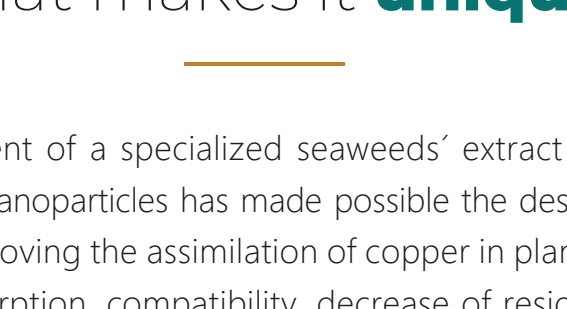
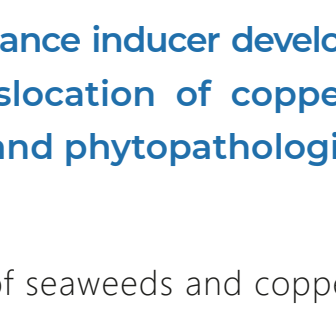




# CopperKelp®

Seaweed with micronutrient

Liquid extract of seaweeds:  
micronutrient and resistance inducer



**Micronutrient and resistance inducer developed for the stabilization, distribution, and translocation of copper nanoparticles which covers nutritional and phytopathological needs in plants.**

Liquid extract of seaweeds and copper nanoparticles

## What makes it **unique?**

The development of a specialized seaweeds' extract for the organic production of nanoparticles has made possible the design of a formula capable of improving the assimilation of copper in plants. The increase of copper absorption, compatibility, decrease of residues and no risk of toxicity is what makes it a unique product in the market.

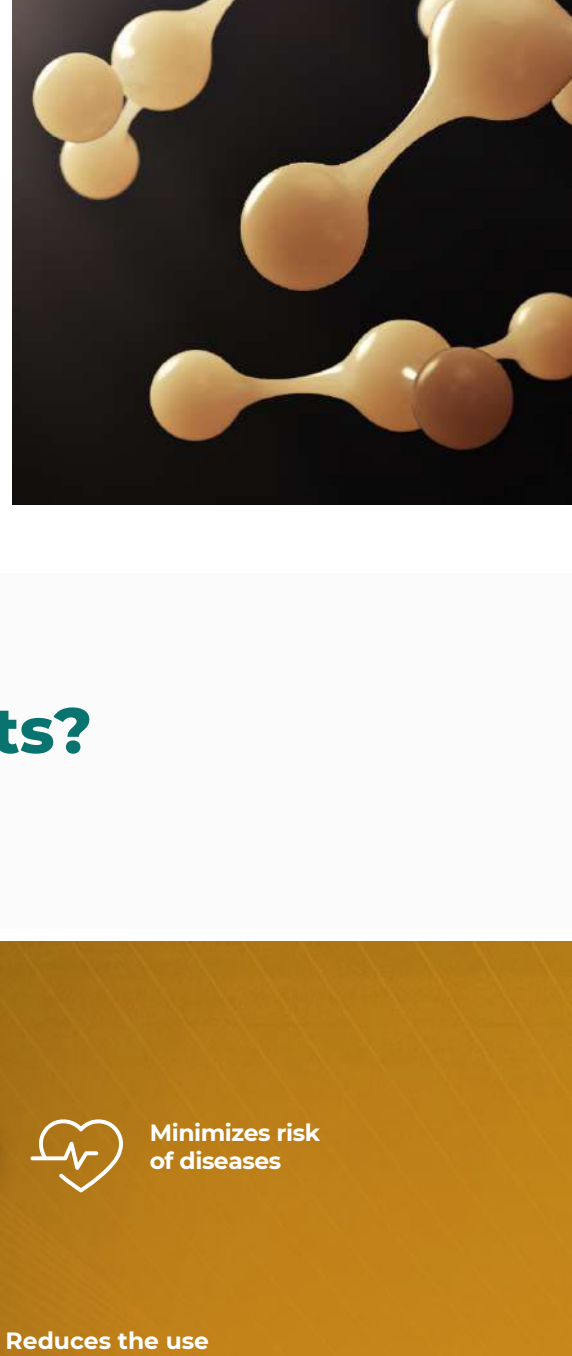
Since its launch in 2018, CopperKelp has innovated the concept and use of copper in agricultural practices from different parts of the world. It has been received as a novel alternative to activate plants' defense system and to decrease the impact caused by the use of synthetic chemical products.



