A Message From Our Executive Officer

Flooding and Wild Weather

Again, we are seeing water raising and rain falling around the country. There seems to be no end to the wet weather on the east coast. Our thoughts go out to all those in the PC community who have been affected by the floods. The PCA family stand ready to assist in any way we can.

There is some good news on the horizon. The Indian Ocean Dipole is predicted to breakdown towards the end of December and the current La Nina is expected to ease into the start of 2023. It is likely that these conditions will bring some dryer weather into the end of summer/start of Autumn. More details can be found here

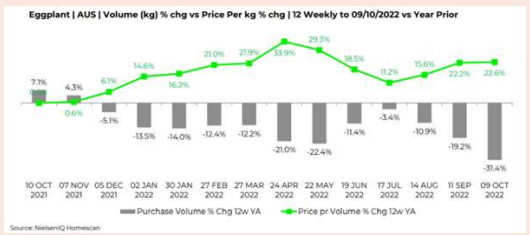
Egglant Market Insights

Eggplant dollar sales remained stable (-0.5%) for the 52 week period to November 22, however volume sales declined -15%. This result is in line with the total vegetable market which saw modest dollar sales growth while volume dropped by -7.7%.

In the 52 week period households bought less volume, less frequently compared to last year. Australian households who do purchase spend $15.11 per year on eggplants, spending around $3.67 per shopping trip. This indicates that households only purchase eggplant 3 times a year.

Sam Turner • *PCA Executive Officer*

Increases in price over the year correlated with a decline in volumes purchased.



Interestingly, eggplants heavily under-index in major supermarkets, meaning that they are bought more often in greengrocers and markets as compared to the rest of the vegetable market. Over a quarter of all eggplant volume purchases are made by Senior couples.

There is an opportunity to drive increased consumption through more direct marketing to foodies who are included to purchase through markets and greengrocers, but also to make the produce more accessible to the general population through the major supermarkets.

More information on these and other levied crops are available here: Harvest to Home

A Message From Our Executive Officer Continued

QLD Grants Available

Queensland DAF have opened the next round of Rural Economic Development Grants. Funding can be used for:

- capital expenditure on buildings, plant and equipment for the exclusive use of the project
- new or used plant and equipment for the exclusive use of the project
- consumables used for the project
- travel and accommodation where supported by a full itinerary and travel outcomes
- training costs and technical support that are project specific
- salary and on-costs for staff and professionals working solely on activities for the funded project.

More information and details on how to apply can be found here

Auditing and Freshcare

Freshcare have recently held their AGM where they identified that they are actively working to increase the availability and efficiency of auditing services for growers. Access to timely audits have become difficult for growers around the country, across all commodities. Unfortunately, there isn't a great deal of labour around at the moment so these auditing challenges are likely to continue into the future. Growers are recommended to get their audits booked in as early as possible to avoid timing issues.

The PCA Board would like to extend our warmest welcome and good wishes to our new members.

Individual Members

Binh Nguyen, The University of Queensland

Margaret Tadrosse, Bilpin Fruit Bowl

We look forward to many successful years together!

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Upcoming Webinar

Forecasting the year ahead – What changes to expect in cost of production, the weather, and the markets in the near future.

Australian vegetable growers have had a tough couple of years. Increases in the cost of production coupled with devastating floods have altered the economics or running a farm.

In this session we will look at what factors have effected changes in cost of production, farmgate price, and the weather over the last year and what tools exist to help growers prepare themselves for next year.

PRESENTATIONS
Market trends in vegetable consumption and price
Presented by James Parry, Fresh Logic

Climate outlook and forecasting tools for growers
Presented by Rachel Davis, Bureau of Meteorology

Drivers of change in fertiliser and labour costs
Presented by Andrew Whitelaw, Episode 3

These presentations will be followed by a moderated Q&A session.

