



BioSap-Q

NATURE'S OWN BIO-STIMULANT & WETTING AGENT

Derived from the Quillaja saponaria tree, BioSap-Q is a groundbreaking bio-stimulant, elevating plant health and productivity. OMRI-certified, it's a cornerstone of sustainable North American farming, delivering a potent, organic solution for modern agriculture.

BioSap-Q is a distinct botanical extract, rich in natural triterpenic saponins from the sustainably harvested Quillaja Saponaria tree. Engineered to boost plant growth, stress resistance, and crop yield, BioSap-Q is the eco-friendly answer for today's varied agricultural demands.



BENEFITS OF BIOSAP-Q

- ✓ **As a Bio-stimulant:**
Promotes robust plant and root growth, increases stress tolerance, and supports higher yields.
- ✓ **Enhanced Germination:**
BioSap-Q has been proven to substantially increase germination rates, ensuring robust starts and healthier plant development from the outset.
- ✓ **Wetting agent:**
BioSap-Q lowers water surface tension, significantly improving nutrient uptake and soil penetration. This action boosts foliar and soil application effectiveness, enhancing water retention in soil and offering protection against dehydration and heat.



TECHNICAL RECOMMENDATIONS

For Foliar Applications:

Dosage: 100–300 cc per 100 liters of water.
Guidance: Designed to stimulate vegetative and root development and optimize nutrition in transplant vegetables and sown crops. Apply from crop establishment or emergence and repeat every 15–30 days. Up to 8 applications can be made per season.

For Substrate Application:

Dosage: 200–300 cc per 100 liters of water.
Guidance: Ideal for promoting root development and vegetative growth in container-grown crops such as seedling trays, bags, pots, etc. Apply through immersion of seedlings or containers or by watering the containers with BioSap-Q at the indicated concentration, diluted in the amount of water that can be retained in the container's substrate without product loss through leaching. Up to 4 applications are recommended during the crop's container growth stage.

Scientific Validation

BioSap-Q's efficacy is backed by scientific studies, demonstrating its superior performance in enhancing germination, grass growth, and overall yield. Endorsed by OMRI, BioSap-Q meets the stringent standards required for organic farming.

PHYTOHORMONES ON BIOSAP-Q

Highlighting its rich composition, BioSap-Q contains higher levels of salicylic and jasmonic acids than its competitors, enhancing plant resilience and growth.

Table 1: Main Phytohormones founded (content in ng/ml)*:

Phytohormone	Active form	Abbreviation	<i>Ecklonia maxima</i>	<i>Ascophyllum nodosum</i>	BioSap-Q
Auxin	Indole-3-acetic-acid	IAA	1.19	3.34	45.48
Gibberellin	Gibberellin 4 Gibberellin 1	GA4 GA1	0.01 0.01	0.03 0.13	0.10 0.17
Cytokinis	Dihydrozeatin Isopenteniladenine Trans-zeatin	DHZ iP tZ	0.02 0.02 0.01	0.01 0.04 0.01	3.95 25.16 4.76

Table 2: Other Phytohormones founded (content in ng/ml)*:

Phytohormone	Abbreviation	<i>Ecklonia maxima</i>	<i>Ascophyllum nodosum</i>	BioSap-Q
Jasmonic acid	JA	1.3	0.2	317
Salicylic	SA	122	180	10.100

*Study carried out by the Institute of Molecular and Cellular Biology of Plants (IBMCP), Valencia, Spain

BIOESTIMULATION TRIAL

A Chilean meadow practical trial illustrates a 4% increase in dry matter production with BioSap-Q, underpinning its efficacy in boosting productivity. This improvement was achieved through application of BioSap-Q at a dosage of 14 fl oz/ac.

