BREMER CATCHMENT ASSOCIATION INC.

around the bremer

June 2023

Special points of interest:

The next Meeting will on

15th June 2023

Inside this issue:

By Job Atkinson, BCA Secretary

Dear members and friends,

I hope this newsletter finds you well. I am writing to provide you with important updates regarding our upcoming operational meeting.

The meeting is set to take place on Thursday, the 15th, at 6pm. **We are grateful for the continued use of the Youth Space Building at the Leichhardt and One Mile Community Centre** as our venue. Thanks again to Kym and her team for allowing us to use this great space. (https://goo.gl/maps/VTXc15KyeQezCpxbA)

We are excited to announce that Belinda Whelband, Team Leader at Ipswich City Council for Strategic Catchment and Conservation Planning, will be joining us as a guest speaker. Belinda will be sharing upcoming council waterway projects and exploring opportunities for collaboration with the BCA. Additionally, she will be joined by Anna Shera to discuss the future of the Bremer River Network (BRN) and how we can leverage it for enhanced stakeholder engagement in the catchment.

Furthermore, we are delighted to have Anastasia Constable from Ripley Valley State Secondary College joining us. Anastasia has expressed interest in our new School's Outreach Program and potential projects where the BCA can provide support. These projects include an On-site Native plant Nursery, Riparian and Bush Restoration Projects, and other collaborative ideas such as workshops, guest speakers, and lesson plans.

I would also like to draw your attention to our upcoming working days this weekend. There is a planned working day on Saturday at 2pm for the Cribb Park bush care group and one on Sunday at 8am for the Lorikeet Street bush care group. Additionally, BCA will be participating as stall holders at the Hardings Paddock, Experience Nature Family Day on Saturday.

Thank you for your continued support and enjoy reading our Newsletter.

Hazelnut at the heart of more than just chocolate for Australian agriculture

At the centre of those little gold chocolate parcels of happiness synonymous with celebrations and special events is the hazelnut. But there's more to this small but mighty nut than just the centrepiece of a Ferrero Rocher.

Hazelnut is the fruit of the hazel tree. The nut falls out of the husk when ripe, about seven to eight months after pollination. The kernel of the seed is edible and is used raw or roasted, or ground into a paste. The seed has a thin, dark brown skin, which is sometimes removed before cooking.

The hazelnut industry in Australia is in its infancy but thanks to a greater awareness of their health benefits – they're packed with vitamins, minerals, antioxidant compounds and healthy fats – demand for hazelnuts is increasing.

In 2020, 1.3 million trees in south-eastern Australia produced approximately 350 tones of in-shell hazelnuts, with a farm gate value of $3.7 million.

However, Australia imports approximately 3,500 tonnes of hazelnut product annually, primarily from Turkey, providing a clear opportunity to displace imported product.
The Australian Hazelnut 2030 Strategic Blueprint has been produced as part of AgriFutures Australia's Emerging Industries Program and identifies eight research and development priorities for industry to implement over the next decade, in an effort to meet the growing demand for the product.

"Plantings of hazelnut trees are for the longer-term investor, with commercial yields not expected until trees are approximately 7-10 years. But patience can yield," Dr Olivia Reynolds, Senior Manager, Emerging Industries, AgriFutures Australia, said.

"Further, there is good evidence for the expansion of hazelnuts into areas outside of the temperate areas of south-eastern Australia, into warmer climates, providing more opportunities for current and potential growers."

The major markets for hazelnuts in Australia are in shell nuts that are large, clean and visually appealing, and kernels that can be roasted or blanched. Australian hazelnuts in-shell are sold at farmers' markets, fruit shops, health food shops and co-operatives.

There are several boutique cracking facilities producing kernels, which are sold through the internet, at farmers' markets and to confectioners and patisseries. Some producers value-add to their kernels by making confectionery and health food products, hazelnut oil, flour and meal.

Kernels and leaves

Locally grown kernels receive a price premium and are sought-after by restaurants, confectioners and patisseries because of the fresh taste of the local product compared with imported kernels.

Hazelnut Plantation

Find out more about the AgriFutures Australia Emerging Industries program.

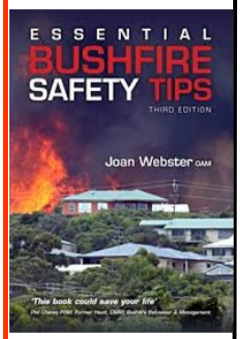
Queensland Fire and Biodiversity Consortium's (QFBC) They keep on its mission to support landholders in managing fire and ecology across landscapes!

Fire workshops and training

Through its workshops, QFBC provides private landholders, land managers, and other stakeholders with practical information on fire management and biodiversity conservation and allows them to network and collaborate.

