Acclimating Algae for Mariculture and Other Commercial Uses

Czerwinski, John Luke (School: Waipahu High School)
Tucker, Marlin (School: Waipahu High School)
Shiroma, Jonah (School: Waipahu High School)

In this project, there was a need to come up with a way to combat the depleting reserve of a salt mix for the algae cultures (Thalassiosira p.) and fish growth. The procedure could be applied commercially and globally for mariculture. The resources used were airline tubing, test tubes, 500mL flasks, flask plugs, roller ball pipettes, algae samples, carboys, 50-gallon barrel, 250-gallon tank, and an autoclave. Many more materials were used that can be later investigated. A clean culture was observed and controlled data of the algae in its regular environment was collected. That same culture was transferred and placed into a more stressed environment in which data was taken. The expected result was that the algae in the stressed environment would acclimate to its surroundings and grow just as well as compared to the regular controlled environment. Data was taken, analyzed, and compared to the control data. The result showed the algae placed in the stressed environment grew just as well as the control experiment. In conclusion, this showed that the algae were able to still draw necessary nutrients from the environment it was placed in and that in the project would be able to be applied where needed.

Awards Won: