

## PROFIT FROM HAY IN 2008 / 2009

Thinking of making hay? Wondering what is best between hay and grain? All your questions are answered below. So take the time to read on.

An **important** point to digest before you read on is that over many years Feed Central has observed that one feature stands out about successful hay operations—that ALL good decisions are planned early and logistics (including marketing) organised to achieve this success. ***You can start the marketing process now by advising us that you might be making or have to sell now***

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### **SUMMER CROP HAY PRODUCTION**

**Forage Sorghum Hay**

**Millet Hay**

**Estimated Production Forecast Sheet**

### **Q. 1: Will there be a market for hay in 2008-2009?**

- A. The short answer is **ABSOLUTELY - YES**. Every year around 9 million tonnes of fodder (hay, straw and silage) is made. Total value is around \$1.3 billion. Approximately half is traded and half retained for on farm use.

The drought market we saw in 06/07 has now passed with many animals being sold and rainfall relieving the situation temporarily. The dairy industry is very positive and looking at a buoyant future with milk prices at all time highs. This market sector is expected to be a strong consumer of hay over the next several years.

This being said, the last twelve months have proven that buyers are keen to suss out quality hay. Growers with quality hay have and continue to be rewarded. Buyers use the Feed Central web selling system because it gives them extensive quality descriptions and consistent grading across all hay, straw and silage lines.

### **Q. 2: What about supply, will there be an oversupply?**

- A. The short answer is – NO, we do not believe so. Feed Central believes the supply of good quality hay will be limited in 2009 because many of last year's growers want to produce grain this year. There are also strong indications that water allocations from most irrigation systems will be similar, or lower than '07-08, therefore fodder produced from irrigated pastures will be well down on past production levels.

On the supply side we will see lower hay production than last year with greater demand. Feed Central is bullish on the hay market. We believe there is more risk of a hay shortage rather than oversupply. This shortage is likely to eventuate in dairy regions starting March, April and May 2009.

### **Q. 3: Why make hay?**

- A. Fodder crops provide an important weed and disease management strategy and these 'hidden' rotational benefits need to be considered. Additionally, fodder crops allow grazing to occur earlier than with a grain crop.

There is a long term market opportunity for good quality hay. This market is growing and has historically been undersupplied. Drought, frost etc. can result in non-traditional hay crops being a very viable income opportunity.

**Q. 4: What type of hay should I make?**

- A. Any grass pasture, cereal, legume or oilseed that will have a good feed analysis can be cut for hay. Examples of these are below:

**Lucerne Hay:** Lucerne makes very nice hay and can be expected to feed test very well. Irrigation water for lucerne production is short, therefore expect low supply. Good lucerne hay will be in strong demand, especially from dairies.

**Cereal Crops:** Wheaten hay has provided exceptional feed analysis in recent years; subsequently it has created a very strong position in dairy feed rations. Expect demand for wheaten hay to be strong. Barley hay has also proven to feed test very well. Oaten hay has been available for many years and while it has not been producing feed test results as good as wheat or barley, it is an exceptional product and can be expected to be in strong demand.

**Canola Hay:** Canola does feed test very well, but it has a different taste and smell. Buyers either love it or hate it. It is not the purchase of first choice for most hay buyers. This being said, Feed Central are predicting a shortage of hay in 2009 and expect a lot of canola hay to be made, sold and eaten in the next twelve months. Buyers should be aware there is a potential of nitrate poisoning with canola, an issue that Feed Central tests for.

**Pasture Hay:** Based on past experience any pasture with strong lucerne or clover content will feed test well and will be in good demand, with pricing subject to the feed analysis.

**Peas, Vetch, Beans etc:** Expect very strong demand for these lines, especially where the feed analysis is good. Traditionally only low volumes of these types are produced.

**Q. 5: How much do you think hay will be worth on farm?**

- A. Depending on quality, storage and location, indications are that cereals will market from \$150-\$250 per tonne ex farm and lucerne around \$350-450. Mixed low legume content pasture hay, summer forages and canola approximately \$30 less per tonne than cereals. Vetch and peas with a good feed test will sell for \$30-50 per tonne less than lucerne hay.

**Q. 6: I'd like to sell my hay straight after baling, can Feed Central do that?**

- A. Unlike the grains industry, the fodder industry has no big accumulators, storage/warehousing systems, futures markets, very few speculators and only operates in the physical market. The most efficient place to store hay is on your farm. This is probably a good thing; however, it does mean that at times the fodder industry works slower than the grains industry, but it still works. Considering the points above, a marketing period of 1-6 months after baling is realistic, but depending on seasonal conditions possibly even 6-12 months, which is similar to many grains.

