**Nitro Humus 323™**

*A highly concentrated liquid nitrogen and humic acid complex ideal for boosting nitrogen levels and plant growth*

**32% Liquid Nitrogen + Humic Acid**

**Benefits of Nitro Humus 323™**

- Humic acid complex of plant available nitrogen
- Minimises losses typically associated with nitrogen fertilisers as a result of environmental conditions
- High absorption rate provides excellent nutrient use efficiency
- Humic acid assists the penetration of nitrogen into the plant and nitrogen retention in the soil
- Can be applied with a wide range of other agricultural chemicals, reducing the number of spray applications needed
- Liquid formulation makes it easy to decant into spray equipment, mixing tanks and irrigation
- High concentration reduces quantity of product needed and saves on packaging and freight costs

**The Role of Nitrogen**

Nitrogen forms proteins and increases the yield of all crops. It is the essential building block of plant structure and is vital to plant growth but can be a limiting factor in uptake of other nutrients. Nitrogen is often leached from the soil therefore regular small applications will ensure efficient uptake without excessive losses.

**The Role of Humic Acid**

Humic acid assists the penetration of nutrients into plants more efficiently therefore no additional adjuvants are required. Humic acid, the active constituents of humus, plays an important role in nutrient availability and cation exchange. Microbial activity, water-holding capacity and soil structure all improve with humic acid application.

**Nitrogen Deficiency Symptoms**

Nitro Humus 323™ is a high nitrogen product which sustains rapid growth in the initial stages after the plant has established a good root system. Nitro Humus 323™ is designed to stimulate vigorous vegetative growth in all ground and tree crops. The use of high nitrogen fertiliser levels should be discontinued at least 10 days prior to budding and flowering (except cereal crops, cotton etc). Nitro Humus 323™ will also boost protein levels in cereals with application prior to flowering. One major advantage of this product is that no follow-up rain irrigation is required after application, because of its liquid formulation and high absorption rate.

**Nitrogen Deficiency Symptoms**

- Stunting
- Dieback
- Rosetting
- Small irregular leaves
- Reduced Yield

**NOTE:** The suggested rates of application are designed for typical Australian conditions and such should be used as a guide only. Each farmer's climatic conditions, water quality, soil types, application processes and practices may differ and therefore necessitate corrections to ensure optimum results. Good agricultural practice requires that application be avoided under extreme weather conditions such as temperatures over 28°C, high humidity, frost, rain etc. It is recommended that when applying to a crop or area for the first time, or in combination with other chemicals, a small test area should be sprayed and observed prior to the total spray. Where possible, it is recommended that regular leaf (sap) tests are conducted to determine actual plant nutrient availability during each growth cycle. Soil tests at least once per year are essential.
### Product Characteristics

**Specific Gravity:** 1.25  
**Colour:** Black Liquid

<table>
<thead>
<tr>
<th>Analysis</th>
<th>Australia (w/v%)</th>
<th>International (w/w%)</th>
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<tbody>
<tr>
<td>Nitrogen (N)</td>
<td>32.3</td>
<td>25.8</td>
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<tr>
<td>Potassium Humate</td>
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### Directions for Use

Agitate contents well before dilution. Suitable for application by:

- ☁️ Aerial
- 🌿 Fertigation
- 🏙 Boom Spray
- ⛑ In furrow

### Crop and Application Details

<table>
<thead>
<tr>
<th>CROP</th>
<th>RATE/ha</th>
<th>MIN DILUTION</th>
<th>COMMENTS</th>
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</table>
| **AVOCADOS & OLIVES** - Foliar | 5 - 10 L | 1:100 | Post harvest application  
Apply at regular intervals during summer flush |
| - Fertigation | 10 - 20 L | | |
| **BARLEY, OATS, TRITICALE** - Aerial | 15 - 40 L | 1:1 | Apply from early/medium tillering to booting.  
2nd application at milky dough may help in protein boost. Use the higher rate in irrigated situations. Do NOT apply whilst flag leaf is emerging or during 5 - 90% flowering. Application can take place after the flag leaf is fully unfolded. All applications after leaf should be diluted 1:1 with water and preferably applied in the evening to minimise risk of burn. |
| - Foliar | | 1:5 | |
| **CANOLA** - Aerial | 20 L | 1:1 | Apply at full cabbage, repeat as required.  
Use higher rate in irrigated situations |
| - Foliar | 20 - 40 L | | |
| **CITRUS** - Foliar | 5 - 10 L | 1:100 | Can be applied monthly from each flush to stimulate roots.  
Fertilisation rates should be adjusted to suit tree size. To prevent fruit drop, fertigate 20L / ha 3-weeks starting post 1st flush. |
| - Fertigation | 10 - 20 L | | |
| **COTTON** - Aerial | 5 - 20 L | 1:2 | Apply prior to irrigation or during water stress situations. In young cotton use a maximum of 5L / ha. From squaring onwards use 10L / ha in sufficient water. |
| - Foliar | 5 - 20 L | 1:3 | |
| **LEGUMES** - Aerial | 7.5 - 10 L | 1:2 | Apply only if crop exhibits poor nodulation or in growth stages prior to nodulation |
| - Foliar | 10 - 15 L | 1:10 | |
| **PASTURE (Established)** - Extensive & intensive grazing - Aerial | 7.5 - 10 L | 1:5 | Apply 1 - 2 applications to clear leafy regrowth as required to enhance overall growth and fertiliser utilisation |
| - Ground | 7.5 - 10 L | 1:10 | |
| **PINEAPPLES** | 7 - 10 L | 1:100 | Apply during active growth stage |
| **POTATOES** | 7 - 10 L | 1:100 | Apply monthly starting four weeks after emergence |
| **SORGUM, MAIZE** - Aerial | 10 - 15 L | 1:4 | 1st spray early to mid-tillering  
2nd spray prior to flowering |
| - Foliar | 10 - 15 L | 1:5 | |
| **STONE & POME FRUIT** - Aerial | 5 - 10 L | 1:100 | Apply in spring and summer after stem extension growth  
Post harvest application, apply before leaf fall  
Apply as required at regular intervals |
| - Foliar | 20 - 30 L | | |
| - Fertigation | 10 - 20 L | | |
| **SUGARCANE** - Aerial | 20 - 60 L | 1:1 | Aerial application - apply as required  
Boomspray - apply as required |
| - Foliar | 20 - 60 L | 1:5 | |
| **TURF** | 50 - 70L  
500 - 700ml / 100m² | 1:5 | Apply as required for growth maintenance. Irrigate well. A typical dry leaf analysis for bent grass should be between 2.4 - 8.3%N and for couch grass between 1.35 - 6%N |
| **VEGETABLES** | 7 - 10 L | 1:100 | Monthly application commencing 4 weeks after emergence or 21 days after transplanting |
| **Vines** - Foliar | 4 L or 0.2 - 0.6L / 100L | 1:150 | Apply 4 - 6 applications commencing from budburst to flower set. Do not exceed 1x concentration. Do not exceed maximum per hectare rate.  
Apply in a cool of the day. Do not apply to berries  
Apply up to 4 x 10 L applications from 10cm up to veraison.  
Apply 1 - 2 doses post-harvest. This is the most important time for application of N  
For wine grapes apply up to 6L / ton of grape yield over the season. |
| Tables Grapes | | | |
| Wine Grapes - Fertigation | 10L | | |
| | 20L | | |

**Minimum Dilution:** A dilution of 1:100 means 1 part product : 100 parts water  
In hot weather, use the higher dilution rate where applicable

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