Fire information nights (3 hours). Dedicated to landholders and the public, these sessions are informative overviews of bushfire and fire preparedness. Participants gain practical advice and guidance and hear from local experts on reducing bushfire risk in their specific landscape.
Local representatives from partnering agencies/organisations present on their respective topics, including (but not limited to) Queensland Fire and Emergency Service (QFES), local government, Traditional Owners, other state agencies, and utility providers.
The fire information nights are of particular interest to landholders because they focus on fire management roles and responsibilities, fire season planning and preparation, as well as managing fire regimes to protect and enhance native vegetation.
Topics span from QFES's Prepare Act Survive message to local and state vegetation management laws, local disaster arrangements, agencies' roles and responsibilities, fire as a land management tool, bushfire mitigation activities within local land management agencies, and more.

Property fire planning workshops (1 day). These practical sessions give local landholders and land managers the chance to learn how to prepare for and manage fire on their properties and in the surrounding landscape. They provide a better understanding of fire management issues when it comes to risk mitigation, property values, and ecosystem health. The workshops support landholders and land managers to reduce the threat of bushfires/wildfires to life and assets on their property, whilst protecting and enhancing the diversity and abundance of native plants and animals, with considerations for primary production. Using the newly revised QFBC Property Fire Management Planning Kit, landholders are supported to develop their own fire management map and action plan tailored to their individual property, priorities (e.g. primary production and/or conservation), and circumstance.



Overall fuel hazard assessment training (7 hours). The QFBC has been delivering the overall fuel hazard assessment awareness course since 2010. The aim is to equip prescribed burn practitioners, fire fighters, development assessment officers and land managers with the skills and knowledge to rapidly assess fuel arrangement and its effect on the probability of controlling a bushfire. Learning outcomes are significantly enhanced through hands-on learning via training field days in fuel assessment.

All these valuable capacity building tools aim to increase community bushfire resilience, management, awareness, and capacity.

For more information, visit **www.fireandbiodiversity.org.au.**

Australian landowners engage new biological control agents for problem weeds

A global network of the world's top researchers has significantly advanced weed management in Australia. Some of Australia's most damaging and destructive weeds are under fire from a legion of natural enemies from around the world, as the second phase of the AgriFutures Australia project, *Underpinning agricultural productivity and biosecurity by weed biological control*, comes to a close.

This project is one of the projects within the Rural R&D for Profit program and is primarily focussed on identifying and releasing biological control agents for weeds.

The impact of weeds on the Australian economy has been estimated to cost up to $5 billion per year through reduced profitability and productivity of agricultural land, choking of our waterways and requiring the ongoing use of herbicides and other controls. There are also substantial environmental costs.

Australian landowners now have access to new biocontrol agents to manage some of the most damaging weeds, which affect 23 million hectares of profitable land and 15,000km of water resources. Eleven (11) weeds have been targeted for biological control, over a seven year, two phase project.

Researchers from the CSIRO, Agriculture Victoria (AgVic), Queensland Department of Agriculture and Fisheries (QDAF) and the NSW Department of Primary Industries (NSW DPI) have collaborated with counterparts across the globe to conduct native range surveys and identify potential biocontrol agents for importation into Australian quarantine. A truly global project, Australian researchers have scoured the world, with work being undertaken on every continent (excluding Antarctica) in partnership with colleagues from as far as Iran, Ethiopia, Paraguay and many other countries.

The process for establishing a biocontrol agent in Australia is lengthy, with rigorous testing and regulatory compliance needed. On average, the time from identifying a potential biocontrol agent to its mass-release in Australia can take from five to 10 years.

Biological control involves the identification of an insect, arthropod or pathogen from the native range available, which will attack a specific weed, reducing its ability to spread. Research ensures non-target species are not harmed by the biological control agent. This sustainable approach requires little further investment after suitable agents are identified and established, enhancing Australia's agricultural competitiveness on a global stage.

At least six of the weed targets now have a biological agent undergoing mass or trial release programs including:

African boxthorn – A biocontrol rust fungus agent, has been deemed safe for release in Australia. Pilot release program for the rust during the 22/23 summer across SE Australia has shown that the rust can establish on African boxthorn in the Australian environment.

Flaxleaf fleabane – A rust fungus

Cabomba – After years of rigorous research in South America and Australia, scientists have released cabomba's natural enemy

Hudson pear – A mass-rearing facility for a cochineal insect
Prickly acacia – Targeted releases of a thrips species

Sagittaria – Following rigorous studies in the USA and in an Australian quarantine facility, a fruit-feeding weevil has been approved for release.
*For more information , May addition of **AgriFutures***

El Niño seems to be on its way. What this means for us in SEQ

Eastern Australia is facing a 90% probability of dry weather in winter and spring as the US Climate Prediction Centre (CPC) recently raised the chance of El Niño, declaring its pattern almost a certainty.
This declaration stems from the continued warming of the equatorial Pacific along with the forecast of westerly winds which will raise temperatures and likely mean that El Niño is on the horizon.

What is El Niño?

El Niño is a climatic phenomenon that occurs in the Pacific Ocean every few years, causing abnormal weather patterns around the world. During an El Niño event, the warm oceanic currents that typically flow from the western Pacific to the eastern Pacific weaken, causing the waters in the eastern Pacific to warm up. This alters atmospheric patterns, leading to changes in rainfall and temperature around the world.

