

Newsletter

Number 56

June 2016



**Save The Dates—Stipa Workshops
featuring Gabe Brown**

Benalla: Wednesday 2 November 2016

Dubbo: Friday 4 November 2016

Photo Gabe Brown <http://brownsranch.us>

www.stipa.com.au

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STIPA is not an acronym. The association was named after the *Stipa* genus of grasses, now *Austrostipa*. One of the *Stipas* is commonly known as spear grass. At its inception in 1997, the association aimed to spearhead a change in attitude to native grasses. As that change is occurring, Stipa continues to promote the use of native grasses to achieve profit from a healthy landscape.

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From the Chair

Annabel Walsh

Welcome to our mid year newsletter, the plans for our bi-annual workshops are well underway, details are within these pages and we encourage all members and anybody who is operating a grazing, or cropping property to join us in November.

Col Seis, over the past 10 years, has formed very strong links with grazing and cropping farmers in America. Col's pasture cropping practices have been embraced by thinking farmers in the States over many years now, presenting at the esteemed Quivera workshops in New Mexico and next month at the Gail Fuller field days in Emporia, Kansas,

Col has enticed Gabe Brown, who presented at the Emporia workshops last year to join us for our November workshops as a guest speaker. Gabe has been able to increase his soil carbon stocks by 4% to 5% over the past 20 years by developing multi-species cover cropping which involves planting 10 to 15 different species and adopting planned adaptive grazing. Gabe's story of his personal journey and the realization of the importance of moving away from mono-culture planting to multi-species is a great story in itself, but the empathy he



has nurtured with his plants, soils and soil life can make a valuable contribution to mankind by making regenerative farming practices common practice.

Several weeks ago I was lent a copy of Aldo Leopold book "A Sand County Almanac". References to Leopold's work has been cropping up in several books that I have read lately. This book was written in the late 1930's, the insight this fellow had way back then is just remarkable. His ability to convey to the reader the folly of man's achievements in his thoughtless attempts at landscape conservation and mindless farming practice which have left our soils so depleted is portrayed with an understanding that leaves you with no doubt that there is no negative social stigma attached to this behaviour. This has to change and it is through the insight of people like Gabe Brown that we will get our inspirations to manage our properties.

From the Chair

Annabel Walsh

The gadgetry of modern farming needs to be used in harmony with an understanding of the biogeoeological systems. Farmers need to think of the consequences of their every day activities on every aspect of plant and soil life and understand the connections. Several weeks ago we had high wind across Southern Australia, a cropper from the Mallee was heard on the radio to say “thank goodness for my GPS today because without it the dust would mean I would have to stop work”. *We must change!*

One of the major hurdles to change is because many still do not have a vision of what our soils were like pre European times. They view their current landscape and soil health as the norm, not the left over carcass from years of practices that have depleted the soil carbon and biogeoeological function. Stipa’s focus at the last workshops was trying to create a mind picture for farmers to envisage how pasture or crop lands should look, smell and function. Smell is very important, just watch those people who are in touch with the landscape and the first thing they do on entering a paddock is grab a handful of soil and smell or kick the first cow pad



they see to measure how their cattle are travelling. We hope we were able to give the participants at the last workshops in Murray Bridge a vivid understanding of the potential within our landscapes, the important role that native perennials and plant connectivity play to regenerate when managed in a manner that allows nature to function as she was designed.

The Stipa committee, by inviting Gabe Brown to present at the November workshops feel that these presentations will provide graziers and croppers with an understanding of the management practices that increase landscape function, soil health lower risk and help retain money in your business.

I strongly recommend that you attend the November workshops.

From the CEO

Graeme Hand

In this report

- Stipa Ninth National Native Grasslands Conference
- Update Spring spelling
- Profitability and low risk of perennial native grasslands continues to be confirmed

Stipa Ninth National Native Grasslands Conference

The format for this year's Stipa Conference is two repeated workshops starting in Benalla Victoria, Wednesday, 2 November 2016 and then Dubbo New South Wales, Friday, 4 November 2016

We are excited to have Gabe Brown talking at this year's events. Gabe is recognised as a leader in the field of multi-species cover cropping, grazing management at high stock density and the stacking of enterprises to lower risk while increasing soil health and profit.

