



TIPS FOR A Profitable Hay Season 2022/23

Will there be a market for my Hay?

Supply & Demand Forecast for the 2022/23 season.

Our tips for handling mice.

What do Buyers really want?

Hints and tips for producing quality Hay.

How to pick a Hay Contractor.

and much more!

CONTENTS

Overview from Tim Ford, Managing Director	1
Benefits of making hay for those who aren't sure	2
About Feed Central	2
Will there be a market for my hay?	3
Supply & Demand Forecast for the 2022-23 season	4
What type of hay should you make?	6
Hay vs silage - pros and cons	7
Estimating hay yields - made easy with our comparison chart	8
The reality of selling hay off the paddock	11
What do hay buyers really want?	13
What prevents your hay from selling?	14
How to pick a hay contractor	15
Let's talk about straw	16
Hints & tips for producing quality hay	17
Seed bed preparation	18
Sowing date & rate	18
Row spacing	18
Fertiliser considerations	19
Weed control	19
Disease & insect management	19
Cutting	20
Windrow & raking	20
Curing - When is it ready to go?	21
Baling	22
Storing	23
Feed Central's QA process	25
From seed to feed	26
What is a CVD (Commodity Vendor Declaration) and how does it trace my hay?	27
Fungicide treatments & export slaughter intervals	27
What about mice? Our top tips for handling mice	28
Our Hay Quality Awards	29



OVERVIEW FROM TIM FORD, MANAGING DIRECTOR

2022/23 Season

2022/23 will mark our 21st season of working with clients to get the hay baled, quality assured and sold. A massive thank you to all the growers, carriers, contractors who worked with us along the way. It's humbling to think that many of the people that supported us 21 years ago are still clients and supporting us today. Most importantly, a special thanks to our team, past and present, who have been with us for this period and contributed so much.

While 2022 has been a year of mixed blessings for our clients across the country, with many facing challenges with floods, COVID and labour shortage, there is no doubt that the majority of our clients are feeling a sense of optimism.

While rising input costs are a concern and we should never be complacent about the future, in my view it's important to take a moment and be grateful for the good times that most in Agribusiness are currently enjoying. There is no doubt that improved trading conditions for livestock, not only beef and dairy cattle, but also sheep and goats, are supporting the price and volumes of hay now and into 2023.

Its of particular note that most buyers are aware and accept that due to rising costs, hay prices need to rise as we head into 2023.

So after 21 years, what are the key messages?

The following messages have basically not changed in the 21 years that we have been doing business:

1. Think Quality

Use every tool in the toolbox to make quality hay:

- » Plant thick
- » Cut high
- » Make big windrows
- » Bare minimum raking
- » Store in a shed

2. Selling hay is more like a marathon than a sprint

- » Plan your cash flow; don't make hay if you need to quit it fast to pay costs, as this may not be possible
- » Plan your storage, sheds are best, other options such as Haycaps are also good
- » List with Feed Central and stay engaged until all product is sold.

3. Heavy Bales Minimise Storage Handling and Freight

- » Use a contractor with new modern equipment, preferably a high density baler.
- » Pay contractor per tonne, not per bale
- » Remember heavy bales receive a higher ex-farm price on the Feed Central system

What has changed after 21 years?

In our mind there are 3 stand-out features for what's new and what's changed.

1. Technology

It's now so much faster for reputable and reliable contractors and growers to get their product listed onto our web platform, using our App for Accredited Inspection Program (AIP) clients. Talk to us about the Accredited Inspection Program (AIP).

2. Visual Grading

Feed Central has made ongoing improvements in the visual description of hay. Specifically, the Visual Gauge, which essentially benchmarks the various visual attributes, especially colour attributes of hay. This has resulted in buyers being confident about what they are purchasing and is directly linked to our 3rd point below.

3. Liquidity

The increased search criteria of the web platform, combined with improvements in visual grading has seen improved liquidity in the market for both high-grade and low-grade hay. Specifically, we are now seeing buyers put a market value on FCB and FCC grade hay and associate a premium with FCAA hay. This is big progress for our industry and we are very proud to be involved in this transition.

Most of our 21 years in business has been tough for agriculture, especially for the livestock sector. It is very pleasing to see a change and it's even better to see this prosperity being shared around via fair and reasonable hay prices and solid demand, along with ongoing willingness for the livestock sector to invest in their animals via good quality and reliable feed supplies. I wish all growers the very best for the season ahead and I thank you each of you for your ongoing support of our business.

Tim Ford

MANAGING DIRECTOR

BENEFITS OF MAKING HAY FOR THOSE WHO AREN'T SURE

Every year around 10 million tonnes of fodder (hay, straw and silage) is produced. Total value is around \$2 billion. Approximately half is traded and half retained for farm use. Like all commodities, the market is cyclical, however, growers who are prepared to store the product in a shed, and market progressively through the year can achieve great returns.

Grain vs Hay

Almost every year, hay out-performs grain in gross value per hectare. Yes, the work is there but so are the rewards. The rule of thumb is that hay yields approximately twice that of grain, in a good season. This rule is very relevant when crops have bulk vegetation but lack soil moisture to make grain, especially after frost.

Over the last 10-20 years, hay production has become an important tool in the control of rye grass, especially in southern areas.

To highlight the potential of growing this hay using this rule, Feed Central has inserted a simple gross margin budget which provides space for growers to do their own figures. The calculation compares gross margin per hectare from harvesting grain to making hay. This can be found on pages 8 and 9.

Additionally, fodder crops allow grazing to occur earlier than with a grain crop and in some regions facilitate double cropping.

Demand typically crashes in spring, during the baling period (at the height of supply). Top producers run a marathon, not a sprint with the sale process. Livestock eat 365 days / year. As producers it's important to know you don't have to sell out in spring at harvest.

About ► Feed Central

Feed Central is a family company, founded by Tim and Megan Ford in 2002 with the support of Tim's parents Kevin and Marie Ford (as volunteers!!!).

Since then, four children have come along, Hugh, Annabelle, Molly and Ted, who are involved in the business in and around school and university commitments. In addition, the business now employs 15 people directly and another 15 in contractor roles.

The business began in order to help clients procure a regular supply of consistent quality hay. Today that's still our core business, with our vision and mission as follows:

OUR VISION is for the domestic fodder industry to satisfy the demands of end users 100% of the time.

OUR MISSION is to offer the industry the commercial tools to allow this to happen. To this effect, we will lead by example, we will set a cracking pace and we will relish the opportunity to raise the bar over and over again.

These days, Feed Central quality assures several hundred thousand tonnes of hay through our Feed Test and Visual Grading system and is directly involved in the marketing of around 100,000 tonnes per annum.

We use a combination of modern e-commerce marketing via our simple web trading platform www.feedcentral.com.au and good old fashioned phone and on-farm service.

We are incredibly proud of our 20 year impeccable payment record to growers. Feed Central strives to be commercially competitive and profitable. Like all family businesses, the vast majority of our profits are redirected back into the business and reinvested into the industry.



“ Buyers are increasingly interested in knowing the quality of hay before they buy it...”

WILL THERE BE A MARKET FOR MY HAY?

The short answer is – YES.

You've heard us say it before, livestock eat 365 days a year. Our country needs hay to be made but take into account that with hay marketing you are running the marathon not the sprint. It takes time to sell hay.

Please note that we are not expecting there to be a big market for hay off the paddock or stored in the paddock. This is typical to most years (drought excluded). As usual, this year the market for 2023 hay will unfold progressively throughout 2023.

There is typically always a market for hay that meets the below requirements:

- **High Density Bales**

- » We're talking 600+ kgs per bale. Australia is a vast country with an increasingly variable climate. Hay is being moved over large distances and using a

high density baler helps to minimise the freight cost and increase the potential options and regions of marketing your hay.

