coda

coda

Strategies

General Product Catalog

CODA PRODUCTS

CODA is SAS's benchmark brand that adapts to any crop to cover all your nutrition and stimulation needs.

Each of the strategies presented in this catalogue is based on one or more **CODA** products: sustainable, high-efficiency fertilisers and biostimulants that have been specially designed for technical agriculture.

They range from products that improve soil and irrigation water, boost germination, enhance root systems and address nutritional deficiencies to products that stimulate and revitalise your crops at all phenological stages, all in order to maximise yields and quality in even the most severe soil and climate conditions.

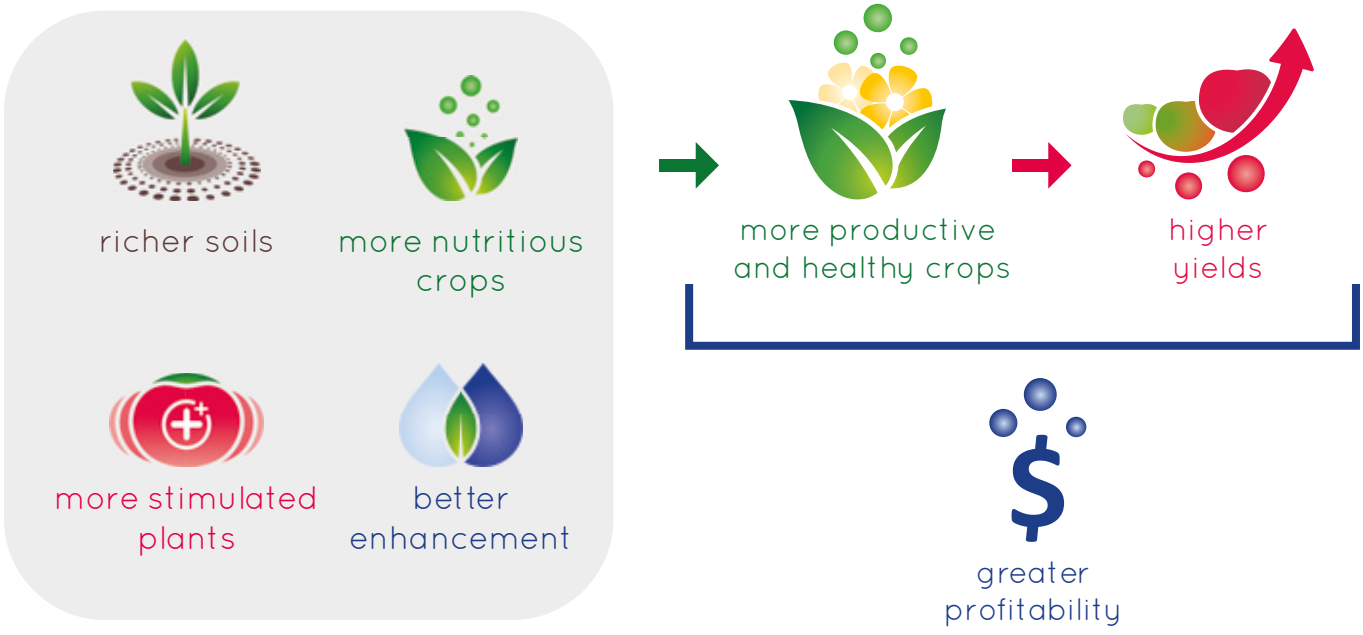
At **CODA** we use the **best quality raw materials**, prioritising natural origin, non-toxicity, safety and regulatory compliance. Our outstanding R+D platform (NOBA) is constantly working to transform our customers' needs into high value-added products and to guarantee traceability throughout the manufacturing process.

We advise you to talk to us or your specialised technician in order to determine which strategies are best suited to your crop, your soil and climate conditions, and the regulatory requirements of your market. We can also help you to combine our products and draw up specific programmes that will ensure you get the most out of your crops.

All **CODA** products are environmentally friendly solutions that promote responsible agriculture. Using these specially designed fertilisers will reduce the need for chemical fertilisers that contribute significantly to global CO_2 emissions, cause major amounts of soil and water pollution, and therefore adversely affect biodiversity and land and aquatic ecosystems.

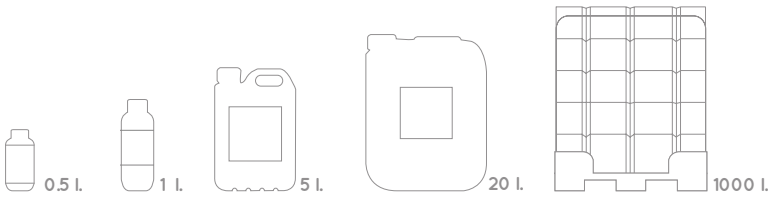
We also have products that are certified as 100% organic. These can be identified by our eco symbol:

Ask us for the environmental certificates of the products you're interested in to find out more about compatibility with the laws in your market.

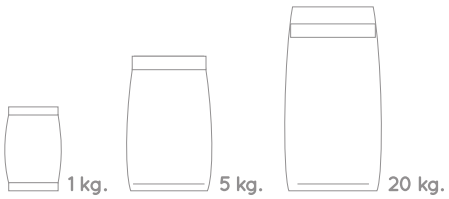


coda

adapted to your crop



Examples of container design **(liquid)**



Examples of bag designs **(solids)**

Quality control is an important part of factory and laboratory management. We ensure that SAS Management Systems and their reference standards are all fully implemented, and we have achieved ISO 9001 quality management system certification. We have also achieved ISO 14001 certification for an effective environmental management system, OHSAS 18001 certification for occupational health and safety standards, UNE 19601 certification for crime prevention and the RD 506/2013 Manufacture and Sale of Fertilisers Certificate. In addition, we have introduced European standard SG E21 for auditing and certifying an ethical and socially responsible management system that enables us to identify and assess our environmental impact in order to manage and minimise it. We are continuously identifying ways to improve our processes; we analyse and respond to any non-conformities and ensure all serious incidents are effectively dealt with.

ISO 14001 BUREAU VERITAS Certification

OHSAS 18001 BUREAU VERITAS Certification

ISO 9001 BUREAU VERITAS Certification

Gestión ética y socialmente responsable SGE21 Forética

SGE 21 BUREAU VERITAS Certification

WE ARE SAS

We are Sustainable Agro Solutions S.A.U. (SAS), a leading company in the development, manufacture and marketing of nutritional and biostimulant fertilising solutions for a more technical and environmentally friendly form of agriculture.
Our commercial activity began in 1989 in Lleida (Spain), one of the most important agricultural areas in Southern Europe. Today SAS is a modern, global company with a presence in over 90 countries, a workforce of over 120 employees, subsidiaries in Mexico and Brazil, and a partner network that spans the different continents.

NOBA created by sas

We focus our efforts on acquiring the knowledge and resources needed to move forward with the research and development of nutritional and biostimulant solutions for technical agriculture. NOBA is our technology platform, which is supported by a multidisciplinary team and the most cutting-edge research facilities (laboratories, growing chambers, greenhouses and test areas).

NOBA has helped us to achieve important milestones that have made us a benchmark within our sector.
Our facilities are currently undergoing renovation and expansion. We have invested 16 million euros into making SAS a more productive and efficient space. We are tripling the size of our production area, which will increase yearly production capacity by 25% in the coming years. We are also extending our storage area, adding more packaging and delivery lines, boosting energy efficiency and quadrupling the amount of space dedicated to R+D.

An important technological leap in automation and sustainability in order to serve our customers better and more efficiently.

#BeSAS

Our **BeSAS concept** makes us unique in the industry. We add value with **people and the environment.** At SAS we combine profitability with social responsibility and environmental protection. At SAS we believe in a sustainable future, in a more efficient agriculture that respects people and the environment. We are a very diverse team, which allows us to adapt better to our customers, their needs, their culture, always working close to them and supporting them so that we all win. Internally, we integrate social, labor, ethical and environmental aspects in our day-to-day business beyond the minimum legal requirements, implementing the European standard SGE21, and we have ISO14001 certification by which we identify and control our environmental aspects trying to prevent and reduce as much as possible their possible current or future impacts.

SUSTAINABLE VALUE

At SAS, creating sustainable value is part of our DNA and key to maintaining leadership in our market segment in the medium-long term.
Creating sustainable value means taking all the intrinsically linked environmental, social and economic aspects of our business into account when creating value.

How does SAS create sustainable value?

