



Wheatbelt the new classroom



Left to Right (back row): Madeline Burt, Amy Freestone, Alivia Bruse, Dianne Lovell, Caitlyn Young, Josie King. Left to Right (front row): Chelsea King, Stevie Crook, Kellie McInnes (all Calingiri Primary School children)

A drive to help educate school children about the environment and indigenous culture in the Wheatbelt has come to fruition.

More than 100 students from seven schools spent two days learning about the history of the region including visits to New Norcia, farms, rivers and key Aboriginal sites.

The idea behind the school camp with a difference came from Calingiri teacher Samantha Young.

"The children in our area have a lot of sporting activities offered to them, but there's not much outside of that," Samantha Young said.

"I had a student ask me if they could form an environmental club and the idea grew from there.

"We also wanted to involve other schools because

we are isolated and it's another way to make friends outside of our immediate towns."

The seven schools included Mt Claremont, Toodyay, West Northam, Bolgart, Yerecoin, Goomalling and Calingiri.

Funding for the camp came from Wheatbelt NRM, the Millennium Kids, The Board of Bendigo Bank; Goomalling and surrounding districts, Calingiri Landcare Association and the Shire of Victoria Plains.

The Millennium Kids is a unique organization run by children designed to encourage them to become environmental leaders.

The students, aged nine to 12, visited Aboriginal displays in New Norcia, Burlong Pool and the Northam Aboriginal Reserve.

Continued next page

Wheatbelt the new classroom - continued

During the visit to the Northam Reserve, the students learnt about Aboriginal culture from two local Elders and Wheatbelt NRM Aboriginal Facilitator, Rod Garlett.

The last baby born at the birthing place on the reserve was 70 years ago and Aborigines lived there until the 1960's.

The Elders talked about what the land meant for them, why the reserve was important and about the way they lived.

Students were then separated into groups of boys and girls and taken to different parts of the reserve to highlight the separate men and women's business in Aboriginal culture.

The girls were taken upriver to where a dip in a rock provided a birthing site for the women.

"This gave the students a really positive appreciation of Aboriginal culture," Samantha Young said.

"Even some of the teachers and adults said it was the first time they had heard from an Elder about the way they used to live in harmony with the environment."

A visit to the Toodyay Brook, a tributary of the Avon River, helped educate students about river health.

They conducted salinity, pH and water testing and investigated the health of the riverbank.

One of the highlights for students was a close encounter with a Stimson python.

Children were able to hold the reptile during a visit to Carrah Farms, near Calingiri.

The cropping property has a focus on conservation, including a Carnaby's Cockatoo protection program.

Wheatbelt NRM's Liz Kington said the camp achieved what it set out to do.

"It really gave children an appreciation of their own environment," Liz Kington said.

"They had a great time and learnt so much about Aboriginal connection to country, which was our intention."

INSIDE THIS ISSUE:

Wheatbelt NRM spring update	3
Successful Yilgarn/ Westonia Field Day	4
Traying workshop focuses on building better soils	5
Wheatbelt Woman Farmers	6
Healthy Bushland Officer profile	8
Spring fax baiting urged	9
New philosophy when using discs	10
New! Guide to Writing Case Studies	12
Wheatbelt NRM AGM featuring Annie Macbeth	12



wheatbelt
natural resource
management

Issue 10, October 2010

Designed, edited and produced by
Wheatbelt NRM.

Printed on 50% recycled paper

Wheatbelt NRM spring update

Welcome to the spring edition of the Wheatbelt NRM Newsletter.

Firstly we would like to thank two long serving Board members who recently retired from the Board of Directors; Colin Nicholl and Merrilyn Temby.

Collin Nicholl has been a Board member since 2004 and his contribution over the years has been greatly appreciated, his knowledge and experience has been a welcome addition. On behalf of Wheatbelt NRM we would like to thank Colin for the perspectives and contribution he brought to the Wheatbelt NRM Board and wish him and all the best.

We would now like to thank Merrilyn Temby, former Chairperson of Wheatbelt NRM and Yilgarn sub-catchment director. Merrilyn was the longest serving member of the Board and who's passion and commitment has shaped direction of the organisation over the years. Merrilyn's contribution to Wheatbelt Natural Resource Management has been exemplary and we hope to continue her work in the Avon River Basin. We thank Merrilyn for her 10 years of service.

