Horticulture Innovation Australia

Final Report

Dried fruits knowledge management project

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Dried Fruits Australia Inc

Project Number: DG13005

DG13005

Contents

Summary

Based on widespread industry concern over the last few years that funding cutbacks at both Commonwealth and State level had seriously impacted on resources and research staff available to horticultural industries, DFA initiated the Knowledge Management project.

DFA established a skills-based, voluntary project management committee with members from research organisations and the industry. It soon became apparent to the committee that an on-line library to preserve scientific knowledge accumulated since the last century was the most cost effective way to ensure preservation of knowledge, while allowing the industry easy access at a time convenient to them.

Thus, project DG13005 has produced a Knowledge Management (KM) system that provides both growers and processors with access to past research reports and industry articles to increase both productivity and profitability, implement best management practices and learn from past research, while at the same time, avoiding duplication of research. Industry members will be able to improve their knowledge and skills enabling them to produce dried vine fruit in a sustainable, agile and resilient manner.

Importantly, information and knowledge accumulated over several decades has been captured and brought together in the one convenient location, resulting in improved accessibility at any time, user friendly categorization and all of it in one convenient location. To date more than 750 publications have been scanned and uploaded including most R&D reports; papers; best practice information; books; and past issues of The Vine and its predecessor, Dried Fruits News.

Additionally, parallel to this project, the Dried Fruits Australia (DFA) website, which also hosts the online library, has been updated to reflect grower and consumer demands. The online library was officially launched at the DFA Annual Growers Forum held on 6 October 2015.

Keywords

Knowledge Management; on-line library; resources; research reports; productivity; profitability; best practice; The Vine; Dried Fruits News; DFA website; technical notes; DFA dried grape production manual.

Introduction

The Australian dried grape industry has a long and successful production history, however due to growers switching to growing wine grapes during the wine boom, current production levels are much lower than those achieved several decades ago. Importantly, following deregulation in the late 1990's and the subsequent increase in import competition, the current industry outlook appears more positive with general support for a target production level of about 30,000 tonnes.

The industry's peak body - Dried Fruits Australia and its predecessor ADFA - has a strong history in initiating and driving research & development projects, as well as marketing project involvement. This 109 year history includes significant investment over many years through the Dried Fruits Research & Development Council, Rural Industries Research & Development Corporation (RIRDC), Horticulture Australia Ltd (HAL) and Horticulture Innovation Australia (HIA). Many research projects have been funded with a wide range of State and Federal agencies, with CSIRO being a major research provider over many years.

A number of developments influenced the decision by DFA to pursue the creation of a Knowledge Management system for the Australian industry and its stakeholders:
- At the DFA Board and Dried Grape IAC level, there were numerous times when potential new projects were discussed and found to have already been done previously
- The CSIRO decision in 2008 to close the CSIRO Plant Research station at Merbein. This along with the decision to transfer of the CSIRO library to Canberra highlighted the need to act quickly and gather as much material (in both hard & soft copy) as possible and create a library (both physical & electronic). Similar situations were developing with various state agencies and their library and staffing resources as agriculture budgets continued to be trimmed.

The decision to pursue this project was also influenced by:
- the DFA Board and its processor/marketer members re-affirming support for the industry objective of re-establishing Australia's reputation as a reliable supplier of high quality light fruit
- the DFA Board's actions in establishing a "Light Fruit Working Group" to gather information on previous research and best practice management as well as pursuing new research into vine maturity and management practices aimed at high quality fruit production
- the DFA's decision to relocate offices and in the process identify the location of a significant quantity of previous R&D reports and documents of relevance, in both soft & hard copy format

The increasing risk of losing not only corporate knowledge and experience as staffing levels were reduced, but also the significant physical resources in the form of research reports, technical notes, best practice production information and industry newsletters, eventually led to the point where a research project proposal was developed and approved in 2014.

Importantly, the project was consistent with the Dried Grape Strategic Investment Plan which provided for the following:

Objective 1   Improved efficiency & sustainability (costs & risks)

Strategy 1.1   Increase total dried grape production &/or number of dried grape producers
Strategy 1.2   Increase selection of high yielding, disease resistant dried grape varieties commercially available to Australian producers
Strategy 1.3   Support sustainable dried grape production

Methodology

The project methodology involved a number of different activities being implemented in several stages, following the initial establishment of a voluntary, skills based Project Management Committee (PMC) including relevant staff, to ensure industry ownership of the project.

The PMC included representatives from DFA, researchers, processors & HAL. Other members (librarian, IT expert) were co-opted as the project progressed. PMC membership included the following representatives:

- Jenny Treeby (Chair), dried grape grower
- Ivan Shaw, dried grape grower
- David Swain, Supply Manager, Sunbeam Foods
- Peter Clingeleffer, researcher, CSIRO
- Warren Lloyd, dried grape grower
- Lyn McMahon, Librarian
- Richard Water, IT expert
- John Hawtin, Industry Development Officer, DFA
- Phil Chidgzey, Chief Executive Officer, DFA

The DFA Chairman, Mark King participated as an ex-officio member of the Committee.

