

tangel<sup>AGRO</sup>

# SOWY

Liquid fertilizer of high concentration of amino acids



AMINOACIDS



# SOWY

Liquid fertilizer of high concentration of amino acids

## CHARACTERISTICS

**SOWY** is a product of natural origin, with a high content of free amino acids, derived from vegetable matter.

Composed of amino acids that the plant uses to satisfy its protein needs, with an important energy saving, acting as an effective biostimulant during the rooting, sprouting, flowering, fruit setting and fruit development stages.

## ACTIONS

- INCREASED PRODUCTIVITY
- FAVORIZES RADICULAR DEVELOPMENT
- IMPROVES THE ABSORPTION AND TRANSPORTATION OF NUTRIENTS
- INDUCES A BETTER POLLINATION AND FLOWERING
- GOOD SPROUTING
- FRUITS OF GREATER QUALITY

## COMPOSITION %w/w

Total Aminoacids	28
Free Aminoacids	25
Total Nitrogen	5
Organic Nitrogen	4
Defense inductor (ID)	3



# SOWY

Liquid fertilizer of high concentration of amino acids

SOWY OBTAINED BY ENZYMATIC SYNTHESIS	AMINO ACIDS OBTAINED BY ACID OR ALKALINE HYDROLYSIS
20 essential amino acids are uptaken.	16-18 amino acids are obtained.
All the amino acids are in the L-form (natural form) and are rapidly and easily absorbed by the plants.	Not all the amino acids are in the L-amino acids, some are in D-shape, which cannot be absorbed.
No cycling of Glutamates, which is important for metabolism energy.	Cycling of Glutamates.
No destruction of Asparagine, which is involved in plant respiration.	Destruction of Asparagine.
Tryptophan in L-form, which initiates the synthesis of auxins (growth hormones).	The tryptophan is destroyed, affecting the synthesis of auxins.
Serine and theronine in L-shape.	Serine and theronine are partially destroyed.
Aspartic and glutamic acid, which are two of the most important amino acids, are availablle.	Aspartic and glutamic acids are not in an available form for plants.
Not form amides. Great biological and nutritive value.	Nitrogen amines are formed. The biological and nutritional value is severely affected.
No presence of inorganic nitrogen (ammonium chloride).	Inorganic nitrogen is present as ammonium chloride.
Low dosages.	High dosages.

## Aminoacid Foliar / Soil



# SOWY

Liquid fertilizer of high concentration of amino acids

## AMINO ACIDS FUNCTIONS

▶ Root development	▶ Methionine, arginine
▶ Resistance to unfavorable conditions	▶ Proline, valine, serine, lysine, glutamic acid, cysteine
▶ Nitrogen reserve	▶ Glutamine, aspartic acid, glutamic acid, arginine, proline
▶ Hormone precursor	▶ Tryptophan, methionine
▶ Scent precursor	▶ Valine, leucines, isoleucines, alanine
▶ Flavour precursor	▶ Alanine, glycine, proline, arginine
▶ Color precursor	▶ Phenylalanine
▶ Increase of pollen germination	▶ Proline, glutamic acid
▶ Increase of seeds germination	▶ Proline
▶ Strengthening of chlorophyll and photosynthesis	▶ Alanine, glycine, lysine, glutamic acid, proline
▶ Complexant capacity	▶ Glycine, glutamic acid, aspartic acid
▶ Antioxidant capacity	▶ Histidine, cysteine, tryptophan, lysine, methionine, threonine
▶ Osmoregulation	▶ Proline
▶ Stoma opening	▶ Alanine, glutamic acid, lysine, proline, methionin



# SOWY

Liquid fertilizer of high concentration of amino acids

## Benefits of SOWY application in crops (1 of 2)



### POSITIVE EFFECTS FOR PLANTS

- Vegetal and root development
- Nutritional enhancer
  - Improve foliar uptake
- Bioactivator for processes
  - Germination, development, sprouting, flowering and fruit growing.
- Maduration
  - Fruit formation and fattening
  - More quality in fruits
  - Higher performance
- Antistress effects:
  - Biotic (Insects, fungi, etc...)
  - Abiotic (low temperatures, hydric, salt)



### POSITIVE EFFECTS FOR THE SOIL

- Activator of microbial flora.
- Chelating effect, helping the uptake of micronutrients.
- Activation of sugar and polyphenol uptake.
- Improves organic matter breakdown.