This being said Feed Central undertakes an extensive Forward Order program at this time of year. This program puts contracts in place between suppliers and buyers before or at baling. The contracts are tested, binding and enforceable. These contracts will once again be operating this year. Traditionally very few contracts state a delivery period straight behind the baler—most contracts have a delivery spread in place. Under all Feed Central contracts, sellers are ALWAYS responsible for their hay until it leaves the farm, a standard part of our contracts for many years.

**Q. 7: Who guarantees payment for my hay?**

- A. When hay is marketed through Feed Central and when Feed Central completes all parts of the transaction, including freight etc, Feed Central guarantees the payment for your hay. This guarantee has not changed since Feed Central was established in 1999. Your payment is not dependent on Feed Central being paid by the buyer — we carry that risk.

**Q. 8: How do I get paid for my hay?**

- A. All loads sold are based on public weigh bridge docketts. Following a load delivery, a weight notification form is issued by Feed Central to the supplier. The supplier then issues a Tax Invoice to Feed Central for payment.

**Q. 9: Do I have to get my hay inspected to sell with Feed Central?**

- A. The short answer is yes. To successfully sell your product using the power of Feed Central's web site, all fodder types are visually inspected on farm by Feed Central Inspectors and core sampled for feed analysis.

This independent and unique inspection and grading services is what makes Feed Central and your hay so attractive to buyers.....there are no vested interests.

**Q. 10: What commission does Feed Central charge?**

- A. None. NO commission and NO hidden costs are charged to the seller. Feed Central does put the freight cost and a margin on your product before it is listed on the web to be sold.

Feed Central's margin is primarily set on species type, class and quality. Market supply and demand conditions also play a part. Feed Central is a commercial business like 99% of sellers and buyers using [www.feedcentral.com.au](http://www.feedcentral.com.au).

**Q.11: What bale size do buyers prefer?**

- A. With rising fuel prices achieving legal pay loads on trucks is one of the most important things to consider when making hay. Legal pay loads are determined by bale dimensions and bale weight.

In the Feed Central system buyers are quoted delivered prices. Obviously the heavier bales are the lower freight cost per tonne. 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 buyers price is lower, **SO EVERYONES A WINNER.**

Large square bales, especially the size 8x4x3 are very popular because you get an excellent load on a Drop-Deck or B-Double trailer and most front end loaders can handle the weight. Some lucerne buyers prefer 8x3x3, but any square bale size provides more efficient and competitive freight advantages compared to large round bales. If you must make round bales consider 4x4 bales which have freight advantages over 5x4 rounds. Small square bales are for niche markets.

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.

**BOTTOM LINE - maximum efficiencies are gained with 8x4x3 bales.**

**Q. 12: How do I pick and pay a contractor?**

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

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 parameters into your contract.

Feed Central uses Rudweigh scales to weigh bales at the time of inspection. You can use your cattle scales or take half a dozen bales to the local weighbridge.

Bale weights are a big deal. Make sure the contractor understands that you understand this.

### **Q. 13: What do you think, should I make hay or silage?**

- A. Hay is Feed Central's preference for 2008-2009. Indications from suppliers are they will run light yielding crops through to grain; therefore a shortage of quality hay could eventuate in early 2009. The majority of our buyer clients are geared to feeding hay. Please seek further advice from your relevant local government department or consultant before making your decision. From Feed Central's experience the key strengths and weakness of hay and silage production are summarised below to help your decision making.

**HAY Positives:** 1) Hay is efficient to transport with lower costs on a dry matter basis compared to silage and straw, 2) Hay nearly always has lower delivery cost when based on protein, metabolisable energy, neutral detergent fibre etc, 3) More contractors are equipped to make hay, 4) Baling costs per tonne are lower, 5) Hay has more uses and 6) Hay has more market outlets.

**HAY Negatives:** 1) Hay is more exposed to weather damage whilst curing, 2) Hay feed analysis is generally lower compared to silage and 3) Hay degrades quicker if stored outside unprotected.

**SILAGE Positives:** 1) Generally has higher feed analysis compared to hay; 2) Silage is less exposed to weather damage whilst curing, 3) Silage is unaffected by the type of storage and storage surface in the first 8-12 months of storage, 4) Good silage is free of weed seeds, and 5) Silage is a good fodder conservation option when consumed on the same farm it is produced.