- **Shed Storage**

- » Increasingly important. Good sheds are key to preserving the quality of the product.

- **Quality Assured Product**

- » Buyers are interested in knowing the quality of your hay before they buy it. They want to know the visual grade and Feed Test values and to see good quality photos! Having those 3 things done greatly assists in the marketing and moving of hay, all the while helping to maximise returns.

- **High Quality Hay**

- » We use all the tools in the toolbox to make quality hay (see page 8).



“ New season quality hay will be preferred even at a higher price”

SUPPLY & DEMAND FORECAST FOR THE 2022/23 SEASON

As discussed, 2022 saw an increased liquidity in the hay market. In the past, hay only really sold when it was dry. These days, we are seeing hay progressively sell for 365 days of the year, not just when it's really dry. We are also seeing a greater propensity for buyers to pay a premium for hay that suits their needs. This can be for quality, feed testing parameters, visual grade, stem length, location, delivery schedules etc. Of specific note is buyer willingness to purchase lower grade hay when it is described correctly and buyer willingness to pay a premium for high grade hay.

Feed Central is in regular contact with hay buyers. We estimate that 80% of our clients are expected to be buying similar volumes of hay in the next 12 months as they have in the last 12 months. Some buyers are planning on buying more, while only 5% are planning on buying less. A dry spell or another wet, cold Winter will increase this.

New season cereal crops are expected to earn a premium. A very important note here is that clients are aware and seem to accept that increased freight, fertiliser and production costs will lead to some rises in the price of new season hay.

On the supply side, 2022 saw a reduction in hay stocks as volumes of 2020 and 2021 hay sold during the year, meaning that carry over stock into the new season will be at their lowest levels in 3 years. High grain prices, favourable growing conditions and low level of frost risk are also encouraging growers to stick with grain and not cut for hay. This will further reduce the volume of hay on the market in 2022/23 with further upside on price going into 2023.



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WHAT TYPE OF HAY SHOULD YOU MAKE?

You would have already made your decision for the 22/23 season but here's some additional information about each hay type that could help.

Oaten Hay

This type of hay has been available for many years and while it has not been producing feed test results comparable to wheat or barley, it has potential to out-yield both. It is an excellent product and can be expected to be in strong demand.

Barley Hay

Barley hay has proven to feed test very well. It is an exceptional product and can be expected to be in strong demand.

Wheaten Hay

This hay provides outstanding feed test results in drought years, especially when frosted. It has subsequently established a strong position for itself in dairy and feedlot rations. Expect demand for frosted wheaten hay to be strong.

Lucerne Hay

A good lucerne crop will produce superior hay and can be expected to feed test very well. Good lucerne hay will be in strong demand. Dryland lucerne is also popular. Buyers of quality lucerne hay include: chaff mills, dairies and the equestrian industry (who are very particular in their quality requirements).

Vetch Hay

Vetch hay makes a high quality, high protein (16-20% protein) and highly palatable hay. Slashers or rotary type mowers are preferred for hay making operations. Conventional cutter-bar type mowers are not suitable as they are prone to blockages from the vining growth.

Pasture Hay

Any pasture with strong lucerne, rye or clover content that feed tests well should be in good demand, with pricing subject to the feed test results.

Quality, fine-cut Rhodes has a demand into the horse and stock feed markets.

Canola Hay

Normally, canola hay is only cut as opportunity arises in drought or frost years. It is not traditionally a hay crop. Canola feed tests very well and it has a different taste and smell from other hay crops.

There is a slightly higher chance of high nitrates in canola than in other hay. Buyers either love it or hate it, with the best sales in drought years. Growers and contractors are achieving better quality by cutting at full flower with a windrower and then conditioning it. Try to rake as little as possible to retain quality leaf.

Forage Sorghum

This type of hay requires high attention to detail to make good quality forage sorghum hay. Producers who specialise in it and focus on cutting it young and getting it cured can do very well out of this product. It can be grown as irrigated or dryland and can be cut a number of times. The advantage of forage sorghum is that it is very easy to germinate and grows vigorously in warm moist conditions. Good quality forage sorghum, with thin stems is highly desirable.

Pea & Bean Type Hay

Protein hays are sought after in a number of feeding operations. Pea hay is well supported in the Southern markets. Expect very strong demand for these unique lines, especially where the feed test is good.

Millet Hay

Red Panicum and Panorama millets make good quality hay in Summer, where either irrigation or summer rainfall allows. White French Millet is not suitable for hay production. Millet hay is a viable option in cooler and lighter soiled country, typically in Southern Qld. Millet straw can also be a solid option once the Grain has been harvested.



HAY VS SILAGE - PROS & CONS

The majority of our buyers are geared to feed hay. From Feed Central's experience, the key strengths and weaknesses of hay and silage production are summarised below:

HAY PROS

- » **Efficient to transport** with lower costs on a dry matter basis compared to silage and straw .
- » **Lower delivery costs** when taking into consideration protein, metabolisable energy, neutral detergent fibre etc.
- » **More contractors** are equipped to make hay
- » **Lower baling costs** per tonne
- » **More market outlets.**

HAY CONS

- » **Can be exposed to weather damage** whilst curing.
- » **Feed test results are generally lower**, when compared to silage.
- » **Degrades faster** if stored unprotected outside (must be shed stored).

WRAPPED SILAGE PROS

- » **Greater quality feed test results** compared to hay.
- » **Less exposed to weather damage** due to rapid airing condition.
- » **Unaffected by the type of storage** and storage surface.
- » **Good silage is free of weed seeds.**
- » **A good fodder conservation option** when consumed on the same farm it is produced.

WRAPPED SILAGE CONS

- » **Transport costs are higher** on a dry matter basis compared to hay (with silage you are carting a lot of unnecessary water).
- » **Higher delivery cost** based on protein, metabolisable energy, neutral detergent fibre on a dry matter basis.
- » **Baling cost per tonne is higher.**
- » **Less market outlets & demand.**
- » **The plastic wrap of silage tends to get damaged** during handling.

As a general rule, when pricing silage against hay, simply divide the price of hay by 2.5, because a 'normal' bale of silage is approximately between 50-75% percent water.

For example:

If the hay costs \$225 per tonne, then the silage price would need to be \$90 per tonne to be roughly equivalent. We recommend that buyers calculate the cost of silage on a dry matter delivered basis, which almost always is dearer than hay.

In summary...

many people, including Dairy farmers, strongly advocate silage production and consumption. From a marketing perspective, Feed Central advises that you make silage with EXTREME care. If you are going to use the product (and not sell it), silage could be a better feed choice.



“ Some quick calculations can help you compare the potential profitability of crop options.

ESTIMATING HAY YIELDS – MADE EASY WITH OUR COMPARISON CHART!

We have inserted a simple gross margin budget which provides space for growers to do their own figures. The calculation compares gross margin per hectare from harvesting grain to making hay. Please go to the table on the next page to see your budget chart. We trust this will be helpful to you.

In estimating hay yields, some experienced farmers and contractors simply multiply the grain yield by 2 (i.e. hay yield can be expected to be double that of grain). Previous experience with crop simulation tools and basic water use efficiency tables can help estimate the likely future grain yield.

Please note: grain yields in drought conditions can be very hard to estimate, we strongly recommend working with a local agronomist for best results.

CALCULATE

Other methods (potentially more accurate) to estimate hay yields are outlined on right.

Once you have your yield you can then move onto the Gross margin sheet attached to look at potential returns per hectare.

COSTS ASSOCIATED WITH HAY PRODUCTION

Hay harvesting contract costs will vary depending on the area on offer and proximity of the contractor to your paddocks. We expect to see production prices rises in the coming season and advise checking with your contractor before starting. Prices may or may not include fuel. Best to ask.

