In conclusion, photosynthesis plays a crucial role in determining crop yields. Enhancing photosynthetic efficiency through scientific advancements and agricultural practices holds great potential for increasing food production and addressing global food security challenges. Factors such as light intensity, temperature, availability of water and nutrients, and the presence of pests or diseases can affect photosynthesis and subsequently influence crop yields. These efforts aim to optimize the efficiency of converting sunlight into biomass and improve crop productivity. Therefore, while photosynthesis is a critical process, it is essential to consider a holistic approach to agricultural practices to maximize crop yields sustainably. Scientists have been working to enhance photosynthesis through various approaches, including genetic modifications and breeding techniques. Increasing crop yields through enhanced photosynthesis has the potential to address global food security challenges.