BIOLOGICAL FUEL

GT-1000

INTERNATIONAL TRADERS & CONSULTANCY

ITAC Amsterdam | Grote wade 64, 3439 NS Nieuwegein | +31 (0)30 737 05 08 | +31 (0)6 15 404 437

WHAT IS GT-1000?

GT-1000 is a balanced amino acid, vitamins (in active form), mineral feed additive in powder form for livestock, breeding animals, poultry, milking cows, swine, sows etc. GT-1000 is a product derived from special process, which includes fermentation of plant origin, and by derived re-synthesis of amino acids and then transchelation for effective nutritional value. It is a biological fuel, which assist animals to metabolize and easily transport food through intestinal walls.

GT-1000 is entirely made of plant produce and doesn't contain any animal or animal by products. The choice of basic raw material and hygienic preparation are the key point which makes GT-1000 an exceptional animal feed supplement as it acts by natural way on metabolism.

GT-1000 is an excellent bio-regulators and modulators of intestinal bacterial flora and enables animals to reach and maintain an optimum level of health with improved conversion rate of low nutritional value.

HOW DOES IT WORK?

Intestinal cell wall components greatly influence the digestion rate and thereby intake of feed. The size, potential degradability, and their function are few of the factors that limit food intake. In most cases, the intake of feed and assimilation is limited due to abnormality of intestinal wall. GT-1000 aims to optimize the microbial activity in the rumen.

GT-1000 creates an intimate tie of organic mineral elements with proteins (of plant origin) in order to obtain a facilitated intestinal absorption. GT-1000 enables an easy transport of blood and food components, non-toxic nutrition, deeper assimilation and utilization of essential organic trace minerals. GT-1000 has the capacity to cross the barrier of the intestinal walls to develop their action in the specific points and later to be fully metabolized.

GT-1000 is not only a nutritional product but also a biogen catalyst since it stimulates the development of specific lactobacilli, which already exist in intestine and greatly helps animals to maintain intestinal microbic balance.

BENEFITS OF GT-1000

• INCREASES PRODUCTION OF DIGESTIVE ENZYME
which performs strong absorption of food substances.

• BETTER CONVERSION RATE OF LOW NUTRITIONAL VALUE OF FEED AND UTILIZATION.
The management of animal nutrition is a key factor for better production results. GT-1000 allows the utilization of diets, which are low in nutritional value, and yet enables them to obtain the same result of good nutrition.

• METABOLIC MODULATION & ACTIVATION OF NATURAL GASTROINTESTINAL AND MICROBIC SYMBIONT. GT-1000 is a feed supplement that promotes the utilization of feed in economic way and also controls the balance of intestinal micro population. Therefore, GT-1000 exalts the digesting process and at the same time brings mineral elements, which are highly absorbable, and non-toxic.

• LOWER STRESS RECEPTABILITY AND EXALTS ORGANIC DEFENSES. Animals treated with GT-1000 are more capable to react against virus infections- of photogenic bacteria either from feed or from environment- diseases and stress of the environment.

• NO RESIDUES OR METABOLITES AND NO WORRIES OF HYGIENIC-SANITARY OR ECOLOGICAL DISORDER.

• BUILDING OF BODY'S SKELETAL STRUCTURE. Any deficiency in the supply of these minerals results in nutrition disorder and harm to their structure due to imbalances. GT-1000 enables animals to have strength and rigidity to the skeletal structure and plays role in the innumerable enzymatic systems and avoids shortages of essential trace elements. AND, OF COURSE:
• INCREASES PRODUCTION. GT-1000 doesn't alter the natural content of milk, beef any animal produce. Using GT-1000 quality produce is obtained.

• ACCELERATES FASTER GROWTH and INCREASES WEIGHT.
Simply the availability of amino acid and vitamins derived nutritional value with easy transportation of feed and its components in the system enables all animals to grow at faster rate.

• ECONOMY.
Depending on the type of species, the application rate is 1KG : 2,000kg of feed. GT-1000 enables to obtain maximum output with minimum input in animal nutrition.