State-of-the-art facilities

Our facilities are designed to go above and beyond the highest safety and environmental regulatory standards. Our energy needs are largely covered with solar energy, we reuse most of our process water, we minimise our carbon footprint and we treat any outputs that can't be recycled using authorised waste managers.

Renewable raw materials

We select our raw materials in accordance with criteria such as natural and renewable origin, non-toxicity, quality, supply chain security, regulatory compliance and competitiveness.

Value-added products

At SAS we transform our raw materials and ingredients – which are mostly natural – into value-added products designed to promote profitable and sustainable agriculture even in the most severe soil and climate conditions.
Our outstanding R+D platform (NOBA) and highly qualified technical-commercial team guarantee excellence in the design and proper use of SAS formulations.

Our customers

At SAS, our customers are at the centre of our sustainable value creation efforts. They are not our only focus, however, as we have other key stakeholders that we seek to provide with sustainable value as well. We also know that our stakeholders' needs can change, and we therefore recognise the importance of collecting and analysing their feedback so that we can improve and adapt our products, services and solutions.

SOIL IMPROVEMENT

Calcium correctors
codasal premium
e-codasal
codasal complex

Percolator
numatric

Soil conditioners
codahumus 20
e-codahumus
codahumus PK
codabooster
codahumus S80
codargon
e-codargon

Acidifiers
codasul pH
codasul micro

NUTRITION

NPK liquids

Nitrogen
codafol N33
codafol 14-6-5

Phosphorus
codafol P54
codafol 7-21-7

Potassium
codafol K30
k·mad
codafol K35 acid
codafol 4-16-28

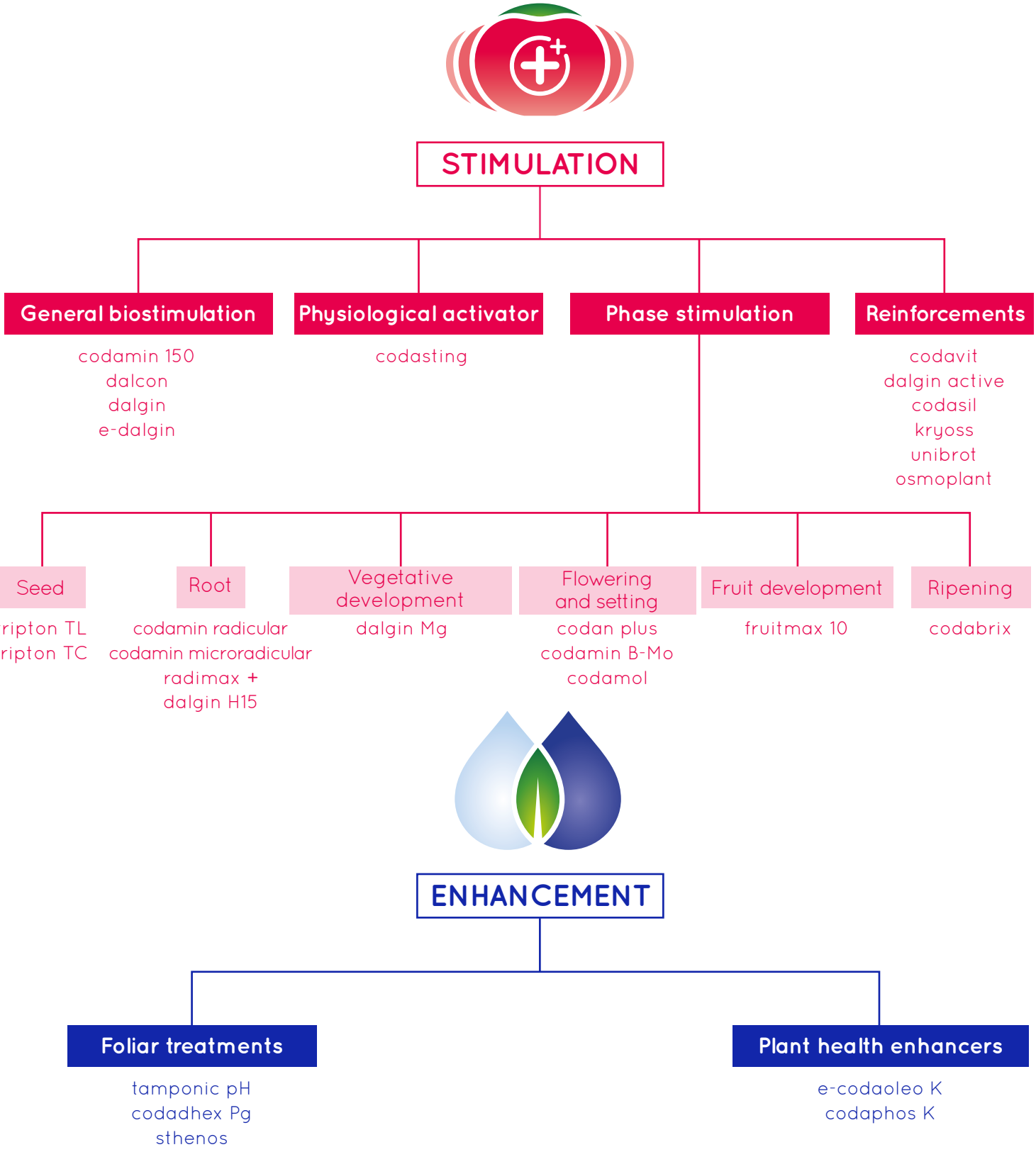
Special
codafol 13-13-13
codafol maximus 8-11-3

Deficiency correctors

Secondaries
coda-Ca-L
coda-Mg-L
codacal boro

Micro-elements
codabor
coda-Mn-L
coda-Zn-L
coda-Cu-L
coda-Fe-L
numafer

Combined
codaquel
codamix
numamix
codacitricos
codahort



For better clarity, we have divided our products into 4 different "strategies", each corresponding with a specific objective. Keep in mind that many of our products are versatile, and can be combined depending on your objective and your crop. SAS and its collaborators will always develop the best program possible according to your needs.

SOIL IMPROVEMENT

We offer different strategies for the improvement of soils and irrigation water.
Our strategies address a wide range of obstacles from general soil infertilities to more narrow problems that need product-specific solutions to reduce salinity, improve water distribution and uniformity, unblock nutrients in the soil, etc.

PRODUCTS

- codahumus 20
- e-codahumus
- codahumus PK
- codabooster
- codahumus S80
- codargon
- e-codargon
- codasal premium
- e-codasal
- codasal complex
- numatric
- codasul pH
- codasul micro

SOIL CONDITIONERS

Formulations based on humates designed to optimize the physical and chemical properties of soils and promote the biological processes of the rhizosphere.

codahumus 20

23.53% THE (11.65% humic acids + 11.88% fulvic acids) + 5.82% K_2O + 1.39 P_2O_5 (w/v)

Liquid organic corrector with humic extracted from leonardite, and fulvic acids.
It improves the physical structure of the soil and increases the CEC (Cation Exchange Capacity). By applying this product we unblock and increase the assimilation of nutrients available in the soil. It acts on soil microbiota increasing microbial biomass as well as its activity. It promotes the formation of soil aggregates, increasing root mass and water retention.

application	application dose
Fertigation	3-5 l/ha -application 20-50 l/ha-growing cycle

e-codahumus

23.23% THE (11.50% humic acids + 11.73% fulvic acids) + 4.6% K_2O (w/v)

Liquid organic corrector based on humic extract from leonardite and fulvic acids compatible with organic agriculture.
It improves the physical, chemical and biological properties of the soil, due to the stable and colloidal nature of organic acids. It increases soil fertility in both acidic and alkaline soils, due to its chelating power on macro and microelements, stimulating in turn the development of beneficial microorganisms.
(Compatible with organic agricultural production).

application	application dose
Fertigation	3-5 l/ha -application 20-50 l/ha-growing cycle

codahumus PK

20.3% THE (11.4% humic acids + 8.9% fulvic acids) + 8.9% P_2O_5 + 15.2% K_2O (w/v)

Liquid organic corrector formulated with humic and fulvic acids in combination with phosphate and potassium.
It enhances biological processes to strengthen the plant against adverse conditions. In addition, it stimulates root development, increases nutrient assimilation, improves the availability of water and soil structure and increases CEC (Cation Exchange Capacity).

application	application dose
Fertigation	3-5 l/ha-application 20-40 l/ha-growing cycle

codabooster

16.72% THE (13.38% humic acids + 3.34% fulvic acids) + 5.24% K_2O (w/v)