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Year Round Asparagus Production
Mike Nichols

Some 20 years ago I became interested in coir, and a former student (who worked for a coir company) suggested that I tried to use it in my research. At the time I was still actively involved with asparagus, so planted some young seedlings in boxes filled with coir in a greenhouse and irrigated with a full nutrient solution. The growth was astronomical and a year later I was harvesting spears which I sold to a local up market restaurant for an astronomical price because they were out of season. This was written up in the magazine "Practical Hydroponics and Greenhouses", which is now (sadly) no longer published.

A few years later I suggested to my friends Alan and Dot Bisseett (of the Wee Red Barn, Masterton) that this might be an interesting crop to try in their 7m wide Haygrove High tunnels. 2 beds (1m wide and 1m high) were constricted in each tunnel, to allow for a tractor to drive between the beds, and the beds filled with used coir from their strawberry operation. Dormant asparagus crowns were obtained from Aspara Pacific in Christchurch, and in the early spring planted into the coir -3 or 4 rows per bed and 30cm between the plants in the row. Daily watering (and feeding) with a full hydroponic solution was carried out, and fern growth was excellent. (Fig 1)

Fig 1.

In late May the irrigation was turned off and the fern died down and was cur off at ground level and removed in late June. The beds were then irrigated and young marketable asparagus spears appeared and were harvested from mid-late July. (Fig 2).

Fig 2.

This was an unheated greenhouse, and productivity was very high. 1 kg/plant was harvested per plant before harvesting ceased in mid-October when the outdoor crop became available, and prices fell. The out of season crop sold for 3 times the price of the in season product. Normally field asparagus only produces 5-10 t/ha/year, and then only after 2 or 3 years of establishment. Hydroponic greenhouse asparagus as grow by the Bissett's produces 22t/ha/year of out of season asparagus, and by manipulating the growing cycle could be available at any time of the year. It might also be possible to produce 3 crops every 2 years.

Note: Asparagus is difficult to grow in northern Australia due primarily to the fern disease problem of the rainy season, but by using high tunnels and hydroponics it should be able to produce out of season asparagus for the southern states (or even for export to SE Asia) at any time of the year.

For further information contact:
Mike Nichols
E-mail: oxbridge@inspire.net.nz

NSW Farm Tour Sponsors

Rural Economic Development Grants

The next round of grants has opened and closes 30 January 2023 – this is the expression of interest round with successful applicants then invited to submit a full proposal. Up to $200,000 as a co-contribution matched 50:50. The guidelines provide more information – essentially to be eligible – must generate jobs, provide value for money and significant benefit to a relevant rural area and be related to primary production value chains.

Funding can be used for below – (not limited to this list)

a) capital expenditure on buildings, plant and equipment for the exclusive use of the project
b) new or used plant and equipment for the exclusive use of the project
c) consumables used for the project
d) travel and accommodation where supported by a full itinerary and travel outcomes
e) training costs and technical support that are project specific
f) salary and on-costs for staff and professionals working solely on activities for the funded project.

Click Here for More Information

Surveillance and Diagnostics Key to Protect Bee Industry

With over 29,000 registered beekeepers who own approximately 668,000 hives, keeping Australia's honey bee population healthy is no mean feat.

Australia's geographic location, a world-class biosecurity system and programs such as the National Bee Pest Surveillance Program (NBPSP) protect the industry from high priority pests that devastate honey bee industries overseas.

The NBPSP is a large industry-government partnership jointly funded by Hort Innovation, the Australian Honey Bee Industry Council (AHBIC), Grain Producers Australia (GPA), the Australian Government and State and Territory governments.

The program currently targets 13 pests that range from giant honeybees at 17-20 mm long to tracheal mites which are less than 0.2 mm in size, and viruses which cause significant disease in colonies.

The NBPSP uses a range of tools and tests to detect these pests.

A lot of surveillance activities are undertaken in the field at ports of high risk concern for the entry of these target pests.

"Several different types of samples are collected and sent to a specific laboratory and highly-trained individuals who inspect the samples or expose the samples to further tests, to detect exotic pests as soon as possible," said Dr Jenny Shanks, Plant Health Australia's Manager, Bee Biosecurity.

