

The evaluation of nitrogen fertilizers on an old stand of crested wheatgrass-alfalfa:- W. F. Nuttall, Melfort

Several nitrogen fertilizers are on the market and come in granular as well as solution forms. It has been shown by others working in this field that the source and form of nitrogen will affect the yield response obtained from forage crops. In order to compare these fertilizers, an experiment was set up with four fertilizers and four rates of nitrogen to give a 4 x 4 factorial design.

The statistical analysis showed that both nitrogen rates and nitrogen fertilizers were not significant. If yields were compared by the least significant range test, the 150 lb N application of solution urea + ammonium nitrate gave a higher yield than the granular urea at 50 lb and the granular urea + ammonium nitrate at 50 and 100 lb N/acre. The latter three treatments gave yields that were not significantly lower than the checks.

Because of the unusually dry year, yields were very low and ranged from 0.217 to 0.427 tons/acre. Solution application of nitrogen to the forage damaged the foliage and gave a spray pattern on the plots. As application was not completely uniform, greater stimulation in growth of plants not severely injured because of greater efficiency in moisture use could have been the reason for the higher yields obtained with this form of nitrogen.