



Land reform + mechanisation = self-sufficiency

At just 0.1 ha per person, China has a comparatively small area of farmland per head of population. The respective figures for Germany and the USA, for example, are 0.3 and 0.6. This means Chinese agriculture needs to bundle best possible area management with the most modern mechanisation available.

Two factors are of crucial for success here. Improving training and further education in practical agriculture and access to high performance modern machinery. At the moment, both are still in very poor supply.

So far, Chinese society sees farmers as »underdogs«.

»One is born a farmer. It's a question of fate«, is the usual opinion amongst the tone-setting city dwellers. Farmers in China have no access to professional education and efficiency training. Neither is there an advisory service at farm level. Organisations such as farmer unions or chambers of agriculture do not exist. But if there's no substantial improvement in practically based knowledge for land users and farmers, China will be unable to optimally utilise the scarce resource of farmland.

The galloping flight from the land in China

(particularly the young and the better performers leave the villages) and the connected labour shortages will only be compensated for with mechanisation. Now there's already an efficient agricultural engineering industry in China, and a system for encouraging rural mechanisation. In every province farm machinery offices take into account the cropping of the respective region in devising best possible mechanisation strategies. These offices consult with the agricultural engineering industry, arrange purchases and negotiate credit for farmers, sweetening the deals with grants of up to 30% for the buyers.

The farm machinery production sector

in China believes that, as far as numbers are concerned, it's already well along the road towards meeting national demand for tractors, cultivation implements and harvesting machinery. But technology level is that of 1970/80, sometimes even earlier. Where European farm machinery might be competitively cost-effective, e.g. when used on large farms, the growing requirement for mechanisation already offers lots of opportunities. Sadly, though, government investment support only applies to Chinese farm equipment. If European manufacturers want a share of this bounty then they have to at least assemble their machines in China.

The state supports farm machinery quality and farmer training.

Der Staat tut viel für die Qualität der Mechanisierung und die Ausbildung der Bauern.

L'Etat ne compte pas ses efforts pour la qualité de la mécanisation et la formation des agriculteurs.



Preusse

In this respect the country represents a great »fallow field« ready for cultivation by European agricultural machinery manufacturers! But questions of competition, not to forget fear of having their technical ideas stolen, have led many internationally successful farm machinery companies to avoid engagement in »cheap land« China. This won't last long, however. Labour costs in China are not too far away from an explosion. There's talk of 130% wage rises in the coming years, with corresponding effects on the country's economy.

Agricultural mechanisation has yet another problem to face: the current labour and procedural organisation. Right across the country almost all crop production is organised for manual labour. This allows peak working times to be staggered for full exploitation of vegetation periods while sowing is done in one patch after the other followed by longer periods of cultivations and then harvesting. This approach keeps down dimensions of crop drying surface, storage facilities and transport requirements. The smaller scale human capabilities are behind every operation, even the marketing. Even while harvest is ongoing, the first ware is moving out of the store to the mar-

Travelling encounters and agriculture in China

The Chinese like to travel internationally, as we can all see, but within their homeland too. And they love to try to communicate in English. Thus I became involved in conversation during a flight from Harbin far in the north to Beijing with a group of senior class teachers. Naturally, the conversation at first centred on where we came from and the exchange of knowledge about different countries. Quite soon we were speaking about planning teaching schedules and the influences on the life of senior class pupils in Chinese schools. Because I grew up on a farm and studied agriculture, my question: »And which of your pupils want to be farmers?« appeared absolutely normal to me. But the reaction to this question was some-

thing of a surprise. Uncomprehending looks were exchanged by the teachers. What a question! Typical »Longnose«! No idea of reality in China. »Our students and farming? In China no one wants to be a farmer. For that, there's no need for an expensive education! A farmer is simply born. It's a question of fate«, was the indignant answer. To my following question: »And who then ensures the daily food?« I harvested shrugs and a murmured »that's what the farmers are there for«! Just like everywhere else in the world: As long as there's plenty of food available, there's no acknowledgement of the farmers' hard work.....!

