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RICE REVEALED
Riceworld's decade of celebrating the life-giving grain

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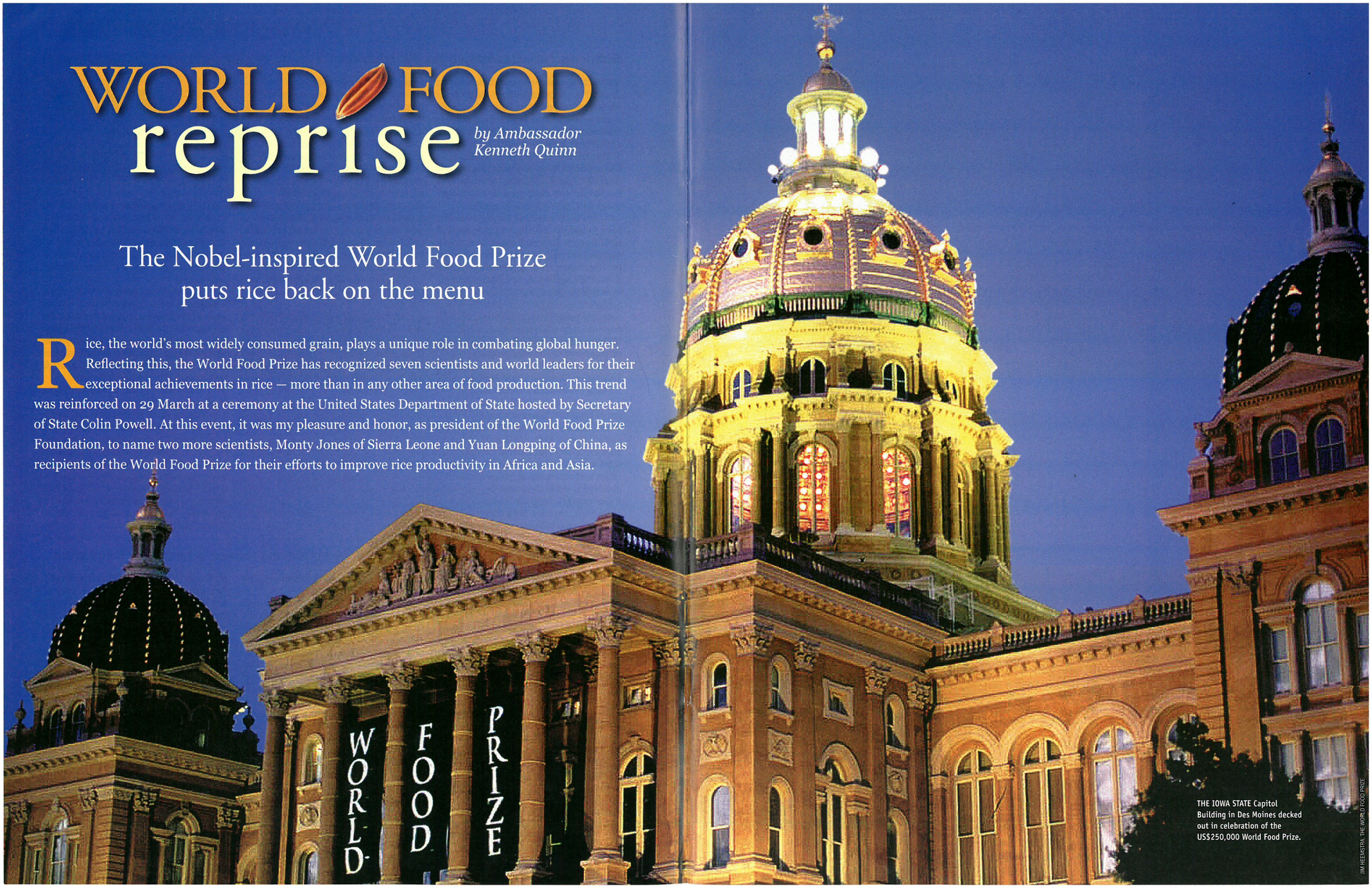
WORLD FOOD reprise

