



Sonar GROWTH

Plant Growth Regulator



CHARACTERISTICS

EXCELENT FLOWERING AND FRUIT SET



SONAR GROWTH is a balanced plant growth regulator with nutrients, amino acids and fulvic acids, all of great importance and which have an impact on physiological and metabolism processes of plants.

ALL COMPONENTS IN SONAR GROWTH are in assimilable form by leaves and other plant organs. The balance between the concentrations of auxins, gibberellins and cytokines in allows to have a significant contribution of these compounds to the plant without causing a hormonal imbalance.

ZERO RESIDUES



foliar



Sonar Growth reinforces metabolic activities thanks to the supply of biomolecules that the plant has stopped synthesizing due to environmental adversity. It can be applied in support of any phenological stage of the crop such as vegetative development, flowering and fruiting

COMPOSITION

	%w/v		ppm
Calcium (Ca)	0,8	Gibberellines	500
Zinc (Zn)	2,0	Auxines	500
Sulfur (S)	0,8	Cytokinins	200
Fulvic acids	25,0	Cisteine	500
Nitrogen (N)	9,0	Tiamine	1110
		Inositol	200



COMPOSITION

Enhance the plant functions in their major metabolic period activity.

IN ORDER TO GROW UP,

besides water, nutrients, solar light and CO₂ plants also need hormones. The vegetal development stages are equilibrated by different chemical substances that are regulators of the growth, phyto and vegetal hormones.

JULIUS VON SACHS (1887)

described phytohormones like chemical signals that allow communication among cells; they equilibrate the growth and development through cellular division, expansion, differentiation and metabolism regulation patterns.

GIBELLERINS:

One of the effects of this hormone is the incitement of stem development, adjustment of the transition from youthful phase to adult phase of the plant, incitement of blooming and determination of the type or sex of the flower, incitement of germination besides promote the intermodal elongation.

CYTOKININES:

They are the compounds that promote the division of the cellular in tissue notmeristematic. These compounds have been found in every plant, specially in tissues who divide themselves in an active way, like meristems, geminations seeds, mature fruits or roots in development.

AUXINS

from the greek Auxein that means "to increase", "to grow up" group a series of natural or synthetic chemical compounds that cause several biologic effects to the different vegetal plant species or various effects of the same species depending the phenological stage when the application is made. One of the most important applications that characterizes the compounds of auxins, is the stimulation of root formation in the reproduction of specimens.



FOLIAR APPLICATION

ALFALFA



Time of application

DOSE L/Ha

After each cut when regrowth appears

0,75 to 1 L/Ha

BROCCOLI, CAULIFLOWER, CABBAGE, LETTUCE



Time of application

DOSE L/Ha

At the beginning of the formation of the head (inflorescence).

0,75 to 1 L/Ha

APPLE AND PEACH



Time of application

DOSE L/Ha

Silver tips water (apple) and green tips (peach) and repeat when the fruit has 1 to 2 cm diameter.

150 to 200ml per 100L

CELERY



Time of application

DOSE L/Ha

Of 4 to 6 weeks before cutting.

0,75 to 1 L/Ha

BEANS, GREEN BEANS, SOY BEANS



Time of application

DOSE L/Ha

At the time of the appearance of flower buds and repeat 1-3 times every 15 days.

0,75 to 1 L/Ha

CEREALS (WHEAT, BARLEY, OATS, TRITICALE)



Time of application

DOSE L/Ha

When full tillering, beginning of stalk formation and boot stage.

0,75 to 1 L/Ha

FOLIAR APPLICATION

CHARD, SPINACH AND OPEN LEAF LETTUCE



Time of application	DOSE L/Ha
Of 3 to 4 weeks after emergence.	0,75 to 1 L/Ha

CUCURBITS (CUCUMBER, MELON, WATERMELON)



Time of application	DOSE L/Ha
When the plants are 3-5 true leaves. Repeat at the beginning of the formation of elvers, continue every 15 days until the last cut.	0,75 to 1 L/Ha

CITRUS, AVOCADO, MANGO, PAPAYA, GUAVA



Time of application	DOSE L/Ha
To the appearance of repeating blooms 30 days.	Apply 150 to 200ml per 100L of water

FLOWERS

Time of application	DOSE L/Ha
At the time of the appearance of the flower stern.	0,75 to 1 L/Ha

COTTON



Time of application	DOSE L/Ha
At the time of first or second squares. Apply mainly in medium and low size varieties or to exit from a stage of stress.	0,75 to 1 L/Ha

GARLIC AND ONIONS



Time of application	DOSE L/Ha
In the moments before the bulb differentiation (10-12 weeks after planting).	0,75 to 1 L/Ha

FOLIAR APPLICATION

MAIZE AND SORGHUM

Time of application	DOSE L/Ha
Between 6 and 8 fully developed leaves, and if possible repeat in full bloom.	0,75 to 1 L/Ha

SCALLION AND LEEK

Time of application	DOSE L/Ha
At 30 days after transplantation for leek and 45 days after planting for onions, repeated 30 days later.	0,75 to 1 L/Ha

MELON



Time of application	DOSE L/Ha
In plantations with 1 or 2 years	0,75 to 1 L/Ha
In cultured 3 more years (The first when the plant is 30 cm height and the second 50cm height.	2 applications with 30-day interval between each.

STRAWBERRY

Time of application	DOSE L/Ha
Once a month, starting at the time of appearance of the first flower cluster.	0,75 to 1 L/Ha

POTATO



Time of application	DOSE L/Ha
At the time of tuber initiation and repeat 15-30 days later.	0,75 to 1 L/Ha

TOMATO, PEPPER AND AUBERGINE

Time of application	DOSE L/Ha
To the appearance of the flowers, repeat every 2 or 3 weeks until the last commercial flowering.	0,75 to 1 L/Ha

SOME OF THE MOST IMPORTANT PHYSIOLOGICAL EFFECTS CAUSED BY VEGETABLE HORMONES IN PLANTS

PHYSIOLOGICAL EFFECTS	AUXINS	GIBBERELLINS	CYTOKININES
Physiological effect	Yes	Yes	No
Tropic responses	Sometimes	Sometimes	Stimulate
Development of oat coleoptiles sections	Yes, in some cases	Sometimes	Yes
Cells Increase size in tissue cultivation	Yes	Yes	Yes
Control in the differentiation in tissue cultivation	Yes	No	Variable answer
Increase the stimulation of rooting in wooden stake	Yes	No	Unknown
Inhibit rooting development	Yes	Yes	Yes
Stimulate cambium division	Yes	Not in a direct way	Yes



SOME OF THE MOST IMPORTANT PHYSIOLOGICAL EFFECTS CAUSED BY VEGETABLE HORMONES IN PLANTS

PHYSIOLOGICAL EFFECTS	AUXINS	GIBBERELLINS	CYTOKININES
Abscission of leaves and fruits	Yes	Yes	Yes, in some of them
Activate the fruits growth	No	Yes	No
Affects the stem growth	No	Yes	Yes
Interrupt the vegetative buds rest	No	Yes	No
Stimulate the germination of seeds	No	Yes	No
Maintenance the apical mastery	Yes	Yes	No
Inhibit the deterioration of proteins and chlorophyll in senescence period	Yes, in some	Yes	Yes, in some cases
Increase fruit breathing during its maturation	Unknown	No	No





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