

UNFS UPDATE



Upper North Farming Systems Newsletter

October 2015

Five steps to successful stubble grazing

Published 16 October 2015 - Meat and Livestock Australia - www.mla.com.au

South Australian livestock consultant Hamish Dickson delivered strategies to optimise livestock nutrition when he presented at an MLA/Australian Wool Innovation funded Making More from Sheep (MMFS) session at an Upper North Farming Systems workshop earlier this year.

Here are his top tips for managing sheep grazing on cereal stubbles:

- 1. Plan ahead.** The benefit comes not from the stubble but from the residual grain left behind at harvest. It is important to align the feed with the requirements of the animal. Other considerations are stocking rate, water availability, the existing groundcover (a minimum 50% is recommended, higher is required for light soil types) and the type of stock grazing the paddock ie ewes or weaner lambs - as each have different nutritional needs. Use [Making More from Sheep's tool on sheep nutritional requirements and DSE ratings](#) for better planning.
- 2. Do a feed budget.** Calculate the number of grazing days by:
 - assessing grain availability
 - determining paddock size
 - the number of animals in the mob
 - the intake of the sheep based on the residual grain, the available grain and the projected daily grain consumption.
- 3. Nutritional value.** Will the stubble meet the animal's nutritional needs? In nearly all cases supplementation will be needed once grain availability has declined. This may be in the form of lupins or other grains, hay or silage, lick blocks, molasses or urea. It is always important to compare the cost efficiency of different supplementation options.
- 4. Monitor your sheep.** Ensure they maintain weight and body condition score. Use the [Making More from Sheep condition scoring tool](#). Watch out for signs of ill health in the flock - particularly [acidosis and pulpy kidney](#).
- 5. Make seasonal adjustments.** Green feed significantly changes the value of the stubble being grazed. Monitor and adjust supplementation or stocking rates accordingly.

More information: Hamish Dickson, AgriPartner Consulting E: hamish@agripartner.com.au

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Harvest Planning is Key to Stubble Management.

Factsheet by VicNoTill: <http://vicnotill.com.au/wp-content/uploads/2012/08/Stubble-Management.pdf>

Correct stubble management is one of the core platforms to establishing a successful no till cropping program.

- Stubble management occurs at harvest time
- Correct harvesting height and distribution of straw through a chopper is critical
- Inter row sowing can allow crops to be sown successfully into large residues

The retention of crop residues has been one of the key drivers of success in No Till farming systems. Retaining crop residues contributes to increased soil organic matter, nutrient cycling, improved soil structure and a reduction in erosion.

Harvest Management Managing residue at harvest is the best way to set up that paddock for the following crop, it is important to know what your seeding equipment is capable of prior to harvest to enable seeding that avoids blockages and allows for accurate seed placement.

If engaging contract harvest operators ensure that the machine you are using suits the job required. You are paying for a service, make sure you get what you paid for, this must include stubble management. Speak with the operator prior to their arrival and discuss what you need done. Don't assume that they will just harvest at the height that suits your seeder.

Cutting height at harvest: Setting the header high at harvest time will improve harvest efficiency but can lead to major stubble handling issues at cropping time next year. Cutting stubble to the correct height and leaving stubble standing and anchored will help to minimize problems with trash flow at sowing. As a general rule of thumb growers should aim to cut their stubble off at around the same height (or lower) than their row spacing (eg. If you are on 12 inch spacing = cut stubble at 12 inches or lower). The only exception to this may be where growers have the ability to inter-row sow. Where the seeder is sowing in the inter-row and not knocking out last years stubble, you may be able to increase the height of the straw without compromising trash flow. Inter-row sowing is an important tool in managing residues, improving stubble handling capacity, increasing establishment percentages and improving the harvestability of legumes such as lentils and field peas etc. (the legumes trellis up the stubble, increasing crop height and reducing lodging)

Straw Choppers and Spreaders: Spreading of straw and chaff out of the back of the header is critical. Thick clumps of loose straw and trash are often the source of many blockages at sowing. Make sure that headers are set up to spread straw and chaff the full width of the header front. Not only will this help with trash flow but it will also help with the efficacy of pre-emergent herbicides. The width of spread is critical, as is the evenness of spread. If the chaff is not evenly spread you are likely to see a build up of organic matter in patches, this will affect nutrient availability.



