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— COVER IMAGE by MELODY LABINSKY.
This photo was taken at the Price family’s property, Moongaool, Yuleba.
Forage oats: what you need to know

Answers to those frequently asked questions

FORAGE oats is an important winter crop in Queensland, supplying highly nutritious and palatable cattle feed at a time of year when most pastures are dormant.

Many growers can increase the productivity of their oat crops by improving management and controlling disease. The Department of Agriculture and Fisheries publishes a forage oat variety guide each year that discusses the recommended practices for growing oats for forage. A copy of this guide is available at www.daff.qld.gov.au/forage-field-crops- and-pastures/broadacre-field-crops/oats/forage-oat-variety-guide. There are a number of questions that commonly come up when talking with growers about forage oats.

WHICH VARIETY DO I CHOOSE?

The best advice is to continue growing what has worked well for you in the past, but try a few of the more recent varieties (e.g. Genie, Aladdin, Drover, Comet) for a few years and see how they compare. When talking to oat growers about selecting varieties, I always recommend two things:

1. Grow what works well on your property but think long term i.e. select what has worked well over the last five years, not just what worked well last year.
2. Plant a range of varieties with different growing patterns that provide feed at different times of the season - this is better insurance against seasonal variation than planting all the oat ground to one variety.

WHY DID MY USUAL OAT VARIETY NOT DO SO WELL LAST YEAR?

Most crop varieties are not 100% per cent consistent in their performance from one year to the next. Good varieties will occasionally have a poor year, and poor varieties will occasionally have a good year. For plant breeders, this variation from year to year is known as 'genotypic by environment interaction'. This is why plant breeders always test their breeding lines over three to four years and across a number of locations to measure the average performance, rather than rely on results from a single year. So, it is not unusual in itself for any variety to have a bad year.

HOW ARE THE MODERN VARIETIES DIFFERENT FROM OLDER VARIETIES LIKE ALGERIAN AND SUAL?

Algerian and related older varieties like Saui and Cocca are very different in their appearance and the way they behave during the season, compared with modern varieties. The Algerian types have very fine leaves and stems, and a more prostrate growing habit particularly early in the season. They tend to have very slow early growth, and have lower forage yield overall compared with the modern varieties. In our breeding trials over the last 10 years, Algerian is normally 20-30 per cent lower yielding for early growth compared with more recent varieties and about 10-20 per cent lower yielding overall.

However, the older varieties often grow better during the late winter period and are more tolerant of heavy grazing. The modern varieties are specifically selected for high early vigour, long growing season and quick recovery from grazing, so they will generally produce more forage than older varieties.

WHY WON’T MY CATTLE EAT THIS PARTICULAR VARIETY?

Palatability and acceptance of oats and other forage crops by livestock is always a difficult one to explain. There are a lot of anecdotal stories about stock not accepting this or that variety in this or that location, but there is never any consistent theme to these stories across locations and years. My experience is that most people immediately blame the variety, but it is more likely due to other factors such as the timing of rainfall, plant disease problems, soil nutrition problems, presence of weeds that may produce a blight in the forage and make the cattle turn away. It would be much easier if the cattle could talk and tell us exactly what the problem is.

WHY DO OATS OFTEN GROW POORLY LATER IN THE SEASON?

Most oat crops need good levels of fertiliser to grow well throughout the season. The nutrient requirement of oats is similar to that of wheat and barley. Nitrogen is the most important nutrient, and it is important to apply at least 40-50kg of nitrogen per hectare to maintain good productivity.

Top dressing with nitrogen is often useful in higher rainfall areas. Phosphorus, potassium and sulphur can also be deficient in pastures that have grown oats for many years. The most common symptom of poor nutrition is yellowing and red-tipping, where the tips of many years. The most common symptom of poor nutrition is yellowing and red-tipping, where the tips of the stems, and a more prostrate growing habit particularly early in the season. They tend to have very slow early growth, and have lower forage yield overall compared with the modern varieties. In our breeding trials over the last 10 years, Algerian is normally 20-30 per cent lower yielding for early growth compared with more recent varieties and about 10-20 per cent lower yielding overall.

