

Pasture

Organibor

Product information



Boron is naturally present in all soil. It is one of the 114 elements that make up the Earth, and every member of the plant world relies on it to grow. Boron is utilised in the primary cell structure of a plant and therefore affects nearly every area of plant growth and development. Unfortunately, New Zealand soils are on the most part, extremely deficient in boron.

Organibor® is a naturally occurring, certified for organic use, Magnesium/ Calcium Borate that replenishes the boron levels in the soil in a controlled and natural way. Boron is always found naturally bound to either, Sodium, Magnesium or Calcium. Sodium is the most soluble form of boron and Calcium is the least soluble with Magnesium falling somewhere in the middle. Most plants need a continual supply of boron right through all phases of their growth and development, however most boron fertilisers are based on sodium borate (Ulexite, Boric Acid, Borax Pentahydrate or Di Sodium Octoborate Tetrahydrate) which is extremely soluble. Because of this high solubility it is extremely difficult to consistently achieve the

correct boron level in the soil or plant. If too little boron is applied then the plant does not get enough boron before it leaches away and if too much boron is applied then the plant gets boron toxicity. This is why it is necessary to apply most traditional boron based fertilisers in small amounts several times a year to achieve a constant supply of boron.

Organibor® is designed to be applied to pasture once every 12 to 24 months depending on the desired outcome, climatic and soil conditions, and will continually release boron over that period of time so the pasture will have a continual supply of boron right through all seasons. The effect on the pasture is the same as if it was grown in boron rich soils. Having a constant supply of boron means that boron stops being a limiting factor to pasture growth through the season allowing higher dry matter yields and better quality pasture. Organibor® contains no sodium borate and therefore will not destroy soil biology or leach into underground waterways or streams.

Features of Organibor®

- ☀ Slow release boron designed to be applied annually at any time of the year
- ☀ New Zealand market proven for over 10 years
- ☀ Easy to spread, can be mixed easily with other fertilisers including lime
- ☀ Soil stable, low leaching
- ☀ Safe on soil microbes
- ☀ Can assist with brown heart control in brassicas
- ☀ BioGro certified

Application rates

Brassica/foddercrops

25kg - 50kg per hectare

Lucerne

25kg - 50kg per hectare

Mixed pasture

25kg per hectare

Swedes/turnips

25kg - 50kg per hectare

Basic specification

Chemical formula: $\text{CaO MgO} \cdot 3\text{B}_2\text{O}_3 \cdot 6\text{H}_2\text{O}$

Appearance: Whitish chip

Boron content: 10% min

MgO: 4.6% - 6.2%

CaO: 13% - 16%

Particle size: 95% between 2 - 4mm

Packing: 25kg bags or 1000kg bulk bags

Organic certification: BioGro #2925

Application timing

For mixed pastures Organibor® should be applied annually in spring or autumn for the first 2-3 years, with repeated applications the boron levels will begin to build in the soil and the frequency of application can be reduced. The long term frequency of application and the performance of Organibor® in the soil and pasture will depend on several factors including rain fall, soil acidity, soil organic matter, soil biology and soil type. For Brassica and Lucerne fodder crops apply Organibor® at planting. An annual soil test is recommended to determine correct rates of fertiliser are applied.

Release time

Organibor® is a slow release fertiliser but will begin to release boron in the first 4-8 weeks with peak boron supply arriving in the first 6 months as a general rule. Release time will depend heavily on moisture levels, soil acidity, organic matter, soil biology and soil type.

Toxicity

Due to Organibor®'s gradual release patterns the chance of inducing Boron toxicity is low. However as with all borate fertilisers caution needs to be taken when the product is applied to ensure an even application at the recommended rate.

Application methods

Organibor® can be applied as a separate application or as part of a fertiliser mix. If the Organibor® is being mixed with other fertilisers it is important that particle size is similar to ensure and even mix and distribution. Organibor® can be applied by truck, helicopter, plane, small towed spreaders or by hand.