Exporting residue off-farm? Baling residue for hay should be considered a last resort. The loss of residue can be detrimental long term. The table outlines some of the expected removal of nutrients for every 1t/ha of wheat product removed. A quick calculation can give you an indication of how removing stubbles can cost you. Eg. 3t/ha wheat straw (3t x 5kg N/t x \$1.44), removing this from the paddock could cost you as much as \$21.60/ha in lost N alone.

Table 1.

Nutrient	Kg/ha (removal 1t/ha straw)
N	5
P	0.5
K	10
S	0.5

Source:DAWA, Farmnote 97/2001

Harvest Planning is Key to Stubble Management...continued

Sowing Width Sowing width is one of the key factors that affect the ability of seeding machinery to handle crop residues. There have been studies to show that row spacing increased past 180 mm can decrease crop yield. We (Vic No-Till Association) believe that the benefits of going up to row spacings of 15"(381mm) with seeding machinery to allow for full retention of stubble far outweigh any potential yield losses due to decreases in seed bed utilization. Wider row spacing also allows inter row sowing to occur more easily which can have benefits of reduced diseases such as crown rot. In addition, decreases in yield can often be made up in increased sowing efficiency as wider sowing widths allow faster sowing speeds.

More Information:

<http://cwfs.org.au/2015/09/02/good-stubble-or-bad-stubble-loads/>

<http://cwfs.org.au/podcast/contract-harvesting/>

www.grdc.com.au

UNFS Spring Crop Walk - 10/09/2015



What plant is that?

Plant identification workshop for property management and revegetation

When: Friday 30th October

Time: 10:00am – 3:00pm

Cost: Free

Where: Meet at 'Chimney' car park, corner of Barrier Highway and West St, Burra. Then move to other sites near Burra as time allows, participants will be required to travel in their own vehicles.

Presenters: Anne Brown, Millie Nicholls and Natural Resources staff

Please bring your own: lunch, water, outdoor weather appropriate clothing and sun protection.

Come out and about and learn about local plant species: What plants are what, how to identify them? Which grasses are native? The basics of how to manage grasses in a grazing system and how you can use local plants in revegetation. Weed management

To RSVP and for more information please contact **Anne Brown** on **0409 684 312** or **Debbie Wilkinson** on **8532 9100** or debbie.wilkinson@sa.gov.au



"To win the war you must win the battles. Harvest weed seed control is an important battle" - Ray Harrington, WA grower & inventor of the Harrington Seed Destructor

Which HWSC tool is right for you?

Follow the links below for more info on the HWSC tools relevant to your farming operation:

- Do you have sheep? [Chaff cart / grazing dumps](#)
- Are you a CTF grower? [Chaff deck](#)
- Are you a low cost, low rainfall grower? [Windrow burning](#) or [chaff cart](#)
- Are you hell bent on residue retention (are you a stubble hugger?)? [HSD](#)
- Are you CTF with a disc seeder? Chaff line / windrow rotting (early stages - stay tuned!)
- Do you have a market for straw near your farm? [Bale Direct](#)

Narrow windrow burning

By mounting a chute to your grain harvester, all of the exiting chaff and straw residues are concentrated into a narrow windrow about 500-600mm wide which is later burnt. There's a 6 step intro vid, chute CAD drawings, plus tonnes of other handy resources [over at the website](#).

Chaff cart

Chaff carts are towed behind harvesters to collect the chaff fraction as it exits. The dumps are later burnt or grazed. Super quick video, handy financial factsheets and more are available for you [here](#).

Harrington Seed Destructor (HSD)

A unique system developed by the awesome Ray Harrington that processes the chaff fraction to destroy any weeds before returning the material to the paddock. There is no need for any post-harvest operations and all harvest residues are retained (win/win!). More info? [Here you go](#).

