

Agricultural developments in China and implications for Australian agriculture

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Note – this is a somewhat superficial view based on a 10 day tour of China with a Nuffield group

Key points about development in China

1. Strong desire to modernise the country and improve living standards.
2. Aim to have “world’s best” enterprises.
3. Element of competition between local government areas to develop successful enterprises.
4. Being a one party government with Communist Party officials at all levels of government, changes can be implemented almost immediately.
5. Where the government owns the land then new development seems to happen without too much argument or delay.
6. There will be big shifts in population (estimated 300m) from rural areas to the city. This will increase demand for modern services including diet.

As a result of these

1. They think... and act... big. There is continuing massive investment into roads, rail and airports. For example, the highways we went on were not that busy and yet they were widening them and building more. In the near future they plan to build another 11,000km of railway for trains travelling up to 200kpm and 5,9000km for trains travelling at up to 350kph (including from Shanghai to Beijing). Also mobile phone coverage is excellent and everyone seems to have one... or two. That is, they are investing in what’s important for economic development... and before the current system is overloaded. (We should let our government know this is a good idea!)
2. There are very big and (presumably) highly efficient agricultural enterprises. The few we saw or heard of were impressive by their sheer scale eg the 10,000ha Shaanxi Agricultural Development Cooperative with 700ha of cherries & 30,000 ostriches. Plans for 10,000 dairy, 10,000 beef, 100,000 pigs as well. There was also a 25,000 cow dairy nearby.
3. They use the latest technology from wherever and once they can do it, or make it themselves, they send the westerners home. Examples we came across were propagation of orchids (using expertise and technology from Holland) and kiwi fruit (using expertise from New Zealand). But this concept is not new to China. There are examples in the Emperor’s Palace Museum where European scientists were in residence there to show the Chinese new ideas. This was in the 1600s and 1700s!

The cherry orchards we visited had video monitors (for insect pests, etc). Also when the fruit is sold a bar code lists the location of the orchard and production details. To make better use of the land they grew carrots along the rows between cherry trees. We also visited a kiwi fruit (= Chinese gooseberry!) plantation that would dwarf any in New Zealand.

China’s agricultural production is impressive. According to estimates this year (2009) the production (food, feed & industrial) (and average yield) and consumption will be

	Production		Consumption
wheat	113mt	(4.7t/ha)	94mt
rice	191mt	(6.5t/ha)	174mt
corn	164mt	(5.6t/ha)	155mt

China is the world's largest producer of many agricultural commodities (including some you wouldn't think was the case) such as
cotton, rice, peanuts, dairy products, pork and sheepmeat

In short, China is essentially self sufficient in most food.

One proviso here – we were told to be cautious of their production figures. Even so, wheat yields of the order of double ours is impressive.

There seems to be a very clear policy of keeping the population well fed.

To cater for poorer years we were told that they have about 40% of their annual wheat requirement in reserve. And so, we can't expect China to have a big demand for grain or other food products other than meat.

They also made the claim that agricultural production could double in 10 years. That's a big call. But from the small bit we saw of large scale operations using the latest technology, they can certainly increase production significantly.

4. They seem to be working hard (although not necessarily cheerily) to improve the lot of the country and maybe one day their lot. Trucks are loaded to the hilt. No-one seems too stressed. In spite of the somewhat chaotic traffic (I think that's where they learn to drive) you rarely see anyone get cranky.
5. Support for agriculture is very strong. They have very big agricultural research and development programs (especially in cropping). One development centre we visited at Yangling, Shaanxi, had plans for a new research and development centre for horticulture, forestry and broadacre crops. Extrapolating from the model plan we were shown the size of this site will be an impressive 15km x 7km and due to be completed in 3 years!

China is very strong in plant breeding. Note, GRDC tap into this, especially sourcing wheat and barley lines with greater tolerance to drought, salinity and waterlogging. One Chinese professor I came across recently at a brassica conference had about 100 PhD students in his department. Younger people seemed keen to learn English. Several we met were going to study in Australia. They were also keen on agricultural fairs. In fact, one we were told of (near Xian in November this year) was called the Agricultural Hi-tech Fair.

In contrast to their driven, modern agriculture is

1. The large number of small, labour intensive farming operations. It was not uncommon to see grain spread on roads to dry.
2. Their apparent lack of regard for the environment and animal welfare and nutrition. This is something they will need to address eventually to improve production and living standards. This may create a demand for services in these areas.

Opportunity for efficiency gains in China

1. Logistics
There is still a lot of manual loading and unloading. When they need to they could no doubt easily convert to pallet and forklift or even better systems. Put a bigger engine and a trailer on their trucks and they could shift twice as much on a load. Mind you that would be a massive load if they can fill them as they now do!
2. In agriculture
To make farming more attractive for younger farmers they need to reduce the amount of manual work, especially hoeing. They are part way there now with mechanical harvesting. Also they need to have a scheme to increase farm size. Currently it is 1 mu (1/15th ha)/person x 3 people (mum, dad and one child). This is 2,000sq m (40m x 50m) or 3 tennis courts/family!
3. From the little I saw and heard they are not very good at animal production. Beef carcass weights (average 140kg) were low by our standards. They seem not to feed them enough... they get leftovers (eg straw) that people don't want. Also they reportedly have a poor meat grading system and a poor food safety system. Certainly at the local village level the "wet markets" are a bit of an eye opener compared with what we are not allowed to do!

Opportunity for marketing into China

1. Beef

With the increase in urbanisation and living standards, there is expected to be an increase in the demand for beef. Beef production, especially at the smaller farm level, is reportedly declining in China as returns take longer than other enterprises and there are additional costs (of feeding) and risks (of them dying). The biggest demand will be for manufacturing beef (eg hamburgers). This is a price sensitive market and Australian imports into China will have to compete with those from USA, Brazil, etc. The \$A exchange rate has a big impact here.

2. Fodder, such as oaten hay

With the increase in large scale feedlots and dairies in China there may be an opportunity to export fodder such as oaten hay. This has been done successfully from Australia to Japan for many years.

What we were told by westerners about doing business in China

1. Don't regard China as one country (eg as a single market). Just because there are 1,300 million people doesn't mean you can sell 1,300 million widgets.
2. Relationships with Chinese government is very important. That is, the business objectives need to align with those of the government.
3. Establishing working business relationship may take years. They put their toe in the water first to get a feel if they can deal with you. We saw this at the dinner in Xian with officials from Gaoling County. They had a proposal for us ("We want your ideas and money...") but no printed detail for us to consider.

Footnotes

1. Many of the amazing loads on bikes and trucks you get on emails you actually see (eg where you can't see the person on the bike for the huge load of straw).
2. Everyone seems to have equal right of way on roads whether driving a 10t truck (loaded to 15t) or pulling a cart.
3. They are trying to get people to adopt safer practices. One poster in a village showed that it was not a good idea to hang your washing on the powerlines.
4. Translations into English can be quirky. One road sign said "Crooked Road". Another next to a display on the pavement: "Please don't stampede".
I'm still thinking about this one at the gateway to a large enterprise: "Welcome to present and give advice once more." Maybe it's a nice welcoming message for the local agronomist as he comes onto the farm!

**Selected photos to highlight a few points
Development**

New settlements – using up agricultural land



Kiwi fruit plantation - technology from New Zealand



Orchid production – technology from Netherlands



Roads & transport
Road network



Expanse of new roads & odd loads



Full loads – they shift as much as they can as best they can

Other unusual sights

Traffic driving over grain drying on roads



Shifting furniture, or 101 uses for a bike



Hanging onto loads as best they can