**SILAGE Negatives:** 1) Silage transport costs are higher on a dry matter basis compared to hay, 2) Silage nearly always has higher delivery cost when based on protein, metabolisable energy, neutral detergent fibre etc, 3) Many contractors don't have all the equipment to make silage and have to sub-contract, 4) Baling cost per tonne are higher, 5) Silage has less uses, 6) silage has fewer market outlets, and 7) 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 i.e. if hay costs \$225 per tonne then silage price would need to be \$90 per tonne to be roughly equivalent.

Regardless of the key points above, many people, including dairy farmers and extension officers, strongly advocate silage production and consumption. From a marketing perspective Feed Central says make silage with EXTREME care.

**SUMMARY:** As stated, the majority of our buying clients are geared to feeding hay. Feed Central believes the strength of dairy industries through 2008 indicates increased hay consumption in 2009. There are compelling reasons to make hay in 2008. Milking cows need fibre to perform. Herd numbers are rebuilding after industry restructuring and strong domestic supply and demand signals. Link this to strong export growth in dairy products (plus hay) and a declining dollar — surely the next several years' have a very positive outlook for export dairy products and fodder.

#### **Q. 14: When is the best time to cut and bale my hay?**

A. **Lucerne:** Ideally 5-10% of the plants should be flowering

**Cereal:** Ideally 80-100% of the plants should be flowering

**Millets (summer hay):** as per cereals

**Forage Sorghum:** 1.2 m high and pre-head emergence / flowering

As a general rule the younger a crop is cut, the higher the feed analysis test will be, however, bulk yields peak around full flower / early milky dough seed, so a balance needs to be found. Crops cut pre- head emergences (e.g. forage sorghum) are generally very hard to dry down/cure. This is one of the major downfalls of forage sorghum as a legitimate hay crop.

One observations made by Feed Central inspectors during the 07-08 hay making season was that wherever a grower mower conditioned or super conditioned their hay, windrow drying/curing times were substantially reduced. Feed Central believes this 'conditioning and curing' of windrows is a critical operation, particularly if crops are cut using harvester draper fronts that bring 9-18 metres of material into one 3 metre windrow.

### **Q. 15: How long do I cure for and when do I start baling?**

- A. Bale when the hay is dry and **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 doesn't use a moisture meter until the hay is in the bale, but there are a few old fashioned, yet proven techniques, in determining when the hay is ready for baling. Generally hay must pass all of the following tests prior to baling:

- 1) Simply peel back the skin at the nodes with your finger nail. If there is any moisture there at all – it is not dry. If there are no nodes e.g. lucerne, peel the skin back at several points.
- 2) In cereal hay the nodes will be black and shrunken when dry. If they are bigger than the stem, – it is not dry.
- 3) Grab a handful of hay from the windrow with two hands. Twist your hands in opposite direction whilst holding the hay. If the hay is dry it will break/snap in 1-2 turns. If it doesn't – it is not dry.
- 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.

An expert contractor can assist here more than Feed Central. When baling large areas you cannot 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 to bale.

Do not rush hay making. Baling hay with high moisture will:

- 1) 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 FC B.
- 2) Dramatically increases the potential of fire caused by self combustion, a serious and real risk.

### **Q. 16: If I bale straw, can Feed Central sell it?**

- A. Yes, Feed Central can sell your straw! Feed Central sells more fodder types across more areas than any other company in Australia. Straw has many uses, including roughage in feedlot diets, maintenance of dry cows or as a drought supplement, garden mulch, mushroom or animal bedding. It has limited nutritional value; on a dry matter basis straw is expensive to transport because legal pay loads on a truck of any size is rare e.g. It is very rare to sell straw from say Victoria to Queensland, but quite normal for a hay product.

As a general rule, straw prices may be half the price of green hay. This being said, growers must consider the costs of baling straw and expected 'straw' yield. A general rule is if a grain crop yields a tonne of grain, it will yield a tonne of straw.

**Q. 17: Can I use a local carrier to move my hay?**

- A. The short answer is – NO. Feed Central engages and trains transport companies that know our procedures, particularly quality assurance, when loading/unloading product and the paper trail. Feed Central trucking companies are particularly aware of the requirements of OH&S, load dimensions and weight limits across state borders.

As Feed Centrals marketing areas grows we are constantly looking out for new carriers who can be trained in our procedures.

