Humic Acid

- Dissolves in alkaline solutions but insoluble in acids
- Most cost-effective when applied to soil (via irrigation or drench)
- Increases CEC of soil - nutrients more available + reduces leaching and run-off
- Improves soil structure - good for clay and sand
- Stabilises soil against increased acidity from fertilisers
- Stimulates beneficial microbial activity

If you broadcast dry, water run or foliar spray fertiliser ......

...... we have a humate solution for your crop.

Hold onto your Nitrogen with humates

We all know that there is a rapid drop of soil N after fertiliser application (dry spread or water run).
N loss is dramatically reduced using humates with fertiliser.

More N for next crop

<table>
<thead>
<tr>
<th>Treatment</th>
<th>Available nitrate ppm</th>
<th>Exchangeable ammonium ppm</th>
</tr>
</thead>
<tbody>
<tr>
<td>No Fertiliser</td>
<td>245.18 a*</td>
<td>280.2 c*</td>
</tr>
<tr>
<td>Urea Only</td>
<td>373.6 a*</td>
<td>2841.1 b*</td>
</tr>
<tr>
<td>Urea + Humates</td>
<td>280.2 a*</td>
<td>3817.7 a*</td>
</tr>
<tr>
<td>Urea + Humates</td>
<td>443.65 a*</td>
<td>4059 a*</td>
</tr>
</tbody>
</table>

*Different letters indicate significant difference between treatments by Duncan’s New Multiple Range test at p<0.05.


At the end of the crop, there is significantly more soil ammonium where humates had been used, providing residual N for the next crop.

Further benefits from humates & fulvates

Humic Acid and Fulvic Acid are the 2 main categories of humic substances with the main difference being their pH and solubility in water.

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Fulvic Acid

- Dissolves in alkaline and acid solutions.
- Use as foliar as mixes with all pH levels
- Penetrates leaves as smaller particles than humates
- Use with NPK fertilisers as chelating agent
- Goes across the leaf surface
- Boosts response time by plants to fertiliser application - good for correcting nutrient deficiencies in plants during growth

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www.organicfarming.com.au
Application Rates for Humates

**Soil Amendment**
To improve soil structure of clay and sand, stimulate microbial activity, increase CEC, stabilise acidity, improve moisture retention/penetration and buffer salinity apply either of the following:

- **Humus 26** Horticulture 5-10 L/ha; Broad-acre 2-3 L/ha
- **Humus 100** Horticulture 2-4kg/ha; Broad-acre 1-3kg/ha
- **New Era Protector** Horticulture 5-10L/ha; Broad-acre 1-5 L/ha

**Chelating Complex Fertilisers**
To improve response times to fertiliser applications, buffer and chelate NPK mixes and trace minerals in fertigation tanks and foliar sprays:

**Foliar Spray**
- **Fol Up** 2-3L/ha
- **Fulvic Acid Powder** 250-500 grams/ha (Pre-mix at 1:10 in water)

**Fertigation Systems**
- **Fol Up** 2-6L/ 1,000L
- **Fulvic Acid Powder** 0.3-1.0kg/ha; (Pre-mix at 1:10 in water)

Hydroponics: 120-360g/1,000L

**Nitrogen Buffering**
To improve nitrogen uptake and reduce leaf damage from applications of UAN, N26 or other liquefied Urea situations.

Water run or boom sprayed:
- **Humus 26** 4-6L/tonne Urea or 1,000L N26
- **Humus 100** 1-2kg/ tonne Urea or 1,000L N26
- **New Era Protector** 1-5L/ha or 3% of UAN. Mixes well with UAN.
- **Fulvic Acid Powder** For low volume sprays use 100-300g/ha in 100L water, or 100g/30L UAN.

Talk to us now about getting the most out of your fertiliser this season.

WA, SA, Vic, Tas  0417 992 970 - Steve David
Qld, NSW  0417 992 121 - Graham Golding