In agriculture learn from Tachai

Clyde Sanger

One of the first questions you are expected to ask these days on a visit to a commune in China is, "How far has mechanization gone?"

The answer is on the tip of the tongue of any official giving the routine briefing. It flows smoothly off the lips of Ku Li-yung, vice-chairman of the revolutionary committee of Tao Pu Peoples Commune, whose 15,000 members make a good living growing vegetables for sale in nearby Shanghai, besides growing rice for themselves:

"In drainage and irrigation our target this year is to reach 100 percent. In harvesting we have reached 40 percent, transplanting 80 percent, trench-digging 60 percent. We've achieved our targets for ploughing, threshing and insecticides. Overall, we are 70 percent mechanized."

In other places the answer may not always be as detailed. In some places, like Linhsien County in Honan province which was transformed by a huge irrigation canal cut through the Taihang mountains, the recital ends with a near-apology — or at least modesty: ". . . 60 percent of the land is mechanically ploughed. That is not very much."

But everywhere there is acknowledgement that agricultural mechanization should be brought in as quickly as possible. It began with a new slogan from Chairman Mao: "The fundamental way out for agriculture lies in mechanization." Then the target was set of 1980 for the achievement of basic mechanization. (Cannily, the Chinese leaders inserted the blurring adjective "basic", probably to allow for a margin of failure).

A big push to mechanization — perhaps even the greatest momentum — was given in a speech by Hua Kuo-feng in October 1975, nearly a year before he succeeded Mao as Chairman.

It was a speech that helped Hua to the top; he was in the spotlight, summing up on a month-long National Conference on Learning from Tachai in Agriculture. And it was the speech of a no-nonsense manager, saying that some county officials were "soft, lax and lazy" and then going on to declare that it was at county level that the emphasis for leadership in agricultural development should be put. His speech was given the title: "Let the whole party mobilize for a vast effort to develop agriculture, and build Tachai-type counties throughout the country".

He was making a crucial point. The lower levels of organization — the production team, the brigade and the commune — would obviously retain importance. Indeed, Hua said the idea of the team as the basic accounting unit was still right for most of China, although he expects a step-by-step transition to brigade or even commune level "when conditions are ripe". But to spearhead mechanization, and to promote capital construction, the county — with a population of between 200,000 and 800,000 — must take a leading role.

Hua even touched one level higher. Provinces, municipalities and autonomous regimes, he said, "must energetically develop their own farm machinery industry in the light of local conditions" to supply communes and brigades with equipment for the mechanization of agriculture. It was a strong directive to move away from backyard industries.

There is something of a paradox in talking about "Tachai-type" counties. Tachai itself is a production brigade of only 83 households, who have in their time resisted handing over control of some of their assets — for instance, the piggery — to the Tachai People's Commune. But ever since 1964, when Mao praised their heroism in overcoming floods that swept away their homes and in rebuilding their land in terraces and told the rest of China, "In agriculture learn from Tachai," this brigade has been a model for increasing productivity. In 1975 Hua Kuo-feng took this argument a step further by pointing out that the 200,000 people of Hsiyang County (which includes Tachai) had indeed learnt from its model, and if all the counties of Shansi province did as well as Hsiyang the amount of marketable grain there could increase fourfold.

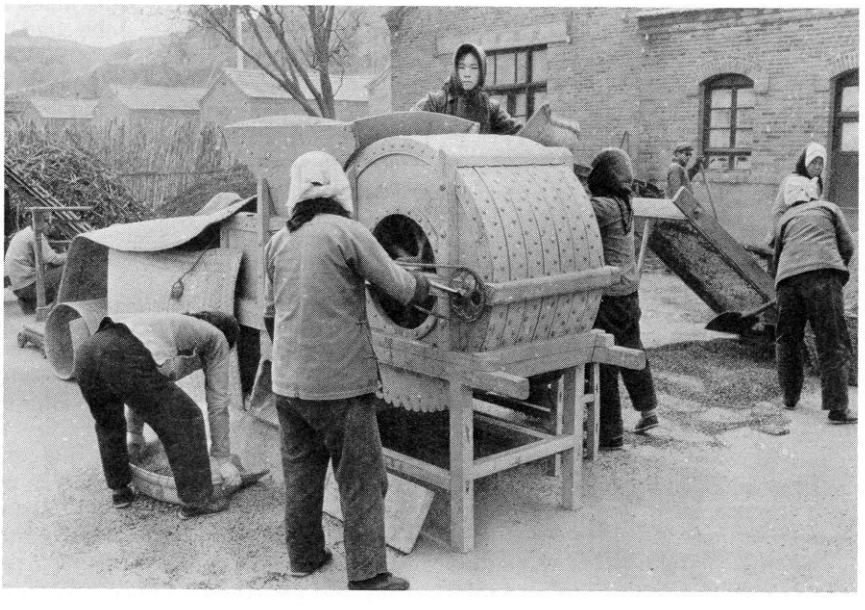
So the pressure was on to bring other counties to the level of Hsiyang, or a Tachai-type, county. In 1975, by Hua's calculation, there were already 300 that qualified, and he set a target of 100 new Tachai-type counties a year for the next five years.