by Ambassador Kenneth Quinn

The Nobel-inspired World Food Prize puts rice back on the menu

Rice, the world's most widely consumed grain, plays a unique role in combating global hunger. Reflecting this, the World Food Prize has recognized seven scientists and world leaders for their exceptional achievements in rice — more than in any other area of food production. This trend was reinforced on 29 March at a ceremony at the United States Department of State hosted by Secretary of State Colin Powell. At this event, it was my pleasure and honor, as president of the World Food Prize Foundation, to name two more scientists, Monty Jones of Sierra Leone and Yuan Longping of China, as recipients of the World Food Prize for their efforts to improve rice productivity in Africa and Asia.



THE IOWA STATE Capitol Building in Des Moines decked out in celebration of the US$250,000 World Food Prize.

JIM HEEMSTRA, THE WORLD FOOD PRIZE

The announcement coincides aptly with the United Nations' designation of 2004 as the International Year of Rice. The ceremony in Washington — attended by over 250 diplomats, experts and policymakers including U.S. Secretary of Agriculture Ann Veneman and Jacques Diouf, director general of the Food and Agriculture Organization of the United Nations — was notable in another respect. It served as a surprise celebration of the 90th birthday of Norman Borlaug, with Sec. Powell leading the diplomatic corps in singing *Happy Birthday* to the World Food Prize founder (see *Iowa's international harvester* below).

Now in its 18th year, the World Food Prize honors individuals who have made significant contributions to improving the quality, quantity or availability of food throughout the world. The mission of the World Food Prize Foundation, which awards the annual US$250,000 prize, is threefold: to recognize exceptional achievement across the entire food production and distribution process, to highlight how scientific innovation might solve problems affecting the process, and to inspire others to dedicate their careers to helping to feed the world and eradicate hunger.

Yuan Longping, while at the Hunan Academy of Agricultural Sciences in China, achieved a major scientific breakthrough as he developed the genetic materials essential for breeding high-yielding hybrid rice varieties. Now widely considered the father of hybrid rice, Prof. Yuan is being recognized for developing hybrids that yield up to 20% more grain than inbred varieties.

THE AFRICA RICE CENTER (WARDA)

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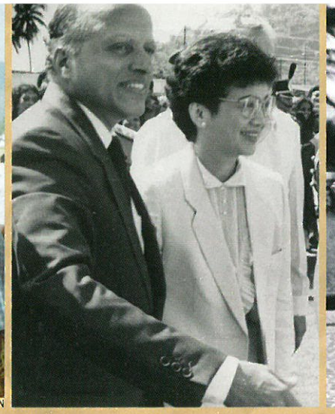


WORLD FOOD PRIZE laureates (*from left*) **Monty Jones (2004), Yuan Longping (2004), M.S. Swaminathan (1987, pictured with Philippine President Corazon Aquino at IRRI in 1986), Robert F. Chandler (1988, with Philippine President Diosdado Macapagal and John D. Rockefeller III at the formal dedication of IRRI in 1962), Henry Beachell (1996, with Dr. Chandler and the Philippine and American first ladies Imelda Marcos and Lady Bird Johnson at IRRI in 1966) and Dr. Swaminathan again (with Lu Liangshu, president of the Chinese Academy of Agricultural Sciences, in 1985).**

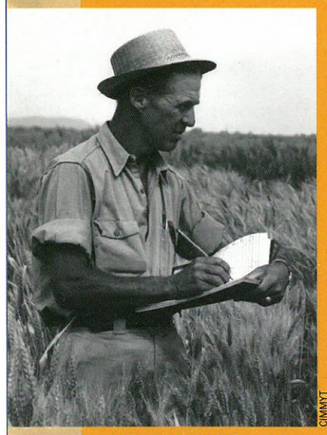
IRRI (4)

Iowa's international harvester

Born in a rural Norwegian-American community in northeastern Iowa on 25 March 1914, Norman Borlaug was — like hundreds of millions of beneficiaries of his life's work worldwide — raised on a family farm and first educated in a one-room schoolhouse.

