

**SUMMARY OF
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EVALUATING PASTURE IMPROVEMENT PROGRAMS**

In this project a pasture paddock was separated off. Four different treatments and a check were repeated four times in this paddock. The treatments were: Alfalfa no-till drilled at 6 lbs/acre, Red Clover drilled at 6 lbs/acre, Red Clover frost seeded at 6 lbs/acre, and a fertilizer treatment of 87 lbs/acre of 46-0-0 after a grazing in June and again after a clipping in September. All four treatments also got 87 lbs/acre of 11-52-0. The frost seeding was done mid April 2000 and the no-till done early June. Sheep were rotationally grazed in this paddock throughout the summer. The pasture has been in grass more than 20 years and had a thick grass stand with little legume. It is on a side hill and tends to be wet.

On Oct. 3, 2000 the treatments and checks were evaluated. On visual evaluation only the fertilizer treatment appeared different. It was taller and darker green. There was no sign of Alfalfa in the Alfalfa treatment and little Red Clover in the two Red Clover treatments. The NIR analysis of the samples did show some differences in protein and yield as shown in the chart below. There were no significant differences in energy.

	Harvest Height inches	Fresh Yield lbs/acre	% Moisture	Dry Yield lbs/acre	% Crude Protein	DM Protein Yield lbs/acre
Check	4.1	871	75.6	212.5	17.3	36.7
Alfalfa Drilled	4.3	762	73.5	201.9	17.0	34.3
Clover Drilled	5.0	1998	77.0	459.5	20.0	91.9
Clover Frost Seeded	4.5	1143	78.8	242.3	19.6	47.5
Nitrogen Fertilizer	5.75	2723	76.9	629.0	19.1	120.0

This shows that visual evaluation gives you little insight into the true state of the treatments. The check and all treatments were actually all of good quality. This is due to the regular grazing and clipping to keep the pasture vegetative. Alfalfa did not do well due to the wetness of the field. The best yields and most lbs. of protein came from the urea fertilizer. The highest percent protein and second highest yield came from the drilled clover. The frost seeded clover also showed significant increases in yield and protein.

Conclusions:

Pasture improvement can be done several ways. Adding nitrogen fertilizer has the greatest yield impact, but can be costly and time consuming. In this trial Alfalfa did not work well because of soil and field conditions. Other conditions may have different results. Both frost seeding and no-till drilling Red Clover increased protein and yield. There appears to be both a yield and protein increase with the no-till over the frost seed. This could vary however with the conditions at the time of seeding. There was no economic analysis done to compare the yield gains in no-till with the added cost. In general, it seems practical to seed clover into a grass pasture no matter how you do it.