Stockpiled Cicer Milkvetch and brome forage quality

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• Non-bloating legume
• Slow to establish
• Uptake in pastures has been slow
• Oxley is standard variety
• Oxley II (2001) – improved seedling vigor
• Veldt (2009) – improved forage yield
Stockpiled forage

- Deferral of use to later in year (fall and winter)
- Common on native range; interest growing in tame pastures
- Loeppky et al. 1996 reported higher forage quality of CMV vs alfalfa
- Do Oxley II and Veldt differ from Oxley in stockpiled forage quality?
M&M

• Oxley, Oxley II and Veldt seed from LRC breeding program, AC Grazeland alfalfa as check
• Mixed with Knowles hybrid bromegrass
• Systems: Stockpiled: Harvested once in fall; Hay and Stockpiled: Harvest in July and fall; Simulated Grazing: Harvested in July, August and fall
• 4 reps, RCBD at Lethbridge AB, Saskatoon SK, and 3 reps at Lanigan SK
Forage Quality

• Lanigan and Saskatoon samples to Cargill Lab, Strathroy ON
• Lethbridge samples determined at LRC
• NIRS with wet chemistry support
• CP, ADF, NDF, Lignin, Ash, Ca, P, Mg, K, S, EE
• TDN calculated from Weiss 1994
## Results:
### Harvest dates

<table>
<thead>
<tr>
<th>Year</th>
<th>Lethbridge</th>
<th>Saskatoon</th>
<th>Lanigan</th>
</tr>
</thead>
<tbody>
<tr>
<td>2013</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hay and Stockpile</td>
<td>July 8, Oct. 22</td>
<td>July 4, Oct. 18</td>
<td>July 2, Oct. 8</td>
</tr>
<tr>
<td>Simulated Graze</td>
<td>July 8, Aug. 21</td>
<td>June 12, July 19, Aug. 22</td>
<td>July 2, Aug. 9, Oct. 8</td>
</tr>
<tr>
<td>Stockpile</td>
<td>Oct. 22</td>
<td>Oct. 18</td>
<td>Oct. 8</td>
</tr>
<tr>
<td>2014</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hay and Stockpile</td>
<td>July 12, Oct. 15</td>
<td>July 4, Oct. 15</td>
<td>July 4, Oct. 8</td>
</tr>
<tr>
<td>Simulated Graze</td>
<td>July 12, Aug. 21, Oct. 15</td>
<td>July 4, Aug. 13, Oct. 15</td>
<td>July 4, Aug. 8, Oct. 8</td>
</tr>
<tr>
<td>Stockpile</td>
<td>Oct. 15</td>
<td>Oct. 15</td>
<td>Oct. 8</td>
</tr>
</tbody>
</table>
Mean DM yield (kg/ha) of stockpiled CMV and brome at 3 locations.
Mean DM yield (kg/ha) of Hay & SP CMV and brome at 3 locations.
Mean DM yield (kg/ha) of Sim. Graze CMV and brome at 3 locations.
Location
Lethbridge
Saskatoon
Lanigan

Crude Protein g/kg
0
20
40
60
80
100
120
140
160
180

Alfalfa
Oxley
Oxley II
Veldt
ADF g/kg

Location
Lethbridge
Saskatoon
Lanigan

ADF
0
100
200
300
400
500

Alfalfa
Oxley
Oxley II
Veldt
The bar chart shows the NDF (Neutral Detergent Fiber) g/kg for different locations and crops.

Locations: Lethbridge, Saskatoon, Lanigan

Crops: Alfalfa, Oxley, Oxley II, Veldt
<table>
<thead>
<tr>
<th>Location</th>
<th>ADF g/kg</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lethbridge</td>
<td>Hay &amp; SP</td>
</tr>
<tr>
<td>Saskatoon</td>
<td>Sim Graze</td>
</tr>
<tr>
<td>Lanigan</td>
<td>Stockpile</td>
</tr>
</tbody>
</table>

**ADF g/kg**

0 100 200 300 400 500
The bar chart compares Calcium g/kg levels across three locations: Lethbridge, Saskatoon, and Lanigan. The chart includes data from three categories: Hay & SP, Sim Graze, and Stockpile. The Calcium levels range from 0 to 18 g/kg.
Conclusions

• CMV varieties in mixture with hybrid brome are similar for forage quality if stockpiled for fall grazing
• CMV is better in forage quality than alfalfa for stockpiled grazing
• Hay and SP is the superior forage quality system to Stockpiled
• Fall yield in simulated grazing (not shown) is lower.
Acknowledgement

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