In the 1940s, armed with degrees in forestry and plant pathology, he began working in a wheat-research program jointly sponsored by the Rockefeller Foundation and the Mexican government. His achievements in Mexico — notably the development of short-strawed wheat cultivars able to produce high yields and resist disease — were the beginning of a distinguished career in fighting world hunger. After helping to reverse severe food shortages in India and Pakistan in the 1960s, Dr. Borlaug continued his work in other hunger-ravaged nations throughout the world, never losing sight of his goal to provide food for the countless millions suffering the pangs of malnourishment.

As a result, Dr. Borlaug saved as many as a billion lives throughout the world. For this unprecedented service to humanity, the man now known as the father of the Green Revolution received the Nobel Peace Prize in 1970.



CIMMYT

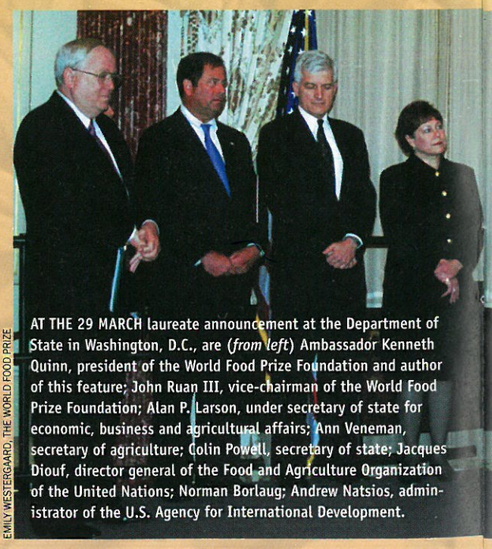
NORMAN BORLAUG'S contributions to world agriculture have saved a billion lives.

Yet, as he accepted the world's premier humanitarian honor, Dr. Borlaug realized that no provision existed for regular recognition of the work of others in the fight to end world hunger. There was no system to honor the achievements of thousands of scientists, farmers, political leaders and humanitarians working toward global food security in fields as diverse as agriculture, ecology, nutrition, economics, manufacturing and public policy. He envisioned a World Food Prize, knowing that establishing it would be a difficult task. However, overcoming immeasurable challenges was nothing new to Dr. Borlaug, so when the first World Food Prize was awarded in 1987, few were surprised by its success.

This year's laureate announcement in March at the Department of State in Washington, D.C., which did double duty as a 90th birthday celebration for Dr. Borlaug, gave Secretary of State Colin Powell the opportunity to express sentiments that many have long cherished.

"Thanks to Dr. Borlaug's pioneering work in the 1960s to develop varieties of high-yielding wheat, countless millions of men, women and children, who will never know his name, will never go to bed hungry," Sec. Powell observed. "Dr. Borlaug has been an inspiration to new generations across the globe who have taken up the fight against hunger."

On 10-12 July, the World Food Prize Foundation will join the Chinese Academy of Agricultural Sciences to celebrate Dr. Borlaug's birthday again in Beijing, where the father of the Green Revolution will be guest of honor — along with Yuan Longping, China's homegrown 2004 World Food Prize laureate — at the International Symposium on Science and Technology in Agriculture: Current and Future. In October, as people everywhere mark World Food Day, the foundation will bring the celebration back home to Des Moines, Iowa (see *Ear of rice* on page 17).



