



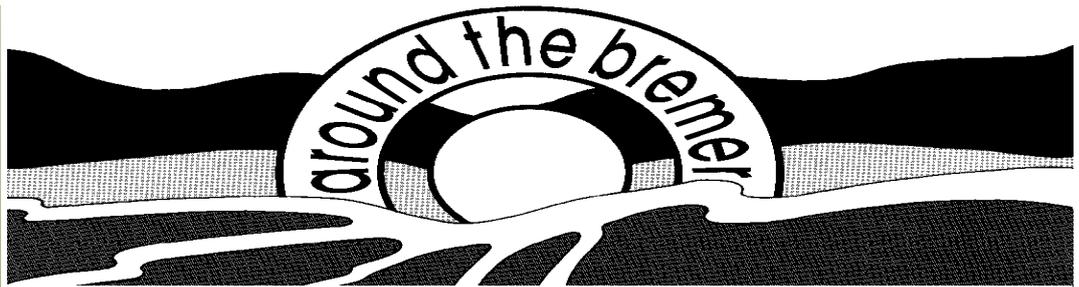
February 2014

Special points of interest:

- Welcome to the New Year, it will be a great year.
- Our first Operational meeting will be on 20-02-2014.
- Bring along your ideas for the forthcoming activities.

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President's Message

With the festive season now behind us, I sincerely trust that everyone enjoyed the festive spirit and celebrated well with family and friends.

As an inaugural Presidential message I'd like to thank the previous BCA committee for their hard work, persistence, dedication and generous support towards the community. To all BCA members I extend a sincere thank you for your dedicated work over the past year and with your continued support trust I can fulfill my obligations for the BCA for this year.

For many of us this year will be filled with high adulations, and just to make us feel human, no doubt there will be some unfortunate lows. Plans are already scheduled to have the first BCA meeting on the 20th February 2014 and I encourage everyone, both members and friends, to come along and participate. It's a great opportunity to meet up with like-minded folk who harbour a passion caring for the environment.

For many folk the beginning of 2014 started off with some welcomed rainfall. Unfortunately this has not been too widespread, with many communities still hopeful for decent rain. Summertime always spells out "Fire Season" to me, so I encourage all of you to develop a "What to do in case of a fire" strategy. Such plans are essential in the event of tragic circumstances like that of fire.

Dorothea Mackellar (1885-1968) described in her 1908 poem titled "My Country" wrote 'of droughts and flooding rains.....', which sums up the Australian environment quite well. Our environment is very sensitive and continually undergoes these diverse climatic changes. If we continue to punish our environment, through misuse of land management, non-sustainable projects and continued pollution, a serious decline in numerous ecosystems is inevitable. Some of these ecosystems may take years to fully recover, unfortunately others may not recover at all.

Hence why we must look after our fragile planet and look toward the future. We have an opportunity to make good some bad environmental decisions from the past and develop something special for our children (grandchildren, great grandchildren) to appreciate in the future. It's quite possible they will enjoy the same ecosystems and wonderful communities which we all share today, if we have the foresight now to develop long term sustainable strategies - caring for our environment.

I look forward to meeting up with each and everyone over the coming year.

Gary H Cochrane
President
Bremer Catchment Association



Setaria incrassata

In this study 11 of these fodder species were sown at the recommended rates into P. hysterophorus infested field sites at Injune and Monto, Australia

Suppressive fodder plants as part of an integrated management program for *Parthenium hysterophorus* L.

Abstract: *Parthenium hysterophorus* L. is an alien invasive weed in both Australia and Pakistan infesting rangelands, reducing fodder biomass and causing significant livestock production losses. Previous studies have identified a number of introduced and native fodder species that can suppress the growth of *P. hysterophorus* in glasshouse trials. These species can also provide an adequate fodder biomass for livestock production. In this study 11 of these fodder species were sown at the recommended rates into *P. hysterophorus* infested field sites at Injune and Monto, Australia while an additional five species were sown into similar infested field sites at Islamabad and Mardan, in northern Pakistan. Measurements taken on dry shoot biomass production of the fodder species were used to determine their *P. hysterophorus* growth suppressing ability and fodder biomass production. In

Australia, all of the fodder species suppressed the growth of *P. hysterophorus*, with *Setaria incrassata*, *Cenchrus ciliaris*, *Clitoria ternatea*, *Themeda triandra* and *Astrebla squarrosa* (Injune field site), and *Chloris gayana*, *C. ciliaris*, *Dichanthium sericeum*, *Clitoria ternatea* and *Bothriochloa insculpta* (Monto field site) all suppressing growth by >62% and producing at least 329 g m⁻² of dry fodder biomass. In Pakistan, all of the fodder species suppressed the growth of *P. hysterophorus*, with *Sorghum alnum*, *C. ciliaris* and *C. gayana* suppressing growth by >73% and producing at least 622 g m⁻² of dry fodder biomass. Some species such as *S. incrassata* performed well at just one field site, while others (*C. ciliaris* and *C. gayana*) performed well at all the four field sites, indicating that such plants could be considered as part of a new integrated weed management system for *P. hysterophorus* in both Australia and Pakistan.

From: WeedsNews, December 2013

New digital resource to help in fight against weeds

For those of you who attended either the QLD or NSW Noxious Weeds conferences you will know that we have developed a new Woody Weed App for your iPad.