How does it affect Australia?

El Niño affects different regions of Australia in different ways. In the north, El Niño tends to bring a decrease in rainfall and an increase in temperatures, leading to more frequent and severe bushfires. In the south, El Niño tends towards bringing drier conditions, leading to droughts that can affect agricultural production and water availability for cities. In recent years, the frequency and intensity of El Niño events have been increasing. This is attributed to climate change, and the trend has significant implications for our country. It is significantly increasing the likelihood of more frequent and severe droughts, bushfires, and coral bleaching events.

It is important to note that in countries like Australia other climate drivers (for example the Indian Ocean) can decrease the strength of an event such as El Niño by altering the temperature of the Pacific Ocean. It happened in the past in 2015 that the effect for a portion of the event was reduced.

Unfortunately, **it is too early to make any predictions for the year,** however long-range forecasts including the Bureau of Meteorology's (BoM) seasonal model, suggest below average rain across most of Australia this winter.

Healthy Land and Water article.

The Bundamba Creek Corridor in 1999

Bundamba Creek

Vegetation

Despite historic clearing in the catchment, there are a number of Regional Ecosystems mapped throughout the Bundamba Creek catchment under the Vegetation Management Act 1999, including area which are classified as 'endangered' and 'of concern'. Those include areas of the endangered Queensland Blue Gum adjacent to the riparian zone, particularly in the lower reaches north east of the Ripley Valley PDA.

The steep hills and foothills surrounding the Bundamba Creek Catchment are predominately covered by native forests which are zoned for conservation and strategic reserves. This reservation is part of the Flinders Karawatha Corridor which is the largest remaining continues stretch of open eucalyptus bushland south the Brisbane River in South East Queensland. This corridor supports many rare and threatened floure and fauna species.

Clearing of vegetation of floodplain areas for rural use, industry and residential developments has degraded riparian zones and destabilised the creek corridor in many locations.

Flooding

Vegetation clearing and increased catchment imperviousness has changed the hydrology and geomorphology of the Bundamba Creek corridor resulting in more frequent "flashy" flooding in the middle and lower catchment.

Future hydrologic changes are expected as a result of the planned development within the Ripley Valley PDA. To ensure this development does not further impact flooding in the lower catchment it will be imperative for flood mitigation works to be provided. This can be as part of the development to ensure there is no increase in flood inundation and /or flood damages within the lower catchment.

Waterway Health

The upper and middle reaches of the Bundamba Creek are largely ephemeral, supporting isolated pools in dry periods.

The lower section of the waterway is tidally influenced from the Bremer River and has large numbers of stormwater outlets discharging stormwater runoff directly into it.

Overall the Bundamba Creek and its tributaries are highly degraded and extensive gully and stream bank erosion limiting the in-stream habitats. The poor waterway health can be attributed to limited riparian zones, uncontrolled stock access and highly dispersive soils. The unstable waterway corridor is therefore at high risk to future impacts associated with the future development of the Ripley Valley PDA area.

Water quality monitoring along the Bundamba Creek corridor shows a decline in water quality downstream of the Swanbank Power Station. Pollution sources in the catchment include the Swanbank Power Station site, the Bundamba Sewerage System, existing urban development stormwater pollution and diffuse pollution from agricultural areas.

Open Space

The Bundamba Creek corridor functions as a linear open space corridor with its floodplain areas offering opportunity for a variety of uses and experiences from nature based to active recreation.

In the headwaters, the White Rock Conservation Estate and the Flinders-Goolman Conservation Estate provide important natural areas incorporating walking trails and other nature based pursuits.

The above is a look in the past.

Information Page

Natural resources within the Bremer catchment

Today, more than half of the total catchment area is used for grazing, and crop production is still an important industry within the catchment. It supports a diverse and economically important range of commercial (eco tourism) and industrial businesses.

Water

Less than one per cent (1280ha) of the catchment is covered by water. Moogerah Dam supplies a large proportion of the catchment with water for irrigation, drinking water to local townships, such as Boonah and Kalbar.

Riparian vegetation

This vegetation grows on land adjoining waterways, gullies and dips, around lakes and on river floodplains. The natural vegetation helps to stabilise banks, shade streams reducing evaporation, provide food and habitats for birds and wildlife, and most importantly, act as a buffer for catchment run-off.

Freshwater wetlands and swamps

These areas of land are seasonally inundated by water, generally for two to six months of the year. They act as sinks for nutrients and sediments and absorb pollutants from catchment run-off. Wetlands are also important in reducing the velocity of surface run-off, helping to prevent soil erosion whilst supporting a diverse range of wildlife.

Soils

Agriculture and cropping is important within the catchment. Several properties have diversified agriculture and eco-tourism. Many commercial crops, including potatoes, carrots and onions are grown throughout the region on the rich alluvial soils.

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