Liquid organic corrector with a high percentage of humic content from high-quality leonardite.
It improves soil structure, decreasing erosion and compaction, and increases soil fertility. It also stimulates the development of microorganisms by providing a source of carbohydrates. It improves root development, prevents nutritional imbalances, and improves vegetative growth and crop development.
(Compatible with organic agricultural production)

application	application dose
Fertigation	3-5 l/ha-application 20-40 l/ha-growing cycle

codahumus S80

80% THE (76% humic acids + 4% fulvic acids) + 12% K_2O (w/w)

Highly concentrated humic acids from high-quality leonardite, in solid form.
It improves the properties of the soil, especially the structure, increasing water retention, CEC (Cation Exchange Capacity), fertility, and therefore the root system of the crop. The product is soluble in water and can be applied with various types of irrigation systems.
(Compatible with organic agricultural production)

application	application dose
Fertigation	1-2 kg/ha-application 8-15 kg/ha-growing cycle

codargon

36% organic acids + 2.8% CaO + 1.2% MgO (w/v)

Soil corrector formulated with liquid organic matter with 36% (366 g/l) organic acids combined with calcium, magnesium and sulfur. It quickly boosts the assimilation of macro- and micro-elements in the soil matrix thanks to its ability to form bonds. It also improves the physical properties of the soil, especially in the case of clayey, heavy or clumped soils, improving oxygenation and favoring the generation of root exudates. Ideal for fertigation.

application	application dose
Fertigation	5-10 l/ha-application 40-100 l/ha-growing cycle

e-codargon

35% organic acids + 2.7% CaO (w/v)

Soil corrector formulated with liquid organic matter with 35.1% organic acids, all of which is of plant based, combined with sulfur and calcium. Its continued application can partially replace or complement manure applications. Its application improves soil conditions by optimizing the availability of water and nutrients. Ideal for fertigation.
(Compatible with organic agricultural production)

application	application dose
Fertigation	5-10 l/ha-application 40-100 l/ha-growing cycle

CALCIUM CORRECTORS

Calcium solutions complexed with organic acids ideal for any type of soil and for all crops through root applications. With the application of calcium that is readily available to plants, we increase production and obtain fruits of better caliber, firmness, quality, and post-harvest life.

codasal premium

17.52% CaO + organic acids (w/v)

Calcium solution complexed with high quality organic acid chains of vegetable origin. It is designed to provide calcium to the crop, to facilitate the mobilization of salts from the root zone, reducing osmotic stress in the plant and improving the physical, chemical and biological properties of the soil.

application	application dose
Calcium corrector	4-6 l/ha-application, every 7 days during fruit development
Corrector of sodic soils	10-20 l/ha-application 2-4 aapplications per crop cycle
Sodium-saline water corrector	10-40 ml/m³ of water

It provides efficient and plant-assimilable calcium in a constant and balanced way throughout the vegetative cycle of the crop, which increases the hardness of the cell walls. This extends post-harvest life and gives plants resistance to diseases.

In case of sodium and sodic saline soils, or soils irrigated with saline water with high Na+ levels, it allows to displace the salt content of the root zone, reducing osmotic stress problems in the plant.

Due to its high flocculant power, it optimizes the physicochemical and biological conditions of the soil, favoring the aeration of the root system, increasing the cation exchange capacity and increasing the water retention capacity and availability.

e-codasal

8.15 % CaO + organic acids (w/v)

Complexed calcium solution suitable for use in organic production. Composed of organic acid chains, from high quality raw materials of vegetable origin.
The calcium provided is really efficient and assimilable by the plant. In case of sodium and sodic saline soils, or soils irrigated with saline water with high Na+ levels, it allows the displacement of the salt content of the wet bulb, reducing the problems associated with saline stress. Due to its high flocculant power, it optimizes the physical-chemical and biological conditions of the soil, favoring the aeration of the root system, increasing the cation exchange capacity and increasing the water retention capacity and availability.
(Compatible with organic agricultural production)

application	application dose
Calcium corrector shock	8-12 l/ha-application at the beginning of the plantation.
Calcium corrector maintenance	4-6 l/ha-application Every 7 days along the crop cycle
Sodium saline water corrector	15-50 cc/m³ of water

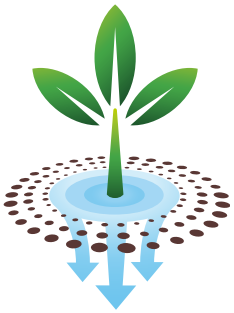
codasal complex

14% CaO + 2.8% MgO + 0.14 B + 0.07% Mo + 0.007% Co + organic acids (w/v)

Calcium solution complexed with organic acids, with macro and micro-elements.
In addition to improving soil structure, it is an ideal product for irrigation in acidic soils, reduces the toxicity of elements such as aluminum, and improves the availability and absorption of limiting elements, such as calcium or magnesium.

application	application dose
Calcium corrector in fertigation	4-8 l/ha-application, every 7-10 days during fruit development

PERCOLATOR



numatric

2.4% CaO + 1.1% MgO + 45.2% organic acids (w/v)

Calcium-magnesium solutions complexed with organic acids, for use on compact soils lacking structure and with infiltration problems. Improves the percolation and uniformity of the distribution of irrigation water in the root zone, thus increasing the hydration and oxygenation of the soil. The crop will have a better root system, which in turn improves quality and production.

application	application dose
Fertigation	5-10 l/ha-application 2-4 applications per crop cycle. Perform of irrigation, then apply numatric, and in the last of irrigation apply water alone.

ACIDIFIERS

Coda acidifying formulations have a triple fertilizer-acidifying-blocking action. They are fertilizers high in nitrogen and sulfur, and enriched with micro-elements.
Its main function is to lower the pH of irrigation water to avoid blockages in the irrigation systems, in addition to acidifying the root zone, washing unwanted salts, and unblocking all essential plant nutrients for better absorption.

codasul pH

22.8% N + 60.8% SO_3 + 0.03% Fe + 0.01% Zn (w/v)

Acidic, liquid solution of nitrogen fertilizer with sulfur that lowers the pH of irrigation water through the contribution of H+ (HCO_3^- + H^+ <-> H_2O + CO_2).
It also neutralizes carbonates and bicarbonates in irrigation water, which when applied to the soil increases the fertility and the availability of blocked nutrients. In sodic soils, the contribution of H+ favors its exchange with Na+, facilitating leaching of salts.

application	application dose
Acidifier	50-150 cc/m^3 of water
Nutrient de-blocker	5-10 l/ha- application 20-40 l/ha - crop cycle

codasul micro

20.3% N + 20.9% SO_3 + 4.05% Fe + 2.03% Mn + 0.68% Cu (w/v)

Formulation with a high nitrogen and sulfur content, enriched with a balanced mixture of micro-elements (40 g/l Fe, 20 g/l Mn and 6 g/l Cu). Can act as a water acidifier with an additional corrective fertilizer function. It reacts with carbonates and bicarbonates in the irrigation water that when applied facilitates greater availability of nutrients for alkaline or calcareous soils.

application	application dose
Acidifier	50-250 cc/cm^3 of water
Nutrient de-blocker	5-10 l/ha -application 30-60 l/ha -growing cycle
Foliar	20-40 cc/hl (up to pH: 5.5-6)

NUTRITION

These strategies improve plant nutrition both foliar and root for all types of crops. It includes products composed of macro-nutrients and micro-nutrients that stand out for their high assimilation power in the plant.

PRODUCTS

- codafol N33
- codafol 14-6-5
- codafol P54
- codafol 7-21-7
- codafol 13-13-13
- codafol maximus 8-11-3
- codafol K30
- codafol K35 acid
- codafol 4-16-28
- k·mad
- coda-Ca-L
- coda-Mg-L
- codacal boro
- codabor
- coda-Mn-L
- coda-Zn-L
- coda-Cu-L
- coda-Fe-L
- numafer
- numamix
- codaquel
- codamix
- codacitricos
- codahort

NPK LIQUIDS

Liquid formulations with a high concentration of nitrogen, phosphorus and/or potassium, totally soluble, and designed for foliar applications and in some cases for root applications. They are specially designed for increased efficiency.

