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Rice is not just another grain. For three billion people, it is a daily necessity (page S50). Since its domestication some 8,000 years ago (S58), rice has played a part in building civilizations, shaping societies and, most of all, feeding a growing world.

But the climate is changing, and much of the land that once went to paddies is being consumed by expanding cities. There is a realization that farmers cannot keep applying fertilizers and pesticides to their crops without environmental consequences. If rice is going to feed future populations — in Asia, Africa (S64) and beyond — scientists will have to help to improve yields.

Rice research involves scientists around the world. This year marked a milestone achievement: the publication of the genomes of 3,000 strains of rice will help to guide the creation of hardier, more productive crops (S60). Researchers are addressing a massive nutritional crisis by converting rice into a vehicle for vitamin A, but a combination of technical challenges and public opposition threatens the development of this 'golden' rice (S55). Scientists plan to retool the way in which rice harvests energy from the Sun (S52) and are tackling problems such as arsenic contamination (S62).

Many questions remain, but the biggest — will there be enough rice? — will take decades to decide. Governments and scientists can use that time to work together on the answer (S66).

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Chris Woolston
Contributing Editor

CONTENTS

S50 RICE BY THE NUMBERS

A good grain

A snapshot of global production, consumption and trade

S52 AGRIBIOTECHNOLOGY

Blue-sky rice

Researchers are working to increase rice yields to feed a growing population

S55 BIOTECHNOLOGY

Against the grain

Golden rice, which is being developed to help prevent vitamin A deficiency, has political and technical problems

S58 DOMESTICATION

The birth of rice

The competing claims of countries claiming to be the crop's origin

S60 YIELD

The search for the rice of the future

Researchers are working on small changes to make big improvements

S62 CONTAMINATION

The toxic side of rice

Investigations to prevent arsenic from contaminating this vital crop

S64 AGRICULTURE

The next frontier

Africa relies on rice imports but there is a move to self-sufficiency

S66 PERSPECTIVE

Time to unleash rice

Governments' interventions are not helping farmers, says Robert Zeigler

COLLECTION

S67 Genetic diversity and classification of *Oryza sativa* with emphasis on Chinese rice germplasm
Wang, C. H. et al.

S75 Africa and Asia need a rational debate on GM crops
Whitty, C. J. M.

S78 Genome-wide association analyses provide genetic and biochemical insights into natural variation in rice metabolism
Chen, W. et al.

S86 The genome sequence of African rice (*Oryza glaberrima*) and evidence for independent domestication
Wang, M. et al.

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