Furthering Understanding of the Nutritional Value of Baled Bay Over Time

Sawyer Fonnesbeck-University of Idaho Extension sfonnesbeck@uidaho.edu

Objective: Previous studies have been completed in the southern and eastern United States about the longevity and stability of the nutritional value of baled forages. However, there is a paucity of information about baled alfalfa in the western United States. The objective of this small project was to study baled alfalfa hay in Oneida County, ID as a "seed study" for larger research projects to come in the future.

Methods: Pure alfalfa hay was purchased from three different hay growers (X,Y, Z) in Oneida County, ID. 12 two-string bales from each producer were split into three different storage methods: uncovered (unprotected), tarped, and a metal shed (protected). Initial samples were collected via a hay probe on Day 1(Sept 2023) and then bales were tested every 4 months for two years. Each sample set consisted of the three bales from a single producer in a storage method, resulting in 9 samples per collection day. Samples were sent to an independent laboratory for testing. A basic NIR analysis was completed on each sample submitted.

Acknowledgements:
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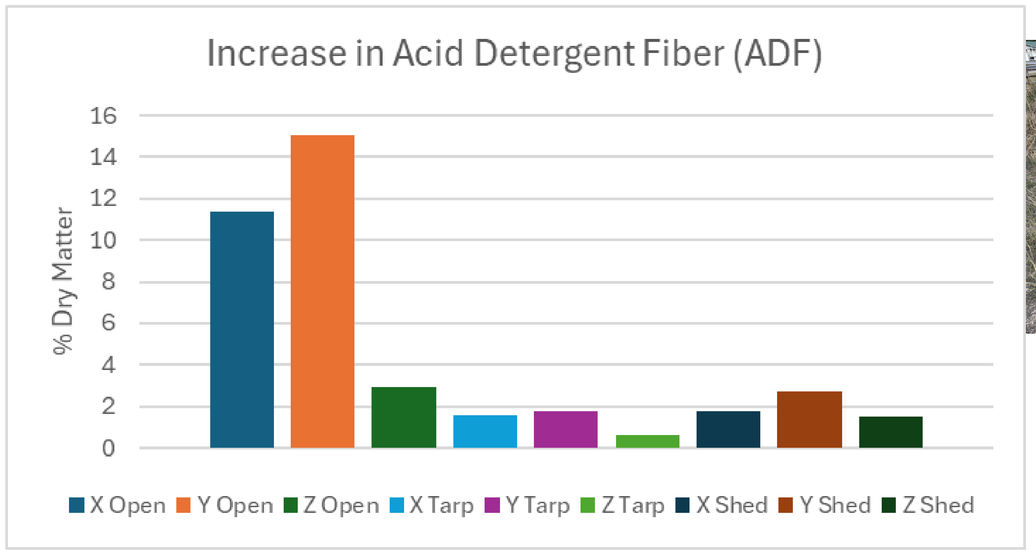

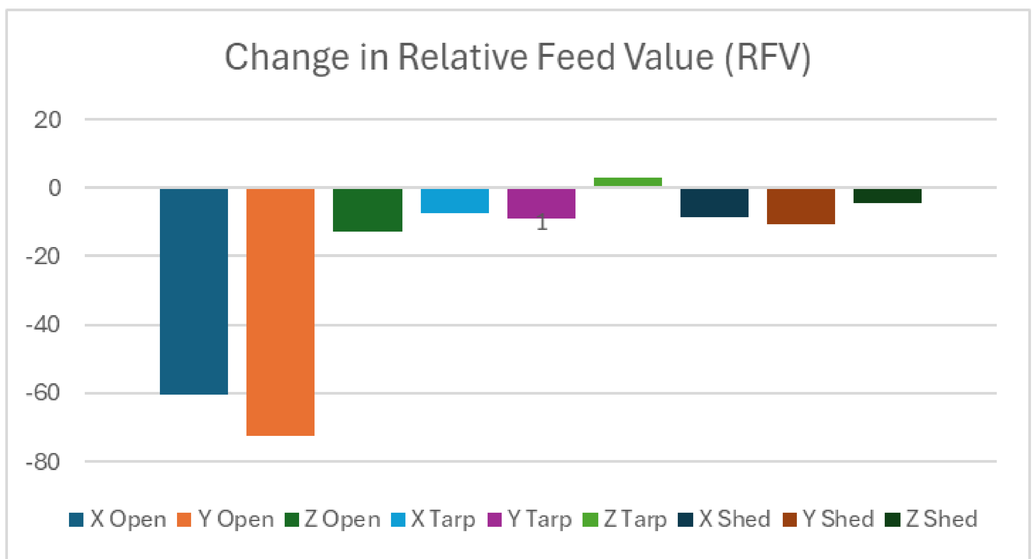

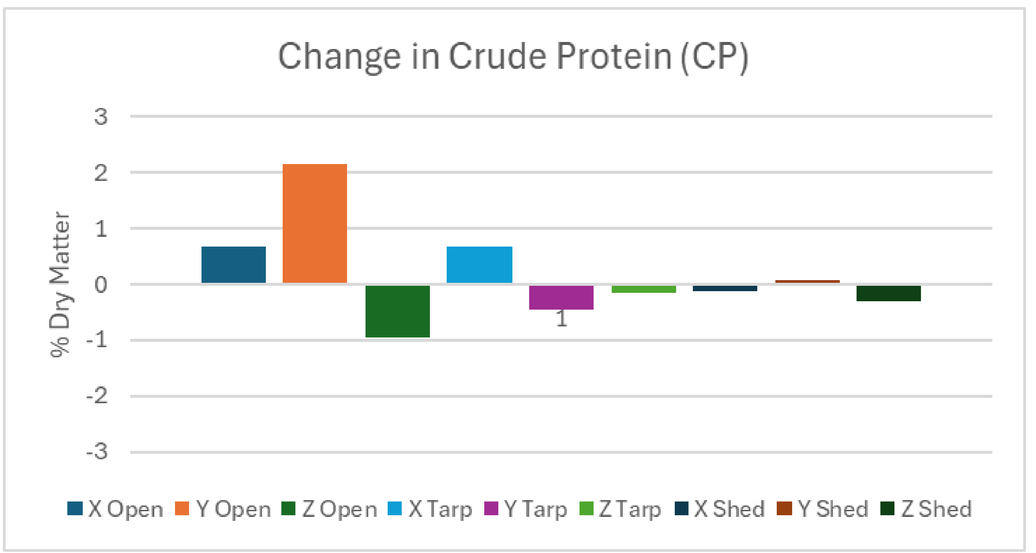

Preliminary Results: Hay stored under uncovered conditions had greater decline in quality than protected hay. Macro-minerals Ca, K, Mg, and P did not vary over the 16 months of this trial thus far. Crude Protein was also relatively unchanged in protected hay and decreased by 0.6% DM in uncovered hay. ADF in uncovered hay increased 5 times more than protected hay. NDF increased 10 times more than covered hay. A rate of decline for each storage type will be completed at the end of the study.

What's Next? This is an ongoing study that will be completed in the fall of 2025. Statistical analysis will be completed at that time. The results of this "seed study" will be used to create a proposal for a similar study to be done on a larger scale in multiple states to gain a firmer understanding of nutritional value of hay under storage in the western United States.

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