Nitrogen

codafol N33

33% N + 0.06% Mn + 0.06% Zn + 0.12% Cu (w/v)

Foliar fertilizer with a high concentration of nitrogen (N) balanced with its different forms (ureic, ammoniacal and nitric) and complemented with EDTA-chelated micro-elements.
Its application is recommended in the early stages of the crop cycle and in periods of vegetative development, when rapid growth activation is desired.

application	application dose
Foliar	300-400 cc/hl - application 1-3 applications per crop cycle

codafol 14-6-5

17.0% N + 7.3% P_2O_5 + 6.1% K_2O + 0.12% Fe + 0.06% Mn + 0.06% Zn + 0.06% Cu + 0.001% Mo + N-ATC (N-Acetyl Thiazolidine 4-Carboxylic Acid) (w/v)

Compounded fertilizer with high nitrogen (N) concentration, complexed with phosphorus, potassium and trace elements chelated by EDTA.
It is recommended in the early stages of cultivation at times when active vegetative growth is desired. All elemental components in this product are highly available and absorbable to the plant. The product is complemented with N-ATC that gives it an added bio-stimulant action on desirable bio-chemical processes.

application	application dose
Foliar	200-400 cc/hl - application 1-3 applications per crop cycle

Phosphorus

codafol P54

85% P_2O_5 + 10 ppm dimethyl sulfoxide (w/v)

Foliar fertilizer with a high phosphorus concentration (850 g/l P_2O_5) complemented with dimethyl sulfoxide (DMSO) for better absorption by the plant.
Used in situations where there is a deficit of phosphorus, and in general in the stages of pre-flowering, flowering and fruit setting. In addition, it increases metabolic processes such as photosynthesis and increases energy input. It also boosts root development in plants.

application	application dose
Foliar	100-150 cc/hl - application 1-2 applications per crop cycle

codafol 7-21-7

7.3% N + 21.9% P_2O_5 + 7.3% K_2O + 0.13% Fe + 0.06% Mn + 0.06% Zn + 0.12% B + 0.06% Cu + 0.001% Mo (w/v)

Compounded fertilizer with a high concentration of phosphorus (P_2O_5) in conjunction with nitrogen, potassium and micronutrients. It is especially useful for plants in the stages of pre-flowering, flowering, and fruit set, as well as a facilitator for multiple metabolic pathways.

application	application dose
Foliar	150-200 cc/hl - application 1-3 applications per crop cycle

codafol 13-13-13

13.1% N + 13.1% P_2O_5 + 13.1% K_2O (w/v)

High-quality and balanced N-P-K fertilizer, readily available to plants. Its application is recommended in stages of growth in which the plant needs an equal balance of macro-elements, for example, in aerial vegetative development.

application	application dose
Foliar	200-300 cc/hl - application 2-3 applications per crop cycle

codafol maximus 8-11-3

10.4% N + 14.3% P_2O_5 + 3.9% K_2O + 0.39% MgO + 0.98% Mn + 0.68% Zn + 0.14% B + 10.66% free amino acids (w/v)

Formulated with a perfect N-P-K balance and enriched with micro-elements, amino acids and natural biostimulators.
Its application results in greater plant vigor, acting as a stress remedy and providing the plant with essential nutrients and bio-stimulants that favor fruit setting, increasing yields and quality as a result. It is especially recommended for row crops (cereals, soybeans, etc.).

application	application dose
Foliar	1-3 l/ha - application 2-3 applications per crop cycle

water volume: 200-1000 l.

agronomic benefits

Special nutrition
(NPK + Mg + micros + amino acids)
Greater stress recovery in critical moments when production is defined.

Increased growth and biomass accumulation.
Optimal distribution and accumulation of photoassimilates in harvestable parts.

Maximum crop yields

Greater economic benefit

codafol K30

45% K_2O (w/v)

Foliar fertilizer with a high concentration of potassium (K_2O) and easily absorbed by plants.
It provides an effective and highly assimilable potassium, which plays an important role in regulating various plant functions such as photosynthesis, opening and closing of stomata, transpiration, formation of sugars, etc. Suitable during fruit development, to improve ripening, quality and coloring.

application	application dose
Foliar	250-300 cc/hl -application 1-2 applications per crop cycle
Fertigation	10-20 l/ha - application 2-4 applications per crop cycle

codafol K35 acid

35% K_2O (w/v)

Foliar fertilizer with a high potassium concentration (K_2O).
Suitable for times of maximum demand for potassium, especially in stages prior to harvest for higher quality fruit, increased sugar, color and even caliber. In addition, it regulates various processes in the plant such as photosynthesis and transpiration. Because this formulation has a low pH, it facilitates its own assimilation into the leaves, and can be used as a pH regulator in agrochemical mixtures.

application	application dose
Foliar	250-300 cc/hl- application 1-2 applications per crop cycle

codafol 4-16-28

4.2% N + 16.8% P_2O_5 + 28.0% K_2O + 0.28% B + 0.02% Mo (w/v)

Compounded fertilizer with a high potassium concentration (K_2O) complexed with a perfect balance of nitrogen, phosphorus and micro-elements.
Especially useful in the stages of fruit set and development when the plant requires more of these specific elements.

application	application dose
Foliar	200-300 cc/hl - application 2-3 applications per crop cycle

k·mad

36% K_2O + 7% free amino acids (w/v)

Formulated with a high potassium concentration and amino acids specifically designed for root application.
It is used on soils with low potassium availability (clay fixation) or at specific times when K is in high demand, as can be prior to harvest. The aim is to increase fruit size, weight, sugar accumulation, color and uniformization of the harvest itself. The presence of amino acids, in addition to strengthening the crop against adverse conditions or abiotic stress, increases the availability of potassium for its absorption by the root, favoring the growth of the root system in general.

application	application dose
Fertigation	10-20 l/ha - application 2-3 applications per crop cycle every 10-15 days. Apply to plants with developing fruit up until about 7-10 days prior to harvest.

DEFICIENCY CORRECTORS

Liquid formulations containing micro-nutrients and secondary elements. Great adhesion and absorption power via foliar applications and highly available to plants through fertigation due to their stability in a wide pH range.

Secondaries

coda-Ca-L

10.8% CaO (w/v)

Liquid calcium solution complexed with lignosulfonates for foliar application.
Prevents and corrects calcium deficiencies. It favors the development of cell walls giving them greater elasticity and hardness which affects a fruit´s shelf-life down the road. With this product, the likelihood of fruit cracking and blemishing is reduced.

application	application dose
Foliar	Concentration: 250-400 cc/hl Dosage: 2-4 l/ha-application 4-6 applications every 10-15 days

coda-Mg-L

8.4% MgO (w/v)

Liquid magnesium solution complexed with lignosulfonates for foliar and soil applications.
Prevents and corrects magnesium deficiencies, which improves photosynthesis and chlorophyll formation; also in carbohydrate metabolism and protein synthesis. Magnesium deficiencies cause a reduction in photosynthetic activity, and consequently lower the production.

application	application dose
Foliar	Concentration: 250-300 cc/hl Dosage: 2-4 l/ha-application 4-6 applications per crop cycle
Fertigation	3-5 l/ha-application 2-4 applications per crop cycle

codacal boro

10.4 % CaO + 0.52 % B (w/v)

Calcium and boron complex, especially recommended for foliar and soil applications.
It prevents deficiencies of both these elements that share a synergistic relationship. Fruits obtained after its application show greater hardness and elasticity, thus prolonging shelf life. The combined application of these two elements enhances the mobility of calcium while also correcting possible boron deficiencies.

application	application dose
Foliar	Concentration: 250-300 cc/hl Dosage: 2-4 l/ha-application 4-6 applications every 7 or 10 days
Fertigation	3-5 l/ha - application Every week from the beginning of fruit development

codabor

14% B (w/v)

Liquid borate complex (boroethanolamine) of high concentration (140 g/l) for foliar or soil applications.
Prevents and corrects boron deficiencies, an essential micro-element for providing greater viability to pollen and increasing fruit set. As a result it prevents fruit deformities and blemishes. It also regulates the synthesis of hormones involved in the processes of cell division during fruit development, increasing production and the quality of the fruits or plants.
(Compatible with organic agricultural production)

application	application dose
Foliar	Concentration: 100-200 cc/hl Dosage: 1-2 l/ha-application 1-3 applications per crop cycle
Fertigation	1-3 l/ha-application Number of applications: 2-4 per crop cycle

coda-Mn-L

10.6% Mn (w/v)

Liquid manganese solution complexed with lignosulfonates, recommended for foliar or soil applications.
Prevents and corrects manganese deficiencies. It improves protein synthesis, stimulates photosynthesis, and favors a large number of enzymatic processes in plants, neutralizing free radicals, decreasing oxidation and thus improving the overall health of a crop. Because it helps reinforce cell walls, it in turn enhances root development.
(Compatible with organic agricultural production)

application	application dose
Foliar	Concentration: 200-300 cc/hl Dosage: 2-3 l/ha-application 1-3 applications per crop cycle
Fertigation	3-5 l/ha-application 2-4 applications per crop cycle

coda-Zn-L

10.4% Zn (w/v)