It has been the season of field days and Wheatbelt NRM has been out there at Dowerin, WANTFA spring day and many more out in the region, eagerly spreading the message to the region for our Wind Erosion and Healthy Bushland projects. Two of these field days are featured in this newsletter if you missed them.

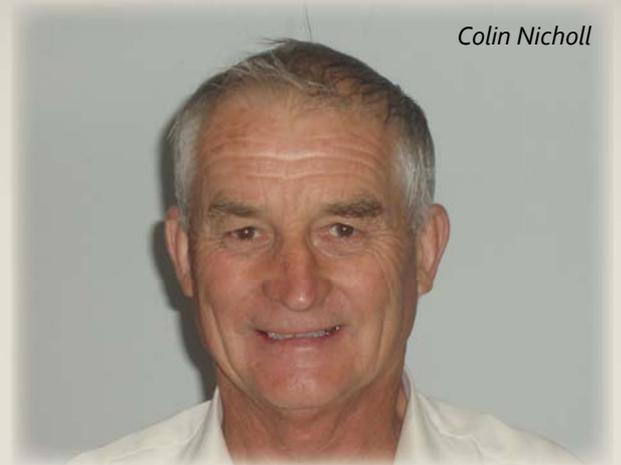
Also be sure to check out the Recognising Women Farmers blog at birchiptour.blogspot.com with learnings, reflections and observations of the Wheatbelt women who recently visited the Birchip Cropping Group in Victoria.

Finally we would also like to welcome Taryn Beagley to the role of Communications Officer and we would also like to welcome back Rod Garlett to the role of Aboriginal NRM Facilitator.

Wheatbelt NRM



Merrilyn Temby



Colin Nicholl

Nyungar Seasons

Djilba

August - September

Becoming warmer from August to September. As Mukuru progressed into Djilba, kangaroo, quenda, emus and possums were hunted.

Kambarang

October - November

Rain decreasing from October to November. At this time there was a natural increase in game. Hunting focused on swamps and wetlands for turtles, fresh water crustaceans and frogs, and birds and eggs.

Successful Yilgarn/Westonia Field Day



There was a good turnout of local farmers for the Spring Field Day organized by Bodallin Catchment Group. In all some 49 people participated in all or part of the day, with a large proportion of these being local farmers.

The Field Day featured the Woolworths Pasture Project, the DAFWA legume pasture trials and other projects such as the Variable Rate Technology project at Butchers, the Reducing Wind Erosion project at Clint Della Bosca's and the Italian Ryegrass demo, part of the WEROC project funded through Caring for our Country.

The group travelled some 370kms across the Westonia and Yilgarn Shires looking at the Woolworths Pasture Project sites. We saw demonstrations of various legume pastures recommended by Neil Ballard (Ballard Seeds) and Angelo Loi (DAFWA) to suit the soil types and situation. They were both on hand to discuss the attributes of each and answer questions, as was Steve Carr from AGLIME and Tim Scanlon from DAFWA, Merredin. Of particular interest was the Bartolo bladder clover and the Sothis Eastern Star clover which were doing well despite the dry conditions (90-100mm rain for the growing season)

The highlight of the day was the DAFWA legume pasture trials at David and Brad Auld's. The trial has 26 varieties of legumes including the newly released Eliza

and other low rainfall species still in the development phase.

The suitability of these low rainfall species for our area was clear for everyone to see. The Eliza French Serradella was planted next to the Cadiz French Serradella (from which it was bred) and was in flower while the Cadiz was still budding up.

"Eliza flowers three weeks earlier than Cadiz so it will produce seeds even in a very dry year like this" said Angelo Loi, DAFWA.

The day ended with refreshments and finger food at the Moorine Rock Hotel, giving people the chance to reflect on the trials and demonstrations.

David Auld summed up the value of the trials and demonstrations "Angelo's trial work has proven that the sub-clovers we've relied on over the past 40 years have reached their used by date. These trials are proving that today's pastures are producing more feed, have less weeds in the grazed pasture and are easier to harvest for seed."

Traying workshop focuses on building better soils

Wheatbelt NRM Sustainable Agriculture Program Manager Dan Ferguson with Dr Christine Jones and Cathy Sadler



About 60 farmers turned out to a workshop in Trayning looking for answers on how to improve soil fertility.

The key message delivered by renowned soil scientist Dr Christine Jones was that farmers need to understand how plants and microbes interact to build carbon rich top soil.

The day was hosted by Wyalkatchem farmers Ian and Dianne Haggerty as part of the Wheatbelt NRM Soil Conservation Incentives Program.

Dr Jones has developed a following from broadacre farmers keen to find an alternative to conventional farming, as droughts and frosts continue to cut yields and the cost of fertilizer and chemicals grow.

Dr Jones encouraged farmers to change to biology friendly fertilizers, instead of the more commonly used synthetic fertilizers high in available nitrogen and phosphorous, which inhibit root growth and hence biological activity in the soil.

"If a plant is given nitrogen and/or water soluble P upfront, there is little need for the plant to function properly," Dr Jones said.

"The lack of a good root system and the cessation of carbon transfer to the soil means plants cannot access the trace elements and minerals they need for healthy immune system function."

Dr Jones said crops become very susceptible to insect and disease attack when essential trace elements are lacking through lack of microbial activity.

"Farmers then find themselves on the insecticide and fungicide treadmill. The use of these chemicals further inhibits life in the soil.

"Ever-diminishing soil health is accompanied by ever-increasing input costs," Dr Jones said.

"Improving biological activity in the soil helps to build rich top soils, but this can't be done when high analysis fertilizers like N and P are being used."

Ian Haggerty told the group that abandoning traditional farming practices and moving into biological farming required a careful transition period.

"Because soil function has been impaired by chemicals it needs a gradual integration of biological farming practices," Ian Haggerty said.

The information day concluded with an open forum and interactive discussion on ways to transition to farming practices that restore soil function and carbon building in agricultural soils.

The Wheatbelt NRM Soil Conservation Incentive Program provides opportunities for farmers to trial practices that improve soil health and help to cut the risk of problems like wind erosion.

WHEATBELT WOMEN FARMERS



WHAT IS THE PROJECT ABOUT?

Social research tells us women are more likely to bring environmental and social issues to the decision making table. If you are working off-farm, supporting a farming business or simply trying to manage your family, you probably don't get to field days. So how do we get our information to you? As the lead organisation for natural resource management in the Wheatbelt, we want to encourage and support rural women. We've created a project for six women who will join us on a study tour to Birchip in the Wimmera Mallee region of Victoria in October.

We'll be looking at how families have managed to cope with prolonged drought and then sharing what we learn at morning teas throughout the Wheatbelt in November.

You will be able to track our trip via the tour blog: birchiptour.blogspot.com

This project is supported by funding from the Australian Government Department of Agriculture, Fisheries and Forestry under Australia's Farming Future.

Below are some short snippets of the profiles appearing in the Farm Weekly Newspaper during the tour

Erin Turner

"We have been farming for 20 years and we have had a good year, followed by a bad year, and now we just want average years!"

Erin Turner says more women need to know what's happening on their farms.

Along with husband Lance, she owns and leases about 5660 hectares of cropping country east of Pingelly and Corrigin.

"Every woman should know and be interested in what their financial position is, regardless of if they are a farmer or not," Erin Turner said.

"I acknowledge there are complicated relationships that would make it difficult, but that shouldn't stop women from familiarising themselves with their financial position.

"From being aware comes confidence, especially when the seasons are unkind."

Erin Turner has always been involved in the farm, after spending 20 years growing up in Narrogin, she has spent the last 20 years of her life on the land.

"I've always been involved in the farm and I think I look at farming differently to other people," she said.

"I firmly believe a farm should be run as a business, and it should be no different to if it were a news agency or a cafe.

"It is very difficult to remove the emotional aspect of the business from the numbers, we all have an emotional attachment to our farms."



WHEATBELT WOMEN FARMERS

Sarah Miller

"It is always very inspiring and motivating to hear how people have made it through the most difficult of times and fantastic to share tips."

