

# Product: **Lono**



## Key benefits:

- Increased flower and fruit numbers
- Improved fruit size
- More even size distribution
- Improved growth during stress
- Better fruit quality
- Transplant establishment



**Soft Fruit**

# Product: **Lono**



## Technical Data:

Lono for Soft Fruit is a smart fertiliser that focuses the plant on reproductive growth (flowers and fruit). It supplies nitrogen in a form that encourages reproductive growth, rather than the vegetative growth, stimulated by conventional N fertilisers. Lono uses Levity's LimiN chemistry to hold nitrogen in the amine form, and also contains calcium. Applied in low doses through the season, Lono increases flowering and fruit growth, lifting both the number and size of fruit. Lono helps crops maintain growth during periods of stress, safeguarding yield.

Lono works by supplying nitrogen in an efficient way that encourages reproductive growth instead of the vegetative growth seen with conventional products. Nitrogen is needed to produce the proteins from which plants are built. Soft fruit growers know that there is a trade-off between getting crops growing and quality. As nitrogen inputs rise, crops get leggy and fruit quality starts to decline.

What is less well understood is the effect that form of nitrogen has on growth, and it is this that has formed the basis of Levity's research and development into how to feed soft fruit crops better.

The first thing to understand about soft fruit nutrition is just how wasteful standard practice is. Research shows that typically only 15% of nitrogen applied to strawberry crops actually ends up in the plant. The rest is lost due to a combination of volatilisation and leaching, where the nitrogen farmers apply is lost to the environment.

The next thing to learn is that, regardless of what type of N is applied, it tends to be mostly taken up as nitrate due to conversion by bacteria. Why is that important? The typical effect seen when nitrogen is applied, is that we see an increase in growth that is mostly vegetative, so plants can become weak and straggly with too much height and leaf, and not enough energy is used for fruit development. This is not a nitrogen effect, rather it is a nitrate effect created by the plant overproducing the auxin growth hormone in response to nitrates accumulating in the leaf.

When plants feed on amine nitrogen, cytokinin hormone

levels increase. This encourages more bushy plants with more root branching and greater production of flowers and fruit. The problem is that farmers don't see any difference between nitrogen products, as they all change to mostly nitrate before the plant takes them in.

This is where Lono, the world's most advanced nitrogen feed for soft fruit can help. Lono uses chemistry developed by Levity to bond the nitrogen to calcium and hold the form as amine. This has the double benefit of ensuring most of the N ends up in the crop, giving good growth with small inputs. The second and more interesting benefit though is where the growth is. With conventional nitrogen, soft fruit growers have to be careful; too much and the crop gets leggy and quality drops. With Lono the growth is in the fruit, not the leaf. Growers see shorter, bushier plants with a higher fruit load and less quality problems.

The third aspect of Lono is how energy efficient it is. We feed crops nitrogen to get growth, but plants must use energy (in the form of carbon) to process and assimilate it. The more efficient that plant can turn nitrogen into growth (using less carbon from the air), the better, particularly when the crop is stressed as access to CO<sub>2</sub> is reduced under stress conditions. Lono supplies nitrogen to plant in a form that is 12 times more energy efficient than the nitrate most conventional fertilisers are taken up as. This means the plants fed with Lono can keep growing when under stress.

Lono acts on three levels. It gets more N into the crop, generates growth in the part of the crop we harvest (fruit) and is easy for the plant to process, even when stressed. What growers see as a result is higher yields and healthier crops that perform better when growing conditions are bad.

Soft fruits are difficult crops to grow, with a trade-off between yield and quality. When developing Lono, Levity have taken time to understand the science of soft fruit crops, which has allowed us to develop a more advanced product. Lono can help growers deliver high yields of high quality fruit.

**Application rate:** General application rate 5 l/ha through drip irrigation at 14-day intervals through growing season. Transplanting 2 l/ha through drip irrigation at transplanting to better establish plants.

**EC Fertiliser C.1.1:** 15-0-0-7 (Ca) 15% Nitrogen (N) 10% Ureic, 5% Nitrate 7% Calcium (Ca) 9.5% (CaO) 0.2% Boron (B) w/w