

## ASSAYS OF INDIVIDUAL SAMPLES OF CALIFORNIA FEEDSTUFFS

*New sample in Blue*

(Assay codes at the bottom)

Oct 2016

DM %	OM % DM	Fat -----	CP -----	SolP --- % CP ---	UndP ---	NDF % DM	dNDF % NDF	NEI Mcal/kg DM	ADF	Lignin	Starch	Sugars	Ca % DM	P	Mg	K	S	Na	Cl	Fe	Mn	Zn ppm DM	Cu	Mo	Se -----
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### Alfalfa (green chop -> summer)

27.1	87.2	19.8	39.8	8.1	52.4			36.6					1.13	0.39	0.23	3.58	0.35		0.58	396	49	30	5
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### Alfalfa (green chop - fall)

56.7	88.2	2.4	22.1	4.5	31.1	45.2	1.46	26.2															
51.0	88.3	2.6	21.1	5.8	33.5	44.1	1.43	27.4															
21.1	86.1		18.8	40.0	8.0	48.8		34.6					0.85	0.47	0.26	3.53	0.34		0.51	612	74	44	6
<b>Mean</b>	<b>42.9</b>	<b>87.5</b>	<b>1.3</b>	<b>20.7</b>	<b>40.0</b>	<b>6.1</b>	<b>37.8</b>	<b>22.1</b>	<b>1.45</b>	<b>29.4</b>			<b>0.85</b>	<b>0.47</b>	<b>0.26</b>	<b>3.53</b>	<b>0.34</b>		<b>0.51</b>	<b>612</b>	<b>74</b>	<b>44</b>	<b>6</b>

### Alfalfa (cubes, dehy)

91.3	90.8	1.8	16.7	32.0	6.6	46.7	49.8	1.3	40.4				1.27	0.35	0.28	2.43	0.36	0.18	0.39	170	28	20	9	7.8	
92.8	89.2	2.4	26.2	44.0	8.0	33.8	45.6	1.5	28.6				1.39	0.47	0.27	2.58	0.30	0.18	0.64	387	39	45	8	6.8	
89.5	90.3	2.1	21.9	36.0	4.6	39.4	47.5	1.4	31.1				1.41	0.33	0.41	2.13	0.32	0.20	0.87	178	34	24	13	3.1	
91.0	90.4	2.5	19.8	27.0	8.1	34.4		25.5					1.22	0.39	0.33	1.86	0.22	0.16	0.63	522	66	29	13	2.7	
87.3	90.4	2.1	21.8	32.0	5.5	34.7		25.3					1.42	0.28	0.38	2.02	0.26	0.16	0.70	273	50	25	10	1.0	
89.5	88.2	2.8	23.2	40.0	3.9	32.7		27.5					1.40	0.44	0.36	3.02	0.26	0.14	0.89	365	30	17	5	2.6	
89.2	88.0	2.7	24.4	37.0	4.5	32.9		26.0					1.21	0.36	0.25	3.16	0.21	0.36	1.28	352	80	19	8	3.9	
90.8	90.1	2.6	23.8	40.0	5.5	34.5		27.2					1.38	0.37	0.33	2.35	0.25	0.18	1.00	242	33	20	8	7.1	
90.0	89.5	2.6	25.5	30.0	5.5	38.0		28.1					1.54	0.33	0.31	1.97	0.23	0.18	0.78	302	35	19	6	1.0	
<b>Mean</b>	<b>90.2</b>	<b>89.7</b>	<b>2.4</b>	<b>22.6</b>	<b>35.3</b>	<b>5.8</b>	<b>36.34</b>	<b>47.6</b>	<b>1.40</b>	<b>28.9</b>				<b>1.36</b>	<b>0.37</b>	<b>0.32</b>	<b>2.39</b>	<b>0.27</b>	<b>0.19</b>	<b>0.80</b>	<b>310</b>	<b>44</b>	<b>24</b>	<b>9</b>	<b>4.0</b>

### Alfalfa (cubes, sun-dried)

91.6	89.2	1.7	17.5	21.0	5.7	49.8	46.7	1.2	34.6				1.40	0.25	0.31	2.02	0.28	0.30	1.09	357	30	51	8	3.5
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### Alfalfa (hay -> sorted from low to high NDF)

94.3	90.8	1.9	29.3	3.3	26.6	44.1	1.61	22.2																
91.5	89.1	1.4	25.6	36.5	4.9	29.8	44.9	1.51	23.6	3.3	1.2	3.2												
91.3	88.5	2.1	23.1	31.3	4.1	29.9	34.1	1.42	23.6	4.8	1.8	5.3												
92.4	89.3	1.9	19.9	37.4	4.4	31.1	41.3	1.48	25.4	4.6	2.6	5.8												
89.4			22.4	31.2		31.3	60.1		24.6				1.16	0.27										
87.0	89.4	3.1	28.1	34.0		31.7			21.9				1.61	0.44	0.49	1.48	0.32	0.24	0.69	277	40	25	11	1.1
89.8	89.6	3.0	25.5	33.7	4.7	31.8			22.0				1.79	0.32	0.32	2.69	0.36	0.15	0.76	259	40	53	7	
86.6			25.4	33.4		32.0			26.9				1.60	0.36										

... *continued*

DM %	OM %	Fat % DM	CP %	SolP % CP	UndP ---	NDF % DM	dNDF % NDF	NEI Mcal/kg DM	ADF	Lignin	Starch	Sugars	Ca % DM	P	Mg	K	S	Na	Cl	Fe	Mn	Zn	Cu	Mo	Se
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**Alfalfa (hay -> sorted from low to high NDF)**

*continued*

84.5						32.4	50.1	26.7																
91.6	88.6	1.6	21.4	37.0	4.1	32.5	29.0	1.31	27.1	5.3	1.8	3.4												
83.6	90.2	2.5	26.3	44.6	4.2	32.6			24.1				1.39	0.37	0.36	2.60	0.32	0.06	0.95	138	33	28	4	
92.7	86.8	1.5	24.6	36.5	5.1	33.3	37.6	1.33	26.6	5.0	2.1	3.6												
92.0	87.1	1.0	23.6	39.2	4.5	33.7	35.3	1.30	28.5	5.6	1.6	4.0												
84.1						33.8	62.0		27.1				1.33	0.32										
88.4	85.1		25.3	30.9	4.0	33.8	42.0		28.2				1.63	0.33	0.26	2.36				1109	42	22	17	
89.6	88.7	3.3	21.2		4.2	34.0	43.7	1.49	27.3				1.67	0.33	0.33	2.79	0.29	0.09	0.31	279	35	12	10	3.6
93.0	87.4	1.4	21.3	36.1	5.6	34.2	33.6	1.28	27.7	4.8	1.3	2.9												
86.9				24.6	31.3		34.3		27.0				1.60	0.33										
93.5	89.5	2.9	19.9		4.8	34.5	47.2	1.51	26.1															
89.7	90.7		23.0	34.0	4.9	34.8	44.2	1.39	27.7				1.16	0.26	0.26	2.07	0.29	0.13	0.68	170	30	22	7	1.9
91.2	89.4	2.9	26.3	48.0	10.3	35.1	40.9	1.40	26.6				1.84	0.34	0.32	2.31	0.27	0.18	0.80	254	48	28	7	4.7
88.5	81.7		22.9	39.3	6.6	36.8	41.0		29.7				2.06	0.37	0.25	1.79				1553	42	22	18	
92.7	90.2	1.5	23.1	35.4	6.0	36.9	34.8	1.30	30.1	5.9	1.8	4.1												
93.1	89.7	1.2	20.2	34.0	4.9	37.3	34.3	1.28	32.5	6.1	2.4	5.2												
92.9	87.5	1.2	20.5	37.0	6.4	37.3	33.2	1.21	31.3	5.8	1.5	3.5												
92.5	90.0	1.2	21.8	33.8	5.2	37.6	37.7	1.32	29.4	4.8	1.5	3.4												
90.3	91.0	1.5	23.6	32.0	6.0	37.7			28.8				1.70	0.34	0.42	2.51	0.29	0.12	0.46					
88.8	87.9		25.5	35.4		38.0			23.9				1.49	0.25	0.43	2.47	0.42		0.85	320	35	37	15	
91.9	89.6	1.8	21.1	37.9	5.0	38.5	35.0	1.28	32.3	6.3	1.8	3.8												
86.4	91.3	2.2	21.0	30.9	7.6	38.7			30.9				1.32	0.33	0.42	1.99	0.39	0.32	1.33	204	37	33	7	
91.7	91.5	2.4	17.6	30.0	12.5	38.7	41.2	1.38	30.8				1.23	0.32	0.36	1.73	0.33	0.38	0.85	314	20	23	8	2.7
88.3	90.1	2.6	21.3		4.8	38.7	36.0	1.35	31.4															
89.8	88.9		21.0	34.0	6.2	38.8	42.4	1.28	32.4				1.26	0.35	0.16	3.19	0.30	0.11	0.43	162	21	21	7	4.5
91.8	86.1		23.3		8.0	38.9			32.8	6.2	0.7	2.0												
88.0	79.7		22.3	31.9	4.9	39.0	40.0		32.4				1.78	0.32	0.25	2.20				1789	54	30	26	
89.0	88.1	2.2	20.6	50.7	9.2	39.4			31.6				2.04	0.27	0.47	3.43	0.36	0.08	1.17	64	34	24	3	
93.8	90.1	1.2	18.6	38.4	6.4	39.4	34.9	1.26	31.4	6.2	2.6	4.7												
90.8	91.1	1.6	18.4	37.1	5.8	39.5	47.1	1.44	32.7	6.4	1.7	4.5												
88.5	92.2	1.9	23.1	39.0	6.5	39.8			31.4				1.16	0.33	0.46	2.12	0.35	0.14	0.73	150	32	29	8	
92.8	90.7		19.1		7.2	40.2			30.9	5.5	2.9	4.8												
84.4	92.4	2.4	22.0	34.0	6.8	40.3			29.9				1.90	0.34	0.41	1.75	0.35	0.27	0.51					
88.6	90.7	2.0	24.5	25.5	5.6	40.7			32.5				1.76	0.34	0.43	1.71	0.31	0.26	1.12					

*... continued*

DM OM Fat CP SolP UndP NDF dNDF NEI ADF Lignin Starch Sugars Ca P Mg K S Na Cl Fe Mn Zn Cu Mo Se

% ----- % DM ----- --- % CP ---- % DM % NDF Mcal/kg DM ----- % DM ----- ppm DM -----

## Alfalfa (hay -> sorted from low to high NDF)

### **Alfalfa (silage)**

#### **Alfalfa/Grass (hay)**

<i>Class (day)</i>	<i>83.7</i>	<i>89.9</i>	<i>2.6</i>	<i>17.8</i>	<i>4.9</i>	<i>38.5</i>	<i>52.8</i>	<i>1.49</i>	<i>27.6</i>
85.4	90.8	2.6	17.3		5.6	36.9	37.2	1.39	27.2
85.6	90.9	2.6	14.0		6.2	42.7	41.9	1.35	33.0
<b>84.9</b>	<b>90.5</b>	<b>2.6</b>	<b>16.4</b>		<b>5.6</b>	<b>39.4</b>	<b>44.0</b>	<b>1.41</b>	<b>29.3</b>