Put the dates aside and attend the workshop nearest to you. These workshops will be valuable to you if you are cropping and are looking to improve soil health through the se-



Photo By Lucy Hand

lection of enterprise design, grazing management and multi-species cover crops. These workshops will allow you to design your business to rebuild soil health, reduce inputs and lower your financial and production risk.

Update Spring spelling

In this newsletter I have included an update of the Spring spelling idea. It has finally rained and we are getting back under control. Overestimating feed, a missed selling opportunity and a few water disasters made this Summer/ Autumn harder than I expected. I'll try to explain what we did wrong and what corrective action we will be taking for the future.

Profitability and Low Risk of Perennial Native Grasslands

I have been studying profitability and risk of cropping, sheep grazing, cattle grazing and dairy. The pattern that has appeared is that these industries have been intensified and are running at stocking rates and area being cropped inappropriate for maintaining profitability. In this newsletter I have tried to identify designs that produce stable profits and would welcome feedback on what the underlying cause is for this industry wide over cropping and overstocking.

The good news is that a focus on management that regenerates perennial native grasslands consistently lowers risk while improving environmental outcomes.



Cows grazing native perennial grasslands on Browns Ranch

Photo Gabe Brown <http://brownsranch.us>

The following is a clipped story about Gabe Brown full story at:

www.farmandranchguide.com

Grass-fed and pasture-raised beef program moving to pilot phase

MAY 26, 2016 11:00 AM • DALE HILDEBRANT, FARM & RANCH GUIDE

A tender rib-eye steak and a western meadowlark bird normally aren't connected, but that will soon change as the National Audubon Society embarks on a pilot program, "Conservation Ranching Program," that will partner with ranchers to develop a market-based incentive program that will benefit prairie birds and conservation practices on the grasslands.....

.....As urban areas have grown and land uses have changed in the central region of the United States, the prairie grasses have disappeared to a point that native rangelands are now among the most endangered habitats, according to land cover data. Only about four percent of native range now remains and as a result prairie birds have shown the most sustained population declines of any bird group in North America.

"We have seen 24 million acres of grasslands lost nationwide in the last 10 years," said Marshall Johnson, head of Audubon Dakota.

"The concentration of those land

use changes has been in the Dakotas, and the prairie pot hole regions of Minnesota, Iowa, Nebraska and Missouri.”

This loss of grasslands, mainly in an area known as the Central Flyway, not only is changing the agriculture picture of that region, but is resulting in a decrease in nesting area which, in turn, threatens the population of certain bird species.

“We can compare this to a freight train coming at us,” Johnson said. “We have 24

species that are plummeting because of grassland lost. And we saw an opportunity where we could be creative and support the grass-based economy and grass-based agriculture....

...Long-time grass-fed ranchers Gabe Brown and his son, Paul, from the Bismarck area, have agreed to help launch the program by acquainting the grass-fed system to those producers interested in adopting this type of specialty cattle crop.

Both Johnson and Gabe Brown feel this is a good time to equip ranchers with opportunities to diversify their product offering, as changing consumer demands necessitates it.

“During the last 15 years the grass-fed beef industry has really taken

off, and has a devoted following and clientele,” Johnson said. “This is not a niche market anymore... the sky is really the limit.”

“The grass-fed industry, nationwide, is seeing a growth rate of 25



to 30 percent per year, the last three years, and it is skyrocketing,” Gabe Brown added. “The potential is there to put a lot more dollars in producers’ pockets and raising grass-finished beef will also help to regenerate the environment, so it’s a win-win for everybody.”

Brown attributes the growth in the consumption to two main reasons: The human health issue and the environment.....

.....In closing, Johnson admits “There are a lot of kinks that still need to be worked out. It’s an entrepreneurial approach to conservation and there is still a lot to learn and then we hope to scale the program as we move forward, offering an additional opportunity to beef producers.”

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Spring Spelling Update

June 2016

Key Points:

- Policy works in South West Victoria and was profitable
- Some reduction in litter
- Stick to the low risk plan of selling
- Broke my own rule - if animals are going well on dry feed keep going
- Water back up is critical

In the Summer 2016 Newsletter I reported that the policy of selling, on seasonal forecast, before the main growing season, was going well. Overall the policy resulted in moderate profit and low workload in a season where many lost money and fed from early summer.

The action taken was to reduce stocking rate by 50% before Spring (start of August) based on seasonal forecast and low soil moisture.

A few management mistakes resulted in a decrease in landscape function (litter reduced) and lower body condition scores.