A car accident nearly eight years ago down the main street of Beverley has had life changing implications for Sarah Miller.

Working as a teacher part time, her spare time was taken up with the farm books and raising three children.

"I'd always put the farm last on my list of things to do," Sarah Miller said.

"After the accident I couldn't stand or sit for long periods of time and I found teaching really aggravated the pain, so I resigned and began to look for other areas to focus my attention."

Sarah was suffering from chronic neuropathic

pain in both her legs and back.

She has a neurostimulator implanted that produces mild electrical pulses to stimulate specific nerves along the spine.

The stimulation blocks pain signals before they reach the brain and replace them with a more pleasant sensation called paresthesia. It looks and works a lot like a pacemaker.

"I've had to adapt to change and cope with the challenges of living with chronic pain," she said.

"But another reason why I have become so active in farm life was our need to expand to survive."



Jane Mouritz

"So many women that have married farmers have had diverse career experiences and bring these into the farming businesses."

The last thing Hyden farmer Jane Mouritz expected was her daughter to go farming.

"We always expected one of our sons to come home, not a daughter who was a fashion designer," Jane Mouritz said.

"But things changed, and we were delighted. We had made sure our farm succession and business plan was a living document that could be changed."

Jane shares Hydillowah Feedlot and farm with her husband Vern and their now extended family.

Hydillowah is a 3500 hectare property that produces about 3500 tonnes of wheat and

barley and turns off up to 6000 head of cattle each year.

They have four adult children Carlia, Sari, Elliott and Jacob.

Sari is a nurse now studying medicine and Jacob is a rifleman with the Australian Defence Force in East Timor.

Both Elliott and Carlia have returned home to farm in Hyden.

After initially being employed at Hydillowah, Carlia and her husband and their young family now operate their own nearby farm, and Elliott shares the management of Hydillowah with Vern and Jane.



Jo Fulwood

"I'm interested in the role women play in an emotional sense during a period of uncertainty like drought,"

Jo and Dave Fulwood's decision to go farming was driven by their childhood experiences.

Both grew up on farming properties, and both agreed they wanted to raise a family in the same environment.

Careers in the corporate world reinforced that decision, and so they moved to the Wheatbelt town of Cunderdin six years ago.

"We didn't really know how we would raise children in the city," Jo Fulwood said.

"We saw so many of our friends who were working long hours in an office, not having quality time with their kids, because they

would leave early and come home late.

"We also knew that if we stayed in the corporate world, we would always be on a fixed income and could never really be masters of our own destiny.

"We love the idea of seeing something grow from start to finish.

"I understood there would be busy periods during seeding and harvest living on a farm, but in the off-season things would be more flexible.

"I also love the idea of having space, and children that live in the city don't seem to have that luxury."



Shauna Stone

"We've learnt from our own lessons and have started planning for our own children."

Shauna Stone admits she is in the minority.

The 50-year-old is the key decision maker on her family farm south east of Quairading, a situation uncommon in the WA Wheatbelt.

Her husband Noel is happy to take a back seat, but is always consulted along with their two sons Kent and Todd.

"You can go to local field days and Shauna is often the only woman there, and no one blinks an eye," Noel Stone said.

"While many decisions are discussed around the kitchen table, it's more often than not Shauna has done the background research and come up with an option when it comes

to things like fertilizer and chemical usage."

The couple crop wheat, canola and barley, and like many other Wheatbelt farmers have moved out of sheep, selling their last commercial line in 2007.

Shauna Stone began life in the picturesque town of Kojonup, growing up on her parent's sheep farm.

"We spent a lot of time on horseback doing sheep work and traveling around with horse sports, but when I left school I went on to become a dental therapist, absolutely nothing to do with agriculture!" she said.



