

# What is Growth B&B: Liquid Blood and Bone

**Typical analysis (elemental w/v)** Due to the organic nature of the product the analysis may vary slightly.

Nitrogen - N	10%	Magnesium - Mg	0.25%	Copper - Cu	0.011%
Phosphorus - P	4%	Sodium - Na	0.3%	Boron - B	0.024%
Potassium - K	7%	Iron - Fe	0.11%	Molybdenum - Mo	0.015%
Sulphur - S	3.3%	Manganese - Mn	0.024%	Cobalt - Co	10 ppm
Calcium - Ca	1.6%	Zinc - Zn	0.008%	Selenium - Se	60 ppm

Plus Giberellins, Triacontanol (Tria) and organic material.

**GROWTH B&B Liquid Blood and Bone** is made by converting **meat** and **bone meal** and **dried blood** into a highly concentrated liquid colloidal suspension and then adding trace elements to provide a carefully balanced liquid fertiliser.

The blood and bone provides **organic material, protein, amino acids and cholesterol**, which feed plants and the soil's micro-organisms, an integral part of the organic cycle. The soil organisms break down organic material into humus, release locked up nutrients, as well as improving the fixation and release of nitrogen and the soil structure.

Regular use of **GROWTH B&B** helps to increase the number of earthworms, soil microbes and bacteria working in biologically active soil.

The formulation of **GROWTH B&B** allows some of the nutrients to be immediately available to the plant through the foliage as well as the roots. The remaining nutrients, including the finely ground bone particles, attach to the foliage and permeate the soil dissolving gradually, slowly releasing nutrients to continue to feed plants through the foliage and the soil.

**GROWTH B&B** is a totally **balanced fertiliser**, which can be used as a total replacement fertiliser or as a supplement to a conventional fertiliser program

**GROWTH B&B** can be applied using conventional ground or air application equipment and can be applied through overhead irrigation or other fertigation systems.

**GROWTH B&B** also contains two naturally occurring growth promotants, **Gibberellic Acid** and **Triacontanol**. These have been widely proven to significantly increase growth rates, crop yields and plant health and they especially contribute to recovery from stress as in transplant shock or adverse climatic conditions. These growth regulators stimulate the plant to **take up and use** all available nutrients.

## TRIACONTANOL - TRIA

TRIA is a naturally occurring plant hormone found in all plants, but has particularly high concentrations in Roses and Lucerne. Tria causes plant cells to divide, promotes early root growth and will increase the rate of photosynthesis. This means that plants can still grow to their full potential even in less than ideal growing conditions.


## GIBBERELIC ACID - GA

GA is also a naturally occurring growth hormone. In the plant, Gibberellic Acid causes the plant cells to elongate. It helps promote flowering and fruit set and is widely used in horticulture, grape production and pasture crops on its own.

**GROWTH B&B** will supply the plant with all major nutrients and trace elements and also, by making the cells elongate and divide more rapidly, ensure the plants get away to an early, healthier start. This means, potentially, early and higher quality yields.

## Effect on Brix Levels

Of particular interest is the positive effect on crop quality, yields and the Brix/Acid ratio. Several physiological effects have been observed, including rapidly increased levels of reducing sugars, free amino acids and soluble protein. There is a consistent increase in the Nitrogen content of plant samples and in the redistribution of Nitrogen within plants. Also evident are increases in carbohydrate synthesis from the stimulation of photosynthesis and changes in the activity of several enzymes have also been recorded. These factors will make a significant contribution to flavour, appearance and keeping qualities for all crops treated with **GROWTH B&B Liquid Blood and Bone**.



## 14 Great Reasons for using Growth B&B

1. A balanced liquid fertiliser containing all the major and minor elements required for healthy, strong growth, and improved yields and quality
2. Made from organic blood and bone.
3. Contains two naturally occurring growth promotants that stimulate plants to take up and use all the available nutrients again in a balanced form.
4. As a liquid it more effectively addresses mineral and trace element deficiencies or imbalances and acts as a carrier for the addition of extra elements when needed.
5. Early application aids in more rapid establishment of healthy plants resulting in improved yield and quality.
6. Ideal in overcoming waterlogging stress.
7. Being an organic liquid suspension Growth B&B will not leach or wash away under heavy rain or irrigation avoiding waste and environmental damage.
8. Further economy of application by applying Growth B&B with an existing spraying programme.
9. Very safe to use. Growth B&B will not burn or damage tender plants or seedlings when used according to directions.
10. Achieves rapid stress recovery after transplanting or adverse climatic conditions.
11. Shipped in a highly concentrated form adding water as the carrier at the point of application, results in substantial freight and application cost savings.
12. Higher yields and improved quality results in greater returns for the grower.
13. Can be applied by both ground rig or by air.
14. Convenient to use liquid.