During the period of this project (June 214 to April 2016) the PMC met formally 9 times, with numerous informal meetings of various members and DFA staff also being held as required.

DFA managed this project with a range of activities being conducted over 4 stages:

Stage 1)   Collection of all available information based on a literature scan and input from researchers (in both hard & soft copy form) and gathering lessons learnt in knowledge management from other horticulture industries such Ausveg to assist in fine-tuning DFA's activities

Stage 2)   Review other information sources & overall task assessment - to clarify:
- What other information was available and where it was
- What form it was in and its accessibility, and thus
- Assess & confirm size of the overall task

Stage 3)   Follow-up information collection & preparation:
- Gather the additional information
- Determine how information would be presented - establish hierarchy

Stage 4)   Information technology - clarify information delivery system requirements & build the system in conjunction with an industry led upgrade of the website:
- Consider how information would be made available
- Confirm the electronic system to be used and related database & hardware needs
- Finalise the information preparation & build the system
- Integrated into the new website

As stage 1 got underway, DFA engaged a Librarian, Lyn McMahon and an IT expert, Richard Waters, to work on the project and then invited them to join the PMC. Similarly, Melissa Smith, External Communications Manager, HAL agreed to join the PMC.

Some of the issues considered by the PMC in the early stages included:

- The wide range of industry reports and published research papers that needed to be sourced
- The range of libraries that held relevant documents & information
- The various research organisations that had been involved in dried fruits research over the past 50-70 years
- Technical aspects of the project including capability to search documents held in digital form
- Lack of equipment to assist preparation of documents by providing access to OCR (Optical Character Recognition) scanning capability that recognised text and made documents searchable
- The positions of Project Officer and Project Co-coordinator were unnecessary due to the work being done by DFA staff in addition to Lyn McMahons and Richard Waters contract services and the fact that the PMC, staff and contractors worked as a close team.

As a result, the PMC would soon request several changes to the initial contract in order to be more flexible and agile:

In the milestone 102 report, DFA advised that the process of identifying and collecting research papers and reports, as well as other materials had begun. It was further reported that with advice from the PMC, DFA had decided not to engage a Project Officer at that stage to help gather material but rather to do this work using DFA's resources or PMC member direct assistance such as that provided by Peter Clingeleffer, CSIRO. In addition, Lyn McMahon (librarian) had started work on the project.

DFA committed to providing additional administrative support as required. In addition, based on advice from the PMC, DFA reported that it had deferred a decision relating to the appointment of a Project Co-ordinator to oversee this project.

At this stage, DFA sought and obtained HAL agreement to vary the original project timetable. A new milestone 103 was incorporated into the project agreement with due date 30/11/2014. The existing milestone 103 was amended to milestone 104 with due date 28/02/2014.

In the milestone 103, DFA reported that the identification and collection of relevant documents had progressed well, as had the development of a document database. Further, there was a strong focus on the preparation of documents and development of a suitable Knowledge Management System. It was also noted that DFA staff and the librarian, Lyn McMahon regularly consulted each other in relation to progress in identifying and collecting relevant papers. She had actively searched the libraries of various research agencies including CSIRO Plant Industry & Food Research, University of South Australia, Victoria University of Technology and State agencies including DEDJTR Vic, DPI NSW and SARDI.

DFA reported that the PMC had decided that it was unnecessary to engage a dedicated project co-ordinator as this role was being fulfilled by the DFA CEO. PMC members were comfortable with the progress being made in developing a Knowledge Management System (KMS).

In the milestone 104 report, DFA advised that the ongoing identification and collection of relevant documents and information had continued, as had the preparation of a document database. It was also noted that DFA had upgraded its office equipment. Importantly, a Knowledge Management System (KMS) demonstration website had also been developed by Richard Waters.

PMC members noted that CSIRO had provided copies of various research papers and other material (missing copies of Dried Fruits News) for inclusion in the KMS. In addition, CSIRO had provided advice in relation to copyright and suggested that DFA may want to seek permission to use certain documents from the Journals in which the papers had been published.

Due to the active involvement of the PMC during all stages of this project, the focus had been on user friendliness, ease of navigation and access as well as the high quality standard of information. The user friendliness was tested throughout the project by the PMC as well as various industry members.

Document collection and collation process

A wide array of documents was gathered and reviewed as part of the project. Reports were scanned and put into folders according to research body - mainly under headings for Horticulture Australia Limited (and previously DFRDC and more recently HIA) CSIRO, Victorian Department of Primary Industries, NSW Agriculture, and University of South Australia. These documents were then uploaded to the online library. Ideally everything would be available to view as full text through the online library but this was only possible if permission was granted by the publishers of the journals and some reports.

