

4 million tons of rice is destroyed each year to flooding in Southeast Asia. This genetically-engineered rice variety could limit losses

Global rice production will likely be hit by the devastating effects of climate change as early as 2030, according to a recent NASA study.

Among those trying to mitigate the losses of rice — the world's second most important cereal crop — is plant geneticist [Pamela Ronald](#). Her lab at the University of California Davis studies genes that control resistance to disease and tolerance of environmental stress in food crops.

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For the past few years, her team spent her time working with rice farmers in Southeast Asia, where increased flooding limits crop production in areas that are already dealing with flood-prone land.

"It's estimated that 4 million tons of rice — enough to feed up to 30 million people — is lost every year to flooding," Ronald says.

Her laboratory created a rice disease resistance gene that has reached more than 6 million subsistence farmers in India and Bangladesh.

To achieve this, her team took advantage of an ancient Indian rice, isolated its gene and introduced it into rice varieties using modern technology. Those new varieties can withstand flooding for up to two weeks and have a 60% yield advantage compared with their conventional counterparts.

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