• IMPROVES GENERAL HEALTH CONDITION.

DOSAGE RATE

ANIMAL SPECIES	GT-1000 DOSE	PER KG OF FODDER
Poultry, Layer		
One—two weeks of age	0.1%	1000
Two-three weeks of age	0.2%	1000
Stock & Breeding animals	0.1%	1000
Milking cows	0.1%	1000
Sheep and goats	0.1%	1000

GT-1000 INGREDIENTS

Manganese, copper, Iron, Iodine, Cobalt, Zinc, Magnesium, Fermented Caramel, and Rice husk total: 1530/1000g.

AVERAGE AMINO ACIDS & Vitamins					
Aspartic acid	238 mg	Valine	60 mg 12	Vitamin B1 Vitamin	1.8 mg
Glutamic acid	229 mg	Histidine	mg	B2	8.3 mg
Alanine	98 mg	Leucine	66 mg	Vitamin B6	8.3 mg
Arganine	12 mg	Lysin	79 mg	Vitamin B12	5MG
Phenilalanine	31 mg	Methionione	15 mg	Panthothenic acid	24.3 mg
Glycine	47 mg	Proline	39 mg	Niacin	180 mg
Isoleucine	30 mg	Serine	44 mg	Folic acid	249mg
Threonine	42 mg				

ALL FEED SUPPLEMENTS ARE NOT THE SAME.
TRY GT-1000 AND SEE THE DIFFERENCE

EFFICACY OF GT-1000 (NATURAL FERMENTED PRODUCTS) IN BROILER DIETS

Jowaman Khajarern and Sarote Khajarern Department of Animal Science, Faculty of Agriculture, Khon Kaen University, Khon Kaen 40002, Thailand

ABSTRACT

Mix-sexed Arbor Acres 396 broiler chicks were fed day-old to 6 wks of age either a control (based on corn-rice bran-fish meal-soybean meal) or the control diet supplemented with chlotetracyclines (CTC) or supplementation with 2 levels of GT1000 (0.10 and 0.20%) or in combination both with GT-1000 and CTC. Each diet was replicated three times; with 22 birds per replicate. Feeding either GT-1000 (0.10 and 0.20%) or CTC (100 mg/kg) resulting improvement in all periods of testing (0-3, 3-6, 0-6 wks of age) for body weight gain and feed conversion ratio when comparing the birds fed with the control diet. Supplementation of GT-1000 in broiler diets satisfactorily replace CTC on performance promoters for body weight gain, feed conversion ratio, carcass quality (carcass grade and dressing percentage) and also decreased in mortality. Additive effects on performance promoters were also observed when GT-1000 and CTC were fed in combination in the broiler diets. The results of experiment indicated that GT1000 was a alternative natural products which can replace on the functions of antibacterial performance promoters in the broiler diets.

(Key words : broiler, performance promoters, natural fermented products, antibiotics).

INTRODUCTION

Recently in the European Union (EU) most antibiotic for growth promoter have been banned. Feeding of antibiotics is risky due to not only cross-resistance but also to multiple resistance have been reported by many researchers. However, the poultry industry has to face the strong political and social movement flavoring for items and substances from various high quality of natural product sources which can replace the functions of antibacterials in the feed. For acceptance by consumers only "natural feed additives" have been produced by fermentation and have been reported in animal feeds for immunoenhancing material, powerful flavorants, digestenhancing enzyme, probiotic effect in the gut, inhibition of pathogens, detoxification agents and mycotoxin binders. The present experiment was conducted to investigate the efficacy of GT1000 (natural fermented products) for alternative antibacterial performance promoters in broiler diets.

