

New Insights on Choline Levels in Feed

Balchem is a global leader in the production and distribution of Choline Chloride worldwide.

Recently, in an effort to provide updated and highly relevant information to the Poultry, Swine and Pet Food industries, **Balchem** undertook a small survey of commonly utilized feedstuff samples to assess their choline level. Our goal in this effort was to see if improvements in analytical testing procedures and changes to the genetic makeup of the crops or current processing methods of the feedstuffs might have altered our previous understanding of choline levels in these feed ingredients. This effort to revisit a topic that has been for many years virtually overlooked has yielded some interesting observations. While our survey is still in progress and there are other feedstuffs currently being evaluated, we wanted to share our results to date.

Balchem obtained samples of Soybean Meal (SBM) and Corn from poultry integrators across the USA and analyzed these samples for choline levels in our R&D laboratory in New Hampton, NY. Additionally we confirmed our analysis with an independent external lab. The table below summarizes the choline results from the analysis:

		Choline content (% choline)			
Sample	Sample no.	Mean	S.D.	95% C.I.	NRC value*
SBM	27	0.197	0.053	0.176 – 0.218	0.273
Corn	10	0.055	0.022	0.040 – 0.071	0.062

*NRC value is obtained from "Nutrient Requirements of Poultry, 1994"

The SBM samples, drawn from across the continental USA, have a choline level that is considerably lower than the NRC book value. Importantly, the NRC value falls well outside the 95% confidence interval and, therefore, suggests this industry standard reference value is overestimating the choline levels of SBM. Although our laboratory analysis result for corn and the poultry NRC value are similar, the feed tables from *Feedstuffs* give 0.11% for the choline content in corn, which is greater than the choline content of all corn samples we collected.

Balchem is continuing to evaluate this topic and to consider the implications to the poultry industry. We intend to survey additional feed samples to better understand the level of choline in common feeds. We would like to thank the many industry partners who assisted in providing the feed samples and anticipate future cooperation as we look at this important topic in the future.