The management mistakes were overestimating feed available in January and not selling at weaner sales. Shifting to green feed (opening up a flat for the neighbours, which usually works okay but with low rainfall the small waterway quickly became undrinkable). This broke one of our rules that if animals are going okay on dry grass then keep going and do not change their diet.

We also ran out of water twice with burst pipes and fittings which resulted in water stress. I was away and the fire pump back up system would not work for those at home. To catch the animals up after these events resulted in moving quicker than budgeted for.

Even though I was not happy with the outcome visitors repeatedly asked if we needed some stock to eat 'all the grass'. I was looking at landscape function whereas visitors were looking at feed on offer.



Photo taken 18/5/2016. Ground cover in South West Victoria with spring spelling and planned grazing



Photo taken 12/5/2016 Typical ground cover in South West Victoria with ad hoc rotation and stocking to 'eat the spring'

Stipa Workshops November 2 & 4, 2016

The following is some of the information and skills Gabe Brown will be providing at the November workshops. The days will include a farm visit to see these practices in operation. This article is clipped from the Grazeonline website

Plant diversity as the key to soil health

<http://www.grazeonline.com/plantdiversit>

May 1, 2013 GRAZING MANAGEMENT

Gabe Brown isn't afraid to put 25 species in the seed box

Bismarck, North Dakota — Gabe Brown acknowledges that no planted crop will build soil health as quickly and completely as a well-managed and very diverse perennial pasture. But that doesn't mean he can't try.

And boy, does he try. Gabe says the seed boxes on his no-till drill often contain 15 to 25 species at any one time, chosen from a wide variety of warm and cool season grasses and broadleaf crops. Buckwheat, barley, turnips, hairy vetch — you name it, Gabe plants it in mixes that give new meaning to the word "variety." And he's ready to use that seed at almost any time when winter isn't ruling the northern Plains.

..... Over the past two decades of no-till, Gabe has boosted the average organic matter levels of his crop ground from below 2% to above 5%, with most of that gain the result of multi-species covers combined with mob grazing of the beef herd. Soil health by any number of measures — tilth, water holding capacity, critter counts — has been considerably boosted and is visually superior compared to many neighboring fields.

..... Like a lot of innovators, Gabe's transition from conventional farming to cover cropping pioneer was born of necessity. Though he had already switched to no-till to conserve moisture, a combination of drought and hail caused four consecutive crop failures in the mid '90s and made it difficult to obtain the credit required to buy commercial fertilizer. So he

began planting legumes for homegrown nitrogen along with other covers for cattle feed, and started noticing that the wheat planted to those acres often produced better than before.

.....“We are mimicking the native rangelands,” Jay describes. Yet he also notes that some of Gabe’s native pastures register above 7% organic matter. “His crop ground is at around 5%, so he’s got a long ways to go.”

..... Gabe says he is not enthusiastic about cash grain. “Perennial systems are by far the best as long as they’re highly diverse,” he acknowledges. “But (cash grain) is extremely lucrative right now, and I love toying with this cover cropping.” He likes proving that cropping systems can boost organic matter and overall soil health, which is something that the great majority of soil professionals thought impossible not too many years ago. Active on the speaking circuit, one of Gabe’s missions is to convince the cash-cropping world that cover crops, diversity, grazing and soil health are a far better route to the future compared to corn and bean monocultures and the associated production methods.



Regenerating perennial native grasslands in the Wimmera Mallee

A recent visit to the Maybery property in the Wimmera Mallee demonstrated clearly that most farms are being overcropped and will make more money using planned grazing and pasture cropping on the marginal areas.

Lachlan Maybery has attended two Stipa field days with Col Seis and myself and he then used Planned Grazing and Pasture Cropping to regenerate perennial grasses on the marginal deep sand hills. This photo is after record low rainfall while at the same time making money – by any measure a big effort.

This result was achieved with a combination of pasture cropping and planned grazing that germinated the perennial grass seed in the soil. Lachlan is fully aware that the next step is to fill in the inter-tussock spaces with litter to increase landscape function (less erosion, increased nutrient cycling and water infiltration).

3 species of Stipa (*Austrostipa* sp.), Rigid Panic (*Walwhalleya proluta*),



Wallaby grass (*Austrodanthonia* sp.) and Veldt Grass (*Ehrharta erecta*).

