



## The right boron choice for granular compound fertilizers

The quality of your product depends on the quality of our product.

Growers expect optimal results from blended fertilizers. U.S. Borax refined borates deliver high quality and great value.

Blended granular fertilizers that contain *Granubor*®—a refined borate— in their formulas can deliver higher yields, healthier crops, and more profit for farmers.

### What is the true cost of using less expensive non-refined borates like ulexites?



#### Unrefined borates (ulexites)

- Potentially high levels of impurities and arsenic, a heavy metal
- Generally irregular granulometry
- Incomplete dissolution in water
- High hygroscopicity
- Inconsistent release of boron over time
- High content of dust creating segregation and poor distribution of the product in the field
- Limited field tests and certifications



#### Refined borates (*Granubor*)

- No impurities, dust, fillers, coatings, or added ingredients
- Average particle size 2.8 mm—perfect for blending with NPK fertilizers
- 100% water soluble
- Very low hygroscopicity for even blending in NPK fertilizers
- Gradual release of boron for consistent, long-lasting benefits
- Crush resistant, limited dust during transport, hauling, and spreading
- OMRI-listed and USDA-certified for use in organic food production, processing, and handling

#### Deliver a product that delivers results

*Granubor* supports boron nutrition for the whole plant and meets the requirements of the bulk-blended fertilizer industry. When you compare side-by-side, *Granubor* delivers greater returns on farmers' investment than any other mineral source.

# BROCHURE: GRANUBOR AND COFFEE

## Coffee field trials in Brazil prove the performance of *Granubor*

To understand the role of boron in crop health and develop the best available products, U.S. Borax has been conducting and participating in field studies for more than 60 years.

We conducted coffee trials near Espírito Santo do Pinhal, São Paulo state Brazil during the 2013/2014 and 2014/2015 growing seasons.

In this test, *Granubor* was compared to granular ulexite and boric acid for soil application at an equivalent dose of 1.5 kg B/ha.

*Granubor* contains 15.0% B, granular ulexite contains 10% B, and boric acid contains 17% of B.

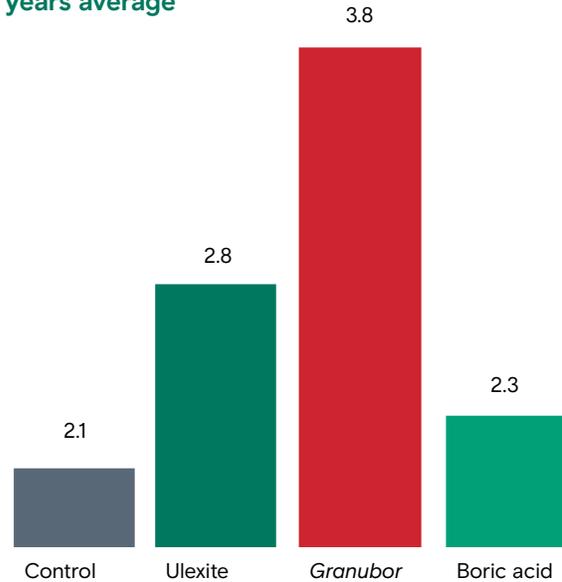
All products claim to have enough boron content to release and be available for plants' uptake—but the results from the trial showed that only *Granubor* had superior performance over granular ulexite and boric acid, winning at producing the highest yield and highest quality coffee.

The soil in the test area was normal in boron (0.5 ppm B), but the addition of a reliable source of boron (*Granubor*) showed a significant benefit.

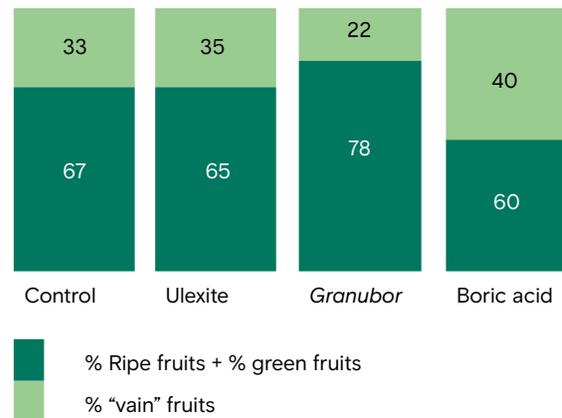
### Use a product that delivers results

U.S. Borax refined borates, such as *Granubor*, provide a guaranteed rate of water-soluble, fully available, pure boron, without contaminants.

Yield (t/ha) – 1.5 kg/ha of B  
2 years average



Fruits quality – 1.5 kg/ha of B  
1<sup>st</sup> year harvest



### About U.S. Borax

U.S. Borax, part of Rio Tinto, is a global leader in the supply and science of borates—naturally-occurring minerals containing boron and other elements. We are 1,000 people serving 650 customers with more than 1,800 delivery locations globally. We supply around 30% of the world's need for refined borates from our worldclass mine in Boron, California, about 100 miles northeast of Los Angeles.

Our local agriculture experts understand the uses and benefits of boron on crops. In addition to a global sales team, we have a number of agronomists on staff to help fertilizer distributors maximize the benefits of borates in agriculture applications. Our ag team can answer individual growers' questions and concerns about their particular crop.

High quality, high reliability, high performance borate products. It's what we're known for.