

FREQUENTLY ASKED QUESTIONS



What is Agricen Sciences?

Agricen Sciences is an applied sciences research company leading the development of novel microbial and biochemical solutions for plant nutrition and health. The company's cutting-edge research programs on soil-plant systems are yielding new insights for crop nutrition, soil science and nutrient management. By applying this knowledge, Agricen Sciences is developing innovative new biochemical solutions that address the sustainability and production challenges facing modern agriculture.

What is biochemistry? What do you mean by “biochemistry-based” solutions for plant nutrition?

Biochemistry is the science of chemical compounds and processes that are generated by the activity of various organisms. Simply put, it is the chemistry of life. In the context of plant nutrition, interactions between plants and microorganisms in the soil—or, more specifically, their biochemical metabolites or byproducts (such as various proteins, enzymes, organic acids and chelators)—can have a significant impact on nutrient availability, uptake and use. Agricen Sciences is dedicated to better understanding these interactions and translating these findings into effective biological and biochemical products that can be used to improve plant nutrition.

Why focus on biochemistry?

The soil's biochemistry is extraordinarily complex. This presents a great challenge, since just beginning to unravel and understand this complex biochemistry and its applications, both in agriculture and other fields, may take decades. However, it also offers us the extraordinary potential for discovering new ways to support and enhance grower practices. Better understanding the biochemical pathways and mechanisms that influence the soil-plant system will help us develop practical and effective biochemical solutions that enhance nutrient use efficiency and increase crop yields.

Based on Nature. Built on Science.

How is this different from organic farming?

Organic farming relies on the use of natural (that is, non-chemical) products for plant nutrition, soil management and even crop protection. While we are looking at natural *sources* for new product technologies, we are really trying to unlock nature's secrets to plant care and use that knowledge to complement modern agricultural methods by improving their effectiveness or making them more sustainable. We think of what we do as a “natural products discovery model” to help unlock and harness some of those naturally occurring mechanisms for plant nutrition and vigor.

Does that imply ‘genetic engineering’ or ‘genetic modification’?

No. We are not manipulating the genetics of organisms or plants, either in the lab or in the field. Instead, we are focusing on those agents that are already at work—the thousands and thousands of molecular-level triggers that may lead to certain positive responses in plants or soil microbial communities. In the same way that natural products have been shown to have inherent benefits for human nutrition and health, we feel there is a vast opportunity for such innovations in the field of plant science.

What scientific basis exists to support this approach?

A recent literature review by the US Biostimulant Coalition cited nearly 150 peer-reviewed journal articles of work done on biostimulant approaches. A separate report, sponsored by the European Commission, cited nearly 100 scholarly articles. New, more sophisticated molecular tools (many coming from human health and pharmaceutical industries)—along with the supercomputing power to drive bioinformatics analysis—are bringing the analysis of complex ecologies within reach, while a rapidly increasing level of investment by Agricen Sciences and many others is beginning to break through the enormously complex world of soil systems to drive unprecedented insights.