You can expect something close to the below for the 22/23 season:

- » \$50 - 60/Ha for cutting with mower conditioner
- » \$12 - \$20/Ha for raking (depending on the number of times raked)
- » \$20/bale for an 8x4x3; add another \$5/bale with steamer
- » Add a handling and stacking cost. This amount will depend on paddock size and location of stacks or distances to shed.

ESTIMATING HAY YIELD: METHOD 1

1. Cut 1m² of crop at the height you will cut at (NOT ground level, look closer to 20cm to produce quality hay)
2. Get kg/m² fresh weight using scales
3. Multiply by 10 to calculate t/Ha fresh weight
4. Repeat at 4 or 5 paddock locations to determine average
5. Assume 20% - 30% of fresh weight makes it into a dry bale - multiply by 0.2 or 0.3 to calculate hay yield t/Ha

ESTIMATING HAY YIELD: METHOD 2

1. Cut 1 m² of crop at the height you will cut at (NOT ground level, look closer to 20cm to produce quality hay)
2. Dry in 50°C oven and weigh after a minimum of 24 hours to calculate kg/ m² dry weight at approx. 12% moisture
3. Multiply by 10 to calculate t/Ha dry matter
4. Assume 80% - 90% ** of the dry weight makes it into a bale - multiply by 0.8 or 0.9 to calculate hay yield t/Ha
5. Repeat at 4 or 5 paddock locations (EXAMPLE: Five 1m² cuts on a barley paddock, average weight 1.09 kg/m² fresh weight 1.09 x 10 = 10.9 t/Ha of fresh material 10.9 x 25% = 2.7 t/Ha estimated hay yield *

* The % conversion increases with crop maturity. For crops that have flowered and are into grain fill, assume closer to 30% as the final hay yield estimate. Less mature/fresher crops use 20% - 25% as final yield estimate.

** Final hay yield will depend on losses after cutting due to weather, raking or baler set-up.

Disclaimer: The information on this fact sheet is targeted at a national audience. It is for general information and promotional purposes only and service providers. Feed Central, its agents and employees will not be responsible for decisions or actions initiated from this information.

◀ Hay vs Grain

In many years, hay can out-perform grain in gross value per hectare. This is particularly relevant in dry years with frost.

Calculate what is best for you*. Complete the tables (left) for producing hay and then repeat for producing grain and compare your margins. (Please note, we strongly recommend working with a local agronomist for best results).

HAY MAKING GROSS MARGIN			Example	Your Estimate
Step 1 - Estimate Gross Return Per Ha				
Estimate Yield <i>(use tools from this sheet)</i>		A	3	_____tonnes/Ha
Estimate your Sell Price (FARM GATE BASIS)		B	270	\$_____tonnes
Total Gross Return Per Ha (A x B)		C	810	\$_____Ha
Step 2 - Determine Your Pre-Baling Expenses (normally quoted per Ha) <i>TIP: The higher the yield, the cheaper the per tonne cost</i>				
	Contract Mowing	D	50	_____/Ha
	Contract Raking	E	10	_____/Ha
	Other	F		_____/Ha
	Sub-Total Step 1 (D+E+F)	G	60	_____/Ha
Step 3 - Determine Your Baling and Post-Baling Expenses (normally done per bale) <i>TIP: The heavier the bale- the cheaper the per tonne cost</i>				
	Baling	H	20	\$_____/bale
	Handling	I	2	\$_____/bale
	Other	J		\$_____/bale
	Sub-Total 2 (H+I+J)	K	22	\$_____/bale
Step 4 - Determine Bales per Ha and Cost per Ha <i>TIP: When paying contractor per bale, watch bale weights carefully</i>				
Estimate Bale Weights		L	650	_____kg
	Bales Per Ha = Yield (A) divided by Bale Weight (L) x 1000	M	4.62	_____bales/Ha
	Cost Per Ha = (M) x Cost Per Bale (K)	N	102	\$_____/Ha
Step 5 - Calculate Gross Margin				
	Calculate Total Cost Per Ha (G+N)	O	162	\$_____/Ha
	Calculate Gross Margin (C-O)	P	648	\$_____/Ha
GRAIN GROSS MARGIN			Example	Your Estimate
Step 1 - Estimate Gross Return Per Ha				
Estimate Yield		Q	2.25	_____tonnes/Ha
Estimate Your Sell Price (FARM GATE BASIS)		R	360	\$_____tonnes
Total Gross Return Per Ha (AxB)		S	337.5	\$_____Ha
Step 2 - Determine Your Harvest Expenses (normally quoted per Ha) <i>TIP: The higher the yield the cheaper the per tonne cost</i>				
	Header Contractor	T	35	_____/Ha
	Other	U		_____/Ha
	Sub-Total Step 2 (T+U)	V	35	_____/Ha
Step 3 - Calculate Gross Margin				
	Calculate Gross Margin (S-W)	W	505	\$_____/Ha
Which Return is Best - Hay (P) or Grain (W)?			\$143	

* The % conversion increases with crop maturity. For crops that have flowered and are into grain fill, assume closer to 30% as the final Hay yield estimate. Less mature/fresher crops use 20% - 25% as final yield estimate.

** Final Hay yield will depend on losses after cutting due to weather, raking or baler set-up.



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◀ A shed gives you the ability to wait for ideal market conditions to sell your product.

THE REALITY OF SELLING HAY OFF THE Paddock

This season (22/23) we expect to see limited buyers purchasing hay off the paddock. It's important to remember that livestock eat 365 days of the year, not just when you are making hay.

Unlike the Grain industry, the Fodder industry has no big accumulators, storage/warehousing systems, futures markets, very few speculators and generally, only operates in the physical market.

This is probably a good thing, however it does mean that at times the fodder industry works slightly slower than the Grain industry, but it still works.

For this reason, having hay sheds on your property provides multiple benefits and is considered a market requirement. There has been a significant growth in hay sheds over the past 5-10 years. The majority of our buyers will only buy shed-stored product. A shed gives you the ability to wait for ideal market conditions to sell your product. It also allows you to engage in forward contracting as these buyers always request for their product to have weather protection. Sheds can also significantly boost the market value of your property and mean you do not lose value over the years despite being on your depreciation schedule.