**Q. 18: How do I calculate if I am better off making hay or harvesting grain?**

- A. Almost every year hay out performs grain in gross value per ha. Yes, the work is there but so are the rewards. 2007-08 was probably the year when grain was a better option. This performance surprised a lot of experienced hay growers, but the *rule* of thumb is hay yields approximately twice that of grain. This *rule* is very relevant when crops have bulk but lack soil moisture to make grain—a situation experienced by many grain growers over the past several years.

To highlight hay's potential using the *rule*, Feed Central has inserted a simple gross margin budget below which provides space for growers to do their own figures. The calculation compares gross margin per hectare from harvesting grain to making hay.

	EXAMPLE GRAIN	YOUR GRAIN	EXAMPLE HAY	YOUR HAY
<b>A = Est. yield</b> ha x \$ per tonne on farm	2 T per ha wheat @ \$300 T Total = \$600 ha	___T per ha wheat @\$___ T Total = \$___ha	4 T per ha hay @ \$225 T Total = \$900 ha	___T per ha hay @\$___ T Total = \$___ha
<b>B = Growing</b> costs per ha	Fertiliser = \$120 Chemicals = \$80 Fuel = \$24 Machinery = \$26 <b>Sub total = \$250 ha</b>	Fertiliser = \$___ Chemicals = \$___ Fuel = \$___ Machinery = \$___ <b>Sub total = \$ ___ ha</b>	Fertiliser = \$120 Chemicals = \$80 Fuel = \$24 Machinery = \$26 <b>Sub total = \$250 ha</b>	Fertiliser = \$___ Chemicals = \$___ Fuel = \$___ Machinery = \$___ <b>Sub total = \$ ___ ha</b>
<b>C = Harvest</b> and handling \$ per T on farm	Harvest @\$20 T Handling @ \$5 T <b>Sub total= \$50 T</b>	Harvest @ \$___ T Handling @ \$___T <b>Sub total= \$___ T</b>	Cutting per ha = \$40 Raking per ha = \$20 6.6 bales ha/8x4x3 = \$140 Handling @ \$10 T = \$40 <b>Sub total= \$240 ha</b>	Cutting per ha = \$___ Raking per ha = \$___ 6.6 bales ha/8x4x3 = \$___ Handling @ ___ T = \$___ <b>Sub total= \$___ ha</b>
<b>Gross margin</b> <b>= A – (B +C)</b>	GM = A – (B + C) GM = \$600 – (250 + 50) Gross Margin = \$300 ha	GM = A – (B + C) GM = \$___ – (\$___+\$___) Gross Margin = \$___ ha	GM = A – (B + C) GM = \$900 – (250 + 240) Gross Margin = \$410	GM = A – (B + C) GM = \$___ – (\$___+\$___) Gross Margin = \$___ ha

### Q. 19: Where should I store hay on my farm?

- A. Remember, the hay stored on your farm 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.
- 1) 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.**
  - 2) 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.
  - 3) Hay naturally sheds water, but when hay sits in water it naturally absorbs it; therefore damage is more likely on bottom bales than top bales. Always ensure hay stacks are not located in old floodways or low-lying areas.
  - 4) Fence lines can divert local water during a heavy down pour. Consider carefully where you position stacks along fence lines.
  - 5) Create good drainage between stacks so water does not flow off one stack and then underneath another. Grade a small diversion bank if this could be a problem.
  - 6) Store your hay in an area that is well drained and dry, with good all-weather access. Fodder sales often come during wet / cold periods, so good truck access can make or break a sale.

### Q. 20: How do I tarp large square bales?

- A. At Feed Central we have seen both excellent and terrible hay tarping techniques. We have compiled the following to help you protect your hay investment. When done correctly **TARPS WORK**, and yes, Feed Central can provide you with tarps to fit your requirements.

**Black plastic** is not good enough. Cotton module type tarps are best. These tarps have fitted curtain edges and eyelets every 1 m (ropes not included). Make your hay stack resemble a cotton module as follows:

- 1) Make stack sizes of approximately one semi load – big tarps are too hard to keep on, and blow in the wind causing tarp damage and leakage.
- 2) Strictly **ONE BALE WIDE** – do not go any wider, it is too hard to keep the tarp down and creates shallow points for water to lie and soak through the tarp.
- 3) Make stacks as high as possible. 8x4x3 bales should be a minimum of four high and five high if made well. The higher the stacks the less exposure, especially to bottom bales.
- 4) Remember **TARPS ARE NOT WATER PROOF**, only water resistant; therefore the idea is to shed water quickly. Do not allow dips or hollows in the top where water can lay.
- 5) **PROTECT THE TOP** - Cap tarp only. When you tarp the sides, it doesn't allow hay to breath, so if water does get in, it can't get out. Leaving the sides open allows moisture to get out.
- 6) **PROTECT THE SIDES** – Hay stack bales will naturally shed any water that runs down the sides so long as you create hay stacks with straight edges - no bale should be sticking out wider than the bale above as water can run off the tarp, down the sides and then back up through the stack via a ledge created by a bale sticking out (capillary action).