Karl-Martin Lüth

ket. Increased mechanisation and the correspondingly more efficiently farmed areas would see more uniform sowing times and shorter harvests. With that, transport and storage capacities would have to be greatly enlarged.

Another obstacle to be cleared for rapid agricultural development is the small farm infrastructure. Anyone in China nowadays that

wants to build up a halfway economically viable farming business has to arrange contracts with a large number of legally recognised users of the land. Here, alongside the provisions of an intelligent land use legislation there are naturally also »solutions« for the rural population members wishing to »drop out« of farming. As a rule, for every hectare two land worker or farmer families

have to be bought out. Establishing enough free land for a 100 ha farm thus means over 200 families – with all young and old members – have to be dealt with. This still represents an unsolved problem. The government will have to create political instruments to simplify this development and help these wanting to leave farming.

How then might a farm in China look like in the future? The statistics say that there are 650,000 rural communes in China. Countryside population is put at around 800 m. Not counting itinerate labourers, the old and children, we can assume that around 400 m people actually work in agriculture with – an estimated – 280 m occupied full-time. Based on this, a rural commune nowadays would cover around 184 ha with some 430 full time workers. In other words a labour input of 233 workers/100 ha, absolutely unimaginable for the European farmer and a statistic that sounds economically dangerous. This social network for the old,

Full mechanisation on this farm. Farm labour tends to be scarce in the neighbourhood of large booming cities. The tractor is built under licence in China.

Der Betrieb ist voll mechanisiert. Arbeitskräfte für die Landwirtschaft sind nahe den großen Boom-Städten eher knapp. Der Schlepper ist ein chinesisches Lizenzprodukt. L'exploitation est entièrement mécanisée. Dans le voisinage des villes champignons, les ouvriers agricoles sont une denrée rare. Le tracteur est fabriqué sous licence en Chine.



and the unemployment it camouflages, cannot be easily rationalised away. However, continued flight from the land will rapidly speed up, reducing available labour and making it drastically more expensive. Enterprising »farmers« with ideas and plenty of imagination will have ample scope in the future.

China's new cooperation law enables group farming of a rural commune's fields.

These allow the creation of a long-term land use contract involving people committed to a future in farming and wanting to pursue this in a professional way. The elected commune leaders transfer their land use entitlements and, if still interested, can also involve their own work input within the arrangement. This sort of group farming appears to offer stable contractual agreements and to be the most successful from a social point of view. Even now, there are plenty of small-scale tenants. In many cases these entrepreneurs begin by renting neighbouring ground within their own commune. At the same time, work can be undertaken for other land users who haven't the available labour. Transport jobs and other contractor activities may also be conducted by the new farmer within his commune. The purchase of a tractor is usually the first investment.

Nowadays, many have taken the above route. But still, aiming to take over 1000 ha

would mean seeking the agreement of around 2000 families willing to step down. If, and how, such large areas will emerge as single farms in a socially acceptable way is not certain. The money for the necessary large machinery fleet and for the compensation of the former land users will mostly come from other segments of the economy and not from agriculture. And for encouraging those land users to rent out their patches, there'll probably be a »Chinese solution« worked out and followed. The social dynamite that comes hand-in-hand with decisive agricultural development in China is certainly substantial. But it's safe to say that China will face up to developing its agricultural structure with the same commitment and dynamism already applied to its economical development and towards the country's progress on the world's political stage.

China will follow its own way – with or without help from the experiences of European agriculture development. Offering our know-how and cooperating constructively would be the correct contribution, I would suggest!

*Karl-Martin Lüth,
DLG senior consultant*

● **Neue Technik plus neues Bodenrecht, das könnte die Effizienzformel für die chinesische Landwirtschaft des kommenden Jahrzehntes sein. Effizienz ist nötig, denn überall zeigen sich Grenzen des Wachstums.**

● **La Chine suivra sa route sans forcément tenir compte de l'expérience du développement agricole européen. Mais l'Europe pourrait en faire profiter le pays de manière constructive pour contribuer à lui faire utiliser de manière optimale une ressource foncière limitée.**

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