Protein availability of AminoPlus vs. soybean meal as measured by the performance of young chicks.

448 Ross x Ross one-day old chicks were utilized to determine if the protein in AminoPlus has equal bioavailability to the protein in soybean meal. There were 7 treatments in the experiment with 8 replicate pens/treatment and 8 birds/replicate pen. The chicks were fed diets in which 0, 33, 67 and 100% of the soybean meal in the diet was replaced (on a total lysine basis) by each of two separate batches of AminoPlus. The diets were formulated to contain amino acids below the requirement level so performance would be reflective of the bioavailability of protein in AminoPlus. The lysine levels in the diets were formulated at 1.05% vs. a requirement of 1.14% lysine.

The results of this experiment are shown in the following table:

The influence of replacing soybean meal in the diet with AminoPlus on an equal lysine basis on the performance of chicks from 1 to 21 days of age.

Soybean Meal Source			Avg. Daily Gain, gm	Feed/ Bird/ Day, gm	Feed/ Gain Ratio
Soybean Meal %	AminoPlus Batch 1, %	AminoPlus Batch 2, %			
100 control	0	0	28.2	53.6	1.900
67	33	0	28.8	53.8	1.868
33	67	0	30.4	54.1	1.782
0	100	0	28.9	53.2	1.845
67	0	33	29.0	53.7	1.859
33	0	67	29.2	53.1	1.837
0	0	100	28.6	54.3	1.899

Chicks fed the diets with AminoPlus replacing soybean meal actually had slightly increased daily gains and feed efficiencies relative to the chicks fed the control soybean meal ration. These results show that the protein (amino acid) bioavailability in AminoPlus is at least equal to soybean meal, and, in fact, may be higher than that of soybean meal. These data support the fact that the bypass protein and amino acids in AminoPlus are in an available form when they enter the small intestine.