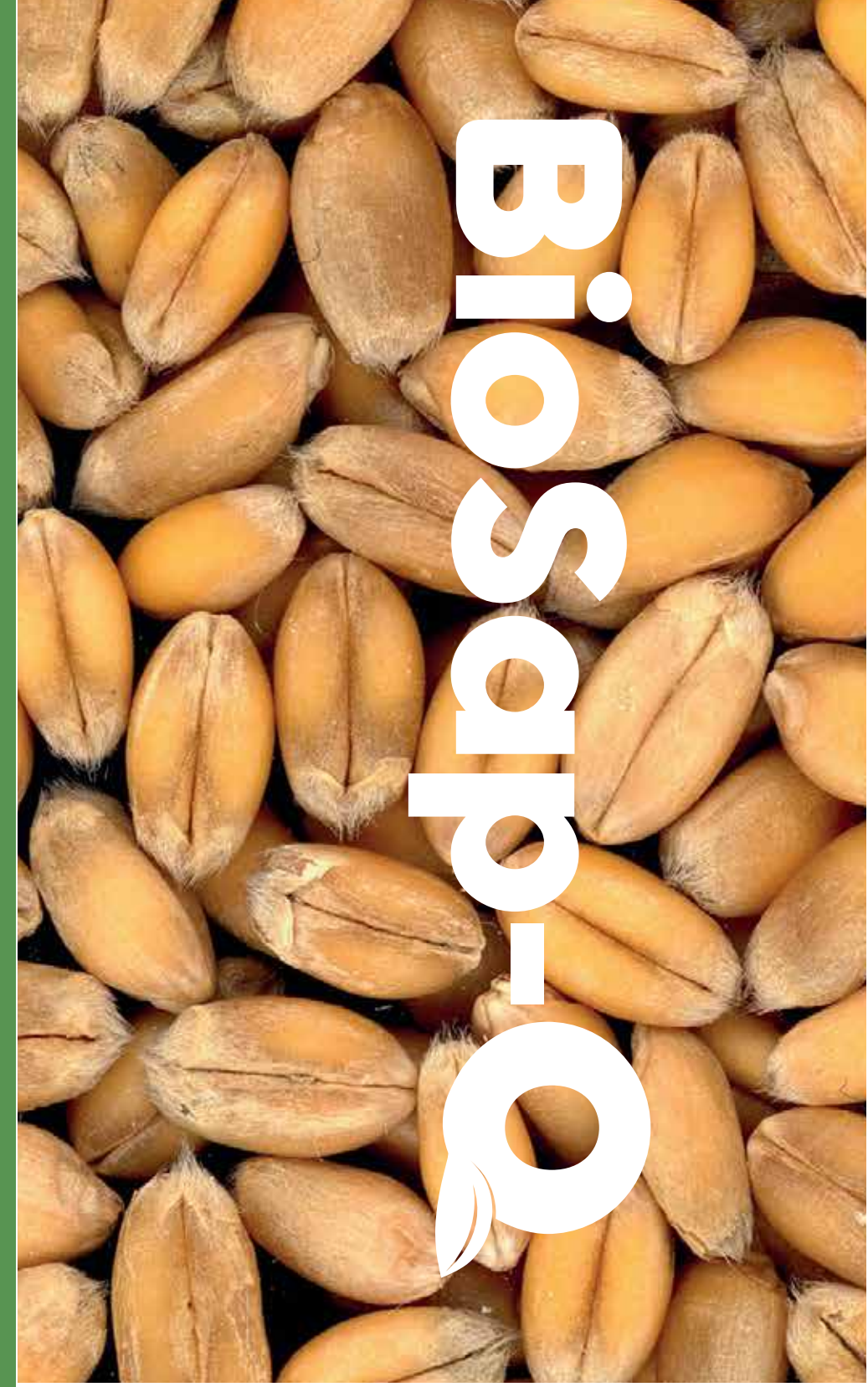
Table 3: Measurement results lbm Dry matter /ac at summer (averages)
Osorno, Chile, 2019

Date	BioSap-Q	Control	Difference	%
22-Jan	1.869	1.869	0	0%
28-Jan	2.136	2.017	119	6%
04-Feb	2.167	2.090	77	4%
27-Feb	2.103	1.950	153	8%
Total lbm/ac	8.276	7.927	349	4%



BioSap-Q driving superior productivity in meadows.

