

Report on Algae

Over the past few months, I have been researching algae and how it could help us and affect climate change. Algae are a group of aquatic organisms or living things found in water – they have the ability to conduct photosynthesis which is the process where green plants and some organisms use sunlight to gain nutrients from carbon dioxide and water.

Many scientists have been researching how they can use algae to help us fight climate change, it is particularly important as it controls pollution in the ocean by consuming carbon dioxide that may have been pumped into the water. Many countries around the world have been trying to use algae for this exact purpose in the best way. Some of you may be wondering why algae of all organisms – it is because algae is a lot more efficient at removing fossil fuels out of our atmosphere. In fact, it is around 400 times more efficient than trees at removing carbon dioxide.

Trees are very similar to algae they almost do the same job but algae does it better, for example trees consume carbon dioxide as part of their photosynthesis process by consuming carbon into the trunks and roots, the tree then releases oxygen back into the air. However, algae does the exact same thing but absorbs the carbon in the form of new and more algae.

Algae can also cover a lot more surface area than other organisms and is easy to control by bioreactors. These are a certain type of apparatus or vessel which are used for growing organisms quickly. An example of this would be to make the algae grow quicker, therefore making the algae a lot bigger which causes it to be more efficient at doing its job of extracting carbon.

Unfortunately, warmer water is bad for the growth of algae as it produces bad algae. This is because climate change plays a massive part in the temperature of water. The algae blooms then absorb lots of sunlight making the water even warmer causing bad algae to grow. This tells us that algae growth needs to be controlled to produce the best algae possible to be used for oils and fuels.

Although, Algae can help us in many different ways it has a few disadvantages of using it - the first point about Algae is that the biofuel made by algae doesn't always meet its energy efficient targets which means it needs a certain amount of energy to produce a good recourse. The second disadvantage of using algae is that even though it grows quite quickly, it needs more time to be produced into the different oils and fuels we need.

Algae biofuel costs more to produce - it has higher production costs as it is used to power things which deems it as fairly important. To round of our list of disadvantages for using algae, it uses a lot of fertilizer to help it grow; you'll need a lot of fertilizer and this could be hard to get depending on how much u need and whereabouts you are stationed.

Now we have covered the disadvantages, we can now move on to the many advantages of using algae – for example unlike fossil fuels such as coal and oil, algae is a renewable resource which is extremely good for our environment as it won't damage it significantly. The second advantage we will be covering is how quickly it grows – algae grows really fast. It doubles numbers around every few hours meaning it can be harvested daily; this again proves why it is the ideal organism to help us out with the problem of climate change.

Another advantage for using algae is that it helps purifying waste waters, this could help us stop pollution in rivers and the ocean in the future. To add on to this, it can be grown in almost any water for example you could grow it in swampy water or a different water.

Algae is currently being used as a fuel in some places replacing oil and gas – it is being used to power homes and places making the environment a better place. Secondly, algae is being turned into oils in an economic way which could reduce how bad climate change is. This shows how good algae is because currently we are extracting oils from the ocean in a non-environmentally way – we are also slowly running out of oil due to how much we have used.

To conclude, algae could have potential to be a good way to slow down climate change and be a good source of future energy however, it isn't very successful yet and is quite expensive at the moment.

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