### **Almond Hulls**

87.8	94.5	1.9	5.1	34.8	62.7	27.0			21.5
86.0	95.5	2.5	4.4	25.3	45.5	30.0			23.6
78.4	94.1		4.9	24.0	67.4	59.8	21.6	0.79	48.7
90.2	93.2	2.9	8.0	26.0	36.2	33.6	28.8	1.41	29.6
86.7	94.6	2.4	6.4	47.0	39.1	28.0	53.9	1.70	25.8

... *continued*



Nutrient Content Data (ppm DM)																										
DM %	OM %	Fat %	CP %	SolP %	UndP %	NDF %	dNDF %	NEI Mcal/kg DM	ADF	Lignin	Starch	Sugars	Ca %	P	Mg	K	S	Na	Cl	Fe	Mn	Zn	Cu	Mo	Se	
<b>Barley (grain)</b>																										
89.3	97.1	2.3	12.2	10.0	8.2	16.8	56.4	1.93	6.7				0.06	0.37	0.12	0.56	0.15	0.02	0.17	88	16	29	7	1.9		
90.6	97.2	2.2	14.4	20.0	14.6	20.4	43.4	1.80	9.2				0.07	0.35	0.11	0.54	0.13	0.01	0.13	59	21	31	5	1.3		
90.6	97.2	2.0	10.3		2.2	24.2	56.3	1.86	9.2																	
91.0	97.2	1.7	12.2	22.3	2.6	22.6	55.7	1.94	8.5	2.0	50.7	1.3														
<b>Mean</b>	<b>90.4</b>	<b>97.2</b>	<b>2.1</b>	<b>12.3</b>	<b>17.4</b>	<b>6.9</b>	<b>21.0</b>	<b>53.0</b>	<b>1.90</b>	<b>8.4</b>	<b>2.0</b>	<b>50.7</b>	<b>1.3</b>	<b>0.07</b>	<b>0.36</b>	<b>0.12</b>	<b>0.55</b>	<b>0.14</b>	<b>0.02</b>	<b>0.15</b>	<b>74</b>	<b>19</b>	<b>30</b>	<b>6</b>	<b>1.6</b>	
<b>Beans (lima, dry)</b>																										
90.7	94.3	1.2	23.2	49.1		30.5			7.5				0.11	0.36	0.19	2.34	0.20	0.00	0.01							
<b>Beet pulp (pellets, dehy)</b>																										
91.6	92.2		10.3	24.2		44.1			27.8				1.03	0.09	0.24	0.32	0.39		0.06	811	67	27	11			
89.7	90.4	0.6	8.5	40.4	10.6	45.8			27.3				0.61	0.07	0.25	2.14	0.30	0.81	0.91	532	74	25	6			
92.8	91.7	1.4	8.3	14.0	18.1	42.1	86.9	1.76	26.1				0.88	0.12	0.27	0.60	0.23	0.25	0.13	821	55	22	16	1.8		
92.7	94.1	1.4	8.0	11.0	6.3	45.1	84.8	1.78	24.2				0.82	0.13	0.36	0.64	0.18	0.08	0.03	607	62	26	10	1.0		
<b>Mean</b>	<b>91.7</b>	<b>92.1</b>	<b>1.1</b>	<b>8.8</b>	<b>22.4</b>	<b>11.7</b>	<b>44.3</b>	<b>85.9</b>	<b>1.77</b>	<b>26.4</b>				<b>0.84</b>	<b>0.10</b>	<b>0.28</b>	<b>0.93</b>	<b>0.28</b>	<b>0.38</b>	<b>0.28</b>	<b>693</b>	<b>65</b>	<b>25</b>	<b>11</b>	<b>1.4</b>	
<b>Beet pulp (shreds, dehy)</b>																										
91.1	92.5		15.6	23.1		45.8			26.5				0.62	0.33	0.22	0.41	0.37		0.15	832	70	37	13			
91.2	93.1	0.8	11.7	50.5	19.7	30.8			14.3				0.56	0.07	0.22	2.26	0.33	0.30	0.58	261	47	27	4			
92.4	93.2	1.1	10.5	28.0	16.2	40.7	93.2	1.84	23.9				0.89	0.11	0.17	1.14	0.27	0.46	0.88	290	33	13	6	1.0		
92.2	92.6	1.9	12.1	36.0	5.8	42.9	78.3	1.72	22.2				0.65	0.18	0.22	1.54	0.20	0.64	0.66	179	71	28	4	1.0		
91.1	91.7	1.0	12.5	46.0	8.0	46.4	74.5	1.61	27.2				0.84	0.10	0.23	1.96	0.19	0.75	0.76	177	78	21	4	2.1		
89.4	91.4		10.0	38.3	6.0	36.3	85.0		18.7				0.66	0.06	0.25	2.06		0.16		344	65	25	9			
91.7	93.5	0.9	10.1	43.0	9.9	31.8	84.0	1.84	19.9				0.46	0.09	0.25	1.91	0.22	0.32	0.50	178	50	26	3	2.3		
87.8	89.4		8.8	39.4	8.0	42.4	81.0		23.8				0.57	0.05	0.24	2.90		0.16		453	90	33	8			
91.5	93.9	0.7	9.7	37.0	8.2	39.7	90.0	1.86	20.2				0.49	0.09	0.24	1.84	0.22	0.32	0.43	205	62	22	5	1.0		
88.5	90.9		9.9	41.3	9.1	39.9	83.0		21.5				0.58	0.05	0.23	2.12		1.02		383	73	24	7			
94.0	94.0	0.7	9.2	41.6	4.1	32.4	85.5	2.04	20.3	0.8	6.6	19.1														
94.2	93.9	0.8	9.8	44.3	3.8	33.9	87.2	2.06	20.3	0.9	6.3	18.5														
<b>Mean</b>	<b>91.3</b>	<b>92.5</b>	<b>1.0</b>	<b>10.8</b>	<b>39.0</b>	<b>9.0</b>	<b>38.6</b>	<b>84.2</b>	<b>1.85</b>	<b>21.6</b>	<b>0.9</b>	<b>6.5</b>	<b>18.8</b>	<b>0.63</b>	<b>0.11</b>	<b>0.23</b>	<b>1.81</b>	<b>0.26</b>	<b>0.46</b>	<b>0.57</b>	<b>330</b>	<b>64</b>	<b>26</b>	<b>6</b>	<b>1.5</b>	

DM %	OM %	Fat % DM	CP %	SolP % CP	UndP %	NDF % DM	dNDF % NDF	NEI Mcal/kg DM	ADF	Lignin	Starch	Sugars	Ca % DM	P	Mg	K	S	Na	Cl	Fe	Mn	Zn ppm DM	Cu	Mo	Se
<b>Bermuda grass (hay)</b>																									
63.3	88.8	3.2	19.9		3.6	57.9			28.6																
<b>Bermuda grass (seed screenings)</b>																									
94.3	91.2	2.2	7.8	32.0	17.9	65.1	26.2	0.79	37.4				0.58	0.19	0.29	1.03	0.41	0.14	0.67	514	59	31	5	2.3	
93.5	87.9	3.1	12.5	30.0	14.4	56.3	42.4	1.08	27.3				0.72	0.35	0.26	0.98	0.40	0.08	0.44	841	83	44	16	1.6	
90.7	88.5	5.1	21.4	36.0		41.2	53.3		30.2				0.92	0.42	0.36	1.21	0.29	0.14	0.46	1110	50	53	13	4.7	
87.9	88.1	2.4	10.1	14.0	25.7	48.2	19.8	0.93	32.6				0.59	0.37	0.25	0.78	0.33	0.04	0.31	722	79	47	16	1.0	
90.8	88.9	2.5	9.8	15.0	24.5	46.6	43.1	1.23	30.2				0.66	0.38	0.26	0.97	0.37	0.07	0.42	783	82	45	15	1.0	
<b>Mean</b>	<b>91.4</b>	<b>88.9</b>	<b>3.1</b>	<b>12.3</b>	<b>25.4</b>	<b>20.6</b>	<b>51.5</b>	<b>37.0</b>	<b>1.01</b>	<b>31.5</b>				<b>0.69</b>	<b>0.34</b>	<b>0.28</b>	<b>0.99</b>	<b>0.36</b>	<b>0.09</b>	<b>0.46</b>	<b>794</b>	<b>71</b>	<b>44</b>	<b>13</b>	<b>2.1</b>
<b>Brewers Grains (wet)</b>																									
28.2	96.3	6.2	24.4	15.0	7.4	31.4	56.9	1.81	15.3				0.17	0.56	0.23	0.23	0.30	0.04	0.08	134	46	78	8	2.2	
26.4	95.0	7.7	29.4	15.0	4.8	36.0	42.9	1.65	15.2				0.22	0.67	0.28	0.29	0.31	0.06	0.08	183	46	93	1	2.0	
<b>Mean</b>	<b>27.3</b>	<b>95.7</b>	<b>7.0</b>	<b>26.9</b>	<b>15.0</b>	<b>6.1</b>	<b>33.7</b>	<b>49.9</b>	<b>1.73</b>	<b>15.3</b>				<b>0.20</b>	<b>0.62</b>	<b>0.26</b>	<b>0.26</b>	<b>0.31</b>	<b>0.05</b>	<b>0.08</b>	<b>159</b>	<b>46</b>	<b>86</b>	<b>5</b>	<b>2.0</b>
<b>Brandy (pulp, wet)</b>																									
29.5	90.0	3.2	11.3	15.3		42.8			23.0				1.12	0.16	0.10	1.95	0.19	0.07	0.07	640	24	39	21		
<b>Brandy (dehy/pomace)</b>																									
93.0	90.0	2.5	10.8	30.8		43.4			46.8																
<b>Canola Pellets (38% CP, solvent)</b>																									
90.6	92.0		42.2	36.4		31.0			18.5				0.77	1.08	0.56	1.35	0.87		0.12	287	58	75	10		
91.2	92.4		42.0	35.4		30.4			18.2				0.71	0.35	0.52	1.24	0.88		0.07	225	59	74	10		
89.0	92.5	3.8	40.4	27.6	5.9	24.1			17.4				0.74	1.19	0.61	1.47	0.89	0.08	0.17	216	54	70	3		
89.5	92.3	3.3	38.1	28.4	3.4	24.2			16.8				0.71	1.26	0.63	1.54	0.88	0.02	0.26	221	55	71	2		
90.1	91.1	3.2	39.6	31.0	7.1	27.2	56.1	1.64	20.9				1.17	1.29	0.57	1.59	0.70	0.03	0.06	259	71	58	7	3.0	
90.2	91.9	4.4	43.8	31.0	6.6	28.5	41.7	1.57	19.0				0.83	1.24	0.52	1.38	0.71	0.09	0.07	247	68	58	2	2.5	
90.3	91.4	3.7	41.1	29.0	10.5	28.9	48.1	1.54	22.7				1.03	1.54	0.60	1.62	0.65	0.02	0.08	262	66	67	4	1.3	
90.0	91.8	4.7	40.8	29.0	10.3	30.4	54.1	1.61	23.1				0.81	1.59	0.63	1.58	0.71	0.03	0.08	327	64	62	4	1.8	
86.9	92.3		38.7	26.7	6.2	25.5	45.0		17.4				0.89	1.45	0.65	1.65		0.09		192	58	66	6		
89.2	91.6	3.5	39.2	24.0	6.9	28.3	45.3	1.56	22.0				0.90	1.26	0.62	1.57	0.68	0.05	0.13	307	69	67	3	3.9	
86.7	91.2		38.8	21.0	5.2	27.0	43.0		19.3				0.81	1.27	0.68	1.54		0.10		357	57	92	6		
89.5	91.7	3.1	40.8	27.0	6.4	29.8	65.6	1.68	20.8				0.95	1.28	0.64	1.64	0.65	0.03	0.08	205	74	75	4	3.9	
86.9	91.7		44.1	35.0	5.7	26.5	44.0		17.9				0.79	1.14	0.62	1.44		0.13		262	57	72	6		
<b>Mean</b>	<b>89.2</b>	<b>91.8</b>	<b>3.7</b>	<b>40.7</b>	<b>29.3</b>	<b>6.7</b>	<b>27.8</b>	<b>49.2</b>	<b>1.60</b>	<b>19.5</b>				<b>0.85</b>	<b>1.23</b>	<b>0.60</b>	<b>1.51</b>	<b>0.76</b>	<b>0.06</b>	<b>0.11</b>	<b>259</b>	<b>62</b>	<b>70</b>	<b>5</b>	<b>2.7</b>



