	3,199	84,725.20	26.485			
May	4,807	151,636.70	31.545	2,430	55,579.40	22.872
June	3,034	98,972.50	32.621	6,392	138,298.00	21.636
July	1,699	60,180.45	35.421	5,802	131,381.55	22.644
August	1,033	28,876.70	27.954	4,460	115,774.20	25.958
September				254	7,381.00	29.059
Total	13,772	424,391.55	30.816	19,338	448,414.15	23.189