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ZHAN WU

The Development of Socialist Agriculture in China

1 ESTABLISHMENT OF SOCIALIST AGRICULTURE

As agriculture in old China was under the multiple oppression of imperialism, feudalism and bureaucrat capitalism, it was very backward and of a semi-feudal and semi-colonial nature. Feudal land ownership subjected the peasants to ruthless exploitation, the land rent usually accounted for more than 50, even 80 per cent of the crops harvested; the reactionary government extorted heavy taxes and duties; the imperialists carried out economic plunder and aggressive wars caused serious damages. All these factors combined to ruin the rural economy and make it impossible for the peasants to earn enough for decent food and clothing despite their incessant toil. Such is the fundamental cause for the stagnation of China's agricultural production over long years.

Under the leadership of the Communist Party of China, the broad masses of the toiling peasants were mobilized and relied upon to carry out land reform, thus putting an end to feudal exploitation and domination in the rural areas. By the end of 1952, land reform was in the main completed throughout the country. Those peasants who used to have no land or little land and who constituted 60 or 70 per cent of the rural population obtained over 46 million hectares of cultivated land without compensation and were exempted from paying 35 million tons of food grains annually as land rent. They also acquired large numbers of draught animals, farm implements and other means of production. In this way, the peasants' enthusiasm was aroused and agricultural production rapidly restored and developed. By 1952, food grains, cotton and other major agricultural crops had attained or surpassed their record levels in the pre-liberation years.

However, individual economy was still predominant in China's vast rural areas, with each family constituting a separate productive unit. Their productivity was low, their ability to combat natural disasters was weak, and a number of peasants still encountered difficulties both in production and livelihood. This kind of small-peasant economy was very fragile, it tended to breed class differentiation, and could not adapt itself

to the requirements of socialist industrialization. In order to change this situation, the Chinese Communist Party formulated its strategy on the agricultural problem. The first step was to bring about agricultural collectivization, and the second step was to realize mechanization and electrification of agriculture on this basis. In this manner, the peasants' enthusiasm released by the land reform could be guided in time to go along the path of socialism.

The policies in effecting China's agricultural collectivization were as follows. Through various concrete and appropriate forms of transition, the peasants were actively and prudently guided to change their zeal for individual economy into enthusiasm for mutual aid and co-operation. In the course of collectivization, the peasants were educated through patient persuasion and demonstration of typical examples. On the principles of voluntary participation and mutual benefit, they first organized themselves into mutual-aid teams, and gradually developed into agricultural producers' co-operatives of the elementary and advanced type. Agricultural co-operation was thus completed by 1957. In 1958, rural people's communes were formed by uniting the agricultural producers' co-operatives. The ownership of the people's commune at present is still collective ownership by the labouring peasants. In the commune, a three-level ownership is instituted, that is, ownership at the commune level, ownership at the production brigade level and ownership at the production team level, with the production team as the basic accounting unit. This form of organization corresponds well to the level of agricultural productive forces in China and the managerial ability of Chinese peasants. It also enables a commune or a production brigade to concentrate necessary manpower or resources in farmland capital construction on a scale much larger than ever before and to set up its own factories and enterprises.

While a socialist agriculture based on collective ownership was established, more than 2,000 state farms and livestock farms were set up, which were owned by the whole people. Although what they produce constitutes a small percentage in Chinese socialist agriculture, yet they play a meaningful role in improving China's overall agricultural layout, providing agricultural commodities and giving a demonstration to the Chinese peasants.

2 SPEEDING UP THE DEVELOPMENT OF SOCIALIST AGRICULTURE

The establishment of a socialist agriculture not only made it possible for the Chinese peasantry to take the road of common prosperity through getting organized, but also guaranteed sufficient supplies of food grains and raw materials as well as an expanding internal market for the development of industry, thus facilitating the socialist industrialization of the country. Furthermore, hundreds of millions of commune members

are enabled with the support of the state to tap fully the advantages of the collective economy of the people's commune to speed up the construction of socialist agriculture and provide conditions for agricultural modernization.

China has a relatively small cultivated area, averaging 0.12 hectares per person. Hence, while doing everything possible to facilitate land reclamation, the main measure for increasing agricultural production at present is to go in for farmland capital construction in a big way and raise the per-unit-area yield of crops. Specifically, the purpose of such farmland capital construction is to build fields giving a high and stable yield despite drought or excessive rainfall, its emphasis is on soil improvement and water conservancy, and its method is to carry out a comprehensive management of mountains, water resources, fields, forests and roads. This means primarily the transformation of the soil of cultivated land and the construction of various water conservancy projects so as to increase resistance to drought and excessive rainfall, improve soil fertility and ensure a high and stable yield.