Nutritional Composition Data (DM Basis)																										
DM %	OM %	Fat %	CP % DM	SolP % CP	UndP %	NDF % DM	dNDF % NDF	NEI Mcal/kg DM	ADF	Lignin	Starch	Sugars	Ca % DM	P	Mg	K	S	Na	Cl	Fe	Mn	Zn ppm DM	Cu	Mo	Se	
<b>Corn (germ meal)</b>																										
91.4	93.4	2.7	21.3		1.5	33.4	73.2	1.82	9.5																	
89.5	97.2	8.8	23.9		3.7	43.9	82.0	2.07	12.5																	
89.1	97.6	3.8	24.4		3.7	44.4	71.8	1.81	13.4																	
<b>Corn (gluten feed pellets)</b>																										
91.6	92.9	4.1	21.2	49.8	6.1	38.0			11.0				0.62	0.81	0.40	1.53	0.80		0.34	137	27	47	5			
91.5	90.2	2.6	21.1	54.8		31.7			10.2																	
92.1	93.6	4.2	26.0	48.3		32.6			11.0																	
<b>Mean</b>	91.7	92.2	3.6	22.8	51.0	6.1	34.1		10.7				0.62	0.81	0.40	1.53	0.80		0.34	137	27	47	5			
<b>CV (%)</b>	0.2	1.1	14.5	7.1	3.9	-	5.8		2.5				-	-	-	-	-		-	-	-	-	-	-	-	
<b>Corn (gluten feed, dehy)</b>																										
91.3	92.8	5.9	21.4	40.0	6.5	41.6	79.8	1.85	13.0				0.05	0.80	0.27	0.79	0.34	0.18	0.11	208	16	105	1	4.0		
<b>Corn (gluten feed, wet)</b>																										
47.7	91.6	2.9	21.9	68.0	1.8	32.0	79.0	1.85	9.0				0.02	1.02	0.41	1.63	0.45	0.04	0.25	48	20	59	1	1.0		
42.1	94.3	2.9	23.8		1.0	36.6	71.8	1.80	10.9																	
<b>Corn (grain, flaked)</b>																										
86.2	99.5		9.4	26.9		11.7			3.4				0.05	0.25	0.07	0.24	0.12		0.05	33	5	22	5			
87.2	99.3		9.9	15.8		11.7			3.3				0.05	0.24	0.10	0.30	0.12		0.08	38	6	23	5			
86.2	99.7	3.9	9.2	37.3	15.2	11.1			3.5				0.01	0.23	0.10	0.36	0.14	0.01	0.22	44	6	22	1			
87.3	99.4	3.7	8.9	34.1	19.1	17.5			5.6				0.02	0.20	0.10	0.35	0.13	0.01	0.19	31	4	24	1			
88.0	98.7	2.8	8.0	9.0	12.5	8.8	89.7	2.17	3.0				0.01	0.18	0.06	0.26	0.09	0.01	0.07	21	3	12	1	1.0		
90.9	98.9	3.6	11.1	11.0	9.0	12.4	63.0	2.09	5.9				0.02	0.25	0.09	0.33	0.10	0.01	0.09	37	6	20	1	1.0		
88.5	98.6	6.6	8.6	22.0	8.1	9.7	73.6	2.25	3.9				0.01	0.28	0.11	0.44	0.09	0.01	0.07	51	7	22	1	1.7		
88.1	98.8	3.4	8.2	10.0	11.0	10.7	67.9	2.12	4.5				0.01	0.28	0.09	0.36	0.09	0.01	0.10	76	7	19	1	1.0		
86.1	98.8	3.3	9.4	22.4		8.1	63.9	2.26	3.5	0.2	74.5	0.4														
85.7	98.6	1.9	7.6	28.5		8.3	69.2	2.23	2.9	0.5	68.5	0.3														
<b>Mean</b>	<b>87.4</b>	<b>99.0</b>	<b>3.6</b>	<b>9.0</b>	<b>21.7</b>	<b>9.4</b>	<b>11.0</b>	<b>71.2</b>	<b>2.19</b>	<b>4.0</b>	<b>0.4</b>	<b>71.5</b>	<b>0.4</b>	<b>0.02</b>	<b>0.24</b>	<b>0.09</b>	<b>0.33</b>	<b>0.11</b>	<b>0.01</b>	<b>0.11</b>	<b>41</b>	<b>6</b>	<b>21</b>	<b>2</b>	<b>1.2</b>	
<b>Corn (hominy feed)</b>																										
87.9	98.3	4.2	12.3	15.0	10.7	23.4			9.8				0.05	0.36	0.14	0.48	0.11	0.01	0.07	114	11	32	2	0.5		
91.4	97.3	7.1	10.9	28.0	3.7	13.9			4.7				0.02	0.62	0.25	0.72	0.11	0.01	0.11	71	16	48	1	1.8		
90.6	98.7	3.2	8.3	12.0	13.3	22.8			8.1				0.02	0.22	0.09	0.40	0.09	0.01	0.06	59	8	22	1	1.9		
<b>Mean</b>	<b>90.0</b>	<b>98.1</b>	<b>4.8</b>	<b>10.5</b>	<b>18.3</b>	<b>9.2</b>	<b>20.0</b>		<b>7.5</b>				<b>0.03</b>	<b>0.40</b>	<b>0.16</b>	<b>0.53</b>	<b>0.10</b>	<b>0.01</b>	<b>0.08</b>	<b>81</b>	<b>12</b>	<b>34</b>	<b>1</b>	<b>1.4</b>		

DM %	OM ----- % DM	Fat ----- % CP	CP ----- % CP	SoIP ----- UndP	NDF % DM	dNDF % NDF	NEI Mcal/kg DM	ADF	Lignin	Starch	Sugars	Ca % DM	P	Mg	K	S	Na	Cl	Fe	Mn	Zn ppm DM	Cu	Mo	Se
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**Corn (silage -> sorted from low to high NDF)**

34.8	93.5	3.0	8.3	66.7	6.1	39.6	48.3	1.56	27.4	2.4	29.1	<0.2												
34.5	90.5	2.7	7.8	69.3	7.3	40.1	42.5	1.41	28.5	2.7	27.3	<0.2												
31.9	93.5	3.1	7.1	70.7	7.9	40.7	50.3	1.58	26.8	2.5	31.1	<0.2												
33.6	93.2	3.1	8.0	71.7	7.0	42.0	49.2	1.53	29.3	2.6	26.8	<0.2												
34.0	94.4	3.2	8.5		6.5	42.4	42.9	1.56	25.0															
34.1	92.2	3.6	7.2	67.4	7.8	43.0	47.4	1.49	29.9	2.4	27.0	<0.2												
34.1	94.1	2.9	7.2	70.6	11.3	43.1	53.4	1.59	28.7	2.7	28.8	<0.2												
30.6	92.8	5.1	8.8	60.5	10.6	43.5	46.1	1.51	33.3	4.1	22.6	<0.2												
33.9	92.6	2.6	8.5	56.5	8.8	43.6	56.3	1.58	28.0	2.4	24.4	<0.2												
24.7	94.7	5.3	8.5		4.7	43.8	39.2	1.48	26.7															
25.3	91.8	3.6	8.0	61.0	10.0	44.4	50.8	1.47	31.5				0.25	0.24	0.33	1.64	0.12	0.01	0.85	237	63	45	7	2.4
33.2	92.9	3.2	7.7	68.7	8.9	44.4	51.7	1.53	31.0	3.1	23.7	<0.2												
30.8	94.0	2.9	8.5	70.0	7.4	44.7	52.5	1.55	31.0	3.3	23.3	0.4												
34.3	94.1		8.2	54.0		44.8			26.8				0.21	0.37	0.22	1.35					214	28	49	7
30.9	93.9		8.0	59.6		44.8			26.0				0.29	0.23	0.21	1.44					269	31	45	7
30.4	94.6		7.4	47.2	9.5	44.9			27.6				0.23	0.26	0.14	1.19					279	21	25	4
29.1	94.8	5.2	6.9		5.3	45.1	36.7	1.43	29.9															
33.7	94.1	3.3	7.2	56.5	11.8	45.3	55.0	1.54	29.1				0.16	0.20	0.21	1.06					248	33	17	6
29.7	93.3	3.6	8.4	66.8	7.4	45.3	51.8	1.54	32.2	3.2	22.3	<0.2												
31.5	93.3	3.3	8.0	67.6	9.4	45.7	56.6	1.59	31.5	3.4	21.7	<0.2												
31.4	95.0	3.3	8.2	58.2	11.0	46.4	57.0	1.57	27.7				0.17	0.28	0.11	0.82					198	33	26	5
30.8	92.6	2.6	6.8	69.2	10.1	46.4	52.8	1.49	30.6	3.0	20.2	<0.2												
26.1	94.1	4.1	8.1	64.0	7.4	46.5	60.0	1.61	30.9				0.20	0.27	0.15	1.28	0.09	0.01	0.45	219	34	19	8	1.1
28.2	94.6	3.3	6.7	55.0	10.4	46.5	64.2	1.63	30.5				0.16	0.26	0.15	1.17	0.07	0.01	0.13	202	39	25	5	2.1
22.0	93.9	3.2	8.5	45.8	12.9	46.7			28.9				0.30	0.27	0.20	1.23	0.13	0.14	0.27	471	69	51	12	
29.7	94.9	3.3	7.8	62.3	10.3	47.1	58.5	1.57	29.9				0.17	0.26	0.11	0.88				217	39	29	4	
29.1	94.2	3.9	7.9	53.0	16.5	47.1			28.3				0.16	0.36	0.14	1.35	0.09	0.01	0.40	125	28	20	4	1.0
34.4	94.0	2.9	7.0		3.5	48.0	40.8	1.36	28.2															
30.2	94.1	4.4	7.8	53.0	23.1	48.1			29.5				0.19	0.25	0.20	0.92	0.09	0.01	0.09	212	38	22	6	1.0
32.6	95.2	3.3	6.8	54.0	12.3	48.3	53.7	1.51	30.7				0.17	0.17	0.15	0.67				160	36	20	4	
28.1	95.0	2.8	7.1		3.6	48.7	43.1	1.38	29.2															
33.0	93.1	2.7	9.5		7.7	48.8	44.6	1.34	31.7															
28.6	94.9	3.8	7.7	45.0	19.5	49.1			29.1				0.24	0.23	0.27	0.69	0.08	0.01	0.15	147	54	20	5	1.0