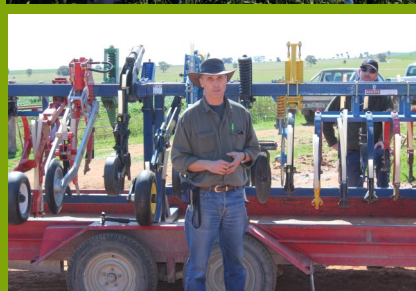
Bale Direct

The Shields family in WA developed the Bale Direct System. The large square baler is attached directly to the harvester and constructs bales from the chaff and straw residues. For more info plus resources [click here](#).

Funnel seed onto tramlines

In controlled traffic farming systems, weeds are funnelled onto an inhospitable environment - compacted by soil and run over by machinery (weeds deserve it). [Find out more](#).

UNFS Spring Crop Walk Cont...



Introducing the UNFS Operations Committee

At the 2015 AGM the UNFS Operations Committee was launched. This committee is made up of the Strategic Board and the recently appointed Hub Representatives and Industry Representatives. The Hub Representatives role is to ensure that the group and its projects remain driven from the ground up and to keep a social element to the Upper North Farming Systems Group. The inaugural meeting of this committee was held on the 7th of October in Booleroo Centre. There was fabulous discussion and a detailed list of priorities for the region was put together. Each Hub Rep will aim to have an informal gathering after harvest to touch base and gauge how you would like your hub to be run. Come along, have a chat and mingle with like minded people from the region!

Hub Representatives

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New Farmers (<10 yrs Farming) - Vacant

Melrose - vacant

Tell the women in your lives to check out the Facebook Page established for the Ladies on the Land Hub. It has shown the demand for networks like this with a viral start of over 700 likes in the first 2 weeks! Well done Jess for doing such a professional job at getting this started!

<https://www.facebook.com/Ladies-on-the-Land-1179519845397639/>



Vote now in WoolPoll! Vote closes Friday, October 30

AWI



Growers must vote now if they want to influence the future of the wool industry, with WoolPoll 2015 closing on Friday, October 30 at 5pm.

"This is the best way for every wool grower, prime lamb producer and mixed farmer to make a statement," says WoolPoll 2015 Panel Chairman, Will Roberts.

"You can give your two cents in the pub, around town, over the neighbour's fence, but if you really want to make your opinion count, make sure you vote.

"It takes two minutes to vote online at www.woolpoll.com.au, and not much longer to fill in your voting papers and put them the mail.

"If you have an opinion about our industry, do it now."

All eligible levy payers – any wool grower, prime lamb producer or mixed farmer who has sold \$100 worth of wool over the past three years – can vote.

For more information head to www.woolpoll.com.au

Grass Identification Workshops

Trees for Life have set a date for a Grass Identification workshop, to be held in Clare.

When: Sat 31 October **Time:** 9.30-4.30 **Cost:** \$10 (Morning tea and lunch provided)

BOOKINGS ESSENTIAL - If you'd like to attend, please **RSVP** to Erica Rees EricaR@treesforlife.org.au or ph 8406 0500



Want to understand herbicide resistance in 30 days?

[Diversity Era](#) has been developed by the Australian Herbicide Resistance Initiative's (AHRI) communication team and we're excited to announce that this online learning program is now part of WeedSmart.

Diversity Era's first full-length course [Herbicide Resistance 101 with Professor Stephen Powles](#) starts **November 16, 2015!**

What does the course cover? In a (herbicide resistant) nutshell:

- An overview of target site resistance
- ACCase target site resistance
- Gene amplification
- An overview of non-target site (metabolic) resistance
- Metabolic resistance P450 & GST
- Reduced movement
- Hyper-sensitive source leaf
- PLUS how it applies in the field



The course will be **run live**, which means we're working through the material together over 4 weeks. We'll release 2-3 videos (5-10 mins each) every Monday and there's 2 members only webinars (with Stephen Powles and Peter Newman) to answer your questions and help support you along the way.

