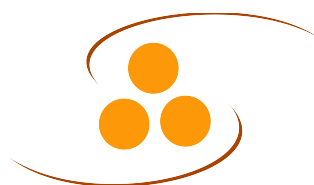




SUPLEMENTO ENERGÉTICO PARA LA NUTRICIÓN ANIMAL



PREPEC

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Patent No. 293972

Registry SAGARPA: lipofeed PB - A-0828-001
lipofeed AQ - A-0828-002

Technical Data Sheet

I.- DESCRIPTION

Lipofeed is the result of a biotechnological development, based on gluconeogenic substrates, that provide animals from all species with glucose precursors that activate and stimulate metabolic pathways that produce energy along with other different elements (metabolite), whose function is to increase the gene expression (nutrigenomics) that optimizes the use of ingredients from a ration (carbohydrates, proteins, lipids, vitamins, minerals), which makes animals express their maximum genetic potential according to their zootechnical function.

Glucose is the source of energy for most of the cells; they use it in order to satisfy the sudden demand of energy of an organism; these demands can be: reproduction, growth, weight gain, milk or egg production and so on. Carbohydrates and lipids are the main compounds that an organism uses for obtaining energy once they are metabolized and synthesized in glucose or glycogen by the liver.

Fats are used in rations as energy sources; however, there are other kinds of compounds that are neither carbohydrates nor fats, and that form glucose and glycogen when they are metabolized. The main pathway within the metabolism of carbohydrates, lipids and proteins that allows the conversion of these compounds is called gluconeogenesis; this creates biosynthesis of another source of glucose. The substrates that intervene in this process are propionates, lactates, glycols and glucogenic amino acids.

These substrates stimulate and improve gluconeogenesis thanks to the Krebs Cycle, which consists on a series of chemical reactions, whose result is the generation of energy that takes place (mainly) in the mitochondria of the hepatic cells. The mitochondria, which are called "miniature energy-producer plants", are the place where energy molecules (ATP) that are necessary for the metabolic functioning of an organism are synthesized. When those substrates are missing, a glucose molecule only generates 2 ATP molecules; unlike the 36 ATP molecules that are generated when such substrates are added to the ration.

Fats do not activate and stimulate gluconeogenesis, which is the aerobic pathway of the

carbohydrates' metabolism, where glucose biosynthesis takes place. Fatty acids are not gluconeogenic and two of such moles are required in order to synthesize a glucose mol, which causes an extra metabolic cost in animals.

Lipofeed is a supplement with a liquid and powder presentation that was developed in order to be used as a nutritional energy source and to replaces the use of 10 kg of animal (tallow) or vegetable (oil) fat with one kilogram or liter of supplement during the formulation and elaboration of balanced animal feed.

II.- FUNCTIONAL BENEFITS

- 1 liter or kilogram substitutes up to 10kg of tallow.
- 1 liter or kilogram substitutes up to 10kg of oil.
- It doesn't go stale.
- It is not toxic.
- It is not hormonal.
- It is not beta-agonist.
- Its ingredients are innocuous.
- There's not time for retirement; either before animal sacrifice or before sending to the market products that are meant to be for human consumption.
- Quality is always uniform.
- It gets mixed with the ration's ingredients without any problem.
- Its handling is safe; thus avoiding risks of accidents.

III.- ENERGY VALUE

By accelerating the Krebs Cycle, **Lipofeed** can make each kilogram and liter generate up to:

Ruminants	Pigs	Birds
81.60 Mcal. de E.D	81.60 Mcal. de ED	81.60 Mcal. de ED
77.50 Mcal. de EM	77.50 Mcal. de EM	77.50 Mcal. de EM
50.10 Mcal. de ENm	64.00 Mcal. de EN	61.70 Mcal. de EN
31.90 Mcal. de ENg		
48.80 Mcal. de ENl		

The latter data is just informative and doesn't represent commercial warranty

IV.- GUARANTEED ANALYSIS

	Lipofeed AQ (liquid)	Lipofeed PB (powder)
Propane-1,2-diol	4.00%	3.30%
Sodium or calcium propionates	11.20%	6.90%
Excipient q.s.f.	100.00%	100.00%

V.- METHOD OF USE

- Mix it with the food during its preparation.
- Add it to the drinking water.
- As direct supplement or over the food.

VI.- PRESENTATION

lipofeed AQ. Liquid supplement; plastic containers with 20, 50 and 200 liters of net content.

lipofeed PB. Powder supplement; sacks of polypropylene or paper bags with insulating interior. 20 kilograms of net weight.

VII.- EXPIRATION

- **lipofeed AQ:** Six months after its elaboration.
- **lipofeed PB:** 24 months after its elaboration.

VIII.- STORAGE

- Keep in a cool and dry place away from sunlight.
- Close the container after using the product until it's finished.