... **continued**

DM %	OM %	Fat % DM	CP %	SolP % CP	UndP %	NDF % DM	dNDF % NDF	NEI Mcal/kg DM	ADF	Lignin	Starch	Sugars	Ca % DM	P	Mg	K	S	Na	Cl	Fe	Mn	Zn ppm DM	Cu	Mo	Se
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**Corn (silage -> sorted from low to high NDF)**

*continued*

26.0	95.5	4.5	8.2	63.0	12.3	49.4			31.0				0.19	0.33	0.15	1.48	0.08	0.01	0.42	184	31	14	1	2.4	
24.7	93.9	5.3	9.3			2.8	49.4	37.2	1.36	32.8															
31.2	93.0	2.6	9.0			5.7	49.4	34.4	1.23	29.2															
24.9	94.4	4.2	7.8	53.0	11.5	49.6	51.1	1.47	32.0				0.26	0.21	0.21	0.98	0.10	0.01	0.51	194	41	31	7	1.0	
25.9	95.0	4.3	7.7			6.3	49.9	38.0	1.35	32.5															
32.4	94.4	2.8	5.2			5.0	50.3	43.9	1.36	30.2															
28.1	93.6	3.6	7.9	53.0	20.2	51.1			30.3				0.21	0.34	0.19	1.37	0.09	0.01	0.09	189	37	18	5	1.0	
31.8	96.0		8.4	75.9	10.7	51.2			29.2				0.14	0.14	0.12	0.72	0.13		0.24	195	26	22	1		
27.8	94.4	2.5	6.5	46.0	10.8	51.4	52.9	1.42	31.9				0.25	0.27	0.16	1.06	0.10	0.01	0.39	239	50	34	5	1.5	
27.8	93.5	2.9	7.6			9.1	51.8	38.6	1.26	34.2															
24.4	92.5	2.9	7.4	66.3	11.0	52.1	55.3	1.46	33.6	3.6	19.2	<0.2													
27.8	89.7	2.8	7.1			6.0	53.5	39.8	1.16	35.4															
23.0	86.8	3.9	10.8	45.3	9.3	53.7			32.7				0.49	0.35	0.54	2.45	0.21	0.17	0.15	1113	82	88	33		
26.8	93.8		8.3	49.0	8.4	54.7			32.3				0.27	0.21	0.19	1.11	0.14		0.39	261	47	40	3		
28.4	94.9	2.1	8.5			7.2	54.7	37.9	1.20	35.6															
26.7	93.8	2.6	9.0			6.6	55.1	37.8	1.19	36.4															
32.9	90.8	4.5	8.9	60.0	15.7	55.7			35.9				0.16	0.48	0.18	2.10	0.11	0.01	0.61	163	21	53	7	1.0	
19.3	93.8	3.1	9.3			6.1	67.0	36.2	0.99	45.7															
<b>Mean</b>	<b>29.5</b>	<b>93.6</b>	<b>3.4</b>	<b>7.9</b>	<b>59.7</b>	<b>9.5</b>	<b>48.0</b>	<b>47.6</b>	<b>1.44</b>	<b>30.8</b>	<b>2.9</b>	<b>25.3</b>	<b>&lt;0.2</b>	<b>0.22</b>	<b>0.27</b>	<b>0.20</b>	<b>1.23</b>	<b>0.11</b>	<b>0.03</b>	<b>0.34</b>	<b>261</b>	<b>40</b>	<b>32</b>	<b>7</b>	<b>1.4</b>

**Cotton (hulls, seed)**

91.5	95.1	3.1	13.7	22.0	39.4	82.8			65.5				0.26	0.45	0.31	1.41	0.69	0.06	0.09	530	23	34	7	1.1
93.4	95.7	2.1	10.6	27.0	38.7	85.9			70.7				0.23	0.24	0.25	1.32	0.28	0.04	0.13	376	16	19	5	1.0
93.5	96.1	6.6	9.5	17.0	37.1	72.7			63.9				0.29	0.28	0.24	1.16	0.10	0.03	0.07	194	19	37	3	1.6
92.6	95.5	6.0	13.6	44.0	33.1	78.8			61.9				0.23	0.28	0.21	1.31	1.26	0.04	0.09	253	26	24	8	1.5
<b>Mean</b>	<b>92.8</b>	<b>95.6</b>	<b>4.5</b>	<b>11.9</b>	<b>27.5</b>	<b>37.1</b>	<b>80.1</b>		<b>65.5</b>				<b>0.25</b>	<b>0.31</b>	<b>0.25</b>	<b>1.30</b>	<b>0.58</b>	<b>0.04</b>	<b>0.10</b>	<b>338</b>	<b>21</b>	<b>29</b>	<b>6</b>	<b>1.3</b>

**Cotton (meal, solvent)**

89.6	92.5	2.4	42.0	10.0		30.0			21.4				0.28	1.21	0.61	1.73	0.44	0.26	0.13	120	20	60	16	2.1
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DM %	OM % DM	Fat % DM	CP % CP	SolP % CP	UndP % DM	NDF % DM	dNDF % NDF	NEI Mcal/kg DM	ADF	Lignin	Starch	Sugars	Ca % DM	P	Mg	K	S	Na	Cl	Fe	Mn	Zn ppm DM	Cu	Mo	Se
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**Cotton (seed, upland with lint)**

93.9	96.0		24.1	31.6		61.2			46.2				0.17	0.75	0.29	0.94	0.27		0.06	361	22	46	14		
97.6	96.4		21.9	33.4		60.3			45.0				0.19	0.65	0.35	1.19	0.28		0.11	77	16	45	13		
93.6	96.0	19.4	22.8	26.5	7.9	56.3			43.5				0.16	0.62	0.32	1.24				46	10	31	7		
89.0	95.8	21.1	23.7	27.1	7.2	55.4			43.2				0.21	0.65	0.34	1.16				52	11	23	11		
92.3	96.1	21.0	20.5	36.5	4.9	59.5			45.5				0.17	0.60	0.40	1.25	0.26	0.02	0.19	182	19	45	9		
89.7	95.0	27.2	28.6	27.0	5.9	35.9	41.2	2.26	24.0				0.17	0.92	0.43	1.21	0.28	0.02	0.07	65	19	44	10	2.7	
92.5	95.1	25.7	28.7	14.0	6.6	46.7	41.6	2.01	34.0				0.36	0.86	0.46	1.11	0.25	0.05	0.13	100	44	65	15	1.5	
91.4	96.4		23.8	29.1	7.1	56.6	27.0		42.9				0.20	0.60	0.39	1.20		0.01		62	15	43	9		
91.9	96.3		22.4	27.2	7.6	54.3	24.0		45.8				0.17	0.64	0.39	1.32		0.01		72	15	52	12		
92.8	96.0		23.6	27.0	8.1	55.2	25.0		42.9				0.19	0.57	0.43	1.40				65	14	68	21		
95.0	95.6	21.4	22.8	23.0		40.3			30.7																
93.1	95.8	19.0	20.7	23.0		45.7			36.3																
<b>Mean</b>	<b>92.7</b>	<b>95.9</b>	<b>22.1</b>	<b>23.6</b>	<b>27.1</b>	<b>6.5</b>	<b>52.3</b>	<b>41.4</b>	<b>2.14</b>	<b>40.0</b>				<b>0.20</b>	<b>0.72</b>	<b>0.37</b>	<b>1.16</b>	<b>0.27</b>	<b>0.03</b>	<b>0.11</b>	<b>126</b>	<b>20</b>	<b>43</b>	<b>11</b>	<b>2.1</b>

**Cotton (seed, pima with lint)**

92.6	94.8	27.9	28.8	22.0	5.9	26.3	28.1	2.36	16.8				0.21	0.76	0.40	1.15	0.30	0.05	0.08	26	12	30	6	4.0
94.8	96.1	15.4	17.9	14.0	22.3	67.5	53.1	1.54	44.2				0.21	0.52	0.29	1.09	0.20	0.01	0.09	107	19	34	7	1.3
92.6	94.7	30.9	29.8	25.0	3.7	43.1	68.3	2.58	31.6				0.16	1.00	0.41	1.20	0.32	0.01	0.08	39	12	34	8	1.0
93.7	95.3	23.1	29.8	32.0	6.0	53.7	55.5	2.05	39.5				0.20	0.98	0.44	1.29	0.30	0.01	0.09	51	15	41	9	1.3
92.5	95.8	30.5	27.9	27.0	5.7	36.8	55.9	2.54	23.8				0.20	1.03	0.46	1.38	0.30	0.01	0.08	51	17	35	9	1.0
93.2	95.1	28.1	30.4	24.0	3.9	36.6	58.0	2.48	25.8				0.19	1.08	0.46	1.35	0.34	0.01	0.13	66	15	49	11	1.0
93.2	94.7	27.3	31.8	27.0	4.1	40.9	59.7	2.40	30.4				0.23	1.02	0.44	1.31	0.35	0.01	0.19	64	16	49	7	2.3
93.0	94.8	26.7	28.9	29.0	4.5	44.7	58.5	2.32	34.6				0.21	1.13	0.48	1.36	0.31	0.01	0.12	60	16	49	8	1.3
92.9	94.9	28.3	27.7	28.0	4.7	49.6	63.2	2.36	32.9				0.19	1.14	0.48	1.34	0.31	0.01	0.09	55	15	42	9	1.1
93.6	95.1	34.0	28.4	25.0	3.2	48.5	48.9	2.40	34.0				0.20	1.04	0.44	1.34	0.27	0.01	0.09	56	14	42	9	1.3
93.7	95.4	23.6	27.2	29.0	5.5	46.9	48.4	2.08	33.1				0.20	0.98	0.44	1.27	0.30	0.01	0.02	50	15	45	9	1.0
92.7	95.2	26.9	27.6	28.0	4.7	47.9	52.8	2.22	37.4				0.19	0.99	0.43	1.27	0.28	0.01	0.09	43	14	34	8	1.0
93.5	95.3	23.0	29.4	25.0	2.4	48.1	46.0	2.04	37.9				0.19	1.04	0.44	1.32	0.30	0.01	0.07	57	15	39	9	1.3
93.5	95.3	24.0	28.1	25.0	2.8	50.3	46.0	2.03	35.9				0.19	1.01	0.44	1.30	0.29	0.01	0.11	53	14	39	9	1.3
93.3	94.9	27.2	32.2	27.0	2.8	38.8	46.7	2.32	26.4				0.19	1.09	0.47	1.31	0.34	0.01	0.10	48	14	42	9	1.0
92.3	95.2	25.7	29.8	28.0	7.0	42.4	44.2	2.18	29.6				0.23	1.00	0.46	1.30	0.29	0.01	0.11	56	15	40	11	1.0
92.4	95.3	23.8	27.7	28.0	5.1	47.1	45.9	2.06	35.6				0.20	0.93	0.42	1.27	0.28	0.01	0.10	46	15	36	9	1.2
92.1	94.9	30.1	32.1	25.0	2.8	36.8	65.0	2.59	23.1				0.16	0.96	0.42	1.23	0.33	0.01	0.11	59	14	39	9	1.0