The use of chemical fertilisers is like borrowing from your bank at 100% interest!

achieving a short term goal - creating a long term problem



SITUATION	CROP	RATE	CRITICAL COMMENTS
Improve Soil Biology	All Crops	10-20 L/Ha	Apply directly to soil 2 - 4 times per year
Starter Fertiliser	Broad acre and Intensive Irrigated Crops	2-4 L/Ha	Direct injected with the seed or set at planting in sufficient water to adequately cover the seed or set.
Full Replacement to Conventional Nutrient Program	Broad acre and Intensive Rain Grown or Irrigated Crops	10 L/Ha	Up to 8 applications per growing season either soil or leaf applied. Use leaf and soil analysis as a guide to application rates and timing. Also use as a Starter Fertiliser.
Partial Replacement to Conventional Nutrient Program	Broad acre and Intensive Rain Grown or Irrigated Crops	5-10 L/Ha	Up to 4 applications per growing season either soil or leaf applied. Use leaf and soil analysis as a guide to application rates and timing. Also use as a Starter Fertiliser.
Crop Booster to assist in alleviating crop stress from water logging or other environmental or agronomic considerations.	All Crops	2-10 L/Ha	Apply to the foliage of stressed plants in sufficient water to ensure thorough coverage. If mixing with Insecticides or Fungicides always check for both Physical and Chemical Compatibility. Add Growth B&B to the spray tank last. For aerial application use a minimum of 30 litres total volume per hectare.
Pasture Improvement & Pasture Boost after cutting for Hay or Silage	All Pasture Crops	10-20 L/Ha	Apply in Spring and Autumn by Ground or Air or as soon as possible after crop has been cut . Apply with sufficient water to ensure good coverage. Growth B&B may be applied during or after rain or irrigation without loss due to leaching. It is recommended that stock be removed prior to application of Growth B&B and that pasture be kept free from grazing animals for 24 hours after application to allow the product to be fully absorbed into the soil and plants. Growth B&B may be able to be mixed with some pasture herbicides however always check for Physical and Chemical compatibility and always add Growth B&B to the spray tank last. Use the higher rate in high rainfall areas or where grazing is more intensive.
As an Aid to reducing Transplant Shock	<b>Vegetables:</b> Green Vegetables, Roots, Tomatoes etc.	Dilute with water 1:200	Soak seedlings overnight prior to transplanting. Use any remaining solution as a soil drench around the seedlings after transplanting.
Fertiliser program for Vegetables	<b>Vegetables:</b> Green Vegetables, Root Vegetables, Tomatoes, Sweet Corn, Peas etc.	Dilute with water between 1:100 and 1:200	Use as a watering liquid around the root zone or as foliar spray. Apply weekly for young plants and at greater intervals towards harvest. Use the higher concentration in poorer soils or when fruit load needs improving. If mixing with Insecticides or Fungicides always check for both Physical and Chemical Compatibility. Add Growth B&B to the spray tank last.
Soil Applied Fertiliser Program for Tree and Berry Crops	All Tree crops including Apples, Cherries etc. Citrus and Nut Crops. All tropical fruit, Berries, Nuts, Grapes etc.	10-20 L/Ha	Apply as a soil drench within the drip zone of the tree or vine or in drip irrigation water. Apply in sufficient water to ensure thorough incorporation into the top soil. Apply at least twice per year in late Autumn or early Spring and again prior to the crop going into dormancy. An application during flower set is highly recommended.
Foliar Application Program For Tree and Berry Crops	All Tree crops including Apples, Cherries etc. Citrus and Nut Crops. All tropical fruit, Berries, Nuts, Grapes etc.	Dilute with water between 1:100 and 1:200	Spray to run off on a regular basis to maintain adequate nutrient feeding of the tree. Determine timing through leaf analysis or other acceptable management practices. Use the higher dilution rate for poor quality soils or where fruit load requires higher levels of nutrition. If mixing with Insecticides or Fungicides always check for both Physical and Chemical Compatibility. Add Growth B&B to the spray tank last.
Seed germination	Nurseries - All Crops	Dilute with water 1:200	Use as a soil drench prior to planting seeds. In poorer soils or if a more vigorous seedling are required use a dilution rate of 1:100
Repotting, Planting Out	Nurseries - All Crops	Dilute with water 1:200	Thoroughly drench the root system. As a guide when planting out tube stock, drench the receiving hole and root with 500ml of the diluted product per tube. In poorer soils or if a more vigorous plant is required use a dilution rate of 1:100
Hydroponics & Fertigation	All Crops		Growth B&B may be used on its own as the prime source of nutrients. In this case, charge diluter of feed tank with a 1:10 dilution and adjust the feed rate to achieve desired CF (Conductivity Factor). NOTE a dilution of 1:200 will yield a CF of approximately 20. Alternatively add Growth B&B into the feed tank as a booster rate of 1 litre in 200 litres of feed concentrate. Check system regularly for biological oxygen demand (BOD), flush and use fresh material if necessary.
Turf Booster after Cutting	Most Ornamental Turf Varieties	10-20 L/Ha	Apply immediately after cutting with a follow up application in 14 days. Growth B&B may be used as a supplement to other fertiliser regimes at the rate of 4 L/Ha every 10 - 14 days. Apply in a minimum of 100lt water per ha or through the irrigation system.
Bowling and Golf Greens	Most Turf Varieties	2 Lt Per Green	Spring 1-2 applications. Summer 1-2 Applications. Autumn 2-3 applications. Apply in 100lt water per ha or through the irrigation system.
Gardens	All Flowers, Shrubs etc.	Dilute with water 1:200	Use as the watering liquid around the root zone or as a foliar spray. Repeat every 10-14 days
Knapsack and Watering Can	All Crops and Plants	50 ml/10 lt	Foliar application to run off