For more info on the **Herbicide Resistance 101** course and to **join 100 other course members**, [click here](#).



UNFS has a new Administration and Finance Officer



Upper North Farming Systems Group is excited to introduce to you, our new Administration and Finance Officer, Sara Clark. Sara started with the group on the 7th of October and will be working approximately 1 day per week.

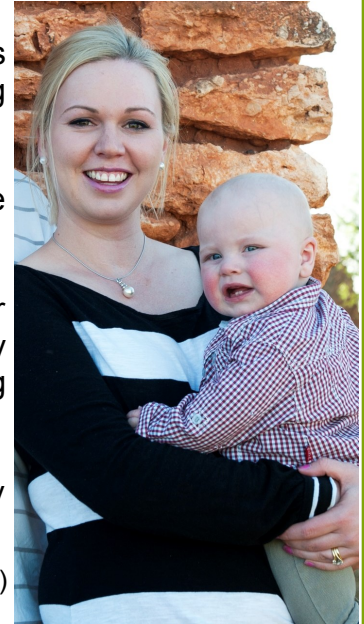
Sara brings with her a wealth of administration experience and is passionate about gaining a greater understanding of the farming enterprises of the Upper North Region.

Sara, her husband Adrian and 2 boys, Ned and Sid, farm and live at Belalie North.

Sara will be responsible for the memberships and many other aspects of the group administration into the future and is quickly learning the finances to ensure the group is managed in keeping with the principles of good governance.

We welcome Sara to the team and look forward to many achievements with you as part of our organisation.

Picture: Sara and her son Ned (now 4)



Congratulations to the Seed to Store Winners from Booleroo Centre

Supported by the South Australian Grains Industry Trust and the Grains Research and Development Corporation, the 2015 Seed to Store – The Story of Australian Grain YouTube clip competition involved filming your favourite aspects of the grains industry, creating a cool little clip and then entering it into the 2015 Royal Adelaide Show competitive YouTube section.

Results of the SAGIT-funded Seed to Store YouTube Clip Competition were announced at the Royal Adelaide Show on the 8th of September. First prize winners in the community section were Peter Frith, Jen Frith and Henry Green.

Congratulations to local girls Meg Jarvis, Chelsea Arthur, Lily Durnford, Bethany Simpson, Eliza Bastian and Ayeisha Bishop from Booleroo Centre, who were been announced as the 2015 SAGIT-funded Seed to Store YouTube Clip Competition School Student Section WINNERS! Great to see the next generation of Advocates! [Watch here](#)



SEED TO STORE

The Story of Australian Grain

How much does harvest weed seed control cost?

AHRI - <http://ahri.uwa.edu.au/hwsc-cost/>

Life is full of trade-offs. Do I buy the quality beer or go for volume? Should I take the high paid job or the job with lots of holidays? The answer to the second question may dictate the answer to the first!

Harvest weed seed control (HWSC) is full of trade-offs. Some options are excellent but expensive. Others are cheap but require compromise.



For example, narrow windrow burning appears cheap, but has a high hidden cost of nutrient removal and requires a lot of labour to burn the windrows. The Harrington Seed Destructor is the dead opposite.

In this AHRI insight we quantify the cost of six HWSC tools. One of the tools can cost as little as 10c/ha while another can cost as much as \$60/ha. The cheaper tool may seem the obvious choice, but it is not quite that straight forward.

There are currently six HWSC tools being used by Australian grain growers. All remove weed seeds at harvest but they come at different capital cost, running cost and cost of nutrient removal. To compare these tools we must first consider the running cost, and then add the nutrient cost to get a realistic comparison.