Liquid zinc solution complexed with lignosulfonates, recommended for foliar or soil applications.
Prevents and corrects zinc deficiencies. It favors essential enzymatic processes of plants, intervenes in the nitrogen cycle and is required for the synthesis of tryptophan (an important growth regulator). It is a structural component of proteins and is involved in numerous enzymatic processes. Zinc deficiencies reduces plant growth, affecting production.
(Compatible with organic agricultural production)

application	application dose
Foliar	Concentration: 200-300 cc/hl Dosage: 2-3 l/ha-application 1-3 applications per crop cycle
Fertigation	3-5 l/ha-application 2-4 applications per crop cycle

coda-Cu-L

6.0% Cu (w/v)

Liquid copper solution complexed with lignosulfonates, recommended for foliar or soil applications.
Prevents and corrects copper deficiencies. Copper is important in a multitude of enzymatic processes, such as photosynthesis, the synthesis of lignin, and the transport of nutrients from roots to leaves.
(Compatible with organic agricultural production)

application	application dose
Foliar	Concentration: 200-300 cc/hl Dosage: 2-3 l/ha-application 1-3 applications per crop cycle
Fertigation	3-5 l/ha-application 2-4 applications per crop cycle

coda-Fe-L

6.2% Fe (w/v)

Liquid iron solution complexed with lignosulfonates, recommended for foliar and soil applications.
Prevents and corrects iron deficiencies. It favors protein synthesis, photosynthesis and chlorophyll synthesis, thus promoting plant growth and enhancing production.
(Compatible with organic agricultural production)

application	application dose
Foliar	Concentration: 250-400 cc/hl Dosage: 2-4 l/ha-application 2-4 applications per crop cycle
Fertigation	3-5 l/ha-application 4-6 applications per crop cycle

numafer

6% Fe-EDDHA (w/w)

Iron chelate in soluble micro-granules with high stability due to the molecule´s phenolic groups that prevent hydrolysis and the precipitation of iron. Specially designed for soil applications.
It provides highly assimilable iron necessary for the synthesis of proteins and chlorophyll, favoring photosynthesis. Iron deficiencies lead to plant chlorosis, which stops growth and reduces the size of the fruit, causing early ripening.
Product available (depending on the market) in three different concentrations of ortho-ortho: 3.5% o-o, 4% o-o and 5% o-o.

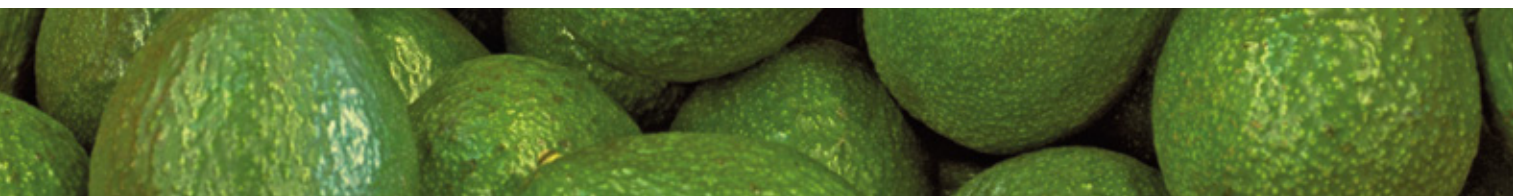
crops	application dose
Fruit/citrus	15-60 g/tree/cycle
Vine	5-15 g/vine/cycle
Horticultural crops and plant-nurseries	1-3 g/m²/cycle

numamix

6.5% Fe+ 4.6% Mn + 3.0% Zn + 0.3% Cu + 0.4% Mo (w/w)

A balanced mixture of iron, manganese, zinc and copper, as well as molybdenum, in soluble micro-granules. All elements are chelated by EDTA, which guarantee that they are highly available to the plant. Its balanced formulation and homogeneity between micro-nutrients have been precisely adjusted to the nutritional needs of the plant, by effecting enzymatic and biochemical processes that allow plants to develop properly.
(Compatible with organic agricultural production, OCS)

Root dose	
Hydroponic crops	2-3 kg/100 m³ of stock solution
Horticultural crops	1-2 kg/ha-application every 7 or 10 days
Fruit/citrus	2-3kg/ha-application every 10-15 days



codaquel

4.5% Zn + 4.5% Mn (w/v)

Liquid combination of zinc and manganese complexed with lignosulfonates for foliar or soil applications.
It is recommended for preventing and correcting the deficiencies of these elements. The synergy of both nutrients increases photosynthetic activity, protein synthesis and the cell growth process, thus increasing development, quality and production.
(Compatible with organic agricultural production)

application	application dose
Foliar	Concentration: 200-300 cc/hl Dosage: 3-4 l/ha-application 2-3 applications per crop cycle
Fertigation	3-5 l/ha-application 2-4 applications per crop cycle

codamix

5.1% Fe + 2.6% Mn + 0.6% Zn + 0.4% B + 0.2% Cu + 0.1% Mo (w/v)

Liquid combination of chelated trace elements and complexed with lignosulfonates, totally soluble in water.
Its carefully balanced formulation allows the correction of the respective deficiencies during all the phases of the crop, complementing any N-P-K fertilizer regiment. It can be applied by foliar and soil applications for any crop.
(Compatible with organic agricultural production)

application	application dose
Foliar	Concentration: 200-300 cc/hl Dosage: 2-3 l/ha-application 2-3 applications per crop cycle
Fertigation	3-5 l/ha - application Every 7-10 days

codacitricos

13.4% SO_3 + 2.5% Fe + 2.5% Mn + 2.5% Zn (w/v)

Liquid combination of iron, manganese and zinc complexed with lignosulfonates, that is recommended for soil applications (fertigation).
It prevents nutritional deficiencies of iron, manganese and zinc especially in fruit trees that have high requirements of these elements. It facilitates their availability in certain conditions, for example, in calcareous soils. These three elements are involved in the improvement of metabolic processes and the transport of assimilates, which have an effect on crop development.
(Compatible with organic agricultural production)

application	application dose
Fertigation	5-10 l7ha-application 30-60 l/ha - crop cycle. Depending on the age of the tree

codahort

2.17% MgO + 11.78% SO_3 + 2.48% Fe + 1.24% Mn + 1.24% Zn + 0.24% B + 0.12% Cu + 0.02% Mo (w/v)

Liquid organic fertilizer of trace elements with a high content of organic acids, totally soluble in water, for soil applications.
It works as a multi-deficiency corrector. Complements NPK (fertigation) fertilizer regiments for fruit trees and horticultural crops. The contribution of these micro-nutrients promote important metabolic pathways such as photosynthesis, protein synthesis, and the activation of enzymes, thus optimizing physiological development and increasing yield.
(Compatible with organic agricultural production)

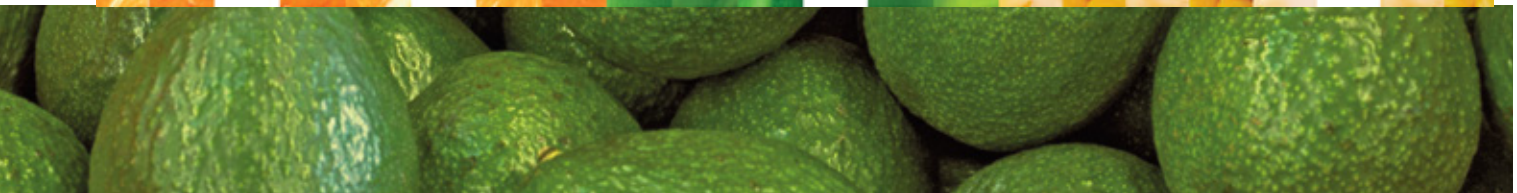
application	application dose
Fertigation	4-6 l/ha-applications 30-80 l/ha-growing cycle

coda

adaptados a tu cultivo

adapted to your crop

SUELO | NUTRICIÓN | ESTIMULACIÓN | POTENCIACIÓN



STIMULATION

Coda's biostimulation strategies include formulations aimed at maximizing yield and quality of any crop as they induce the plant´s resistance to stressful conditions and provide a rapidly available source of energy. We have different solutions based on amino acids of plant and alga origins and other biostimulants designed to activate the different processes of crop development.

