BREMER CATCHMENT ASSOCIATION INC.

June 2016

around the bremer

Special points of interest:

Next BCA Meeting Thursday 16th June 2016

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President's Message

Recently the Bremer Catchment Association hosted a Field Day at Barry and Marjorie Jahnke's property at Kalbar. For many years this couple, including Jocelyn Clarkson have worked tirelessly to revegetate areas seriously affected by salinity issues. The revegetation work has now afforded a sanctuary for wildlife, particularly that of birds, to frequent the area and local region.

Barry is quite passionate about his efforts and revegetation work (and so he should be). This work has been completed with absolutely no funding, apart from what Barry and Marjorie have put in themselves. The idea to revegetate the area and establish a bird habitat was borne out of Barry's desire to reclaim the seriously affected salinity land region.

Jocelyn on the other hand has been actively planting a number of tree species in what she describes as a 'woodlot'. The work Jocelyn has been involved is now a true indication of what species survive in such areas. A hearty congratulations to Barry, Marjorie and Jocelyn for their passion and hard work which is now paying off. This revegetation work reminded me greatly of a book titled "***The Untrained Environmentalist***" by John Fenton. For those of you interested in planning for a revegetation program on your property, it is a book well worth the read.

The '**Bremer River Network' (BRN)** has slowly been developing a structured program for future consideration. A small number of environmental projects have been outlined and it is anticipated that future opportunities will be highlighted soon. This may provide an opportunity for BCA to complete a couple of much needed projects.

In the interim BCA is looking to engage in a number of small projects in the local region. These projects are aimed at assisting in revegetating and controlling erosion in riparian areas which will greatly assist local landowners. Members of BCA are encouraged to contact the BCA Secretary regarding possible projects in their region. Please be aware that it would most beneficial for BCA members to be involved in the early stages of project consideration and perhaps some long term involvement.

The organisation is also seeking opportunities to attract funding for a few of these projects. Grant applications will need to be assessed on a 'case-by-case basis', however any information regarding funding or grant applications should be directed to the Grants Officer (Jocelyn Clarkson).

Stay safe and drive steady on the roads.

Gary H Cochrane
President (Bremer Catchment Association)

Fire Ants

Fire ants

Fire ants swarm to attack and sting repeatedly

Fire ants can destroy entire ecosystems.

One of the world's most invasive species. If they establish permanently in Queensland they will ruin our way of life, and have serious health and environmental impacts. Everyday activities, such as barbecues, picnics and sporting events may no longer be possible in high infestation areas. With our help we have the best chance of ridding Queensland of fire ants.

Social impacts

Fire ants are a social menace because of their sting. Encounters with fire ants usually involve dozens of ants moving quickly and undetected. By the time they sting, a large number of ants could be on your body, all stinging at once. Stings from fire ants can cause a painful, burning itching sensation, which can last for up to an hour. Multiple stings give the sensation that the body is on fire.

Only in extreme cases will fire ant stings be lethal to humans. This could occur to those experiencing a severe allergic reaction.

Environmental impacts

Fire ants have the potential to inhabit most of the major coastal areas of Australia, and extensive areas of the tropical north. Vast areas of the continent's natural environment, including world heritage areas and national parks, are prone to fire ant invasion.

Fire ants are very aggressive and are voracious feeders on small ground fauna, including insects, spiders, lizards, frogs, birds and mammals. Consequently, fire ants may displace or eliminate some of Australia's unique native species.

The ants' habit of eating or damaging seeds can cause major changes in an ecosystem over time. Fire ants are also predatory, attacking insects and animals that pollinate native plants.

Economic impacts

Mounds formed by fire ant nests can be a serious problem in lawns, sporting fields and golf courses. The ant's activities and their nesting materials can cause expensive damage to sensitive electrical equipment. They can also affect the tourism industry as well as the export trade of restricted items with fire ant-free countries.

Fire ants can significantly affect the agriculture industry. Newborn or hatching animals are particularly prone to attacks that can lead to death. Fire ants attack young animals and sting in and around the eyes, which can lead to blindness; and around the mouth and nose, which can lead to swelling and suffocation. Fire ants also invade the food and water supplies of animals. The animals are unable to reach the food or water without being seriously stung, and this can lead to starvation and dehydration.

Fire ants sometimes feed on seeds, and can fatally damage some plants by tunneling through roots and stems. They protect some species of pest insects that produce 'honeydew'. This downgrades the quality of produce and assists in the spread of some diseases. Fire ants will also feed on important biological control agents and interfere with integrated pest management practices.

Fire ant mounds can destroy equipment such as irrigation systems and can also damage machinery during harvesting operations.

Fire ants can cause considerable damage to the agricultural industry.

From the Weed Spotters Bulletin May 2016

Farm/rural urban Biosecurity

The introduction or spread of new weeds, pests and diseases onto your property can reduce production and cost you time and money. The best defence is prevention, by implementing sound biosecurity practices. Quick and simple measures built into everyday practice will help protect your farm and your future. Farm biosecurity is your responsibility, and that of every person visiting or working on your property. Similarly, for rural urban properties the problem should not be overlooked.