Regular meetings were held to discuss progress and decisions were made about what would be put online. Confidential reports and journal articles have not been uploaded, because of confidentiality and copyright reasons.

DFA was fortunate to be able to source copies of every research paper from the CSIRO Merbein research facility from 1920s to 2008, as well as other papers up to 2009. This material was scanned and the process of putting a record and summary for each paper in the online library is ongoing.

Note, the full text of articles published in Australian Dried Fruits News or The Vine is available in the online library.

Scanning was done in different ways – short articles were scanned with OCR so are searchable documents. All issues of The Vine are searchable as are most editions of the Dried Fruits News.

Some reports are fairly large and file sizes were minimized which means that users of the library need to have access to the most up to date version of Acrobat Reader (vs 10 or later) to open them.

Outputs

The online library
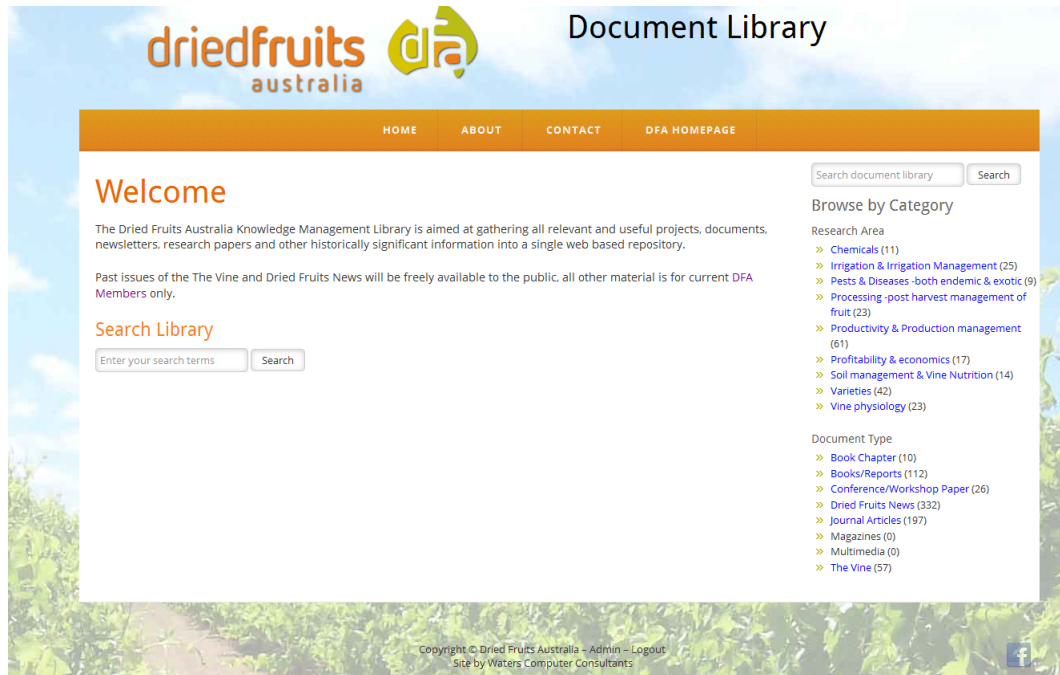
Above is the Welcome screen to the online library with an explanation of what it holds. The 'Search Library' function will search for keywords in the title, authors and the notes fields of the record. On the right hand side there are broad 'Research Area' categories that the user can browse and below that is listed 'Document Type' – online issues of *Australian Dried Fruits News* and *The Vine* can be found here as well as records for other journal articles, conference papers and book chapters. There is also capacity to add multimedia (eg. photographs) at a later date.
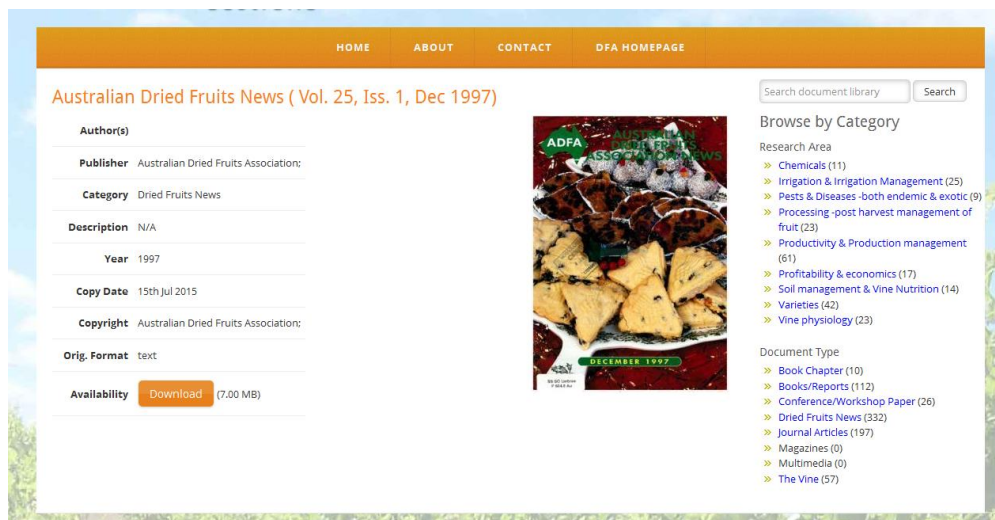
Above is an example of the screen and download option for an issue of *Australian Dried Fruits News*

