## **RESEARCH UPDATES**

## **SOUTH DAKOTA - Cover Hay Piles Properly** *Karla Hernandez, South Dakota State University*

Producers are increasingly aware of the need to protect alfalfa from weather damage. Main goals when covering hay: dry the hay and prevent DM loss. As demand and price increase, producers invest more in protecting their hay. Traditionally, protected hay has been stored in a barn or under plastic tarps. A recent introduction is the hay tarp. It is important to know poor quality tarps or improperly installed tarps may cause more damage than having no tarp at all. Achieving quality hay goes from harvest to feedout and requires attention to detail to ensure forage quality does not become a limiting factor.



Picture 'A' shows alfalfa bales harvested at the same time - bales in the front were unprotected and show signs of weathering; bales in the rear were protected with a breathable hay tarp. Picture 'B' shows internal color of the alfalfa underneath the tarp. Photo Source: Ed Zahn, Bruno Rimini Corp (2013).

Hay barn or commodity shed - consistent, highly effective method of storage. It keeps water from the hay and allows for acceptable moisture loss if well-stored and ventilated. However, barns can be expensive to build and maintain.

Plastic hay tarps - offer flexibility, allowing more protection while minimizing field transportation. Producers can sell when the market price and their price goals coincide. They are cheap, keep water off, and are easy to manage. However, there are often issues with trapping moisture as the bale dries out and they often suffer from exposure to ultra-violet light which significantly reduces their service life.

Hay Tarp - similar to a plastic tarp in usage, however, they are made of a breathable material allowing moisture to leave the bale while preventing precipitation from penetrating. They allow passage of air and vapor (prevents mold), provide excellent rain protection, are wind lifting resistant, provide maximum drying of damp straw after downpours, are extremely tear resistant, and are ultra-violet light stable leading to a long service life. However, they are more expensive than a traditional tarp (up to five times the cost of a plastic tarp).

It is important to regularly inspect and repair covered surfaces to maintain feed quality. Catching a damaged cover early helps minimize spoilage from excessive moisture. Annual evaluation of covering and feeding practices can extend inventory of higher quality feed year long.