

# SEL-PLEX<sup>®</sup>

## The superior source of organic selenium



### What is selenium?

Selenium is an essential trace mineral for animals and people. It acts as a powerful antioxidant and plays a critical role in:



**Immune health**



**Reproduction**



**Mitigating oxidative stress**



**Growth development**

Selenium deficiency is related to various diseases in animals and humans, along with decreased growth and reproductive performance in poultry. As such, meeting animals' selenium requirements is one of the key factors in achieving optimal production efficiency and producer profitability and in providing consumers with a nutritious source of protein.

### Alltech's proprietary form of selenium yeast

Sel-Plex is Alltech's proprietary organic form of selenium yeast. It offers an excellent source of dietary selenium provided in a very similar form to the selenium found naturally in organic plant matter. Research has shown that optimizing selenium nutrition in the diets of food animals increases the efficiency of egg and meat production. More importantly, it improves the quality and nutritive value of these products.

### Selenium form drives efficiency

Evidence from the last three decades of research indicates that the form in which dietary selenium is delivered is key to its efficiency. This has led to an industry shift toward less toxic, more effective organic forms of selenium and a movement away from sodium selenite, which has long served as the traditional form of selenium supplementation.

Selenite's high toxicity, negative interactions with other minerals, possible contamination with heavy metals, poor bioavailability and overall safety concerns have caused the industry to reexamine its use.

While newer, chemically synthesized forms of selenium are now being marketed to the feed industry, the available research and regulatory data indicates differences in terms of performance improvement and stability within feed and premix while having toxicity values closer to that of selenite.

The selenium from Sel-Plex<sup>®</sup> is better able to meet the higher requirements of modern poultry, which are raised to meet stringent growth, reproductive performance and health standards.

# Why SEL-PLEX®?



## PROVEN

Sel-Plex was the first FDA-reviewed form of organic selenium and was the first strain-specific form to be EU-approved for all species.



## TRACEABLE

Sel-Plex is manufactured, packaged and sold by Alltech, which uses highly controlled manufacturing processes and quality control methods.



## RESEARCH

Supported by more than 30 years of research, Sel-Plex is the most studied and proven form of organic selenium available.



## BIOAVAILABLE

The selenium in Sel-Plex is better absorbed, stored and utilized by the animal when compared with inorganic selenium, helping boost the body's defense system.



## LOWER TOXICITY

Sel-Plex organic yeast has relatively few, if any, toxicity concerns for humans or livestock.



## COMPLETE

Sel-Plex is designed to completely replace all supplementary organic and inorganic selenium sources in the diets.

# BENEFITS OF SEL-PLEX®



## POULTRY

### Breeders and Layers

The process of laying eggs is a major stressor for breeder and layer birds. Feeding a high-quality source of selenium is linked to:



Fertility support



Improved hatchability



Better chick viability



Boosted selenium status of the egg, embryo and newly hatched chick

**Table 1:** Effect of dietary selenium source (0.3 ppm) on the performance of broiler-breeder females

Diet	Hatchability (%)	Hatch of fertile eggs (%)	Chick production (no.)
Control	77.9	88.6 <sup>b</sup>	131.3 <sup>b</sup>
Selenite	82.5	91.5 <sup>a</sup>	139.1 <sup>ab</sup>
<b>Organic Se (Sel-Plex®)</b>	<b>83.5</b>	<b>92.5<sup>a</sup></b>	<b>145.3<sup>a</sup></b>

**+6**  
extra  
chicks

<sup>a, b</sup> Values with different superscripts differ (P<0.05)

Renema, 2004

Additionally, research shows that boosting breeder hens' selenium status through feeding Sel-Plex can result in selenium being more available for embryo development and the support of post-hatch chick health (Pappas *et al.*, 2019).

### Broilers

Selenium supplementation is linked to:



Improved feed-to-gain ratio (-8.3 pts.)



Optimized bird health



More robust feathering



Optimized meat quality

**Table 2:** Influence of selenium source (0.3 ppm) on the performance and breast Se content of broilers (1–42 days of age)

Diet	Weight gain (g/bird)	Feed gain (g/g)	Breast Se content (mg/kg)
Control	3115	1.743 <sup>a</sup>	0.034 <sup>a</sup>
Selenite	3085	1.638 <sup>b</sup>	0.080 <sup>b</sup>
<b>Organic Se (Sel-Plex®)</b>	<b>3159</b>	<b>1.555<sup>c</sup></b>	<b>0.225<sup>c</sup></b>

Ravindran and Elliott, 2017

**-0.083 points**

**Effect of organic selenium on average feed-to-gain ratio = -8.3 FCR**

Contact your local Alltech representative or email [KnowYourMinerals@Alltech.com](mailto:KnowYourMinerals@Alltech.com) to learn more about Alltech's Mineral Management solutions.