Below is an example of a record where the article is not available for download but there is a summary and members are asked to contact DFA for further information.

Below is part of the results screen for a search for the author 'Clingeleffer'. Some of these records will have the article/report available to download and others will just have a summary.

Apart from what has been put in the online library, additional spreadsheets have been prepared listing the hard copy library of historical material and a hard copy file for confidential reports held at DFA. A copy of all future documents sourced will be added in the KMP file. DFA has various files containing listings of all the material that has been collected and/or scanned.

Instructions have been prepared on how to scan, rename files and where to save. There are also instructions on how to use the different forms when adding records to the online library as well as instructions on adding authors and uploading the scanned documents. DFA staff members have been trained in collecting and collating information and storing it in the online library in order to have an ongoing supply of new information for growers.

While there is a lot of material in the online library, further work will be done to identify other reports that DFA should hold. DFA recognizes that the online library is an ongoing project – there will always be new information to add and let grower members know about through the Vine and emails.

Technical Overview of the Knowledge Management System

Refer to Appendix 1 for a copy of the Technical Overview prepared by Richard Waters.

Information articles for dried grape levy payers

Refer to Appendices 2 & 3 for copies of articles published in The Vine in the Oct-Dec 2015 and Jan-Mar 2016 editions. These articles provide background to the KMS project and its official launch in Oct 2015 and invite grower members to register so that they can access the on-line library.

Outcomes

The Dried Fruits Knowledge Management project, DG13005 has produced a knowledge management system that provides both growers and processors with access to a vast amount of research information and past industry articles that can be used to increase productivity and profitability, implement best management practice and learn from past research, while avoiding any duplication of research. This will allow industry to improve their knowledge and skill set, enabling them to produce dried vine fruit in a sustainable, agile and resilient manner.

Due to the active involvement of the PMC during all stages of this project, the focus has been on user friendliness, easy of navigation and access as well as the high quality standard of information.

Importantly, information and knowledge accumulated over several decades has been captured and brought together in the one convenient location, resulting in improved accessibility at any time, user friendly categorization and all of it in one convenient location, known to all of the industry. To date more than 750 publications have been scanned and uploaded including most R&D reports; papers; best practice information; books; and past issues of The Vine and its predecessor Dried Fruits News.

Additionally, parallel to this project, the Dried Fruits Australia (DFA) website, which also hosts the online library, has been updated to reflect grower and consumer demands, including the on-line library. The online library was officially launched at the DFA Annual Growers Forum held on 6 October 2015.

Evaluation and Discussion

The online library was launched at the DFA AGM with many industry representatives getting a first insight into what is available, how to navigate etc. Feedback from this session was very positive as growers commented that the layout was attractive, articles easy to locate and that the information contained in the library is very useful. Growers also commented that an online library that is accessible 24 hours, 7 days a week is preferable to an old fashioned library with limited opening hours, which are not always convenient and easily reached.

Online knowledge management enables growers to access the information when needed from anywhere at any time.

Since the on-line library was launched in October 2015, and fully operational from January 2016, the number of visits being recorded has averaged about 1,200 per month. So far in June 2016, there have been 709 unique visitors who made 835 visits, averaging 2.23 pages/visit and 22.31 hits/visit. Most visitors are from Australia (about half) followed by USA and China.

Refer to Appendix 4 for more details of on-line library usage.

The DFA Board will review progress with the online library and grower usage in the near future, with input from the IT specialist and the librarian. While still in the planning stages, consideration is being given to use of a survey monkey at the next Annual Conference to find out what growers think about the usefulness of the on-line library and the potential it holds for them.

Although too early to assess its longer term impact, DFA anticipates that the on-line library will develop into a significant source of research and other information for both growers and other stakeholders including the processor/marketers.

The early establishment of the Project Management Committee (PMC) was an important factor influencing the successful development of the Knowledge Management system. Further, the composition of the PMC, with a mix of skills amongst staff, growers, researcher, processor, HAL, librarian and IT expert, helped ensure broad ownership of project and access to a range of information sources. The HAL involvement was also important in providing another source of advice as well as ensuring that the funding organization was kept well informed.