# SOWY

Liquid fertilizer of high concentration of amino acids

## Benefits of SOWY application in crops (1 of 2)

### OTHER POSITIVE EFFECTS

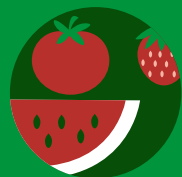
#### 🌿 FROST RESISTANCE

The increased protein synthesis is reflected in energy savings that the plant uses to fight against low temperatures.

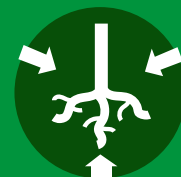
#### 🌿 DROUGHT RESISTANCE

Some amino acids favor the water balance of the plant, increasing its resistance in times of drought.

#### 🌿 INCREASES:



YIELD



NUTRIENT UPTAKE



ROOT SYSTEM



THE SEED GERMINATION



INMUNOLOGICAL SYSTEM ACTION OF THE CROPS

#### 🌿 DECREASES OF HEAVY METAL CONTAMINATION

These metals can combine with localised compounds localised in the root zone (amino acids), decreasing the toxicity of those elements on the plant.

#### 🌿 DECREASE OF IRON CHLOROSIS EFFECT


The chelating action of the amino acids increase the amount of iron that the plant is able to assimilate.





# SOWY


Liquid fertilizer of high concentration of amino acids


## SOIL APPLICATION


BANANA PLANTS		
	<b>Dosage</b> Every 15 days between March and June.	<b>Lts/Ha</b> 6

DRY FRUITS		
	<b>Dosage</b> From budding until the swelling of the fruit.	<b>Lts/Ha</b> 5

COTTON		
	<b>Dosage</b> 10 days after shooting until 20 days after the flowering.	<b>Lts/Ha</b> 6

FRUIT TREES		
	<b>Dosage</b> From budding until the swelling of the fruit.	<b>Lts/Ha</b> 6

CITRUS FRUITS		
	<b>Dosage</b> From flowering until the swelling of the fruit.	<b>Lts/Ha</b> 12

OLIVE TREES		
	<b>Dosage</b> Throughout the whole cycle.	<b>Lts/Ha</b> 18

# SOWY

Liquid fertilizer of high concentration of amino acids

## SOIL APPLICATION

### ORNAMENTAL PLANTS



Dosage	Lts/Ha
Every 15 days after transplanting.	4

### STRAWBERRIES



Dosage	Lts/Ha
Every 10 days after transplanting	4

### TABLE GRAPES




Dosage	Lts/Ha
From budding until the end of the cycle.	5





# SOWY


Liquid fertilizer of high concentration of amino acids


## FOLIAR APPLICATION


ALFALFA		
	<b>Dosage</b> After every mowing.	<b>CC/100L</b> 2,5 L/Ha

CITRUS FRUITS		
	<b>Dosage</b> From flowering until the swelling of the fruit.	<b>CC/100L</b> 200-300

BANANA PLANTS		
	<b>Dosage</b> Every 15 days.	<b>CC/100L</b> 250

COTTON		
	<b>Dosage</b> 10 days after sprouting until 20 days after the first flower.	<b>CC/100L</b> 300

BEET		
	<b>Dosage</b> 2 applications every 15 days.	<b>CC/100L</b> 2,5 L/Ha

DRY FRUITS		
	<b>Dosage</b> From budding until the swelling of the fruit.	<b>CC/100L</b> 200-300

# SOWY

Liquid fertilizer of high concentration of amino acids

## FOLIAR APPLICATION

### FRUIT TREES



**Dosage**

From budding until the swelling of the fruit.

**CC/100L**

200-300

### OLIVE TREES



**Dosage**

Throughout the whole cycle.

**CC/100L**

200-300

### HORTICULTURAL CROPS



**Dosage**

Every 10 days after transplanting.

**CC/100L**

200

### ORNAMENTAL PLANTS



**Dosage**

Every 15 days after transplanting.

**CC/100L**

250

### LAWN



**Dosage**

After sowing/Growth phase.

**CC/100L**

3-5 L/Ha/  
30 cc/m<sup>2</sup>

### STRAWBERRIES



**Dosage**

Throughout the whole cycle.

**CC/100L**

200

# SOWY

Liquid fertilizer of high concentration of amino acids

## FOLIAR APPLICATION

### TABLE GRAPES



**Dosage**  
From budding until the end of the cycle.

**CC/100L**  
250

### TUBERS



**Dosage**  
Every 15 days.

**CC/100L**  
250

### WINE GRAPES



**Dosage**  
From budding until the end of the cycle.

**CC/100L**  
2 L/Ha

tangel<sup>AGRO</sup>

■ [www.tangelagro.com](http://www.tangelagro.com)

■ 0034 642 64 43 47

■ [export@tangelagro.com](mailto:export@tangelagro.com)