... **continued**

DM	OM	Fat	CP	SolP	UndP	NDF	dNDF	NEI	ADF	Lignin	Starch	Sugars	Ca	P	Mg	K	S	Na	Cl	Fe	Mn	Zn	Cu	Mo	Se
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%	% DM				--- % CP ---				% DM	% NDF	Mcal/kg DM	% DM				-----				ppm DM				-----			
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**Cotton (seed, pima with lint)**
*continued*

92.8	96.6	27.7	28.5	24.0	3.5	39.7	52.9	2.41	28.1				0.19	1.04	0.46	1.30	0.28	0.01	0.06	47	15	38	9	1.0	
93.9	95.0	29.3	27.8	26.0	3.2	42.9	54.5	2.39	25.8				0.16	1.03	0.42	1.20	0.46	0.01	0.04	35	13	35	8	1.0	
93.2	95.3	27.6	31.1	24.0	2.9	41.2	56.2	2.39	31.9				0.19	1.06	0.47	1.27	0.29	0.01	0.05	43	15	41	9	1.0	
93.6	95.8	20.0	19.8	14.0	9.6	58.1	37.0	1.65	44.5				0.17	0.88	0.40	1.20	0.21	0.01	0.09	38	13	31	7	1.0	
94.1	94.7	32.9	26.7	29.0	2.6	40.0	64.7	2.65	24.7				0.18	1.26	0.50	1.30	0.29	0.01	0.07	50	15	39	9	1.0	
92.5	95.0	30.7	34.5	27.0	2.9	38.4	74.0	2.69	20.0				0.17	0.98	0.41	1.19	0.35	0.01	0.11	65	15	42	9	1.0	
93.1	95.1	29.1	30.8	25.0	2.9	45.6	62.4	2.44	29.1				0.16	0.97	0.41	1.19	0.32	0.01	0.08	49	13	39	7	1.0	
93.4	95.0	32.9	31.5	31.0	3.5	43.0	51.2	2.47	32.9				0.18	1.13	0.48	1.31	0.32	0.01	0.09	130	14	48	9	1.3	
94.1	95.4	25.5	31.1	27.0	1.6	49.8	55.4	2.20	33.5				0.18	1.12	0.47	1.33	0.33	0.01	0.12	62	14	52	11	1.1	
93.9	95.0	25.2	31.8	28.0	3.5	37.9	49.9	2.29	28.4				0.22	1.03	0.43	1.28	0.32	0.01	0.09	48	14	40	8	1.3	
94.0	95.2	24.9	29.9	26.0	2.3	41.9	50.2	2.24	27.6				0.18	1.07	0.46	1.32	0.31	0.01	0.12	60	14	51	9	1.2	
93.7	95.5	23.7	24.6	26.0	6.1	53.0	46.4	1.97	36.8				0.17	0.89	0.40	1.23	0.27	0.01	0.09	41	13	33	7	1.0	
94.3	95.2	24.1	28.2	21.0	3.2	45.3	53.2	2.19	31.6				0.19	1.05	0.45	1.34	0.30	0.01	0.05	61	14	51	12	1.5	
93.5	95.3	23.1	25.3	30.4		34.6			25.9																
92.8	95.0	22.9	23.4	22.2		36.9			28.1																
93.6	95.2	21.4	21.3	23.4		44.1			31.4																
<b>Mean</b>	<b>93.3</b>	<b>95.2</b>	<b>26.4</b>	<b>28.3</b>	<b>25.6</b>	<b>4.7</b>	<b>44.1</b>	<b>53.3</b>	<b>2.27</b>	<b>31.0</b>				<b>0.19</b>	<b>1.01</b>	<b>0.44</b>	<b>1.28</b>	<b>0.31</b>	<b>0.01</b>	<b>0.09</b>	<b>55</b>	<b>14</b>	<b>41</b>	<b>9</b>	<b>1.3</b>

**Distillers Grains (wet/corn/w solubles; various sources)**

34.0	96.9	10.0	35.7	23.3		32.9			18.7															
31.6	96.5	10.6	34.7	30.4		30.2			15.4															
33.3	97.0	10.5	37.7	34.9		31.1			16.6															
<b>Mean</b>	<b>33.0</b>	<b>96.8</b>	<b>10.4</b>	<b>36.0</b>	<b>29.6</b>		<b>31.4</b>			<b>16.9</b>														

**Distillers Grains (dehy/corn/w solubles; various sources)**

89.7	95.2		29.0	25.7		50.8			19.1				0.13	1.04	0.39	1.18	0.64		0.30	221	31	74	12	
88.9	93.3	9.0	30.3	10.8		37.2			19.4				0.53	0.75	0.37	1.24	0.91	0.33	0.25	258	42	64	7	
87.3	95.1	9.3	29.7	20.6		38.2			17.6				0.15	0.97	0.46	1.32	0.55	0.11	0.21	264	66	83	8	
88.3	94.1	13.6	30.5	22.0		45.5			20.9				0.12	0.97	0.46	1.40	0.40		0.20	195	72	71	8	
89.8	97.5	3.2	24.0	21.0		48.7	84.6	1.8	18.2				0.03	0.57	0.11	0.28	0.31	0.02	0.31	136	8	66	1	1.0
90.8	95.5	13.3	31.7	13.0		31.9	71.8	2.0	17.6				0.09	0.90	0.32	1.03	0.62	0.05	0.17	126	35	79	2	1.6
92.0	94.9	15.7	34.1	4.0		31.4	95.8	2.2	26.9				0.09	0.91	0.37	0.99	0.57	0.06	0.17	160	50	61	6	2.7
86.5	94.6	14.4	32.1	13.0		33.3	74.0	2.1	22.1				0.11	1.01	0.34	1.16	0.67	0.08	0.19	192	33	56	4	1.0
90.1	94.1	9.8	28.6	11.0		33.3	67.2	1.8	19.9				0.13	0.97	0.44	1.16	0.52	0.21	0.21	195	73	76	1	2.9
...	<b>continued</b>																							

DM	OM	Fat	CP	SoIP	UndP	NDF	dNDF	NEI	ADF	Lignin	Starch	Sugars	Ca	P	Mg	K	S	Na	Cl	Fe	Mn	Zn	Cu	Mo	Se
%	% DM				--- % CP ---				% DM	% NDF	Mcal/kg DM		% DM	-----				ppm DM				-----			

**Distillers Grains (dehy/corn/w solubles; various sources)*****continued***

91.2	95.0	6.0	26.5	14.0	31.3	71.7	1.8	23.6	0.12	0.66	0.25	0.87	0.50	0.07	0.07	156	19	49	4	1.5	
90.5	94.9	10.4	30.2	8.0	34.0	70.5	1.7	29.9	0.07	0.82	0.35	0.99	0.70	0.19	0.13	124	37	61	2	2.7	
87.0	95.3	12.9	30.9	12.0	32.9	78.1	2.0	20.9	0.10	0.90	0.32	1.15	0.69	0.05	0.16	173	35	54	3	1.0	
91.5	95.0	14.6	29.1	3.0	31.2	74.0	2.0	27.6	0.07	0.94	0.40	1.15	0.62	0.04	0.20	139	38	86	1	2.4	
90.2	94.9	12.4	29.8	13.0	30.4	81.1	2.0	25.8	0.13	0.91	0.33	1.18	0.58	0.07	0.17	169	34	60	2	1.1	
89.4	95.2	9.3	33.0	8.0	34.8	70.9	1.7	31.0	0.06	0.82	0.34	0.91	0.60	0.21	0.12	158	40	62	1	3.2	
90.9	94.6	11.9	31.5	11.0	29.0	82.9	1.9	26.0	0.08	0.96	0.45	1.11	0.57	0.07	0.15	276	57	70	2	3.4	
90.2	94.5	13.7	29.9	9.0	34.1	71.5	2.0	20.6	0.05	1.14	0.32	1.16	0.43	0.19	0.70	204	15	79	5	1.0	
91.0	95.1	13.6	29.9	15.0	35.2	73.3	2.0	16.7	0.08	0.85	0.32	1.17	0.40	0.12	0.19	107	16	102	1	1.9	
91.6	95.6	13.4	30.1	21.2	31.0			13.3													
91.2	95.6	13.3	30.0	18.6	31.1			12.9													
92.7	95.6	11.3	31.0	32.0	29.3			10.3													
92.8	95.5	10.6	31.2	27.7	28.8			8.3													
92.8	95.6	11.4	29.5	27.0	35.2			12.6													
<b>Mean</b>	<b>90.3</b>	<b>95.1</b>	<b>11.5</b>	<b>30.1</b>	<b>15.7</b>	<b>34.7</b>	<b>76.2</b>	<b>1.93</b>	<b>20.1</b>	<b>0.12</b>	<b>0.90</b>	<b>0.35</b>	<b>1.08</b>	<b>0.58</b>	<b>0.12</b>	<b>0.22</b>	<b>180</b>	<b>38</b>	<b>69</b>	<b>4</b>	<b>2.0</b>