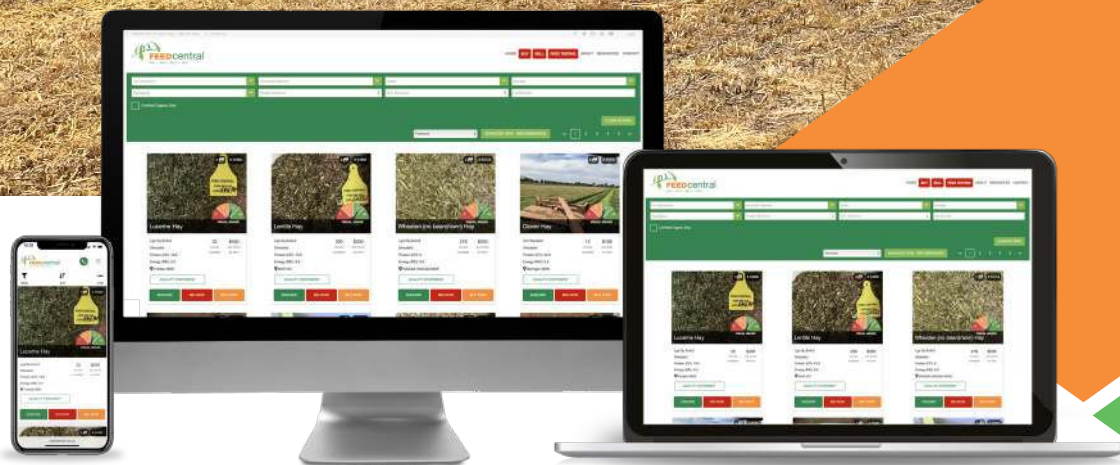
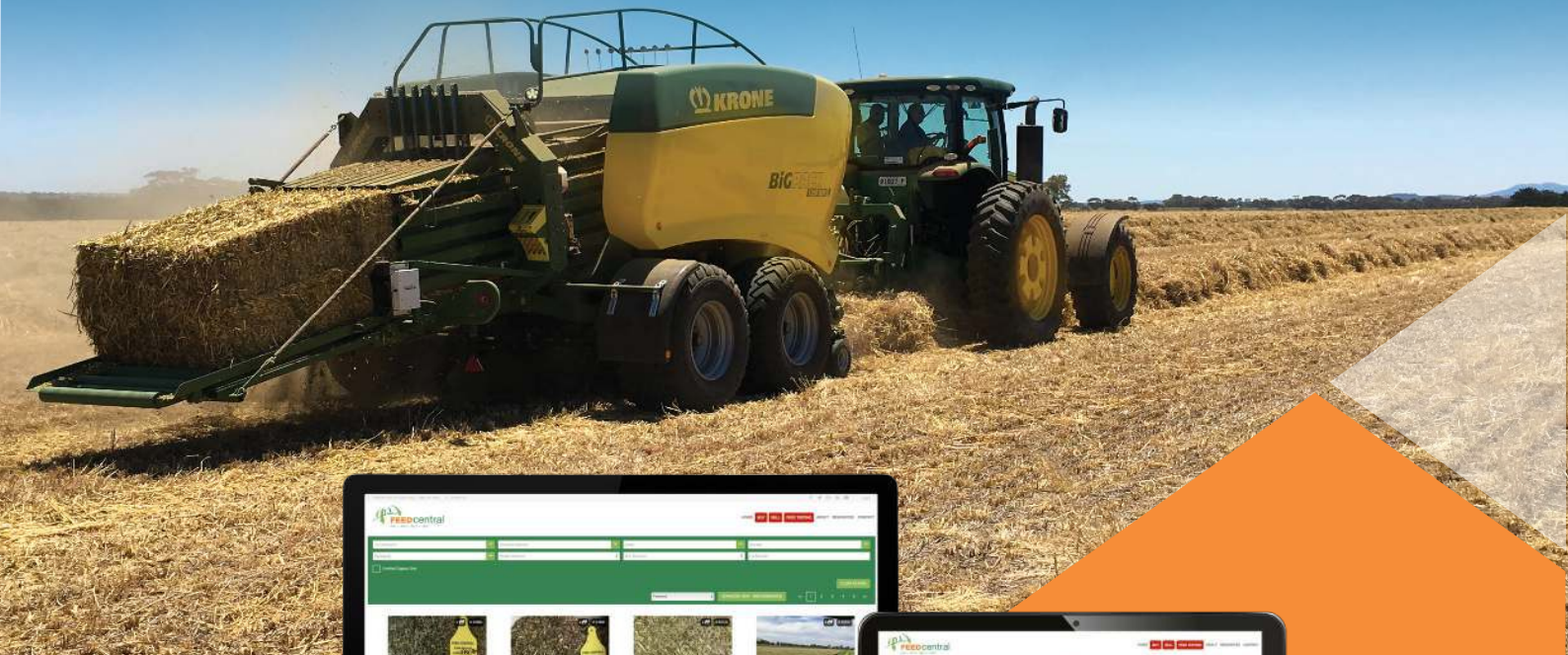
It's important to be prepared to get bales stacked ASAP after baling to avoid weather damage on paddock-stacked bales. If you have limited shed space, have in mind that round bales stack and store better outside, over large square bales.

A marketing period of 1-6 months after baling is realistic but fluctuating seasonal conditions can extend this to 6-12 months or longer, which is similar to many grains.

As already mentioned, in a high yielding season, hay may carry over into the following season. Remember, buyers need hay all year round, not just when you are producing it, so storing and selling later can be a more profitable option. The most efficient place to store hay is on your farm, in a shed with all-weather access.

Feed Central's Web Marketing Service connects buyers and sellers 365 days of the year. This being said, Feed Central operates an extensive Forward Order program. This program puts in place contracts between suppliers and buyers. The contracts are tested, binding and enforceable. Feed Central contracts have a delivery spread built into them, that clearly defines the period of time for which the product needs to be held on farm.

Is there a smarter, simpler way to sell Hay?



National Marketplace.

Get Your Hay Quality Assured.

Every lot is On-Farm Inspected and Feed Tested. This ensures you and we know exactly what you're selling with the help of our Quality Certificates.

Online System

Backed by a team of real people.

Simple Mobile Friendly Website.

List, update and view your Hay online easily - buyers love our website!

Your Choice

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SELL NOW



WHAT DO HAY BUYERS REALLY WANT

In summary, here's what Feed Central hay buyers want:

- » **Heavy, large, square bales (8x4x3)** that maximise freight and handling efficiencies at every stage. High Density (HD) balers that can deliver this size bale are now highly preferred.
- » **Feed with high energy & good protein**, so baling while the crop is immature is vital. The higher the energy (M.E.) the better. The best way to increase energy is to cut early.
- » **Oats, barley, wheat, vetch and lucerne hay** that is green in colour with no (or minimal) weather damage.
- » **Access to fodder 365 days of the year.**
- » **Shedded product**, with all-weather access.

In the Feed Central system, buyers are quoted delivered prices to their property within seconds. Obviously, the heavier bales are, the lower freight cost per tonne will be. Growers with heavy bale weights will often get a higher ex-farm price as the freight component is cheaper, so even though the supplier's ex-farm price is higher, the buyer's price is lower, so EVERYONE'S A WINNER.

High-density, large, square bales, such as those made by the Krone 8 String Balers and the 8x4x3, are very popular because you achieve an excellent load on a Drop-Deck or B-Double trailer and most front-end loaders can handle the weight.

Heavy bales will achieve pay weights in general, so focusing on achieving heavy weights regardless of the bale configuration will always be of benefit to your operation.

