KUALA LUMPUR: The introduction of hybrid rice to the world in 1979 enabled China to feed 70 million more people annually and uplift the status of rice farmers by maximizing output from paddy fields.

"Hybrid rice technology belongs not only to China but also to the world," said Prof. Yuan Longping, the man behind China's hybrid rice.

For his achievement, Prof. Yuan, who is Director General of China National Hybrid Rice Research Development Centre, was awarded the 2011 Mahathir Science Award.

The Mahathir Science Award is bestowed on any scientist, institution or organisation worldwide to recognise the contributions and innovations in solving problems of the tropics using science and technology.

Known worldwide as the "Father of Hybrid Rice", Prof. Yuan has come a long way since 1950s. His first job at Anjiang Agricultural School in Hunan Province, China, allowed him to venture into asexual crossings between crops, using Russian theories.

Finding that those theories didn't work, he secretly read research magazines from countries outside the Communist block and learned of different methods.

The famine that China suffered from 1958 to 1961 led Prof. Yuan to focus his research on the development of high-yielding rice. At the same time, he decided to switch from asexual crossing to artificial hybridization in search of a high-yielding rice variety.

Scientists then did not believe that there was a way to create a variant of self-pollinated crops like rice that produced high yields.

Going against the odds, Prof. Yuan proceeded with his research and in 1979 he introduced Chinese hybrid rice to the International Rice Research Institute in the Philippines, where it was initially viewed with skepticism.

The institute used to conduct its own hybrid rice research in the 1960s but eventually gave up. However, with Prof. Yuan’s findings, it renewed the hopes of coming up with a high-yielding variety.

It was a tough road for Prof. Yuan, as the Great Proletarian Cultural Revolution in China posed a serious challenge for his research.

As an intellectual who dared to voice different opinions, he was branded as rightist and counter-revolutionary. His experimental seedlings were seized after he added the term “time” to President Mao Tse-tung’s eight-word constitution on agriculture.

He then moved his research work from Hunan to Hainan, which led him to an important breakthrough when he found a natural male sterile wild rice plant (wild rice with flowers containing no pollen) in 1970.

The finding led to rapid progress in the development of hybrid rice, and in 1972 the China State Science and Technology Commission listed hybrid rice as key national research project.

Today, his findings have helped China feed more of its people. The country’s annual production rose from 5.68 billion tonnes in 1950 to 19.47 billion tonnes in 2000. Hybrid rice cultivation covers an area of 16 million hectares, accounting for 77 percent of total rice area in China.

China’s rice production is the highest in the world. Other major rice producers include India, Indonesia, Bangladesh, Vietnam, and Myanmar. Speaking at the award presentation ceremony recently, former prime minister Tun Dr. Mahathir noted that technologies used in tropical countries were mostly researched elsewhere or originated from other regions and thus might not suit the local requirement.

Therefore, he called on scientists from tropical countries to conduct more research to produce high-technology products that are globally suitable regardless of climate differences.

"We have to ensure what we produce here can be resilient worldwide. For example, Malaysia produces Proton cars that have been successfully tested in a cold country like Sweden," he said.

Tun Mahathir also urged Malaysian scientists to boost their efforts to come out with findings that produce critical impacts on the nation and as well as the region, stressing that the award was not exclusive for internationals.

"The prize money has been raised from USD2,000 (RM100,000) to USD 200,000 (RM 300,000), which should encourage our local (Malaysian) researchers," he said.

Of the five previous MSA laureates, two of them were local institutions.

University of Malay’s Faculty of Medicine was awarded the MSA in 2006 for its outstanding contribution to the understanding and treatment of the Nipah virus that caused Japanese Encephalitis.

In 2009, the Forest Research Institute of Malaysia received the MSA for its technology and development of the rubber wood furniture industry in Malaysia and globally.

In spite of his achievement, Prof. Yuan said that he will continue to do his best to promote the development of hybrid rice in China and overseas with special emphasis on developing countries, for the welfare of the world.

Hybrid rice is being grown in dozens of countries in Africa, America and Asia, thus providing a reliable food source in areas at high risk for famine.

In 2004, Prof Yuan came to Malaysia to share his knowledge and was appointed chief consultant to the Perlis Hybrid Rice Research Centre.

Having produced about 60 articles on his research, Prof. Yuan has received numerous awards and honours, including World Food Prize and Wolf Prize in 2004, Ramon Magaysay Award for Government Service in 2001, and National Supreme Scientific and Technological Award in 2000.

The Mahathir Science Award Foundation (MSAF) has entrusted the Academy of Sciences Malaysia (ASM) to conduct the selection of winners, picked through voting by the Fellows of ASM, based on scientific breakthrough, impact and contribution to solving the problem of the tropics.

A total of 19 nominations were received for the 2011 MSA.