GlobalSeaweedSTAR Capacity Building Fund

Completion Report

Awardee Details

Grant reference ID	GSS/CBF/026
Full name/title	McMarshall M. Ongkudon
Position held	Laboratory Technician
Organisation	Seadling Pte. Ltd.

Details of Capacity-Building Activity

Name of activity	12th International Phycological Congress (IPC 2021)
Date held	22-26 March 2021
Organiser/provider	International Phycological Congress

Biography

I am a molecular biologist and seaweed biotechnologist in Seadling pte. Ltd. I am currently working on R&D on the tissue culture and aquaculture of Kappahycus seaweed. The main objective for my current research is to boost the land-based growth of Kappahycus seaweed while improving their survival rate upon transferring to the open-sea farming. In Seadling, we

are commited in improving the livelihood of the local seaweed farmers by providing them a better quality Kappaphycus seedlings.

Report on Capacity-Building Activity

This activity was held virtually (online symposium). I only participate as an audience, and actively participate in the live Q&A sessions.

Through this symposium, I manage to gain extra knowledge on the current situation of phycological research and development. It is good to know more about the carbon capture mechanism in seaweed which guide me and my colleagues to seek new branch of seaweed products. Especially a presentation on the pyrenoid organelle in the algae, this makes us think that algal extract production may be optimized to retain the activity of pyrenoid outside of the cell. It is also interesting to learn about the symbiotic interaction of microbes and seaweeds. This may help in a more natural way of cultivating seaweed on land rather than adding fertilizers which can be costly and harm the ecology. Also, knowing about the current challenges with the seaweed R&D is really helping me to came up with interesting ideas to try in our research facility. This include different way of keeping the seaweeds on substrate and trying more species to be cultivated in tanks. For example, the high growth rate of Agardhiela subulataunder low concentration of nutrient may be an option to overcome seasonal nutrient fluctuation issue in the local seaweed farmer community. In addition, it is really interesting to know that amino acid and seaweed extract will be in the top rank of global bio stimulant market. This makes me think if we can enhance the protein production in seaweed cultivar, then the extracted product will contain both amino acid and another seaweed-based compounds.