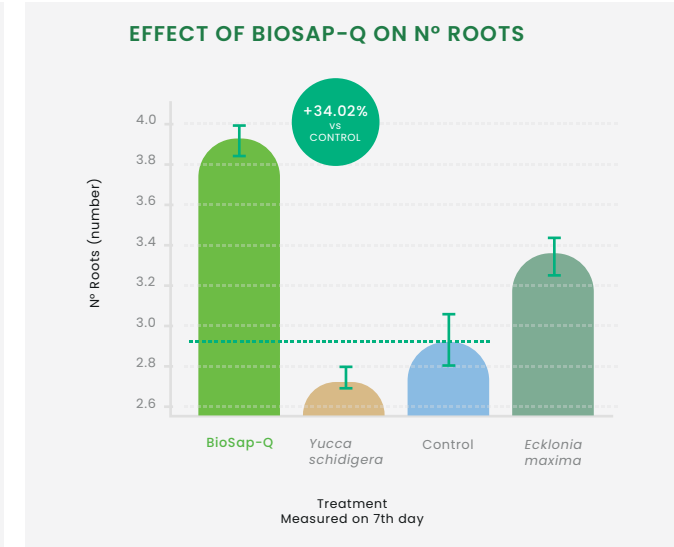
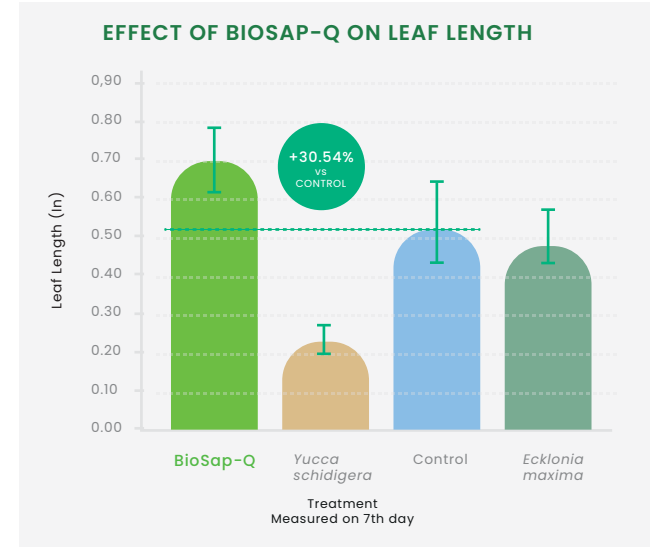
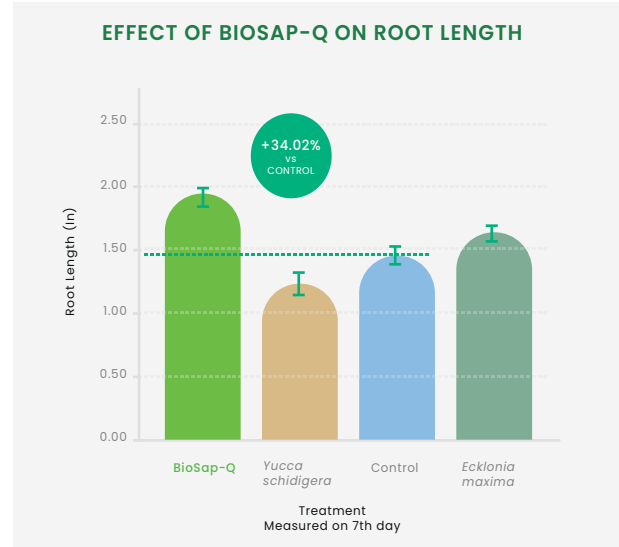
**IMPROVE PLANT GROWTH AND RESILIENCE,
PARTICULARLY UNDER STRESSFUL CONDITIONS.**



BioSap-Q

BIOSTIMULANT EFFECT OF BIOSAP-Q ON WHEAT SEED GERMINATION

Research conducted by the Regional Center for Research and Innovation for the Sustainability of Agriculture and Rural Areas (CERES) confirms BioSap-Q's significant enhancement of wheat seed germination after just 7 days.