In the light of China's specific circumstances, stress is laid on farmland capital construction, on the principle of "working according to local conditions and for practical results"; overall planning and integration of large, medium-sized and small projects is practised. Generally speaking, the central or provincial government is in charge of overall planning and technical guidance of projects covering whole river basins, and implements key projects, as well as rendering material and financial assistance to communes and brigades. Medium-sized projects are usually undertaken jointly by several counties or communes. Small projects and field works are jointly carried out by several brigades or production teams, or by the related production team alone. In this way, full play is given to governments at various levels as well as the people's communes so that big, medium-sized and small projects form an integrated network in stimulating the development of the farmland capital construction and achieving quick economic results.

As a result of the above principles and measures, farmland capital construction has made steady progress in China. Since the beginning of the 1970s, nearly 100 million people have engaged in this work each winter season; on top of this, about 28 million people work in farmland capital construction all the year round. Displaying the *Dazhai* spirit of "self-reliance and hard work", they have made remarkable achievements, by using simple tools. By August 1978 more than 81,000 big and medium-sized reservoirs had been completed throughout the country, increasing the total irrigated area from 16 million hectares in 1959 to 47 million hectares in 1978. Of the 22 million hectares of land susceptible to waterlogging, 13 million hectares had initially been improved. 6.7 million of the 26 million hectares of sloping land had been terraced. In the course of farmland capital construction, over 80,000 small hydro-electric power stations had been built. These farmland works have played their part in resisting serious drought and flood which have occurred in China during

the past few years and ensured the steady development of China's agricultural production. Consequently, despite the unusually serious drought of last year, gratifying increases were recorded in China's agricultural production.

Although farmland capital construction has in a certain degree transformed basic conditions for agricultural production, it remains essential for the development of agricultural production to institute technical reforms and apply science to farming in accordance with local conditions. That is what is meant by implementing, in an all-round way, the "Eight Point Charter for Agriculture" formulated by Comrade Mao Zedong. In other words, while going in for water conservancy and soil improvement, it is important to apply more fertilizer, use improved seeds, control diseases and insect pests, reform cultivation patterns and adopt all effective measures in a comprehensive way, in order to raise crop yields by a large margin.

Application of more fertilizer is an effective way to raise yields. While trying to increase the amount of organic manure applied, grow more green manure crops and use plant residues as fertilizer, China is making every effort to ensure the application of more chemical fertilizer so as to add to the total amount of fertilizer available for the fields. In developing her chemical fertilizer industry, China builds medium-sized and small chemical fertilizer plants along with big modern plants with a view to rapidly increasing the supply of chemical fertilizer. By the end of 1978, the average amount of chemical fertilizer applied in China reached 367.5 kilogrammes per hectare, a fact that had significantly helped to increase agricultural production.

Farm mechanization is one of the key links in the modernization of agriculture in China. In the past 20 years and more, our agricultural machinery industry has started from scratch and developed rapidly. During the eleven years from 1966 to 1976, the number of big and medium-sized tractors in China has increased at an annual rate of 20.3 per cent, while walking tractors increased by 46.4 per cent each year. In 1978, 46 per cent of the total cultivated area was ploughed by machine, with 141 HP per 100 ha.

In the process of farm mechanization the Chinese Government stresses the importance of working in accordance with the actual conditions. Mechanization must correspond with and promote the reforms of cropping systems and cultivation techniques. Agricultural machinery must gradually achieve standardization, serialization, and universality. Power machinery and working machinery should be in proper proportion and form complete sets working in unison. Tractor stations are of two types: one is owned and run by the commune, i.e. the commune or brigade buys tractors and may get state credit when it is short of funds. The other kind of tractor station is owned and run by the state, which sets up tractor stations to serve communes and brigades at appropriate charges. Of the two types, the former is predominant.

At present, our country is increasing investments in focal areas in a

planned and gradual way to supply complete sets of advanced agricultural machinery to state farms, communes and brigades producing a large percentage of commercial products, enabling them to serve as models in agricultural production. In this way, mechanization can be realized step by step.

The modernization of agriculture requires development of scientific research and education in agriculture to train large numbers of qualified agro-technicians, scientists and management specialists. By 1978, integrated or special scientific research organizations had been set up at national, provincial and county levels. In education, there are now 45 agricultural universities and colleges and 234 specialized agricultural schools. As early as 1958, a network of scientific research and experimentation began to emerge, which covered units at county, commune, brigade and production team levels.

People's communes have their own stations for giving guidance in science and technology, some of which have experimental farms attached to them. Brigades and teams run scientific research groups, each with its experimental plots, which demonstrate and extend advanced science and technology under the guidance of research organizations at higher levels. Improved varieties are dominant in the cultivation of rice, wheat, corn and cotton throughout the country. Much work has been done in pest control.

In order to accelerate the modernization and rapid development of agriculture, emphasis has been laid on the development of enterprises at commune and brigade levels.

By the end of 1978, 80 to 90 per cent of China's communes and brigades have set up a total of more than 1.4 million various enterprises, whose output value makes up 31 per cent of the total income of the communes, brigades and teams. This has transformed the economic structure of the commune, and strengthened its collective economy.

