

Socio-Economic Change in China's Countryside

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Transformation of Nature

From time immemorial the Chinese farmers have been the victims of natural disasters and hazards such as floods, droughts, strong tidal waves in coastal areas, alkalization and encroachment of desert sands. Since Liberation China considered the elimination of these natural disasters and hazards as the major corner-stone in solving her food problem as well as providing basic raw materials for her light industry. For nearly three decades, the Chinese people have been working undauntedly and unceasingly towards these objectives. No political upheaval such as the Cultural Revolution, the Criticize Lin Piao and Confucious movement and the present struggle against the 'Gang of Four' is allowed to impede China's effort to achieve this end. On the contrary, these political upheavals have served to heighten the political consciousness of the masses, thereby unlock the tremendous energy hitherto not fully tapped, and put it to work for the harness of Nature.

Floods are the result of excessive rain-fall and the inability of the river systems to discharge the flood water. While not much can be done with an adverse weather condition, floods could be prevented if the river systems were harnessed. In China, rivers having a bad record of flooding are the Hai River, the Huai River and the middle and lower reaches of the Yellow and Yantze Rivers. On different occasions Mao urged his countrymen to harness China's problem rivers: "The Huai River must be harnessed" (1951), "Work on the Yellow River must be done well" (1952), "The Haiho must be brought under permanent control" (1963).

Although each of these rivers has its own characteristics such as volume of flow (cu meter per second) and silt content (Kg per cu meter of water); and has to be treated on its own demerits separately, the general strategy adopted by the Chinese to control them seems to follow a fix pattern comprising the following steps:

- (a) Mass mobilization of labour in winter and spring to do water conservancy works, often 300,000-500,000 men were involved at any one time. In times of emergency such as threat of dykes being reached, millions of men had been called up to strengthen dykes.
- (b) Dredge old river channels.
- (c) Strengthen dykes and build new ones.
- (d) Construct reservoirs and retention dams in upper reaches.

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- (e) Construct new outlets to the sea.
- (f) Mass afforestation in catchment areas and on all embankments and along drainage channels.

This strategy is well-illustrated by the way the Yellow River is harnessed. At the Yellow River Delta in the vicinity of Taoshu, (see map) a small town on the south bank, 4 kilometers of diversion canals, 28 drainage ditches and 17 small conservancy works were built to facilitate the flow of water to the sea.¹⁾ To the North, around Peichen, commune members erected over 40 km of flood breaks, dredged 5 channels to the sea, dug three trunk canals through 1,300 ha of newly-reclaimed cropland and set up 3 pumping stations for irrigation.²⁾

On the Yellow River Plain, between Kaifeng and Huayuankou, a labour force of 300,000 to 400,000 from Honan and Shantung was deployed every winter and spring to heighten and reinforce the 1,800 km of dykes – a task involving 380 million cubic meters of stone masonry.³⁾ Today, after twenty years of hard work, the river is contained by dykes on both banks lined by rows of trees.

At the border between Shantung and Honan, a flood retention works was built on Tungping Lake. It consists of 5 giant locks which can mitigate the crest force of a flood at 22,300 cubic meters per second. Also the river course has been widened from 1 km to 4 km and 17 regulating systems have been completed to control the flow of the river.⁴⁾

Water from the Yellow River, once out of reach because the river was 10 meters above the land on both sides, has now been used for irrigation. In Shantung alone irrigation siphons, culverts, and pumping stations have a total lifting power of 2,000 cubic meters per second, watering 533,000 ha of farm land of which many are newly reclaimed paddy fields.

The silt from the water is also utilized by diverting the silty water into low-lying sandy land. The precipitated silt mixed with sand to form a gravelly sand which is used for dyke building, while the water is channelled into canals for irrigation.