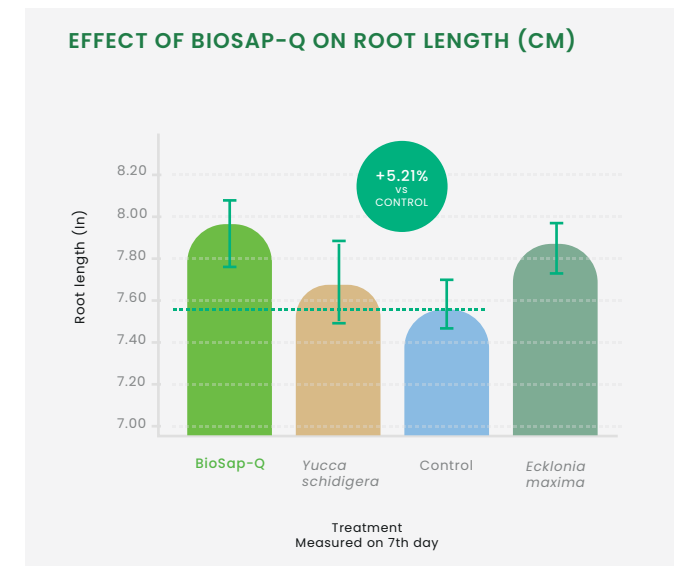
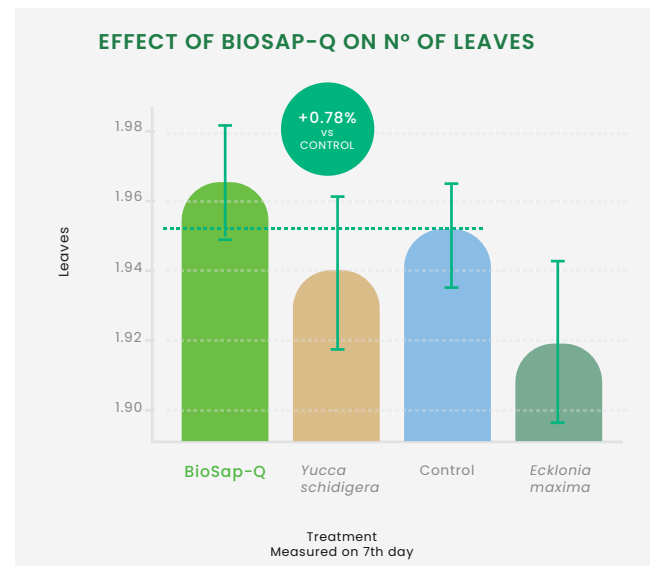
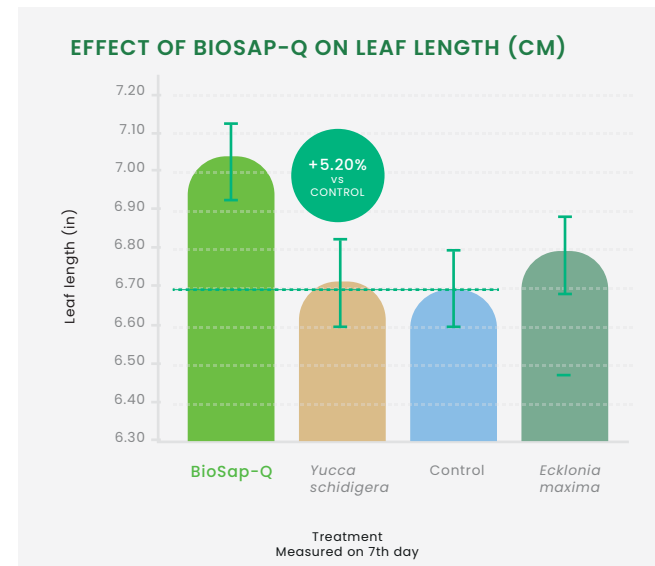


BioSap-Q accelerates germination and promotes vegetative growth in high-moisture settings.