EMILY WESTERGAARD, THE WORLD FOOD PRIZE

AT THE 29 MARCH laureate announcement at the Department of State in Washington, D.C., are (*from left*) **Ambassador Kenneth Quinn, president of the World Food Prize Foundation and author of this feature; John Ruan III, vice-chairman of the World Food Prize Foundation; Alan P. Larson, under secretary of state for economic, business and agricultural affairs; Ann Veneman, secretary of agriculture; Colin Powell, secretary of state; Jacques Diouf, director general of the Food and Agriculture Organization of the United Nations; Norman Borlaug; Andrew Natsios, administrator of the U.S. Agency for International Development.**

Breakthrough achievement

Born in Sierra Leone, Monty Jones became in 1991 the head of the Upland Rice Breeding Program of the West Africa Rice Development Association (WARDA) – The Africa Rice Center, one of 15 international research centers funded through the Consultative Group on International Agricultural Research by the World Bank and other member donors. It was in this position that he made his breakthrough achievement of combining Asian and African rice varieties to develop a new rice uniquely suited to the upland conditions farmed by poor Africans. These varieties, which came to be known as New Rice for Africa, or NERICA, provide African farmers with much-needed alternatives to existing rice varieties. As the father of NERICA, Dr. Jones is credited with increasing many African farmers' upland rice yields by half or more.

In October, Prof. Yuan and Dr. Jones will travel to Des Moines, Iowa, to receive their award and participate in the 2004 World Food Prize International Symposium, From Asia to Africa: Rice, Biofortification and Human Nutrition. Along with the laureate announcement in Washington, D.C., the Laureate Award Ceremony and Symposium will likely be remembered as a defining event of the International Year of Rice (see *Ear of rice* on page 15).

Scientific and policy achievements related to rice — the primary food of 17 countries and billions of individuals throughout the world — have greatly advanced the struggle to feed some of the world's largest and most undernourished populations. Prof. Yuan and Dr. Jones are the most recent World Food Prize laureates honored for their work on this essential grain, adding a new chapter to the prize's rich history of recognizing achievements in rice production.

This history started with the inaugural World Food Prize. In 1987, M.S. Swaminathan became the first World Food Prize laureate for his work in extending the Green Revolution to India, which led to a doubling of that country's total wheat and rice output in just 5 cropping seasons. Dr. Swaminathan promoted high-yielding rice varieties

JESUS VICTOLERO

developed by the International Rice Research Institute (IRRI) to Indian farmers through test plots and demonstrations, thus advancing a revolutionary approach to agricultural extension in India that reversed yield stagnation and helped feed millions.

The prize recognized progress in rice again the following year, as IRRI's founding director general, Robert F. Chandler, became the 1988 laureate. Dr. Chandler was selected for his role in preventing widespread famine in Asia, as IRRI, under his leadership, helped raise the continent's rice harvest by two-thirds. The prize also recognized Dr. Chandler's continued contributions after he moved on from IRRI to become the founding director of the Asian Vegetable Research and Development Center, where he was instrumental in improving the diets of millions of undernourished people throughout the world.

Eight years later, in 1996, the World Food Prize honored Henry Beachell and Gurdev Khush, who worked together at IRRI to develop new strains of rice with dramatically improved yields. Dr. Beachell applied to rice Norman Borlaug's principle of breeding sturdy, short-strawed cultivars. The results were semidwarf rice cultivars that yielded nearly twice as much grain as traditional varieties. Dr. Khush, a student of Dr. Beachell's at IRRI, carried on his mentor's work by breeding into these high-yielding modern varieties improved resistance to diseases and pests. The innovations developed by these two men led to a high-yielding and resilient rice variety that at one point occupied over 70% of the world's rice lands.

I witnessed, 3 decades ago while working in the Mekong Delta, the dramatic impact of the rice varieties developed by Drs. Beachell and

AILEEN DEL ROSARIO-RONDILLA

RAY CHARLES and the Des Moines Symphony Orchestra keep the music flowing at the 2002 Laureate Ceremony in Iowa. At the IRRI Experiment Station in the Philippines (*top, from left*), Gurdev Khush, 1996 World Food Prize laureate, examines a rice field in 1999 with Norman Borlaug and Sant Virmani, IRRI principal scientist in plant breeding and pioneer of tropical hybrid rice, and (*bottom*) Arnold Manza, Experiment Station senior manager, demonstrates the institute's modern rice mill to Yuan Longping in 2003.

