BorreGRO HA-1 is a modified potassium humate derived from leonardite. Made by a proprietary formulation process, BorreGRO HA-1 has superior solubility in low pH systems.

### Typical Analysis (powder)

- **pH**: 9.0
- **Soluble potash (K2O)**: 17%
- **Sulfur**: 8%
- **Carbon**: 35%
- **Oxygen**: 33%
- **Hydrogen**: 70%
- **Organic acids (BaCL2 Method)**:
  - 50% derived from Humic acids
  - 20% derived from Fulvic acids

### Benefits

- Improves soil structure
- Increases nutrient exchange and retention
- Stimulates microbial growth
- Improves nutrient absorption
- Stabilizes pH
- Increases stress tolerance
- Increases root development
- Improves seed germination

### Versatility

The unique nature of BorreGRO HA-1 makes it one of the most versatile potassium humates available today. BorreGRO HA-1 can be mixed and applied with most types of fertilizers (including acidic fertilizers), pesticides, seed treatments and micronutrients. BorreGRO HA-1 is readily bio-available and is packaged as either a soluble powder or concentrated liquid.

### BorreGRO HA-1 vs. Conventional Humates

<table>
<thead>
<tr>
<th>Property</th>
<th>BorreGRO HA-1</th>
<th>Conventional Humate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alkali Soluble</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Acid Soluble</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Water Solubility</td>
<td>Complete</td>
<td>Varies</td>
</tr>
<tr>
<td>Fertilizer Compatible</td>
<td>Yes</td>
<td>Maybe</td>
</tr>
</tbody>
</table>

### Application Rates

- **Corn**: 1-3 lbs powder or 2-6 quarts liquid per acre; two treatments per year in irrigation water
- **Garden Vegetables and Strawberries**: 1-2 lbs powder or 2-4 quarts liquid per acre per treatment; three treatments per year in irrigation water
- **Deciduous Fruit & Nut Trees**: 1-2 lbs powder or 2-4 quarts liquid per acre per treatment; minimum of three treatments per year in irrigation water
- **Citrus**: 1-2 lbs powder or 2-4 quarts liquid per acre per treatment; two to three treatments per year in irrigation water
- **Banana**: 10 lbs powder or 20 quarts liquid per acre per year; 5 treatments per year in irrigation water at equal intervals
- **Vineyard Grape**: 1 lb powder or 2-3 quarts liquid per acre; three leaf treatments per year
- **Olive**: ½ lb powder or 1 quart liquid per acre; two leaf treatments per year
- **Sorghum**: 1-3 lbs powder or 2-6 quarts liquid per acre; two treatments per year in irrigation water
- **Ornamentals**: 3 lbs powder or 6 quarts liquid per acre; weekly treatments in irrigation water
- **USE GUIDELINES**
  - **Drip Irrigation**: 3 lbs powder or 6 quarts liquid per acre; weekly treatments
  - **Soil Application**: 1 lb powder or 2 quarts liquid per acre to promote adsorption
  - **Foliar Application**: ½ lb powder or 1 quart liquid per acre to promote adsorption

### Physical Properties

- **Powder**
  - % Solubility in water: 98 min
  - % Moisture: 10 max (powder)
  - Color: Black
- **Liquid**
  - Density: 9.6 lbs/gallons

### Packaging

- **Powder**: 50 lb net weight multi-wall kraft bags or non-returnable bulk bags
- **Liquid**: 5 gallon pail, 55 gallon drum, non-returnable tote, tank truck, or rail car

Please visit [www.lignotechagro.com/contact](http://www.lignotechagro.com/contact) to request more information.

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