**Distillers Dried Grains (dehy/corn/w solubles; Poet)**

88.2	95.5	12.6	31.1	16.8	10.0	28.7	76.7	2.19	14.8	0.04	0.66	0.33	0.93	0.62	0.16	0.17	83	16	76	5	1.0	
89.1	95.6	11.4	30.4	17.1	6.5	31.2	76.1	2.15	13.5	0.02	0.68	0.31	0.96	0.30	0.10	0.16	65	15	77	4	0.7	
86.8	95.6	10.5	31.9	20.6	6.3	27.0	77.4	2.17	14.0	0.02	0.60	0.30	0.85	0.89	0.10	0.15	72	15	100	4	0.8	
88.3	95.4	11.5	30.1	18.3	6.9	30.7	78.0	2.16	14.4	0.03	0.71	0.33	1.00	0.58	0.18	0.16	72	17	89	5	0.8	
88.6	95.4	12.3	31.8	17.1	6.9	26.4	81.1	2.25	13.3	0.03	0.66	0.30	0.91	0.64	0.31	0.15	85	13	84	4	0.5	
87.4	95.7	12.0	28.8	17.6	5.0	28.4	77.5	2.22	13.1	0.02	0.68	0.29	0.94	0.49	0.12	0.13	68	13	180	5	0.4	
89.1	95.5	12.5	29.5	19.5	8.6	25.5	76.4	2.22	14.2	0.02	0.75	0.30	0.98	0.59	0.13	0.13	72	15	220	5	0.5	
88.0	95.4	11.2	29.7	15.7	9.1	29.3	78.5	2.16	15.5	0.02	0.69	0.28	0.89	0.71	0.11	0.12	78	17	85	5	0.6	
89.7	95.1	12.6	32.7	15.6	12.4	23.9	76.8	2.21	16.1	0.02	0.77	0.28	0.95	0.57	0.07	0.14	68	17	80	7	0.9	
87.2	95.2	12.1	31.0	16.8	10.6	30.2	76.2	2.14	15.4	0.02	0.78	0.32	1.00	0.55	0.16	0.16	66	13	96	5	1.0	
<b>Mean</b>	<b>88.2</b>	<b>95.4</b>	<b>11.9</b>	<b>30.7</b>	<b>17.5</b>	<b>8.2</b>	<b>28.1</b>	<b>77.4</b>	<b>2.2</b>	<b>14.4</b>	<b>0.02</b>	<b>0.70</b>	<b>0.30</b>	<b>0.94</b>	<b>0.594</b>	<b>0.14</b>	<b>0.15</b>	<b>73</b>	<b>15</b>	<b>109</b>	<b>5</b>	<b>0.7</b>

DM	OM	Fat	CP	SolP	UndP	NDF	dNDF	NEI	ADF	Lignin	Starch	Sugars	Ca	P	Mg	K	S	Na	Cl	Fe	Mn	Zn	Cu	Mo	Se	
%	----- % DM -----	----- % CP -----	% DM	% NDF	Mcal/kg DM	-----	-----	-----	% DM	-----	-----	-----	% DM	-----	-----	-----	-----	-----	-----	-----	-----	-----	ppm DM	-----	-----	-----

#### Distillers Dried Grains (solubles, raw starch hydrolysis; Poet)

90.4	95.9	10.2	28.6	17.0	7.2	29.2	76.5	2.26	9.8				0.04	0.78	0.32	1.14	1.03	0.24	0.17	105	20	98	8.2	1.2	
90.7	95.9	10.5	28.2	14.5	7.1	27.7	75.9	2.27	10.0				0.03	0.78	0.31	1.14	1.04	0.25	0.14	95	19	97	7.1	1.2	
90.2	95.9	10.6	27.4	15.3	8.4	28.9	68.2	2.18	9.3				0.03	0.78	0.32	1.14	0.98	0.22	0.17	92	20	101	6.5	1.1	
90.2	96.1	10.8	27.6	14.6	6.7	26.7	77.0	2.31	9.7				0.03	0.78	0.32	1.13	0.98	0.18	0.17	86	19	99	6.4	1.1	
90.4	96.1	10.1	28.8	18.4	6.9	26.5	79.2	2.31	10.2				0.03	0.81	0.32	1.13	1.05	0.19	0.17	86	19	99	6.3	1.1	
88.9	95.6	11.0	29.4	20.0	5.9	26.1	81.0	2.35	9.9				0.03	0.83	0.34	1.21	1.19	0.31	0.18	90	21	104	6.8	1.1	
91.7	95.7	10.9	28.3	18.2	5.7	26.8	76.8	2.31	9.8				0.03	0.79	0.32	1.16	1.04	0.29	0.17	83	20	102	6.5	1.0	
93.9	95.8	11.0	26.3	13.9	6.0	25.9	73.2	2.28	8.4				0.03	0.80	0.32	1.15	1.04	0.22	0.17	83	19	98	6.4	1.0	
86.3	95.6	11.9	29.9	22.3	5.5	30.7	76.6	2.31	9.5				0.03	0.85	0.35	1.27	1.12	0.33	0.18	91	21	125	6.0	1.1	
90.0	95.7	10.0	28.3	17.4	7.4	28.3	70.8	2.19	9.7				0.03	0.78	0.32	1.15	1.03	0.29	0.18	84	19	103	5.9	1.2	
<b>Mean</b>	<b>90.3</b>	<b>95.8</b>	<b>10.7</b>	<b>28.3</b>	<b>17.2</b>	<b>6.7</b>	<b>27.7</b>	<b>75.5</b>	<b>2.28</b>	<b>9.6</b>				<b>0.03</b>	<b>0.80</b>	<b>0.32</b>	<b>1.16</b>	<b>1.05</b>	<b>0.25</b>	<b>0.17</b>	<b>90</b>	<b>20</b>	<b>103</b>	<b>6.6</b>	<b>1.1</b>

#### Distillers Dried Grains (high protein; Poet)

94.7	98.2	6.3	40.9	3.5	4.6	21.7	87.9	2.33	12.0				0.01	0.44	0.10	0.37	0.75	0.13	0.07	57	6	65	4.5	0.9	
94.3	98.1	5.3	40.3	8.7	5.7	23.6	89.3	2.29	11.1				0.01	0.47	0.11	0.40	0.71	0.08	0.08	46	7	70	4.3	0.9	
93.7	98.2	5.2	41.6	3.7	6.3	24.3	90.0	2.29	11.4				0.01	0.47	0.11	0.40	0.78	0.12	0.07	44	7	69	4.4	0.9	
94.4	98.0	5.6	40.3	2.1	6.0	23.6	90.4	2.31	10.7				0.02	0.47	0.11	0.39	0.72	0.09	0.07	56	7	71	4.9	0.9	
94.1	98.0	6.4	40.3	8.1	6.4	24.8	92.1	2.34	10.7				0.02	0.46	0.11	0.39	0.74	0.18	0.07	59	7	77	4.8	0.9	
93.6	98.1	5.3	40.6	6.1	5.3	24.1	89.9	2.30	10.7				0.01	0.46	0.11	0.40	0.71	0.10	0.08	46	7	71	4.2	0.9	
93.6	98.1	5.0	42.1	6.5	7.0	22.5	90.6	2.28	11.9				0.01	0.45	0.10	0.40	0.75	0.13	0.08	45	6	72	4.5	0.9	
93.2	98.1	4.4	41.6	8.1	6.1	21.5	94.2	2.30	10.3				0.01	0.45	0.10	0.40	0.82	0.15	0.08	36	6	59	4.1	0.9	
93.6	98.1	4.7	41.6	7.1	5.9	22.5	89.8	2.28	10.7				0.01	0.44	0.10	0.37	0.81	0.19	0.07	42	7	60	4.4	0.9	
93.3	98.1	4.3	42.1	5.6	6.1	21.6	93.7	2.29	11.3				0.01	0.43	0.10	0.37	0.79	0.17	0.08	43	6	63	4.1	0.8	
<b>Mean</b>	<b>93.9</b>	<b>98.1</b>	<b>5.3</b>	<b>41.1</b>	<b>5.9</b>	<b>5.9</b>	<b>23.0</b>	<b>90.8</b>	<b>2.30</b>	<b>11.1</b>				<b>0.01</b>	<b>0.45</b>	<b>0.11</b>	<b>0.39</b>	<b>0.76</b>	<b>0.13</b>	<b>0.08</b>	<b>47</b>	<b>7</b>	<b>68</b>	<b>4.4</b>	<b>0.9</b>

#### Distillers Dried Grains (low fat; various sources)

91.3	6.0	32.1		26.6
92.3	5.7	32.5		25.3
91.5	6.2	31.8		27.3



Nutritional Composition Data (DM Basis)																									
DM %	OM %	Fat % DM	CP %	SolP % CP	UndP % DM	NDF %	dNDF % NDF	NEI Mcal/kg DM	ADF	Lignin	Starch	Sugars	Ca % DM	P	Mg	K	S	Na	Cl	Fe	Mn	Zn ppm DM	Cu	Mo	Se
<b>Linseed (meal, solvent)</b>	91.8	92.0	2.0	43.7	28.2	48.5		16.1																	
Oat (hay)	89.7	91.6	3.7	7.9	32.0	20.3	67.1		44.7				0.33	0.29	0.18	2.15	0.19	0.30	1.48	248	42	32	7		
	92.8	93.5	1.7	6.3	22.0	11.1	67.9	46.2	1.08	46.1			0.26	0.27	0.12	1.76	0.11	0.07	0.10	128	100	39	8	1.8	
	90.0	90.7	2.1	9.1	34.0	8.8	62.3		37.3				0.27	0.38	0.14	2.70	0.12	0.24	1.19	162	65	26	7	1.0	
	89.4	92.2	2.1	6.4	32.0	10.8	60.5		38.1				0.32	0.27	0.11	2.18	0.08	0.16	0.75	130	39	18	8	1.4	
	89.9	91.9	2.0	6.2	34.0	12.9	61.4		38.5				0.29	0.29	0.12	2.31	0.08	0.21	1.25	85	38	15	5	1.1	
	89.3	90.6	2.1	7.5	41.0	10.7	58.5		39.8				0.26	0.28	0.15	1.96	0.08	0.82	1.09	99	36	15	5	1.0	
	91.5	92.8	1.5	5.2	24.0	17.3	67.6		46.2				0.27	0.20	0.10	1.62	0.07	0.12	0.20	85	118	26	6	1.0	
	88.8	92.3	3.0	7.1		4.8	57.9	35.2	1.10	35.0			0.59	0.57	0.36	2.82	0.33	0.36	0.60	439	61	41	8	1.1	
	93.9	92.8	2.2	6.1		7.0	60.3	36.9	1.07	39.7															
<b>Mean</b>	<b>90.4</b>	<b>91.9</b>	<b>2.2</b>	<b>6.9</b>	<b>31.3</b>	<b>13.1</b>	<b>63.6</b>	<b>46.2</b>	<b>1.08</b>	<b>41.5</b>			<b>0.29</b>	<b>0.28</b>	<b>0.13</b>	<b>2.10</b>	<b>0.10</b>	<b>0.27</b>	<b>0.87</b>	<b>134</b>	<b>63</b>	<b>24</b>	<b>7</b>	<b>1.2</b>	
<b>Oat (straw)</b>	93.7	79.2	0.7	2.6	10.0	53.8	70.3		67.5				0.07	0.06	0.04	0.62	0.03	0.02	0.19	1330	178	75	72	1.0	
	92.5	91.7	1.5	8.2	34.4	7.6	57.9	58.0	1.38	37.3	3.6	9.2	5.6												
<b>Oat (whole crop, silage)</b>	29.4	90.2	3.6	9.9	58.2	13.1	67.8		44.5				0.32	0.37	0.22	2.84	0.16	0.18	1.15	357	85	34	13		
<b>Palm Kernal Meal</b>	92.2	95.5	9.7	15.4	13.0	16.9	57.1	21.8	1.13	37.9			0.39	0.77	0.29	0.74	0.16	0.02		526	245	48	21	1.0	
<b>Pistachio Meal</b>	92.2	60.1	13.9	11.4		5.7	13.4	54.6	1.56	10.2															
<b>Potato Waste</b>	23.5	95.2	14.5	14.4		11.6	22.2		17.0	7.9	29.0		0.93	0.49	0.08	0.21	0.13								