The decision to engage specific expertise, including a librarian and an IT expert, was vital and helped ensure that the PMC had access to excellent information and advice which facilitated the preparation and cataloguing of documents and the construction of the on-line library.

The broad input from PMC members and DFA staff led to the decision, as reported in milestone reports, not to engage a Project Officer to assist with information and document collection or a Project coordinator to manage the project. The DFA CEO fulfilled the co-ordination role effectively.

During 2015/16, the DFA website was revamped significantly to cater for both public and grower users. This process ensured a smooth integration of the on-line library, adding value to both. The on-line library was promoted strongly when launched at the DFA Annual Conference in October 2015, and also in subsequent articles published in The Vine magazine (refer Appendices 2 & 3).

Recommendations

Recommendation 1   DFA recognizes the need for ongoing maintenance of the Knowledge Management system (on-line library) and should allocate adequate resources for this purpose.

Scientific Refereed Publications

None to report

>

Intellectual Property/Commercialisation

No commercial IP generated

Acknowledgements

Dried Fruits Australia acknowledges the assistance provided by all members of the Project Management Committee including Lyn McMahon and Richard Waters whose expertise was integral to the successful conclusion of this project.

Appendices

Appendix 1   Technical Overview of the Knowledge Management System project (Richard Waters)

Appendix 2   Article from the Oct-Dec 2015 edition of The Vine

Appendix 3   Article from the Jan-Mar 2016 edition of The Vine

Appendix 4   DFA on-line library statistics

DFA Knowledge Management Project Technical Overview

The KMP was developed with open standards in mind to ensure its longevity and ease of access. For this reason MySQL was chosen as the database and PHP was chosen as the language to code in.

The initial goal of the website was to store and present useful research data and documents that would be interesting and relevant for current DFA members. Much of this material is not easily accessible and DFA had a unique opportunity to present this in a meaningful manner to its members. Ease of use was a prime goal for the site. Users must be able to locate the documents they were after quickly and easily.
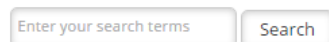
Website operation

Anyone wishing to use the knowledge library must first be added as a user to the website. When attempting to access the library, a user will be asked for a username and password. Once entered correctly they will be given the ability to browse documents by research area, document type or simply enter search terms. Once the user finds the relevant document they can download a copy in PDF format if it is available.

Searching

The website integrates a search facility to enable users to quickly find the information they require. Currently the search fields are set to title, description, keywords and author name. Full text searching is not available on the PDF files as many of these are scanned from hard copy material and converting this using OCR software was beyond the scope and time limits of the project. Many of these older documents do have keywords entered into the database which helps with indexing.

Search

34 results for 'drip irrigation'

Drip irrigation - a grapegrower's guide
First published April 1993. ISBN 0730567133 This booklet aims to inform interested grape gowers about drip irrigation, its requirements, …

Drip irrigation - a grapegrower's guide
Third edition. ISBN 0734713053 This booklet aims to inform interested grape gowers about drip irrigation, its requirements, advantages an…

Sample search results screen

Document Display and Download

Once a document is found and selected, the details are displayed for the user and a download button for the document will be shown if a PDF copy is available. The user can then download this and save or print a copy for their own records.

Dried grape best practice guide part 2: Post-harvest and winter

Author(s)	Dried Fruits Australia;
Publisher	Dried Fruits Australia; Horticulture Innovation Australia (HIA);
Category	Books/Reports
Description	This booklet offers guidelines for decision-making at critical points in the winter and pruning phases of dried grape production. It offers suggestions for management practices that can help improve the quality of dried grapes produced. The guide is to be read and used in conjunction with the Dried Grape Production Manual and the Spray Diary, both of which are available from Dried Fruits Australia.
Year	2015
Copy Date	30th Apr 2015
Copyright	Dried Fruits Australia;
Orig. Format	Booklet
Availability	Download (859 KB)

Sample document detail and download button

Database Design

As stated previously the website is based around a MySQL database with a number of tables used to store the data effectively.

The data model is shown on the following page. As can be seen, most data is stored in the lib_documents table with a number of lookup tables used to provide links to publishers, authors etc. Note that the tblusers table is part of the DFA websites user management. This is designed this way to ensure that users on the DFA site have seamless integration into the library and are only required to log on once for both the DFA and Library sites.

