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U.S. Department of Agriculture's Economic Research Service has recently published estimates of world-wide use of soybean meal. The following table provides data for the past three marketing years. One can see that most of the soybean meal is consumed by China, EU-27 countries, United States and the "other" countries which are primarily located in Southeast Asia.

It is interesting that soybean meal consumption in most countries has been relatively stable over the past three years, whereas, meal consumption in China is growing. The importance of the world's economy, a country's population growth, the consumer's demand for meat, milk and eggs, and the profitability of the livestock and poultry operations directly impact these soybean meal use values. Dynamic growth in the world economy should greatly increase the demand for soybean meal and may alter a country's share of the soybean meal market.

## Soybean Meal Use (Million Metric tons)

	2007/2008	2008/2009(*)	2009/2010 (**)	% of Total
United States	30.15	27.89	27.58	17%
Argentina	0.62	0.63	0.68	1%
Brazil	12.26	12.44	12.61	8%
China	30.85	31.67	35.25	22%
India	2.06	2.38	2.85	2%
EU-27	35.17	31.58	31.54	20%
Other Countries	<u>46.13</u>	<u>45.84</u>	<u>48.49</u>	<u>30%</u>
World Totals	157.24	152.43	159.00	100%

**Reference:** USDA, Economic Research Service, *World Agricultural Supply and Demand Estimates; WASDE-481, April 9, 2010*

## Soybean Meal Process/Quality

The objective of this study was to evaluate the nutritional value of expeller soybean meal (ESBM) compared to solvent-extracted soybean meal (SBM). A secondary objective was to determine the effect of SBM's particle size on broiler performance. ESBM is what remains after the oil is mechanically removed from whole soybeans. Expeller-processed ESBM typically has a higher fat and energy content, but lower protein than solvent-extracted meals.

The experiment was a 2 x 2 factorial of SBM type (ESBM and SBM) and particle size (coarse and fine). The fine SBM was produced by grinding the material through a 1.6 mm hammermill screen (390 microns), the coarse treatments were fed as received from the supplier (1,040 microns). A total of 1,024 male day-old broiler chicks were randomly assigned to one of four treatments with 8 replicate pens per treatment and 32 birds per pen. The starter diets were fed in crumbled form and the grower and finisher diets in pelleted form. Commercially available SBM and ESBM were used in the experiments. The SBM was analyzed for moisture, crude protein, and crude fat, which were then used to estimate the ME of the SBM. The estimated ME content of ESBM and SBM was 2,800 and 2,588 kcal/kg, respectively. Results indicated an interaction between particle size and SBM type for the bird's body weight in the 49-day experiment. The coarse SBM and ESBM and fine SBM resulted in heavier 49 day weight (3,794, 3,803 and 3,762 g respectively) as compared to the fine ground ESBM (3,605 g). The adjusted feed conversion ratio for the birds fed the SBM (1.90) was poorer than birds fed the ESBM (1.77). Birds fed the finely milled SBM had poorer adjusted feed conversion ratios (1.86 vs. 1.80) compared to the regular meal. The results of this experiment indicated that birds performed better when fed the coarse SBM. The difference in adjusted feed conversion ratios indicated that energy value of 2,800 kcal/kg for ESBM was underestimated in the diet formulation.

*Pacheco, W.J. and co-workers. 2010. Evaluation of expeller-produced and solvent-extracted soybean meal at two particle sizes on broiler performance. Abstract M25, 2010 International Poultry Scientific Forum; Georgia World Congress Center, Atlanta, Georgia; January 25–26.*