Approaches to increase plant biomass through stabilization of net photosynthesis during stress

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Considering the possibility of climate change due to global warming, particularly the appearance of climatic extremes, is one of the most important problems. Photosynthesis is one of the first processes, which is influenced by such abiotic stresses. In order to guarantee a consistent supply of energy, which is independent of abiotic stress factors, tobacco plants were created, which have a modified photosystem II. Increasing the effectiveness of the Calvin Cycle in order to achieve stable energy production, an enzyme from the cyanobacterium *Synechocystis sp.*, which should improve the performance of the Calvin cycle was expressed in tobacco plants. Some plants already showed a higher performance of this enzyme. It is expected that the resulting plants will be able to deliver similar or higher yields of energetically useful biomass under high temperature and low water conditions.