PROJECT 2

Kelantan Biotech Corporation Sdn Bhd is planning to setup an algae farm, which will produce Spirulina-based products for various applications. Based on lab study, 100 g dried spirulina may be obtained from 1 m^3 volume of pond. Growth medium for spirulina requires 5-10% salinity and basic elements (N, P, K) of 10%, sugar of 5% and some other additional elements. The medium also requires aeration to supply oxygen.

The company has to supply spirulina powder of 20 kg per month to pharmaceutical company. The product price is expected to be no less than RM3,000 per kg.

Question:

Prepare a feasibility of scale up proposal for the production of powder spirulina as mentioned above. The proposal should not exceed 10 pages. Use the basic information above, however you may find other data and information from literature necessarily.

Hints:

1. Literature survey from existing farm
2. Process flow (including modification and scale up based on desired capacity)
3. Basic equipment design of algae farm
4. Capital cost and operating cost
5. Simple profitability analysis