

DMG ADEK Powder

Each 100 gram Contains:

Vitamin A	2000000 IU
Vitamin D ₃	2000000 IU
Vitamin E	6000 mg
Vitamin K	5000 mg
Leads Specs	



DMG ADEK Powder



Vitamins play crucial role in both human and animal nutrition. As organic catalysts present in small quantities they are essential for the normal functioning of metabolic and physiological processes such as growth, development, health and reproduction. The requirements of vitamins animals are not fixed: they vary according to new genotypes, levels of yield and production systems.

Vitamin requirements in animals are affected by a multitude of factors. Vitamins may only represent less than 1 % of the cost of animal feed but they are present in 100 % of metabolic functions, a fact which gives them the status of micronutrients of “macro-importance”

VITAMINS	FUNCTIONS	DEFICIENCY SYMPTOMS
VITAMIN A	Vision, Steroid synthesis, Epithelialization	Severely retarded growth, Blindness, Skin Problems, Higher susceptibility to infections
VITAMIN D	Absorption and fixing of calcium	Rickets, Osteomalacia
VITAMIN E	Antioxidant, Stimulates defenses at 20 times its minimum requirements	Muscular dystrophy, Exudative diathesis, Encephalomalacia
VITAMIN K	Anticoagulant	Hemorrhages, Anemia

VITAMINS AND PATHOLOGY

The interrelationship between nutrition, stress and pathology have received growing attention. This is demonstrated by the many reviews published in the last 20 years like their effects on immunity, specific pathologies like coccidiosis, ascites, thermal stress and thermal stress. All of them devote a large amount of space discussing investigation on vitamins. Stress reduces growth rate and the carcass and breast yield and impairs feed conversion. It has been frequently demonstrated both experimentally and in practice that a higher than normal level of supplementation of vitamins has a beneficial effect on these parameters.

Immunological stress is produced when the tissues are invaded by a pathogenic agent, whether by natural infection or vaccination. The primary defensive barrier depends on the integrity of the epithelial and mucous membrane, in which vitamin A plays a fundamental role (Chew & Park, 2004). The physiological response is initiation of phagocytic activity of macrophages and the production of specific antibodies. Protecting the macrophages from self- destruction requires the antioxidant activity of Vitamin E (Chew 1995). Vitamin A, D and E modify the leukocyte response (Klasing, 2007). Under field conditions it is well known that vitamin treatments help sick animals recover better, but investigation has focused on studying the contribution of vitamins to improving immunity and to the prevention of specific pathologies only recently.

VITAMIN A: It protects the epithelial tissues and mucous membranes, which are natural barrier against pathogens, and therefore preventing infections. Vitamin A is needed for the proper functioning of important lymphoid organs like thymus and bursa of Fabricius, and modifies leukocyte response, in particular of the CD4+ T cells

VITAMIN K: Birds can synthesize Vitamin K in the intestine, but to only a very limited degree. Furthermore, its anticoagulant action is impaired by aflatoxins (Daghir, 1996) and by prolonged treatment with antimicrobials, which eliminate the intestinal flora that synthesize it.

VITAMIN D: The primary function of vitamin D is to elevate plasma calcium and phosphorus to a level that will support normal mineralization of bone as well as other body functions. It is now realized that vitamin D is not only important for mineralization and skeletal growth but has many other roles in regulation of the parathyroid gland, in the immune system, in skin, cancer prevention, in metabolism of foreign chemicals and in cellular development and differentiation. There is a regulatory role of vitamin D (1,25-(OH)₂D) in immune cell functions (Reinhardt and Hustmeyer, 1987), the release of insulin in relation to glucose challenge (DeLuca, 2008), and reproduction in both males and females (DeLuca, 1992).

VITAMIN E: This vitamin is the main antioxidant in blood and on a cellular level, it maintains the integrity of the cellular and vascular membranes. It also acts as detoxifier and takes part in many other biochemical reactions. Vitamin E is essential for the fertility of adult birds. This vitamin is also involved in immune response on a cellular as well as humoral level.

VITAMIN E: This vitamin is the main antioxidant in blood and on a cellular level, it maintains the integrity of the cellular and vascular membranes. It also acts as detoxifier and takes part in many other biochemical reactions. Vitamin E is essential for the fertility of adult birds. This vitamin is also involved in immune response on a cellular as well as humoral level.

VITAMIN D FUNCTIONS:

- Active form, calcitriol, functions as a steroid hormone
- Essential for control of blood levels of Calcium (Ca) and Phosphorous (P) alongside hormones, calcitonin and parathyroid hormone (PTH)
- Stimulates active transport of Ca and P across intestinal epithelium
- Mobilizes Ca and P from the skeleton, intestine and kidneys
- Promotes growth and mineralization of bones
- Essential for normal insulin secretion, in the pancreas
- Maintains normal citrate levels in blood
- Protects against amino acid loss through the kidneys
- Influences the absorption of Mg, Zn, and other minerals from the small intestine
- Helps the assimilation of vitamin A
- Regulates gene expression of more than 50 genes
- May act as immune-regulatory hormone, enhancing the performance of immune system

VITAMIN E FUNCTIONS:

BIOLOGICAL ANTIOXIDANT

- Maintains structural integrity of the cell and metabolic activity
- Reduces the production of free radicals from unsaturated fatty acids in the cells
- Stabilizes/protects vitamin A, C, carotenoids and their intermediates in the body
- Ensures red blood cell stability and maintains capillary blood vessel integrity