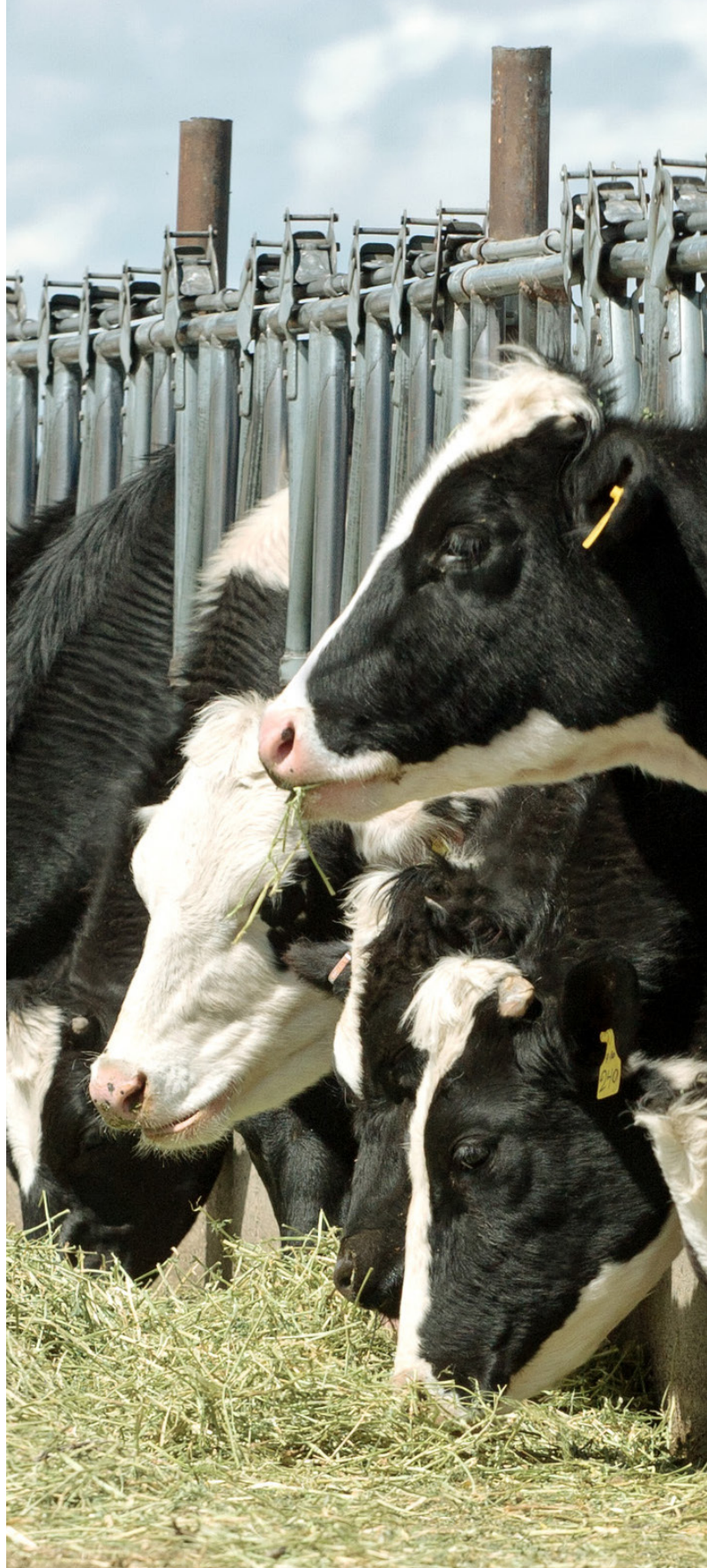
Alternative Bale Sizes unpacked.

If you must make round bales, consider 4x4 bales which have freight advantages over 5x4 rounds. Small, square bales are a viable alternative for niche markets.

High-density, large, square bales are normally cheaper to make when calculated on a per tonne basis. It is also quicker and easier to move a large volume of large squares both on farm and on trucks.

Do not underestimate the importance of this. Bale weights and sizes are the area where smart growers maximise their returns and create huge efficiencies in their operation. In very simple terms, imagine all the extra work and man hours required to move 500kg bales off your paddock versus 750kg bales. Think of the cost. Now, multiply this tenfold as you think about loading, transport, unloading etc.

Maximum efficiencies are gained in high density 8x4x3 bales.



“Buyers want access to fodder 365 days of the year.”



WHAT PREVENTS YOUR HAY FROM SELLING?

We talk to a lot of producers about what will help your product sell, but this season we wanted to outline some notable issues that could affect the saleability of your hay.

Here they are:

- **Not knowing the quality of your hay**
 - » Have you got your hay Quality Assured (Feed Tested, Visually Graded etc)? These are all important marketing tools that the Feed Central selling system tackles first when we market hay for sale. By knowing these things, the buyer will understand the true quality of the hay.
- **Wrong price point**
 - » If you're not keeping yourself up to date with the market (you can do this easily by reading our Hay Market Report or reading our Feed Registry), then the chances of your product being at the wrong price point are extremely high. The market can move quickly in terms of price, so it's important to keep yourself in the loop.
- **Not keeping your advertising up-to-date**
 - » Whether you advertise with Feed Central, in the local paper, social media, online, or anywhere else you must keep your advertisement up-to-date with the correct description, price, details and quantity. Buyers don't know what they don't know.
- **Poor quality**
 - » Poor quality hay will sell last. It's what we see every year, buyers want quality, so they snap up those deals first. Poor quality hay must be priced appropriately, and producers need to understand that it may get picked last. That doesn't mean it won't move, (unless quality is very poor) but it won't move fast.
- **Damaged product**
 - » Weather or rodent damage will negatively affect the saleability of your hay. Buyers want quality.
- **Inconsistent bale weights**
 - » Buyers want to know the true weight of your bales and they want them to be heavy!
- **Strange bale sizes**
 - » 8x4x3 is what the majority of the market wants.
- **Shedding**
 - » The Feed Central sales team are reluctant to sell anything that is not shedded. Put simply, we have had too many bad experiences.

HOW TO PICK A HAY CONTRACTOR

Machinery manufacturers have put a lot of effort into producing a solid and heavy baler over recent years. So (as a generalization), a contractor with newer gear should be able to make heavier and better shaped bales than a contractor with older gear.

Here's a few things to look for in a hay contractor:

- **HD Baler**

- » We strongly encourage you to engage a contractor with a high density baler. High density balers not only make heavier bales, but they are also much faster.

- **Moisture Monitoring System on their baler**

- » A contractor who has a moisture monitoring system on their baler, such as a Gazeeka, should be sought. This enables the constant monitoring of moisture levels and can help you avoid stacking high moisture, potentially dangerous bales, into the shed and therefore mitigating the risk of hay fires.

- **Fair pricing agreement**

- » Most contractors charge per bale. Be very careful here. Lighter bales make more money for a contractor, while heavier bales mean less work stacking, loading and more profit for the grower. Lighter bales mean higher freight costs and a lower selling price for your hay. Talk to your contractor about this — put bale weight parameters into your baling contract. Contractor rates have risen recently. Discuss their prices with them and

fully understand the increase. Question them if fuel is included or not in the price.

- **Written Contract**

- » These days it is not uncommon for growers to have a written contract with the contractor. This is something to consider. When making a verbal or written contract, we strongly suggest you cover bale weights and timing.

- » Contractors can pick up other jobs and some contractors (not all) will give preference to larger jobs. We suggest you talk about this in your discussions and agreement with your chosen contractor.

You can find a full list of contractors from all around Australia on our Contractors Registry on our website. This registry is to help you find a contractor that will suit your needs. These contractors have a range of different equipment and specialities listed for your convenience. We encourage you to pick your own contractor.



GET FOUND TODAY

JOIN HUNDREDS OF CONTRACTORS

THE NUMBER ONE PLACE
for hay, silage, grain and truck contractors
working within the agricultural industry.

*Trusted by growers
all around Australia.*

SCAN TO VIEW CONTRACTOR REGISTRY



(www.feedcentral.com.au/contractors)

LET'S TALK ABOUT STRAW

Straw has many uses, including roughage in feedlot diets, maintenance of dry cows, or as a drought supplement, garden mulch, mushroom production or animal bedding. It has limited nutritional value; on a dry matter basis. Straw is expensive to transport because legal pay loads of straw on a truck of any size are rare. As always heavy and ultra-heavy bales are highly preferred due to reduced bale weight.

If I bale straw, can Feed Central sell it?

Yes, Feed Central can advertise and market your straw for sale and we often have contracts open.

High density bales and heavy bale weights are highly desired advantages with straw, as well as clean bales and the straw being bright in colour and fresh in smell.

Long or short straw lengths?

The long and short of it is... Feedlots/ration inputs are generally looking for Straw with consistent length of well-made bales with good colour, no dirt and a fresh smell. Feedlots today would prefer windrowed straw over header tailings, at 12-15cm length, with knives in the baler. However, they will, at times, accept full length and header tailings. Long straw is still popular with the mushroom industry and some others.

Wheat or Barley Straw?

Barley straw traditionally has been preferred but this has gradually become less so. Price has become a big driving factor, as long as the grade/quality is equivalent, so there is not a significant difference between wheat and barley straw.