- 7) **PROTECT THE BOTTOM** – Locate stacks on gentle slopes, irrigation channel banks, gravelly or sandy ridges where water drains away quickly and does not pond around the stacks. Make sure there is good drainage on both sides.
- 8) **PROTECT THE TARP and THE HAY:**
  - a. Tie down as much as possible to prevent tarp flapping and rubbing.
  - b. Use the bale strings as anchor points for the tie down ropes.
  - c. Baling twine is satisfactory as tie down ropes.
  - d. Use a claw hammer to help get the anchor rope under the bale string or make a “needle” from fencing wire and thread the anchor rope under the bale string.
  - e. Use every available eyelet – the more tie down ropes the better.
  - f. Simply half hitch the tie down rope around the anchor string to tighten.
  - g. Re-tighten regularly (minimum monthly) – this prevents the tarp from flapping and wearing.
  - h. If you have old plastic, lay this down on the top or edges of your canola stack before you tarp it. Canola is abrasive, you can even whipper snip the edges.

***PROTECT THE OPERATOR*** - Always use safe work practices. It is possible to roll the tarp up so that it will unroll on-top of the stack, with little effort and without the need to get on-top of the stack. If you are getting on top of a stack always use a safety cage, approved harness and safety equipment.

**SUMMARY:** Hay will be very sought after and valuable at some point in the future. Growers don't leave 25 tonne grain bins untarped, so why leave 25 tonnes of hay untarped? So please, get involved and get active, look after it. Just look at the price below, so get your tarp order now on 1300 669429.

**Hay Tarps!!!**  
**PROTECT YOUR INVESTMENT**  
**40ft x 8ft with a 1ft skirt (eyelets but no ropes)**  
**\$220 + GST + Postage**  
**FREE DELIVERY 10 or more,**

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## SUMMER CROP HAY PRODUCTION

Heading into summer it is timely to ask about summer hay production.

### **Forage Sorghum Hay**

Feed Central does not actively support the production of forage sorghum for hay production. This being said we understand that some growers do get on well with forage. These generic comments don't suit all farms or farmers.

Some of the pitfalls include:

- Grows too fast
- Uses a lot of water and nutrients
- Relatively Low yield (unless there is a lot of rain)
- Even when irrigated the crop does not seem to perform well
- Budget on 3 tonnes per acre from 3 cuts
- Cutting the crop 3 times to get 3 tonne increases harvest costs
- Very slow and difficult to dry down / cure
- Seed is expensive
- Limited market uses
- Generally poor feed analysis results; newer varieties are better than the old, but results are still highly variable
- Not suitable for the horse market
- Potential for prussic acid and nitrate poisoning. Newer varieties have dramatically lower risks, but a risk is still there

### **Millet Hay**

We should re-name millet hay to summer oats. Millet is dual purpose. You can harvest the seed and make a very high quality straw or simply harvest the hay at flowering in the same manner as cereal hay. The advantages of millet hay:

- Fast maturity but not too fast
- Uses less water and nutrients than forage sorghum
- Under stress it stops growing and then re-starts again after rain. It does not panic. Therefore even with drought stress it can yield well, especially if rain eventually falls
- Like cereal, cut in flower when the head is out and easier to dry down/cure
- Good feed test

- Open pollinated, therefore seed can be kept from one year to the next. Plant thick e.g. 15-30 kg ha to maximise plant population and decrease stem thickness
- Yields very well over one cut e.g. 3 tonne / acre, therefore low cost of production
- Open to all markets, including horses

The main disadvantages of millet are it's vulnerable to heat stress at emergence and low germination percentages on heavy soils. On the other hand, it does enjoy light textured soils, a fine seed bed and after the two leaf stage it is a very tough plant. The best varieties for hay production are red panicum and panorama. White French millet is not suitable for hay production.

### **Have hay to sell and want to list with Feed Central**

**Disclaimer:** *This information is targeted at a national audience. It is for general information and promotional purposes only. This information is not designed for any specific farm or region. We strongly encourage farmers to consult with local agronomists, hay baling contractors and other specialist service providers. Feed Central, its agents and employees, will not be responsible for decisions or actions initiated from this information.*