Understanding plant responses to elevated CO_2

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Sustainability

LETTER

doi:10.1038/nature13179

Increasing CO_2 threatens human nutrition

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Dietary deficiencies of zinc and iron are a substantial global public health problem. An estimated two billion people suffer these defi- experiments contribute more than tenfold more data regarding both the zinc and iron content of the edible portions of crops grown under

Nature **408**, 79-82 (2 November 2000) | doi:10.1038/35040544; Received 12 May 2000; Accepted 15 August 2000

Elevated CO_2 increases productivity and invasive species success in an arid ecosystem

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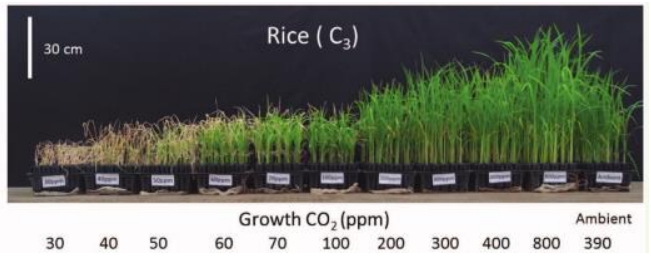
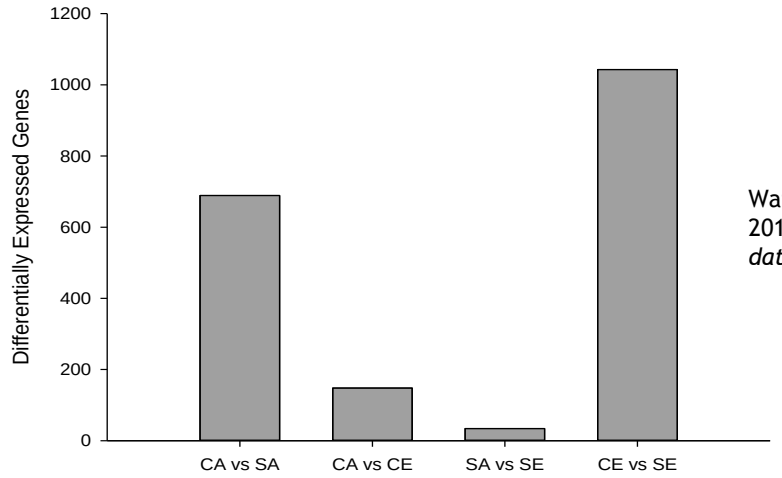
Carbon dioxide mitigation strategies



Von Caemmerer et al. 2012. [Photograph]

Studying plant responses under elevated CO_2



Watson-Lazowski. 2015. *(Unpublished data)*

	Ambient CO_2 chamber	Elevated CO_2 chamber
Control site	CA	CE
Spring site	SA	SE

Acknowledgements

- Alex Watson-Lazowski
- Professor Gail Taylor
- Dr Mark Chapman

SPITFIRE Southampton Partnership for Innovative Training of Future Investigators Researching the Environment

References

- Buitenwerf, R., et al. "Increased tree densities in South African savannas:> 50 years of data suggests CO2 as a driver." *Global Change Biology* 18.2 (2012): 675-684.
- Kies, Antoine, et al. "Diurnal CO 2-cycles and temperature regimes in a natural CO 2 gas lake." *International Journal of Greenhouse Gas Control* 37 (2015): 142-145.
- Myers, Samuel S., et al. "Increasing CO2 threatens human nutrition." *Nature*510.7503 (2014): 139-142.
- Smith, Stanley D., et al. "Elevated CO2 increases productivity and invasive species success in an arid ecosystem." *Nature* 408.6808 (2000): 79-82.
- von Caemmerer, Susanne, W. Paul Quick, and Robert T. Furbank. "The development of C4 rice: current progress and future challenges." *Science*336.6089 (2012): 1671-1672.
- Watson-Lazowski, Alex. (2015): *Unpublished data*
- Ziska, Lewis H., and Frances A. Caulfield. "Rising CO2 and pollen production of common ragweed (Ambrosia artemisiifolia L.), a known allergy-inducing species: implications for public health." *Functional Plant Biology* 27.10 (2000): 893-898.