Healthy Bushland Officer profile

Phil Lewis

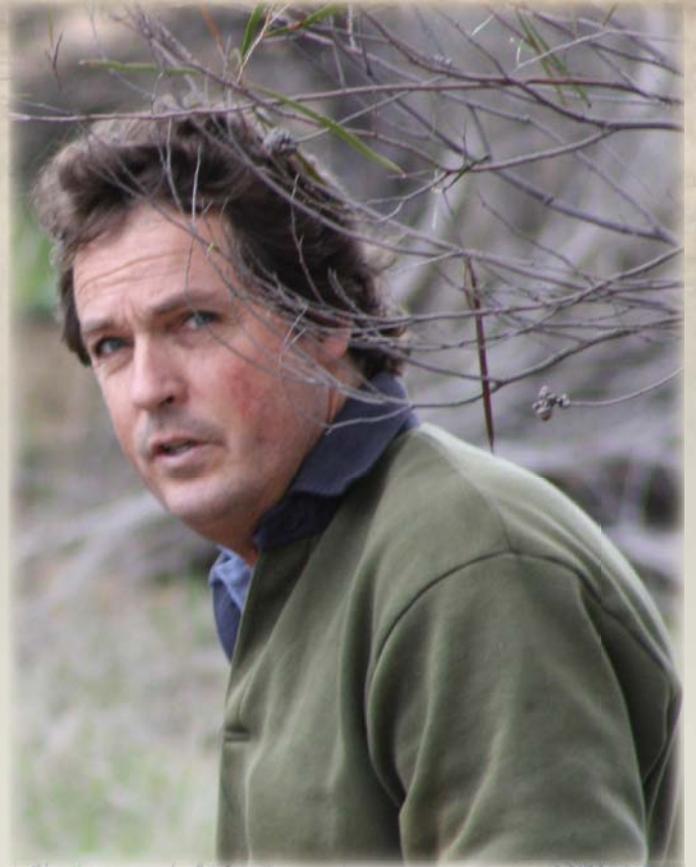
Project Officer, Healthy Bushland.

The call of the country runs strong in Phil. He has worked with livestock on distant sheep stations, in market gardens, on mines far out in the wilds of West Australia and in the rural back blocks with the Water Corporation. But Phil has always been drawn to wildlife and has a keen hands-on understanding of the species that remain in the wheatbelt region. Phil lives on a bush block just outside of the central Wheatbelt town of Wyalkatchem near the old Korrelocking town site. Together with his wife they've single handedly identified most of the birds and plants that inhabit their remnant bush. Having lived in the central Wheatbelt now for over 10 years, Phil's existing networks and pragmatic down-to-earth approach to conservation have made him a key WWF asset in establishing conservation covenants in the Southwest Australia Ecoregion.

"I know I'm not going to change the world but I feel great sense of achievement when I am able to support and encourage landholders to fence off and manage their well-loved bushland. It makes you feel you're doing something worthwhile," Phil said.

In his spare time, when Phil isn't bird-watching, capturing rare images of equally rare small marsupials, or investigating cryptic trapdoor spider burrow entrances, you can find Phil out the back tending his weird breeds of chickens or talking them up at the local Ag Show.

Phil Lewis in conjunction with Wheatbelt NRM has been part of an intriguing program using "camera traps" to record the habits of the region's native animals. The camera traps are motion triggered cameras that sit on standby, but wake up to record warm, moving objects. Already, the camera traps have revealed exciting discoveries such as the existence of the Western Bowerbird near Wyalkatchem. Without the camera footage, bird experts would have disputed this desert species could have ever been found in the region. The cameras have also filmed two species of the rarely seen dunnart, a mouse-sized marsupial. Disturbingly, footage has also revealed how common cats have become in the Wheatbelt. Here's some shots obtained through this innovative program.



Spring Fox Baiting urged

Commitment from farmers to continue their coordinated efforts to give the 'Red Card to Rabbits and Foxes' is urged, as the program expands from its Autumn focus to include a Spring fox baiting program.

"A dry Spring presents a prime opportunity to bait foxes while food demands are high due to the raising of cubs and the inexperience of the young animals," RCRF Coordinator Sally Thomson explained. "The Spring program will complement over 22,000 fox baits that were laid across 500 farming properties during March and April this year as part of the Red Card for Rabbits and Foxes drive to protect agricultural and bio-diversity assets," she said.

"The single most influential factor regarding effective pest control is still the ability of the community to take a coordinated approach, so that widespread baiting occurs at the same time," Sally explained.

