

## TO TARP... OR NOT TO TARP

Glen Knopp<sup>1</sup>

### ABSTRACT

The use of hay tarps is one of several strategies hay producers consider in the protection of their baled hay. Certain elements need to be considered to determine the best storage strategy for each alfalfa operation. Hay tarps are not the best choice in all situations. This discussion will review when and where hay tarps fit into the protection of alfalfa hay.

**Key words:** Hay tarp, storage, protection, alfalfa hay, baled hay, hay producers.

### INTRODUCTION

Hay producers across the country are increasingly aware of the need to protect their alfalfa hay from weather damage. Traditionally considerable energy was expended to carefully select the correct stage of cutting, monitor and reduce the windrow drying time, bale at proper moisture levels, and rapidly remove the hay from the field. Once the hay was stacked, attention was directed to watering and managing the next cutting. Little attention was paid to protecting the stacked alfalfa from weather damage. Ironically, the same producers might have grain corn, wheat, oats or other commodities which were faithfully stored in weather-proof bins. One might ask why? Some producers considered alfalfa a non-priority crop. Haying began when the other work was done. Hay barns were often considered too expensive and operating capital was needed elsewhere. Some producers were essentially unaware of other storage options available and their cost effectiveness. As the demand and price of alfalfa increases, producers invest more effort in protecting their valuable hay. The development of the Pacific Rim hay market and subsequent increased prices has encouraged exporters to protect the hay they purchase.

Today, as you travel across the country you see alfalfa hay being stored in many different ways -hay barns, hay tarps, tarps, silage bags, straw bales, and protective sprays. Each has it's own place in the scheme of hay protection. For the purpose of this discussion we will focus on hay tarps and how they fit into some hay producers programs.

### DEFINITIONS

#### Hay Tarp

It is important to qualify what is meant by "hay tarp". Some tarps being sold as hay tarps are no more than a multi-use tarp with no specific application. Hardware

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<sup>1</sup> Glen Knopp, Hay Covering Consultant, President of Inland Tarp & Cover, Inc., Almira, WA 99103-0193, Moses Lake, WA 98837

stores, wholesalers, and national chains often sell these light weight tarps. They usually have a grommited edge. Many alfalfa producers have tried these tarps with devastating results. Ultraviolet (U.V.) light degradation often reduces them to ribbons within months of installation. They are not designed to remain installed on a hay stack during wind storms. Be careful. Poor quality hay tarps and/or improperly installed hay tarps may cause more damage to alfalfa hay than no tarp at all. If the tarp fails, it acts as a funnel dumping rainwater through the hole and causing damage to every bale below. Purchasing high quality hay tarps can position the producer to avoid this problem. Several U.S. manufacturers produce high quality hay tarps designed to withstand U.V. and severe windstorms. Some manufacturers will even guarantee and install the tarps for you.

### **Installation**

A properly installed hay tarp will typically have a roof-like peak constructed from bales or other proven mechanical means. In most situations peaking the hay stack is critical to the success of the hay tarp. The tarped stack peak causes rainwater to run off the sides rather than puddle on the top. It also aids in stretching the tarp tight. Many other elements are important to successful installation. The most important is proper "peaking".

### **WHAT CAN THE USE OF HAY TARPS DO FOR ME?**

Properly installed hay tarps may earn you over a 100% return on your investment the first year. A hay tarp investment of \$5 per ton can usually return that much or more in the higher price offered for protected hay. Other sources of return are the obvious savings in damaged hay which can average 12% on small bale stacks to 25% on four high big bale stacks. With hay selling for \$100 per ton the savings is \$12-25 per ton. What if you can still sell these bales at 1/2 price? The savings is still \$6-12 per ton - not a bad return on investment.

Hay tarps offer you maximum flexibility. They are very transportable. They allow you to move your hay protection to the hay field location minimizing field transportation costs for the hay.

Lower investment costs are another feature. In some areas the annual taxes and insurance paid on a hay barn nearly equal what it would cost to pay for tarps to cover an equal amount of hay. The producer who leases his hay ground may not have the option of building a hay barn. Hay tarps offer an economical alternative solution.

### **WHEN DOES HAY TARPING NOT FIT?**

Tarping the hay stack may not be cost effective when weather is nice and the hay is being stored for only a few days.