PRODUCTS

- codamin 150
- dalcon
- dalgin
- e-dalgin
- codasting
- tripton TL
- tripton TC
- codamin radicular
- codamin microradicular
- radimax +
- dalgin H15
- dalgin Mg
- codan plus
- codamin B-Mo
- codamol
- fruitmax 10
- codabrix
- codavit
- dalgin active
- kryoss
- unibrot
- codasil
- osmoplant

GENERAL BIOSTIMULATION

codamin 150

4.1% N + 2.42% Fe + 0.72% Mn + 0.48% Zn + 15.6% free amino acids (w/v)

Biostimulant with an optimal combination of hydrolyzed plant proteins and micro-elements.
Helps crops to prepare for and/or to overcome stressful situations. The presence of amino acids helps during periods of growth and flowering thus stimulating higher yields and quality in crops. These amino acids take part in protein synthesis, reserving the plant´s energy for other physiological processes. They also act as a metabolism regulator stimulating the formation of chlorophyll, indolacetic acid (IAA), vitamins and various enzymes. It is often combined with different CODA nutrition products, creating synergistic effects. It is a great product to complement with basic NPK fertilizers.

application	application dose
Foliar	200-300 cc/hl 1-4 applications per crop cycle
Fertigation	5 l/ha-application 2-4 applications per crop cycle
Foliar co-adjuvant	1 l/ha-application

dalcon

3.49 % N + 2.66% K_2O + 2.54% Fe + 10.16% free amino acids (w/v)

Environmentally friendly biostimulant containing amino acids of plant origin.
Promotes the saving of energy within plants because it intervenes in various functions of metabolism, while also providing essential elements and organic matter. The product activates the plant's natural resistance to biotic and/or abiotic stresses during all phenological states. Its composition improves the action of most other products it is mixed with.
(Compatible with organic agricultural production)

application	application dose
Foliar	250-300 cch/l 1-2 separate applications 15- 20 days
Fertigation	3-5 l/ha-application 4-8 separate applications 15-20 days

dalgin

22.4% seaweed extract + 6.7% free amino acids + 1.4% N (w/v)

Liquid biostimulant rich in plant amino acids and seaweed extract *(Ascophyllum nodosum)* that constitutes a natural reserve of micro- and macro-nutrients, amino acids and carbohydrates. It increases crop yield, quality and especially vigor. The product induces beneficial synergies with its calibrated formulation of plant amino acids, which improves crop recovery time under stressful conditions. It also contains natural phytohormones endemic to seaweed that make the product very effective when applied during phases of fruit development.

application	application dose
Foliar	200-250 cc/hl 1-3 applications per crop cycle
Fertigation	3-4 l/ha-application 2-6 applications per crop cycle

e-dalgin

100% seaweed extract

Environmentally friendly biostimulant containing 100% seaweed extract (Ascophyllum nodosum) that constitutes a natural reserve of micro and macro-nutrients, amino acids, carbohydrates and phytohormones of natural origin.
Its composition improves and keeps the plant physiologically active throughout its development, delaying senescence and strengthening the plant against all types of stress which leads to higher yields and quality.
(Compatible with organic agricultural production)

application	application dose
Foliar	200-250 cc/hl-application 1-3 applications per crop cycle
Fertigation	3-4 l/ha- application 2-6 applications per crop cycle

codasting

8.1% N + 10.1% free amino acids + 13.4% organic matter + stimulators (w/v)

Powerful physiological activator of high penetration and fast action. Its biostimulant effect, caused by the synergic action of hydrolyzed and amino acids, of vegetable origin, associated with osmolytes and precursors.
Its effect activates the crop, stimulating photosynthesis, plant growth, optimizing the availability and use of nutrients, and achieving great energy savings. It helps the crop to tolerate or recover after stressful situations.

application	application dose
Foliar	75-100 cc/hl - application 1-3 applications per crop cycle
Fertigation	1-2 l/ha-application 3-6 applications per crop cycle

codasting is a very versatile product that improves every phenological stage. It also creates an important synergy in combination with many of Coda products, increasing their efficiency.

agronomic benefits:

Increased activation, growth and vigor of your crop

Pre abiotic stress
Recovery after abiotic stress

Complement to your Coda program

High quality amino acids
AATC Betaine
synergy of components

Improved nutrition and water use
Energy savings
Increased photosynthesis

Increases tolerance and recovery to abiotic stress episodes.

More efficient use of water and nutrients.

Greater plant and root growth.

Increases the efficiency of other Coda products applied.

more production
more quality

more profitability

codasting is a product that perfectly fits our philosophy of sustainable company, which promotes responsible agriculture. It helps in the efficiency of water and nutrient absorption, saving energy to the plant and promoting healthy crops, which decreases the need for chemical fertilizers. In this way, it contributes significantly to the reduction of global CO_2 emissions.

PHASE STIMULATION

Seed

tripton TL

3.59% N + 9.63% Mo + 0.96% Co + 6.42% free amino acids + 12.8% organic matter (w/v)

Biostimulant comprised of amino acids of plant origin and specific nutrients designed for the treatment of seeds in legume crops.
Improves germination, root development, and seedling emission at initial start-up, resulting in higher production and quality. The presence of cobalt and molybdenum stimulates the formation of nodules in roots by increasing the biological fixation of nitrogen (BFN) by means of *Rhizobium spp.*

application	application dose
Foliar	200-300 cc/ha-application On V4, 25-30 DDS. 1-2 separate applications 15-20 days
Seed coating	200-400 cc/100 kg of seed

tripton TC

3.73% N + 7.47% P_2O_5 + 0.31% K_2O + 3.73% Zn + 6.2% free amino acids + 24.9% organic matter (w/v)

Biostimulant comprised of amino acids of plant origin and specific nutrients designed for the treatment of cereal seeds prior to sowing.
Promotes germination and root development, achieving greater viability of seedlings in the initial stages, resulting in higher production and quality. The combination of phosphorus, zinc, polysaccharides and organic acids increases the effect of this product.

application	application dose
Seed coating	200-400 cc/100 kg of seed

codamin radicular

5.8% free amino acids + 3.3% N + 11.3% P_2O_5 + 4.0% K_2O (w/v)

Biostimulant formulated with a balance of specific amino acids of plant origin, phosphorus, and potassium.
This product has a double action: nutrition and stimulation. It promotes the development of healthy, extensive root systems with a greater volume of root hairs and greater absorption. In stressful situations (transplant, frost, toxicities, etc.) it nourishes and gives extra energy to the plant, contributing to its rapid recovery and consequent vegetative activation.

application	application dose
Fertigation	5-10 l/ha-application 20-40 l/ha- crop cicle

codamin microradicular

5% free amino acids + 1.3% N + 3.6% Fe + 1.2% Mn + 1.2% Zn (w/v)

Biostimulant formulated with a balance of specific nutrients and amino acids of plant origin.
Its careful balance of iron, manganese and zinc combined with amino acids favors root activity ensuring optimal absorption of nutrients. In addition, it improves crop recovery time during stressful situations as it makes it easier for plants to synthesize their own proteins more quickly, thus saving energy.
(Compatible with organic agricultural production)

application	application dose
Fertigation	5-10 l/ha-application 20-40 l/ha- crop cicle

radimax +

3.7% N + 11.1% P_2O_5 + 4.1% K_2O + 5.8% free amino acids + 0.5% Zn (w/v)

Biostimulant formulated with specific amino acids of plant origin, macro-elements, plant activators, and trace elements.
It has a powerful rooting action, promoting overall root development as well as the emergence of new roots. It reduces the period of stress caused by transplanting, optimizing the absorption of nutrients and unifying the development of the plant.

application	application dose
Fertigation	2-4 l/ha-application 2-4 applications per crop cycle

dalgin H15

17.5% total humic extract (8.47% humic acids + 9.04% fulvic acids) + 4.23% K_2O + 2.03% free amino acids + 6.8% algae extract (w/v)

Liquid biostimulant that combines a high content of humic and fulvic organic acids with seaweed extract *(Ascophyllum nodosum)*, plant amino acids, bio-molecules, and specific activators.
It favors the growth and regeneration of roots in the presence of nematodes, restoring the useful microbial life of the soil, and facilitates healthy development and production in a crop.

application	application dose
Fertigation	5 l/ha-application 40-60 l/ha -growing cycle

Vegetative development

dalgin Mg

6.15% MgO + 12.3% SO_3 + 1.23% B + 0.12% Mo + 6.15% seaweed extract (w/v)

Biostimulant with seaweed extract *(Ascophyllum nodosum)*, that contains more than 60 macro and micro-nutrients, carbohydrates, amino acids and growth promoters of natural origin.
Provides energy to the crop, especially during vegetative growth, and activates chlorophyll and photosynthetic processes. The product is complete with magnesium, boron and molybdenum, providing optimal crop nutrition that are especially needed during times of great demand.

