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Creating wealth from algae

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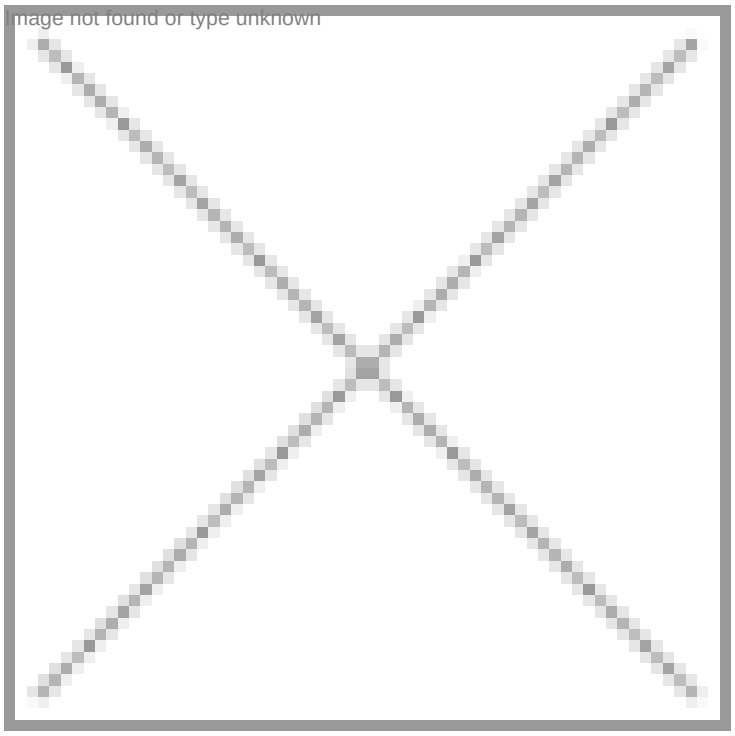

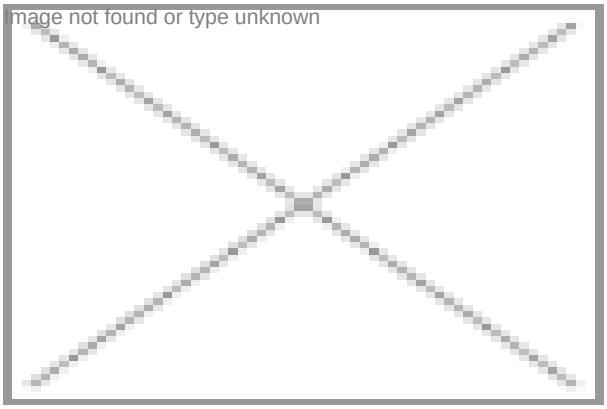

Dr Dinabandhu Sahoo,
scientist
Marine Biotech Lab, Dept of Botany, Delhi University

The seaweeds' industry is worth more than $8 billion per year. One particular seaweed, Porphyra, (used in a Japanese delicacy called Sushi) is a $2 billion industry. The demand in this sector is increasing at the rate of 10 percent every year. There are many marine algae that are excellent sources of poly unsaturated fatty acids (PUFA) and have wider applications. Antioxidants' production from marine algae is another important area.

After doing his master's degree in botany at the University of Delhi, Dr Dinabandhu Sahoo did his PhD on peanuts and groundnuts.

Dr Sahoo traveled to the coastline of the Bay of Bengal in search of an exciting area of marine algae. The next challengewas to stay in New Delhi and work in the field of marine biotechnology. â€œEven today I face the same question from many quarters. How can I work in the domain of marine sciences by staying in Delhi? My answer is very simple. If you want to work on space you do not need to set up your lab in space,â€? says Dr Sahoo, who was the first Indian student to visit Antarctica during 1987-88 as part of the 7th Indian Scientific Expedition to Antarctica. He subsequently undertook two trips to the Arctic between 1991-1992.

Dr Sahoo contributed substantially to the field of marine algae and applied his scientific knowledge in product development and employment generation at the grassroot level for the socio-economic development of the people living in coastal areas. He has extensively worked in the field of seaweed cultivation and utilization using the concept of generating wealth from waste. Based on his 20 years of work experience on Chilika Lake, he has developed a model called the 'Chilika Model' for the socio-economic upliftment of the fishermen community in different parts of Indian coasts. This pioneering Chilika model led the Department of Science and Technology, Government of India, to formulate the First National project on large scale seaweed cultivation and processing for livelihood generation in different coastal states and Union Territories of India. This pioneering work has earned him a spot amongst the 20 social entrepreneurs of the country in the best seller, I Have a Dream. Based on the same subject, Dr Sahoo has co-directed a documentary film 'Chilika and Untold Story'.

Presently, Dr Sahoo is the secretary of Indian Phycological Society and is also involved in teaching and research at the Department of Botany, University of Delhi. Marine algae, popularly known as seaweed, are a good source of food, feed, fertilizer, chemicals and pharmaceuticals among others. The seaweeds' extracts are used in toothpaste, cosmetics, ice cream, chocolate, food processing, meat processing, juice, tomato ketchup, beer refining, textile printing, syrup making and a number of other industries. Talking about his research, he says, â€œOut of the 770 species of seaweeds, growing in Indian coasts, we have only selected four commercial species for large scale field production.â€?

During the last few years, he has been working on developing huge biomass production. Next-, he plans to set up the world's first integrated marine algae biorefinery in India, based on zero waste concept. He has been in talks with a few agencies and private players. Besides that, he is also trying to guide some new young entrepreneurs in this field.

Dr Sahoo's pioneering work has led to the invention of 'carbon dioxide capture box', which can capture CO2 from automobile exhausts. He believes that based on marine biotechnology, the world can move towards blue carbon economy, and this is his goal. His dream is to create a million jobs in rural areas through the application of marine biotechnology and become a guiding force in life science with a human face.

Rahul Koul in NewDelhi