Col and I think we are either getting better at training or that Lachlan is a very quick learner.

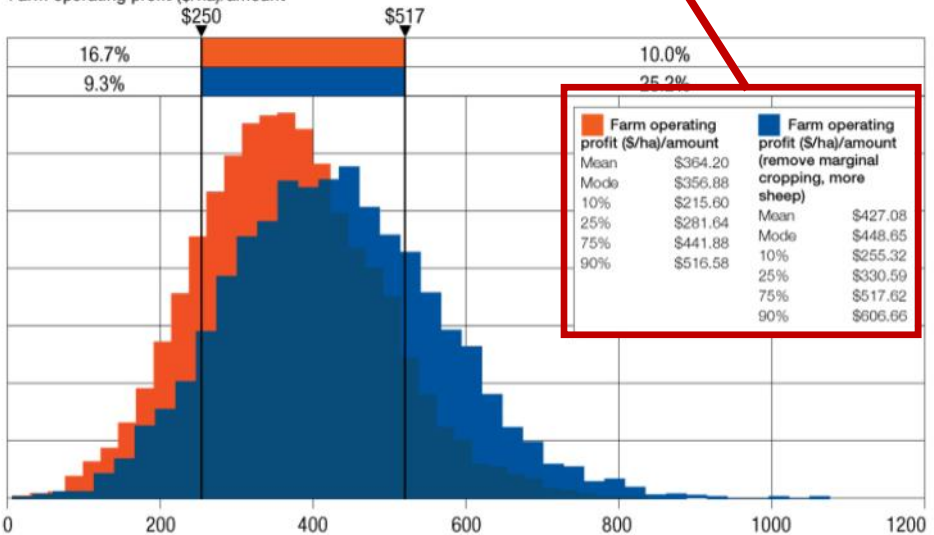
Research, like the below, shows that the Maybery's can look forward to increased average profit (mean) and that the most frequent result (mode) for profit will also be higher with lower risk. Orange graph is with cropping marginal areas and blue graph is grazing sheep on the marginal areas.

Understanding income volatility and risk profile – Cam Nicholson GRDC Ground Cover Issue 101

■ Farm Operating profit (\$/ha) amount
• Mean \$364.20
• Mode \$356.88

■ Farm Operating profit (\$/ha) amount (remove marginal cropping, more sheep)
• Mean \$427.08
• Mode \$448.65

Farm operating profit (\$/ha)/amount



Animals for performance and profit

Size really does matter (but it's not what you think)

Key points:

- Animal types (phenotypes—observable interaction of genotype and environment) are important on regenerating grasslands
- Some livestock value has been transferred from producers to feed lots

Discussion following is on cattle but applies equally to sheep

Short, thick cows have all the critical factors ticked off when it comes to profitably restoring grasslands and increasing biodiversity and landscape function. Economically, these cows have been proven, MLA research, to be more profitable with the exception of very low stocking rates. Environmentally these types of cows have a lower maintenance energy needs and perform very well on fully recovered perennial grass containing fresh litter. Socially these cows can produce progeny that can be finished on perennial grass producing healthier meat while enhancing the environment. As we know, grazing management that increases landscape function and perennial grass diversity is the only way to reverse climate change (lower fossil fuel use does not address the legacy load of CO₂). Conversely, tall, narrow cows, selected for low levels of subcutaneous fat require larger amounts of energy, which is traditionally supplied in Australia through renovating for high performance pastures and other dietary supplements including grain (or anything else that can supply energy in times of need- think lollies, citrus pulp, shredded magazines which were fed in the millennium drought). A diet high in supplements and renovated 'improved pastures' is highly dependent on fossil fuels, lots of money and is high risk.

There are many case studies depicting where a farmer has switched to 'high performance' genetics. The case studies overwhelmingly include 'pasture improvement' to make the 'most' out of the new genetics. This practice is clearly unsustainable. Resowing pasture has, on average, a 7-9 year payback period and is no longer considered best practice or even the best use of money. Resowing pasture also uses fossil fuels and decimates landscape function for several years.

Animals for performance and profit continued

Photograph Source: Kit Pharo's Newsletter - PCC Update (05/25/2016)



'Here is a picture taken by Gerardo Diaz in Chihuahua of two cows of approximately the same weight but different frame sizes. Both cows calved two months ago. Both cows are being fed the same.'