There are three categories of Harvest Weed Seed Control

		% of crop residue removed
1. Remove chaff fraction only	Chaff cart, chaff deck, chaff line	10 – 25
2. Remove chaff and straw	Narrow windrow burn, bale direct	40 – 50
3. No residue removal	Harrington Seed Destructor (HSD)	0

Running cost

The running cost of the various tools was calculated assuming that the harvester covers 2000 hectares each year. A bigger area will reduce the finance cost per

hectare and vice versa. The running costs include:

Finance	6% interest over 8 years
Labour	Burning of windrows and chaff dumps – approximately \$2/ha
Extra fuel	3 L/ha to run the HSD, extra 0.5 L/ha to tow chaff cart
Maintenance	HSD, chaff cart & chaff deck

The capital cost and the running cost of these tools in the table left are indicative only and based on current pricings.

Once we know the running cost, we then

need to add the cost of nutrient removal per tonne of grain harvested and multiply by yield. To do this we assume that 50% of nutrients in the residue is returned to the soil if it was to be retained. This is a rubbery figure and can be adjusted. The biggest nutrient costs are Potassium (K) and Nitrogen (N). Some growers have soil with very high K levels and wish to ignore this cost. There are other benefits of full residue retention that we are aware of but haven't quantified in these calculations.

	Chaff removal only			Chaff & Straw removal		No residue removal
	Chaff cart (New)	Chaff deck	Chaff line	Narrow windrow burn	Bale Direct	Harrington Seed Destructor
Capital cost	\$75,000	\$15,000	\$200	\$200	\$140,000	\$200,000
Running cost per ha	\$8.90	\$1.65	\$0.10	\$2.08	\$23.17	\$24.40
Other financial benefits	Feeding sheep				Selling bales	
	PLUS			PLUS		PLUS
Nutrient removal cost per tonne of wheat harvested	Assuming 50% recovery of nutrients, cost of nutrient removal is \$2.50 per tonne of wheat harvested			Assuming 50% recovery of nutrients, cost of nutrient removal is \$8.25 per tonne of wheat harvested		Nil

Chaff line

The chaff line technique is clearly the cheapest. Chaff lining involves making a simple chute to divert the chaff only fraction (off the sieves) into a narrow windrow which is left to rot/mulch while the straw is chopped and spread. This system is in the early days of development and we are still learning about the benefits and drawbacks of leaving strips of concentrated chaff containing potentially very high numbers of weed seeds. Observations of growers using this system suggests

that low numbers of weeds germinate in the chaff line. There are unknowns, but it is certainly worth a try in a paddock or two. Low cost, low tech, low labour. Check out [this past edition](#) of AHRI insight for more info.



Chaff deck

The chaff deck is also low cost and is well suited to growers with controlled traffic farming systems. Once again there are concerns that the weed seeds are left in the paddock rather than being destroyed. Anecdotally, growers who have been using this system for many years comment that their permanent tramlines are getting cleaner the longer that they use this system.



Chaff cart

The chaff cart is a medium cost option with low levels of nutrient removal. For mixed farmers this option has the benefit of allowing the grazing the chaff dumps in the field or in a feedlot. Frequently the direct grazing of chaff dumps means there is no need to supplementary feed sheep or to subsequently burn the dumps as remaining residue can be seeded through. Check out [these WeedSmart webinars](#) with Andrew Boulton and Mark Wandel.

Narrow windrow burning is best suited to lower rainfall environments with high Potassium soils.

The bale direct system is profitable where a market for straw bales exists close to the farm.

The Harrington Seed Destructor (HSD) The capital and running cost of the HSD are high in comparison to other systems but there is no nutrient removal cost.

Clearly, expensive capital items such as the HSD are best suited to bigger farms that can average out the capital cost over a larger area of cropping.

Summary

The integrated destructor mill is very exciting. Early indications are very good and when it comes to market it is likely to have a big impact. Watch this space (hopefully not for too much longer!). The chaff cart has a big future for mixed farmers, they are good for the sheep and good for the crop. The chaff deck and chaff line are good low cost options for controlled traffic farmers, but the weeds are still in the paddock. We need to continue to research these options. Bale Direct is profitable in the odd rare situation where a big market for bales exists.