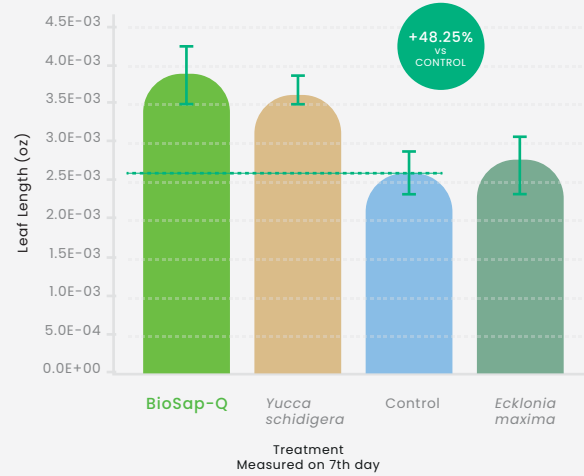


GERMINATION TRIAL IN SEEDBEDS WITH TOMATOES

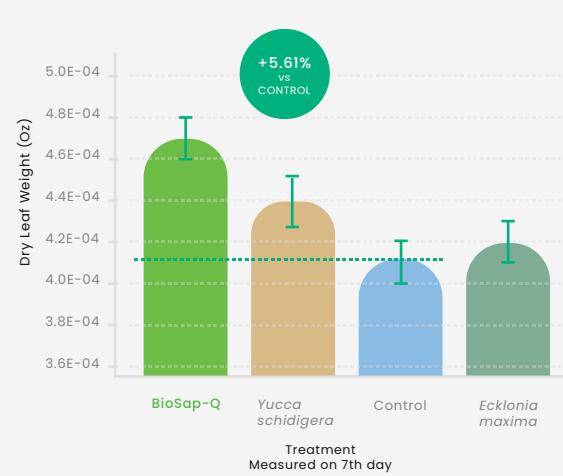
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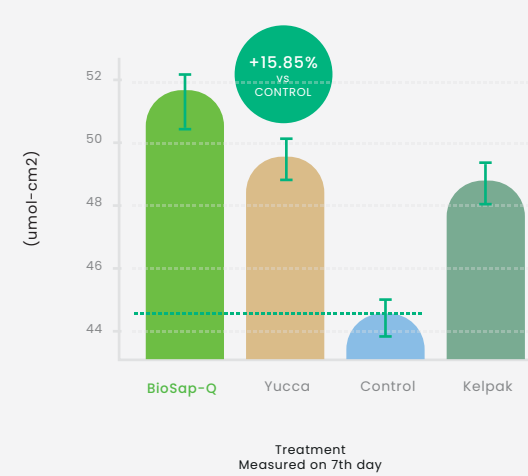
EFFECT OF BIOSAP-Q ON FRESH ROOT WEIGHT



