**EW FS#3 AC KINGS BARLEY S-1**

**SAMPLE INFORMATION**
- Lab ID: 16962 212
- Crop Year: 2014
- Feed Type: BARLEY FORAGE
- Cutting#: 1
- Package: BASIC NIR

**NIR ANALYSIS RESULTS**

<table>
<thead>
<tr>
<th>Protein Type</th>
<th>% SP</th>
<th>% CP</th>
<th>% DM</th>
</tr>
</thead>
<tbody>
<tr>
<td>Crude Protein</td>
<td></td>
<td></td>
<td>22.0</td>
</tr>
<tr>
<td>Adjusted Protein</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Soluble Protein</td>
<td>69.8</td>
<td>15.4</td>
<td></td>
</tr>
<tr>
<td>Ammonia</td>
<td>12.2</td>
<td>8.5</td>
<td>1.87</td>
</tr>
<tr>
<td>ADF Protein (ADICP)</td>
<td>4.1</td>
<td>0.90</td>
<td></td>
</tr>
<tr>
<td>NDF Protein (NDICP)</td>
<td>7.5</td>
<td>1.66</td>
<td></td>
</tr>
<tr>
<td>Rumen Degr. Protein</td>
<td>84.9</td>
<td>18.7</td>
<td></td>
</tr>
</tbody>
</table>

**FIBER**
- ADF: 62.8
- aNDF: 49.5
- aNDFom: 47.3
- NDR (NDF w/o sulfite): 4.42
- peNDF: 2.19
- Crude Fiber: 4.42
- Lignin: 2.19
- NDF Digestibility (12 hr): 77.7
- NDF Digestibility (24 hr): 38.4
- NDF Digestibility (30 hr): 48.0
- NDF Digestibility (48 hr): 24.0
- uNDF (30 hr): 22.4
- uNDF (240 hr): 11.1

**CARBOHYDRATES**
- Silage Acids: 74.4
- Ethanol Soluble CHO (Sugar): 11.1
- Water Soluble CHO (Sugar): 8.9
- Soluble Fiber: 12.8
- Starch: 12.8
- Starch Dig. (7 hr, 4 mm): 8.9
- Fatty Acids, Total: 2.07
- Fatty Acids (%Fat): 48.4
- Crude Fat: 4.28

**MINERALS**
- Ash (%DM): 12.53
- Calcium (%DM): 0.65
- Phosphorus (%DM): 0.48
- Magnesium (%DM): 0.16
- Potassium (%DM): 4.69
- Sulfur (%DM): 0.31
- Sodium (%DM): 0.43
- Chloride (%DM): 0.12
- Iron (PPM): 8.08
- Manganese (PPM): 2.74
- Zinc (PPM): 0.97
- Copper (PPM): 1.95

**QUANLITATIVE**
- pH: 4.52
- Soil Contamination Probability: Probable low to none
- Nitrate Probability: Probable low nitrate level
- NDR Statistical Confidence: Good prediction potential

**ENERGY & INDEX CALCULATIONS**
- TDN (%DM): 65.3
- Net Energy Lactation (mcal/lb): 0.68
- Net Energy Maintenance (mcal/lb): 0.67
- Net Energy Gain (mcal/lb): 0.40
- NDF Dig. Rate (Kd, %HR, Van Amburgh, Lignin*2.4): 5.84
- NDF Dig. Rate (Kd, %HR, Van Amburgh, INDF): 5.84
- Starch Dig. Rate (Kd, %HR, Mertens): 122
- Relative Feed Value (RFV): 169
- Milk per Ton (lbs/ton): 1148
- Dig. Organic Matter Index (lbs/ton): 154
- Non Fiber Carbohydrates (%DM): 13.3
- Non Structural Carbohydrates (%DM): 2.7
- DCAD (meq/100gd): 4.07
- CNAPS / CPM Lignin Factor: 102.1
- Summative Index %: 102.1

Values in bold were analyzed by wet chemistry methods.

Definitions and explanation of report terms
Guide to Safety of Forages with Varying Nitrate Content

0.0 to 0.44 Safe to feed under all conditions.

0.44 to 0.66 Safe for non-pregnant animals under all conditions. For pregnant animals, limit to 50% of the total dry matter in the ration.

0.66 to 0.88 Limit to 50% of the total dry matter in the ration.

0.88 to 1.54 Limit to 35% to 40% of the total dry matter in the ration.

More than 1.54 Feeds with more than 1.76% nitrate ion are potentially toxic. Do not feed.

Should be tempered by nitrate and nitrite content of the water supply. A total intake of more than 30 g of nitrate ion per cwt bodyweight of normal animals may result in acute toxicity and possible death. Levels of 8 to 22 g of nitrate per cwt bodyweight may result in acute toxicity if animals are undergoing a change in feed or have otherwise impaired rumen metabolism. Nitrites may be six to eight times as toxic as nitrates and are more apt to occur in water. Most problems of toxicity result from levels exceeding 1%.

From: Penn State Dairy Reference Manual