VIII.- PRODUCTIVE BENEFITS

Swine

- Sow produces more milk.
- Prevents ketosis in the sow.
- Higher fertility index.
- Avoids hypoglycemia in the piglet.
- More uniform litters.
- Reduces the piglet's mortality index.
- Higher resistance to pig-handling and environmental stress.
- Faster profit making (less days in the market).
- Higher yielding carcass.
- Better meat quality (lean meat).
- Higher semen production.

Dairy Livestock

DAIRY CATTLE, GOAT AND SHEEP

- Prevents ketosis (clinical and subclinical).
- Prevents the fatty liver disease in delivering females.
- Increases peak milk production.
- Higher milk production.
- Lower infertility rates.
- Reduces problems like metritis, lack of menstrual cycle and ovarian cystitis.

Feedlot livestock

FEEDLOT CATTLE, SHEEPS AND GOATS

- It reduces the adaptation period (from paddock feeding to stack feeding) in the corrals.
- Highest weight-gain speed.
- Better meat quality.
- Higher yielding carcass.
- Highest resistance to stress during transportation.

Poultry

FEEDLOT CHICKEN, TURKEY AND QUAIL

- Higher resistance to handling and environmental stress.
- Lower death rate.
- Higher flock uniformity.
- Better meat quality.
- Better feeding conversion.

LAYING HEN, TURKEY AND QUAIL

- Higher resistance to handling and environmental stress
- Increases egg-laying index.
- Better body condition
- Better egg quality
- Better feeding conversion

BREEDING BIRDS:

- Higher resistance to handling and environmental stress
- Higher fertility index
- Longer egg-laying index
- Longer shelf life

X. GENERAL DOSAGE

- A liter or kilogram of Lipofeed can substitute up to 10 kg of tallow or vegetable fat (oils) in balanced feed. This is to be included during food elaboration.
- As energy supplement, dosify 1 ml or gram per every 20 kg of weight. Administer directly on top of the food or include it during the elaboration process.
- In drinking water, when needed, add 1 lt per every 1000 liters of water.

- Dosify 1 ml or gram per every 20 kg of weight in the following cases:
 - Dairy cows in transition period.
 - Sheep and goat in the last six weeks of gestation.
 - Poultry, Bovines and Porcines during handling or environmental stress.
 - Feedlot cattle, goats and sheep in flushing state. over the food or include it during its elaboration, directly or in drinking water.

XI. DOSAGE PER SPECIES

Porcine

- 1 liter or kilogram provides enough energy to substitute partially or totally up to 10 kg of tallow or oil. Mix in the food during its elaboration.
- As energizing supplement direct intake or on top of the food 1 ml or gram per every 20 kg of weight.
- In drinking water, dosify 1 liter per 1000 liters of water.
- During environmental or handling stress period, last two weeks of gestation and lactation, dosify 1 ml or gram per every 20 kg of weight.

Dairy cattle

COWS IN TRANSITION PERIOD:

- 3 weeks before giving birth, up to 80 days after, 40 ml to 60 ml or grams per day on top of the concentrate or include them in the food, during the elaboration process.

MILKING COWS:

- Until 200th day of lactancy, 25 to 40 ml or grams per day on top of the concentrate or include them in the feed, during the elaboration process.
- Every liter or kilogram of lipofeed, can substitute up to 10 kg of ruminally inert fat or overweight.

RE-BREED:

- Add 1 ml per every liter of milk substitute in the same preparation mixture.
- In initiation foods, daily supply from 25 to 30 ml or grams per animal; on top of the food or including them during the elaboration process.

SHEEP AND GOAT:

- During the last six weeks of gestation until the weaning process, 4 to 6 ml or grams per day on top of the concentrate.
- In the flushing stage, its advised to use from 3 to 4 liters or kilograms per metric ton of food in order to obtain better fertility results.

FEEDLOT LIVESTOCK

FEEDLOT BOVINE, OVINE AND CAPRINE:

- 1 liter per every 1000 liters of drinking water (recommended when receiving the livestock in the corral).
- Administer 1 ml or gram per every 20 kgs of weight over the food or mix it during its elaboration.

BIRDS

BIRDS FOR FATTENING, LAYING AND BREEDING

- Mix it with the feed during its elaboration; 1 liter or kg provides the energy needed to partially or totally substitute up to 10 kg of oil.
- Include 1 liter per every 1000 liters in the drinking water during periods of stress (environmental or handling).
- **(IMPORTANT)**. When broiler chicken needs pigmentation, completely substitute oil with **lipofeed** until the third week; from then until it is put in the market, use 50% of oil and 50% of **lipofeed** in the recommended dosage for a liter or kilogram per every 10kg of oil.

WITH **LIPOFEED**, ANIMALS WILL ALWAYS HAVE THE ENERGY REQUIRED FOR REPRODUCTION, GROWTH, WEIGHT-GAIN, MILK AND EGG PRODUCTION.

Lipofeed energy supplements are today constituted as nutrition tools that reduce costs in the formulation of balanced feed , increases production performance of animals and, most important, increases profit; thus fostering competitiveness of the livestock company in the market.

MADE IN MEXICO BY



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