## Why **use it?**

The absorption and compatibility of CopperKelp's nanoparticles ease its application both by foliage and roots for its use in plant metabolism.

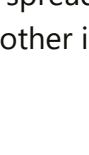
The benefits of maintaining the proper concentration of copper in plants and soils are observed in the development of sprouts and the lignification of plant tissue as well as in the resistance to diseases caused by bacteria or phytopathogenic fungi that can cause severe economic losses.



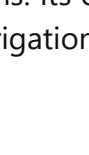
## What are its **effects?**



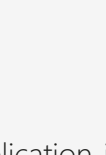
Improves the assimilation of copper



Strengthens the plant's defense mechanism



Minimizes risk of diseases



Compatible with microbiological products



Reduces the use of chemicals

## How is it used?

It can be applied in any crop, taking into account the phenological stage and the areas susceptible to the spread of phytopathogens. Its compatibility facilitates the mixture with other inputs for use by irrigation or foliage.



### FOLIAR APPLICATION

Its application is recommended for the strengthening of leaves, new sprouts and fruit setting or growth, as well as in times prior to the appearance of foliar diseases.



### SOIL APPLICATION

Applications to the soil or substratum will allow the absorption of copper in the root and its translocation through the plant's vascular system; this will mitigate the effects caused by the spread of phytopathogens nearby the root area and the stem's neck.



### TECHNICAL ASSISTANCE / DOSAGE AND RECOMMENDATIONS

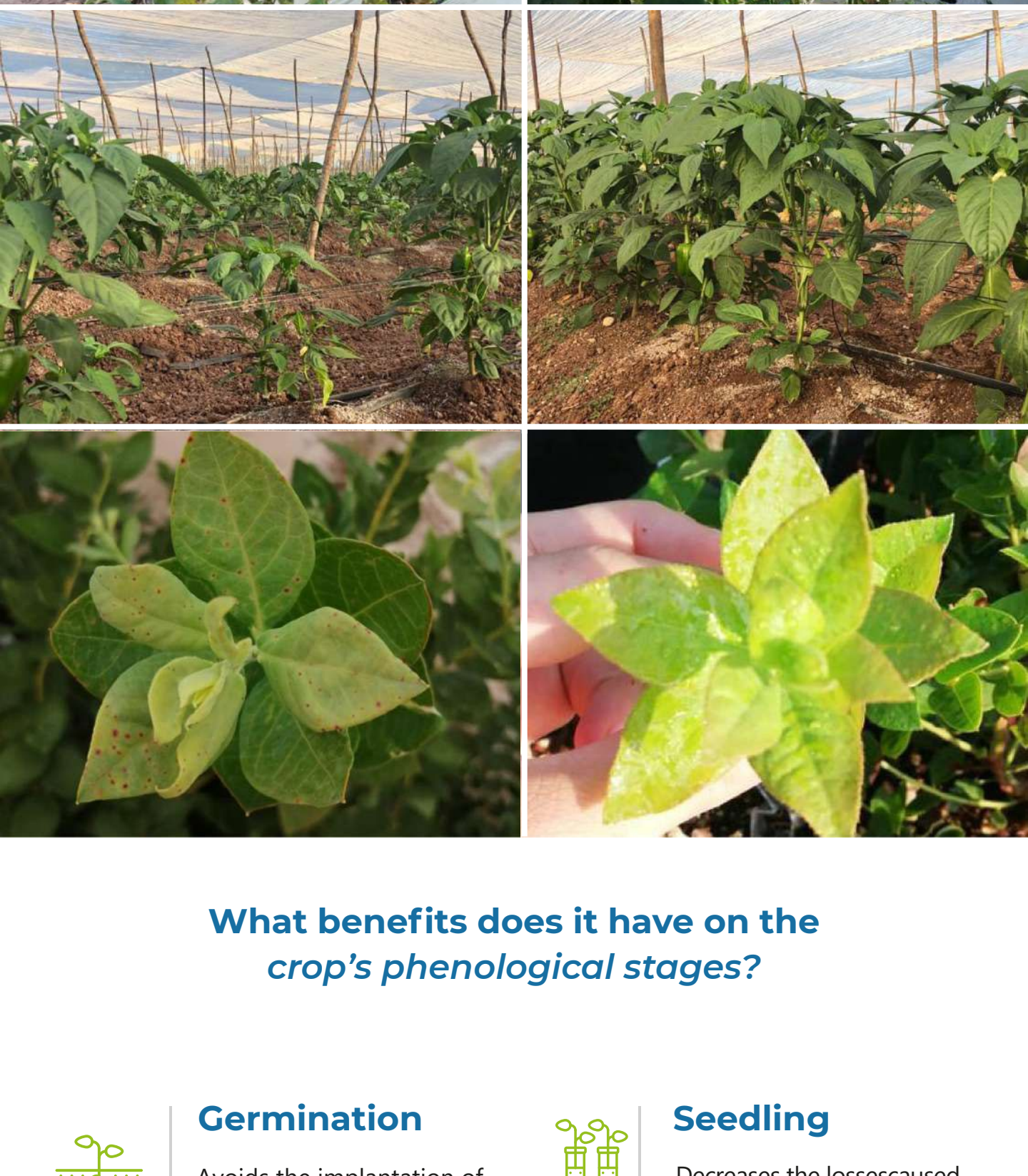
Depending on the type, conditions, and handling of the crop, the recommended dosage is:

PRODUCT	TYPE OF APPLICATION		DOSAGE (Gallon/Acre)					
	IRRIGATION	FOLIAR	GRAINS		VEGETABLES		FRUIT / NUTS	
			MIN	MAX	MIN	MAX	MIN	MAX
CopperKelp	X	X	0.25	1	0.25	1	0.25	1

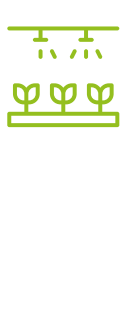
For better results, follow the instructions of trained technical personnel.

### CONTROL PLOT

### TREATMENT

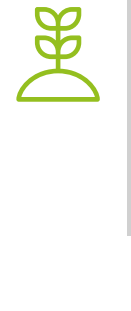


## What benefits does it have on the *crop's phenological stages?*



### Germination

Avoids the implantation of pathogens in germinated seeds



### Seedling

Decreases the losses caused by fungi and bacteria  
Strengthens the plant prior to transplantation



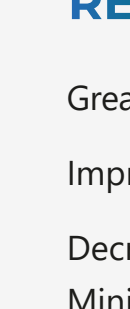
### Plant development

Improves the development and lignification of plant tissue



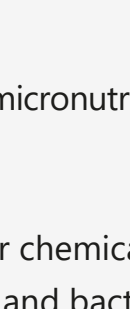
### Sprouting

Increases the resistance and development of new buds and sprouts



### Fruition

Reduces biotic stress and direct damage in fruit



### Post-harvest

Strengthens the plant after the stress produced by the harvest

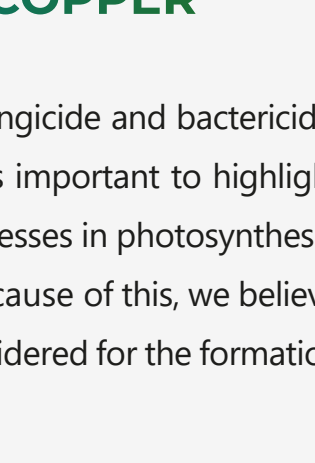
## RESULTS

Greater uptake and use of copper as a micronutrient

Improves the resistance of plants

Decreases the use of copper and other chemicals

Minimizes the effects caused by fungi and bacteria up to 18 %



## THE NEW AGRICULTURAL COPPER

Even though copper is better known for its effects as fungicide and bactericidal in agriculture rather than for being a micronutrient, it is important to highlight that it is an element widely connected to metabolic processes in photosynthesis, lignification, formation of enzymes, among others. Because of this, we believe that its uptake and availability at low doses must be considered for the formation of sustainable crops.