The types of tools used in diagnostics vary. Beekeepers can do a physical inspection for pests by looking at hive frames or undertaking sugar shakes or alcohol washes. Laboratories have a wider range of diagnostic tools such as microscopes to inspect bees, sticky mats for mites, dissection to remove the trachea of individual bees, and molecular tests for detecting viruses. These tools assist with Varroa species identification and to genetically confirm exotic bee species.

Interestingly, birds can also assist in diagnostics. The presence or absence of pest bees in regurgitated pellets, can be inspected in a laboratory for the presence of bee wings.

"The wings are then inspected for venation arrangement, as wing veins are different between Asian honeybees and European honeybees," said Dr Shanks.

Specialist entomologists such as Alberto Guanilo from Bugs for Bugs Ltd. dissected at least 25,000 adult honeybees between 2016 and 2021, removing the trachea of the bee and inspecting for the presence or absence of a 'tracheal mite'. This method requires the careful and precision dissection of the trachea from the bee under a microscope. The samples of bees were collected from hives, swarms captured in catchboxes and around port areas, and during floral sweep netting activities by government biosecurity officers. In Tasmania over 4,000 bees have been inspected for tracheal mites.

Surveillance and Diagnostics Key to Protect Bee Industry Continued

Dr John Roberts from the CSIRO has developed an exotic virus assay, used on samples of bees collected from hives to inform the presence or absences of harmful bee viruses not currently in Australia. Some of these viruses include Deformed Wing Virus (DWV), Acute Bee Paralysis Virus (ABPV), and Slow Bee Paralysis Virus (SBPV). Between 2019 and 2021, 600 samples of adult bees were provided to the CSIRO lab for testing of these three key bee viruses. All samples over the 5-years have returned negative results for DWV, ABPV, SBPV.

The NBPSP stakeholders and managers are continuously exploring new innovative diagnostic tools to improve detection sensitives and laboratory capacity and efficiency, such as trialling molecular tests for detection of tracheal mite, or the use of eDNA to detect even more information of target pests.

Article via Plant Health Australia

Instant Crop N Analysis to Boost Fertiliser Efficiency

GROWERS can now gain the nitrogen (N) nutrition status of a range of crops instantly following the launch of a unique smartphone app that aims to assist the most efficient application of fertilisers in order to maximise returns and protect the environment.

Croptune uses smartphone cameras to take leaf photos, upon which it measures chlorophyll and provides both a plant N uptake and percentage range reading for annual crops, as well as a percentage range measurement for perennial crops.

Where the N percentage lands on an indicator bar that transitions from green to red for the selected annual crop suggests whether applications can be reduced or are required to achieve optimum nutrition and production, while the recommendation also includes a calculation of phosphorus (P) and potassium (K) requirements.

In perennial crops, the percentage measurement allows growers to track the N nutrition status in real-time and, if necessary, adjust applications immediately, rather than be delayed waiting for laboratory plant analysis results.

Haifa Australia Northern Sales Agronomist Peter Anderson, Croptune Product and Agronomy Manager Eldad Sokolowski, Aaron Myrteza, Lindsay Rural Mareeba, and Helen Bensilum, Farm Manager at Kureen Farming's 'Avomac' property at Kairi, near Tolga in Northern Queensland, take a look at the new Croptune app analysing the nitrogen percentage of Shepard and Hass avocado trees.

Instant Crop N Analysis to Boost Fertiliser Efficiency Continued

Helen Bensilum, Farm Manager at Kureen Farming's 'Avomac' property at Kairi, near Tolga in Northern Queensland, Aaron Myrteza, Lindsay Rural Mareeba, and Croptune Product and Agronomy Manager Eldad Sokolowski pictured using the new Croptune app to measure the nitrogen status of avocado trees.

So far, the Croptune app has been calibrated for 18 crops, including wheat, cotton, corn, rice, tomato, potato, carrot, capsicum, lettuce, cucumber and onion annual field crops and banana, avocado, pear, peach, nectarine, clementine and cherry perennial orchard crops, and with sugarcane expected to be added from the start of 2023.