No Compromise

We are looking for the ultimate system with no trade-off. A system that is cheap, reliable, and convenient. For mixed farmers, the chaff cart may well be it. For the crop dominant farmers the integrated destructor mill will hopefully be the answer. In other words, quality beer with lots of holidays!

Some great links to help you this harvest

www.grainproducerssa.com.au/pages/links.php

CFS:

[CFS: Have your say on the Grain Harvesting Code of Practice Review - HURRY! The review closes this week!](#)

[CFS: Grain Harvesting Code of Practice](#)

[CFS: Broad Acre \(Stubble\) Burning Code](#) (downloads as pdf document)

[CFS: Farm Fire Unit Joint Guidelines](#)

[CFS: Farm Fire Safety Page](#) (select topic from left-hand menu)

Transport:

[Summary for producers – 2015 Grain Cartage \(PDF\)](#)

[Summary for producers – moving agricultural machinery in Zone 4 \(only\) \(PDF\)](#)

[NHVR - Fatigue management for farmers \(PDF\)](#)

[90-day Agricultural Transport Project Report](#) - March 2015

[Transport SA: Agricultural Vehicles - Gazette Notices and Codes of Conduct](#)

[DPTI RAVnet system](#)

See also our [Transport Information](#) page

Spray Drift:

[Code of Practice - Summer Weed Control. Quick reference guide.](#)

[Code of Practice - Summer Weed Control. Brochure.](#)

[Checklist: Reducing Spray drift and damage.](#)

Other:

[POOLS - GTA Operating Standard for Grain Pool Providers](#)

[GRDC - Reducing harvester fire risk: The Back Pocket Guide](#)

[Rural Business Support - Rural Financial Counselling](#)



The following vacancy is now open through Jobs SA and external applicants.

Enquiries to: Kate Pearce – 0429 362 002

Applications to: Jeannine Naughton –

dewnr.nynrmjobs@sa.gov.au

Applications close 8th November 2015

Ranger Community; Southern Flinders / Upper North District

Vacancy # 2015-7126

Duties

In conjunction with the Team Leader (Community) and other district staff, the Ranger (Community) will contribute to the effective operational delivery of natural resource management programs and projects at the district level, in accordance with the Regional Natural Resources Management (NRM) and DEWNR Plans. This will require the Ranger to work across the landscape, both on and off reserve, to coordinate and integrate community and stakeholder engagement in NRM related activities. As a team member, the Ranger (Community) will contribute to the delivery of the broader outcomes of the District which will include Landscape Management and Fire Management. The Ranger will also contribute to effective community engagement within the Southern Flinders / Upper North District.

Special conditions

This is a contract / term vacancy up to 36 months. A current Class C drivers licence and willingness and ability to safely operate a 4wd is essential. A National Police Clearance Check is essential. Will be required to participate in fire management duties.

Additional notes

Applications need to include a Resume and a letter of application (of no more than three pages), addressing the Core Competency Elements and where necessary, the Technical, Professional/Knowledge and Experience. See the Applicant Guidelines document for guidance. Applicants are required to complete the Pre-Employment Declaration Form if not currently employed by the Public Sector.



1. Do you live in rural South Australia?
2. Are you interested in knowing more about your health and the health of your community?
3. Are you aged 18 years or older?

If you answered YES to these questions you may be interested in joining our REACH database

The University of South Australia is looking for people to register their interest in being part of a rural participant database called the 'REACH Database'.

What does being part of the REACH Database involve?

