

## Agriculture Development In China

The feeding of China's population — one-fifth of the world's total — from an area of arable land that amounts to only 7 percent of the world's cultivated land is accomplished today thanks to reforms in rural areas begun in 1978. The major reform was the application of the responsibility system — mostly a household contract responsibility system with remuneration linked to output. Farmers were given again the right to use land, to arrange their planting and dispose of their products. The state monopoly for purchase and marketing was annulled, price controls over most agricultural products were lifted, and many earlier restrictive policies were abolished. Farmers responded with enthusiasm as they were allowed to develop diversified businesses and set up township enterprises. The reforms freed and developed the rural productive forces, promoted the rapid increase in agriculture, especially grain production, and optimized the structure of agriculture, so there have been remarkable achievements in China's agriculture.



Yuan Longping, known as "father of hybrid rice".

In the 1990s, though China's agriculture and rural economic development were confronted with many unprecedented difficulties and challenges, they maintained a fairly good momentum. In the five years, 1996-2000, the total increment of agriculture in the GDP came to 7,129.18 billion yuan. Calculated according to constant prices, the annual average growth rate stood at 3.5 percent, showing a tendency toward stable growth. Grain and other major agricultural products had bumper harvests for many years running. In 2003, China's grain output was 430.70 million tons, less than the previous year because of a decrease in planted areas and serious natural disasters. The amount of grain per capita was 334 kg; and the amount of meat (pork, beef, mutton), milk, and aquatic products per capita reached 42.7 kg, 13.6 kg, and 36.5 kg, respectively, exceeding the world's average levels. Today China leads the world

in production of grain, cotton, rapeseed, peanut, meat and fruit.

### Township Enterprises

Township enterprises are businesses run by farmers in the countryside. Thanks to the rural reform and scientific and technological progress in agriculture, the efficiency of agricultural production has been improved by a large margin, and a huge number of rural labourers have been emancipated from the land, thus laying the basis for the development of township enterprises. The products of township enterprises with their competitive prices sell well throughout the country.

Township enterprises are involved in various spheres, such as industry, agricultural products processing, transportation and communications, construction, commerce and catering. In 2003, China had more than 21.85 million township enterprises, with 135.73 million employees and generating 3,670 billion yuan in added value, a 13.3 percent increase over the previous year.

Now township enterprises have become the main source for the raising of farmers' income and rural economic development. At present the annual sales income of more than 10,000 township enterprises in China exceeds 50 million yuan, including nearly 5,000 township enterprises whose annual sales income exceeds 100 million yuan; and the products of some 30 township enterprises have been named China's famous-brand products.

### The Contributions of Science and Technology to Agriculture

Advanced science and technology in China has enhanced agricultural production in such areas as cultivation of plant cells and tissues, anther culture, haploid breeding and the research on its application, bilinear hybrid rice, hybrid beans and corn, and multi-crop planting. Agricultural scientific research has been encouraged by state programs geared to rural economic development, such as the Spark Program, the Promotion Plan of Important Achievements, the Bumper Harvest Plan, and the Prairie Fire Program. Since 1949 Chinese agricultural scientists have cultivated more than 40 varieties of crops, and 5,000 high-yield, excellent-quality and strong-resistant new varieties and new combinations. The varieties of major crops have witnessed four to five renewals.

In general, one renewal results in an increase of 10 percent to 30 percent in output. At present, the yield of crops has increased to 4.82 tons per ha.

### International Market

Following China's entry into the WTO in 2001, the Chinese government restructured its approach to agricultural development, investing funds and

materials in speeding up agricultural science and technology progress to improve the international competitiveness of China's agricultural products.

The project of "intensively processing main agricultural products" put forward by the Ministry of Science and Technology has been listed as an important scientific and technological project during the 10th Five-Year Plan period.

The project aims at developing key technologies and equipment for intensive processing of primary agricultural products such as grain, edible oil, fruit, vegetables, animal by-products and forest products and conducting research into an integrated quality control system and the rapid testing of technology and equipment related to agricultural products.

After the completion of the project, China's technological level of processing agricultural products will reach the advanced world level in the mid-1990s, and some technological aspects will be brought into line with the advanced international level. Meanwhile, the two projects of "milk industry development," and "water-saving agriculture" have been included in the 12 important scientific and technological application projects initiated by the Ministry of Science and Technology. The state has invested 20 billion yuan in these projects.

In 2003, the state initiated six high-technology agricultural projects involving cultivation of new varieties and strains; elimination of environmental hazards in efficient planting; aquatic breeding; water-saving and quantified precision technologies in agriculture; processing of agricultural and related products; pollution-free fertilizer and fodder; and an agricultural information platform