Nutrient Content Data (ppm DM)																										
DM %	OM %	Fat % DM	CP %	SolP % CP	UndP %	NDF % DM	dNDF % NDF	NEI Mcal/kg DM	ADF	Lignin	Starch	Sugars	Ca % DM	P	Mg	K	S	Na	Cl	Fe	Mn	Zn	Cu	Mo	Se	
<b>Poultry (litter, dehy)</b>																										
90.7		2.9	18.4	51.1	12.0	45.7			38.1				8.13	1.76	0.63	2.43	0.37		0.89	5642	384	266	61			
91.3	75.0	3.5	24.3	47.0	14.0	45.7	40.1	0.92	32.5				2.49	1.85	0.49	2.43	0.42	0.64	0.16	2500	523	444	307	4.2		
68.9			17.7	58.0	12.4	47.4	16.1		42.2				2.15	1.49	0.57	2.03	0.39	0.55		4430	513	321	248	3.7		
<b>83.6</b>	<b>75.0</b>	<b>3.2</b>	<b>20.1</b>	<b>52.0</b>	<b>12.8</b>	<b>46.3</b>	<b>28.1</b>	<b>0.92</b>	<b>37.6</b>				<b>4.26</b>	<b>1.70</b>	<b>0.56</b>	<b>2.30</b>	<b>0.39</b>	<b>0.60</b>	<b>0.53</b>	<b>4191</b>	<b>473</b>	<b>344</b>	<b>205</b>	<b>4.0</b>		
<b>Prunes (flesh)</b>																										
67.5			4.7	59.0	14.9	7.0	70.6		6.0				0.10	0.12	0.08	1.27	0.04	0.04		48	8	9	4	1		
<b>Prunes (pits)</b>																										
84.8			4.2	48.0	26.2	80.3	8.6		68.7				0.13	0.06	0.04	0.33	0.03	0.01		14	8	6	6	1		
<b>Raisins (whole, cull)</b>																										
89.6	97.7	3.5	3.9		0.1	2.0	60.8	2.23	2.8				0.08	0.12	0.04	0.80	0.06	<0.01	0.02	73	5	3	4	<.5		
<b>Raisins (tailings)</b>																										
92.8	91.8	2.9	8.2		17.1	17.9	16.3	1.67	21.9																	
92.2	90.3	0.4	8.2	41.9	24.0	24.7	40.7	1.55	28.5	10.7	0.4	26.2														
<b>Rapini</b>																										
92.1	89.1	4.1	15.4			44.0	39.6	1.31	37.9																	
91.8	89.7	4.4	14.0			42.7	39.3	1.35	37.5																	
91.9	90.5	4.7	15.1			40.5	39.3	1.41	35.2																	
<b>Rice (bran)</b>																										
85.9	91.5	23.3	15.1		2.9	18.9	45.9	2.42	8.8																	
87.7	90.5	23.4	15.4		3.0	26.6	41.7	2.27	11.6																	
90.9	92.1	18.8	13.2		3.3	17.5	32.6	2.28	7.3																	
<b>Rice (grain)</b>																										
<b>87.8</b>	<b>92.7</b>	<b>6.2</b>	<b>10.4</b>		<b>15.1</b>	<b>13.9</b>			<b>12.5</b>	<b>2.9</b>	<b>52.0</b>			<b>0.07</b>	<b>0.62</b>	<b>0.26</b>	<b>0.65</b>	<b>0.10</b>								
<b>Rice (grain, paddy)</b>																										
87.9	97.8	3.0	8.0		4.3	11.6	16.2	2.0	8.1																	
<b>Rice (hulls)</b>																										
92.9	87.8	1.0	2.3	24.0	47.8	68.7			57.5				0.20	0.08	0.08	0.83	0.03	0.03	0.25	284	36	14	10	1.3		

DM %	OM %	Fat %	CP %	SolP %	UndP %	NDF %	dNDF %	NEI Mcal/kg DM	ADF	Lignin	Starch	Sugars	Ca %	P	Mg	K	S	Na	Cl	Fe	Mn	Zn ppm DM	Cu	Mo	Se			
<b>Rice (polishings)</b>																												
90.3	90.9			15.0	39.0	4.7	24.2			11.9			0.06	2.09	0.79	1.71	0.17	0.01		131	181	45	6	1.0				
<b>Rice straw (hay)</b>																												
93.6	86.6	1.7	3.7		11.4	63.4	32.0	0.82	44.3																			
90.5	81.9	2.1	5.4		10.2	66.4	43.9	0.85	48.1					0.30	0.10	0.22	1.88	0.08	0.05	0.73	199	608	22	3.8	0.2			
94.3	81.0	1.1	4.5		14.3	73.0	40.3	0.66	53.6																			
93.3	83.3	1.2	5.5		13.7	69.6	34.1	0.66	52.2																			
93.0	84.7	2.0	4.4	29.6	29.8	69.7	46.5	0.88	48.8	4.4	3.0	2.9																
90.7	80.8	1.8	5.8		20.8	75.3	41.4	0.65	55.3																			
<b>Mean</b>	<b>92.6</b>	<b>83.0</b>	<b>1.7</b>	<b>4.9</b>	<b>29.6</b>	<b>16.7</b>	<b>69.6</b>	<b>39.7</b>	<b>0.75</b>	<b>50.4</b>	<b>4.4</b>	<b>3.0</b>	<b>2.9</b>	<b>0.30</b>	<b>0.10</b>	<b>0.22</b>	<b>1.88</b>	<b>0.08</b>	<b>0.05</b>	<b>0.73</b>	<b>199</b>	<b>608</b>	<b>22</b>	<b>3.8</b>	<b>0.2</b>			
<b>Rice straw (silage)</b>																												
37.6	83.0	2.6	6.5	36.0	8.8	70.7	29.0	0.60	49.6					0.51	0.16	0.16	1.93	0.08	0.01		373	1417	24	19	1.0			
36.2	82.6	2.8	7.6	39.0	7.8	69.3	30.1	0.63	50.3					0.44	0.14	0.20	2.14	0.17	0.01		416	2111	25	23	1.4			
43.0	80.5	1.6	5.8	39.0	9.5	65.5	24.2	0.54	50.8					0.28	0.12	0.18	1.61	0.07	0.02		686	1420	28	26	1.6			
34.4	83.1	1.9	6.6	35.0	10.7	73.0	22.9	0.45	52.7					0.38	0.16	0.17	1.64	0.09	0.06		469	1690	24	21	1.6			
<b>Mean</b>	<b>37.8</b>	<b>82.3</b>	<b>2.2</b>	<b>6.6</b>	<b>37.3</b>	<b>9.2</b>	<b>69.6</b>	<b>26.9</b>	<b>0.55</b>	<b>50.9</b>					<b>0.40</b>	<b>0.15</b>	<b>0.18</b>	<b>1.83</b>	<b>0.10</b>	<b>0.03</b>		<b>486</b>	<b>1660</b>	<b>25</b>	<b>22</b>	<b>1.4</b>		
<b>Rye (whole crop, silage)</b>																												
24.1	88.7	4.8		11.8	57.0	8.5	53.3	73.4		1.6	33.9				0.64	0.34	0.21	2.47	0.16	0.21	0.73	295	77	31	7	2.4		
<b>Ryegrass (pellets, screenings)</b>																												
93.2	84.3	2.3	10.9	15.0	14.7	54.6	42.1		1.0	34.8					0.53	0.29	0.20	1.03	0.23	0.05	0.30	3280	244	41	6	4.9		
<b>Ryegrass (silage)</b>																												
26.0	92.3	2.9	8.9	56.7	11.2	61.6	57.3	1.32	38.3					0.42	0.25	0.18	1.90	0.20	0.34	0.76								
29.4	90.0	2.7	8.3	49.4	8.4	63.8	53.8	1.20	41.2					0.42	0.23	0.23	1.75	0.26	0.40	0.30								
<b>27.7</b>	<b>91.2</b>	<b>2.8</b>	<b>8.6</b>	<b>53.1</b>	<b>9.8</b>	<b>62.7</b>	<b>55.6</b>	<b>1.26</b>	<b>39.8</b>					<b>0.42</b>	<b>0.24</b>	<b>0.21</b>	<b>1.83</b>	<b>0.23</b>	<b>0.37</b>	<b>0.53</b>								
<b>Safflower (meal, solvent)</b>																												
94.4	94.4	1.9		29.9	14.0	9.0	53.3	16.3		0.9	39.5				0.37	0.68	0.33	1.09	0.29	0.03	0.21	508	36	83	23	1.8		
<b>Saltgrass</b>																												
77.4	81.7	2.2	6.6	33.3	16.7	64.1	27.0	0.57	36.1	5.8					0.81	0.13	0.34	1.10				2.93	5.22	837	50	33	5	0.09
75.2	81.7	2.5	6.5	30.7	16.9	63.8	29.6	0.64	34.6	6.2					0.86	0.13	0.37	1.20				2.93	5.09	1083	55	35	7	0.09