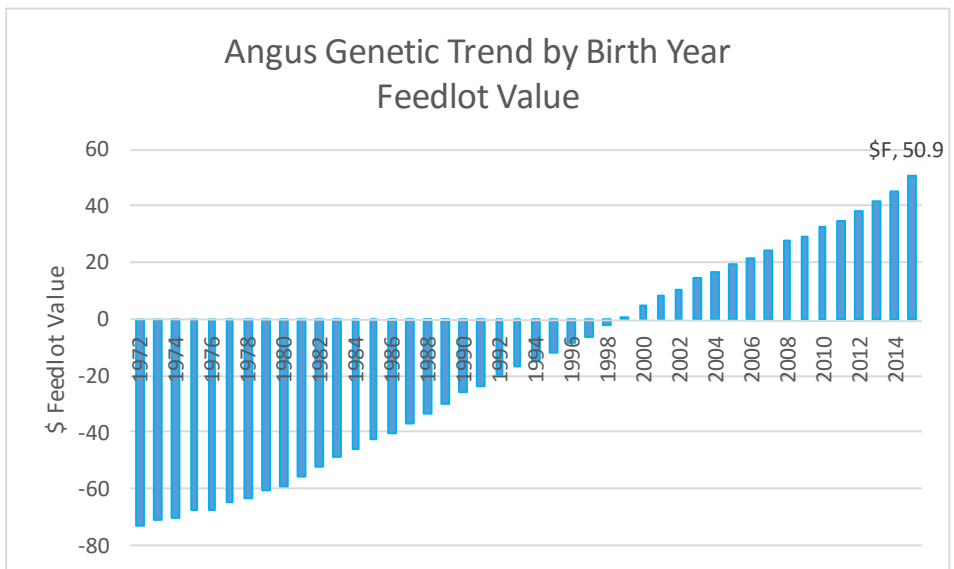
Despite this, there continues to be a shift to these larger, energy consuming, supplement dependent cows. The driver appears to be the feedlot industry where low fat levels and large mature size increases the value for the feed lotters. The graphs following show the trend that has emerged and remained true of recent years; as feedlot value goes up the energy required to maintain a cow, let alone gain condition, increases (Cow Energy Value the higher the value the less energy a cow requires – more positive the number the lower energy required to maintain a cow).

Two messages from these graphs appears to be that a transfer of value has occurred. American Angus are now more expensive for farmers to run but have higher values for feed lotters. Many of these genetics are used in Australia and it is fair to suggest that the same transfer of value has occurred.

Animals for performance and profit continued

Graphs showing the transfer of value from farmers to feedlots

This graph shows the impact of selective breeding in the American Angus breed for the last 43 years. Feedlot value has increased by \$124.

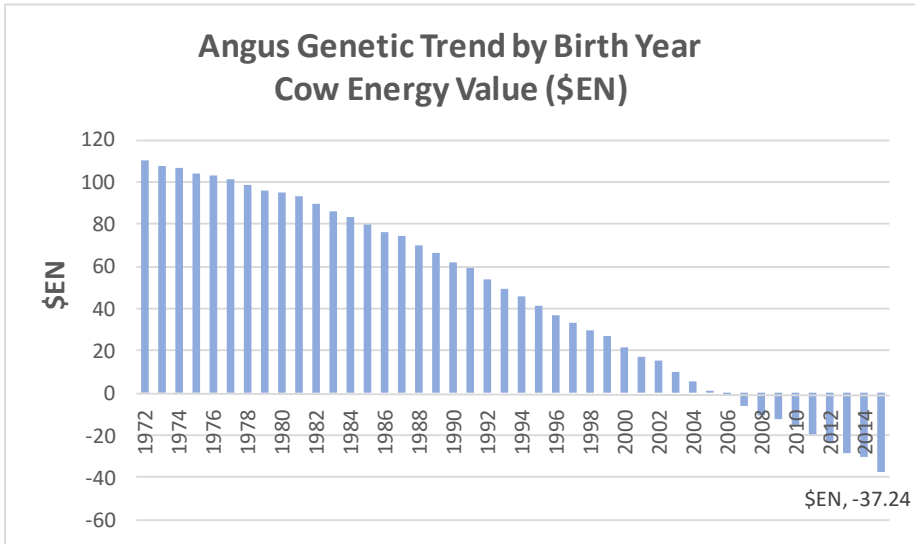


Source : <http://www.angus.org/>

The impact on the energy required to maintain cows is clearly seen in the graph following. The American Angus breed has for the last 43 years seen a steady decrease in cow energy value. The graph indicates that the estimated costs (\$EN) for farmers of keeping cows has increased by \$147!

