

Tips For Making Marketable Hay Without Rain-Damage Or Mould

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Infosheet

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The year 2008 will long be remembered as the year when it was almost impossible to make dry hay without getting some rain on it. With almost daily rains and lack of sunshine, suitable hay making weather "windows" were either extremely narrow or non-existent. Rain-damaged hay is typically lower in soluble sugars and higher in fibre, discoloured, mouldy, dusty and less palatable to livestock. Hay baled "tough" also presents the risk of heating in storage. "Horse quality" hay made without rain-damage or mould is extremely short in supply, and trading for very high prices.

Fast drying of hay in the field is the goal. The obvious benefit is to get the hay successfully made and under cover before the next rain. Fast drying also minimizes respiration losses, microbial growth in the windrow, and maximizes sugars, green colour, and palatability.

There are many different ways to successfully make quality hay. Even so, some hay producers are more successful than others. These craftsmen apply the "art" as well as the science of hay making. If you look around the province, you can observe hay producers that focus on quality for horse hay and other export markets. Watch closely what these pros are doing that others are not, that makes their batting average higher when it comes to making a premium hay product. It is all about attention to details. Here is a short list.

Hay Making Capacity

Hay making technology has changed a great deal to give us the capacity to cut, rake, bale and store a lot of hay when the weather windows of opportunity present themselves. The pros have that capacity.

Cut A Wide Swath

Leaving the swath as wide as practical takes the maximum advantage of the drying effects of the sun and wind. Narrow swaths take longer to dry. Humidity inside a tight, narrow swath is very high and not conducive to fast drying. Most haybines have an easy swath width adjustment. Some of the pros go as far as setting their tractor tires as wide as possible to avoid driving on a wide swath.

Proper Conditioning

Proper maintenance of both roll and flail conditioners is important to ensure adequate conditioning, without over-conditioning. Check your Owner's Manual. Rubber rolls wear with use and eventually under-condition if not adjusted. In a survey done in the machine sheds of some Wisconsin hay producers, half of the conditioners exceeded the maximum roll clearance spacing required for adequate conditioning.

Some of the pros also use more intensive super conditioners, macerators and reconditioners to achieve more aggressive conditioning and faster drying. This also results in a softer textured hay. A super conditioner, replacing the need for a conventional conditioner, uses adjustable airbags with high pressure rubber rolls to crush the stems their full length, rather than crimp and break the stems every 2-4 inches. Macerators and reconditioners are used after initial drying with another trip around the field to achieve further conditioning.

Strategic Raking

The rotary rake seems to be the standard tool for windrow management used by the pros. Parallel bar and wheel rakes tend to result in "roping" and don't break up clumps and provide as much fluffing effect as a rotary rake. Tandem axle rotary rakes ride the ground more evenly with less

contact with the ground. Raking at no less than 40% moisture minimizes leaf loss. Some adjust their rotary rakes to give a slower rotary speed, which also reduces leaf loss.

Tedders are sometimes used at higher moistures to speed up drying by spreading the crop over the entire surface area. Tedders can result in high leaf loss with legumes, but much less so with grasses.

Because leaf losses can be high when raking that "almost ready to bale hay", windrow invertors can be useful to gently move the bottom of the swath to the top to achieve that last bit of necessary drying.

Make The Right Bale

Small square bales fetch the highest prices per lb, but require a lot of labour or investment in handling equipment (accumulators and grapplers) to get them into storage. Small squares are somewhat limiting in their capacity to get a lot of hay made in a narrow weather window.

Large round bales are not as attractive to non-local buyers and are discounted in price, because they are more difficult and more expensive to transport. They typically don't move farther than a tractor and wagon can comfortably take them.

There is a growing market for large square bales. Large squares have the significant advantage of easier trucking to non-local domestic and export markets. They also have the advantage of giving the producer the capacity to make a lot of hay in a short period of time. A recent innovation is the reprocessing of a large square bale into small squares by hydraulically cutting and retying them. This combines the advantages of harvest capacity and mechanization of large squares with the market appeal of small squares.

Propionic Acid

Large square bales are more dense, so it can be very difficult to get this hay dry enough to avoid mould and heating without the use of propionic acid hay preservative products. For this reason, moisture sensors with computerized applicators are usually standard on large square balers. High application rates result in oxidization and browning that makes the hay less marketable. While there has been some resistance to propionic acid in the horse hay market, there is growing market acceptance, some of it from necessity.

Under Cover & Off The Ground

Getting hay stored properly is often a weak link in hay production. Large squares absorb moisture from the ground, so bales should come off the field the same day they were made. Bales should be stored under cover and off the ground. Skids or a layer of old hay can be used. Ventilation is important while bales lose their moisture to a safe level, so stacked large square should be stored with space between. To have good market acceptance, bales should be green on all sides, so avoid sun bleaching. "Green sells hay" is a market reality.

Forage Focus

The topic "The Craftsmanship Of Successful Hay Making" will be discussed in more detail by Fritz Trauttmansdorff, Dunlea Farms, at this year's Forage Focus Seminars, sponsored by the Ontario Forage Council. Forage Focus is tentatively scheduled for December 2nd at Winchester and December 3rd at Shakespeare.