

TECHNICAL INSIGHTS

INSIDE R&D

TECHNOLOGY ALERT



INNOVATIVE CONSORTIA OF PROBIOTIC CULTURES FOR USE IN VARIOUS APPLICATIONS

The use of sustainable practices across industries is gaining prominence across industries. The use of harsh chemicals and other crude-based derivatives is being gradually yet steadily replaced by products of biological origin. Bacteria, especially beneficial bacteria, play an important role in developing eco-friendly products that can be considered viable alternatives for crude-based or synthetic ones. The beneficial bacteria, commonly known as probiotics, are not restricted to the human gut alone as the popular belief goes; bacteria are found in animal guts as well as plant life.

These bacteria can also be synthesized using fermentation and other biotechnological processes for commercial use. While the use of probiotics for animal and human health is established, its deployment in industrial applications is still at a nascent stage. This is mainly due to the scalability and efficacy issues of the probiotic organisms. Therefore, development of probiotic cultures that will satisfy the aforementioned requirements will help in increasing its commercial adoption across industries.

SCD Probiotics has developed probiotic cultures that have the potential to overcome the above-mentioned challenges. A unique aspect of the company's technology is the development of a cocktail of probiotic microbes using more than 10 strains instead of stand-alone or pure cultures.

The probiotic cocktail is developed using the company's proprietary consortia-culturing process, which results in each strain interacting with others in a symbiotic relationship, resulting in an ecosystem of probiotic strains. The resultant culture is more effective and resilient than standalone strains. The consortia technology, resulting in a combination of various strains has a better survival rate compared to pure cultures. Another advantage is that the combination of cultures enables the use of both liquid and solid delivery platforms, albeit the existing preference for liquid formulas for human and animal nutrition.

The company's proprietary platform is leveraged for the development of products for various applications. These range from animal feed and human nutrition to industrial applications. The products have varied uses including large-scale composting, crop waste treatment, household cleaning products, waste remediation, and crop protection. One of the noteworthy developments includes development of probiotic cultures for treatment of waste water from the leather or tannery industry.

The company has proven the ability to use microbes to successfully treat the huge amount of effluent loaded waste water that is generated by the tannery industry.

The company, through its continuous innovation culture and maintenance of stringent quality control measures in its manufacturing locations (Exhibit 1) is able to meet the exacting product standards across varied applications and satisfy the requirements of discerning customers. The company's products that are meant for use in crop treatment and livestock management are reviewed and certified by the Organic Materials Review Institute (OMRI), USA.



Exhibit 1 shows the company's manufacturing facility.

Picture Credit: Libby Hasbert, Social Media Coordinator, SCD Probiotics

Apart from in-house R&D, the company actively participates in various industrial and academic collaborations and partnerships aimed at technology and product development for various industries across the globe. One such initiative is targeted toward the use of probiotics for skincare formulations. The company is actively seeking technology-licensing opportunities and has the ability to customize the probiotic cultures based on end-user requirements.

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