Barley (Hordeum vulgare L.) grown for hay increased to more than 20,000 ha in North Dakota by 2004. Most of the increasing hectarage has been with the forage-type barleys, but some continues to be the grain and feed-type barleys. A few cultivars have been evaluated for yield potential at Dickinson, Williston, and Carrington, ND. Carr (2004) at Dickinson, ND, reported significant difference among barley cultivars tested for forage yield, total digestible nutrients, and crude protein, but he did not report maturity at harvest. Hays’ barley had a slightly greater relative feed value than Haybet’ at Williston, ND, but no difference in forage yield (Williston Res. Ext. Center, 2005). ‘Westford’, Hays, and ‘Bestford’ were the highest yielding entries at Carrington, ND, when harvested at soft dough, but forage quality was not determined (Zwinger, 2005).

**RESULTS**

Bestford, hooded Bowman, Westford, and Hays were the highest yielding entries while Horsford, late-maturing Bowman, and Haybet were the lowest yielding entries (Table 1).

Ash, crude protein, ADF, NDF, HEMI, CELL, and RFV generally were non significant among entries over the two years (Table 1). Most were significant in the individual-year analyses; yet, the year by entry interaction was non significant for all characters except ADL and forage yield. The reason for this is unclear, but it may have been associated with the more stressful year in 2006.

Hays barley had the highest IVDMD and lowest ADL in both years (Table 1). The orange lemma character is associated with reduced lignin content and the hooded character was associated with forage yield in Bowman isolines.

**CONCLUSIONS**

Hays barley, a hooded 2-rowed cultivar, with its high IVDMD, low lignin, and better than average forage yield would be the recommended barley cultivar for forage production.

Bestford barley, a hooded 6-rowed cultivar, with its highest forage yield and second greatest IVDMD would be a good alternative.

Incorporating the orange lemma character into Hays or Bestford might reduce their lignin content and increase the forage quality.

**REFERENCES**

