



PROJECT SUMMARY

Ref No.: MRIC/IBG3-BG/P05	Title: Algal Biochar as an innovative source of fertilisers and soil amendment technology for Mauritius
Local Institution: Mauricoast Ltd	
Project Leader	
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<p>The agricultural sector in Mauritius is highly dependent on synthetic fertilizers for food production. The use of synthetic fertilizers is widely known to be unsustainable, environmentally damaging and costly to farmers. Today, the ability to increase yields without synthetic fertilizers or soil additives is a challenge for modern sustainable agricultural methods. Alternatives such as biochar, an organic material produced during slow, exothermic, thermal decomposition of biomass under low or zero oxygen conditions, has shown to improve soil properties hence increasing plant productivity. Macroalgae are known to be comparatively low in carbon and high in nitrogen, phosphorus and other nutrients compared to many terrestrial biomass types (such as plants). Biochar derived from macroalgae are comparatively low in C content and surface area but high in cation exchange capacity, pH, ash, N, P and K, making it very attractive as a soil amelioration product providing direct nutrient benefits to soils and therefore to crop productivity. The present project proposes to develop an innovative biochar product naturally enriched with nutrients that can be used for soil amendment to increase plant productivity. Our proposed project will harness the knowledge of materials science to transform the world of agriculture.</p>	
Key Words: Seaweed, Biochar, Fertilisers, Materials science, Agriculture, Circular economy	