

# CropSIL

## TECHNICAL SUPPORT DOCUMENT

- Balanced Diet of Nutrients is essential for Good Crop Growth Cycle.
- Nutrient quantities in soil are insufficient to sustain high crop yields.
- Climatic conditions can also limit plant's uptake of nutrients at key growth stages.
- These result in Hindered Plant Growth & Low Crop Yield.
- **13 nutrient minerals are essential for Plant Growth.**

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| <b>Primary/Major Nutrients</b>  | Nitrogen, Phosphorus, Potassium   |
| <b>Secondary Nutrients</b>      | Calcium, Magnesium, Sulphur   |
| <b>Essential Micronutrients</b> | Boron, Copper, Iron, Manganese, Molybdenum, Zinc, Silicon<br><b><i>Silicon plays an essential role in the uptake of majority of above nutrients for optimum plant growth.</i></b> |

NuVia Technologies offers unique "**Plant Immunity & Yield Booster CropSIL™**" to serve the purpose.

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| <b>Product Description</b> | <ul style="list-style-type: none"> <li>• Based on exclusive mixture of monomeric silica additives &amp; stabilizers.</li> <li>• Used to enhance the productivity &amp; quality of crops.</li> </ul> |
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| <b>Technical Data</b>   | <b>Value/Unit</b>   |
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| <b>Base</b>             | Stabilized monomeric silica & other proprietary additives |
| <b>Appearance</b>       | Liquid  |
| <b>Colour</b>           | Light Yellow to Light Brown                               |
| <b>G-Scale Value</b>    | 7 – 9   |
| <b>Odour</b>            | Ammoniacal  |
| <b>Specific Gravity</b> | 1.10 – 1.20 kg/lit  |
| <b>pH</b>               | 13 – 14   |
| <b>Viscosity(FC-4)</b>  | 15.0 sec ± 5 sec  |
| <b>Stability</b>        | Stable at ambient temperature                             |

