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Dear Reader,

Adding of Antioxidants in the feed is very essential to prevent oxidation of feed and avoid wastage of expensive feed ingredients. This article contains the detail information regarding the oxidation of the feed, stages of oxidation and important information about an ideal antioxidant **Oxigon**.....

Dr. C.S.Bedi
Guybro

Poultry performance & productivity crucially depends on feed formulation. Feed is formulated on the basis of nutrition value. Fats and oils are considered as the greatest energy contributor and relatively much expensive among all feed ingredients and are susceptible to the process of auto oxidation.

Different lipid components present in the feed react with oxygen spontaneously and leaves feed quality behind by deteriorating its nutritional value. The lipid component of feeds covers a wide range of molecules from triglycerides, free fatty acids, xanthophylls, carotenes, vitamins to phospholipids.

Oxidation of feed reduces its quality, palatability, color, texture & aroma. Free radicals present in oxidized feed can negatively impact animal health and productivity.

Oxidation process:

Auto oxidation process is a complex chain of reactions, There are three different important processes:

Initiation phase: It is characterized by formation of free radicals. The participation of oxygen level is minimal in the initiation process.

Propagation phase: This phase is characterized by the formation of hydro peroxides, when free radicals react with oxygen. Propagation process involves rapid consumption of oxygen & production of heat which in extreme cases destroys the feed material and even ignite material like fish meal which has significant oil content.

Terminal phase: This is characterized by recombination of different types of free radicals to produce stable end products. Hydrocarbons, aldehydes, ketones, alcohols & organic acid. This effect is slowing down of oxidation & generates characteristic unpalatable or rancid odour which makes feed unpalatable.

The above factors create demand for selecting and adding good antioxidant in the feed.

Oxigon

The complete Antioxidant for compound feeds & feed ingredients:

Commercial antioxidants if not in pure form may reduce the efficacy of natural antioxidants viz. Vitamin E. These antioxidants could interfere with colour, taste and flavor of the product. They are not stable at extreme temperature and wide range of pH.

Antioxidants are very effective if they are added in the first stage of initiation, therefore antioxidants must be added as early as possible.

Oxigon is 100% (concentrated) product (with no base material), containing the blend of most powerful antioxidants BHA, BHT, Propyl gallate, Ethoxyquin & synergistic of antioxidants & chelates. **Oxigon** delivers superior efficacy against both animal and plant sourced fats, protecting key ingredients & vitamins from oxidation and protects quality and nutrients.

Oxigon helps to reduce oxidative damage & thus preserves energy. By adding **Oxigon** in feed you can preserve more energy from fat. It also prevents the production of secondary byproducts such as aldehydes and ketones, which produces the off taste and smell.

By controlling all three important stages of oxidation viz. Initiation, Propagation and Terminal stage, **Oxigon** controls auto oxidation and formation of **Glycotoxins**.

What are Glycotoxins:

Glycation, one of the post-translational modifications of proteins, is a nonenzymatic reaction initiated by the primary addition of a sugar aldehyde or ketone to the amino groups of proteins.

This result in the formation of molecules known as advanced glycation end products (AGEs) or **glycotoxins**.

Oxigon controls Glycotoxins:

Free radical formation is unlikely to produce with **Oxigon** because of its important role in preventing uncontrolled oxidation reactions at first stage of initiation that helps to prevent production of further stages of oxidation named Propagation and Termination respectively. Aldehydes, ketone and oxidized fats are end products of termination stage and responsible for producing glycotoxins in the body. In this way by not allow forming of these end products **Oxigon** prevents formation of **glycotoxins**, that could hamper production and meat quality.

Advantages of Oxigon:

- **Oxigon** preserves nutritive value of feeds/ingredient
- **Oxigon** protects energy of fats, oils & animal by-product
- **Oxigon** maintains stability of vitamins
- **Oxigon** reduces feed cost by protecting nutritive values of feed and thus saves the cost of expensive ingredients prone to oxidation
- **Oxigon** improves shelf life of feed ingredients and finished feeds

Advantages of feeding Oxigon on meat quality:

- **Oxigon** improves meat quality by making it more fresh and tender.
- **Oxigon** has no effect on compositional analysis of the meat.
- Lowers levels of moisture in the meat

Oxigon protects vitamins:

Vitamins are complex organic molecules. Even very small structural changes may sometimes reduce their effectiveness. Oxidation or reduction reactions are the main causes of degradation of vitamins in animal feed.

Oxigon helps to preserve and protect fat soluble vitamins. **Oxigon** further protects nutritional value, energy value of the fat soluble vitamins.

Oxigon protects minerals:

Inorganic minerals tends to oxidize very easily the feed than other minerals, **Oxigon** helps to prevent Oxidation of minerals & retains quality.

Oxigon a self regenerating antioxidant:

Synergic substances present in the **Oxigon** improves the true antioxidant by modifying oxidation- reduction potential of the environment to create a reserve of H⁺ for the consumed antioxidant regeneration.

Recommended mixing ratio:

- Feeds and raw materials: 75gm to 100gm / ton
- Vitamin premix and supplements: 500gm/ ton
- Dosage is dependent upon use of non-rancid raw materials. It may be increased upto 500gm/ ton depending upon feed moisture and ingredient quality

Presentation:

10 kg bags