

Feeding Through Drought in Montana Grazing Stubble and Feeding Straw

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1) With lack of hay in Montana this year, many producers will be grazing standing crop, grazing stubble or feeding straw.

2) **Grazing Standing Crop**-Much of the feed value of droughted-out wheat is the grain. You are basically feeding a highly volatile grain starch with some lower quality straw. The only thing keeping the sheep from eating too much grain are the awns on the seed heads that slow down consumption. Ideally, there will be enough leaf material available to balance the grain load and keep the sheep from becoming acidotic. Vaccinating sheep for Enterotoxaemia is a must in this situation and feeding a good mineral will also be essential due to the high phosphorus content of grain and low calcium level of available forage.

3) **Grazing Stubble**-To measure grain on the ground left in stubble, build a wire frame that is twelve and half inches by twelve and half inches square. Randomly drop this frame on the ground in twenty spots across the field and count the grains in each frame to get an idea of usable grain residual. You have roughly 90lbs of grain per acre if you have the following number of grains by crop: wheat and oats 28 grains per square, barley 25 grains per square, field peas 5 grains per square and chickpeas 5 grains per square. On an irrigated barley field we lease, I averaged 53 grains per frame. $(53/25)=2.12*90=191\text{lbs}$ of barley per acre. At the current price of \$13/hundred for feed barley, the lease is worth \$24.83/acre this fall. Digestibility of stubble grazing falls about one percent per week as the finer leaf materials start to weather and degrade. If you have multiple crops available, it is recommended to graze canola first, followed by any peas and save the cereals for last as they hold up better. <https://www.wool.com/globalassets/wool/land/drought-resources/accordion-1/feeding-and-managing-sheep-in-dry-times.pdf>

4) **Feeding Straw**-Straw is a good roughage source for sheep when used with a protein supplement, blended with better quality hay or simply offered free choice when lot feeding to keep ewes busy. Barley straw is best, followed by oat straw and then wheat straw. One cautionary note is to limit straw intake prior to shearing and several weeks prior to lambing as straw tends to slow down passage rate of feed and build up in the rumen. From personal experience, you may end up with situation prior to lambing where the ewes cannot consume enough feed and develop pregnancy toxemia or have difficulty pushing during labor due to an impacted rumen. You can maintain dry, mature sheep on a straight ration of straw and grain or grain hay with a good mineral package if needed, however lambs and producing ewes need additional a better quality forage.

5) **Ammoniating Straw**-Adding urea to straw to improve the protein level will only be of benefit to you if you also provide an energy source to feed the rumen microbes so they can fully utilize the urea. Straw is extremely low in energy and energy is generally the limiting nutrient during drought. To treat a large stack of straw, the Kansas State Extension Service has a good video of the process and safety precautions using anhydrous ammonia and can be found at: <https://www.youtube.com/watch?v=-JtjJb-umpk>.

To add urea straw bales on a small scale, dissolve twenty-two pounds of urea and four point four pounds of sulphate of ammonia in fifty-three gallons of water. You will need to weigh a few bales so that you can calculate the correct volume of urea solution per bale. Lay the bales on their side and pour the mixture over them at rate of twelve gallons per forty-five pounds of straw. Using ammonia or urea will add about three percent protein equivalent to the value of the straw, so it is not a magic bullet to convert it to premium hay.



Molasses or other liquid feed supplements could also be added to straw but can be expensive and impractical to treat whole bales. These products make a great addition to a TMR or total mix ration where the straw is ground and combined with grain and other available feed products to make a complete ration for the animal. The addition of these products also reduces dust which be an issue when feeding straw based diets during drought.