

Nutrient composition of corn distiller dried grains with solubles

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Samples of corn distillers dried grains with solubles (DDGs) were collected to determine the nutrient composition and extent of variation relative to source. Samples (N=22) were obtained from four different commercial plants during spring, 2002. Samples were submitted for determination of proximate components, sugar, starch, amino acids, and minerals. Means (as fed) for ash, DM, fat, fiber, protein, starch and sugars were 3.97, 88.3, 10.0, 5.7, 27.5, 4.7, and 2.28%, respectively. Sources varied in fat, protein, and ash content ($P < .01$). Across sources, fat varied 9.4 to 11.1% and protein content varied from 26.2 to 30%. Sources also varied in amino acid content with the exception of ser ($P < .05$). Respective means for met, cys, lys, arg, trp, val, thr, and ile were .49, .52, .74, 1.08, .218, 1.32, .98, and .96. Lys content was the most variable across all samples ($CV=11.2\%$). Within source, CV for lys averaged 4.6%. Respective means for Mg, Na, P, K, Cl, S, and Ca were .31, .107, .73, .95, .165, .65, and .03%. Sources varied in mineral content. Sodium content was the most variable across all samples ($CV=33\%$) and showed considerable variation within sources as well. Analyses of DDGs indicated that differences in composition are related to source of production during the time period of sample collection in this survey. However, within source, composition was found to be relatively consistent with the exception of sodium content.

Keywords: distiller dried grains with solubles, corn, composition

Presented at the 2003 Poultry Science Association Meeting, Madison, Wisconsin