Top five tips for better Biosecurity on your farm:

1. Have a plan

Every property is different. By developing a biosecurity plan, you can ensure you are addressing the priority issues for your farm and that it fits your work program.

2. Restrict movement

Anyone visiting your property can unknowingly introduce weeds, pests and diseases. There are some simple measures you can take to limit the biosecurity risk visitors pose to your farm. **Contractor entry to a farm should be conditional on adhering to farm biosecurity plans and hygiene protocols. Therefore, it is important to display these instructions using clearly visible signage.**

Ensure all production inputs coming onto your property are weed, pest and disease free

3. **Come clean go clean**

Weeds, pests and diseases can enter a farm and be spread by vehicles, machinery and equipment. They can be carried on vehicles by tyres, undercarriages, grills, floors and trays, and canal so be present in plant material, soil or manure. It is important to maintain equipment hygiene and ensure all vehicles that visit your property are clean and well-maintained.

4. **Ensure all production inputs coming onto your property are weed, pest and disease free**

Farm inputs such as seed, fertiliser, feed and propagation material may contain weeds, pests or diseases.

5. **Keep records**

Monitor and record all people, product and vehicle movements on and off your farm. These registers can be used in the case of a biosecurity emergency for tracing purposes. Keep a diary of spray herbicide, pesticide and fumigation treatments for crops and adhere to withholding periods.

For further information See: Farm see: **Planthealthaustralia**

Using Chemicals Safely and Effectively

When registering chemicals, the Australian Pesticides and Veterinary Medicines Authority (APVMA) evaluates the effectiveness of the chemical and the impacts to human health, crops, animals and the environment.

Where there are increased risks to human health, the environment and trade, additional controls are applied through restrictions on how and where products can be used.

Certain chemical products have been declared restricted chemical products (RCPs) because of the special training and other occupational safety requirements needed for handling or using these chemicals.

To use chemicals responsibly, you must follow the instructions on the registered product label or permit issued by APVMA. It is very important to:

- use the correct, registered product
- follow the instructions on the label
- read the material data safety sheet (MDSS)
- use the correct equipment to apply the chemicals
- make sure you have the correct licence and permit, if one is required
- understand and meet your work health and safety obligations

Refer to the Agricultural chemical users' manual for information about using agricultural chemicals appropriately and effectively.

Minimising off-target spray drift

Agricultural chemicals may become airborne and drift outside the intended area when sprayed - this should be avoided. Spray drift can damage plants, environment, property and the health of animals and people.

Learn more about minimising the impacts of spray drift and reporting chemical spray drift.

APVMA also has information on assessing and managing spray drift.

Chemical residues

Agricultural and veterinary chemicals break down after application but some residues do remain on crops or in animals. It is important to follow the withholding period to make sure the residues are not at unacceptable levels. The National Residue Survey monitors chemical residues in food products.

Residue monitoring programs support access to key export markets and confirming Australia's status as a producer of clean food. These programs encourage good agricultural practices, help to identify any potential problems and indicate where corrective action may be required.

For more information see: **Business and Industry Portal.**

Aratula—Small Market Crop Area

Aratula is a small town near The Gap (Cunningham Highway) in the Scenic Rim Region. In the near vicinity of this town, valuable riparian cultivations are producing a variety of crops, including small crops.

There are countless different varieties of pumpkins and winter squash for example.

Pumpkins

Mal Abbott, one of our BCA members has at present 2½ ha of pumpkins (Sweet Grays) laying in the paddock. “Their white colour is great, we can harvest them a bit late in the day when it gets dark”, he said.

Sweet Gray

There is not much point growing a big crop of pumpkins if the varieties selected are poor keepers with insipid flavours. There are plenty of other varieties available and they come in all sizes, skin colours and flesh densities.

The Sweet Gray is an excellent variety similar to both Queensland Blue and Jarrahdale but has smoother skin with less ribbing and is flatter and rounder. It has excellent taste. This is a great pumpkin for all-round kitchen use and the qualities that make it different also make it easy to use in preparing meals. Yields well and easy to grow.

Chickpeas

Mal planted 16 ha of chickpeas recently. He has experimented to roll-in the seed in an inoculant.
Chickpeas, also called garbanzo beans or gram, are regarded as beans, but botanically are neither beans nor peas. The chickpea is a tender annual legume, a bushy plant that grows to about 18 inches tall and has pairs of dark green, compound leaflets that look like vetch. Chick peas have swollen, oblong pods to about 1 inch long and nearly as wide that contain one or two large, cream-colored, pea-like seeds each. Flowers may be white or violet colored depending on the variety.

Originally cultivated in the Mediterranean and the Middle East, chickpeas, have spread their culinary influence to areas all over the world. They are featured prominently in Italian, Greek, Indian, Middle Eastern, Spanish and Portuguese cuisine.