The core of Yellow River's trouble is the tremendous amount of silt, 1600 million tons brought down from the Loess Plateau each year⁵⁾ to the lower reaches. The silt content is 37.6 kilos per cubic meter of water which, in high water season, can rise to 651 kilos. This is because 74% of the Loess Plateau (total area: 580,000 sq.km) has been seriously eroded. To reduce the amount of silt washed down the river after each heavy rain, a large-scale soil conservation and afforestation is

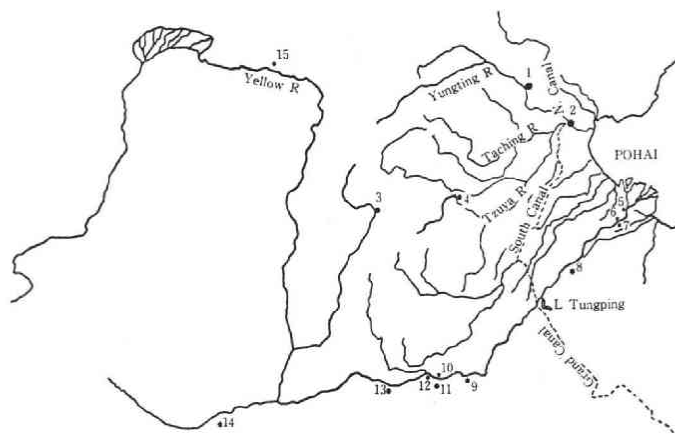
1) **Foreign Languages Press Peking** (1975): *Along the Yellow River*, p. 138

2) *ibid.*, p. 139

3) *ibid.*, p. 124

4) *ibid.*, p. 125

5) *ibid.*, p. 80

The Yellow and Hai River Basins

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|------------------|----------------|--------------|
| 1. Peking | 6. Peichen | 11. Chenchow |
| 2. Tientsin | 7. Taoshu | 12. Taohuayu |
| 3. Taiyuan | 8. Tsinan | 13. Loyang |
| 4. Shichiachuang | 9. Kaifeng | 14. Sian |
| 5. Lichin | 10. Huayuankou | 15. Paotow |

necessary. In view of the huge areas involved, this is a hard and long-term task. But the initial steps have been taken as shown in the example of Chuyu Brigade of Hsunchen commune, Hochu County, Shensi.⁶⁾

People of Chuyu Brigade, after twenty years of hard work, have built a 5 km dyke, planted with a belt of trees 20 m deep. Channels were dug to flood the area of the bank behind the dyke with rain water running down the hills. The silt deposited by this water year after year gradually built up the former bank, until about 270 ha of land with fertile soil 3 meters deep were obtained. Now this land is used for the production of food and fruits.

In the 12 deep gullies, some of which are several kilometers long and hundreds of meters wide, dams were built to hold back water in rainy season and retain silt for making terraced fields which are covered with crop land and orchards. On the sun-facing slopes grapes are grown whereas trees cover the northern slopes. On high mountains a system of irrigation ponds and terraced fields edged with bushes to hold them up has also been constructed.

Today Chuyu Brigade can say with pride that 95% of their farm land has been freed from water loss and soil erosion. The example of Chuyu Brigade is being copied throughout the Loess Region, and given time the Loess Plateau will turn green and the problem of water and soil conservancy will be solved.

6) **Foreign Languages Press Peking** (1975): *Along the Yellow River*, p. 81.

With equal dedication and determination the people of North China Plain (between Yellow River in the south and the Great Wall in the north) work hard to harness the Hai River (Haiho) with a total drainage area of 265,000 sq.km. Within this huge river basin live 70 million people on some 12 million ha of arable land.

The Haiho is composed of 5 major rivers and waterways (the South Canal, Tzuya River, Taching River, Yungting River, and the North Canal) together with more than 300 tributaries (see map). The main problems in the Haiho basin are flooding, waterlogging and droughts.

In 1964 work on large scale projects to conquer Haiho began. By the end of 1970, the people of Hopei, Shantung, Peking and Tientsin practically brought the southern and western part of the Haiho system under control. (Table 1)

Table 1 Taming the Haiho

Location	Projects completed	Year
South and Western section of Haiho System	Dug 19 new river outlets totalling 1600 km. Construct 14 large dykes totalling 1400 km. Built 14,000 reservoirs.	1964-1970
Heilungkang area	Dredged 9 major rivers and over 30 tributaries	1965
Tzuya and Taching Rivers	Dug Tzuya Canal (145 km long 2.5 km wide) and Fuyang Canal (133 km)	1966
Taihang Mountain area	Planted 130,000 ha of trees and built 400 reservoirs	1970-71
Yungting River area	Yungting Canal (60 km) completed	1971

Compiled from *China Tames Her Rivers*, 1972, 32-42

In 1971 summer, work on the northern system of Haiho was already in full swing with the completion of the 60 kilometer Yungting Canal to the sea. This canal thus removes the threat of the Yungting River flooding Tientsin and the Peking-Shanhaikuan Railway.

