

RESEARCHER IMPROVES CROP PERFORMANCE WITH NEW BIOTECHNOLOGY

Read the following text and use these words to replace those in italics in the passage.

areas – beneficial – cultivate – demanding – events causing stress – helpful – increase – poisoning – produce – provision – successfully – vital

With the world's population exploding to well over 7 billion, feeding the human race is getting even more *challenging*. Increasing the *yield* from crops such as wheat, maize, rice and barley, is *paramount* to growing enough food. In addition, crop production is now affected by *stressors* such as drought, climate change and the salinisation of fields, presenting obstacles to our future food *supply*. Researchers have discovered a way to *enhance* a plant's tolerance to stress, which in turn improves how it uses water and nutrients from the soil. These improvements increase plant biomass and yield.

Professor Roberto Gaxiola said this discovery could be *instrumental* in agriculture and food security by improving crop sustainability and performance. Current agricultural methods often overuse fertilizer, causing environmental problems by *polluting* water with phosphates and creating dead *zones* in oceans. Over-fertilization can also cause plants to have small roots. By changing how *effectively* a plant uses water and nutrients, farmers would be able to use fewer resources to *grow* their crops. "Larger roots allow plants to more efficiently acquire both nutrients and water. We can optimise inputs while minimising environmental impact. This is *advantageous* for our environment and for all consumers," said Gaxiola.