



Research, Validation and Commercialization of Technologies

**Plausible Scientific Evidence of the Product Supreme(AG)<sup>TM</sup> with Nutri-Mastic<sup>TM</sup> as a Mulch, Soil Amendment, Natural Fertilizer, and More When Applied as a NPIMSE<sup>TM</sup>...Natural Phytochemical and Ionic Mineral Soil Enhancement Technology**

Rev.1-20Jun26-ifus

**Point 1 - Background:**

“Man became distracted from the importance of organic compound cycling when it was discovered that soluble acidic based N P K "fertilizers" could stimulate plant growth. Large industrial concerns took advantage of the N P K discovery to market industrially processed "fertilizers" from mineral deposit. Continued use of these acidic fertilizers in the absence of adequate humic substances (in the soil) has caused many serious sociological and ecological problems. **Man needs to reconsider his approach to fertilization techniques by giving higher priority to soil humus.**”

--"ORGANIC MATTER, HUMUS, HUMATE, HUMIC ACID, FULVIC ACID AND HUMIN: THEIR IMPORTANCE IN SOIL FERTILITY AND PLANT HEALTH"

Dr. Robert E. Pettit, Emeritus Associate Professor Texas A&M University

**Point 2: What is SupremeAG (SAG<sup>TM</sup>)?**

Like SGP+<sup>TM</sup> with Nutri-Mastic<sup>TM</sup>, **SupremeAG<sup>TM</sup> (SAG<sup>TM</sup>) is NOT simply Sugarcane Bagasse, BUT a proprietary formulation containing Nutri-Mastic<sup>TM</sup> (Mastic Gum, Ionic Minerals, Water), Carob, and Sugarcane Bagasse. SAG<sup>TM</sup> is a PRODUCT supported by a NPIMSE<sup>TM</sup>...Natural Phytochemical and Ionic Mineral Soil Enhancement Technology.**

**Point 3: How is SupremeAG™ Made?**

The SAG™ formulation is processed through IFUS's proprietary method. Sugarcane Bagasse at 135-145°F shifts in less than 2-minutes to lowered temperatures of 92-94°F. The newly formulated SAG™ continues cooling to 84-86°F within 2000-lb highly compressed bales. The transformation into SGP+™ is immediately evident in the texture of the new proprietary product SGP+™ (Pic 1) vs. SAG™ (Pic 2) vs. Untreated Bagasse (Pic 3).

**Point 3a:** Pic 1 SGP+™ to be aged into SAG™. The SGP+™ is cool to the touch.



**Point 3b:** Pic 2 Aged SGP+™ now transformed into **SupremeAG™**:



**Point 3c:** Untreated Sugarcane Bagasse VERY hot to the touch.



**Point 4: What is IFUS Claiming?**

**IFUS holds that it has discovered a commercially viable process by which lignin from Sugarcane Bagasse can be degraded and depolymerized *in vitro* by combining Sugarcane Bagasse with Mastic Gum, Carob, Ionic Minerals, and Water, through the IFUS Proprietary Formulation Technology.**

Degraded and Depolymerized Lignin by the naturally occurring microbial biome (especially White Rot Fungi) is scientifically shown to be essential to the ecological balance of Earth.

Furthermore, Sugarcane Bagasse is shown to possess a natural occurring microbial biome (to include White Rot Fungi) that mimics what is found in Nature.

**Point 6: Why are iron-loving and acidic-loving plants thriving on SupremeAG™ with Nutri-Mastic™?**

- Iron
- pH
- Hydration
- Phytochemicals / Phytohormones
- Soil Structure
- Humic Substances
- Naturally balanced Ionic Minerals
- And, more.

**Point 7: Why are iron-loving and acid-loving plants mulched and/or soil amended with SupremeAG™ with Nutri-Mastic™ demonstrating a reduction and/or elimination of unwanted insects and/or bugs?**

- Plant and root health
- Natural phytochemicals leached from the soil and/or the plant that attract beneficial insects and/or repel pests

**Point 8: Why are iron-loving and acid-loving plants mulched and/or soil amended with SupremeAG™ with Nutri-Mastic™ requiring less herbicides?**

- The matt suppressing weed growth
- The healthier plant with healthier root system
- The phytochemicals / phytohormones

**Point 9: Why are iron-loving and acid-loving plants mulched and/or soil amended with SupremeAG™ with Nutri-Mastic™ requiring less fertilizers?**

Sugarcane Bagasse as well as SupremeAG™ have both been shown to be very high in natural iron (e.g., one analysis from Cumberland Valley Analytical Services showed a roughly 85% mixture of SGP+™ to contain 1625ppm Fe along with specific minerals tested to include: 0.17ppm Ca, 0.14ppm P, 0.20ppm Mg, 0.38ppm K, 0.02ppm Na, 74.00ppm Mn, 23.00ppm Zn, 8.00ppm Cu.

SGP+™ is comparable to SupremeAG™ with a major exception, that being, the added degradation of the lignin fiber and what is believed to be an increased concentration of Humic Substances.

Additionally, the CVAS Analysis showed Crude Protein and Soluble Protein as a % of DM at 6.5ppm and 0.7ppm, respectively. You can view the CVAS reports at:  
<https://www.impactfusionbrands.com/knowledge-base/cvas-standard-34710041-deer-run-ranch/>

**Point 10: Why are iron-loving and acid-loving plants mulched and/or soil amended with SupremeAG™ with Nutri-Mastic™ requiring less water?**

Bagasse is particularly hydrophilic.