The problem of waterlogging is tackled through the construction of a vast network of drainage ditches and channels. Meanwhile droughts are combatted with a spider-web like irrigation system, supplemented with the sinking of 497,000 wells from 1966-1973.⁷⁾ Today wellwater irrigates 2.66 million ha of farmland which is two thirds of the total irrigated area. The availability of water in drought condition (1972 was a good example of a bad drought year) enable a bumper crop to be harvested, thus reverting the age-old situation of transporting grain from south China to North China. (One of the purposes of constructing the Grand Canal was to transport rice to the courts in Peking.)

The provision of good irrigation and drainage system has come a long way to

7) **Ho Chin** (1974): *Haiho: A Record of People Devoted to Tame Rivers**, 85p. (* in Japanese)

solve the problem of alkalization of the soil. Today the areas affected by alkaline soils in Hopei Plain have been reduced to less than half of the previous figure.⁸⁾

In the battle against strong tidal waves which surge up the Hangchow Bay twice daily, the people of Chekiang have constructed huge stone dykes (total length 300 km on both sides of the Bay) some 6-7 meters high above water. This successfully prevented the loss of farm land and salinization of soil. Check dams along the coast of northern Kiangsu have also been renovated to protect arable land and soils.

In the arid northwest, especially provinces bordering the deserts, and along the old river beds and coastal sand-dunes, drift sand has long been a menace of immense proportions. This sand swallowed up fields, vegetation, houses, roads and even villages. Since 1952, sand-anchoring belts 1000 km long and 500 km wide have been constructed to stop the drifting sand from advancing southeast-ward. Vast expanses of sand in northwestern Kansu and in the area of south of the Yellow River in Inner Mongolia have been stabilized by grass and other vegetation after a struggle lasting for 22 years.⁹⁾

The reclamation of the Gobi Desert is another example of man's struggle against Nature and succeeds in stabilizing the countless number of sand dunes by planting sand date trees in the drifting sand. The process requires the plasting of clay which has to be carted in elsewhere on the sand first, then plant the sand dates. Once the sand dates take root the dune is stabilized. Then deep wells are sunk into the sand to tap the underground water for irrigation. In Minchin county (bordering Kansu and Inner Mongolia) alone 230 million trees had been planted between 1952-1973 and 2,650 wells had been sunk to irrigate farm land reclaimed from the barren sands of the Gobi.¹⁰⁾

The Chinese will stop at nothing to better their environment. Hills are levelled or terraced to create new fields, gullies are filled to provide a few extra hectares of land to produce food while mountain slopes too steep for agriculture are planted with trees. All major problem rivers have been harnessed and irrigation acreage is expanding year after year. It is the result of twenty-seven years of hard work and the investment of tremendous amount of human labour. There were many heart-breaking moments in these long years of struggle: inevitably

8) **Commercial Press Peking** (1972): *Chinese Geographical Knowledge***, 51p (** in Chinese)

9) *ibid.*, p. 54

10) **Burchett, W. and Alley, R.** (1976): *China: The Quality Life*, p. 308

It is not known whether the Chinese intend to reclaim the fringe or the entire Gobi Desert as no detail plan is available. It seems while it is quite possible to achieve the former, the latter task might never materialize as man has not yet the power to change the macro-climate.

mistakes were made and human lives sacrificed. However, the Chinese have demonstrated they can achieve what the Western experts dare not to contemplate, because all the Chinese projects are uneconomical and too wasteful in terms of man power to Western eyes. What other government can persuade her people to stay in an environment as barren and hostile as Tachai or Sand Stone Valley and produce not only sufficient food for themselves but also a surplus for the state? To the Chinese no price is too high, no experiment is unworthy of the effort, if a change in the natural environment will bring benefits not only to this generation, but for many generations to come.