Cow energy value (\$EN) assesses differences in cow energy requirements. A larger value is more favourable when comparing two animals. Differences include lactation energy requirements and energy costs associated with differences in mature cow size

Animals for performance and profit continued



Source : <http://www.angus.org/>

Of course, it'd be remiss of me not to mention the added negatives of 'high performance' genetics and the typical production chain impacts. Pollution from feedlot dung concentration and landscape function damage caused by conventional grain production means that this is the wrong direction for any livestock production.

The good news is that grazing management that regenerates perennial grasslands also increases biodiversity, reducing erosion while repairing nutrient cycling. Regenerating grasslands, are at times, higher in fibre and lower in protein and therefore require animals that are very energy efficient.

Work in the dairy industry is clear. More feeding reduces profit by increasing cost of production and fixed costs. Let's not forget that this approach has also been proven to increase risk and environmental damage. If the dairy industry cannot afford to feed cows, then it is unlikely that this feed more strategy will prove successful for beef producers.

Animals for performance and profit

Graeme Hand

Damage caused by current grazing management

A big concern is that current grazing management, (which isn't focused on increasing landscape function) is the single most damaging practice for reducing biodiversity, causing erosion and damaging nutrient cycling in Australia. This conclusion was from a recent analysis I did for a project on behaviour change. Impact X Area lifted grazing above cropping.

This analysis of impact by sector is required so as to focus effort on behaviours that will have significant impact (see cbsm.org). I look forward to sharing more of this with you as the project progresses.

How can it be that farmers have gone down this path? The path of reducing their own profits to make other sectors of the industry more profitable? The design of a low-risk, moderately profitable farm business doesn't seem to have the same appeal as chasing production even though this approach increases risk whilst providing little or no profit and damaging the environment.

It's not just the grazing industries. This is seen in cropping as planting marginal areas of the farm that aren't profitable over a 10 year period, planting crops such as canola, that have little chance of being profitable over a 10 year period, dairy farmers overstocked with tall, narrow cows that require too much maintenance energy to be profitable over a 10 year period, sheep and beef grazers carrying excess numbers of animals that also have very high maintenance requirements and need a decade of above average rainfall to be profitable over that same period.

The reasons for this lack of connection between enterprise design and profitability have been stated and are twofold:

- poor economic analysis and advice (imperfect information — advisors and input providers can have a vested interest in higher production)
- a misguided attempt to build wealth through livestock numbers and land value increasing when this overstocking, with high maintenance energy animals, reduces equity and wealth over time

We are experimenting with trying to quickly change to a cow with the following design features:

- Low energy requirement and performs well on fully recovered perennial grass (looks like an ungrazed plant and contains fresh litter)
- Easy, unassisted calving and excellent mothering
- Gets too fat if not feeding a calf for 10 months
- Calves are early maturing and fatten easily
- Performs well at high stock density and frequent moves

We have found some discussion of selecting for low energy requirement bulls on Kit Pharo's website <http://www.pharocattle.com> , Dunlouse Angus <http://www.dunlouseangus.com> & Alto Angus <http://www.altoangus.com.au/>