Currently there are around 750 documents stored in the database. The design of the database and website will allow for many thousands of documents to be added without affecting performance.

lib_categories

PK	**category_id**
	category

lib_documents

PK	**doc_id**
FK1	category_id
FK2	doc_type_id
FK3	author_type_id
	title
	creator
	contributor
	publisher
	isbn
	description
	pubyear
	origdate
	copydate
	keywords
	rightsholder
	rightsdetail
	citation
	origformat
	viewingformat
	dateadded
	dateupdated
	journal
	year
	notes
	fruittype
	volume
	issue
	month
	pages
	server_filename
	server_jpgname

lib_author_type

PK	**author_type_id**
	author_type_desc

lib_document_type

PK	**doc_type_id**
	doc_type_desc

lib_doc_authors

FK1	author_id
FK2	doc_id

lib_authors

PK	**author_id**
	author_name

lib_doc_researcharea

FK1	researcharea_id
FK2	doc_id

lib_researchareas

PK	**researcharea_id**
	researcharea

lib_doc_accessroles

FK1	role_id
FK2	doc_id

lib_accessroles

PK	**role_id**
	role_name

lib_user_accessroles

FK1	user_id
FK2	role_id

lib_doc_rightsholder

FK1	publisher_id
FK2	doc_id

lib_doc_publisher

FK1	publisher_id
FK2	doc_id

lib_publishers

PK	**publisher_id**
	publisher_name
	publisher_url

tblusers

PK	**user_id**
	username
	password
	member_no
	fullname
	email
	country_id
	last_logon
	pwd_changed

Users table on DFA website

Data Model for library document management

Administration of Documents

The management of documents in the library is provided by a secure area of the website which gives the operator access to all data associated with each document.

Documents

Add Document | Books/Reports ▼ | Search

Document	Date Added	Updated		
Dried grape best practice guide part 1: Pre-harvest and harvest guide	30-04-2015	13-05-2015	Edit	Delete
Dried grape best practice guide part 2: Post-harvest and winter	30-04-2015	13-05-2015	Edit	Delete
Producing high value dried grapes: literature review	30-04-2015	13-05-2015	Edit	Delete
ADFA Dried grape production manual: a production guide for quality dried grapes	30-04-2015	13-07-2015	Edit	Delete
International dried grape conference: Mildura November 2008	30-04-2015	13-05-2015	Edit	Delete
Enhanced dried grapes types for the Australian industry	30-04-2015	13-05-2015	Edit	Delete
A systematic and smarter approach to breeding and developing grapevine rootstock	30-04-2015	27-05-2015	Edit	Delete

View Website | Admin Home | Documents | Authors | Publishers | Categories | Research Areas

Administration area showing list of documents in the Books/Reports category

Administrators can add, edit and delete any document, as well as adding authors, publishers, categories and research areas.

Document editing allows the author to enter all details pertaining to the document as well as uploading a PDF copy of the file. The upload facility is designed to allow uploading of very large files and to provide responsive feedback on the upload process.

Edit document

Title: Dried grape best practice guide part 1: Pre-harvest and harvest guide

Category: ○ Book Chapter ● Books/Reports ○ Conference/Workshop Paper ○ Dried Fruits News ○ Journal Articles ○ Magazines ○ Multimedia ○ The Vine

Document Type: ○ Still image ● Text ○ Video

Research Area: × Productivity & Production management

Author(s): × Dried Fruits Australia

Author Type: ○ Author ○ Compiler ○ Editor

Publisher: × Dried Fruits Australia × Horticulture Innovation Australia (HIA)

Description:

This booklet offers guidelines for decision-making at critical points in the pre-harvest and harvest phases of dried grape production. It offers suggestions for management practices that can help improve the quality of dried grapes produced. The guide should be read and used in conjunction with the Dried Grape Production Manual and the Spray Diary, both of which are available from Dried Fruits Australia.

Document entry/edit screen

The description area of the entry screen allows for rich text to be entered, giving the operator flexibility in the way document information is displayed.

Annual Growers' Forum

A comprehensive library of industry resources is now at the fingertips of Australian dried fruit growers thanks to a knowledge management project.

The online library was revealed at the Dried Fruits Australia Annual Growers Forum held on 6 October.

DFA Chief Executive Phil Chidgzey said the dried fruit industry had accumulated a massive amount of research data and technical notes during its rich history, but there was no easy way of finding out what information was available or where it was located.

"Many research staff had retired or moved on in response to government cutbacks. The industry was concerned that if we did not act now there was a real risk that this information would have been lost," he said.

The *Dried Fruits Knowledge Management Project* DG13005 was funded through dried grape research levies and matched funds from the Australian Government. Facilitated by Horticulture Innovation Australia, the project aimed to find the information and consolidate it in one location where it could be easily accessed by industry members.

Mr Chidgzey said the project management committee decided that an on-line library within the DFA website would be the logical way to present the information.

"Available at any time or place, an on-line library enables growers to access information when and where they need it," he said. "This may be down the paddock looking up pest and disease symptoms on a smart phone, or reviewing past research documents to improve productivity."

Librarian Lyn McMahon reviewed the information and catalogued it making it easier for growers to search for specific items. Working alongside her was IT specialist Richard Water who built the system to house the library and in the process revamped the DFA website.

