

The Great Yield Forward?

A photo essay on China's hybrid rice

In September 2006 GRAIN went to rural Yunnan and Sichuan, two of China's major rice farming areas, to interview farmers about their experience growing hybrid rice. A full report from this trip is available in the January 2007 issue of Seedling:
(<http://www.grain.org/seedling/?id=455>)

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With China's economic liberalisation policy, many farmers are becoming worried about private seed companies' entry in the seed market. Many fear that these companies could easily jack up the price of seeds and, as some farmers experienced already, could signal the arrival of poor quality seeds.



A newly harvested field grown with hybrid rice in a rural village outside of Chengdou city in Sichuan. The hybrid variety is from a government seed company that sells it for US\$ 1.0 per kilogram.

Local seed dealers are quick to guarantee farmers with 'high yield' from planting hybrid varieties, and many are easily lured with it. But there is one condition: farmers have to spend for the whole 'package' of seeds, fertilisers, pesticides and irrigation to achieve it. The general trend from farmers' field is that the much-hyped 'yield advantage' is a modest affair – 500 kg to one tonne per hectare – rather a whimper than a bang.



One of the many hybrid rice posters adorning the walls of a small seed shop in Yuanyang in Honghe Prefecture, Yunnan. From panicle length to seed density, everything from this variety looks tempting.



The famous Yuanyang rice terraces carved out of the mountains. The entire valley contains about 3000 terraces of about 11000 hectares of paddy fields – planted with both hybrid and traditional varieties of rice – with strands of food and fodder crops growing in between.



The hybrid rice invasion has not only led to the disappearance of important traditional varieties but also of local farming traditions and food culture. Over the last 20 years the government has tried to push farmers into adopting hybrid rice on their farms although it is alien to local custom of seed saving and exchange.

In some upland villages of Yuanyang, mechanised farming has not caught up yet with farmers and everything is done manually. Farming relies heavily on strong kinship among family members and relatives, from sowing the first seed to harvesting.



Harvesting rice the old way: by hand and a sickle. This farmer in Yuanyang prefers traditional varieties because its yield is more reliable compared to hybrids, the eating quality is much better too.





Threshing rice the old way. Indeed not everything that's old has to be replaced by modern expensive machines. The creativity of Chinese farmers to innovate is boundless.

Farmers in Yuanyang threshing rice grains. It is a highly social process.



Farmers in Gejiu threshing rice grains by the road which also acts as solar dryer.



"I've heard other farmers in the village having half-filled grains from their hybrid rice varieties. So I won't try it. Also because I'm contented with my traditional variety (Huagu) which I would even recommend to other farmers."

Not much has changed in 50 years of farming. Farmers are still poor despite the change in seeds from conventional high yielding varieties to hybrids.



"I have a son who works in the city to supplement the family's income. Otherwise life can get really hard when you are a farmer."



"Traditional varieties are more resistant to pest and diseases, and have better eating quality than hybrids."

For many of the farmers we talked to with 10-50 years experience in rice farming, the only great difference they noticed is that farmers now have become more dependent on chemical pesticides and fertilisers.



The trademark 'peasant shoes'. With the widening gap between the urban and rural populations, it has come to also symbolise poverty.

With more and more children of peasant families fleeing the countryside to look for work in the cities, will there still be new breeds of 'farmers' in the next generation? In some farming villages in Sichuan, some mothers are advising their kids to stay out of farming if they can do other things.



If necessity is the mother of invention, this improvised rake made of bamboo is certainly born of it.





"The cost of farming in recent times has increased but the real income has remained stagnant. If they have other choices, farmers will just go out to do other work/ jobs instead of growing hybrid rice."



Golden harvest, indeed. But often, with barely more than US\$100 annual income from (hybrid) rice farming, it's not even enough to make ends meet, much less pay a family's debt.