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Immunity produced by tick fever and other possible do not administer more than one vaccine at a time. Vaccinate with booster 5-in-1 or 7-in-1. Consider coccidia control if considerable time spent through yards, crushes etc. Animals get to know yard layout. Once settled animals can be tailed out to learn paddock muster control. 4. The training process allows you to identify problem animals sooner and you can make a management decision regarding their future. 1. Less stress on animals and people 2. Quiet well trained animals are usually calmer, do and sell better. 3. Teaches animals to eat supplements and work through yards, crushes etc. Animals get to know yard layout. Once settled animals can be tailed out to learn paddock muster control. 4. The training process allows you to identify problem animals sooner and you can make a management decision regarding their future. 1. Less stress on animals and people 2. Quiet well trained animals are usually calmer, do and sell better. 3. Teaches animals to eat supplements and work through yards, crushes etc. Animals get to know yard layout. Once settled animals can be tailed out to learn paddock muster control. 4. The training process allows you to identify problem animals sooner and you can make a management decision regarding their future. 1. Less stress on animals and people 2. Quiet well trained animals are usually calmer, do and sell better. 3. Teaches animals to eat supplements and work through yards, crushes etc. Animals get to know yard layout. Once settled animals can be tailed out to learn paddock muster control. 4. The training process allows you to identify problem animals sooner and you can make a management decision regarding their future. 1. Less stress on animals and people 2. Quiet well trained animals are usually calmer, do and sell better. 3. Teaches animals to eat supplements and work through yards, crushes etc. Animals get to know yard layout. Once settled animals can be tailed out to learn paddock muster control. 4. The training process allows you to identify problem animals sooner and you can make a management decision regarding their future. 1. Less stress on animals and people 2. Quiet well trained animals are usually calmer, do and sell better. 3. Teaches animals to eat supplements and work through yards, crushes etc. Animals get to know yard layout. Once settled animals can be tailed out to learn paddock muster control. 4. The training process allows you to identify problem animals sooner and you can make a management decision regarding their future. 1. Less stress on animals and people 2. Quiet well trained animals are usually calmer, do and sell better. 3. Teaches animals to eat supplements and work through yards, crushes etc. Animals get to know yard layout. Once settled animals can be tailed out to learn paddock muster control. 4. The training process allows you to identify problem animals sooner and you can make a management decision regarding their future. 1. Less stress on animals and people 2. Quiet well trained animals are usually calmer, do and sell better. 3. Teaches animals to eat supplements and work through yards, crushes etc. Animals get to know yard layout. Once settled animals can be tailed out to learn paddock muster control. 4. The training process allows you to identify problem animals sooner and you can make a management decision regarding their future. 1. Less stress on animals and people 2. Quiet well trained animals are usually calmer, do and sell better. 3. Teaches animals to eat supplements and work through yards, crushes etc. Animals get to know yard layout. Once settled animals can be tailed out to learn paddock muster control. 4. The training process allows you to identify problem animals sooner and you can make a management decision regarding their future.
WorkCover helping businesses stay safe

How can workers’ compensation insurance help you?

IF YOU own a business in Queensland you’re responsible for keeping a safe work place and if you employ workers and one of them is injured at work, they can apply for workers’ compensation.

In Queensland, workers’ compensation insurance is compulsory if you employ workers who meet the definition of a “worker”.

Holding an accident insurance policy gives the employer peace of mind knowing their business will be covered should a worker sustain a work-related injury and require medical treatment or time off work.

Employers may not be aware of their obligations to insure or they may not realise that not only full-time workers on a wage or salary need to be covered, but also part-time, casual, seasonal and in some cases, contractors and sub-contractors, may require coverage.

In 2013-2014 WorkCover received 500 claims for the beef industry amounting to approximately $7.5 million in statutory costs.

Serious injuries can result in claims costing hundreds of thousands of dollars and significant premium increases, and being uninsured or underinsured exposes both the employer and worker to unnecessary risk.