The app has information on the basic weed biology, the optimal time of treatment, the range of herbicide options available with labels and safety data sheets as well as application videos. There is also a useful section on treatment options: what technique to use, what to avoid and why.

Below is the link.

<https://itunes.apple.com/us/app/woody-weed-specialists/id668582351?mt=8>

Woody Weed Specialists—Free download



McInnes Brothers Dairy Farm Harrisville

Marianne, the Editor of the newsletter, asked me to put a few notes together about our Dairy Farm operation at Harrisville and the wider Dairy Industry.

Our family business is run by myself and two brothers and has been going for the last 37 years. This year marks 100 years of our family being on the same property.

We currently peak at 520 cows and produce close to 4 million litres of milk per year. Like all businesses we are continually searching out better and easier ways to improve our performance – sometimes a very uphill battle.

Core activities include operating the Dairy parlour (milking), Heifer rearing, Herd health, Cropping, Storing over 5000 ton of Silage and 500 ton of hay per year, Pasture management, Grain handling, and Feeding 900 head of cattle a balanced ration on a daily basis. Also, operating these things within a responsible Financial and Business Management regime.

The total labour involved in the business is about 9 full time equivalents, which includes Partners, Full time and Part time workers.

The Industry has certainly gone through some big challengers over our time. In 2000 deregulation came to the Industry. At that stage there were 1650 Dairies in Queensland producing 820 million litres per year. Then six years of drought from 2000 to 2006 really hit the Industry for six. Now we are down to about 500 Dairies producing say 440 million litres per year. Current consumption of milk is about 540 million litres per year in Queensland – 100 million short.

The most basic economic principle of supply and demand affecting the price has definitely been stifled.

There are comments within the Industry that to survive we need an extra 5, 10, or even 15 c/liter on top of 50 to 55 c/liter we currently get. I don't know what the right price is, but everyone agrees farmers are still leaving the industry, State production is still going down and everyone knows that the price to the farmers has been held down as a direct flow on effect of the current marketing arrangements that the 2 large Supermarkets have dictated to the overall Industry. That is everyone agrees apart from all politicians and the ACCC.

Most farmers try to make a reasonable effort of supporting the Triple bottom line as per Catchment Management (sustainable business, community and environment). It has been shown time and time again how communities suffer even more than farmers during a long drought (farmers go into survival mode). The environment is no different

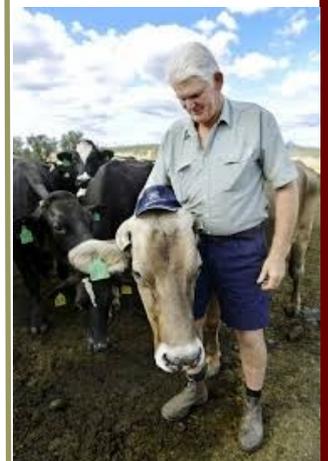
Don't ask a farmer to be Green when he's in the Red.

Morris McInnes



Ross McInnes stands with his Friesian dairy cattle at his Harrisville farm.

Current consumption of milk is about 540 million litres per year in Queensland – 100 million short.



Looking after the animals



Working Together

Operational Meetings

20th February

20th March

Disclaimer

While we hope that you will find this publication informative, BCA does not guarantee that the information herein is without flaw, or is wholly appropriate for your particular purpose.

We therefore disclaim all liability for any error, loss or other consequence, which may arise from you relying on any information in this publication.

Predictive modelling of weed seed movement in response to superficial tillage tools

Abstract: Weed seed burial and excavation by tillage determines seed depth, seed survival, germination and pre-emergent seedling mortality. However, quantitative estimates of seed burial are available for only a few tools and often without reference to soil structure, moisture or tillage depth. This study proposes a conceptual model for predicting weed seed movements during superficial tillage in response to the type of tool, tillage depth and soil structure. The proposed model was calibrated with field data collected using coloured plastic beads as weed seed proxies. Beads were placed at different vertical and horizontal positions before tillage, using augers to preserve soil structure and collected after tillage by opening trenches and counting beads found at different depths. Approximately 33% of the beads were retrieved and used to establish bead distributions from which model parameters were estimated. Cross-validation showed that prediction quality was satisfactory (modelling efficiency = 0.85, minimum rMSEP = 0.11) with most of the error associated with using a harrow in compacted soil. Subsequently, the new model was integrated into the existing weed dynamics model FlorSys, and simulations were run to predict weed emergence and dynamics for different tillage practices. With a surface seed bank, total emergence was highest for shallow operations (harrow, discs) and lowest for deep operations (chisel, mould board plough). Emergence was also lower in compacted soils. Differences among tillage tools persisted when weed dynamics were simulated over several years, with mould board ploughing generally having the lowest density even though this tool was only used every three years. Superficial tillage which left seeds closest to the soil surface resulted in the highest weed density. Also, for species with heavy seeds densities generally increased with ploughing.

These simulations confirm the utility of the new model, but additional studies are needed to examine other tillage, management practices and weed species combinations. [Nathalie Colbach, Hugues Busset, Jean Roger-Estrade & Jacques Caneill (2013). Predictive modelling of weed seed movement in response to superficial tillage tools. *Soil and Tillage Research*, 138, 1–8]



Mould board plough being tested for weed control in Western Australia]

Taken from “The Weed's News email digest” January 31, 2014.