Until export markets developed, most end users had some tolerance for rain damage and mold. Protecting the hay against moderate damage was not always important. As a consequence the difference between the price of tarped hay and unprotected hay was small. The same is still true in some parts of the country, especially in larger feedlot areas. If a client offers to buy unprotected hay for the same price or even 3% less than tarped hay, tarping may not be cost effective.

Those who are using hay tarps should view installation as just another step in the production cycle. The hay is watered, cut, baled, stacked and tarped. A hay producer who does not have the trained labor available to install the tarps and maintain them correctly and promptly will be less satisfied with hay tarps than with a hay barn. Hay tarp installation should be done with careful attention to proper installation and tightening detail.

A well designed hay barn allows the producer to stack the hay and be done. It can also be used to store farm machinery when the hay is removed. If adequate barn storage is available at a comparable price, hay tarps would not be the best choice. However, if the hay barn is not in close proximity to the hay fields, transportation costs will quickly cancel the advantage.

If you are in an area where winds reach 90 mph every month of the year, hay tarps are probably not a good choice. Installation of a hay tarp is extremely difficult in winds over 10 mph. High winds increase the wear and decrease the life of hay tarps

In some areas where regular winter weather includes 90-100% humidity and lots of rain, snow, freezing and thawing, hay tarps will sometimes sweat. The humidity works its way under the cover and on cold sunny days it turns to water vapor condensing on the bottom side of the tarp and damaging top bales. This problem can be reduced by making sure your hay tarps are built with fabric that uses black tapes. This stops the sunlight from penetrating through the tarp and warming the hay inside. Reducing airflow through the tarp can also help reduce the problem. Don't plan to store hay longer than three to six months under these conditions. The northern coast of Oregon is where we have observed the problem. Enclosed hay barns are the best solution.

Stacking hay in the field and tarping it may not be desirable if a proper stack site is not prepared. If the hay stack is situated in a low area of the field during the winter rains or spring thaw, it may be flooded causing the loss of bottom bales. Also keep in mind that all the water that is being diverted off the hay by the tarp must go somewhere. As with hay barns, bottom protection and in some cases side protection of the hay stack is important for long term storage of your hay.

### **WHEN DO HAY TARPS FIT AS AN OPTION?**

Hay tarps offer an advantage over hay barns for producers who rotate their alfalfa fields with other crops and transport the product over a radius of ten to twenty

miles. The hay can be hauled five to ten minutes, stacked on the field edge and tarped. The hay can be stored on site until marketed, eliminating as much as \$5-10 per ton transportation costs.

During damp weather periods, tarped hay stack sides offer better bale protection than open-side sheds. Bale compressor operators can press more alfalfa in a day when it is consistently the same moisture. Dampness on the outside of bales reduces productivity and increases downtime.

Exporters and hay brokers can purchase unprotected hay from a broad geographical area and quickly have it protected with tarps. Three trained tarp installers can cover two to three thousand ton of hay in a good day. When rain is imminent, tarps can be installed much quicker than hay can be hauled to a barn or straw bales can be layered on a hay stack.

Hay tarps can usually be installed for less than the cost of straw bales, hay barns or other alternatives. An average annual investment of \$2.50-4.50 per ton will usually be the cost for using hay tarps. It is common in Washington and Idaho for tarped and barn stored hay to sell for \$5-10 per ton more than unprotected hay. This is a nice return on investment. Current tax laws require hay barns to be depreciated at 39 years versus 5 years or less on hay tarps.

A popular producer perspective on how hay tarps fit is as follows: the hay producer who produces his hay in a five to six mile area uses hay tarps for a couple years to leverage himself into a position where he can buy centrally located hay barns to cover 50-80% of his production. The balance is covered with hay tarps as needed.

If cash flow is a problem a hay producer may purchase enough tarps for protecting one third of his crop each year. With an expected hay tarp life of three years or more, by the third year he should have enough to cover a full years crop. The savings on the first years tarp use could pay for the second years tarps... and so forth.

A hay producer who tarps his hay has the flexibility to sell his hay when the market price and his price goals coincide. If crop income is high, the crop can be sold after the year end without the worries of weather damage.

Some producers say they sleep better at night knowing their crop is safe inside a hay tarp. If a rainstorm comes up they don't worry about weather damage. What price do you place on "peace of mind"?

## CONCLUSION

Hay tarps have a place in hay protection. Properly designed and installed hay tarps offer an economical means to limit weather damage of alfalfa. Increased marketing opportunities resulting from protected alfalfa should not be overlooked.