Hints & tips for producing quality hay

The following information uses Oaten Hay as an example variety, please note these tips and hints can be applied across a variety of hay.





SEED BED PREPARATION

✓ Minimises potential for contamination

Always prepare your paddock prior to planting. Make sure that there are no contaminants such as wire, star posts, rocks or dead animals in the paddock that may get baled with the hay.

✓ Rolling after seeding

- This enables mowing at a different angle to planting.
- Minimises clods in bales.
- Pushes residual stubble down.

✓ Stubble

If left, it requires an elevated cutting height to avoid old crop stubble from contaminating the product – affects feed test results.

✓ Weed control considerations

Aim for zero weeds.



SOWING DATE & RATE

✓ Early planting

Time your planting backwards from your historical ideal harvest period.

✓ Match variety to soil types, rainfall zones and sowing dates

Get to know your local agronomist and partner with them for quality timely advice.

✓ Sowing rates impact on Hay quality through:

1. Stem thickness - the heavier the sowing rate the thinner the stem.
2. Weed competition
3. Colour
4. Thin stems have better feed test (lower NDF, ADF, high protein + ME) and are visually more attractive and palatable.



ROW SPACING

✓ Tighter spacing

Reduction in weed competition.

✓ Better feed test

As a result of reduced stem thickness.

✓ Better support base for windrow

It will also allow for more airflow during curing.

✓ Reduces soil contamination

It also reduces uneven curing.



FERTILISER CONSIDERATIONS

- ✓ **Best to review cropping and soil history prior to planting**
We recommend getting a soil test done
- ✓ **Fertiliser budgets prior to planting**
- ✓ **Production costs**
Including aerial application, fertiliser cost



WEED CONTROL

Weeds reduce the aesthetic appeal and palatability of the hay and/or may put livestock at risk of toxicity. Weeds can also make it difficult to get an even moisture reading through the windrow and into the bales.

In short, weeds are undesirable to have in hay. They pose a biosecurity risk and can cause the spread of noxious weeds. Ideally, try to control weeds prior to sowing and during the growing period. If you know that a certain part of your paddock has weeds in the crop, then consider stacking these bales separately after baling.



DISEASE & INSECT MANAGEMENT

- ✓ **Depending on cropping rotation and season, your crop may require a fungicide application.**
Fungal diseases will have quality issues related to:
 - » Colour
 - » Dust
 - » Leaf retention
- ✓ **Insect management:**
 - » Aphids increase the potential for barley yellow dwarf virus, depending on variety selection
 - » Talk with your local agronomist, for further tailored advice.



CUTTING

- ✓ **As a general rule, the crop should be cut at soft drink or stubby can height in a dry harvest season.**

In a wet season, we suggest you cut at 20-30cms (water bottle height). This allows for a breeze to pass through and under the windrow, assisting in curing.

Most importantly, this also ensures that the windrow is up off the ground following rain, preventing significant damage and downgrading.

Cutting on a slight angle across the air-seeder rows is another method to keep windrows off the ground.

NB: Cutting high also improves your feed test and leaves a stubble to protect your soil or for grazing. Crop has gone to milky or dough stage will attract mice during storage.



WINDROW & RAKING

Spraying crop with an application of roundup 24-36 hours prior to cutting. This kills the crop, preventing regrowth. In a warm wet windrow crops can regrow very quickly, and this green leafy material then find its way into the bale.

- ✓ **The ideal time to cut your hay**

The ideal time is between flowering when you can see the white anthers appear, up to the watery ripe stage when you can squeeze the grain and watery green liquid appears.

Cutting your hay after this stage risks a decline in quality due to the fact that as the plant continues to grow it will increase in fibre content and decrease in sugar content.

Cutting when the crop has gone to milky dough stage will attract mice during storage.

For Canola in particular, rake as early as possible and only once to retain as much leaf as possible in the bale.

- » Make a large windrow, up to 600-1000 mm. We suggest avoiding Tedder Rakes. Many experienced hay growers will merge windrows together. What we are doing here is minimizing the percentage of material exposed to weather damage.
- » Minimise raking. The less you turn hay, the more leaf you will retain, with higher quality and colour.



CURING - WHEN IS IT READY TO GO?

- ✓ **Bale when the hay is dry, no matter what, never before. Regardless of the product you are baling, the single most important procedure is baling the product at the correct moisture level.**

Feed Central's Delmhorst Moisture Meter has a windrow attachment for testing hay in the windrow. There are also other proven techniques in determining when the hay is ready for baling. Generally, hay must pass all of the following 'old school' tests prior to baling.

Test 1

Simply peel back the skin at the nodes with your fingernail. If there is any moisture there at all – it is not dry. If there are no nodes (eg. lucerne), peel the skin back at several points.

Test 2

In cereal hay the nodes will be darker in colour and shrunken when dry. If they are bigger than the stem, it is not dry.

Test 3

Grab some hay from the windrow with two hands. Twist your hands in opposite directions whilst holding the hay (use the motion of peddling on a pushbike!). If the hay is dry, it will break/snap in 1-2 turns. If it doesn't, it is not dry.

Test 4

Take a hammer, get some hay stems and crush some nodes between the hammer and a hard steel surface. If any moisture smear is detected, it is not dry.

TIP:

To speed up the process of baling, consider the use of a super-conditioner to quicken curing time. Also keep in mind the ideal texture for hay is soft and not prickly. This parameter again can be affected by maturity when cut and curing time.

Get your Hay testing equipment direct from the Feed Central Shop



DELMHORST F-2000 MOISTURE METER



- » 45cm Probe used for testing large bales
- » Electrode Probe Handle for ease of testing
- » Short Pin Windrow Testing Probe
- » Moisture Meter Calibrator
- » Exclusive PVC Travel Tube
- » 3 Year Warranty



STAINLESS STEEL HAY CORER

- » Bagging Attachment prevents contamination
- » Efficient Design for fast Hay sample collection
- » Stainless Steel Components
- » Cleanout Rod to ensure complete cleanout between Lots
- » Stainless Steel Serrated Tip & protective cap



For more information or to order, call us on **1300 669 429** or visit www.feedcentralshop.com.au



BALING

Here are some aspects you need to consider/ look out for during baling:

✓ Do not rush hay making.

Baling hay with high moisture will:

- » Cause hay spoilage by damaging the fresh green hay colour in the bale. In Feed Central's system, anything baled above 18% moisture will have a maximum visual grade of FCB.
- » Dramatically increases the potential of fire caused by self-combustion. This is a serious and very real risk.

✓ Making quality hay is all about timing.

You will never be able to recover the quality if you get the timing wrong. When baling a large area, it can be hard to always bale at the ideal moisture, therefore compromises need to be made. But it's better to make hay too dry than too wet. Sometimes hay becomes too dry to bale, so wait for dew before baling; or consider using a steamer. Please note, an experienced hay contractor can assist you further in this process.

✓ Colour

The ideal colour for hay is a bright green colour. This is affected by maturity and curing time. The longer the hay is on the ground after it is cut the more chance that it will be weather damaged or bleached by the sun. Always check the forecast when you are about to cut hay.

✓ Texture

The ideal texture for hay is soft and not prickly. This parameter can also be affected by maturity when cut and the curing time.

✓ Stems

Aim to have thin stem diameters. Thicker stems will lead to an increase in fibre content which is not desirable. Having smaller row spacings can help to keep your stems thinner.

✓ Moisture

Aim for all your hay bales to have a moisture range of between 10-16%. This will ensure that no fermentation will occur in the bale after baling and that your hay is not too dusty. To make sure that the moisture is correct always use a moisture meter. Also, consider the use of inoculants to safeguard against moisture spikes.