BOB ELBERT, THE WORLD FOOD PRIZE

Khush. The arrival of the new seeds from IRRI coincided with the building of new roads — rice and roads together clearly driving dramatic improvement in the quality of life. But, where the road-building stopped, so did the spread of technology.

Rice scientists are not the only World Food Prize laureates who have helped make the global rice harvest both more bountiful and more economically and environmentally sustainable. The prize has gone to several individuals whose substantial contributions to agriculture as a whole — in the realms of government and business as well as science — benefited rice along with other crops and so enhanced global food security.

Disseminated knowledge

Former Chinese Minister of Agriculture He Kang, the 1993 World Food Prize laureate, was recognized for setting policies that allowed China to become one of the most efficient rice-producing countries in the world. Minister He helped rebuild a national infrastructure that had been devastated by years of neglect, notably restoring resources to Chinese agricultural universities, which brought a vast increase in the use of new rice-farming methods. In addition, Minister He's efforts helped disseminate knowledge of new high-yielding rice varieties to his nation's farmers.

In 1997, Ray Smith and Perry Adkisson were awarded the World Food Prize for addressing sustainable pest control, one of the greatest challenges facing agriculture, not least rice production. Drs. Smith and Adkisson together developed what is perhaps the most environmentally friendly and cost-effective approach to pest control. The system, known as integrated pest management, stresses limiting the use of polluting agricultural chemicals by employing instead natural pest-control methods.

Each of these accomplished individuals, through his unique and innovative approach, has dedicated his life to ensuring that the world is adequately fed. It is to recognize such selfless dedication that the World Food Prize exists. For their work on rice, Prof. Yuan and Dr. Jones join an illustrious procession of men and women thus honored.

Dr. Quinn, former U.S. ambassador to Cambodia, is president of the World Food Prize Foundation (www.worldfoodprize.org). Emily Westergaard and Nicholas Young contributed to this article. For more about the International Year of Rice, see www.rice2004.org.

Ear of rice

With the October 2004 World Food Prize Harvest Festival in Des Moines, Iowa, the Corn and Soybean State will become the venue for arguably the world's most focused observance of the International Year of Rice. Highlights among the more than 200 events statewide will be celebrations of Norman Borlaug's 90th birthday and the formal presentation of the World Food Prize to the 2004 laureates, Monty Jones of Sierra Leone and Yuan Longping of China.

Reflecting the origins of the new laureates, the World Food Prize Foundation has applied the theme "From Asia to Africa" to its 14-15 October Symposium on Rice, Biofortification and Enhanced Nutrition.

The distinguished speakers at the symposium will be (in alphabetical order) **Catherine Bertini**, United Nations under secretary general, chair of the UN Nutrition Council and 2003 World Food Prize laureate; **Howarth Bouis**, director of the HarvestPlus biofortification challenge program of the Consultative Group on International Agricultural Research (CGIAR); **Joachim von Braun**, director general of the International Food Policy Research Institute of the CGIAR; **Ronald P. Cantrell**, director general of the International Rice Research Institute of the CGIAR; **Gordon Conway**, president of the Rockefeller Foundation; **Susan McCouch**, professor of plant breeding in the Rockefeller Rice Biotechnology Program at Cornell University; **Pedro A. Sanchez**, professor of tropical agriculture at Columbia University, 2003 MacArthur fellow and 2002 World Food Prize laureate; **Alfred Sommer**, dean of the Bloomberg School of Public Health at Johns Hopkins University; **M.S. Swaminathan**, chairman of the M.S. Swaminathan Research Foundation, co-chair of the UN Millennium Project's Hunger Task Force and 1987 World Food Prize laureate; and **Steven Tanksley**, chair of the Genomics Initiative Task Force at Cornell University and 2004 Wolf Prize recipient.

For more information on the 2004 International Symposium or to register, please visit www.worldfoodprize.org.