Mr Chidgzey said the library contained over 550 publications to date. These include R&D reports; papers; best practice information; books; and past issues of *The Vine* and its predecessor *Dried Fruits News*.

"It is a resource for both growers and processors, enabling them to access

The Dried Fruits Australia website has been upgraded with a fresh modern look to coincide with the launch of the on-line library.

past research and other information in an effort to increase productivity and profitability," he said.

The library will not be open to the general public. Dried Fruits Australia members are advised to contact Dolores at the DFA office to organise a username and password which will enable them to access the information.

Basin update

Another guest speaker was Murray-Darling Basin Authority Chair, Neil Andrew AO, who presented information on developments within the basin plan. As a former dried fruit grower, he showed real understanding of the pressures on growers as they managed their annual water allocation. He spoke about how the MDBA was managing the reduction of water extraction from the basin river system through various initiatives. This included the introduction of the Basin Plan in 2012 which will eventually stabilise the withdrawals and establish the Sustainable Diversion Limits (SDLs).

Murray-Darling Basin Authority Chair, Neil Andrew AO, a former dried fruit grower connected with the audience.

Mr Andrew also talked about how savings were being made in water delivery through the plastic lining of channels and the installation of pipes as part of the Sunraysia Modernisation Plan.

He said modern irrigation techniques on farm were also reducing the drainage outfall to evaporation basins and engineered structures were being used to manually manage flood inundations of sites and enable the river environment to recover.

Marketing Aussie sultanas into Europe

Recovery is also on the minds of the Dried Fruits Australia Board as they endeavour to stimulate investment in the industry and regain market share in Europe.

The board has initiated a marketing project into Europe following discussions with both major processors and Boesch Boden Spies, a marketing agent based in Hamburg, Germany who acts for both Sunbeam Foods and Australian Premium Dried Fruits.

Mr Chidgzey said the initial aim of the project was to regain the confidence of the European industry.

"The European market has the potential to pay premium prices for high quality dried fruit," he said.

"We would like to tap into this potential with high quality Australian sultanas and possibly grow demand to 3,000 tonnes in 2015."

Members encouraged to register for on-line library

The Dried Fruits Australia website has been reinvigorated with a vibrant new look and more information for growers and consumers.

A key feature of the new design has been the inclusion of a secure members' area which allows Dried Fruits Australia members to access the on-line library and other industry information and reports.

Dried Fruits Australia Chief Executive Phil Chidgzey said the library was one of the outcomes of the Dried Fruits Knowledge Management Project which aimed to collate all the industry references and research data in the one location.

To date more than 550 publications have been scanned and uploaded. They include: R&D reports; papers; best practice information; books;

and past issues of *The Vine* and its predecessor *Dried Fruits* News.

"This project has preserved the knowledge accumulated over several decades, and by bringing it together in the one convenient location, improved its accessibility and usefulness to the industry," Mr Chidgzey said.

"This precious resource is available to both grower and processor members, but will not be open to the general public.

"I encourage all Dried Fruits Australia members to contact the DFA office and register to use the website.

"Browse through the library, you never know what useful tips you may find that may help increase productivity and profitability on the farm."

The registration process is quick and easy, members need to talk DFA Membership Officer Dolores Shaw-Wait, confirm their email address (used as the username) and create a password. This will enable them to access the on-line library and a wide range of industry and research information.

Revised date for New Varieties Field Walk

Selecting which grape varieties to plant and getting the mix of varieties right to manage risk and time and labour inputs can be a difficult decision.

As varieties mature at different times growers are now looking to plant a mix of varieties on their properties. This helps minimise the risk of damage to the fruit from a single rain event and also spreads the workload over harvest.

Over the past few years, Cardross grower, Allan Long has opened his property for a field walk to allow growers to observe his plantings of new sultana type varieties to directly compare the varieties themselves. We are fortunate that he has agreed to do so again.

This will be the last opportunity to see all of the varieties planted as some of the varieties in the demonstration block are going to be removed.

Please note the date of the field walk has changed from the previous notice and will now be held on Sunday 17 January 2016 and will commence at 10:00am. Mr Long's property is situated at the intersection of Westcliffs road and Ropers Road, Cardross.

Further information will be sent to Dried Fruits Australia members through DFA's e-news service.