Improvement in the standard of living

No one, who has visited China, will disagree that China is no longer a land of famine and diseases. Even during the hardest years of 1959–1961, when food shortages were widespread and strict rationing had to be administered, there were no death due to starvation. At no time did China ask International Relief Organization for assistance as she did so often in pre-1949 days. Since 1970 China had been able to produce 240–275 million tons of food (grains and other foods e.g. sweet potatoes) annually despite adverse climatic conditions in some year notably in 1972. It was true China did import wheat from Canada and Australia from 1961. The largest quantity was 6.4 million tons in 1964 but the amount was a drop in the ocean compared to China's own production and this certainly would not ease the situation if a serious food shortage really occurred.¹¹⁾ At the same time China also exported a similar value of rice to other countries. Therefore, China's food imports should not be interpreted as an evidence of crop failure and resultant serious shortages. Other factors were also operative:

- (a) China might wish to replenish her depleted stock of wheat while the price was favourable.
- (b) China intended to use trade as a bargaining power to win friends among the Third World, and as an effective weapon against the conservative forces which still lobbied for the recognition of Taiwan government as the sole legal government of China. A case in mind is Japan and Australia before 1972.
- (c) Rice fetched a higher price (40 pound sterling per ton as against wheat, 25 pound sterling per ton) on international market. There was a definite economic advantage of selling rice to buy wheat.
- (d) As China's railway system still could not meet the demands of her increasing volume of freight and industrial growth, it would be easier to import wheat to meet the needs of the northern cities rather than ship it from

11) SUM, K.S. (1974): "China: Facts and Fallacies", *Gazette*, 7, 11–16.

regions of surplus such as Szechuan and Hunan thousands of kilometers away.

Of course China watchers are never slow to read sinister meanings into the wheat deal such as the use of import wheat to support the rations of favoured groups while the masses were inadequately fed as suggested by Dawson.¹²⁾

The communes with their social facilities now ensure the basic needs of their members are met. Though rice, cotton cloth and oil are still rationed, this is to assure a fair and efficient distribution of essential commodities rather than the result of a shortage in supply.

Naturally the vast diversity in China's physical geography creates problems which differ from region to region. For instance, in the Loess Region, improvement in housing becomes a pressing issue as it is dangerous to continue to live in caves which could easily be destroyed by slight earthquakes. Nowadays, many brigades and communes have built stone or brick houses with tiled roofs (e.g. Tachai Brigade). However, in the humid south, improvement in housing is not as urgent as the extermination of tropical diseases particularly schistosomiasis. Hence priority is given to the combat and control of diseases than to better housing at this stage. (writer's observations in Kwantung Province 1975) This does not mean that people are living in slum conditions as in squatter areas in Hong Kong. Some new houses have been constructed and will be built according to needs, whereas in the old ones, basic general hygiene are strictly observed. It is the writer's impression that large-scale housing programme must wait until other more urgent problems are satisfactorily dealt with.

Perhaps one of the outstanding social benefits of China's socialist system is the way the aged are being looked after. In a Western society, the old people, if they can still pay the bills, are left to rot in old people's homes. For those who have not got the means, they are not to be admitted in the first place. They find themselves a unit in one of the many high-rise buildings and spend the rest of their lives among indifferent neighbours. In times of emergency like suffering a stroke or heart attack, the victim will be left to die without anyone knowing what had happened or offering any assistance. In Sydney and Melbourne, there were cases where old folks had died several days in their homes without being discovered.

In a brigade or commune the organization is such that every member becomes part of a huge productive machine. Any weak components, in this case, the aged, will be identified and given jobs befitting their capacity. For example old men are asked to look after chickens and ducks and old women to help teachers in a nursery. This has great psychological value. It makes the old people feel

12) Dawson, O.L. in J.L. Buck, O.L. Dawson and Yuan-Li Wu (1966): *Food and Agriculture in Communist China*, p. 106

they are still useful and needed. Because these old people are doing light routine work, anything happened to them will be at once noticed and assistance given.

One may well ask, since China is still heavily dependent on human power what can she really get out of these old folks? The fact is China does not evaluate everything in terms of cost and profit. China believes that the aged, though physically weak, are rich in valuable experiences and these would be useful to the young.

