

SBSF CONSULTANCY— "A SMALL INITIATIVE BACKED BY A GREAT CAUSE."

**Founders- Dr. Mukti Sadhan Basu, Managing Director & Consultant and
Dr. Shravani Basu, MBA Partner & Consultant**

Founded in- 2018

Place- Kolkata

Website- www.sbsf-agritech.com

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Dr. Mukti Sadhan Basu has served in national and international organizations namely ICAR, ICRISAT, UNIDO, HIL in responsible positions for over 40 years and headed prestigious International Projects with UNDP, ACAIR, IFAD, EU and National Network Project on Mycotoxins besides serving as Independent Consultant to NAIP (Funded by World Bank).

Dr. Shravani Basu, who pursued her PhD in Crop Science (specializing in Molecular Genetics) from the University of Nottingham (UK) followed by an MBA has worked with many companies, more prominently with agriculture & pharmaceutical manufacturing companies across UK, Taiwan, China, and Germany, in developing strategy for product and business development.



ABOUT THE STARTUP

SBSF stands for Science, Business and Sustainable Futures, concepts and best practices applied to Agriculture and allied subjects. Registered in Kolkata as a Pvt. Ltd. since 2018, the Company is founded and managed by Dr.

Mukti Sadhan Basu and Dr. Shravani Basu, and supported by renowned Senior Member Consultants in India, Germany, France, Spain and USA in diverse fields.

Farmers

Large Holdings and Cooperatives

Experts

Researchers and Professional Domain Consultants

Vendors

Specialized in Chemicals, Fertilizers and Equipments

WORKING AREA

- ✿ Agricultural Production across various production systems and crops, both conventional and organic;
- ✿ Crop Monitoring, Evaluation, Quality Management, and implementation of Organic Adoption and Certification;
- ✿ Agricultural Business, Market Development and Financing;
- ✿ Food Policy, Regulations, and Compliance;
- ✿ All in multiple markets globally;
- ✿ And with a data-driven approach

MISSION AND VISION OF THE STARTUP

The mission, through SBSF Consultancy, is to leapfrog intensification of agriculture through mechanization focusing on important crops in reasonably and large farms towards more balanced, efficient and yet sustainable, and diversified cropping systems by enabling precision farming. Taking into consideration that Indian agriculture is still dominated by resource deficient farmers, living and farming under extreme weather conditions, with average land holdings of less than an acre, we decided that the best way to approach this challenge would be to create a large network of agricultural experts with rich knowledge and deep experience of Indian agriculture and pair them with Data Science and Machine Learning experts from around the world to work on projects and products that are innovative and deliver value at the individual farm level.

Listing out the value proposition and ways in which SBSF partner with their clients and stakeholders that have included:

1. Preparation of bankable and investment ready projects (DPR), technical guidance, implementation, monitoring, evaluation, etc. for FPOs, FPCs, Government/ Non-Government institutions and Private companies. Focusing

on innovative solutions for utilization of barren/ marginal lands by introducing high value crops of economic importance/ industrial uses, we recently successfully concluded an assignment for NABARD/ NABCONS in establishing Olive plantation on non-agricultural marginal lands in Purulia District of West Bengal.

2. Provide technical backstopping to Farmer Producer Organization/ Farmer Producer Company (FPO/FPC) by fine tuning Good Agricultural Practices (GAP) to improve yields, quality of produce, primary value addition, storage and finally establish market linkages.

3. Guide complete value chain for the Private Companies/ Corporates dealing with agricultural commodities on quality procurement used for value addition and product diversification

4. Assist Agri-Export Companies in private sector by addressing sanitary-phytosanitary issues meeting country-specific regulatory requirements and avoiding import alerts mostly in case of Groundnut, Basmati Rice and range of Spices.

5. Monitor high-quality seed production, both for hybrids and open pollinated for Private

Seed Companies as well as National Level Agencies for seed production and supply

6. Help in filing application for intellectual property rights for new varieties, hybrids/parental lines; patenting of new products/ formulation; R&D Registration, among others.

7. Supervise/ audit organic crop production in agri-horticultural systems, including medicinal plants, and guide the development, implementation and practicing of traceability systems.

FINANCIAL PROSPECTS

Since its inception in 2018, SBSF Consultancy has been working with seed companies, FPOs, FPCs, Universities and other government and non-government agencies.

PROSPECTS AND APPROACH

- Besides these service offerings, through SBSF Consultancy, the focus lies in capturing and building on siloed data, through digitalization in agriculture, to bring it to a level where advanced ML (Machine Learning) and AI (Artificial Intelligence) can be applied to seek novel and innovative solutions to some of the most pressing challenges around food security, health and wellbeing in the face of drastic climate changes.

- While food security through increased food availability (often mistakenly correlated with “just” higher yields) is critical in ensuring that every person has at least two meals per day, it should not be misconstrued with access to potentially toxic food grown with excessive and indiscriminate use of inputs (like chemical fertilizers, insecticides and pesticides), in hazardous soils and irrigated with contaminated water containing high levels

of toxins (like arsenic, cadmium, selenium, etc.), and handled and stored under dangerous conditions (resulting in microbial growth like aflatoxin, Salmonella, Escherichia coli, Bacillus cereus, etc.).

- By working with the whole value chain in agriculture, SBSF are acutely aware of existing technological products and solutions, and how they can be innovated, adapted and deployed to create maximum impact leading to better outcomes at large scales.

THE INNOVATIONAL APPROACH

- SBSF’s recent attempts to tackle the Fall Armyworm (*Spodoptera frugiperda*) infestation in maize and other economically important crops like rice, sorghum, sugarcane, cotton, among others using a data science-based approach led to the most detailed publication to enhance the understanding of this voracious, ineradicable pest (from the Americas). They have successfully combined the FAO FAMEWS dataset (outbreaks) with FLDAS (weather) and HWSD (soils).
- The 3 datasets were merged based on the geo-coordinates of the crop fields in FAMEWS. SBSF used Extreme Gradient Boosting (a Machine Learning algorithm) and the results are available
- Also the advice ‘India needs own Fall Armyworm tracking system to develop

robust prevention and control strategies is available

- Using the expertise developed on Fall Armyworms so far, they intend to conduct very detailed and focused surveys aimed at creating an Artificial Intelligence (AI) based alerting system in real time by leveraging agricultural domain knowledge, data science and machine learning. Here is the advisory “Digital crop management strategy for horticulture in West Bengal’ and ‘Smart management of orchard and plantation crops in India using artificial intelligence driven precision farming’



Science, Business & Sustainable Future

<https://sbsf-consultancy.com>