

PARENT STOCK NUTRIENT GUIDELINES (GROWING)

	STARTER #1	STARTER #2	GROWER #1	GROWER #2	HOLDING #1	HOLDING #2	PRE-LAYER
Females, weeks of age	0-2	2-4	4-7	7-12	12-lighting	24-lighting	28-30
Males, weeks of age	0-4	4-8	8-12	12-Selection	-	-	-
Crude protein, %	25-26	22-23	19-20	14-15	10-12	12-14	16.0
ME, MJ/kg	11.51	11.51	11.72	11.72	11.30-11.72	11.30-11.72	12.35
ME, kcal/lb	1250	1250	1270	1270	1225-1270	1225-1270	1340
ME, kcal/kg	2750	2750	2800	2800	2700-2800	2700-2800	2950
Total lysine, %	1.60-1.65	1.50-1.55	1.15-1.20	0.70-0.75	0.40-0.45	0.50-0.55	0.90
<i>Available lysine, %</i>	<i>1.44-1.49</i>	<i>1.34-1.38</i>	<i>1.03-1.07</i>	<i>0.60-0.64</i>	<i>0.32-0.36</i>	<i>0.40-0.44</i>	<i>0.81</i>
Total arginine, %	1.60-1.65	1.50-1.55	1.15-1.20	0.70-0.75	0.40-0.45	0.50-0.55	0.90
<i>Available arginine, %</i>	<i>1.44-1.49</i>	<i>1.34-1.38</i>	<i>1.03-1.07</i>	<i>0.60-0.64</i>	<i>0.32-0.36</i>	<i>0.40-0.44</i>	<i>0.81</i>
Total methionine, %	0.61-0.63	0.55-0.57	0.43-0.45	0.34-0.36	0.20-0.23	0.25-0.28	0.40
<i>Available methionine, %</i>	<i>0.57-0.59</i>	<i>0.51-0.53</i>	<i>0.39-0.41</i>	<i>0.31-0.33</i>	<i>0.17-0.20</i>	<i>0.21-0.24</i>	<i>0.38</i>
Total methionine + cysteine, %	1.04-1.07	0.94-0.97	0.76-0.79	0.61-0.65	0.41-0.45	0.51-0.55	0.68
<i>Available methionine + cysteine, %</i>	<i>0.94-0.97</i>	<i>0.83-0.85</i>	<i>0.67-0.70</i>	<i>0.53-0.57</i>	<i>0.33-0.36</i>	<i>0.41-0.44</i>	<i>0.61</i>
Total threonine, %	0.98-1.01	0.91-0.94	0.70-0.73	0.43-0.46	0.24-0.27	0.30-0.33	0.59
<i>Available threonine, %</i>	<i>0.85-0.88</i>	<i>0.79-0.81</i>	<i>0.61-0.63</i>	<i>0.35-0.37</i>	<i>0.19-0.21</i>	<i>0.24-0.26</i>	<i>0.51</i>
Total tryptophan, %	0.26-0.27	0.25-0.26	0.19-0.20	0.12-0.13	0.06-0.07	0.08-0.09	0.15
<i>Available tryptophan, %</i>	<i>0.24-0.25</i>	<i>0.22-0.23</i>	<i>0.17-0.18</i>	<i>0.10-0.11</i>	<i>0.05-0.06</i>	<i>0.06-0.07</i>	<i>0.13</i>
Total valine, %	1.13-1.16	1.06-1.09	0.82-0.85	0.50-0.54	0.28-0.32	0.35-0.39	0.70
<i>Available valine, %</i>	<i>1.01-1.04</i>	<i>0.94-0.97</i>	<i>0.72-0.75</i>	<i>0.42-0.45</i>	<i>0.22-0.25</i>	<i>0.27-0.30</i>	<i>0.62</i>
Total isoleucine, %	0.96-0.99	0.90-0.93	0.69-0.72	0.42-0.45	0.24-0.27	0.30-0.33	0.54
<i>Available isoleucine, %</i>	<i>0.88-0.91</i>	<i>0.81-0.83</i>	<i>0.63-0.65</i>	<i>0.37-0.39</i>	<i>0.20-0.22</i>	<i>0.25-0.27</i>	<i>0.49</i>
Total calcium, %	1.40	1.40	1.30	1.15	1.00	1.00	1.90
Available phosphorus, %	0.75	0.75	0.65	0.58	0.50	0.50	0.52
Total sodium, %	0.17	0.17	0.18	0.18	0.18	0.18	0.18
Total chloride, % minimum	0.18	0.18	0.19	0.19	0.19	0.19	0.19
Total chloride, % maximum	0.30	0.30	0.30	0.30	0.30	0.30	0.30

1. A range of amino acid values are presented due to the affect of management and environmental conditions on growth rates. For instance, the higher amino acid values may be considered during heat stress if growth rates are less than desired.
2. Holding #1 is preferred over Holding #2 to control body weight gain. Holding #2 is given only if accelerated growth rates are required.
3. Pre-Layer can be fed if bodyweight is less than the goal. This diet can only be fed for 2 weeks maximum prior to lighting.
4. Diet changes should be based upon body weight. Consult the Hybrid Parent Stock Performance Goals for body weight and feed consumption information for the time period during which each diet is fed.
5. XL, Converter and Grade Maker products have the same Parent Stock male. Hybrid recommends that Parent Stock males are selected as breeder candidates close to the age that commercial progeny are slaughtered. Males are assumed, in this table, to be selected as breeder candidates at 18-19 weeks of age which is typical for XL and Converter Parent Stock. Grade Maker Parent Stock males are generally selected at 16-18 weeks of age.