MATERIALS AND METHODS

Three hundred and ninety six mixed-sex Arbor Acres broiler chicks were divided into six treatments with three replications of each and chicks penned in replication of twenty two birds. Chicks were house in floor pen with heated for the first three weeks of the experimental period. The basal experimental diets (Table 1) consisted of a corn-rice bran-fish meal-soybean meal for the starter (0-3 weeks of age) and grower (4-6 weeks of age) containing one of two levels of GT1000 (0.10 and 0.20%) or in combination with chlotetracycline (CTC) at the level of 100 mg/kg. All diets were maintained isocaloric and isonitrogenous (Table 1). Feed and water were provided ad libitum and weight gain and feed consumption were recorded at three and six weeks. Mortality of birds were also recorded. At the end of the test period of fourty two days, six randomly selected birds from each pen of replication were killed for carcass quality (carcass grading and dressing percentage). The data were analyzed by analysis of variance using the GLM procedure of SAS (1985) and difference between means determined by Duncan's Multiple Range Test (Steele and Torrie, 1960). All statements of significant are based on the probability level of 0.05 and 0.01.

RESULTS AND DISCUSSION

The results obtained in the feeding trials are summarized in Table 2. Supplementation of GT-1000 with two levels (0.10 and 0.20%) satisfactorily replace chlotetracyclines (CTC) for performance promoters in both body weight gain, feed conversion ratio and also decrease in mortality when comparing with the birds fed with control diet (treatment 1) and fed with antibiotic chlotetracyclines diets (treatment 2) for all periods of testing (0-3, 3-6 and 0-6 wks). Supplementation of GT-1000 in combination with CTC showed an additive effect for performance promoters when comparing with the birds fed the diets with GT-1000 plus CTC. Supplementation both two levels of GT-1000 or in combination with CTC also showed improvement in both carcass grade and dressing percentage. Therefore, it is concluded that GT-1000 can be used alone or in combination with antibiotics (CTC) as alternative for growth promoters, feed saver and improved carcass quality in broiler feeds.

REFERENCES ® th SAS Institute. 1985. SAS User's Guide : Statistics. 5 ed. SAS Institute Inc. Cary, NC. Steete, R.G.D. and J.H. Torrie. 1960. Principles and Procedures of Statistics. McGraw-Hill Book Co., New York.

Table 1. Composition of the basal diets.

Ingredients and composition		**0-3 WK**	**3-6 WK**
Ground yellow corn	(8% CP)	48.40	50.79
Rice bran	(12.5% CP)	6.80	6.80
Fish meal	(58% CP)	10.0	6.50
Soybean meal	(44% CP)	28.0	28.0
Rice bran oil	(unrefine)	4.00	4.50
Dicalcium phosphate	(P 21%)	1.50	1.80
Limestone		0.15	0.40
DL-methionine		0.23	0.21
L-lysine-HCl		0.22	0.20
Salt		0.20	0.30
Vitamin-mineral premixes		0.50	0.50
Composition by calculation:			
Protein, %		23.24	21.32
ME, kcal/kg		3,160	3,178

1Vitamin-mineral premixes provides (per kilogram) : vitamin A, 5,500 IU; vitamin D3, 2,500 IU; vitamin E, 5 IU; vitamin K3, 1.45 mg, thiamine 2.0 mg; riboflavin, 7.0 mg; pyridoxin 5.0 mg; vitamin B12 30 µg, pantothenic acid, 12 mg; niacin, 50 mg; choline chloride, 500 mg; foric acid, 1 mg; biotin, 15 µg, ethoxyquin, 125 mg; Mn 50 mg; Zn 40 mg, Fe 80 mg; Cu 8 mg; I .35 mg; Se .15 mg.