application	application dose
Foliar	250-300 cc/hl- application 1-2 applications per crop cycle

Flowering and setting

codan plus

2.53% N + 9.3% P_2O_5 + 12.4% K_2O + 1.3% B + 0.13% Mo + 6.7% free amino acids + 10.9% seaweed extract (w/v)

Biostimulant composed of phosphorus and potassium combined with plant amino acids, biomolecules, osmolytes and trace elements.
Applied during flowering to stimulate the production of viable pollen, ensuring fertilization and fruit setting, which leads to an increase in production and a higher quality crop. The seaweed extract component of this product promotes cell multiplication, while also reducing the oxidative stress of the plant due to the presence of naturally occurring phytohormones found in Ascophyllum nodosum. And the content of osmolytes helps to keep the plant actively growing in times of drought.

application	application dose
Foliar	1-2.5 l/ha- application 1-3 applications per crop cycle
Fertigation	3-5 l/ha - application 2-6 applications per crop cycle

codamin B-Mo

6.27% B + 0.2% Mo + 12.04% free amino acids (w/v)

Biostimulant based on plant amino acids combined with boron and molybdenum.
In addition to correcting boron deficiencies, by combining boron with amino acids and molybdenum, it promotes protein synthesis and creates synergies that enhance its own transport and penetration through cells, facilitating the physiological processes from flowering to fruit setting. In addition, it saves the plant from expending its own energy and stimulates resistance to adverse conditions, increasing yields and fruit quality.

application	application dose
Foliar	200-250 cc/hl-application 1-2 applications per crop cycle
Fertigation	5 l/ha- application 2-3 applications per crop cycle

codamol

3.36% N + 11.6% P_2O_5 + 0.23% B + 3.48% Mo + 2.32% free amino acids (w/v)

Biostimulant with plant amino acids combined with nitrogen, phosphorus, boron, and molybdenum.
It is used as a preventive against deficiencies or imbalances in the assimilation of molybdenum, especially important during flowering and fruit setting. Molybdenum helps nitrogen assimilate into plants and is an important part of enzymatic reactions within plants. Its addition helps increase production and improve the quality of the harvest.

application	application dose
Foliar	100-150 cc/hl-application 2-3 applications per crop cycle

Fruit development

fruitmax 10

3.46% N + 1.96% K_2O + 1.15% B + 0.11% Mo + 11.55% free amino acids + 9.47% seaweed extract (w/v)

Biostimulant based on amino acids of vegetable origin, bioactive substances, osmolytes and seaweed extract.
Its application at specific times of fruit formation and development, provides energy, allows vegetative balance and promotes cell multiplication, maximizing fruit size and fruit uniformity.
fruitmax 10 increases crop yield and therefore crop profitability.

application	application dose
Foliar	150-250 cc/hl-application every 7-15 days
Fertigation	3-5 l/ha-application every 7-10 days

Agronomic benefits:

BIOSTIMULANT EFFECT

Its carefully selected amino acids of plant origin, combined with algae extract, promotes an optimal growing balance, and allows the plant to save significant amounts of energy.

MAXIMIZING EFFECT

The synergy between its amino acids, osmolytes and bioactive compounds promotes cell multiplication and elongation, which boosts fruit fattening.

Greater uniformity

Larger fruit

Increased yield

Greater profitability

Ripening

codabrix

25.4% K_2O + 16.2% polysaccharides + 0.35% free amino acids (w/v)

Biostimulant with amino acids combined with potassium and polysaccharides.
It improves fruit ripening by uniforming coloration. It increases quality parameters such as fruit size and brix level, increasing production without shortening shelf life and generally improving the vegetative state of the plant.

application	application dose
Foliar	200-250 cc/hl - application 1-3 applications per crop cycle

Agronomic benefits:

Improves fruit ripening by uniforming coloration.

Increases quality parameters such as fruit size and brix level.

Increases production without shortening its useful life.

REINFORCEMENTS

Reinvigorates plants and stimulates their natural defenses. These formulations are composed of natural organic compounds, bioactivators and micro-elements. Apart from its nourishing effects, they give plants greater protection against pathogens and pests in a sustainable and effective way.

codavit

2.24% Cu + 2.56% Fe + 0.96% Mn + 0.64% Zn + aluminium lignosufonate (15.7% SO_3) (w/v)

Biostimulant containing micro-nutrients (Cu, Fe, Mn and Zn) combined with substances of natural origin derived from lignin.
It acts by reinvigorating and improving the health and quality of crops. It, therefore, has a double effect: it acts as a bio-stimulant activating metabolism and plant functionality and as a preventative by activating the plant's own defenses, making it difficult for certain pathogens to establish. This is due in part thanks to trace elements and the presence of aluminum.
(Compatible with organic agricultural production)

application	application dose
Foliar	200-400 cc/hl - application 1-3 applications per crop cycle
Fertigation	5 l/ha -application 2-4 applications per crop cycle

dalgin active

1.43% N + 6.78% amino acids + 22.60% seaweed extract + vitamins (1.35 g/l) (p/v)

Biostimulant comprised of seaweed extract *(Ascophyllum nodosum)*, vitamins and antioxidants. It naturally includes more than 60 macro- and micro-nutrients, carbohydrates, amino acids and natural growth promoters.
It has a promoting effe ct on the plant's defense system against pests and diseases (fungi, bacteria, viruses). In crops affected by physical damage (hail, wind ...) it promotes rapid and healthy healing, in addition to promoting crop growth.

application	application dose
Foliar	250-300 cc/hl - application Applied every 7 to 10 days
Fertigation	2.5-5 l/ha-application Frequency: Every 10-15 days

kryoss

NEW

0.28% N + 7.62% K_2O + 2.26% amino acids + mannitol (113 g/l) (w/v)

Biostimulant based on potassium, osmolytes and cryoprotective compounds.

It increases tolerance and reduces the effects of frost damage (down to 25.7°F). Its osmoregulatory potential reduces the freezing point, prevents the formation of intracellular crystals, the loss of membrane integrity and the cell death.

application	application dose
Flowering/fruit set phase, wetting well the areas to be protected.	1 l /100 l of water 1 application 24-48h before the frost is expected.

osmolytes
Reduce cell dehydration.

cryoprotectants
Reduce the freezing point of water and help to maintain the integrity of the plasmatic membrane.

antioxidants
Neutralize free radicals.

Increased resistance to frost, ensuring improved flowering and fruit setting.

Ensures the functioning of the cell and prevents cell dehydration.

Less tissue and organ damage: greater production, more profits.

unibrot

12.64% N + 3.52% amino acids + 23.07% CaO (w/v)

Biostimulant with amino acids, nitrogen, and calcium that easily wets and makes budbreak more uniform, bringing forward the phenological development of vegetative and reproductive buds that are delayed because of nutritional factors.

The synergy between amino acids and nutrients stimulates buds that are positionally or nutritionally disadvantaged so that they break or flower.

application	application dose
On wood prior to bud break in crops with chilling requirements such as deciduous fruit trees, wetting well.	4 - 7% 1 application per crop cycle. From 45 DBF/B* to 15 DBF/B* or when 10% of buds have swollen. Between 51 and 53 BBCH

*Days before flowering/budbreak

unibrot concentrates sprouting.

Makes phenological stages coincide more efficient, improving the efficiency of irrigation and application of other nutritional and phytosanitary products.

With its use, fruit growth is more uniform, concentrating and increasing the quantity and quality of the harvest.

codasil

26.10% SiO_2 + 5.22% amino acids + 14.62% K_2O (w/v)

Bioestimulant rich in silicon, free amino acids, and peptides. The synergy created between these three main components facilitates an increase in production, yield, and quality in crops. High silicon absorption which helps crops to increase their Nutrient Use Efficiency (NUE), and to improve their tolerance against abiotic stress. This is also due to increased photosynthetic activity, efficient water use, maintenance of osmotic balance, regulation of metal uptake or translocation, reduction of oxidative stress and increased structural stability.

application	application dose
Foliar	2-3 l/ha 4 - 6 per growing cycle. Every 15 - 20 days
Fertigation	3-7 l/ha 4 - 6 per growing cycle. Every 15 - 20 days

Crops in general: it is recommended to start applications at flowering or before the onset of stress.

Agronomic crops / cereals: application at specific times at the beginning of tillering.

It favors the efficient use of nutrients and avoids phytotoxicity.

Increased structural resistance in plant, fruit and extended post-harvest life.

