## NORTH DAKOTA– Using TDN for Grazing Management

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| | KBG-provided TDN | ALF-provided TDN | Lactating beef cow TDN requirements |
|---|---|---|---|
| | ----------% | | ---------- |
| **May** | 65.5 | N/A | 59.6 |
| **June** | 61.9 | 64.5 | 60.9 |
| **July** | 60.5 | 66.3 | 58.6 |
| **August** | 59.8 | 58.0 | 57.0 |

Efficient use of cattle-grazing resources requires matching animals' needs to the forage growth cycle. When evaluating a grazing/feeding program, total digestible nutrients (TDN) can be a helpful tool for preventing severe nutrient shortage, but TDN has inadequacies. It tends to overestimate feed and forage energy. Challenges of achieving a low-cost feeding program include matching the time frame of highest animal forage TDN requirements to coincide with highest available pasture nutrients. During times of low forage availability, TDN is used to determine if hay, dormant, or stockpiled grass meet energy needs. When forage TDN is not sufficient, comparing the TDN of hay and supplements is a way to keep costs down by not overfeeding purchased feed sources. Most commercial labs predict TDN of samples using chemical analysis to determine acid detergent fiber (ADF) content. Keep in mind, TDN is just one piece of information, as animals have other nutritional needs including crude protein, minerals, and fat. In the northern Great Plains, Kentucky Bluegrass (KBG) has invaded the native ranges and is often 70-80% of rangeland and pasture. In the table, TDN predicted from 3 years of chemical analysis of KBG-dominated pasture is presented, as well as TDN for 4 years of alfalfa (ALF) hay harvested for various research projects. TDN required each month for a lactating beef cow calving in late April is also presented. Most months the base forage may meet needs of lactating cows; however, in June there is a chance cow nutrient needs might not be fully met if forage digestibility is less than predicted or her time budget does not allow enough intake. It may be warranted to supplement with hay such as that presented here to meet production goals. A grazing alfalfa stand could also serve to supplement the low grass TDN. Having TDN information helps farmers make decisions to ensure cattle nutrient needs are met.