PARENT STOCK NUTRIENT GUIDELINES (BREEDING)

	FEMALE LAYER #1	FEMALE LAYER #2	FEMALE LAYER #1	FEMALE LAYER #2	MALES FULL-FED	MALES CONTROL-FED
	SUMMER (>55% egg production)	SUMMER (<55% egg production)	WINTER (>55% egg production)	WINTER (<55% egg production)	POST-SELECTION	POST-SELECTION
Crude protein, %	17-18	15-16	16	14	10	14
ME, MJ/kg	12.35-12.77	12.14-12.56	12.35	12.14	12.55-13.39	12.24
ME, kcal/lb	1340-1385	1315-1360	1340	1315	1360-1450	1325
ME, kcal/kg	2950-3050	2900-3000	2950	2900	3000-3200	2925
Total lysine, %	0.95-1.05	0.85-0.95	0.90	0.80	0.28-0.30	0.65
<i>Available lysine, %</i>	<i>0.86-0.95</i>	<i>0.77-0.86</i>	<i>0.81</i>	<i>0.71</i>	<i>0.23-0.25</i>	<i>0.55</i>
Total arginine, %	0.95-1.05	0.85-0.95	0.90	0.80	0.28-0.30	0.65
<i>Available arginine, %</i>	<i>0.86-0.95</i>	<i>0.77-0.86</i>	<i>0.81</i>	<i>0.71</i>	<i>0.23-0.25</i>	<i>0.55</i>
Total methionine, %	0.42-0.46	0.40-0.44	0.40	0.38	0.20-0.22	0.32
<i>Available methionine, %</i>	<i>0.39-0.43</i>	<i>0.37-0.41</i>	<i>0.38</i>	<i>0.35</i>	<i>0.18-0.20</i>	<i>0.28</i>
Total methionine + cysteine, %	0.72-0.79	0.68-0.75	0.68	0.65	0.40-0.44	0.55
<i>Available methionine + cysteine, %</i>	<i>0.64-0.71</i>	<i>0.61-0.68</i>	<i>0.61</i>	<i>0.59</i>	<i>0.36-0.40</i>	<i>0.47</i>
Total threonine, %	0.62-0.68	0.55-0.62	0.59	0.52	0.17-0.18	0.40
<i>Available threonine, %</i>	<i>0.54-0.60</i>	<i>0.49-0.54</i>	<i>0.51</i>	<i>0.45</i>	<i>0.14-0.15</i>	<i>0.32</i>
Total tryptophan, %	0.16-0.17	0.14-0.16	0.15	0.13	0.05-0.06	0.11
<i>Available tryptophan, %</i>	<i>0.14-0.16</i>	<i>0.13-0.14</i>	<i>0.13</i>	<i>0.12</i>	<i>0.04-0.05</i>	<i>0.09</i>
Total valine, %	0.74-0.82	0.66-0.74	0.70	0.62	0.20-0.21	0.46
<i>Available valine, %</i>	<i>0.65-0.72</i>	<i>0.59-0.65</i>	<i>0.62</i>	<i>0.54</i>	<i>0.16-0.18</i>	<i>0.39</i>
Total isoleucine, %	0.57-0.63	0.51-0.57	0.54	0.48	0.17-0.18	0.39
<i>Available isoleucine, %</i>	<i>0.52-0.58</i>	<i>0.47-0.52</i>	<i>0.49</i>	<i>0.43</i>	<i>0.14-0.15</i>	<i>0.33</i>
Total calcium, %	2.90-3.00	3.10-3.20	2.90	3.10	1.00	1.20
Available phosphorus, %	0.55-0.57	0.51-0.53	0.52	0.48	0.50	0.60
Total sodium, %	0.18-0.20	0.18-0.20	0.18	0.18	0.18	0.19
Total chloride, % minimum	0.19-0.21	0.19-0.21	0.19	0.19	0.23	0.25
Total chloride, % maximum	0.30	0.30	0.30	0.30	0.30	0.30

1. Breeder females should be on layer diets when light stimulated.
2. Control-fed males should be fed at least 0.5 kg feed per day. Males must never lose body weight after selection.
3. XL, Converter and Grade Maker products have the same Parent Stock male. Hybrid recommends that Parent Stock males are selected as breeder candidates close to the age that commercial progeny are slaughtered. XL and Converter Parent Stock males should be selected as breeder candidates at 18-19 weeks of age. Grade Maker Parent Stock males should be selected as breeder candidates at 16-18 weeks of age.