Western critics often like to single out the low personal income of the Chinese as proofs that despite China's effort, life in China is still poor and miserable compared with life in Hong Kong let alone other advanced capitalist countries. Judging by the figures alone (the average worker earns about 70–100 yuan per month i.e. about US \$ 35–US \$ 50), the income level of the Chinese is indeed very low. But this low income must be viewed in the light of the very low prices of all essential commodities, the very low housing costs and other services are either free (education) or extremely cheap (medical). Since 1949, there is no inflation – an illness that has constantly troubled the Western world and for which there is no cure even at the expense of employment. As China's productivity increases, prices of goods actually decrease both in real terms (certain items are cheaper now than before) and relatively because while there is no inflation people's income is steadily increasing, though by a small amount.

In a Western society where the gap between the rich and the poor is so wide that, in fact, it is misleading to speak of the average income. For instance, in 1962 there were no fewer than 80 thousand millionaires in the US and in 1968 they were so numerous that the numbers were no longer publicly announced.¹³⁾ Yet a black labourer working in a cotton field in the South only earned US \$ 3 for a 12-hour day or US \$ 180 per month.¹⁴⁾ What is alarming is that the very rich which constituted to 1.6% of the US population, are allowed to possess 32% of all the personally owned wealth. Whereas 35 million families, according to Shriver,¹⁵⁾ were poverty stricken i.e. with annual family income below US \$ 3130. For those living below the poverty line, the average income is nothing but an ironical statistic.

Similar situations exist in Western Australia and in Japan. In Western Australia the rich live in high-class suburbs where the value of land alone amounts to A \$ 300,000 per ha. On the other extreme the aborigines often have to live in tents or shanty homes made of boards and cardboards on the outskirts of Perth.

13) Greene, F. (1971): *The Enemy: What Every American Should Know About Imperialism*, p. 254

14) Greene, F. (1971): *ibid*, p. 250

15) Sargent Shriver was Director of the office of Economic Opportunity in the Kennedy and Johnson Administration.

In Japan senior executives of giant co-operations such as Marubeni live in residences with well-tended gardens and water ponds full of golden carps in a prime suburb in Tokyo, which already has the highest land value in the world. On the other extreme casual labourers in Amagasaki near Osaka have to tolerate appalling crowded living conditions, which due to the lack of ventilation are even more unbearable in summer (Trident TV Report: Japanese Experience Part I, Road to Amagasaki, 1975).

In China such polarization between the rich and the poor does not exist. Admittedly there are differences in income level between agriculture and industry. Even within a factory, there are seven grades of salary. But the gap between the highest salary worker and lowest salary worker is small in monetary terms. Furthermore by rationing all essential commodities, by regulating the supply of luxury items, by eliminating all speculative investments such as stocks and shares, land-purchase, etc. the magic power of money is greatly curtailed and one's social position is unaffected by a higher income. For instance the Chairman of a Revolution Committee of a factory (equivalent to a managing director in the West) does not have a private car, though he will have access to a vehicle on official business. In China, therefore, it is more meaningful to speak of an average income. Life in China is simple, but certainly not poor and miserable, considering the wide range of free and cheap services the society provides. Will China ever become a land of plenty? Definitely not, if it means the formation of a consumer society in the Western sense. A consumer society is founded on individualism, greed, ambition, power and self-interest, all these characteristics have no place in Mao's socialist society.

Narrowing the gap between rural areas and the cities

Despite China's effort to develop agriculture, (Agriculture as the foundation with industry as the leading factor), a gap still exists between the two sectors in the nation's economy. This phenomenon is not confined to China alone, but also exists in other industrial powers such as Japan and the USA. But unlike other countries, China is making a serious attempt to minimize the differences between the two sectors.

