

Frequently Asked Questions



ABOUT AquaVantage® AND HOW IT WORKS

Q. In a nutshell, how can I describe AquaVantage to my customers?

A. AquaVantage is a patented soil amendment that improves seed germination and emergence to give plants an early, healthy start. AquaVantage granules absorb more than 500 times their original weight in water and water-soluble nutrients present in the soil, forming hydrogels that slowly release the held moisture as plants need it. It's a versatile product that can be used in seed furrows, at transplanting and as an anti-crustant.

Q. Does AquaVantage physically change the amount of water a plant needs for optimum growth?

A. Plants require a specific amount of water for optimal growth. AquaVantage doesn't change that amount, but it does manage water more efficiently. Instead of water being dispersed into the soil or evaporating, it is absorbed by AquaVantage and held for the plant to use as needed. This "bound water" more effectively and efficiently nourishes the plant.

Q. Does AquaVantage change the nature of the moisture it absorbs?

A. No, AquaVantage triggers no chemical reactions. AquaVantage merely absorbs moisture and any water-soluble nutrients it contains, and remains suspended in the plant root zone, storing the moisture and nutrients in plant-available form.

Q. Is AquaVantage suitable for only one type of soil?

A. No, AquaVantage provides benefits to all soil types. Soil particles in sandy soils are relatively large and have poor water-holding capability. AquaVantage holds water, preventing it from moving past plant roots where it is needed most. Clay soils, which are more compacted, benefit from the increased aeration created as AquaVantage expands and contracts, which increases oxygen levels and water percolation.

Q. Will increased moisture near the root structure cause root rot?

A. AquaVantage granules will expand to many times their original volume, then contract and repeatedly expand based on the water available. This action forces soil particles apart, increasing aeration – the key element required to prevent root rot. Once the granules reach their maximum absorption, excess water is allowed to move deeper into the soil profile. This combination of ideal water availability and good aeration promotes faster plant growth and minimizes the potential for root rot.

Q. Will my customers always notice a difference in plant growth by using AquaVantage?

A. During most growing seasons, fields treated with AquaVantage will show a definite advantage in seedling emergence, seedling vigor and crop development. However, when environmental conditions are ideal for crop development and growth, AquaVantage results may not be markedly different from untreated fields.

Q. How do AquaVantage seed furrow treatments help increase uniformity in crop maturity across the field?

A. By applying AquaVantage in seed furrows at planting, the germinating seed and seedlings have a constant supply of moisture and nutrients available for a more complete, consistent germination and seedling emergence. AquaVantage removes variances caused by dry spots in the field for more uniform stands and crop development.

Q. What are the key benefits of AquaVantage as an anti-crustant?

A. AquaVantage keeps the soil surface moist and minimizes crusting by creating small fissures in the soil as granules absorb and release moisture. This allows more seedlings to penetrate the surface and become established.

Q. How does AquaVantage benefit transplanted plants?

A. When AquaVantage is applied in the transplant water, plants have a consistent source of moisture leading to less water stress, better survival rate and greater plant root and biomass development for higher yields.

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COMPARISON TO PAMs (Polyacrylamide Formulations)

Q. I've tried superabsorbents before, but couldn't really tell a difference in my plants. How is AquaVantage different?

A. AquaVantage is new and totally different from other water-preservation products, including any of the synthetic polyacrylate and polyacrylamide formulations (e.g., PAMs). You've likely heard of or had experience with the many synthetic polymers sold on the market, which are superabsorbents made with petroleum-type formulations, the active ingredient used in disposable diapers. Those synthetic polymers hold water tightly, which explains why those formulations are less effective in growing plants. The most important factor is not absorbency, but the ability of any superabsorbent to **release** water. No other absorbent product is able to release water as well as AquaVantage.

Q. What about other products that claim to have more absorbency than AquaVantage?

A. We developed AquaVantage to hold over 500 times its weight in water, although we can produce a granule that holds as much as 5,000 times its weight. However, experience has shown we have achieved the optimum balance that benefits plants with a product that not only achieves optimal absorbency but also the ability to release moisture as needed.

AquaVantage SAFETY

Q. Is AquaVantage safe for food crops?

A. Yes. AquaVantage is a natural starch-based formulation. It is non-toxic, biodegradable, pH-neutral and safe for any plant. Synthetic polymers, on the other hand, typically contain significant amounts of sodium, petroleum and other fillers, which can be detrimental to food crops. Because it is starch-based, AquaVantage particles are an attractive food source for soil microorganisms. Over time, the microbes consume the AquaVantage, creating a richer soil environment.

Q. Is AquaVantage organic certified?

A. No, AquaVantage is not organic-certified. However, it is formulated from natural cornstarch. During manufacturing, the molecular structure of the cornstarch is tweaked in order to give AquaVantage its great ability to store and release water.

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This process limits qualification for organic certification. However, all trace elements of the process are removed, and the final AquaVantage granules are as natural as the cornstarch in its original state.

AquaVantage APPLICATION

Q. How often do I apply AquaVantage?

A. In general, we recommend a fresh application of AquaVantage with each new planting. This ensures that AquaVantage is in close proximity to the seeds (to increase germination) and roots. For more specific applications subject to plant type, see the AquaVantage User Guide.

Q. Do customers need to reapply AquaVantage if they have to replant crops due to adverse weather conditions or other seasonal challenges?

A. Since replanting disturbs soil in the seedbed, AquaVantage should be applied each time a crop is replanted to keep AquaVantage close to the seeds.

Q. Can I mix fertilizer with AquaVantage?

A. Yes. By combining AquaVantage and nutrients, your plants have the best advantage both food and water.

Q. How long does AquaVantage remain active in the soil?

A. AquaVantage remains effective for a full growing season, depending on the microorganisms present in the soil, which will eventually cause biodegradation. We recommend a new application with each new planting as a way to ensure optimum efficacy.

LONG-TERM EFFECTS

Q. Is residue left in the soil over time?

A. No. AquaVantage is completely biodegradable. Cornstarch, the main component, is a food source for microorganisms present in the soil. So, even after biodegrading, what remains functions as a soil amendment to improve aeration and other soil characteristics.

Q. Does AquaVantage alter soil pH?

A. No. AquaVantage granules are pH-neutral and will work well within a pH environment range of 6 to 10.

To learn more about AquaVantage, visit
www.SunnGlobal.com