

# The Selenium Challenge: An *esSential* & good for you idea!

Selenium, as an integral part of a range of selenoproteins, plays a critical role in regulation of various psychological functions including immunity, reproduction and early postnatal viability (Surai, 2006).

## SEL-PLEX IS ESSENTIAL IN DAIRY COWS FOR:

- Immunity
- Antioxidant status
- Postpartum health
- Nutritional status of calf
- Udder and uterine health
- Optimum milk production
- Normal reproductive function
- More efficient use of vitamin E
- Nutritional value of milk and dairy products

## EXPERIENCE THE DIFFERENCE - TAKE THE SELENIUM CHALLENGE

### WHAT IS IT?

A test of the selenium status in dairy cows to provide accurate selenium intervention and optimum health

### HOW DOES IT WORK?

Take two milk samples (before and after Sel-Plex supplementation), submit the samples for analysis and then see how Sel-Plex improves selenium status in your herd

### WHAT ARE THE BENEFITS?

Sel-Plex organic selenium supports:  
Herd health & performance  
Milk quality & nutritional value  
Healthy dairy products for people



**Alltech**<sup>®</sup>

Nutrition, health, performance ...*naturally*

For more information, contact your local Alltech representative, e-mail [Sel-Plex@alltech.com](mailto:Sel-Plex@alltech.com) or log on to [www.Sel-Plex.com](http://www.Sel-Plex.com)

C	N	O	F	Ne
Si	P	S	Cl	Ar
Ge	As	Se	Br	Kr
Sn	Sb	Te	I	Xe
Pb	Bi	Po	At	Rn

**SEL-PLEX**<sup>®</sup>  
*esSential*<sup>™</sup>

# Selenium

Selenium is an essential nutrient for animals and people. It is a powerful antioxidant that plays a critical role in metabolism, normal growth, reproductive health, and immunity. Feeding rations based on forages grown in regions with selenium-deficient soil may result in selenium deficient animals, food products and people.

## Deficiency in Dairy

Selenium deficient cows are more susceptible to diseases and issues such as:

**\* Immunity**

- High Somatic cell count (SCC)
- Mastitis






**\* Reproduction**

- Retained placentas
- Low Conception Rate
- Metritis
- Cystic Ovaries

**\* Weak calves**

Selenium-deficient calves are typically weak at birth and suffer from high morbidity and mortality.

Addressing selenium deficiency is one aspect. Supporting health and nutrition is another and very important aspect of feeding programs. The source of selenium supplemented makes a difference in the results observed on farm.

Animal function	Nutrition	
	Sel-Plex Organic Selenium	Inorganic Selenium
Natural Substance		x
Stored in the body for use in times of stress		x
Toxic	x	✓
Prevent selenium deficiency		✓
Provides nutrition for optimum health		x
Increase of selenium status in milk	2.5 fold	1 fold
Increases milk quality and freshness		x



Sel-Plex is a strain specific form of organic selenium manufactured to mimic Mother Nature, and is thus better absorbed, stored and used by animals and people.

## The Gene Level

Feeding programs impact herd health at a very fundamental level - the gene level.

Researchers at Alltech's Nutrigenomics Center have demonstrated how Sel-Plex influences gene expression. Research has shown Sel-Plex 'turns on/off' genes related to functions such as fertility and aging, thus providing an advantage to farmers when it comes to planning for the future.

## Human Health

Like animals, people often do not get enough selenium in their diets. This essential nutrient is now more widely recognised as important as a preventative measure for several cancers, viral diseases, aging, and Alzheimer's disease.

Dairy cows fed Sel-Plex have 3-6 times more selenium in their milk, which improves the quality, freshness and nutritional value of such milk varieties on supermarket shelves.

### ARE YOU READY FOR THE CHALLENGE?