DISEASE RESISTANCE

- Stimulates antibody production (particularly IgG), phagocytosis and the bactericide effects of phagocytes – to help killing invading bacteria
- Maintains structural integrity of immune cells
- Stimulate prostaglandin E formation from arachidonic acid
- Helps in resistance to viral infection
- Critical in cell membranes, protecting from oxidation and peroxidation from their own lipids (most active cells are at greatest risk)

ELECTRON TRANSPORT AND DNA

- Regulates synthesis of DNA within cells

ANTIOXIDANT EFFECT

- Protects against heavy metal toxicity from silver, arsenic and lead
- Can be effective against other substances

REPRODUCTION

- Controls development and function of the gonads
- Influences hormone metabolism through the pituitary gland

VITAMIN K FUNCTIONS

- Regulates synthesis of four blood coagulation proteins in the liver; Factor II (pre-thrombin), Factor VII (proconvertin), Factor IX (Christmas factor) and Factor X (Stuart- power factor)
- Involved in number of Vitamin K dependent proteins e.g. plasma proteins C and Shave anticoagulant roles, proteins, Z & M function unknown, protein S may also have a role in regulation of bone turnover
- Production of the calcium transport protein, osteocalcin, for bone mineralization and eggshell production

VITAMIN A FUNCTIONS

Vision

- Part of rhodopsin, the pigment that receives light in the eye

Epithelium

- Involved in the formation, protection and maintenance of mucous membranes and epithelial tissues
- Helps in control of growth and differentiation processes of the cellular metabolism by influencing the transcription of more than 300 genes (genetic expression)

Bone development

- Important in growth and differentiation of embryonic tissues
- Involved in enzyme reactions and affects the biosynthesis of some hormones
- Involved in control of bone resorption and deposition

Immune response

- Affects antibody response and disease resistance

Reproduction

- Involved in spermatogenesis

ڈی ایم جی۔ ایڈک

جدید پولٹری فارمنگ میں متوازن غذا کی بہت اہمیت ہے۔ پرندوں کی موروثی پیداواری صلاحیت بہتر (Improved Genetic Potential) ہونے کی وجہ سے ان کی غذائی ضروریات بڑھ گئیں ہیں۔ فارم کے پابند ماحول (Controlled Poultry Housing) کی وجہ سے بھی پولٹری کی غذائی ضروریات میں اضافہ ہوا ہے۔ موسمیاتی تبدیلیوں، رہائشی اسائنوں میں تغیرات جراثیمی اور وائرل بیماریوں کے حملے کے سبب پرندے معمول سے کم فیڈ کھا کر غذائی قلت کا شکار ہو جاتے ہیں۔ وٹامن K & E, D3, A کی اہم خوراک کی اجزاء ہیں جو پولٹری کی پیداواری صلاحیت اور جسمانی صحت برقرار رکھنے میں اہم کردار ادا کرتے ہیں۔

جدید ٹکنالوجی اور خام مال کے معیار میں بہتری آنے کی مدد سے پولٹری فیڈ کو متوازن تیار کرنے کی کوشش کی جاتی ہے۔ لیکن حساس نوعیت کی وجہ سے اکثر اوقات فیڈ میں وٹامن کی مطلوبہ مقدار برقرار رکھنا مشکل ہو جاتا ہے اور تیاری و سٹوریج کے دوران فیڈ میں وٹامن کی مقدار کم ہونے کا امکان رونمیاں کیا جاسکتا ہے۔ وٹامن K & E, D3, A نامیاتی مرکبات ہیں جس کی تھوڑی سی مقدار پرندوں کی جسمانی نشوونما اور پیداواری صلاحیت بہتر کرنے کیلئے لازم ہوتا ہے۔ پیٹ کی بیماریوں (خونی چھس، آنتوں کی سوجن (Enteritis) وغیرہ) اور دیگر خون رسنے والے عوارض (Hemorrhagic conditions) مثلاً چوچ کا ٹٹے وغیرہ میں وٹامن K & E, D3, A کی ضرورت ہوتی ہے۔ یہ وٹامنز آنتوں کی جھلی بحال کرنے (Repair of intestinal epithelium)، ہڈیوں کی مضبوطی، جگر کا فعل درست کرنے اور پرندوں کی قوت مدافعت بڑھانے میں اہم کردار ادا کرتے ہیں۔ مندرجہ ذیل عوارض میں پرندوں کی وٹامن K & E, D3, A کی ضروریات بڑھ جاتی ہے

ڈی ایم جی کی نئی خوراک:

ڈی ایم جی ایڈک میں شامل وٹامنز کو دنیا کے بہترین Source سے حاصل کیا گیا ہے جن کی Bioavailability مارکیٹ میں دستیاب پراڈکٹس سے کئی گنا بہتر ہے۔ اسی لیے اس پراڈکٹ کی نئی تجویز کردہ خوراک گرام فی لیٹر آپ کی خدمت میں پیش ہے یا درہے کہ نئی Bioavailability تجویز کردہ خوراک مرغیوں کو وٹامنز کی ecomercial ہماری پراڈکٹ کی کوالٹی اور Requirement کو دیکھ کر تجویز کی گئی ہے۔



245, Scheme # 1, Saidpur Road
Rawalpindi - Pakistan.
Tel: +92 51 4843225 & 6
Website: www.dmgpak.com