✓ Contamination

Contamination of the bale can occur when you are storing the hay. Ensure that the surface of the storage has a large amount of residual hay, is covered in a plastic lining or is compacted dirt. This will help ensure that dirt and rocks do not contaminate the bottom bales of your stack.

✓ Weeds

If you know that a certain part of your paddock has weeds in the crop, then consider stacking these bales separately after baling.

✓ Bale Integrity

Avoid oversizing bales and remember that bales will be moved at least 3 times before processing. If you over-size bales it could cause strings to break and make bales difficult to transport, stack and store.



Baling Times

- ✓ **Lucerne Hay**
Ideally 5-10% of the plants should be flowering. Pre-Flowering produces better Feed Tests and higher yields over the season.
- ✓ **Cereal Hay**
Ideally 80-100% of the plants should be flowering.
- ✓ **Vetch Hay**
Early flower, no pods.
- ✓ **Canola Hay**
Full flower with little to no pods.

As a general rule, the younger a crop is cut, the higher the ME and CP values on the feed will be.

However, bulk yields peak around full flower/ early milky dough seed, so a balance needs to be found.

Crops cut pre-head emergence are generally very hard to dry down/ cure. It is best to wait. Heads that are still in the boot can cause issues for curing time. It is important to take care when the crop contains plants at different stages of maturity. This is likely to be the case for drought-stressed crops.



STORING

Hay stored on your property is a valuable asset, so you must protect it. Listed below are some valuable tips on where to store your hay and protecting your asset correctly. Obviously, the best place to store your hay is in a hay or machinery shed. Move machinery out of the shed (even the one with the green paint) and put the hay in there.

- ✓ **If you have a shed, put the hay in the shed**
- ✓ **Stacking round bales outside**
If stacking outside, do not stack round bales on top of each other, the water just runs down one onto the other. Simply stack them sausage style, with a ute distance between rows, that way you can get between rows to slash or spray etc.
Hay naturally sheds water, but when hay sits in water it absorbs it; therefore, damage is more likely on bottom bales than top bales. Always ensure haystacks are not located in old floodways or low-lying areas.
Fence lines can divert local water during a heavy downpour. Consider carefully where you position stacks along fence lines and contours. Create good drainage between stacks so water does not flow off one stack and then underneath another. Grade a small diversion bank if this is a potential problem. Store your hay in an area that is well drained and dry, with good all-weather access.
- ✓ **Stacking large squares outside**
If you **must** stack outside you are best to stack 6 bales high and 1 bale wide, stacked closely together. Moisture inside the bale must be checked before stacking to avoid combustion fires (regardless of whether stored outside or shedded).
Tarps or Hay caps are low-cost and effective but are not a long-term storage option.
- ✓ **Shed Floor**
Moisture will rise from soil inside a shed. Ensure the shed floor area is well drained. Leaking roofs or poor drainage may cause a shed fire even if the hay went in dry.
- ✓ **All-weather access**
Hay sales often come during wet/cold periods, so good truck access can make or break a sale.

Cover your hay the safe way



1800 HAY CAP
www.haycap.com.au

Economical • Easy to Use • Made to Last

FEED CENTRAL'S Quality Assurance Process



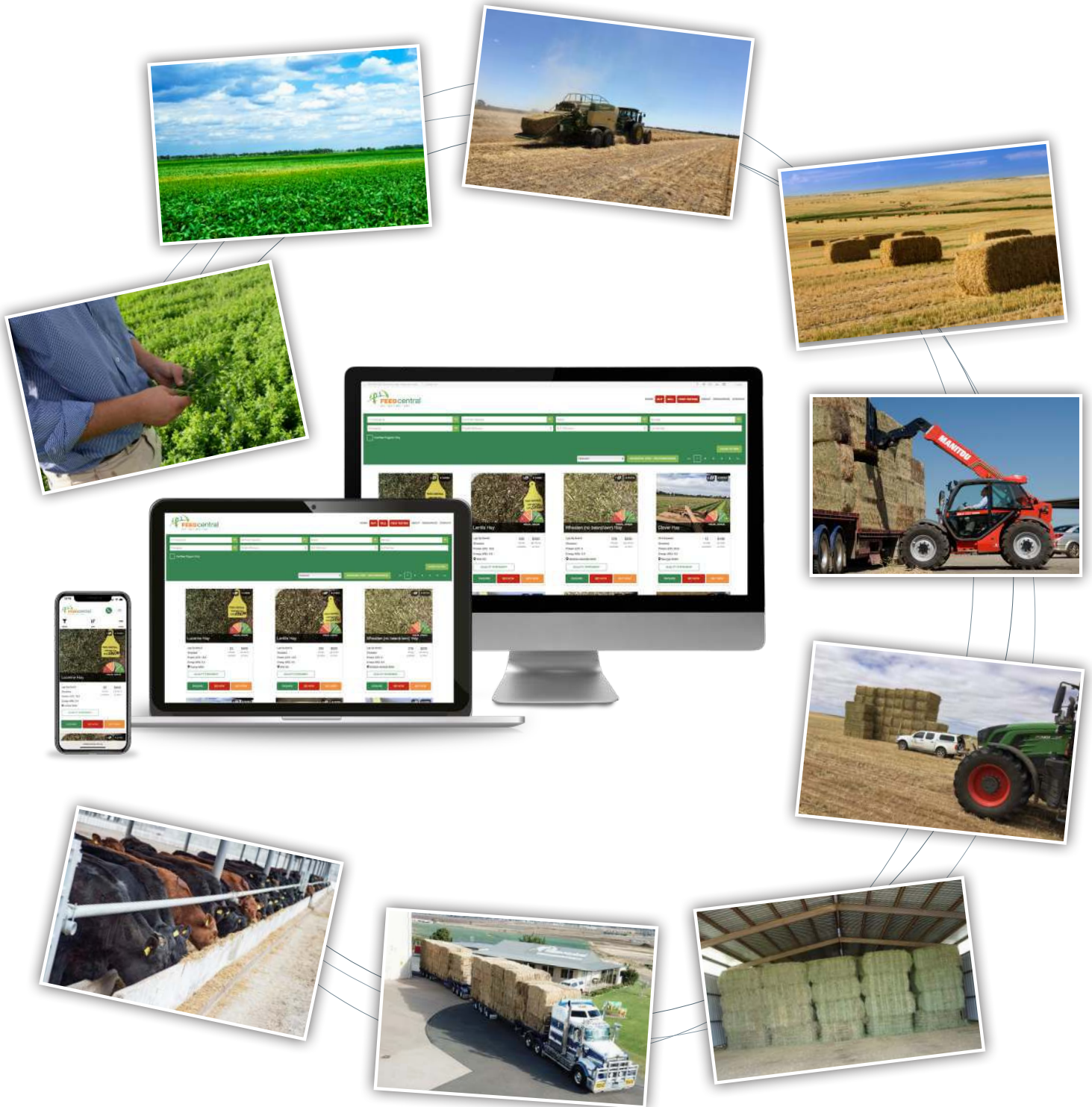
Quality Assurance at Feed Central all starts with you.

Your hay is our concern. Don't just do a great job making your hay. Let us do a great job assessing, testing, marketing, selling and transporting it. Our Laboratory has the right test for every product. We have the team and the resources to find the right buyer for every product.



From Seed to Feed

Feed Central is Australia's largest online hay sales platform, and we have over 21 years' experience in understanding and providing what buyers want. Increasingly, buyers want to know the details of the crop, right from seeding.



We encourage growers to document the process from the paddock at the beginning and then tell the crop's story with images and videos throughout the entire process – buyers love it!



WHAT IS A CVD (COMMODITY VENDOR DECLARATION) AND HOW DOES IT TRACE MY HAY?