"The advantage of spring baiting is that the foxes remain close to the den until October-November, so landholders can hone in on their baiting sites compared to autumn baiting when these pests are highly mobile," she said.

Fox cubs are typically born in August-September and are generally weaned at 6-8 weeks of age, when they regularly surface from the den and begin to source their own food. They generally abandon the dens around 10 weeks of age, and remain in a juvenile social group until they seek their own territory at around 5 months of age. Their lack of experience makes them highly vulnerable to human control efforts such as 1080 baiting during this time.

"Despite the DAFWA bait factory closing its doors after many years of operation, a number of certified commercial soft-bait products are available to landowners," Ms Thomson said.

Landowners gain accreditation to lay 1080 baits on their properties through a simple free application process that provides information and training to ensure safe use and handling of the poison.

Bio-Security Officers located at the Department of Agriculture and Food WA (DAWA) District Offices continue to deliver this role. Accreditation generally



Woodanilling Farmer Trevor Young with Wagin Woodanilling Landcare Coordinator Danielle Perrie.

requires correct answering of open-book multi-choice questions and remains valid for 5 years. Once accredited, farmers simply send their completed one-page application form together with a farm map to their DAFWA District Office for processing.

Authorisation vouchers are then issued, which the landholder takes to their regular ag-supply shop and can purchase baits.

Rabbit baiting is most effective during summer and autumn when feed supply is low and populations are consolidating.

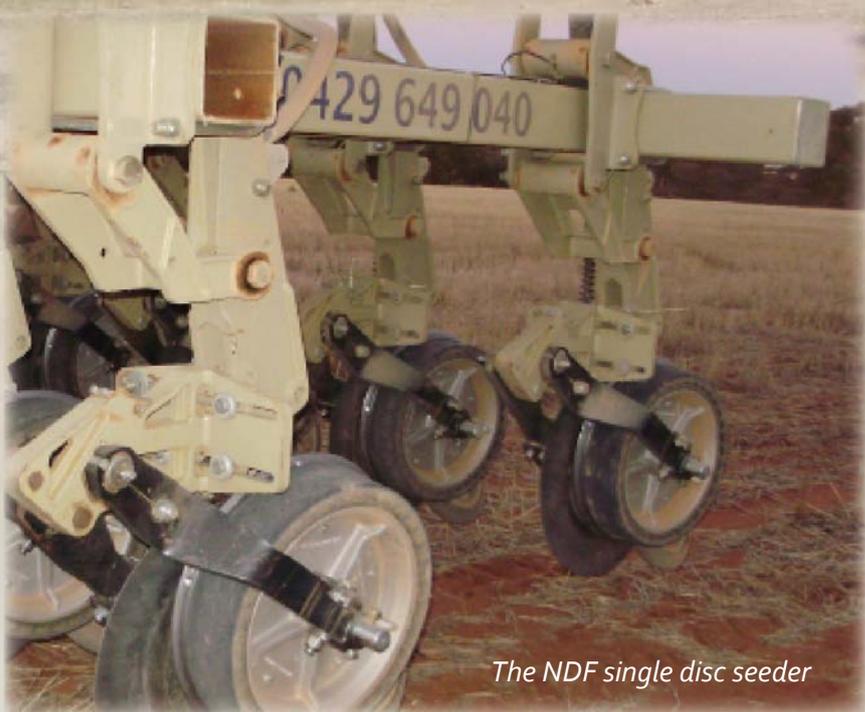
Planning for the RCRF Autumn program is underway, involving coordinated baiting and shooting campaigns to control fox and rabbit populations across the agricultural region to protect agricultural and biodiversity assets. Local organisations and landholders should contact Sally Thomson on 0417 983 356 or sowingseeds@bigpond.com to get involved in the program.

New philosophy when using discs

By Jade Dempster (WANTFA) and Mike Ashworth (WANTFA)

West Australia No-Till Farmers Association (WANTFA) are program partners with Wheatbelt NRM to increase the knowledge and skills of farmers in relation to cropping management practices that help address wind erosion. The anticipated result of their initiatives is an increase in adoption of management practices that address soil constraints and ensure consistently high retention of crop residues.