EFFECT OF BIOSAP-Q ON DRY LEAF WEIGHT

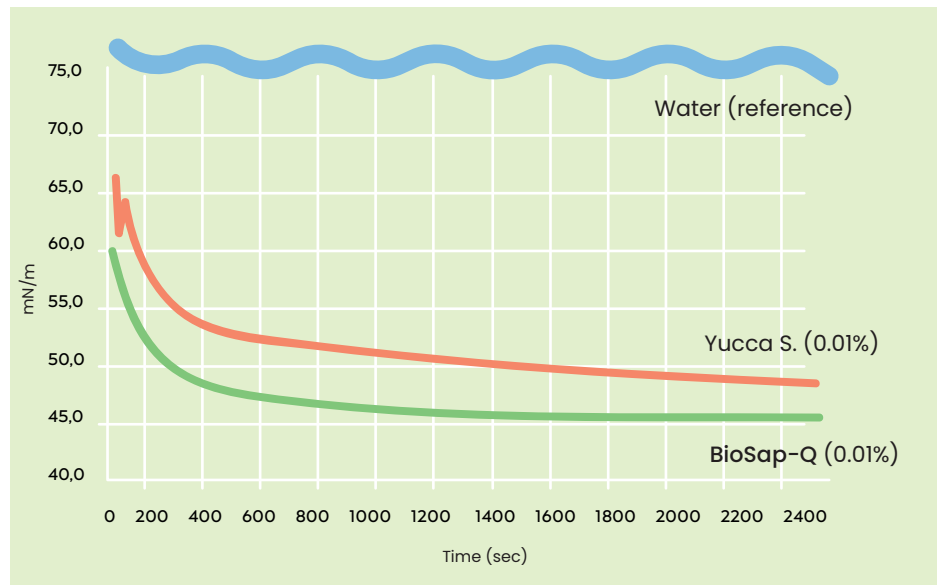


CHLOROPHYLL CONTENT (umol-cm2)



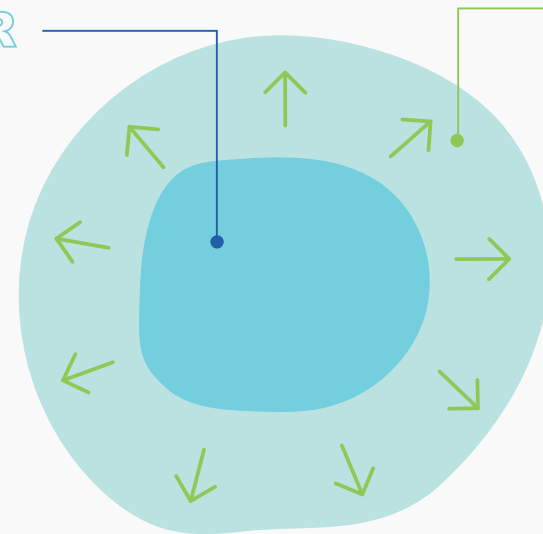
IMPROVING WETTING COVERAGE WITH DIFFERENT DOSAGE OF BIOSAP-Q

BioSap-Q lowers water surface tension, significantly improving nutrient uptake and soil penetration. This action boosts foliar and soil application effectiveness, enhancing water retention in soil and offering protection against dehydration and heat.



WATER

41.10 mm²



ADDING

BioSap-Q
78.60 mm²

INCREASE
91.24%
Wetting coverage

Dosage (fl.oz/gal)	Water (sq in)	BioSap-Q (sq in)	Increase (%)
0.13	0.064	0.117	84.23%
0.25	0.064	0.122	91.24%
0.38	0.064	0.123	92.94%

BioSap-Q

DIRECTION OF USE:

Follow the instructions below to apply BioSap-Q® in the right dosage.

TREATMENT	DOSES	RECOMMENDATION
Seed Treatment	0.05 gal for 225 lb of seeds	Apply 0.25 gal of a solution of BioSap-Q at 0.2 % v/v for 220 lb of seeds. Use seeds as soon as possible
Normal Soils	0.1 - 0.7 gal/acre	Apply every 14 to 30 days. Maximum 3 application in a season.
Compacted Soils	0.75 - 1 gal/acre	Apply at the beginning of cultivation with irrigation water.
Salt Soils	0.2 - 0.4 gal/acre	Remove salt from rhizosphere by improving water mobility in soils.

BIOSAP-Q SETS A NEW STANDARD IN AGRICULTURAL BIOTECHNOLOGY. UNLIKE SYNTHETIC ALTERNATIVES, IT OFFERS A SUSTAINABLE, ECO-FRIENDLY SOLUTION THAT ALIGNS WITH THE EVOLVING NEEDS OF NORTH AMERICAN FARMERS. COMPLIANT WITH NOP REGULATIONS, BIOSAP-Q IS NOT JUST A PRODUCT BUT A COMMITMENT TO SUSTAINABLE FARMING.

QUILLAJA SAPONARIA EXTRACT