In an interview given to a Japanese delegation on 23rd March 1973, a Chinese official of the Agriculture and Forestry Ministry outlined the steps taken to close the gap between agriculture and industry:¹⁶⁾

- (1) Rational deployment of production. In old times the location of modern industries was unbalanced and irrational as they were located along the coast and absent in the interior. This resulted in disparity between cities and

16) Oshima, K. (1974): *Things Learned from Tachai**, 202-204.

villages. After Liberation this unbalanced development was rectified with the rapid setting up of industries in the hinterland. At the same time old industries in the coastal provinces were fully utilized. Now local industries have made substantial progress e.g. in the production of fertilizers and cements, the share of local industries amounted to 60% and 40% respectively of the national output. Small-scale iron factories are set up in several hundred counties and small towns. Factories manufacturing tractors, motors and small farm machines were also set up in more than twenty provinces, urban centres and autonomous regions.

- (2) Backing agriculture with industry. Compared with 1962 the production of tractors has increased twofold, irrigation and drainage pumps threefold. Before Liberation electricity was unknown in the villages. Now consumption of electricity in rural areas has increased several hundred times. Besides, chemical fertilizers and insecticides industry are also developed. This support given by industry to agriculture has gone a long way to minimize the difference between agriculture and industry.
- (3) Financial support to agriculture through taxes. Despite increase in production, agricultural tax remained at former level e.g. in 1953 agriculture tax was 12% of total agriculture output. By 1970 this was only 6%. Thus personal income of farmers has been steadily increased.
- (4) Greater investment in agriculture. Since 1953 the total accumulative investment in agriculture was greater than the total agricultural tax collected.
- (5) Increasing credits to agriculture. In 1970 the total credit given to the agricultural sector was 20 times that of the 1950 amount. Moreover, loan interest was very low about 2.16% per annum.
- (6) Giving state aids to brigades and communes suffering from natural disasters.
- (7) Through purchasing of agriculture products at higher prices while freezing the retail price of agriculture produce to urban consumers. The difference is borne by the State.

Moreover educated youths are sent to the countryside to assist and learn from the peasants. So are cultural groups and medical teams, who provide entertainment and medical services to the countryside. Since the Cultural Revolution, the door of higher education is open to youths from rural areas. This interchange of persons (as opposed to interchange of goods alone as it had happened in old China) contributed to the breaking down of the barrier between rural and urban communities.

Technological transformation of agriculture: irrigation, fertilization, mechanization and electrification

At the time of Liberation, crop production in China had already advanced as far as traditional practices and methods would permit.¹⁷⁾ This is because over the centuries China has developed a system of highly intensive farming and land utilization to supply food to her teeming millions. It is obvious there is little room for further agricultural development unless modern farm inputs and new technology are brought into play.

This means China has to launch four major drives: namely irrigation, fertilization, mechanization and electrification of the countryside, so as to ensure agricultural output meeting the demands of her population and industry. As soon as socialist transformation of rural areas was complete through the Land Reform Movement of 1949-52, peasants and workers were mobilized to undertake multi-purpose water conservancy projects to provide water for irrigation, hydroelectricity and transportation. The Sanmen Gorge Project on the Yellow River and the People's Victory Canal in Honan are two of the many examples.

In the arid North China Plain and the dry Northwest, thousands of wells had been sunk to provide water for irrigation. Though much still has to be done, it can be said China has now basically solved her water problem. As a result even in dry years there is no major crop failure. In fact since 1963, China has reported bumper harvest year after year with the exception of 1972 when a serious drought caused some setback in grain production. Yet grain reserve in 1973 as disclosed by Chinese authorities totalled 40 million tons, i.e. one sixth of the annual production.¹⁸⁾ At 1973, China had 1.3 million wells watering 7.4 million ha of land or 14% of the total irrigated area. At present China has 110 million ha of farmland of which about 52 million ha is irrigated. The objective of the next decade is to bring the rest of land under irrigation.

Human and animal manure have been the chief source of fertilizers in China. The Chinese leaders are aware that without further input of fertilizers, per unit yields could not be increased. Hence the call to the nation to keep at least one pig per household as a source of meat and plant nutrient.

At the same time, small to medium-size chemical fertilizer plants mushroomed in all communes in the countryside. These are now responsible for the output of about 60% of China's production. The amount of fertilizers applied on 1972 was about 26.5 million tons of which about 20 million tons are produced in China.¹⁹⁾ In 1974 this was increased to 30,560,000 tons, of which about 5.7 million tons were

17) **Chao, K.** (1970): *Agricultural Production in Communist China*, p. 4

18) **Hayashi, N.** (1975): *The Future of Mankind and Food Supply*,* p. 148

19) **Ho, Ping-ti** (1974): "New China's Characteristics and Achievements: An Historical Viewpoint", *The Seventies*,** 50 March, 4-14

imported. In 1973, as a basic step to achieve self-sufficiency China also signed an agreement to purchase 8 ammonia and 8 urea plants from Kellogg, USA each with an annual output of 365,000 tons of ammonia and 581,000 tons of urea respectively.²⁰⁾ All these plants are now in operation. In the same year China also purchased one ammonia plant (output 330,000 tons) and one urea plant (output 530,000 tons) from Mitsui, Japan and three urea plants from Holland.²¹⁾ All these plants should enable China to meet her fertilizers requirements at the present level of consumption.

If agriculture production is to be increased in future, more fertilizers will have to be produced. In this aspect China's oil and natural gas reserves will play an important role, because they will not only provide China with foreign exchange to import more fertilizer plants, but also supply her with the needed raw materials.²²⁾

Mechanization of agriculture in China means the mechanization of cultivation in north and northeast China, mechanized irrigation and drainage in the southern paddy regions with limited cultivation, and the construction of wells in the major pasture areas.

As Mao pointed out: 'the fundamental way out for agriculture lies in mechanization', China has been trying hard to increase the level of mechanization in farms. Since 1958 China was able to produce her own tractors, mechanized farm tools and motors for irrigation and drainage projects. But as late as 1962 China was unable to produce all the metal necessary to manufacture its farm machinery.²³⁾ However, this difficulty has long been overcome. By 1973 the output of tractors had increased six-fold and hand tractors 32-fold compared with 1965.²⁴⁾ It is reported in 1973 more than 1,500 kinds of farm machinery were made. Among these many could be put to multi-use. There are now not only hand tractors suitable for hilly land and for horticulture, but also various specifications of wheel and crawler tractors for paddy fields, dry fields or land reclamation. Big increases have also been made in the output of internal combustion engines, combine harvesters, pumps, mills for processing farm and side-line products, sprayers and machines for use in forestry, animal husbandry, side-occupations and fisheries.²⁵⁾

20) **Dobi, P.W., Hill, W., and Walk, W.C.** (1977): "U.S. Technicians in China", *The Seventies*, 88 May, p. 4-6 (Chinese translation of original article published in US-China Business Review)

21) **Yamanouchi, K.** (1973): *Chugoku Keizai O Do Miruka*,* p. 234 and p. 236

22) **Yin Tung** (1977): "China's Chemical Fertilizer Industry"**, *The Seventies*, 85 Feb., 61-63

23) **Larsen, M.** (1967): "China's Agriculture Under Communism", 22-43 in Chen Kuan-I and Uppal, J.S. (1971): *Comparative Development of India and China*

24) The tractor output for 1965 was about 25,000 units. Therefore the figure for 1973 was estimated to be 150,000 units. No figure for hand tractors was available.

25) **Hsinhua News Agency** (1974): "China's Progress in Farm, Mechanization", in special issue for National Day, p. 124

Yet despite China's efforts, China is much undermechanized and a great deal remains to be done. At present while China is waiting for the factories to produce more tractors and farm implements, China is transforming the countryside mainly relying on the strong will power and muscles of her people.

Hand in hand with mechanization is electrification of the rural areas. Before 1949 electricity was unknown in many villages and indeed considered as luxury even in county towns. Today electricity serves the basic lighting needs of the farmer's homes besides being the prime source of power for the many small plants and workshops in the communes. Obviously, the supply is still far short of demand, for everywhere there are slogans calling for thrifty use of power. In all communes I visited (1975) only the conference rooms were equipped with electric fans which were switched on only while a meeting was in progress. It seems all available energy is put aside for the purpose of production and comfortable life has little place on the list of priority.