Nutrient Content Data (DM Basis)																										
DM %	OM % DM	Fat % DM	CP % DM	SoIP % CP	UndP % DM	NDF % DM	dNDF % NDF	NEI Mcal/kg DM	ADF	Lignin	Starch	Sugars	Ca % DM	P	Mg	K	S	Na	Cl	Fe	Mn	Zn ppm DM	Cu	Mo	Se	
<b>Soy (hulls, pellets)</b>																										
90.2	94.6		12.7	23.0	11.8	63.3	88.1	1.67	48.5				0.65	0.14	0.22	1.59	0.12	0.01	0.01	651	24	47	8	1.0		
93.8	95.2	2.1	12.4	16.0	12.9	63.0	95.0	1.83	43.0				0.60	0.14	0.22	1.27	0.10	0.01	0.04	482	18	37	6	1.3		
<b>Mean</b>	<b>92.0</b>	<b>94.9</b>	<b>2.1</b>	<b>12.6</b>	<b>19.5</b>	<b>12.4</b>	<b>63.2</b>	<b>91.6</b>	<b>1.75</b>	<b>45.8</b>				<b>0.63</b>	<b>0.14</b>	<b>0.22</b>	<b>1.43</b>	<b>0.11</b>	<b>0.01</b>	<b>0.03</b>	<b>567</b>	<b>21</b>	<b>42</b>	<b>7</b>	<b>1.2</b>	
<b>Soy (hulls, screenings)</b>																										
87.6	95.0	6.6	22.1	28.6		47.5			46.1				0.51	0.41	0.23	2.07	0.21	0.01	0.29							
<b>Soy (meal, solvent)</b>																										
90.2	91.8	1.6	53.2	18.0	3.4	10.6	79.1	1.86	7.3				0.38	0.85	0.33	2.56	0.47	0.01	0.06	290	47	58	21	5.6		
93.4	92.8	2.3	53.5	10.0	5.0	13.8	96.8	1.90	10.2				0.63	0.79	0.31	2.28	0.37	0.01	0.05	151	43	58	17	4.8		
89.1	91.9	1.4	54.1	17.0	3.0	9.6	88.3	1.88	7.2				0.52	0.76	0.33	2.40	0.42	0.02	0.07	156	42	60	16	4.5		
92.7	93.2	1.3	51.9		1.7	8.1	84.9	2.03	6.4																	
91.7	92.6	0.8	49.9	21.2	0.0	8.3	69.9	2.03	5.0	0.3	5.8	9.6														
91.2	92.6	0.4	50.9	21.3	0.0	8.0	69.9	2.02	4.7	0.1	5.5	10.3														
90.8	92.2	0.6	52.5	21.3	1.0	10.4	69.2	1.98	6.0	0.2	4.2	8.2														
<b>Mean</b>	<b>91.3</b>	<b>92.4</b>	<b>1.2</b>	<b>52.3</b>	<b>18.1</b>	<b>2.0</b>	<b>9.8</b>	<b>79.7</b>	<b>1.96</b>	<b>6.7</b>	<b>0.2</b>	<b>5.2</b>	<b>9.4</b>	<b>0.51</b>	<b>0.80</b>	<b>0.32</b>	<b>2.41</b>	<b>0.42</b>	<b>0.01</b>	<b>0.06</b>	<b>199</b>	<b>44</b>	<b>59</b>	<b>18</b>	<b>5.0</b>	
<b>Soy (waste, tofu)</b>																										
20.2	95.9	18.2	31.5	40.1	2.2	20.5			14.7				0.28	0.41	0.22	1.64	0.33	0.02	0.18	140	20	40	9			
<b>Sudan grass (chaff)</b>																										
93.2	92.3	1.6	8.0	30.0		64.7	46.1		35.8				0.36	0.17	0.18	1.68	0.26	0.10	0.87	196	38	29	8	1.3		
94.5	91.2	2.1	9.7	28.0	15.5	67.6	52.3	1.12	44.4				0.37	0.27	0.30	2.26	0.15	0.03	1.23	304	33	32	13	1.0		
<b>Mean</b>	<b>93.9</b>	<b>91.8</b>	<b>1.9</b>	<b>8.9</b>	<b>29.0</b>	<b>15.5</b>	<b>66.2</b>	<b>49.2</b>	<b>1.12</b>	<b>40.1</b>				<b>0.37</b>	<b>0.22</b>	<b>0.24</b>	<b>1.97</b>	<b>0.21</b>	<b>0.07</b>	<b>1.05</b>	<b>250</b>	<b>36</b>	<b>31</b>	<b>11</b>	<b>1.2</b>	
<b>Tomato Paste</b>																										
20.3	86.7	3.6	25.6	66.0	4.7	19.9	89.7	1.90	18.2				0.16	0.49	0.25	5.28	0.28	0.25		41	13	25	3	1.0		
<b>Tomato Pomace (silage)</b>																										
29.8	91.1		17.3	54.0	19.1	62.9	39.2		53.9				0.42	0.40	0.31	0.81	0.21	0.06		1810	60	37	46	1.0		

DM %	OM %	Fat % DM	CP %	SolP % CP	UndP %	NDF % DM	dNDF % NDF	NEI Mcal/kg DM	ADF	Lignin	Starch	Sugars	Ca % DM	P	Mg	K	S	Na	Cl	Fe	Mn	Zn ppm DM	Cu	Mo	Se
<b>Walnut (meal)</b>																									
92.4	94.9	6.2	33.7	3.0	8.0	40.2	43.4	1.49	35.2				0.45	0.67	0.33	1.13	0.24	0.09	0.15	1050	74	77	31	1.3	
93.6	94.8	6.2	30.5	6.0	7.5	37.4	33.7	1.47	34.6				0.35	0.64	0.27	1.06	0.26	0.02	0.07	276	58	52	22	1.0	
91.7			27.1	23.0	5.9	39.0	8.2		38.2				0.32	0.53	0.26	0.96	0.16	0.03		235	81	40	13	1.0	
<b>Mean</b>	<b>92.6</b>	<b>94.9</b>	<b>6.2</b>	<b>30.4</b>	<b>10.7</b>	<b>7.1</b>	<b>38.9</b>	<b>28.4</b>	<b>1.48</b>	<b>36.0</b>				<b>0.37</b>	<b>0.61</b>	<b>0.29</b>	<b>1.05</b>	<b>0.22</b>	<b>0.05</b>	<b>0.11</b>	<b>520</b>	<b>71</b>	<b>56</b>	<b>22</b>	<b>1.1</b>
<b>Wheat (millrun/midds)</b>																									
88.9	94.8		20.5	39.4		45.2			12.7				0.19	1.17	0.42	1.19	0.28		0.15	156	130	95	16		
89.7	94.5		20.4	51.7		35.4			11.8				0.11	1.17	0.19	0.59	0.08		0.13	258	134	94	15		
94.8	94.9	5.1	20.3	38.0	4.9	38.5	52.4	1.66	15.2				0.22	0.87	0.34	1.00	0.21	0.02	0.15	141	112	66	8	1.2	
91.0	94.9	4.3	19.7	38.0	2.5	36.7	52.2	1.67	13.4				0.12	1.07	0.47	1.21	0.19	0.01	0.12	148	153	96	10	3.3	
92.3	94.8	4.2	17.0	43.0	2.9	39.9	49.1	1.60	12.4				0.15	1.33	0.44	1.32	0.16	0.01	0.12	149	127	87	7	2.7	
90.8	94.7	2.8	18.4	33.6		39.8			12.6																
91.8	94.8	2.8	17.5	43.9		35.3			11.7																
89.9	94.4	5.0	19.1	37.1		37.1			11.1																
<b>Mean</b>	<b>91.2</b>	<b>94.7</b>	<b>4.0</b>	<b>19.1</b>	<b>40.6</b>	<b>3.4</b>	<b>38.5</b>	<b>51.2</b>	<b>1.64</b>	<b>12.6</b>				<b>0.16</b>	<b>1.12</b>	<b>0.37</b>	<b>1.06</b>	<b>0.18</b>	<b>0.01</b>	<b>0.13</b>	<b>170</b>	<b>131</b>	<b>88</b>	<b>11</b>	<b>2.4</b>
<b>Wheat (whole crop, silage -&gt; sorted from low to high NDF)</b>																									
32.5	88.8	2.7	9.5	71.0	7.4	45.8	52.6	1.39	32.7				0.24	0.33	0.13	2.09	0.15	0.05	0.70	274	38	33	11	2.9	
33.1	89.8	3.6	12.0	75.8	6.3	46.2	49.2	1.41	32.6																
40.2	90.0	2.4	7.9	72.0	8.7	47.9	45.9	1.31	34.2																
41.5	82.5		10.2	64.0	16.7	50.6	54.8	1.13	38.9				0.46	0.29	0.13	2.00	0.16	0.05	0.72	2230	48	45	27		
36.0	86.8	2.4	11.8	76.7	10.1	50.6	51.0	1.27	38.0																
30.1	86.5	2.8	12.9	73.4	13.2	51.8			37.7				0.25	0.34	0.11	2.26	0.21	0.02	0.48	313	35	33	10		
21.6	86.0	3.5	7.0	71.0	10.0	53.4	47.4	1.20	37.4				0.23	0.27	0.13	1.29	0.10	0.01	0.23	822	70	25	9	2.4	
27.9	85.4	2.5	12.2	70.7	10.2	56.3	54.4	1.22	40.8																
31.2	88.6	2.3	9.1	76.8	13.0	57.2	57.6	1.33	40.2																
<b>Mean</b>	<b>31.6</b>	<b>87.0</b>	<b>2.7</b>	<b>10.6</b>	<b>72.9</b>	<b>10.6</b>	<b>51.8</b>	<b>51.6</b>	<b>1.29</b>	<b>37.4</b>				<b>0.28</b>	<b>0.31</b>	<b>0.13</b>	<b>1.85</b>	<b>0.14</b>	<b>0.04</b>	<b>0.54</b>	<b>834</b>	<b>49</b>	<b>33</b>	<b>14</b>	<b>2.7</b>
<b>Wheat (hay)</b>																									
91.3	89.0	2.5	10.0		3.3	54.4	51.7	1.30	34.6																
<b>Wheat (straw)</b>																									
91.3	87.5	1.7	7.4	46.1	10.8	70.9			48.2				0.54	0.13	0.13	2.29	0.20		2.86	165	18	20	7		
92.8	90.7	1.0	10.4	43.4	6.6	52.1	45.5	1.21	35.2																
92.7	90.4	1.0	6.6	26.0	13.2	66.2	46.0	1.00	44.2																
<b>Mean</b>	<b>92.3</b>	<b>89.5</b>	<b>1.2</b>	<b>8.1</b>	<b>38.5</b>	<b>10.2</b>	<b>63.1</b>	<b>45.7</b>	<b>1.11</b>	<b>42.5</b>				<b>0.5</b>	<b>0.1</b>	<b>0.1</b>	<b>2.3</b>	<b>0.2</b>		<b>2.9</b>	<b>165</b>	<b>18.0</b>	<b>20.0</b>	<b>7.0</b>	

### Assay Codes

DM	- Dry matter	NDF	- Neutral detergent fiber
OM	- Organic matter (i.e., 100-ash)	dNDF	- NDF digested in vitro at 30 h of incubation
Fat	- Fat	NEI	- Net energy for lactation at 3XM (3 times maintenance)
CP	- Crude Protein		-
SolP	- CP estimated to be immediately soluble in the rumen		-
UndP	- CP estimated to be totally indigestible in the digestive tract	ADF	- Acid detergent fiber