Co-Incubation of Algae for Biofuel

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The purpose of my experiment was to determine if co-incubation of algae would result in a higher cultivation of algae grown than if the algae were to be grown alone. Research on the scientific theory that states when two plants under the same genus are grown together will experience higher growth rates than grown alone led me to the hypothesis that if two species of algae under the same genus are co-incubated, then the growth rates of the co-incubated algae will be higher than that of the ones grown alone. For my experiment I decided to use Chlorophyta chlorella 12 and Chlorophyta chlorella 30. To begin 20 mL Chlorophyta chlorella 12 was placed in 30 test tubes along with 5 mL algae growth serum and 10 mL H2O in each tube, the same was then done with Chlorophyta chlorella 30. In 30 more test tubes 10 mL of Chlorophyta chlorella 12 and 10 mL Chlorophyta chlorella 30 along with 5 mL algae growth serum and 10 mL H2O. A spectrophotometer was used to measure light transmittance through the solutions at the beginning of the test. The spectrophotometer was used to test the growth rates of the algae, because as transmittance went down, density of the algae went up. A buffer test tube that contained 5 mL algae growth serum and 10 mL H2O was used to set the spectrophotometer so that only the algae's density would have an affect on transmittance. The solutions were then allowed to grow for two weeks under the plant growth light, transmittance being recorded once a week. At the end of growth the co-incubated solution showed a much higher average difference than the singularly incubated species. Whereas Chlorophyta chlorella 12 had an average difference of 10.2%, and Chlorophyta chlorella 30 an average of 10.6%, the co-incubated solution had 16.2%, proving my hypothesis correct.

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