

## Rice with longer roots, faster growth and up to 40% higher yields with just a gene editing tweak

By giving a Chinese rice variety a second copy of one of its own genes, researchers have boosted its yield by up to 40%. The change helps the plant absorb more fertilizer, boosts photosynthesis, and accelerates flowering, all of which could contribute to larger harvests, the group [reports \[July 22\] in Science](#).

The yield gain from a single gene coordinating these multiple effects is “really impressive,” says Matthew Paul, a plant geneticist at Rothamsted Research who was not involved in the work. “I don’t think I’ve ever seen anything quite like that before.” The approach could be tried in other crops, too, he adds; the new study reports preliminary findings in wheat.

Follow the latest news and policy debates on sustainable agriculture, biomedicine, and other ‘disruptive’ innovations. Subscribe to our newsletter.

[SIGN UP](#)

The modified plants also flowered sooner, which can offer advantages depending on the environment. For example, farmers might grow more crops per season or harvest crops before damaging summer heat sets in. However, although the modified [Nipponbare](#) flowered up to 19 days earlier, the widely farmed variety of rice bloomed just 2 days earlier.

To demonstrate broader potential, the team added the rice *OsDREB1C* gene to a research variety of wheat and found the same types of effects... suggesting other kinds of crops might be amenable to yield boosts from this modification.

[\*\*This is an excerpt. Read the original post here\*\*](#)