How do counties qualify? In a pyramid pattern, each county sends an examination unit into its communes to check on how well the individual brigades are doing. (In mid-November such a group from Hua Hsien county went checking on brigades in Hua Tung commune, near Canton, and judged that 10 out of 11 examined passed the test; subsequent pressures on the hapless 11th brigade can be imagined). Twice a year the 27 provinces are required to submit reports on all their counties to the Party Central Committee, including progress in farm mechanization.

The main reason for mechanization is to increase yields per hectare, rather than to increase the number of hectares cultivated. The Tachai brigade, for all its astonishing work in terracing the gullies and the ridges, has only added three hectares to the 53 already being farmed in 1945. But the yields per hectare in Tachai have trebled. Through levelling, they turned 4700 small plots into 1500 larger ones, and three-quarters of that land can now be tractor-ploughed. Millet was once the main crop, but now they grow mostly maize and sorghum — and can plant a crop of winter wheat in good time, even though there are only some 160 frost-free days.

An extra crop a year is seen as the

Hand operated sorghum thresher in action at Tachai: a model for increasing productivity.



Photos: Clyde Sanger

first benefit of mechanization. In Linhsien County they used to grow only two crops, usually rice and winter wheat; now, they say, they fit in a third. In Tao Pu commune they grew, before mechanization, one rice and one wheat crop; now they can add a second rice crop. In their vegetable fields, they claim, they can grow more than seven consecutive crops in a year — an achievement also made possible, no doubt, by bringing them on a long way in nursery plots.

A very secondary benefit is the saving of labour to be redeployed in "sideline occupations"; but at Tao Pu they said that 1000 people now worked in the commune's industries, compared with only 200 in 1966.

Mechanization is being built around the 10 h.p. walking tractor. Although it is produced in workshops at county and even commune level, its specifications are said to be standard throughout China; certainly I saw similar models near the Ming tombs north of Peking and in Kwantung province far to the south. Its price is also set at a unified rate of 2300 yuan ($1150). As useful on the roads as in the fields, these tractors are steadily taking over the heavy task of hauling produce to market that has been done by mule-carts or by girls, glistening with sweat, pushing hand-carts.

Their numbers are increasing impressively. The manager of the East is Red machinery plant in Linhsien said it turned out 300 in 1975, 1000 last year, and would produce 5000 this year. Chung-hua county, near Canton, already has 1400 walking tractors and another 100 medium-size (40 h.p.) ones. These figures compare with 1967, when Dick Wilson in his book *A Quarter of Mankind* reported there was an average of one tractor to every commune.

To the fore in mechanization as in other activities, the peasants of Tachai and Hsiyang county designed their own type of tractor for their special needs — one with a tight turning circle and caterpillar tracks for climbing slopes. The central government, which controls raw materials, approved its design and has authorized production of about 3000 of these special tractors a year, with nation-wide distribution.

You can see a wide range of farm machines — trench diggers, transplanters and all — being produced in commune and county plants. Some are of charmingly improvised design, like the transplanter at Tao Pu built on a sturdy bicycle wheel. How economic it is to produce such machines is hard for a visitor to judge, just as it seems to be pushing self-reliance to extremes to depend upon rather dilapidated fertiliser plants at county level. (The Chinese have acknowledged the latter in importing new fertiliser plants from Japan, France, Netherlands and the U.S.)

The 10 h.p. "walking tractor" — key to China's agricultural mechanization program.

The popularizing of a standard machine seems to be their answer. At the Shanghai industrial exhibition is a rice transplanter that can cover a hectare in five hours, 10 times as fast as hand transplanting. Its cost is about 1000 yuan.

The process of popularization has not always been even. In most parts of Kwantung province, for example, pedal threshers are a familiar machine. Its virtues are obvious: simplicity (just a drum with spikes poking out, rotated by a pedal bar), cheapness (once 130 yuan, it now costs 80) and effectiveness (it can fill a basket with rice in five minutes, can be pushed on runners across a field and carried on a pole between two people). Yet within a few kilometres of where a group of peasants said they had been using it for 10 years were other peasants still using hand-threshing techniques, thumping rice down on a slatted table.

But probably the heavy emphasis that has been put by Chairman Hua and others on building Tachai-type counties and on farm mechanization will ensure that more modern methods now spread rapidly and evenly. And their concern to press this campaign can be seen in the fact that, although in 1975 Hua thought another Learning from Tachai conference should be held in five years' time, this follow-up conference was unexpectedly held in December. □

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The pedal thresher: it can fill a basket with rice in five minutes.