

Scarce growth of underwater plants in the swimming pond – how can sufficient carbon supply be achieved?

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Unlike land and swamp plants, carbon in swimming ponds is usually the key limiting nutrient for underwater plants. In contrast to other essential macro and micronutrients, carbon can not be made available to plants in the form of solid and liquid fertilizers: added sugar will be in shortest time Consuming time of microorganisms and thus contributes to the formation of unwanted biofilms, CO_3^{2-} can not be absorbed by higher plants, HCO_3^- can be used only under greatly increased energy expenditure and does not allow lush growth of Unterwasserpflanzen. Letzt ultimately only a sufficiently dissolved carbon dioxide or dissolved carbon dioxide to ensure lush plant growth. The paper discusses the need for carbon availability and underwater plant strategies to deal with carbon shortages. Finally, solution concepts are presented, which eliminate the carbon shortage in swimming ponds and thus promote the growth of underwater plants.