



## Crop focus: Blueberries

*Consideration of the biology of this crop led to the development of a special fertilizer.*

### Introduction

Due to consumer demand blueberries are becoming more and more popular and therefore an attractive crop. Their cultural and nutritional requirements are a little unusual, so care is needed to optimise yields and quality. Solufeed Blueberry Special fertilizer was developed accordingly and is the ideal choice for today's progressive Blueberry grower..

### Blueberries

Blueberries belong to the genus *Vaccinium* in the plant family *Ericaceae*. There are about 450 other species worldwide and those of commercial importance also include bilberries and cranberries.

Ericaceous subjects are characteristically calcifuge (lime-hating) and therefore naturally found growing in acidic soils such as marshes and heath land. Calcifuges cannot cope with alkaline soils, not as a direct result of the presence of hydroxyl or carbonate ions, but rather the effect of pH on iron availability. Under alkaline (pH>6.5) conditions iron becomes increasingly unavailable causing the classic symptoms of leaf chlorosis or yellowing which in turn leads to lost productivity.

Calcifuges also have different nitrogen needs, preferring the ammoniacal form to nitrate.

All this give a clue about the best cultivation and nutrition techniques for Blueberries.

Reflecting their origins, the optimum soil pH for blueberries is 4.5 - 5.5, with 5.5 being too high for some varieties. Consequently much commercial production of Blueberries takes place in containers where pH can be more easily controlled. Here and especially where coir-based growing media is used, optimum pH is lower at 4.0 - 4.5. It is reported that pH's as low as 3 can be tolerated.

### Special nitrogen requirements

Blueberries and other calcifuges have different nitrogen preferences to other crops. They

are not able to utilise the nitrate (NO<sub>3</sub>) form effectively but rather prefer the ammoniacal form (NH<sub>4</sub>). This is because Blueberries lack adequate nitrate reductase activity to metabolise the NO<sub>3</sub>. Whilst both the NH<sub>4</sub> and NO<sub>3</sub> forms are taken up, the latter remains unused; this usually does no harm but there have been reports of leaf burn where high levels of NO<sub>3</sub> containing fertilizers have been used. A practical consequence of course is that the NO<sub>3</sub> in fertilizers is effectively wasted and it still contributes to EC but to no purpose.

The best nitrogen sources for Blueberries are ammonium sulphate (readily providing NH<sub>4</sub>) and urea (which is naturally broken down to NH<sub>4</sub>).

Otherwise the fertilization of Blueberries is fairly straightforward but they are particularly sensitive to iron deficiency and care should be taken to avoid shortages.

## Solufeed Blueberry Special

Recognising the special requirements of Blueberries, Solufeed have designed and developed a water soluble fertilizer optimized for Blueberries and especially those grown in containers.

The essential features are as follows:

- Nitrogen as ammoniacal and ureic; nitrate useless and wasteful.
- Acidifying PK source to help control pH and neutralize bicarbonates.
- Careful about effect of fertilizer on EC.
- Iron and other metal micronutrients as EDTA. FeEDTA to prevent chlorosis.
- Dissolves rapidly and completely even in cold water.
- Cost effective.

## Analysis

EC FERTILIZER 12:10:11+4MgO

Total nitrogen (N)	12.1 %
Ammoniacal (NH <sub>4</sub> ) nitrogen	10.7 %
Ureic nitrogen	1.4 %
Phosphorus pentoxide (P <sub>2</sub> O <sub>5</sub> ) soluble in water	10.0% (P: 4.4 %)
Potassium oxide (K <sub>2</sub> O) soluble in water	10.8% (K: 9.1 %)
Boron (B) soluble in water	0.015 %
Copper (Cu) as EDTA	0.017 %
Iron (Fe) as EDTA	0.060 %
Manganese (as Mn)	0.034 %
Molybdenum (Mo) soluble in water	0.001 %
Zinc (Zn) as EDTA	0.027 %
Calculated EC (0.1% solution)	1.5084 mS

## Directions for use

**Application rates:** Normally 1g/litre depending on desired EC

**Directions:** Make up a 10% stock tank solution and further dilute 1:100

## Important

Always read the label before using any product.

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