

Field Test Results (Alfalfa)-2013



CHI Enhanced Liquid Humic and Fulvic Products Increased Alfalfa Feed Quality

Objective: *To use enhanced organic matter (humic and fulvic acids) based products to increase alfalfa feed quality*

Collaborators: *Larson – Grassland Dairy – Wolfe Brothers Farms, Idaho, US*

Period: *2013*

Tested products: *CHI Liquid Carbon and Liquid Fulvic (Dextrose) - sources of humic and fulvic acids, and dextrose sugar*
CHI Liquid Carbon (5-4-4): sources of humic acids and 5N-4P₂O₅-4K₂O nutrients

Tested crop: *Alfalfa*

Locations: *Dubois, Boise, and Grand View, Idaho, US*

Design of Experiment

Site 1: Dubois, Idaho, US

- Control (129 acres): 0 treatment

- Treated (129 acres): 2½ USG CHI Liquid Carbon/acre + 1/5 USG CHI Liquid Fulvic (Dextrose)/acre

Site 2: Boise, Idaho, US

- Control (75 acres): 0 treatment
- Treated (55 acres): 2½ USG CHI Liquid Carbon (5-4-4)/acre

Site 3a: Grand View, Idaho, US

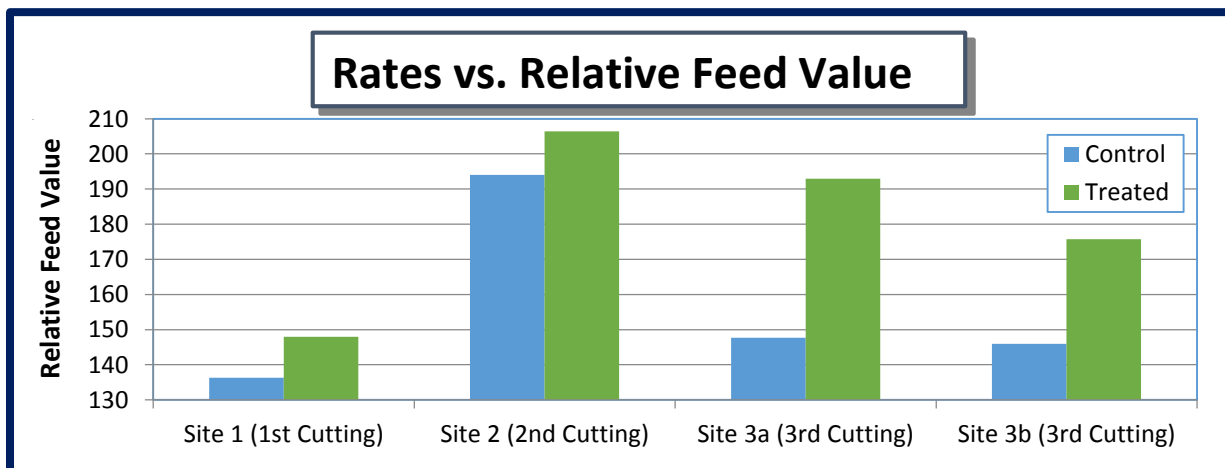
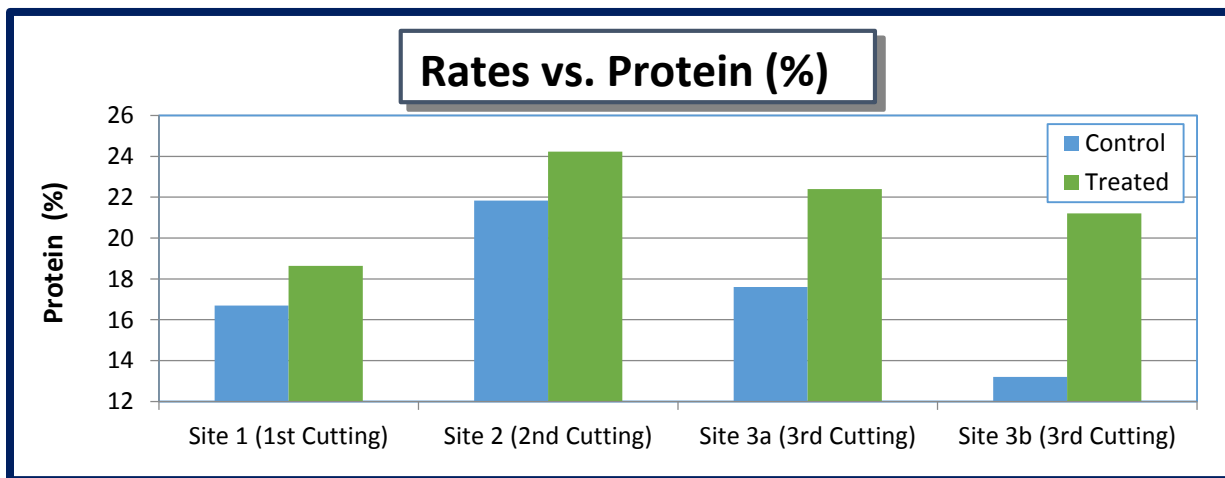
- Control (55 acres): 0 treatment
- Treated (60 acres): 2½ USG CHI Liquid Carbon (5-4-4)/acre

Site 3b: Grand View, Idaho, US

- Control (60 acres): 0 treatment
- Treated (60 acres): 2½ USG CHI Liquid Carbon (5-4-4)/acre

Results

Alfalfa yields (1st cutting) for Site 1 were 2.5 (control) and 2.8 (treated) MT/acre, or 12% increase. No significant yield differences were observed for other sites at approx. 3 MT/acre (one cutting). However, protein and relative feed value (RFV) for all sites increased significantly with enhanced humic and fulvic products, i.e. up to 60.6 and 30.6%, respectively.



Conclusions

The application of CHI-Liquid Carbon, Liquid Fulvic (Dextrose), and Liquid Carbon (5-4-4) resulted in significantly higher protein and relative feed values (RFV) of alfalfa.