Diary 2016

JANUARY
17	New Varieties Field Walk, Allan Long's property, intersection of Westcliffs and Ropers Roads, Cardross. Contact Dried Fruits Australia:
T: *(03) 5023 5174.*

FEBRUARY
3-5	Fruit Logistic, Messe Berlin GmbH, Berlin, Germany,
W: www.fruitlogistica.de/en

MARCH
3-4	Global Agriculture Summit 2016, Growing connections for flourishing communities, Dordt College, Sioux Center, Iowa, United States,
W: *www.agrisummit.org*

8-11	Foodex Japan 2016, Makuhari Messe, Chiba, Japan,
W: www3.jma.or.jp/foodex/en

APRIL
5-7	Irrigation New Zealand Conference and Expo 2016, Oamaru, New Zealand,
W: *www.irrigationnz. co.nz/events-training/ conference-2016*

12-15	FHA Singapore 2014, Singapore Expo, Singapore,
W: *www.foodnhotelasia.com*

MAY
5-7	SIAL China, Shanghai New International Expo Centre, Shanghai, China,
W: *www.sialchina.com*

8-11	17th HOFEX, Hong Kong Convention and Exhibition Centre, Hong Kong.
W: *www.hofex.com*

10-13	Seoul Food Hotel 2016, Korean International Exhibition Center, Seoul, South Korea.
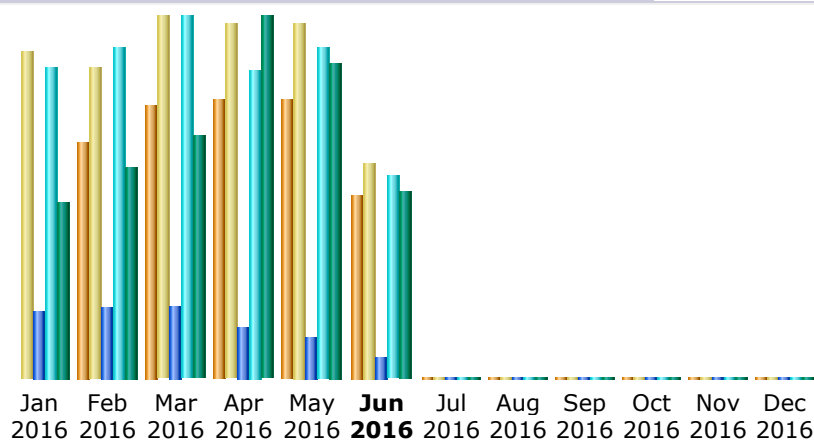**W:** www.seoulfoodnhotel.co.kr

13-14	Riverina Field Days, Griffith Showgrounds.
W: *www.riverinafielddays.com*

Appendix 4 – DFA On-line Library Statistics

Reported period	Month Jun 2016				
First visit	01 Jun 2016 - 00:57				
Last visit	20 Jun 2016 - 21:48				
	Unique visitors	Number of visits	Pages	Hits	Bandwidth
Viewed traffic *	**709**	**835** (1.17 visits/visitor)	**1,863** (2.23 Pages/Visit)	**18,635** (22.31 Hits/Visit)	**8.15 GB** (10231.16 KB/Visit)
Not Viewed traffic			**2,539**	**7,572**	**8.23 GB**

* Not viewed traffic includes traffic generated by robots, worms, or replies with special HTTP status codes.

Monthly history

Jan 2016 Feb 2016 Mar 2016 Apr 2016 May 2016 **Jun 2016** Jul 2016 Aug 2016 Sep 2016 Oct 2016 Nov 2016 Dec 2016

Month	Unique visitors	Number of visits	Pages	Hits	Bandwidth
Jan 2016	994	1,271	6,275	28,835	7.63 GB
Feb 2016	917	1,195	6,687	30,681	9.22 GB
Mar 2016	1,062	1,396	6,757	33,464	10.58 GB
Apr 2016	1,076	1,365	4,820	28,537	15.76 GB
May 2016	1,076	1,376	3,831	30,612	13.77 GB
Jun 2016	709	835	1,863	18,635	8.15 GB
Jul 2016	0	0	0	0	0
Aug 2016	0	0	0	0	0
Sep 2016	0	0	0	0	0
Oct 2016	0	0	0	0	0
Nov 2016	0	0	0	0	0
Dec 2016	0	0	0	0	0
Total	5,834	7,438	30,233	170,764	65.10 GB

Visits duration

Number of visits: 835 - Average: 116 s	Number of visits	Percent
0s-30s	673	80.5 %
30s-2mn	69	8.2 %
2mn-5mn	35	4.1 %
5mn-15mn	27	3.2 %
15mn-30mn	15	1.7 %
30mn-1h	6	0.7 %
1h+	6	0.7 %
Unknown	4	0.4 %

Locales (Top 10)

Locales		Pages	Hits	Bandwidth	
Australia	au	985	12,880	2.56 GB	
United States	us	220	1,156	890.38 MB	
China	cn	203	707	1.64 GB	
France	fr	59	81	20.23 MB	
Ukraine	ua	39	98	3.44 MB	
Brazil	br	37	744	25.23 MB	
India	in	31	416	119.04 MB	
Great Britain	gb	28	288	79.94 MB	
Thailand	th	24	83	43.93 MB	
Italy	it	24	255	44.02 MB	