When deciding to graze a crop, or cut for hay or straw, chemical withholding periods need to be considered and strictly adhered to. **Remember that ALL chemicals applied to the crop at any stage of production must be documented on the CVD.**

Chemical residue testing of feed commodities and animal carcasses has continued to increase throughout the majority of food sectors. For many feeding and food operations, this type of testing forms part of industry audits and compliance.

CVD's are a major part of this audit and compliance chain. Keeping accurate records of chemical application rates and dates is a must. A Commodity Vendor Declaration containing these details will need to be completed if the crop is cut and sold as hay.

No product will be marketed or sold through the Feed Central system without a current and correctly completed CVD.

COMMODITY VENDOR DECLARATION
2nd edition, July 2004

SERIAL NUMBER

Please print clearly.

Trading name of producer or storage facility _____

Vendor's name (if different) _____

Vendor's address _____

(FULL ADDRESS INCLUDING POSTCODE)

Tel no. _____ **Fax** _____

Vendor's contract no. (if applicable) _____

End user's trading name and address _____

End user's contract no. _____

Commodity _____ **Tonnes represented by this declaration** _____

Delivery period from _____ **to** _____

DAY / MONTH / YEAR DAY / MONTH / YEAR

Answer 1A or 1B as applicable.

1A This commodity is ex producer:
If applicable, please tick the relevant box, complete the following details and then go to Question 2.

Direct ex paddock Ex farm storage

Property name _____ **Harvest date** _____

DAY / MONTH / YEAR

Shire _____ **Paddock I.D./s** _____

1B This commodity is ex multi vendor storage:
If applicable, please complete the following details and then go to Question 2.

Storage location _____

Release number _____ **Silo/pad no.** _____

2 Does the property on which the commodity is grown, or storage facility in which the commodity is stored carry accreditation under an independently audited QA program which includes chemical residue management for the commodity being supplied?

Yes No If Yes, give details: _____

NAME OF PROGRAM ACCREDITATION NO.

If the answer to Question 2 is Yes, go straight to Question 8. If the answer is No, please refer to the explanatory notes.

3 Was the commodity tested for chemical residues by a NATA accredited laboratory and test method?

Yes No If Yes, attach details of testing results on delivered product

4 Chemical applied to the commodity whilst under your control (attach list if necessary)
List all agricultural chemicals (excluding fertilisers) applied to the commodity while it was under your control, as follows:

a. from seedling emergence to harvest for fodder;
b. from commencement of flowering to harvest for grains; and
c. all post harvest treatments.

Chemical applied	Rate/Ha or tonne	Application date	WHP and/or EI

5 Chemicals applied on your property (attach list if necessary)
List all chemicals (excluding fertilisers) applied to crops within 100 metres of the crop from which this commodity was derived, or which have placed that crop in a spray drift risk area, as follows:

a. from seedling emergence for the fodder supplied; or
b. from commencement of flowering to harvest for grains supplied.

Crop/situation	Chemical applied	Rate/Ha	Application date	WHP and/or EI

6 Neighbours' Crops (attach list if necessary)
List all neighbours crops within 100 metres of the crop from which this commodity was derived, or which have placed that crop in a spray drift risk area, as follows:

a. from seedling emergence for the fodder supplied; or
b. from commencement of flowering to harvest for grains supplied.

Crop	Approx. harvest month

7 Has the crop been grown on a property with a chemical residue status classification?

Yes No If Yes, give details _____

8 Having kept appropriate records and after making the necessary inquiries, I/we truthfully believe that:

a. all chemicals applied to the crops or commodity specified in this declaration, by me/us or by other persons on my/our behalf during the growing of the crops and/or during the storage of the commodity are disclosed, where required, in the responses to Questions 4 and 5 of this declaration;
b. all chemicals were applied in accordance with their registered labels and at rates not exceeding the maximum rates set out on those labels; and
c. any Withholding Periods and/or Export Intervals set out on the labels of the chemicals applied to the crop or commodity whilst under my control have been observed and, where required, are specified in the response to Question 4 of this declaration.
d. the commodity supplied does not contain any materials that are prohibited for use as feeds for ruminant livestock (cattle, sheep, goats, etc) under state/territory legislation, specifically in regard to animal by-products.

I/We further declare that I/we have read and understood the explanatory notes and declare that the information in this document is true and correct.

Signed by the representative of the organisation supplying this commodity who is responsible for the production and/or storage of this commodity prior to dispatch to the above end user.

Name _____ **Position** _____

Signature _____ **Date** _____

DAY / MONTH / YEAR

FUNGICIDE TREATMENTS & EXPORT SLAUGHTER INTERVALS

An important note on fungicide treatments:

The following 'actives' can be found in certain name/branded fungicide treatments: Azoxystrobin, Epoxiconazole & Bixafen.

These actives interfere with 'Export Slaughter Interval' (ESI) requirements. Grazing withholding periods for such actives are only applicable for the domestic market. The majority of export markets have more stringent standards which

require withholding periods and ESI's to be adhered to. Labelling and the advice provided on any fungicide must be double checked carefully. ESI's are unlikely to be found under the 'Withholding Periods' section. If applicable, the advice may be found under the 'Trade Advice' section of the label / full product detail.

Disclaimer: Feed Central reserves the right not to trade product treated with the aforementioned actives.

WHAT ABOUT THE MICE? OUR TOP TIPS FOR HANDLING MICE

Mice issues are commonly known to build up where there is an abundance of feed and a warm Autumn.

One of Feed Central's Platinum Hay Growers, located west of Forbes NSW sent us these photos (right) showing how he has prepared early for the mice invasion.

His ingenious idea to create a mice barrier around his Hay sheds has protected thousands of tonnes of valuable hay.

His solution is corrugated iron sheets steel with steel pickets on hard gravel ground. Crusher dust & gravel has then been pushed up around the steel sheets to seal the bottom entry point.

This grower is seeing mice climb up the steel posts and running along the top of the corrugated iron sheets at night but has noted mice internally trying to get out to access water. He has a baiting system set up inside the barrier to take care of those who dare to enter.

Our area manager, Steve Page, has inspected these hay lots for sale and has noted no mice damage internally.

If you would like to discuss your storage options or methods with us please do not hesitate to contact us on 1300 669 429.



DOWNLOAD OUR MICE MANAGEMENT BOOKLET

for more tips about Mice Management



SCAN CODE

or navigate to

<https://www.feedcentral.com.au/managing-a-mice-plague-in-haystacks/>

FACT SHEET: Managing a Mice Plague in Hay Stacks



Disclaimer: Feed Central has prepared this information as there is a shortage of information on this subject, this is not complete or "expert" advice. Please do your own research and make your own decisions. Feed Central Pty Ltd will not be held responsible for decisions made and action taken as a result of information in this fact sheet.

OUR HAY QUALITY AWARDS

As part of our hay quality commitment, we hold an Annual Hay Quality Awards presentation and competition.

These nationally accredited awards allow Feed Central to reward producers who have made high quality hay and who have had it quality assured through our system.

It also allows growers and contractors to benchmark the quality of their hay against others. State and National Awards are presented for Best Visual Appearance and Best Feed Analysis attributes.

Feed Central's Hay Quality Assurance Partner:



We've got you covered from seed to feed

AFIA connects the entire fodder supply chain – from fodder, dairy, grain and livestock producers, to lot feeders, contractors, exporters, researchers and service providers.

Join the network, make valuable connections, and stay up to date. AFIA member benefits include:

- Actively shaping the future of the Australian fodder industry
- Access to the latest industry news
- Member discounts for events and sponsor promotions
- A national network of fodder industry professionals at your fingertips

We have membership categories to suit all needs. www.afia.org.au/membership

Together we will grow a sustainable and profitable industry



FEED central

HAY ▶ BUY ▶ SELL ▶ TEST

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