

INFOsource

There is no soybean production and utilization report this month since the latest values were included in the December Soybean Meal INFOsource newsletter and the values for the coming season are not available. It is anticipated that the April newsletter will feature soybean and soybean meal supply and demand estimates for the 2010 crop season.

In developing this newsletter, an impressive website surfaced that showed the growth of soybean production from 1962 to 2005 by geographic area. This website shows visually the changes in world soybean production (<http://centrec.com/resources/promotional/SoybeanModel/WSPmodel.html>). You may want to check out this unique website.

Comparing Soy Protein Products for Turkeys

An experiment was conducted to investigate the effects of diets containing soybean meal, soy protein concentrate and soy protein isolate on growth performance and gut function of the young turkey. One-day-old male turkey poults were randomly assigned to four dietary treatments, with seven pens per treatment and 29 birds per pen. The four experimental diets were isonitrogenous and isocaloric and contained similar amounts of total and water-soluble nonstarch polysaccharides and fed for two-four week periods. The content of oligosaccharides differed among the diets and averaged 2.4, 1.9, 0.9, and 0.1% for the soybean meal, soy protein concentrate and soy protein isolate-based diets, respectively. When compared with SBM, birds consuming the soy protein concentrate and soy protein isolate diets had higher ($P < 0.05$) final BW (4.32 vs. 4.45 and 4.46 kg, respectively). Incorporation of soy protein isolate as a substitute for soybean meal resulted in improved ($P < 0.05$) feed utilization (from 1.76 to 1.67), but did not affect the final BW. The authors concluded that partial or almost complete substitution of soybean meal with soy protein concentrate suppressed the fermentation processes in the ceca and enhanced the growth rate. Substitution of soybean meal with soy protein isolate significantly improved feed utilization, but decreased the body weight of 4-wk-old turkeys with no effect on growth rate of older 8-wk-old birds. (*Note-the comparison of the three soy protein products would have been more meaningful if the diets would have been balanced for essential amino acids. The amino acid content of the three protein sources is different*).

Jankowshi, J. and co-workers. 2009. *The effect of diets containing soybean meal, soybean protein concentrate, and soybean protein isolate of different oligosaccharide content on growth performance and gut function of young turkeys. Poultry Sci. 88:232-2140.*

Glycerin (Glycerol) Use-Layers

The effect of dietary crude rapeseed glycerin (glycerol) on laying performance; egg quality; retention of N, Ca, and P; and metabolizability of energy was determined. The dietary treatments consisted of a control corn-soybean diet containing 6% corn starch (17% CP, 2,775 kcal/kg of AMEn, 0.81% lysine, 0.36% methionine, 3.60% Ca, and 0.37% available P) and three experimental diets containing 2, 4, or 6% crude glycerin substituted for corn starch. During the experimental period (28 to 53 wk of hen age), the dietary level of glycerin had no significant effects on performance (egg production (95.6%), egg weight (60.4 g), daily egg mass (57.8 g/hen), daily feed consumption (121 g/hen), and feed conversion (0.477 g of egg mass/g of feed consumed). No significant treatment effects were found for egg quality parameters (albumen height, Haugh units, yolk color and thickness, density and breaking strength of eggshell), excretion and retention of N, Ca and P, or metabolizability of energy. Linear regression analysis revealed that the AMEn value of crude glycerol was 3,970 kcal/kg (as-is basis). The results of this study demonstrated that crude glycerin may be incorporated to a level of 6% in the diet of laying hens without any detrimental effect on egg performance, egg quality, nutrient retention, and energy utilization.

Swiatkiewicz, S. and J. Koreleski. 2009. *Effect of crude glycerin level in the diet of laying hens on egg performance and nutrient utilization. Poultry Sci. 88:615-619.*