



BIOGRO SUPER® OUTPERFORMS FISHMEAL ...AND SAVES MONEY

Research shows the **BIOGRO SUPER®** can replace fishmeal (Technical Service Bulletin 265E) and improve weight gain and feed efficiency (TSB 281E).

The earlier trial (265E) proved that 2% **BIOGRO SUPER** in a broiler ration produced the same results as 4% Asian fishmeal.

The later trial (281E) indicated the **BIOGRO SUPER** in corn-soy rations improved net profit on 10,000 broilers by up to US \$200.

Now a new trial shows 2% **BIOGRO SUPER** results in better weight gains and feed efficiency, versus a control ration containing 4% high-quality menhaden fishmeal (60% protein). Weight gain improved 3.06%; feed conversion improved 5.63%.

In this most recent trial, a typical corn-soy ration was used, with TREATMENT ONE (CONTROL) also containing 4% menhaden fishmeal. The TREATMENT TWO ration was formulated with the same minimum nutrient levels. But it contained 2% **BIOGRO SUPER**, and no fishmeal.

In TREATMENT THREE, no minimum nutrient levels were set at all. Fishmeal was simply taken out of the TREATMENT ONE ration, and replaced with 2% **BIOGRO SUPER** plus 2% soybean meal (44% protein). As expected, the resulting nutrient profile for the TREATMENT THREE ration was somewhat lower than the other rations.

MATERIALS AND METHODS

One-day old Ross x Ross male broiler chicks were received from a commercial hatchery where they had been Mareks-vaccinated. The chicks were individually allotted to replicate groups weighing approximately the same. There were 18 replicates per treatment, with 10 chicks per replicate.

The chicks were placed in Petersime brooding batteries and offered feed ad libitum, for 16 days, after which the trial ended.





The calculated nutrient values of the rations were as follows:

TREATMENT NUMBER	ONE	TWO	THREE
% FISHMEAL	4.00	0.00	0.00
% SOYBEAN MEAL	35.14	38.80	37.14
% BIOGRO SUPER	0.00	2.00	2.00
PROTEIN %	22.50	22.50	22.06
CALCIUM %	0.98	0.98	0.92
AVAILABLE PHOSPHORUS %	0.45	0.45	0.37
METHIONINE & CYSTINE %	0.90	0.90	0.87
LYSINE %	1.34	1.32	1.29
MET. ENERGY (kcal/kg)	3064	3067	3040

RESULTS AND DISCUSSION

Both **BIOGRO SUPER** treatments outperformed the fishmeal treatment. The results are summarized below, along with the recent Asian cost of the rations:

TREATMENT NUMBER	ONE	TWO	THREE
WEIGHT GAIN (gm/bird)	391	403	393
FEED CONVERSION	1.42	1.34	1.37
% MORTALITY	4.44	3.89	2.22
FEED COST (\$/ton)	238.52	239.83	235.10

This trial again proves that broiler (and layer pullet) producers can safely replace 4% fishmeal with 2% **BIOGRO SUPER**. The best results occur when the substitution is made, and the ration is identical for macrominerals, amino acids and energy (TREATMENT TWO). In this treatment, gain improved 3.06%, and feed conversion was 5.63% better.

Based on recent ingredient costs, the ration for TREATMENT TWO cost US \$1.31 more per ton of complete feed. However, the greater gain and feed efficiency meant an additional US \$134 profit per 10,000 birds.

The ration for TREATMENT THREE cost US \$3.42 less per ton than the fishmeal diet. With its improved performance and lower cost, it also provided more profit to the producer: an additional US \$79 per 10,000 birds.

The Asian poultry producer will choose his strategy depending on current feed costs, and broiler meat prices. With either strategy, **BIOGRO SUPER** greatly improves profitability.

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