Farm-based training, demonstration and extension activities are proposed that focus on barriers to the long-term adoption of no-till practices including integrating livestock, machinery adaptations and weed management. Addressing soil constraints to production through amelioration or changed management will also be a theme of cropping project offered to landholders.



The NDF single disc seeder

In the 2009 season a demonstration looking at the effect of seeder operation on the efficacy and safety of pre-emergent herbicides was conducted at Ty Kirby's property in Beacon. The idea for this demonstration came from growers expressing their concern about effective weed management with disc seeders. As there are many benefits that can be gained by using discs (eg. easier stubble management, faster planting and reduced soil disturbance) it is important to be able to overcome this barrier to adoption.

The technique of applying pre-emergence herbicides incorporated by sowing (IBS) was developed in the Australian no-till context for narrow point press-wheel sowing systems. The technique relies on moving herbicide contaminated surface soil out of the furrow and concentrating it on the inter-row area. Discs however operate by slicing through the soil and do not create as much soil throw in the inter row, which can reduce the incorporation of pre emergent herbicides. For this reason the demonstration tested the efficiency of pre-emergent herbicide mixes in terms of weed control and crop safety.

Table 1: Treatments

Factor 1: Seeder	Factor 2: Sowing speed	Factor 3: Herbicides
Flexicoil (tyne machine) 12m wide, 25cm row spacing	8 km/h	Nil (control)
NDF (disc machine)	10 km/h	Trifluralin 1.5L/ha

12m wide, 38cm row spacing	14 km/h	Trifluralin 1.5L/ha + Lexone® 150g/ha
	14 km/h	Boxer Gold® 2L/ha

This demonstration was a non-replicated criss-cross design (eg. seeding runs across sprayed strips). Barley was inter-row sown into ungrazed, tall (>300mm) standing wheat stubble of approximately a 3.8t/ha stubble load. No knockdown was applied prior to seeding as conditions were so dry.

Table 2: Agronomic details.

Date	Operation	Notes	Input Applied	Rate (/ha)
18 May 09	Spray	IBS, 1-2 hrs before sowing	See treatments	See treatments
18 May 09	Seeding	Tyne and disc	Barley (Mundah)	50kg/ha
18 May 09	Fertiliser	At seeding	Agflow®	50kg/ha

Explained briefly below are the results from the demonstration.

Sowing depth

Sowing depth reduced with increasing speeds for both seeding systems (range between 12-17mm). Barley seeds however were observed on the soil surface at 8km/h and 10km/h for the tyne machine and at 14km/h for the disc machine. These seeds were excluded from the average seeding depth. Unburied seed was probably due to the tynes being mounted to spring coils rather than having a fixed position, while high speeds

New philosophy when using discs

may have reduced penetration of the single discs. This possibly explains why crop safety generally decreased with speed for disc sown plots and increased for tyne sown plots.

Plant count

Barley seedlings counted 28 days after sowing (DAS) were generally lowest for sprayed treatments sown with the tyne machine at 8km/h and highest for sprayed treatments sown with the single disc seeder at 10km/h (Table 4). Comparing matching speeds only, the crop counts overall were greatest for disc sown plots. The tall height of the stubble may have attributed to poor seed placement of tyne sown plots as the tyne machine tended to drag stubble and cause clumping.

Table 3. Barley counts/m² for all treatments recorded on the 15th June 2009.

HERBICIDE TRT	SINGLE DISC			TYNE MACHINE		
	8km/h	10km/h	14km/h	8km/h	10km/h	14km/h
Nil	197	263	316	209	207	175
Boxer Gold	210	286	193	186	233	153
Trifluralin	201	246	246	140	190	242
Trifluralin + Lexone	222	218	222	158	176	225

Annual ryegrass control

Ryegrass numbers were greatest at 14km/h in unsprayed plots for both the disc and tyne (Table 4). There was minimal disturbance of the soil surface from the discs at 8km/h resulting in very low ryegrass counts. Trifluralin sprayed plots incorporated by tynes at 8 and 10km/h had lower ryegrass numbers than the Boxer Gold sprayed plots. At 14km/h with the disc seeder this was also the case. Overall the pre emergent sprays offered more than 75% annual ryegrass control.

