Realization of a low carbon society through game changing technologies

Construction of a microalgal culture system in weakly acidified seawater

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Summary :

- The major difficulty in outdoor microalgal cultivation is contamination of other undesirable organisms especially predators of microalgae
- Commercial utility of microalgae is limited to functional foods because of the high cost of cultivation.
- By providing freshwater acidophilic algae with affinity to weakly acidified seawater, low-cost outdoor cultivation of microalgae with little contamination of other organisms will be established.
- By genetic engineering, microalgal utility will be increased.
- For example, use of microalgae as fish feed will absorb 1 Mt of CO_2 per year in Japan.