

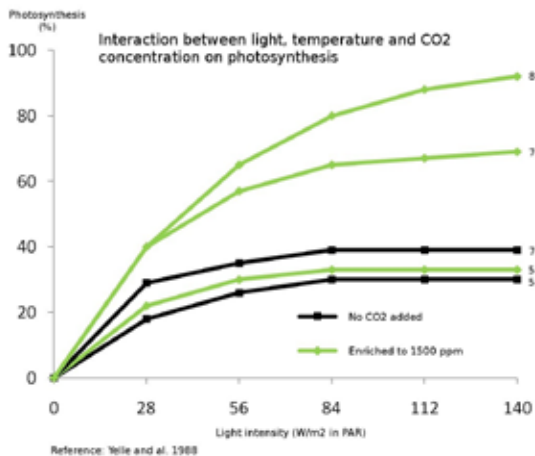
Online Extras

Taking Advantage of CO₂ Enrichment

by Isabelle Lemay agr. and Mélissa Léveillé
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The following table shows the pros and cons of using a combustion generator and a CO₂ bottle and regulator—to supplement CO₂ in the grow room—according to price, influence on the climate and toxicity.

	Combustion Generator	CO ₂ Bottle and Regulator
Price	<ul style="list-style-type: none"> Operating costs are relatively low once the CO₂ generator is purchased. More economical than CO₂ bottles. 	<ul style="list-style-type: none"> Expensive source of CO₂ The larger your garden, the higher the cost.
Impacts on the garden's climate	<ul style="list-style-type: none"> Produces heat and water vapor: one pound of propane generates about 1.5 pounds of water and 20,000 BTU of heat. CO₂ generators are not recommended for small growing volumes (less than 424 cubic feet). Requires good management of temperature and humidity to avoid damage to plants. 	<ul style="list-style-type: none"> The garden's climate is not affected since no heat or water vapor is generated. Can be used in the presence of high temperature and humidity levels in the garden. Excellent choice for small growing volumes.
Potential Toxicity	<ul style="list-style-type: none"> Risk of toxicity in cases of incomplete combustion caused by a defective device or lack of oxygen. Poor quality fuels are to be avoided; some may cause sulfur dioxide pollution (e.g. kerosene). 	<ul style="list-style-type: none"> Safe source of CO₂ Risk free for crops, since no toxic gas is released.
Others	<ul style="list-style-type: none"> A generator with a heat exchanger can recover some of the heat generated by combustion to heat another room. 	<ul style="list-style-type: none"> Regulators may freeze at large gas flow (more than 20 cubic feet per hour). Some models can withstand gas flow up to 50 cubic feet per hour without freezing.



The diagram illustrates the interactions between the light, the temperature and the CO₂ concentration and perfectly shows the effects of a limiting factor on the photosynthesis process.