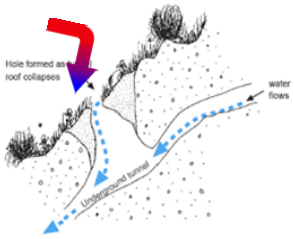
Chickpeas are grown in the Indian subcontinent, Australia, Mediterranean, western Asia, the Palouse region, and the Great Plains.

Marketing of chickpea is $800/$900 a tonne.

Tunnel Erosion in Pasture Land By W. Steentsma

Tunnel Erosion

Hole formed as roof collapses



Tunnel Erosion.

This is the removal of subsoil by water while the surface soil remains relatively in tact (Crouch 1976)

History.

In the Moreton Region many sodic duplex soils on pasture lands are found. Sensitive to sudden imposed stresses to these lands, tunnel erosion is the result by environmental changes and deforestation.

Overgrazing, drought and fires have also contributed to tunnel and consequently gully erosion. Many theories of tunnel erosion mechanism are not very clear and therefore difficult to reclaim. Locally experience has shown that tunnel erosion is a natural form of drainage.

Soil Types.

Tunnel erosion occurs in areas where the subsoil, or B-horizon resting on an impermeable C-horizon, erodes more easily than the topsoil (A-horizon). Water passes through cracks or holes in the topsoil, caused by drought, tree stumps and adverse vegetation management (incl. Pasture grazing).

A tunnel vacuum forms below the topsoil as rainwater disperses the subsoil. Very often one can see dispersed subsoil protruding further downhill. These 'tunnels' collapse and form open gullies.

Soil Groups.

Loamy Solodics or open forest carry narrow/silver leaved ironbark and Moreton Bay ash. These soils have texture contrast profiles with clear division between the loamy brown/dark grey surface and heavy clay subsoil (brown/yellow).

Sandy Solodics – are open forest with spotted gum narrow/silver leaved ironbark, Moreton Bay ash and Bull oak. Texture contrast profiles. Plant growth is restricted by the impermeable clay subsoil and hard setting surface.

Soloths – vegetation are open woodland and open forest. Restricted plant growth due to poorly, structured subsoil and hard setting surface is also a contributing factor. The C- horizon is impermeable and saline subsoil. Generally, these soils are not suitable for agricultural land.

Erosion.

These soils are very susceptible to tunnel erosion and consequential gully erosion.

Limitations are among these soils varied, from moderate to very severe.

Best Management Practices.

These are ranging from grazing, such as maintain adequate cover of grass and trees. Conservative stocking (1AE/8ha).

Reclamation of Tunneled Land

Mechanical:

Deep rip with a bulldozer in order to 'shatter' the tunnels and improve permeability and guidelines to be surveyed **off** the contour.

Chemical:

Gypsum, start with 2-3 /t/ha, repeat annually to 6 /t/ha has been reached. It will improve the 10 cm topsoil layer & provide better reclamation. Check pH & add lime to increase calcium levels & availability of Mn and assisting legume nodulation.

Aims of re-vegetating a tunneled area incl. improving soil fertility & increased evenness of infiltration & stability of the soil structure & furthermore avoid drying effects on soil during summer.

Vegetation:

Siratro & clovers.(the lime also improves nodulation). Grasses: Pioneer Rhodes. Suitable deep rooting trees, planted in strips in order to encourage agro-forestry (i.e. allow cattle grazing).

Prior to earthworks beginning, over 2,800 tonnes of sediment and associated nitrogen and phosphorous had been lost into the lower catchment

Warrill Creek Catchment

The Upper Warrill Creek project, funded through Energex environmental offsets and delivered by SEQ Catchments is an example of a project delivered to address non-point source sediment generation. Through discussion with local landholders and previous works in the area, this site was identified as a key point in the catchment that would deliver on multiple benefits.

Prior to earthworks beginning, over 2,800 tonnes of sediment and associated nitrogen and phosphorous had been lost into the lower catchment and Moreton Bay. This project in conjunction with other works carried out in close proximity to the site has increased the areas natural resilience to future high flow events and minimised the potential loss of sediment and subsequently nutrients into the catchment.

Other key outcomes resulting from this project include building strong relationships with landholders in the catchment, improving land use management in areas surrounding water courses, improving habitat for biodiversity and reducing sediment and nutrient runoff from surrounding farmland.

References:

SEQ Catchments, Water Quality Offsets Position Paper

Church bank Weir

A recommendation from the 2013-17 irrigation pricing review was for Seqwater to produce and publish an annual Network Service Plan (NSP) for the information of irrigation customers. The annual NSP contains scheme information such as historical water usage information and covers both operating and renewals expenditure and future material renewal forecast expenditure.

When a water allocation is sold, the purchaser of the water allocation is required to enter into a water supply contract with Seqwater before the transfer of the water allocation is able to be completed. For further information please contact us at irrigators@seqwater.com.au or call 1800 077 005.

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