With more than 42 per cent of injuries in the beef industry sustained by 20-30 year olds, employers face a significant challenge to comply with workers’ compensation obligations given the large number of seasonal and overseas workers engaged under a variety of employment conditions.

YOU’RE COVERED

A WorkCover accident insurance policy covers your business against the cost of work-related injuries including weekly compensation and rehabilitation costs. If in any doubt about your obligations, or understanding of who is defined as a worker, please phone 1300 362 128 or visit the website www.worksafe.qld.gov.au.

On the website you can apply for a policy online, or read more about your rights and responsibilities and further details on who you should cover for workers’ compensation. You can also check if your contractors are ‘workers’ and should be covered by your WorkCover policy by using the ATO employee/ contractor decision tool.

HEALTH BENEFITS OF WORK AND MINIMISING YOUR PREMIUM

Improving workplace safety and having good injury management processes that help injured workers rehabilitate and get back into their jobs quickly and safely, is not only good for business but has positive effects for the worker too.

A research paper from the Australasian Faculty of Occupational and Environmental Medicine and the Royal Australasian College of Physicians, ‘Realising the health benefits of work’, indicates that if a person is off work for 20 days the likelihood of returning back to work is 70 per cent, reducing to 50 per cent at 45 days and at 70 days off work the chance of ever getting back to work is 25 per cent.

Work is an important part of the worker’s rehabilitation process because ‘doing’ promotes recovery. Being off work for long periods of time can significantly reduce the likelihood of the worker ever returning to their original job and can have a negative effect on the worker, their family and disruption to the business.

The average number of days off work due to a work-related injury for the beef industry was over 43 days during 2013-2014. Injury management in the workplace does not have to be complex. By focusing on early reporting of workplace injuries, seeking early medical attention and encouraging injured workers to participate in work-related rehabilitation, employers not only help their injured workers make an early and safe return to work, they also help reduce the cost of the claim thereby minimising the impact on the employer’s premium.

If you have any questions about your obligations to keep a safe workplace or how to implement good injury management practices, please call us on 1300 362 128.

For information about health and wellbeing at work, visit our website www.worksafe.qld.gov.au. You may also like to visit the dedicated Agriculture section for a range of industry specific information including workplace hazards.

Kate Makin, Industry Manager WorkCover Queensland

Quad bike dangers under scrutiny

RECOMMENDATIONS from a coronial inquest into recent quad bike fatalities are due to be released later this year. A similar inquest is also being carried out in New South Wales.

Quad bike use is addressed in the new Serious about Farm Safety guide published by Workplace Health and Safety Queensland in collaboration with industry groups.

Quad bikes are responsible for the largest proportion of fatalities and serious injuries on rural properties.

Their short wheelbase and high centre of gravity increase the potential for a roll-over or collision when manoeuvring on slopes or rough terrain.

Quad bikes are not all terrain vehicles. They should only be used by trained operators within the scope of the manufacturer’s recommendations. These factors increase the risks:

● insufficient rider training
● children riding adult-sized quad bikes
● excessive speed
● rough terrain, steep slopes and unsewn obstacles in long grass
● overloading with after-market attachments or fitting inappropriate accessories
● carrying passengers on bikes that are not designed for them.

Workplace Health and Safety Queensland has a range of short safety films which can be found at worksafe.qld.gov.au.

You can also view ‘A rush of blood: The Miles Patterson story’ about his personal quad bike incident. A list of training providers to help you get the right training for using a quad bike is also available.

One of the messages from the safety films is “choosing the right tool for the task”. While side-by-side vehicles are not as commonly used on Australian farms as quad bikes, an increasing number of farmers are starting to use these as a safer option.

They often have a bench-type seat for transporting more than one person, have a steering wheel and are considered to be safer because they have seatbelts, rollover protection and the ability to carry items in the rear tray.

For information to help minimise risk of a quad bike fatality or injury visit the Australian Government’s QuadSafe website at safework.au.gov.au or visit worksafe.qld.gov.au.
People and business model: an overview

The business$$ of beef

Steve Banney discusses the business $$ of beef in the Burnet Mary.

