

Extra pores on plants could ease global warming: Japan study

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The Kyoto University team found that soaking germinated seeds in a protein solution raised the number of pores, or stomas, on the leaves that inhale CO₂ and release [oxygen](#), said chief researcher Ikuko Hara-Nishimura.

"A larger number means there are more intake windows for carbon dioxide, contributing to lowering the density of the gas," she told AFP by telephone.

Another effect is higher starch production in photosynthesis, the process in which green [plants](#) use CO₂ and water to produce sugar and other [organic compounds](#).

"It could lead to higher production of food and materials for biofuel," said Hara-Nishimura, a biology professor at Kyoto University's Graduate School in western Japan.

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They found that the number of pores multiplied relative to the concentration of the solution of the protein, which the researchers named Stomagen, achieving a maximum of four times the number of pores of an untreated plant.

An ideal increase would be two-to-three times, as too many pores impede the functions of other cells in the surface of the plant, Hara-Nishimura said.

Stomagen is easy but costly to produce chemically, and the team is working on a cheaper way to make it, Hara-Nishimura said, adding that an alternative may be to genetically modify plants to have more pores.

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