Trends and prospects

After twenty-seven years of struggle—struggle against Nature and against bourgeois traditions and beliefs, China is now firmly set on the road to socialism. From China's past performance several trends have become obvious and these are well-expressed in the following slogans :

- (a) "In agriculture learn from Tachai"
- (b) "Walking on two legs"
- (c) "Grasp revolution and stimulate production"
- (d) "The fundamental way out for agriculture lies in mechanization"
- (e) "In agriculture, take grain production as the main objective with other crops, forestry and animal husbandry as subsidiaries".

Despite China's self-sufficiency in basic food production, her efforts to produce more have never slackened. This is evident from the attempt to improve and expand her water and soil conservancy works, to increase the output of fertilizers and to improve yields per unit area. The objective throughout China is to build stable and high yield fields to counter-act the effects of bad weather conditions. In some advanced brigades and communes this has already been achieved. For China as a whole, the grain production targets (North China: 3 tons/ha, Central China: 5 tons/ha, South China: 6 tons/ha) have been reached or exceeded. Because self-sufficiency in grain at brigade, commune, and provincial levels, it is no longer necessary to transport food from surplus South to deficient North. Short of national disaster such as the Tangshan earthquake in 1976, local grain reserve is sufficient to cope with emergencies at provincial level.

To provide sufficient food for China's 800 million people has always

occupied the minds of the Chinese leadership. At present the race between food and population has been won with the increase of food output slightly ahead of population. But the pressure is there, and is unlikely to reduce until China achieves zero population growth. In order to meet her increasing food demands, China since 1967, went one step further to create Tachai-type counties and planned to spread the movement throughout China. A pace-setter in this drive is Hsiyang county, Shansi province. Through five years hard work, Hsiyang's grain output in 1972 trebled that of 1966 figure.²⁶⁾ Between 1968 and 1976 the county with a labour force of 75,000 put in 55,950,000 workdays for capital construction work. All in all 260 km of stone dams have been built, 3000 new gullies filled, 100 hill tops levelled, 670 hectares of terraced fields and 159 small reservoirs completed. As a result 80% of the county's farmland has been converted into high and stable yield fields.²⁷⁾

Already other counties are trying to emulate the spirit of Hsiyang county. If half of China's 2,200 counties could be converted to Tachai-type counties, the contribution to food supply will be very great. Given China's persistence and her past records in overcoming what in the West would have been insurmountable difficulties there is no reason to believe China will not succeed in her task. In fact by 1980, China expects at least one-third of her 2,200 counties to become Tachai type units.²⁸⁾

The future of China's agriculture is, therefore, very promising. Having had her foundation firmly based on socialism, China is ready to launch new advances in agriculture through new technological inputs. It has often been argued that China's political strifes – the struggle against Liu Shao Chi, Teng Shiao Ping, Lin Piao and now the 'Gang of Four' – have cost China dearly in terms of material progress. The Chinese, however, take a different view. They believe a man's action is determined by his political attitudes. Hence if the attitudes are wrong i.e. self-interest instead of serving the people, the action cannot be correct. Since human nature is unpredictable, and often deteriorates with power and privileges, Mao sees it necessary to purge the Party hierarchy from time to time to weed out elements detrimental to socialism. As the efficiency of a motor-car engine depends on periodic checks or even overhaul of the various components, so the Chinese believe recurrent political purges are essential in the evolution towards socialism. Indeed who could imagine Chiang Ching, an ardent revolutionist when she married Mao could turn to be a major threat to China's political stability after Mao's death? Lucky for China Chairman Hua quickly neutralized the forces of the

26) **Foreign Languages Press** (1975): *Learning from Tachai in Rural China* p. vi

27) **China Pictorial** (1976): 331 (1) p. 10

28) **China Reconstructs** (1976): "A Pacesetting County in Agriculture" 25, (4) 24-30

'Gang of Four' and brought the situation under control. Arm conflict was prevented though there were incidents of intense struggles.

The Chinese society, therefore, does not progress in a straight line, but in a zig-zag pattern. They believe if the general line or direction is correct, deviations or even retreats (like three steps forward two steps backwards) do not really matter. Given time and patience (and the Chinese seem to have both) the final objective will be reached.

While China's agricultural prospect is certain to be better than it is now, the road ahead will be long and zig-zaged. Because of this it will require even greater vigilance and sacrifice of the Chinese people.