By registering your contact information on the REACH Database you will receive information about upcoming research studies being run in your local area. These studies will focus on individual and community health, and may include all or some of the following aspects of health:

- General health and wellbeing
- Stress and mental health
- Sleep behaviour
- Diet and physical activity

For further information or to register contact the REACH team on t: (08) 8302 1365 or email: REACH@unisa.edu.au. You can find us on facebook at <https://www.facebook.com/groups/1497248217262379/>

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Herbicide Resistance Management- We want Keith Richards not Jimmy Hendrix

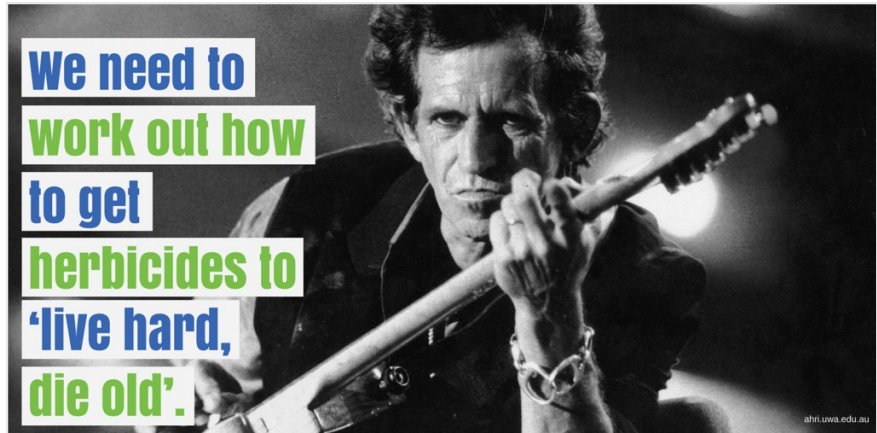
<http://ahri.uwa.edu.au/keith-richards-not-jimi-hendrix/>

The old rock star adage is 'live hard, die young'. Keith Richards, on the other hand, has somehow managed to buck the trend and 'live hard, (and will) die old'. How Keith has lived so long will go down as one of the world's great unsolved mysteries.

Many herbicides are 'living hard, dying young'.

We need to work out how to get herbicides to 'live hard, die old'.

Back in 2006, Pat Tranel and others from the University of Illinois were investigating the first reports of glyphosate resistant waterhemp in the USA. As they travelled around they saw completely weed free fields, while



other fields had glyphosate resistant waterhemp exploding out of the top of the crop. Fast forward to 2010 and these same researchers set out to discover why. They worked with a local spray contractor who provided them with nearly 500 site years of data from 105 fields. They looked at everything from environment, to soil, to landscape and management.

They found that the difference was due to management, specifically, growers that have used full rates of herbicides in mixes. Growers that used 2.5 herbicide modes of action (MOA's) on average per application were 83 times less likely to have glyphosate resistance than growers that had mixed 1.5 MOA's on average. They concluded that mixing herbicides is better than rotating between them to prevent herbicide resistance.

Pat summed it up perfectly by saying 'rotating herbicides buys you time, mixing buys you shots'. Using herbicides in mixes at full rates may be the key for herbicides to 'live hard, die old'.

Mixing is where it's at

The graph right says it all. The researchers reviewed herbicide application from 2004 to 2006 and then did glyphosate resistance tests in 2010. The probability of resistance in these fields declined sharply as more products were added to the tank. (MOA = mode of action = herbicide group).

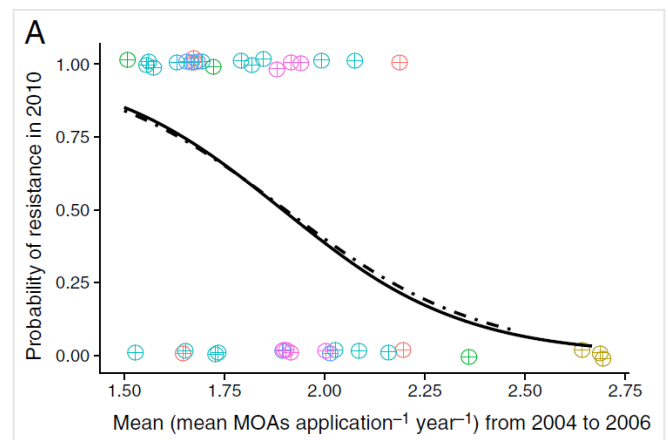
Rotating buys you time, mixing buys you shots

If you have a herbicide where resistance typically evolves after five shots, then using it every second year will buy you some time, but resistance will still happen after five shots over ten years. If there were big fitness penalties, then rotating may buy some shots, but most cases of resistance don't come with big fitness penalties.