GRAZING BEST MANAGEMENT PRACTICE

The Grazing Best Management Practice program is a voluntary, industry led process which helps you to identify improved practices which can help improve the long term profitability and sustainability of your enterprise. It involves an online, self-assessment tool that allows you to benchmark your current grazing and business practice against an industry-developed set of standards. It allows you to identify opportunities and develop a plan to improve your business performance, and access information and support to achieve your plan. The five modules are:

1. people and business
2. soil health
3. grazing land management
4. animal production
5. animal health and welfare

Cash flow information
- historic and budgeted cash flow broken up into operating cash flow, capital expenditure and financial costs

Herd information
- historic and budgeted annual stock flows which show accurate stock numbers by class
- annual weight gains
- average sale weights
- annual adult equivalent carried

Land information
- long term carrying capacity of land under management
- short term carrying capacity based on a feed budget
- overall land condition and strategies to address problem areas

Debt information
- debt level and how it is changing over time
- equity level (assets-liabilities) as a percent of total assets
- interest rate and total interest cost
- number of times your cash flow before interest covers the interest bill

Operational information
- annual operational calendar
- capital expenditure budget for this year and future years and how this impacts your cash flow

Business processes
- Having a well-structured chart of accounts and accurate herd records are two key business processes that will help you generate this information.

Helping people to better understand their business by knowing what is important and how to interpret financial and production information is a passion for Ian McLean.

Ian co-authored 'The Northern beef report - 2013 Northern beef situation analysis' which benchmarked the overall performance of the northern industry over 12 years. This report has solid evidence collected from real producers to show that long-term profitability is more affected by cost of production rather than price, and again in the long-term, not affected by rainfall, locally or locally. It is all about managing the resources you have in the most productive and cost efficient way. For an farming business, minimising the cost of production helps to stabilise against the reality of fluctuating prices.

CHART OF ACCOUNTS

Your chart of accounts is the account categories where you enter transactions to. Is your chart of accounts set up and structured in a logical way? Can you print the high level headings for income and expenditure on one page and have a concise overview how your business has performed by month(s) or year(s)? Find, redraft if it doesn't. Talk to your accountant and advise while doing it, but make sure the focus is on a structure that will give you, as the business manager, the best information to use week to week, month to month and year to year. Below is suggested high level structure for your chart of accounts.

Herd records
Having accurate herd numbers is a critical to understand and improve your business performance. Getting some whizz-bang, herd management software is unlikely to do much for you, if you haven't already got a simple system in place to keep track of stock numbers.

You have good systems in place then software options may be beneficial. Go back at least three years and record what you had at the start and end of each year, by class and movements between classes each year as a stock flow. The herd should balance each year, that is, total opening numbers, plus your purchases, plus your natural increase, less your sales, less deaths and missing should equal, in the paddock, your closing number at the end of the year. Use this information to determine what your reproductive rate is, i.e. calves weaned divided by breeding females (purchased and retained in a 12 month period), your death rate and average sale weight. Improving these benchmarks is the most effective way to increase the income (per head) equivalent of your business.

Use the information
Start summarising the key information on your business to help you make better decisions. Use the above guide as a start and adapt it to your business. What does this tell you about your business and how you use it in management? Knowing how your business has performed in the past is crucial information to use to improve future performance. However, unless you use it to make decisions and fine tune your business, all you are effectively doing is looking at the scoreboard after the game has finished!

THE NEXT STEP
All interested producers should take the bull by the horns and get involved in the self-assessments offered as part of the Grazing Best Management Practice project. The only cost is your own time and travel to a local venue. Once you know where you want to improve your capabilities, the Grazing Best Management Practice partners can direct you to a range of training and educational opportunities.

These include Meat & Livestock Australia’s cost of production tool, DAF’s business modelling packages such as Testing Management Options and BeeيرoodOyma and undertaking a Business EDGE workshop.