Table 2. Influence of GT-1000 on body weight gain (BWG),

Feed conversion ratio (FCR), mortality and carcass quality (carcass grade; CG and dressing percentage; DPC).							
	T1	T2	T3	T4	T5	T6	
Variable BWG, g :							
0-3 wks	604	609	608	611	612	613	6.82
3-6 wks	b1,297	ab1,320	ab1,315	ab1,330	ab1,333	ab1,335	a19.18
0-6 wks	1,901	1,929	1,923	1,959	1,945	1,948	24.73
FCR, g feed/g gain:							
0-3 wks	1.45	1.42	1.40	1.39	1.41	1.37	0.04
3-6 wks	a2.57	ab2.48	ab2.54	ab2.47	b2.45	b2.45	0.06
0-6 wks	a2.22	ab2.15	ab2.18	ab2.13	b2.12	b2.11	0.05
Carcass quality : CG (score)*	3.28	3.33	3.39	3.44	3.42	3.47	0.12
DPC (%)**	82.74	83.14	83.33	83.47	83.45	83.55	0.55
Mortality (0-6 wks) %	7.57	4.54	3.03	3.03	4.54	3.03	
*a-b Value within a row with no common superscript differ significant (P<0.05). + + * CG (score) = 5 score grade (A = 4), B = 3.5, B = 3, C = 2.5, C = 2)Dressing weight with out GT tract ** DPS (%) = x 100 Body live weight./*							

Effects of Supplementation of GT-1000 Feed Premix on Growth Performance of Broilers

Dr. H. Lotfollahian
Poultry Nutritionist

E-mail: houlotf@yahoo.com

H. Lotfollahian, S. A. Hosseini and J. Mirabdolbaghi
Members of Scientific Boards
Animal Science Research Institute P. O. Box 1483 – 31585 Karaj - Iran

Abstract:
In order to study the effects of using of feed premix GT – 1000 in broiler chicks diets on the performance an experiment were conducted in completely randomized design with 3 treatments and 4 replicate in 12 experimental units. 720 day - old chicks (Cobb strain) were used for 42 days. Isonitrogenous and Isocarolic diets were prepared for starter, grower and finisher periods with 0, 0.1 and 0.2 % GT–1000. In this experiment Feed Intake, weight gain, feed conversion ratio, mortality percentage and production index were studied every week and in total period. Data obtained in this study were analyzed with SAS statistical soft ware and Duncan test were used for comparison of means.
Results showed that there were not significant differences between experimental treatments about all traits in total period (P < 0.05). Average final body weight in group feed with diets contains 0.1% GT–1000 was 2155 g (higher than other experimental groups). Feed conversion ratio and production index in two groups feed with diets include GT–1000 were higher than control group. The best production index achieved with diets include 0.2 % GT– 1000.

Key words: GT – 1000, Feed premix, broiler chick performance, production index.

Introduction:
One of the serious problems in poultry production in our country is feed ingredients deficiency and their cost. In order accordingly to those problems poultry diets are usually imbalance.
There are some feed additives to improve poultry performance. GT– 1000 is a balanced amino acid, vitamin (in active form), mineral feed additive in powder from for livestock, breeding animals, poultry and dairy animals. GT- 1000 is derived from a special process which includes the fermentation of planet products and re- synthesis of amino acids and a final trans chelation for effective nutritional value. It is a Biological fuel, which assist animal to metabolize and easily transport food through intestinal walls.

BIOLOGICAL FUEL
GT-1000
INTERNATIONAL TRADERS & CONSULTANCY

Material and methods:
In order to study the effects of using of feed premix GT – 1000 in broiler chicks diets and their performance an experiment were conducted in poultry research station , Animal Science Research Institute, karaj – Iran for 42 days. 12 experimental unit were used .
There were automatic drinking water in each unit and chicks had free access to diet.
During experimental period management condition for all treatment was equal (Temperature, Lightening, vaccination and others). Experiment carried out in completely randomized design in three stages (starter, grower and finisher period). 720 day – old chicks (Cobb strain) were used and there were not significant differences between averages of chick weight in each unit in the first day of experiment. Feed Premix GT–1000 obtained from Jade – Abrisham Company.
Chemical composition and sanitation situation have been studied in another experiment. Chemical composition of GT–1000 feed premix have shown in table – 1. Experimental diet with 0, 0.1 and 0.2% GT–1000 prepared for starter, grower and finisher periods according NRC (1994) and Cobb management recommendation. Experimental diets were Isocaloric and Iso nitrogenous. During experimental period's production traits such as feed intake, weight gain, feed conversion ratio, mortality percentages were studies Every week, each periods and total Period. Feed cost per each kg body weight and production index calculated in total period. Data obtained about traits were analized with SAS statistical soft ware and Duncan test were used for comparison of means.