Mixing this herbicide with other herbicides, all at full rates, is likely to buy some extra shots of the herbicide.

Why does this work?

Essentially, it's very rare for a single weed to be resistant to two herbicides before herbicide selection. If a weed

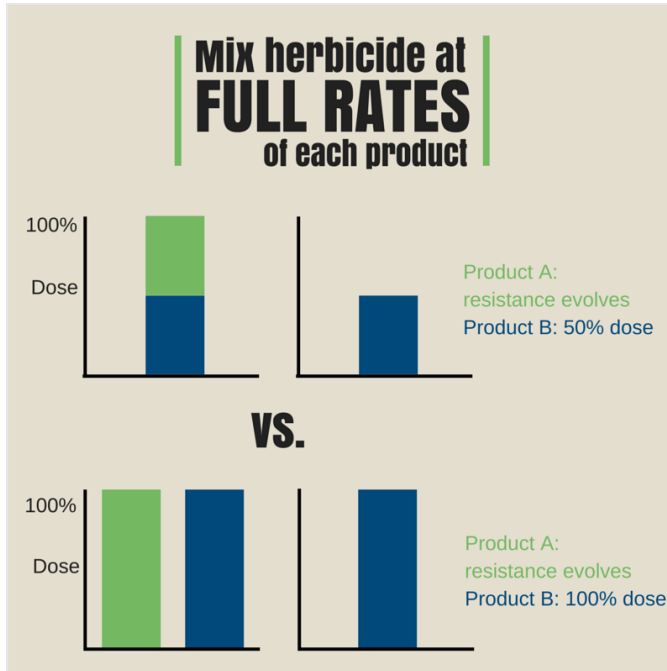


gains a random mutation that gives resistance to a herbicide, and it is sprayed with two herbicides, at full rates, it will die and not set seed.

Mixing and rotating buys you time and shots

Why not combine the two and get the best of both worlds.

What is an effective mix?



We use a lot of herbicide mixes in Australia, but many of them do not include all of the herbicides at full rates. In many cases, crop safety and herbicide labels do not allow us to use all products in the mix at full rates. However, there are plenty of examples where we can use mixes of herbicides at full rates and we owe it to ourselves to do so whenever practical.

A good herbicide mix is:

- Two or more herbicides
- Each at full rates for the target weed
- There is no resistance to any of the herbicides in the mix
- No antagonism between herbicides
- Physically compatible
- Safe to the crop

Tank mix or in sequence?

This study from the USA focuses on tank mixes, however, author Pat Tranel commented to us that it doesn't all have to happen in the same tank and it doesn't all have to be about herbicides. Growers should ask themselves how many hits they can get at a single weed species in a given year. The double knock technique is the perfect example. We need to use the double knock approach in all forms of weed control, not just with knockdown herbicides.

Is mixing the complete answer?

The researchers in this study also concluded that herbicide mixing is not a universal panacea. It's not a permanent solution to the problem, but it will delay the evolution of resistance.

Does this mean that we have had it wrong all of these years by recommending herbicide rotation? No. Herbicide rotation is still a good idea, but perhaps we need to put more emphasis on mixes of products at full rates. Mix and rotate is the answer, but not the entire answer. We need to team it up with non-herbicide tools as well.

Summary

US growers have created the world's biggest herbicide resistance problem by abandoning all other forms of weed control in favour of using just glyphosate. This is the rock star equivalent of dying in your twenties.

This research shows that mixing herbicides is better than simply rotating between herbicides from year to year. We can go one better, and hit the weeds with more knocks that don't come in a drum.

We need to think Keith Richards, not Jimi Hendrix.



Upper North Farming Systems

Strategic Board and Staff



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Photos of the recent UNFS Livestock Nutrition Workshop held at Don Bottrall's Property near Appila. This workshop was delivered by Hamish Dickson and funded by Making More From Sheep

