# SEL-QAS +

# **NUTRITIONAL SUPPLEMENT IN ORAL SOLUTION**

#### 1. COMPOSITION

Each ml contains: all-rac- $\alpha$ -tocopheryl acetate (vitamin E) 100 IU, selenium (sodium selenite) 450 mcg.

#### 2. DESCRIPTION

SELQAS + is a nutritional supplement consisting in a well-balanced combination of vitamin E and selenium. **SELQAS** contributes to the well-being of the animal and the maintenance of the levels of vitamin E and selenium necessary for the good development of the animal, including those feeding in pastures poor in selenium. SELQAS + boosts the immune system of the animal giving better chances to the animal for recovering from situations as diseases or extreme weather conditions stressing on vitamins E and selenium re-imbalance. SELQAS + prevents deficiency of vitamins E and selenium, prevents infertility in breeders due to a low vitamin or selenium levels and enhances performance and hatchability.

Vitamin E: the all-rac-α-tocopheryl acetate is a natural antioxidant that protects the polyunsaturated fatty acids from oxidation, avoiding the formation of free radicals and peroxides that may cause degeneration and cellular destruction.

**Selenium:** Selenium is a trace element that is essential in small amounts, but it can be toxic at high levels. Most animals require selenium for the functioning of a number of selenium-

dependent enzymes (selenoproteins) including:

Glutathione peroxidases: Selenium-containing glutathione peroxidases are all antioxidant enzymes that reduce reactive oxygen species by coupling their reduction with the oxidation of glutathione. Spermatogenesis and male fertility are highly dependent on Glutathione peroxidises.

Selenoprotein W exists in different homologues and is highly conserved across species. It has a role in redox regulation.

<u>Thioredoxin reductases</u> catalyse the reduction of a wide range of substrates and serve as electron donors for the regeneration of antioxidants ascorbic acid,  $\alpha$ -lipoic acid,  $\alpha$ -tocopherol, and coenzyme Q10 from their oxidized forms.

<u>lodothyronine deiodinases</u>: the transformation of T3 into T4 is a reaction catalysed by selenium-dependent iodothyronine deiodinase enzymes.

<u>Selenoprotein P</u> is predominantly produced by the liver. It constitutes the major form of selenium transport to peripheral tissues and also functions as an antioxidant that protects cells from oxidative.

<u>Selenoprotein R</u>: The methionine sulfoxide reduction system is involved in the protection against oxidative stress and is especially critical for the regeneration of proteins damaged by reactive oxygen species.

<u>Selenoprotein</u> <u>S</u>: The mammalian selenoprotein is an endoplasmic reticulum



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membrane protein involved in the cellular response to stress.

These two substances have a role in a number of functions, being interrelated. This justifies the association of these compounds to treat micro or macro-deficiencies of any of them. They also have a toning and preventive action.

#### 3. RECOMMENDED USE

Prevention and treatment of vitamin E or selenium deficiencies in farm animals, including encephalomalacia, muscular dystrophy, exudative diathesis, decreased hatchability or infertility problems.

## 4. CONTRAINDICATIONS

Do not exceed the dosage.

## 5. ADVERSE EFFECTS

None described.

## 6. SPECIAL PRECAUTIONS

None described.

#### 7. ADMINISTRATION

Oral use in drinking water.

- Poultry: Add 1 ml per 7 litres drinking water for 3 to 5 days.
- Chicks (less than 21 days): Add 1 ml per 7 to 15 litres drinking water for 3 to 5 days.
- Other species: 1 ml/70 kg bw mixed in drinking water.

## 8. TARGET SPECIES

Poultry, cattle, sheep and goats.

#### 9. WITHDRAWAL PERIOD

Zero days.

# 10. STORAGE CONDITIONS

Store below 30 °C.

Protect from light.

#### **11. SIZES**

1 L or 5 L



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