

## Carbohydrate Values of Triple Crown Horse Feed

Horse Feed and Form	WSC	ESC	Starch	Starch + ESC	NSC
Triple Crown 14% Performance <i>Textured</i>	6.3%	5.6%	31.8%	37.4%	38.1%
Triple Crown Training Formula <i>Textured</i>	6.8%	5.5%	15.6%	21.1%	22.4%
Triple Crown Complete <i>Textured</i>	8.8%	8.8%	11.8%	20.6%	20.6%
Triple Crown Senior <i>Textured</i>	5.3%	5.3%	6.4%	11.7%	11.7%
Triple Crown Total Lifetime Care <i>Pelleted</i>	8.4%	5.0%	8.3%	13.3%	16.7%
Triple Crown Growth <i>Textured</i>	11.4%	10.5%	7.8%	18.3%	19.2%
Triple Crown Low Starch <i>Pelleted</i>	3.1%	3.1%	10.4%	13.5%	13.5%
Triple Crown Lite <i>Pelleted</i>	4.8%	4.8%	4.5%	9.3%	9.3%
Triple Crown 30% Supplement <i>Pelleted</i>	8.0%	8.0%	1.8%	9.8%	9.8%
Triple Crown Safe Starch Forage <i>Chopped</i>	6.9%	4.3%	1.8%	6.1%	8.7%
Triple Crown Grass Forage <i>Chopped</i>	7.0%	8.1%	2.7%	10.8%	9.7%
Triple Crown Alfalfa Forage Blend <i>Chopped</i>	9.9%	8.0%	4.7%	12.7%	14.6%
Triple Crown Alfa-Lox Forage <i>Chopped</i>	8.6%	6.6%	0.6%	7.2%	9.2%

\*Values determined by Equi-Analytical Laboratories, Ithaca, NY, reported on as sampled or as fed basis. WSC is water soluble carbohydrates, ESC is ethanol soluble carbohydrates, NSC is nonstructural carbohydrates and NSC = Starch + WSC. Select horse feeds and forage with low Starch + ESC values for horses to prevent laminitis, tying up disease (EPSM, PSSM, RER), prevention of Developmental Orthopedic Disease (DOD), calmer behavior and reduced insulin resistance for Equine Metabolic Syndrome and Equine Cushing's Disease. Also, forages with high NSC values (fructans) are more likely to cause laminitis. All Triple Crown Feeds have fixed ingredient formulas, values reflect an average analysis of multiple feed samples.

The following coefficients of variation (cv) can be associated with the carbohydrate analyses. These should reasonably account for both sampling and analytical variation, though as you know, poor sampling can lead to much larger variation. The coefficients of variation (cv) for starch is 10%, WSC is 15% and ESC is 15%. For example, a feed with a WSC value of 10% should be expected to range from 8.5 – 11.5% and a WSC value of 20% to range from 17 – 23%. In addition, there are variables on ingredients between suppliers that could be as much as an additional 5% to 10% per ingredient. Therefore, products, such as TC 30% Supplement potentially would have a smaller variation than TC Lite due to the number of bulk ingredients making up the feed (2 vs. 4).