



## A Beneficial Green Solution for Organic Materials. Only from Anuvia.™

---

### THE COMPANY

In today's ever-growing world, finding sustainable ways to make the things we need is of the utmost importance. That's why, at Anuvia™ Plant Nutrients, we're proud to offer a way for organic suppliers to use their organic resources in an efficient, productive way. Anuvia addresses the three pillars of sustainability – social, environmental and economic – simultaneously by using a patented process to create efficient, natural plant nutrients that help people, plants and the planet thrive. Our way is unique. Our way is new. We are Anuvia.

### THE PRODUCT

At Anuvia, we produce a mainstream dry (99 percent solids), granular, 16-1-2-17S-3Fe plant nutrient product that provides precisely what plants need. Our homogenous granules contain 16 percent organic matter and employ the Organic Matrix™, a novel chemical bonding method that creates a natural slow-release delivery system and represents a major innovation in the world of plant nutrition.

### THE PROCESS

The Ammonium Mix is a proprietary seven-step organic resource processing system described in 14 U.S. patents. It is clean, safe, environmentally friendly, and makes use of organic resources that would otherwise be disposed of. We take organic material and turn it into a quality product used by farmers, turf managers and homeowners alike.



ANUVIA™ PLANT NUTRIENTS

## THE ANUVIA AMMONIUM MIX PROCESS: GOOD FOR YOU, GOOD FOR ALL

Municipalities and industries are facing decreasing options and increasing costs to dispose of organic materials. Land application and landfills, the two primary disposal methods used today, represent environmentally suboptimal alternatives. The Anuvia process gives municipalities and industries a means by which to turn these organic materials into a product with a beneficial use rather than disposing of it.

### ▪ Good for Safety

The Ammonium Mix process sterilizes the organic materials we use, which are normally received in microbial form as biosolids or digested food waste, and our resulting plant nutrients are free of any viruses, bacteria, parasites or fungi that may cause disease in humans and animals. Our process eliminates potential health effects through a unique combination of temperature, pressure, pH and ammonia exposure stresses that destroy or denature many macromolecules and bioactive proteins. This proprietary technology has been issued 14 U.S. patents and numerous foreign patents and exceeds the Exceptional Quality (EQ) standard as set by the U.S. Environmental Protection Agency (EPA).

### ▪ Good for Regulations

During the Ammonium Mix process, nitrogen and other nutrients fuse with organic materials, creating a novel slow-release plant nutrient product containing 16 percent nitrogen. This slow-release feature is of vital importance to the plant nutrient industry, as there are extensive efforts underway to limit the release of nutrients into the environment. The Anuvia process and product work within these limitations and efficiently use the nutrients in every granule, minimizing loss into the environment. It is estimated that the use of slow-release products is growing at a rate of 6-8 percent per annum.

### ▪ Good for the Environment

A recent engineering study shows that the net greenhouse gas emissions associated with the production and application of the Anuvia product are approximately 40 percent less than with an inorganic fertilizer delivering an equivalent amount of plant-available N. In addition, the Anuvia process shows a net energy benefit compared to other organic material treatment processes. As an added benefit, when the plant nutrients containing the organic resources are applied to land, some of the organic carbon is sequestered in the soil, which provides another pathway for net reduction of greenhouse gas emissions.

### ▪ Good for Quality

The Anuvia manufacturing plants utilize standard dewatered organic material handling equipment, standard granulation equipment, state-of-the-art air emissions control equipment and hydrolysis vessels to accomplish nutrient conversions and sterilization. These steps minimize the risks associated with past organic material utilization initiatives, when product quality and environmental impact could not be controlled.

### ▪ The Final Result: The Organic Matrix

The Organic Matrix is the foundation of our plant nutrient product. How does it work? By binding the amino acids from organic materials with inorganic nutrients, Anuvia has created a novel product that is both natural and highly efficient. This unique bonding process gives our product a dual-release characteristic. About 65 percent of the nitrogen (N) in each granule is released over the first two weeks after application; the remaining 35 percent is released over the next six to eight weeks. Trials have shown that this nutrient release rate provides a beneficial plant response.





