Cool-Season Perennial Grass Options for the Western Corn Belt


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**BACKGROUND**

- Smooth bromegrass (*Bromus inermis* Leyss.) is widely adapted in Midwest USA
- Meadow bromegrass (*Bromus riparius* Rehm.)
  - Less productive, but better regrowth
  - Slightly earlier maturity
- Limited information comparing meadow bromegrass to smooth bromegrass

Figure 1. ‘Newell’ smooth bromegrass and NEBR1 meadow bromegrass.

**OBJECTIVE**

Compare yearling cattle performance and body weight gain between a newly released smooth bromegrass cultivar and an experimental strain of meadow bromegrass developed for use in the western Corn Belt.

**METHODS**

- Pastures established in 2009.
- Three bromegrass strains seeded as monocultures.
- Three, 0.4 ha pastures arranged in a CRD.
- ADG and BW gain ha⁻¹ measured from spring grazing of initial growth.
- Forage samples collected weekly from three, 30 cm x 182 cm quadrats to determine available forage.

**RESULTS**

- Grazing days were 31 d (2011), 37 d (2012), and 43 d (2013).
- Mean ADG (Table 1) was similar for Lincoln (1.31 kg hd⁻¹ d⁻¹) and NEBR1 (1.37 kg hd⁻¹ d⁻¹).
- Newell had greater and more consistent ADG (1.43 kg hd⁻¹ d⁻¹).
- Mean BWG (Table 1) was greater for Newell (158 kg ha⁻¹) than NEBR1 (147 kg ha⁻¹) or Lincoln (141 kg ha⁻¹).
- NEBR1 was less productive during drought.

Table 1. Mean beef average daily gain (ADG) and body weight gain (BWG) per hectare for 2 smooth bromegrass and 1 meadow bromegrass strains. Stocking rate was 3 steers per 0.4 ha per year.

<table>
<thead>
<tr>
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<th>2011</th>
<th>2012</th>
<th>2013</th>
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<td></td>
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<td>1.43a</td>
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<td></td>
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<td>133b</td>
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</table>

Figure 2. NE BR1 meadow bromegrass pasture following 3-yr of grazing.

**CONCLUSIONS**

- Another option as a component of complementary forage systems.
- NEBR1 similar agronomic, animal performance; excellent recovery.
- NEBR1 adapted to same regions as ‘Fleet’, ‘Paddock’, and ‘Regar’.
- NEBR1 meadow bromegrass is less aggressive and invasive than smooth bromegrass.

Figure 3. Frequency of occurrence (post-grazing stand counts) taken in 2013 for ‘Newell smooth bromegrass and NE BR1 meadow bromegrass.

Figure 3. Frequency of occurrence (%)