Reinforcement against thermal, hydric and saline stress situations.

osmoplant

2.65% N + 6.63% amino acids + 3.70% K_2O (w/v)

Biostimulant based on specific amino acids and osmoprotectants, in addition to potassium and other cellular osmotic and water balance regulating compounds.

Improves the plant's tolerance mechanisms to a reduction in water resources providing a more effective response to stress, increasing the photosynthetic activity of the plant, and thus favoring an increase in the production and quality of harvests.

application	application dose
Foliar	250-350 cc/hl 2 - 4 applications per crop cycle (every 10 - 15 days)
Fertigation	5-7 l/ha 2 - 4 applications per crop cycle (every 10 - 15 days)

Osmotic power
Stimulating power

Increased plant tolerance to drought and favored water absorption.

Increased pollen viability: increased fruit set: higher production.

it keeps the plant turgid and more active in greenhouses with high temperatures.

ENHANCEMENT

PRODUCTS

tamponic pH
codadhex Pg
sthenos
e-codaoleo K
codaphos K

FOLIAR TREATMENTS

These strategies optimize the effectiveness of those fertilizers and phytosanitary products used through foliar applications, affecting the stability of the pH and the physical-chemical properties (such as superficial tension, the foliar adherence, etc.)

tamponic pH

16.57% K_2O + polycarboxylic organic acids (w/v)

Potassium solution with polycarboxylic acids used to stabilize the pH of water.
Improves stability, penetration and effectiveness of nutrients, bio-stimulants and agrochemicals for foliar application in all types of crops. The slightly acidifying effect means that the pH of the tank mixture is maintained at an optimum value, avoiding its alteration due to an inadequate pH level (alkaline hydrolysis). In addition, it reduces the concentration of hardness-generating salts (carbonates and calcium and magnesium bicarbonates) that could react with agrochemicals and reduce their effectiveness.

application	application dose
Application rate	75-150 cc/100 l. final volume

codadhex Pg

20% alkyl polyglycol ether

Wetting product based on various surfactant components, co-adjuvants and surfactants, with a triple action: adhering + wetting + dispersing. It can be applied in all types of crops together with phytosanitary products for foliar applications. When applied with agrochemicals it accelerates the penetration of the active ingredient in the surface layer, increasing the effectiveness of the product. It is also recommended when it is difficult to evenly wet leaf surfaces, and also in cultivars with waxy cuticles.

application	application dose
Foliar	100 cc/100 l. final volume
Insecticide or fungicide co-adjuvant	50 cc/100 l. final volume
Herbicide co-adjuvant	50-100 cc/100 l. final volume

sthenos NEW

2,17 % CaO + complexing agent: citric acid (w/v)

Suspoemulsion (SE) of complexed calcium and other compounds with photoprotective potential developed to protect fruits from sun exposure. The fruit surface acts by blocking, absorbing and attenuating the effect of solar radiation through organic sunscreens and antioxidants.
It reduces oxidative damage and surface temperature of the fruit, reducing the risk of sun damage losses in production, harvest and postharvest quality. The synergistic effect with calcium provides greater stability to cell walls, increasing crop tolerance to biotic/abiotic stress (thermal, hydric), reducing the appearance of physiopathologies associated with calcium deficiency in the fruit.

application	application dose
Foliar	2.5 l/ 100 l. water per application 3 – 6 applications per crop cycle, every 10 – 20 days

***The lfb complex integrates triple protection for fruits:**

- Sunscreen // inorganic physicists
- Solar filters // organic chemicals
- Antioxidants // biological

Efficient:
high efficiency tested with competitors

New:
triple fruit protection

Easy to use

Safe:
non-staining, no residues

Guaranteed table of components

SOIL IMPROVEMENT

Products	EHT	Humic acids	Fulvic acids	Organic acids	N	P_2O_5	K_2O	CaO	MgO	SO_3	Fe	Mn	Zn	Cu
codahumus 20		11.7	11.9			1.4	5.8							
e-codahumus	23.2	11.5	11.7				4.6							
codahumus PK	20.3	11.4	8.9			8.9	15.2							
codabooster	16.70	13.38	3.34				5.24							
codahumus S80	80.0	76.0	4.0				12.0							
codargon				36.6				2.8	1.2					
e-codargon				35.7				2.7						
codasal premium								17.5						
e-codasal								8.2						
codasal complex								14.0	2.8					
numatric				45.2				2.4	1.1					
codasul pH					22.8					60.8	0.03		0.01	
codasul micro					20.2					20.9	4.1	2.0		0.7

NUTRITION

Products	Amino Acids	N	P_2O_5	K_2O	CaO	MgO	SO_3	Fe	Mn	Zn	B	Cu	Mo	Chelating / complexing agent
codafol N33		32.9							0.06	0.06		0.12		EDTA
codafol 14-6-5		17.0	7.3	6.1				0.12	0.06	0.06		0.06	0.001	EDTA
codafol P54			85.0											
codafol 7-21-7		7.3	21.9	7.3				0.13	0.06	0.06	0.12	0.06	0.001	
codafol 13-13-13		13.1	13.1	13.1										
codafol maximus 8-11-3	10.6	10.4	14.3	3.9		0.38			0.97	0.67	0.14			
codafol K30				45.0										
codafol K35 acid				35.0										
codafol 4-16-28		4.2	16.8	28.0							0.28		0.02	
k·mad	7.0	1.26		36.0										
coda-Ca-L					10.8									lignosulfonate
coda-Mg-L						8.4								lignosulfonate
codacal boro					10.4						0.5			lignosulfonate
codabor											14.0			monoethanolamine
coda-Mn-L									10.6					lignosulfonate
coda-Zn-L										10.4				lignosulfonate
coda-Cu-L												6.0		lignosulfonate
coda-Fe-L								6.2						lignosulfonate
numafer								6.0						EDDHA
numamix								6.5	4.6	3.0		0.3	0.4	EDTA
codaquel									4.5	4.5				lignosulfonate
codamix								5.1	2.6	0.6	0.4	0.2	0.1	lignosulfonate
codacitricos							13.4	2.5	2.5	2.5				lignosulfonate
codahort						2.17	11.8	2.48	1.24	1.24	0.24	0.12	0.02	lignosulfonate

STIMULATION

Products	Organic matter	Amino Acids	Seaweed extract	Polysaccharides	N	P_2O_5	K_2O	MgO	Fe	Mn	Zn	B	Cu	Mo	SiO_2	CaO
codamin 150		15.6							2.4	0.7	0.5					
dalcon		10.16			3.5		2.6		2.5							
dalgin		6.7	22.4		1.4											
e-dalgin			100													
codasting	13.4	10.1			8.1											
tripton TL	12.8	6.4			3.6									9.6		
tripton TC	24.9	6.2			3.7	7.4	0,3				3.7					
codamin radicular		5.7			3.3	11.2	4.0									
codamin microradicular		5.0			1.3				3.6	1.2	1.2					
radimax +		5.8			3.7	11.1	4.1				0.5					
dalgin H15	17.5	2.0	6.8				4.2									
dalgin Mg			6.2					6.1				1.2		0.1		
codan plus		6.6	10.9			9.3	12.4					1.3		0.1		
codamin B-Mo		12.0			6.3							6.3		0.2		
codamol		2.3			3.4	11.6						0.2		3.4		
fruitmax 10		11.5	9.5		3.4		1.9					1.1		0.11		
codabrix				16.2			25.3									
codavit									2.56	0.96	0.64		2.24			
dalgin active		6.78	22.6		1.43											
kryoss		2.3			0.3		7.6									
unibrot		3.5			12.6											23.1
codasil		5.2					14.6								26.1	
osmoplant		6.6			2.6		3.7									

ENHANCEMENT

Products	Potassium salt of fatty acids	P_2O_5	K_2O	CaO	Alkyl polyglycol ether
tamponic pH			16.57		
codadhex Pg					20.0
sthenos				2.2	
e-codaoleo K	50.0				
codaphos K		42.0	28.0		

Product compatible with organic agricultural production

Seed application product

New product

Foliar application product

Product with seaweed extract

Products for soil application / Fertigation

Product with amino acids

SAService

Our highly qualified technical team is always available to you in order to help you select the most appropriate strategies for your individual situation, problems, and needs; always with the objective of maximizing the yield and quality of your crop.

sas
Sustainable Agro Solutions, S.A.U.
Ctra. N-240, Km 110 - Almacelles - Lleida (Spain) 25100
t. (34) 973 74 04 00 / info@sas-agri.com
sas-agri.com