Table 4. Ryegrass counts/m² for all treatments recorded on the 15th June 2009.

HERBICIDE TRT	SINGLE DISC			TYNE MACHINE		
	8km/h	10km/h	14km/h	8km/h	10km/h	14km/h
Nil	1	28	58	35	12	80
Boxer Gold	0	6	9	5	4	1
Trifluralin	4	6	2	4	0	3
Trifluralin + Lexone	1	1	5	0	2	15

Crop yields

When comparing sowing speeds, all disc barley yields were higher than the tyne barley yields (Table 5). Boxer Gold® caused the least reduction in yield when incorporated by discs, but all spray treatments had a significant impact at 10km/h. It is possible that the yield recorded for nilx10km/h is an outlier. Tyne yields were fairly consistent between treatments, except for Trifluralin+Lexone® at 14km/h. It was surprising that the other herbicides did not have the same impact on yield, as generally high speeds with tyne machines create excessive soil throw. In this particular situation improved seed placement at this speed may have reduced this impact.

Table 5. Barley yields (t/ha) for all treatments

HERBICIDE TRT	SINGLE DISC			TYNE MACHINE		
	8km/h	10km/h	14km/h	8km/h	10km/h	14km/h
Nil	3.1	3.7	2.6	2.1	2.2	2.6
Boxer Gold	3.1	2.8	2.7	2.2	2.0	2.4
Trifluralin	2.8	2.6	2.5	2.3	2.2	2.3
Trifluralin + Lexone	2.6	2.4	2.2	2.2	2.3	1.3

In summary...

- The disc seeder provided more accurate seed placement than the tyne machine though was affected by soil strength at high speed (14km/h). Disc seeders have a greater ability at handling tall standing stubble than the tyne machine.
- As a percentage of control (nil) crop safety is reduced with the single disc at high speed (14km/h). For the tyne machine at 8km/h and 10km/h the Boxer Gold spray had the least effect on barley counts.
- Ryegrass numbers generally increased with increasing speed. All pre-emergent were relatively effective, though as a percentage of control (nil) ryegrass control improved with discs as speed increased.
- Disc barley yields were greater than tyne barley yields under tall standing residue. Due to the dry finish the wider row spacing may have also been advantageous.

Disclaimer

Research is conducted as a means of gaining understanding of herbicide safety with disc seeding systems. Any discussion of these uses does not constitute a recommendation for that use. All pesticide use must be in accordance with the registered uses for that product. Use of information contained in this paper is at the user's own risk.

New! Guide to Writing Case Studies

A new guide has been developed to assist land managers and the community to document the story of their achievements.

The purpose of this guide is to provide tips and ideas on how to create a simple one or two page case study and the types of information that should be included. The guide provides the 'bare bones' of a case study, and can be altered or creatively formatted, depending on your needs and audience.

Documenting the outcomes of projects in this simple format has a number of benefits:

- It demonstrates the outcomes of a project to funders and community.

- It provides a historical reference of achievements for future communities.
- It celebrates the achievements of the project and all those who were involved in its implementation.
- It provides valuable information for others implementing similar projects.

The Guide and template can be downloaded via the Wheatbelt NRM website at <http://www.wheatbeltnrm.org.au/projects/monitoring-and-evaluation/resources>

If you would like a hard copy sent to you, please contact Michelle Kidman, Monitoring and Evaluation Coordinator, Wheatbelt NRM on 9690 2250 or via email at: mkidman@wheatbeltnrm.org.au

Recognising Women Farmers blog



A group of women from the Wheatbelt have visited Birchip to meet with the Birchip Cropping Group's women's agronomy group, and the authors of "Critical Breaking Point" to talk about how they have managed 10 years of drought.

The women's learnings, reflections and observations are being posted up on the <http://birchiptour.blogspot.com> site. With interesting articles, video and photo's, be sure to take a look!

This project is supported by funding from the Australian Government Department of Agriculture, Fisheries and Forestry under Australia's Farming Future.



wheatbelt
natural resource
management

PO Box 311
Northam WA 6401
www.wheatbeltnrm.org.au

Phone 08 9690 2250
Fax 08 9690 2255
info@wheatbeltnrm.org.au