When lignin in bagasse degrades, and more so depolymerizes in the presence of White Rot Fungi and other beneficial microbes (found naturally in nature), **Water and CO<sub>2</sub>, along with a host of Proteogenic Amino Acids are produced.**

Furthermore, published science offered in the **ADDENDUM** Document supports this: “Intracellular pathways for lignin catabolism in white-rot fungi”, Carlos del Cerro, et.al, The

Proceedings of the National Academy of Sciences: Systems Biology/Biological Sciences, Feb. 23, 2021. (This information can be found in the ADDENDUM Document).

**Point 11: What additional evidence does IFUS have to support its claims as to the efficacy of SupremeAG™ with Nutri-Mastic™?**

**Point 11a:** IFUS is conducting both Statistical and Broader Non-Statistical Trials applying SAG™ as Mulch and/or Soil Amendment on the IFUS Test Farm in LA., to include:

- A General Citrus Trial / 17-Trees of mixed varieties – non-statistical, yet controlled and managed
- A Washington Navel Orange Trial / 18-Trees – statistically controlled and managed
- A Freedom Blackberry Trial / 24 -vines with 22-alive – non-statistical, yet controlled and managed
- A Freedom Blackberry Trial / 18-vines– statistically controlled and managed
- A General Peach Trial / 33-Trees of mixed varieties– non-statistical, yet controlled and managed
- A Blazing Prince Peach Trial / 10-Trees– statistical controlled and managed
- A La Peche Peach Trial / 10-Trees – statistical controlled and managed
- A Tif-blue, Premier, and Climax Blueberry Trial – statistically controlled and managed

Additionally, we have General Trials on over 100-varities to include:

- Pear, Plum, Persimmon, and Fig trees – non-statistical, yet controlled and managed
- Cantaloupe, Honey Dew, and Watermelon of mixed varieties – non-statistical, yet controlled and managed
- Roses and Azaleas – non-statistical, yet controlled
- Hibiscus and Althea – non-statistical, yet controlled and managed
- Pecans – non-statistical, yet controlled and managed
- Crepe Myrtles, Magnolias of mixed varieties- non-statistical, yet controlled and managed
- Any number of Irises, Lillies, and other flowering plants – non-statistical, yet controlled and managed
- And some odds and sods of trees, shrubs, and plants – non-statistical, yet controlled and managed

When viewed broadly, the non-statistical trials provide baseline observations, which inform the design of statistical trials conducted here on the IFUS Test Farm and SURAEAC, as well as other non-statistical (yet, controlled and managed) trials on Citrus and Peache trees being conducted by organizations like the Florida “Ques”.

In all, both statistical, and what could be viewed qualitatively as semi-statistical data, is being generated...if nothing else from an “Input/Output” perspective based on “Qualitative Observations” (e.g., Color and health of leaves, lack of insects/bugs/worms, clear growth rates, appearance/taste/quality of fruit/buds/etc., and the like). Similar trees, when compared to one another, often offer a STRIKING contrast depending on the application of SAG™. Of course, the variables like soil, location, sunlight, etc. remains statistically un-quantified; hence, those variables MUST be taken into consideration.

BUT, when two separate trees of like variety are proximally located next to one another (with one provided some form of SAG™ or liquid Nutri-Mastic™ and the other provided traditional fertilizing/etc.), and the two trees show disparately different growth rates, bloom/fruit production, visual health contrasts, and more, the “qualitative evidence” becomes more than apparent like pictures provided in the ADDENDUM Document.

In this light, deeper analytical measures are underway. For example, recommendations on BRIX are being placed into part of both statistical and non-statistical trials. We are planning to start with:

1. Washinton Navel Orange Statistical Trial
2. Blazing Prince Peach Tree Statistical Trial
3. General Citrus Trial

**Point 11b:** Additionally, a report published by the Southern University Agricultural Research and Extension Center (SUAREC) states that “SupremeAG™ treated bagasse resulted in the highest overall fruit yield compared with soil control and untreated bagasse mulch. However, crop specific responses were observed.”

**Point 11c:** The Florida “Ques” are conducting non-statistical trials on both Blazing Prince Peach Trees with incredible results and Citrus Trees to study predation by Aphids and overall performance.

**Point 11d:** Any number of IFUS Customers are reporting outstanding results from the application of SAG™.

ALL of these findings can be found on the IFUS Website.

### **Point 12: Concluding Remarks**

Let us be reminded that: “Man needs to reconsider his approach to fertilization techniques by giving higher priority to soil humus.”--"ORGANIC MATTER, HUMUS, HUMATE, HUMIC ACID, FULVIC ACID AND HUMIN: THEIR IMPORTANCE IN SOIL FERTILITY AND PLANT HEALTH," Dr. Robert E. Pettit, Emeritus Associate Professor Texas A&M University

IFUS's product lines made with Nutri-Mastic™ are believed to enable humans, animals, and plants to naturally become more "intact" with Nature. In other words, the IFUS product lines may well be creating a natural state of "homeostasis" beneficial to humans, animals, and plants.

The **ADDENDUM** Document provides further insight, which IFUS holds to be further evidence of the efficacy of **SupremeAG™ with Nutri-Mastic™ as not only a product, but a NPIMSE™...Natural Phytochemical and Ionic Mineral Soil Enhancement Technology.**

Lastly, there is emerging evidence that mulching and/or soil amending with SAG™ may in fact mitigate and/or ameliorate the larvae of the NWS Female, when said larvae drops from the wound of a cow to the ground. Specific studies offer evidence of the anti-larvicidal properties of the active ingredients in SAG™.