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| <b>Unique Features</b> | <ol style="list-style-type: none"> <li>1. 99.99% plant-available o-silicic acid formulation</li> <li>2. High Silica Content (2.5 – 3.5%)</li> <li>3. Cost-effective</li> <li>4. Non-toxic, Eco-friendly, User-friendly</li> </ol> |
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| <b>Major Benefits to Plants</b> | <ol style="list-style-type: none"> <li>1. Improves disease &amp; pest resistance</li> <li>2. Improves germination</li> <li>3. Enhances photosynthesis</li> <li>4. Conserves energy &amp; vigor of plant</li> <li>5. Regulates water uptake, preserves water &amp; monitors uptake of Macro &amp; Micro-Nutrients in plants</li> <li>6. Improves plant quality</li> <li>7. Improves Fruit quality</li> <li>8. Improves Yield</li> <li>9. Improves post-harvest life of crop</li> </ol> |
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| <b>Other Benefits to Plants</b> | <ol style="list-style-type: none"> <li>1. Optimize water, fertilizer &amp; pesticide requirement &amp; usage</li> <li>2. Improves Soil Fertility</li> <li>3. Improves plant architecture</li> <li>4. Increases tolerance to toxic elements like iron &amp; manganese</li> <li>5. Resists Lodging</li> <li>6. Reduces frost damage</li> </ol> |
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| <b>Benefits to Farmers</b> | <ol style="list-style-type: none"> <li>1. Higher Yield</li> <li>2. Improved Post-Harvest Life</li> <li>3. Input Cost Increase off-settled by efficient use of fertilizers, pesticides &amp; insecticides</li> <li>4. Improved quality</li> <li>5. Increased Profit</li> </ol> |
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| <b>Testing &amp; Certification</b> | <ol style="list-style-type: none"> <li>1. ECOCERT, France Certified</li> <li>2. Cleared for Toxicity in Rats &amp; Mice</li> <li>3. RoHS compliant</li> <li>4. Evaluated by <ul style="list-style-type: none"> <li>• BAT (British American Tobacco, Sri Lanka) – On Tobacco</li> <li>• DBSKKV (Dapoli Agriculture University, INDIA) – On Beans</li> <li>• SVSSK (Shri Vighnahar Sahakari Sakhar Karkhana Ltd, INDIA) – On Sugarcane</li> </ul> </li> <li>5. Successful Field Trials conducted on Mangoes, Figs, Pomegranate, Banana, Papaya, Green Chillies, Tomatoes, Brinjal, Potato, Lady Finger, Cauliflower, Sugarcane, Maize, Bottle Gourd, Bitter Gourd, Cucumber, Rice, Beans, Cotton etc.</li> </ol> |
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| <b>Areas of Application</b> | <ol style="list-style-type: none"> <li>1. Regular Crops (cereals, pulses, sugarcane, cotton, coconuts, lawn grass)</li> <li>2. Horticulture (all varieties of fruits &amp; vegetables)</li> <li>3. Floriculture (all varieties of crown &amp; bulb flowers)</li> </ol> |
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| <b>Mechanism of Action</b> | <ul style="list-style-type: none"> <li>• Monomeric Silica gets absorbed by the plant through foliar spray.</li> <li>• It facilitates the uptake &amp; transport of water &amp; nutrients in required proportion to all parts of the plant.</li> <li>• It enhances chlorophyll content &amp; acts as a catalyst for photosynthesis.</li> <li>• It accumulates in the cuticula &amp; epidermis of leaf, thus increasing natural resistance against pests/insects. The jaws of sucking pest/mites/insects get damaged due to thick tissues &amp; hence they cannot chew/bite the leaves.</li> <li>• It also reduces transpiration through the thick leaf &amp; optimizes water management in the plant.</li> <li>• The net result of above mechanics is increased output in terms of both quality &amp; quantity.</li> </ul> |
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| <b>Method of Use</b>   | <b>SHAKE BOTTLE WELL BEFORE USE.</b> |  |  |   |
|  | <b>Treatment</b>                     | <b>Plant Stage</b>   | <b>Dilution</b>  | <b>Expected Benefit</b>   |
|  | DIP                                  | Soak Seeds for 12h before planting in solution / Saplings dip for 5-10 min before planting | 2:1000   | <ul style="list-style-type: none"> <li>• Protection</li> <li>• Better germination</li> </ul>            |
|  | DRIP/FOLIAR SPRAY                    | After 30 days of planting  | 2:1000   | <ul style="list-style-type: none"> <li>• Protection</li> <li>• More number of shoots/tillers</li> </ul> |
|  | FOLIAR SPRAY                         | Before flowering   | 2:1000   | <ul style="list-style-type: none"> <li>• Protection</li> <li>• More number of buds/flowers</li> </ul>   |
|  | FOLIAR SPRAY                         | Before fruiting  | 2:1000   | <ul style="list-style-type: none"> <li>• Protection</li> <li>• More number of fruits</li> </ul>         |
| FOLIAR SPRAY   | Development                          | 2:1000   | <ul style="list-style-type: none"> <li>• Protection</li> <li>• More uniformed development</li> </ul> |   |
| *For crop cycle greater than 4-5 months, 1 spray / or administration through drip per month may be given |                                      |  |  |   |

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| <b>Stability</b>                                  | Stable at room temperature   |
| <b>Hazards</b>                                    | None   |
| <b>Ecological &amp; Toxicological Properties</b>  | Eco-toxicity-None<br>Toxicological data unavailable, however none of the components used have shown chronic toxicity. There is no evidence of any carcinogenic, mutagenic or teratogenic effects |
| <b>LD50 Value</b>                                 | 2000 mg/kg body weight in Rats & Mice  |
| <b>Shelf Life</b>                                 | 24 months from the date of manufacture when stored in dry place at room temperature  |
| <b>Packaging</b>                                  | 5g, 20g,   |
| <b>HS CODE</b>                                    | 38089340   |
| <b>Please refer product MSDS for more details</b> |  |

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