

E. GONG



China needs no foreign help to feed itself

China can meet the demands of its growing population without importing grain from elsewhere, says Peng Gong.

China has a long-standing ambition to be self-sufficient in grain — rice, wheat, maize (corn) and soya beans — yet it imported some 95 million tonnes last year, about 17% of its domestic production. This raised concerns that its grain imports would rise, and push up the price of food. These fears were highlighted by Lester Brown of the Earth Policy Institute in Washington DC, in an article in *The Washington Post* in March, titled 'Can the United States feed China?'

I thank Lester for his warning on food security in China, but I believe it is not a matter of whether China can feed itself. It is a matter of whether the Chinese people will choose to do so.

First, some history. China's grain production quadrupled from 1950 to 2010, and last year saw the largest ever harvest. Much of the grain that China imported last year was not for consumption, but for storage in case of crises. In fact, for the past 60 years, China has, with just 7–8% of the globe's agricultural land, fed about 22% of the world's population.

China's population is projected to grow by around 9%, until it peaks at 1.46 billion around 2030. This turns the question of who will feed China into whether China can maintain self-sufficiency in grain production in the next 20 years.

There are certainly challenges. The growth of large cities should slow the pace of rural development, but China's registered-permanent-residence policy allows floating farmer workers, who spend most of their time in cities, to build houses in their home villages. Village development in the North China Plain doubled in the past decade, gobbling up 3.1 million hectares of top-quality agricultural land. And, as older farmers leave the labour force and young ones go to cities, the decline in agricultural knowledge could reduce grain yields.

Another issue is water. The north now produces more than 60% of China's grain thanks to expanded irrigation, yet groundwater supplies there continue to decrease and severe droughts have hit production. Although many global climate models predict that north China will become wetter, the region has become drier, perhaps too dry even to justify planned investment in new water infrastructure.

I am optimistic that these challenges can be overcome. China has introduced land-conversion rules that require developers and local governments to replace lost agricultural land, by draining swamp-land for example. The country has also invested heavily in improving cropland through efficient irrigation and mechanized cultivation and harvesting. And about 10 million hectares of marsh and flood land in China were converted to agricultural land between 1978 and 2008, although at a cost to ecosystems.

The government has pledged to invest four trillion renminbi (US\$600 billion) over the next ten years to secure water supplies. Properly used,

this investment could increase irrigated agricultural land by 10–20%, potentially boosting grain production by 5–10%. Even climate change could help. Glaciers in western China are likely to melt faster over the next few decades, and could water new farmland in that region. Then there is indoor, hydroponic cultivation, which has already entered China on a household scale for growing vegetables.

If per-capita grain consumption can be held stable, then to feed itself China would need only to increase grain production by 9%. Yes, the growing middle class wants to eat more meat, which requires more grain, but older people tend to eat less meat, so the demand could be balanced as the population ages. The country does not have to follow the Western model of development based on overconsumption. Thrift is deeply ingrained in the philosophy and culture of the people.

Brave policy decisions are needed. Better planning can regulate construction in rural and urban areas. Reducing the per-family area of land for residential construction would also help.

Because of the trend towards urbanization, many rural residences will become vacant in the next 20–30 years. This land must be returned to agricultural use. With this in mind, building rural structures on stilts would avoid soil destruction and enable the reclamation of built-up land. China should abolish the permanent-residence registry system and stop floating farmer workers constructing rural residences.

Furthermore, as the cold Qinghai–Tibet plateau warms, China should look to develop cropland reserves there for emergency use. And in the rural south, the government should provide financial incentives for farmers to sow farmland currently left idle by a shortage of labour.

An effective model could be worker-owned agricultural cooperatives directly linked to urban markets through subsidized transport.

Extra investment to train farmers and strengthen the role of agricultural specialists at the town and village level would protect and raise crop yields. The current promotion of college students to serve as village officers, for instance, could be enhanced with training on biodynamic farming technology and environmental protection.

With these measures, China can maintain the current level of agricultural land, and make full use of idle land. It could grow grain production, not by 9%, but by 20–30%. Given the country's remarkable achievements in population control and economic reform over the past 30 years, the world does not need to worry about having to feed China just yet. ■

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