Marty Deans

Manager of Barewood Stn Lonestar Farms, Otago

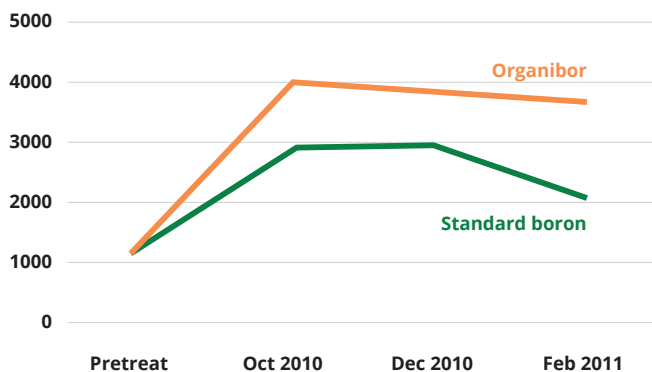
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For the last 5- 6 years Lonestar Farms have used Organibor® over their 800 hectares of Brassica, Fodderbeet crops and Lucerne. Organibor® has assisted in growing healthy crops year on year with a reduction in brown heart observed. Also the Lucerne is reaping the benefit of the higher Boron levels that are easier to access.

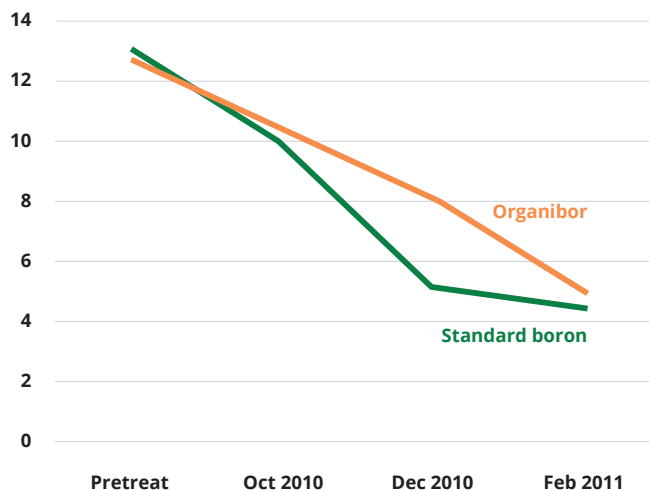
Trial results

Results from a pasture trial run by Agrivet Services to determine the effectiveness of applying Organibor® to pasture. The trial was laid down in early September 2010 on a dairy farm in Makaroro Road, Central Hawke's Bay. Organibor® has been applied at the recommended rate of 30kg/h.

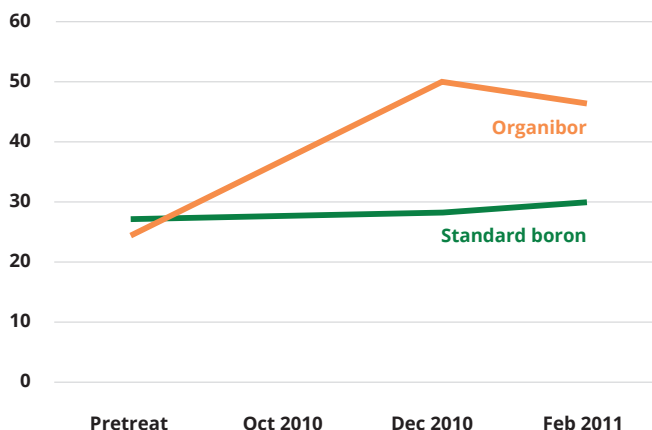
Dry matter - Folding plate kgDryM/ha



Soluble sugars - % of DM



Foliage boron levels (ppm) - Clover only



Always refer to leaf and soil sample results for application rates. For further information please discuss with your representative.