Table 1 – Chemical Composition of GT – 1000 Feed Premix (mg /kg)

Cupper	4.90
Cobalt	1.8
Zinc	67.7
Mn	113
Fe	517
K	11000
Vitamin B1	1.8
Vitamin B2	8.3
Vitamin B6	24.3
Vitamin B12	5
Niacin	180
Methionine	15
Lysine	79
Serine	44
Isolusine	30

Results:

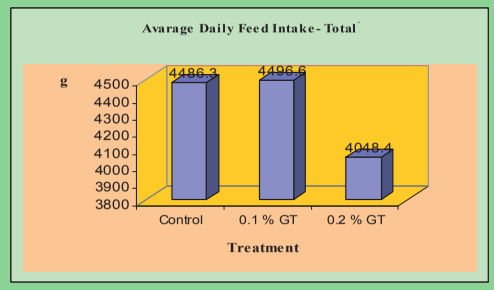
Feed Intake:
Feed Intake in 0.2 % GT groups in total period was 400 g higher than control groups.

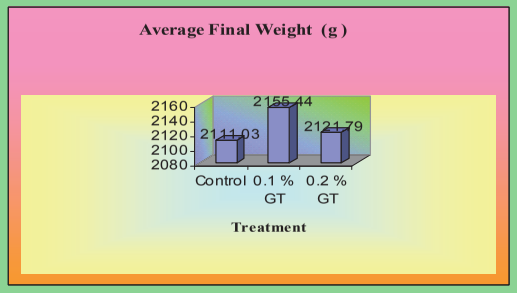
Weight Gain:
Average Weight gain in chicks feed with diets with 0.1 % GT– 1000 was about 45 g higher than control groups.

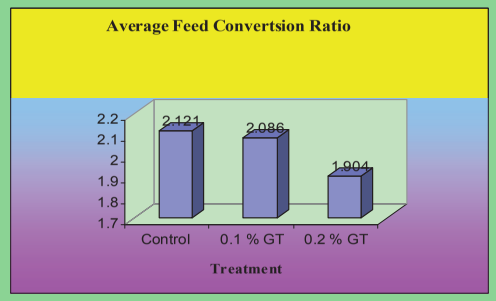
Feed Conversion Ratio:
Feed Conversion Ratio in total period in control, 0.1% and 0.2% GT– 1000 were 2.121, 2.086 and 1.904 respectively.
The best feed conversion Raito achieves with diets containing 0.2% GT– 1000.

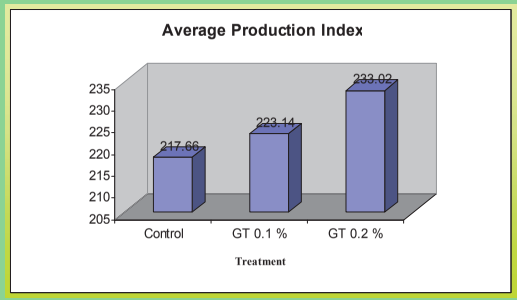
Production Index:
The best production Index has seen in group feed with diets containing 0.2% GT– 1000.

Difference between experimental treatments about all traits in total period was not significant (P < 0/05).









Conclusion:
Final body weight with diets included 0.1 % GT- 1000 feed premix were 45 g higher than control group and feed intake with diets included 0.2% GT- 1000 were 440 g less than control group and also production index was the best with those diets.

Acknowledgment:
The authors gratefully acknowledge JADE – ABRISHAM Company for their assistance and financial support. Special thanks to H. Goodarzi for cooperation during the experiment.

BIOLOGICAL FUEL
GT-1000

ITAC Amsterdam | Grote wade 64, 3439 NS Nieuwegein | +31 (0)30 737 05 08 | +31 (0)6 15 404 437
www.superauxine.com | info@superauxine.com