SBC C-FOUR

soilbasics.com

THE FOUR C'S

The C-Four Technology combines **C**arbohydrates, **C**olloidal structures, **C**arbon, and **C**omplexed fertilizers. Thus, the name of this product line "**C-Four**."

Carbohydrates

- C-Four contains natural carbohydrates, that serve as a food source for rhizospheric microbes. The rhizospheric microbes promote root growth – which stimulates greater feeder root mass and root branching.
- Carbohydrates are a plant-ready energy source.

Carbon

- Promotes and helps sustain functions of bacterial, fungal, and earth worm populations.
- Additional carbon facilitates microbial nitrogen production.
- Complex carbon feeds soil biology and improves overall soil health
- Compatible with SBC SOBEC Clutch to provide additional microbial diversity.

Colloidal Structures

- Colloids are the basis of a "nutrient-energy system" in the soil which is an on-demand resource for plants.
- Increase the surface area of the soil, thus expanding the net CEC
- Improve soil flocculation, structure and water efficiency.
- Increase aeration & drainage on clay soils
- Higher nutrient retention & leaching reduction in sandy soils

Complexed Fertilizers

- Organic colloids bond with soluble salts, building a nutrient reserve for plants (stress reduction) rather than allowing the salts to remain in water (plant stress).
- These molecular clusters of plant nutrients are similar to those found in natural fertile soils, therefore assimilated quickly by the plant.
- Plant nutrients are bonded or complexed to protect from soil tie-up, allowing more efficacy from N-P-K inputs.

The C-Four Lineup:

C-Four
(3.4 - 4.0 - 0)
Original Formulation, with 3.6% sulfur. C-Four is a liquid colloidal fertilizer formulated to enhance soil structure. C-Four supplies a foundation for existing soil biology to build organic complexes which enhance soil structure, provide a nutrient reserve and increase water holding capacity. This product is optimal for crops planted on sandy soil or marginal ground. C-Four is typically used for root stimulation and as a natural energy source.
(Salt Index 31; pH 5.5 - 6)

C-Four K
(2.5 - 8.4 - 5.8)
Original plus di-potassium phosphate, with 2% sulfur. This C-Four based product combined with readily available di-potassium phosphate is ideal for finishing crops, especially grapes, nuts, and citrus.
(Salt Index 34; pH 6 – 7)

C-Four A-P
(6.25 - 13 – 1.0)
Offers a higher phosphate analysis with balanced nitrogen to complete the C-Four technology. This increased nutrient range coupled with the carbohydrates helps to promote microbiology and root growth.
(Salt Index 26; pH 6)

C-Four Mono
(5 - 0 - 0)
The C-Four technology combined with a nitrogen base & formulated to be compatible with micronutrients. The following SBC Products can be blended with C-Four Mono: SBC micronutrient products, **SBC Helix Line, SBC Oasis Line, SBC EvoKe, SBC EXI, SBC Rootboost, SBC K-Oxy, SBC KAPPA, UN-32, KTS & 0-0-24.**
(Salt Index 22; pH 7.4)

SBC C-Four Technology

SBC C-Four is a liquid colloidal based fertilizer. Through building soil structure, C-Four products encourage the development of a diverse microbial community in the rhizosphere, which generates more energy than commercial fertilizer. C-Four products reduce plant stress by providing a carbon source that is an alternative to root exudates.

BUILDING SOIL STRUCTURE

NITROGEN CYCLE

The additional carbon & carbohydrates supplied by C-Four augment the natural nitrogen cycle. In the root system, soil microbes are compelled to generate nitrogen to offset the carbon increase and keep the carbon to nitrogen ratio in balance. This natural process prevents synthetic nitrate from bottlenecking in the plant tissue.

SOIL STRUCTURE

The colloidal clay component in C-Four provides a starting point for microbes to increase soil structure. This is accomplished by providing a particle that the microbiology can start to build structural attachments of sugar matrices and fungal lattices.

Third Party Research Soil Basics Program on Autumn Royal Table Grapes

C-Four & C-Four K were soil applied

8-14% increase in soluble sugars at each sampling date

SIGNIFICANTLY increases brix

INCREASES marketable color levels vs. grower standard

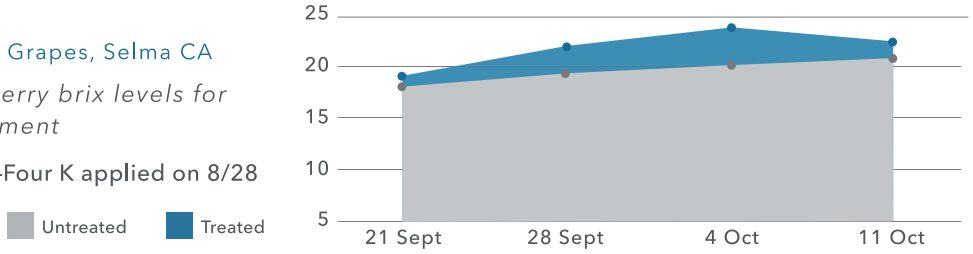
IMPROVES grower return by reducing number of harvest passes

BRIX

2019 Table Grapes, Selma CA

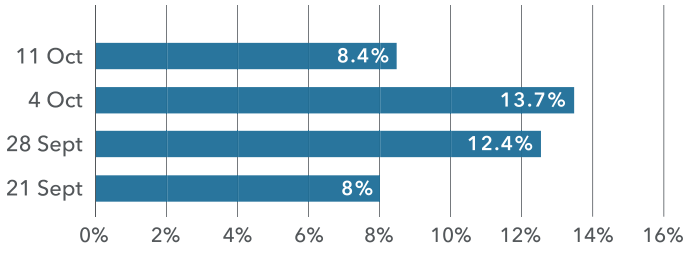
Average berry brix levels for each treatment

C-Four & C-Four K applied on 8/28



INCREASE IN SBC C-FOUR & C-FOUR K TREATED RELATIVE TO UNTREATED

2019 Table Grapes, Selma CA



Avocado Trial

C-Four + SOBEC
(left)
N-P-K Dry Blend
(middle)
Growers Standard
(right)

27% Increase in C-Four + SOBEC leaf weight

C-Four & SOBEC diameter measured 14% Larger than N-P-K dry blend

Red Tag: C-Four & SOBEC; Blue Tag: N-P-K Dry Blend; White Tag: Control

Observations After C-Four Application

- Improved plant establishment
- Increased nutrient accessibility due to colloidal clusters (very important at early establishments stage)
- Improved soil adhesion to the roots (evidence of biological tillage)
- Stronger soil and root structure (branching, length, and thickness)

Australia Almond Trial

Three-year trial (planted 2008) commercial almond orchard in Australia

- 100 acres treated; 200 acres untreated
- Sandy loam throughout orchard, very low organic matter .09
- Drip irrigation system

Average Annual Almond Yield