Croptune Product and Agronomy Manager Eldad Sokolowski, who travelled to Australia from Israel to launch the app with Haifa Group, which partnered its development, said calibration required a full season and hundreds of samples for each crop. It aligns laboratory N analysis with leaf greenness levels, and which continually improves through the use of artificial intelligence.

Eldad said currently there were about 40 greenness layers used for nitrogen measurement of each crop, with the aim to achieve more than 100 layers to further improve its accuracy.

"Currently the accuracy is 85-90pc with the laboratory results, which also are not perfectly accurate."

"We estimate labs have 90pc accuracy and indicate a single figure rather than a range, so the correlation is very close," Eldad said.

Growers also can target specific areas within whole paddocks or blocks with the app to help further fine-tune their nutrition management and, together with their agronomist or adviser, they can access a developing databank of the areas. In future, it can contribute to aerial N maps for paddocks or blocks. Eldad said for the N application recommendation as well as P and K calculation in annual crops, growers entered several details into the app including the planting date and plant density.

"From the age of the crop and the plants per area, the app knows what the N level should be at that time."

He said one of the key aims was to allow growers to apply the minimum base fertiliser required upfront and then to use the app to understand the crop nutrition status and make applications accordingly.

"It depends how frequently fertiliser is applied, but with crops like potatoes during the critical part of the season, growers could check the nutrition once a week."

Haifa Australia Northern Sales Agronomist Peter Anderson (right) takes North Queensland growers David Rolfe, Mena Creek, and Michael Russo (second from right), Boogan, as well as Mac Keenan, Frank Lowe and Sons Innisfail, through the workings of the new Croptune app.

Instant Crop N Analysis to Boost Fertiliser Efficiency Continued

Use of the app in crop trials has shown a reduction in fertiliser application in potatoes of 40 kilograms per hectare, resulting in 30pc increased nutrient use efficiency, while in wheat the fertiliser saving was 35kg/ha for 46pc higher nutrient use efficiency and in carrots the same yields were achieved despite 20kg/ha less fertiliser applied. The lower fertiliser applications also reduced carbon dioxide emissions.

Eldad said the app was developed initially for the widest-grown crops in the world and the most popular varieties, however the list of crops would continue to grow and work was ongoing to add further varieties.

It also will undergo accreditation for use to meet environmental regulations in Israel and this could pave the way for similar developments in Australia.

Jake McLagan, Lindsay Rural Tully, takes a banana leaf photo with the new Croptune app to identify the crop's nitrogen percentage, overlooked by Haifa Northern Sales Agronomist Peter Anderson, local growers Michael and Gerard Laspina, and Croptune Product and Agronomy Manager Eldad Sokolowski.

Haifa Australia Managing Director Trevor Dennis said as part of the company's commitment to the 17 Sustainable Development Goals (SDGs) under the United Nations Global Compact initiative, the adoption of systems for sustainable agriculture was a key focus and the primary target with the app was to improve the efficient utilisation of fertilisers for growers and also the broader community and environment.

James Dunn, Lindsay Rural Innisfail, Croptune Product and Agronomy Manager Eldad Sokolowski and Haifa Northern Sales Agronomist Peter Anderson pictured discussing the upcoming use of the new Croptune app for analysing the nitrogen percentage of sugarcane.

Eldad said the Croptune app was suitable for use with a wide range of iphone, android and Google handsets, while default camera settings should be maintained and photos via the app should be of leaves similar to those used for laboratory plant analysis. In areas with poor connectivity, the app can store the images for analysis later.

The Croptune app is available to growers and advisers via app stores, where users can annually subscribe to field crop or orchard crop versions based on the crop area it is to be used over.

Users can take advantage of a free trial with the app before incurring a fee of around $20 per month, while availability through rural resellers also is being explored to make it as cost-effective as possible for users.

Media information: Rohan Howatson, Howatson PR Communications, on 0407 428 459.

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