For more information, contact Roger Snedecor DAF, 049 630 1244, roger.snedecor@daf.qld.gov.au, Steve Banney, Steve Barney Agribusiness, 0407 161 072, steve.banney@bigpond.com, Ian McLean, Bush Agribusiness, 0427 118 191, ian@babusiness.com.au.
RUMINANT methane emissions account for approximately 10 per cent of Australia’s total greenhouse gas emissions. In 2012, Meat & Livestock Australia implemented the National Livestock Methane Program to develop a strategy to reduce methane emissions from livestock while boosting productivity. One aspect of this program was the suitability assessment of replacing urea supplements with nitrate to reduce methane emissions. Projects led by the University of New England and Ridley AgriProducts are currently investigating this aspect.

This article summarises the information from these projects to date.

Nitrate is often the primary limiting nutrient in the low quality tropical forages of northern Australia. Sufficient dietary nitrogen is required to promote rumen microorganism growth, microbial protein synthesis and rumen fermentation. Consequently, it is common practice for graziers to replace with nitrate the required animal feed intake. Nitrate is a suitable alternative to urea and is readily available to the plants. However, it is more susceptible to environmental factors compared with urea, which is added to the diet and is not subject to weather conditions. The situation is more complex than this however, as nitrate can undergo a number of modifications and changes in the business.

Nitrate as an alternative to urea supplements

Nitrate blocks being tested late 2014 dry season during a UNE supplement trial in NQ. The solar powered feeders automatically record the tag and record RFID ear tag numbers allowing individual intakes to be calculated. This data is remotely uploaded to a database using satellite telemetry. (Source: Joseph Miller, UNE).

Are your pastures suffering from nutrient tie-up?

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Nitrate as an alternative to urea supplements

Nutrient tie-up occurs where excess nitrate is fed, accumulation of nitrate compounds exceeds the conversion rate of nitrate to ammonia. This can lead to nitrate toxicity where excess nitrate is absorbed across the rumen wall into the blood where it reduces oxygen transport around the body. It is generally accepted that toxicity occurs when nitrate concentrations in the diet exceed 50g/kg of dry matter. The situation is more complex than this however as the following variables also influence the extent of toxicity:

- rate of nitrate intake
- rate of feed digestion and the subsequent release of nitrates
- rate of conversion of nitrite to ammonia in the rumen
- rate at which nitrite passes through the rumen
- feed type and dietary composition.

As with the direct effects on cattle health, by reducing oxygen transport in the animal, excessive dietary nitrate could affect the ability of cattle to walk long distances, thereby affecting grazing, grazing and walking efficiency.

Studies show that feeding a given dose of nitrate over two or more feeding events is less likely to have ill effects than if the same dose of nitrate is fed in a single dose. Furthermore, feeding nitrate as part of a total mixed ration or pelleted grain diet or with cattle hay results in significantly lower concentrations of methaemoglobin than if single doses of nitrate are administered in isolation.

Incorporating grain concentrates into a diet supplemented with nitrate reduces the incidence of nitrate toxicity. Higher digestibility diets have an increased conversion rate of nitrate and nitrite to ammonia so toxicity is less likely to occur.

More research is needed to fully understand the effects of these strategies. As molluscsmilliseconds and low-intake lose their blocks and locks are currently the most commonly used delivery systems, non-nitrogen supplements in northern Australia, it would be appropriate to feed nitrate the same way. It is important to consider the畜her is little control over the rate of nitrate release in these free-choice situations and therefore a higher chance that some cattle may experience toxicity. In feedlot situations, it’s possible to more intensively manage nitrate intake. Therefore tighter control can be exercised over the negative effects associated with higher levels of dietary nitrate.

The current research is likely to give a better indication as to whether nitrate is a safe and productive alternative to urea and, if so, at what dosage.

Financial considerations ultimately drive many business decisions and in this case, nitrate is lower in nitrogen content than urea. Thus the daily feeding cost is likely to be significantly greater (approximately 2.5 times) than the current practice of feeding urea-based supplements without any expected improvement in animal productivity. The return of feeding nitrate supplements needs to consider the price received for methane abatement under any approved feeding methodology that results from this research.

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Email: tom.calypian@udo.edu.au


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