Editor's Summary

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SNORKEL beats the monsoon

http://www.nature.com/nature/journal/v460/n7258/edsumm/e090820-14.html

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Monsoon season floods in Asia can cause widespread devastation of rice crops. Some strains of rice have adapted to this environmental stress by developing the ability to undergo rapid stem elongation. Normally this type of rice grows to about a metre high, but when flooding occurs, the stem undergoes rapid and dramatic internode elongation and can grow to several metres, according to the water level. Hattori et al. have identified the genes that trigger internode elongation in deepwater rice, called *SNORKEL1* and *SNORKEL2*. They code for transcription factors that regulate signalling of the gaseous phytohormone, ethylene. The introduction of these genes into high yield cultivars could boost rice production in flood prone areas.

Authors: Making the paper: Motoyuki Ashikari

Flood-survival genes surface after years of fieldwork in rice paddies.

strain – odrůda
stress – tlak
trigger – aktivovat
transcription - přepis

BBC NEWS

Snorkel rice could feed millions

By Sudeep Chand
Science Reporter, BBC News

A new rice plant has been developed which grows "snorkels" when exposed to floods.

A paper in the journal Nature, describes how the plant elongates rapidly in response to being submerged.

One of the scientists, Motoyaki Ashikari from Nagoya University in Japan, said "the impact is huge".

It could also boost the production of rice in Asia and Africa, where up to 40% of crops are subject to flash floods or deep water.

"People cannot plant any crops in the rainy season, because the crops drown and die in the floods," said Mr Ashikari.

Writing in Nature, Laurentius Voesenek describes how the Japanese scientists discovered the "snorkel" genes in flood-tolerant rice, and introduced them to more sensitive high-yield rice.

"Snorkels" grow as hollow tubes from parts of the plant called internodes, preventing it from drowning.

When the floods arrive, the super rice plants can grow up to 25cm per day.

Story from BBC NEWS:
http://news.bbc.co.uk/go/pr/fr/-/2/hi/science/nature/8208411.stm

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submerge - ponořit se, potopit se
boost - zvýšit