



All-Purpose Plant Food (APF): A Biologically Enhanced Plant Food

APF crop care solutions are naturally fermented products developed to improve soil health by specifically feeding beneficial soil microbes and improving soil moisture. APF was developed with complex bioactive compounds that encourage optimal soil health so that plants can thrive regardless their environment. APF contains amino acids (the building blocks of plant proteins) that serve as a food source for beneficial microbes in the soil; alginic acid (a complex carbohydrate) that also serves as a food source for beneficial soil microbes while improving soil moisture by mixing with certain molecules in the soil to form salts that swell and retain water when wet; and different types of saccharides (natural sugars) that feed bacteria in the soil, freeing up nutrients for plants.

APF is an all-purpose plant food providing beneficial microbes, essential nutrients, and minerals as sustainable nutrition. This alternative to synthetic plant food is GMO-free. APF also conditions the soil, promotes microbial life, stimulates root development, reduces the effects of drought and frost, and improves water retention in the soil. APF is a naturally balanced source of minerals and essential nutrients containing natural occurring plant growth stimulants and hormones including cytokines, auxins, and gibberellins. By activating microbial activity in the soil, the nutrients in APF become readily available. The following benefits make APF an important complement to AgriBrew’s product line:

Benefits for plants	Soil Health	Plant Establishment
<p>One of the most cost-effective ways to increase the size and storage life of any crop.</p> <p>Enhances root mass regardless of plant type.</p> <p>Natural and organic, making it right for any chemical-free growing environment.</p> <p>Boosts the efficiency of any soil or potting mix to get the most from a limited space.</p>	<p>Improves soil fertility.</p> <p>Increases activity and diversity of beneficial soil microbes.</p> <p>Improves soil moisture retention.</p> <p>Increases healthy populations of microbes in soil.</p>	<p>Creates bigger, stronger plant root systems.</p> <p>Improves the plant’s ability to absorb nutrients.</p> <p>Increases capacity to store carbohydrates that are used to fuel plant growth and development.</p> <p>Enhances the formation of plant root nodules, which store beneficial bacteria that convert nitrogen into a usable source for the plant.</p> <p>Enhances the growth and uniformity of shoots including plant stems, leaves, and petals.</p>



Why should I use APF?

Growth, crop quality, and yield all depend on a strong plant with large, healthy root development. Multiple bioactive compounds found within APF help increase plant root growth and crop establishment including nutrient uptake, stress management, and post-harvest quality.

Nutrient Uptake	Stress Management	Post-Harvest Quality
<p>APF helps make the best possible use of nutrients and in doing so, promotes improvement in crop yields and quality.</p> <p>APF contains complex bioactive compounds including alginic acid, a complex carbohydrate that bonds to micronutrients in the soil and makes them easier to be absorbed by the plant (It also serves as a food source for beneficial microbes in the soil); mannitol, a sugar alcohol that also bonds to micronutrients in the soil and makes them easier to be absorbed by the plant; and organic acids that feed beneficial microbes in the soil that deliver nutrients to plant roots.</p>	<p>Adverse growing conditions such as drought, flood, heat, disease, and insect pressure reduce the potential for improved crop yields.</p> <p>Multiple bioactive compounds found within APF plays a role in helping plants tolerate these stress conditions including the production of proline, an amino acid that strengthens cell walls and regulates the amount of water within cells to keep cells hydrated and healthy during stressful situations; mannitol that also helps regulate the amount of water within cells to keep cells hydrated and healthy during stressful situations; key polysaccharides, complex carbohydrates that trigger antioxidant production within plants and protecting plants from damage caused by harmful molecules called free radicals; and betaines that help adjust the levels of water, salt, and other compounds within cells so that plants can better manage water, salinity, heat, and chill stresses.</p>	<p>Improving post-harvest quality and extending the shelf-life of highly perishable fruits and vegetables can help farmers access new markets as their produce will be able to better withstand shipments to faraway destinations.</p> <p>Multiple bioactive compounds found within APF help plants improve post-harvest quality including key polysaccharides, complex carbohydrates that trigger antioxidant production within plants and protecting plants from pre- and post-harvest damage caused by free radicals; proline, an amino acid that strengthens cell walls within plants so that they don't break down as easily post-harvest; and oligosaccharides, complex carbohydrates that stimulate plant defense mechanisms so that plants can better fend off post-harvest losses from rot and decay caused by fungi or bacteria.</p>
<ul style="list-style-type: none"> • Nitrogen (water soluble and insoluble) • Phosphoric acid • Potash • Calcium • Manganese • Beneficial organic compounds found in nutrient-rich seeds 	<ul style="list-style-type: none"> • Drought Stress • Heat Stress • Chill Stress • Salinity Stress 	<ul style="list-style-type: none"> • Improves post-harvest appearance • Improves firmness • Reduces decay and post-harvest losses



What is in APF and how much do I use?

Derived from	Nutrient analysis	Applications
<ul style="list-style-type: none"> • Fermented Glycine Max Seed Extract • Ascophyllum nodosum • Lacto Bacillus Casei • Molasses • Hydrated Sodium Calcium Aluminosilicate • Ceramic Powder • Sea Salt • Humic Acid 	<ul style="list-style-type: none"> • Nitrogen (N) 1-2% • Phosphorus (P) 1-2% • Potassium (K) 1 -2% • Sulphur (S) • Calcium (Ca) • Iron (Fe) • Magnesium (Mg) • +24 other types, including essential trace minerals • Amino acids • Carbohydrates <ul style="list-style-type: none"> ○ Alginic acid ○ Mannitol ○ Laminarin ○ Other sugars • +11 types of vitamins 	<p>The following application rates are approximate and may vary depending on climatic conditions, soil type and soil fertility</p> <p>Soil Application All Crops: 1 – 10 gallons per acre</p> <p>Foliar Application All Crops: 1 quart – 3 gallons per acre</p> <p>General Use Preparation All Crops: 0.5 – 1 oz per gallon</p> <p>Compost: 1 – 2 gallons of prepared solution per cubic yard</p>