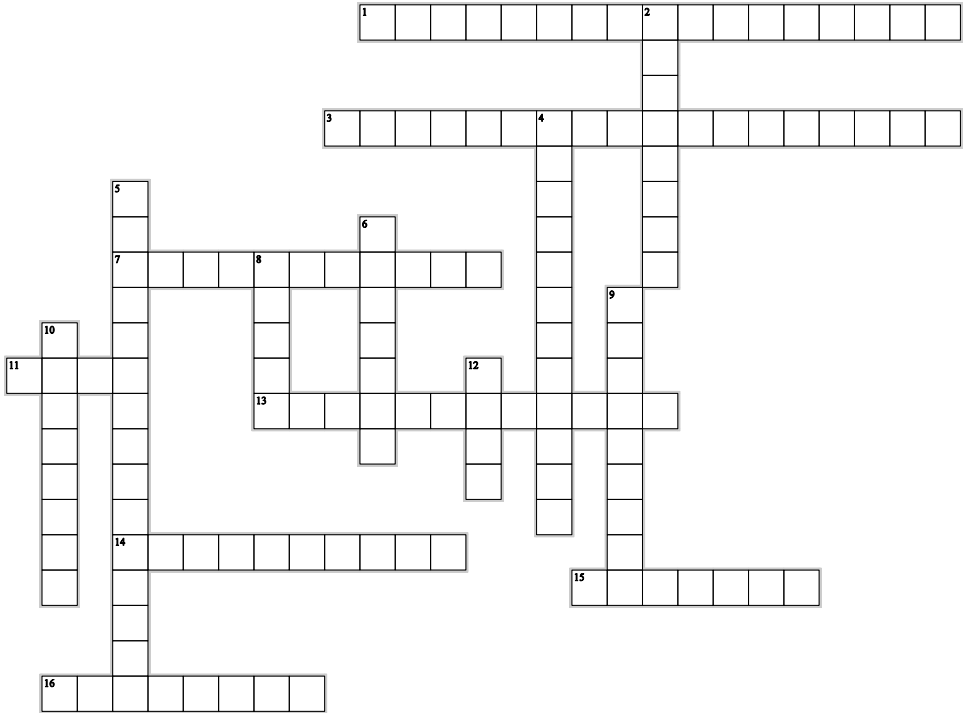
The following was clipped from the Dunlouse Angus Facebook page

*From data submitted by ranchers to the American Angus Association, our Native Angus bulls fair superbly for Cow Energy Value:
Dunlouse Commander Bond - +86.36 (top 1%) (top photo)
Dunlouse Cortachy Boy - +84.82 (top 1%) (bottom left)
Dunlouse Jipsey Earl - +39.51 (top 2%) (bottom right)
This means daughters of these bulls are extremely feed and cost efficient*

Please note, we may be biased, as we have tried some of the Dunlouse bulls with calves on the ground but apart from easy calving and short gestation we are unclear on further benefits – I will keep you informed.

Let me know if you would like the referenced version of this article





Crossword Clues

Across

1. Builds soil health quickly and completely
3. Focus on this lead to increased nutrient cycling
7. Common name for *Walwhalleya proluta*
11. Also knows as the average
13. Many cropping farms are doing this
14. November workshop Speaker
15. One of the towns near Stipa Workshop
16. Town in North Dakota near Brown's farm

Down

2. Result of management focused on regenerating grasslands
4. Author of Sand County Almanac
5. Basis of regenerative agriculture
6. Family regenerating perennial native grasslands
8. One of the towns near Stipa November workshops
9. the set of observable characteristics of an individual resulting from the interaction of its genotype with the environment.
10. type of business top profit from breed changes
12. Number that occurs most often

Crossword Key

Across

1. **PERENNIAL PASTURE**—Builds soil health quickly and completely
3. **LANDSCAPE FUNCTION**—Focus on this lead to increased nutrient cycling
7. **RIGID PANIC**—Common name for *Walwhalleya proluta*
11. **MEAN**—Also knows as the average
13. **OVERCROPPING**—Many cropping farms are doing this
14. **GABE BROWN**—November workshop Speaker
15. **BENALLA**—One of the towns near Stipa Workshop
16. **BISMARCK**—Town in North Dakota near Brown's farm

Down

2. **LOW RISK**—Result of management focused on regenerating grasslands
4. **ALDO LEOPOLD**—Author of Sand County Almanac
5. **PERENNIAL GRASS**—Basis of regenerative agriculture
6. **MAYBERY**—Family regenerating perennial native grasslands
8. **DUBBO**—One of the towns near Stipa November workshops
9. **PHENOTYPE**—the set of observable characteristics of an individual resulting from the interaction of its genotype with the environment.
10. **FEEDLOTS**—type of business top profit from breed changes
12. **MODE**—Number that occurs most often

Membership renewals

Please note

Stipa is changing the way they renew memberships. We will endeavour to mail out your renewal tax invoice one month prior to your expiry date. If you would like to renew please mail us a cheque or EFT your membership.

Please remember to make reference on all EFTs and return cheques your **INVOICE NUMBER** (found on the top of your Stipa tax invoice).

Attention all members

To ensure that you continue to receive Stipa newsletters and updates, please remember to advise us of any change of address.

Also if you wish to receive emails about forthcoming events and other matters of interest, it is important that we have your correct email address.

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