*Anuvia Zellwood Plant – Construction as of August 2015*

## **BENEFITS OF ANUVIA PROCESSING FACILITIES**

Anuvia manufacturing facilities provide significant advantages for organic suppliers, consulting engineers, regulators and the public.

### **Organic Suppliers**

Every organic supplier that takes advantage of the Anuvia processes will have a reliable, state-of-the-art partner with a favorable environmental footprint. In addition to the benefits of the processes, organic suppliers will see competitive cost when compared to other alternatives for the disposal of organic materials that are in a microbial form. The competitiveness, environmental footprint and ability to manufacture a product that fits in major market segments make Anuvia technology the preferred organic materials solution.

### **Consulting Engineers**

Consulting engineers will be able to recommend a technology to their clients that is reliable, green, has a low carbon footprint and produces an end product that exceeds the present state and federal regulations for Exceptional Quality (EQ). Other considerations for consulting engineers include:

- Along with the high-quality nutrient composition, Anuvia can be very competitive in the mainstream plant nutrient markets.
- Our technology is built around and depends upon well-tested, reliable manufacturing equipment.

### **Regulators and the Public**

Regulators at the local, state or federal level will be able to see that their municipal organic materials are meeting the most stringent EQ regulations. Anuvia's Ammonium Mix technology exceeds even U.S. EPA's EQ standards, resulting in a product that is sterile and exhibits inhibitory and hydrolytic effects on biologically active molecules. This places Anuvia in a very favorable position for strong regulatory support. The fact that organic materials will be used to manufacture a high-grade, hard, dry plant nutrient that has utility in the mainstream plant nutrient marketplaces is of significant importance to regulators.



## THE FACILITIES

The first commercial Anuvia plant is located in Zellwood, Florida. This plant has been fully permitted by the state of Florida and Orange County. We are also currently developing other projects in Florida and throughout the U.S. Our business model moving forward is to design, build, own and operate these plants in locations as close as possible to the source of organic material supply.

The Anuvia plant design has achieved the 100 percent level of engineering by CDM Smith. CDM Smith has conducted extensive review and testing of the Anuvia Ammonium Mix plant nutrient process, especially with regard to product characteristics. Construction of our Zellwood plant is overseen by CDM Constructors Inc., an internationally recognized construction (EPC) firm.

## COMPANY STRUCTURE

Anuvia has aligned itself with reliable suppliers of raw materials, best-in-class engineering, procurement and construction contractors, and plans to sell to major plant nutrient distributors in the U.S. and around the world. We have partnered with Trammo, Inc.<sup>®</sup>, a global distributing company, to sell product throughout the U.S. and internationally.

Our management team is highly experienced in areas that will be key to success:

- Organic material processing
- Granular plant nutrient manufacturing
- Marketing and product development
- Finance and project development

## FINANCIAL

Anuvia Plant Nutrients is financed primarily by TPG<sup>®</sup> Alternative and Renewable Technologies (ART). In addition to TPG ART, equity investors include strategic investors Agro-Iron<sup>®</sup>, whose businesses include the production of iron micronutrients; and Shrieve Chemical<sup>®</sup>, a supplier of industrial chemicals, active in the fertilizer industry. Other investors include Florida-based agricultural companies and individual investors.

---

**The Anuvia proprietary Ammonium Mix technology offers the ability to produce high value, readily marketable plant nutrients from organic materials. These organic materials have become a significant environmental problem, leading to a number of domestic and international opportunities to build, own and operate Anuvia plant nutrient production facilities.**

©2015 Anuvia Plant Nutrients. All rights reserved. The Anuvia logo and Organic Matrix are trademarks of Anuvia Plant Nutrients. Always read and follow label directions.



ANUVIA™ PLANT NUTRIENTS