Sagarsona-Mycorrhiza: A Miracle Bio-fertiliser Combination and Its Benefits in Agriculture for Sustainability

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Abstract

The uniqueness of the present idea is to utilize the "**Combination of SAGARSONA and MYCORRHIZA"** *(de novo thinking product*) for enhancing the productivity of paddy. The recent challenge in agriculture is how to regenerate and rejuvenate soils and stabilize production in the context of high chemical dependent production, and that will enable us to meet the goals of sustainable agriculture and provide safe and nutritious food security for all, especially the poor. **SAGARSONA** is an ideal organic manure prepared with locally available ingredients has been proved to be efficient at per with that of chemical fertilizers. While, the mutualistic associations between Mycorrhiza (potent pesticide) and agriculturally important crops have shown the potential to increase crop productivity, thereby playing a key role in the functioning and sustainability of agro-ecosystem. The ultimate goal is to achieve sustainability by enabling local SHG members along the NGO to support themselves financially in innovative ways instead of relying solely on grants and donations. Essential of the success of **social enterprise** is an effective **business model**. Sagar island is one of the epicenters of climatic hazards, by the recurrent cyclones (AILA, etc.) in recent years and migration from the nearby island of Ghoramara facing erosion into the sea and to plug them all by the recent Corona pandemic and return influx of its people who ventured out for greener pastures.

Keywords:

- Biofertilizer-pesticide,
- Educational support system,
- SAGARSONA-MYCORRHIZA,
- Social enterprise,
- Sustainability

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Biographies

➢ **Dr. Amales Misra** is trained Zoologist, but with a difference. After his retirement from Zoological Survey of India (ZSI), spanning more than 30 years as a scientist, decided to go back to his roots in the far-off Sagardwip where he was born and spent his childhood and conserve flora and fauna. While in service itself, he along with some of his colleagues formed an NGO called **"Paribesh Unnayan Parishad (PUPA)"**, dedicated to the cause of environmental conservation. Back in his village, he was shocked to see indiscriminate use of chemical fertilizers and pesticides in growing different crops which was a long way off the farming practices during his childhood days. Farming was then more rooted to the local agro-climate which can be technically called **'Organic Agriculture'**. The biggest challenge, to find a local solution to prevent excessive use of chemicals, led him to improvise an organic manure, **'Sagarsona',** being a product of Sagardwip, as a substitute for the chemical fertilizer. He is engaged in motivating the youth towards agriculture and local bio-diversity for quite some time, personally providing hand-holding support to a large number of students for attending **Children's Science Congress** and other state level programs, by promoting school curricula linked **Activity and Project-based learning under** the banner of '**Krishna-Suchitra Memorial Centre for Rural Development & Research',** with"**WIPRO Earthian Sustainable Education Programme"** for the last four years. Thus, he is a perfect embodiment of **environmental education, conservation and eco-friendly livelihood intervention** to develop **MODEL Village** at Sagar Island.

➢ **Mrs. Mahasweta Guha** is an asstt. teacher (bioscience) of Pratapnagar Giridhari High School (H.S.) and simultaneously a Ph.D. scholar of WBSU. After completion secondary and higher secondary examination, with75.6%, and graduation with 1st class, she joins in a govt. aided school at 2009. Simultaneously, she completes my B.Ed with 80% (2015),1st class third and then M.Sc. with 86.2%(2020), 1st class second, but she never wants

to stop my learning and exploring, also being a mother of three children and become victim of domestic violence's. Motherhood is not always another name of sacrifice but also strength. Then she qualifies GATE-Exam (2022) and West Bengal SET-Exam (2022), managing my all duties for my family and my babies. Then she pursues Ph.D. from 2022. During this time, she finds mycorrhiza and its beneficial roles which is helpful for sustainable developments to save our mother earth increasing the productivity of the agricultural field. She is an active member of **Paribesh Unnayan Parisad (PUPA)** and Breakthrough Science Society. With in one year of research she publishes three international publications and another three are in under procedures. Including these, she awarded from **WB science congress, JBNSTS- DST, National level innovation idea competition arranged by RK Mission and Ministry of Culture of Govt. of India** and honored for poster presentation from **IIT Madras and Australian National University**. Her initiative shows her responsibilities for poor dwellers of Sagardwip. She is an excellent teacher, resource person, communicator, leader, documenter, multitasker, trainer, mentor, narrator and writer with computer knowledges.