The commune/brigade-run enterprises serve agricultural production and the people's daily life, as well as the requirements of large industry and exports. Falling under many kinds and varieties, they generally make use of local resources, by going in for cultivation and breeding, farm and sideline produce processing, mining, building agro-machinery, transport and so on, according to local conditions. In terms of output value, industrial enterprises make up the greater part. Urban industrial enterprises often transfer to them the production of some products and parts which can be best handled by commune- and brigade-run enterprises, supplying them with the necessary equipment and techniques. The state will gradually incorporate commune- and brigade-run enterprises into overall planning at different levels through signing contracts with them for sales, production and purchases. Communes and brigades are allowed to sell some of their products themselves. Joint enterprises can also be run by communes and brigades if necessary.

The development of commune- and brigade-run enterprises had given a great push to the development of a socialist countryside. Firstly, it

provides agricultural production with funds, techniques and equipment. Modernization of China's agriculture requires enormous financial resources and equipment. Apart from state investments and proceeds from agricultural production, the income of commune- and brigade-run enterprises plays an important role in the accumulation of funds. In 1977, for example, funds coming from the profits of commune- and brigade-run enterprises for farmland capital construction and purchase of farm machinery were equal to 60 per cent of state investments in agriculture. Secondly, commune- and brigade-run enterprises, being located in the countryside, link up agriculture closely with industry, enabling industry to play its leading role and serve agriculture better. Thirdly, commune members engaged in these enterprises are both workers and peasants, working at the enterprises most of the time but helping in the fields during busy seasons. This helps to narrow the gap between workers and peasants. Fourthly, the fact that industries processing grain, oilseeds, cotton, fruits, poultry and aquatic products come to be located in the countryside reduces transportation costs, promotes comprehensive use of agricultural and sideline products and rationalizes production generally. Fifthly, the development of commune- and brigade-run enterprises provides employment for the manpower released by mechanization, avoiding the unchecked expansion of big cities and facilitating the emergence of medium-sized and small towns. All this, as Comrade Mao Zedong pointed out, "Our great and brilliant hope lies here."

3 ACHIEVEMENTS, PROBLEMS AND PROSPECTS

Under the leadership of the Communist Party, China's hundreds of millions of peasants have made remarkable achievements in the socialist construction of agriculture through their hard work. From 1949 to 1978, the nation's total output of food crops increased by 1.6 times, that of cotton by over 3.5 times, and the production of other crops, forestry, animal husbandry and fishery also increased by various degrees. All this has helped to solve basically the problem of feeding and clothing China's 800 million people. Yet on the whole, China's agriculture is still backward compared with advanced countries, as demonstrated by her underdeveloped means of production and science and technology, and low labour productivity, management level and income per caput. For nearly thirty years, China's agriculture traversed a tortuous path. During the first eight years after liberation, it developed fairly fast and the nation's grain output registered an average progressive increase of 7 per cent a year. But it slowed down in the following years. Worse still, during the Cultural Revolution, due to the sabotage of Lin Biao and the "gang of four", China's agriculture kept a low pace of development and saw unbalanced progress in different areas.

Over twenty years' practice in agriculture have convinced us: first, like other economic undertakings, political stability is indispensable to the

development of agricultural production. Second, in developing agriculture objective economic laws must be observed. Agriculture is the foundation of China's national economy – this must find its full expression in the country's allocation of investments for capital construction, in the scale and speed of development of industrial enterprises serving agriculture, and in agricultural credit and in agricultural scientific research and education. Agriculture, forestry, animal husbandry, fishery and sideline occupations should be well co-ordinated and develop in a proportionate way; they should gradually change from self-sufficient production to specialized production on a regional basis. As the current commune system having a "three-level ownership with the production team as the basic accounting unit" is basically in conformity with agricultural productivity, we should stabilize it and fully respect the autonomy of the production team. As the basic accounting unit in the commune, the production team should have the right to decide what to cultivate according to local conditions, what measures to take to increase production, what method of management to adopt and how to distribute its products and cash income. Third, it is essential to give full play to the initiatives of the central government, local authorities, communes and commune members themselves. Being a socialist country with a planned economy, China must co-ordinate the efforts of all sides in the course of modernizing its agriculture, and pay particular attention to tapping the initiatives of the people's communes at all three levels of ownership and of the commune members for doing a good job in agriculture.

On the basis of the experience summarized, Premier Hua put forward at the Second Session of the Fifth National People's Congress a policy of concentrating our efforts within these three years on earnestly doing a good job in readjusting, restructuring, consolidating and improving our economy. In adjustment, we uphold the guiding principle of taking agriculture as the foundation of our economy and concentrate our efforts on raising agricultural production. Government investment in agriculture has increased from 10.7 per cent in the 1978 economic plan to 14 per cent in 1979. Purchasing prices for farm and sideline products have also been raised by over 20 per cent. Agricultural taxes have been remitted or reduced in poor areas. Continued efforts will be made further to implement various economic policies, conscientiously to carry out the principle of distributing income according to one's work, to restructure managerial systems in agriculture, and to respect the autonomy of enterprises, so as to further boost the enthusiasm of the enterprises, commune members and managerial personnel.

In modernizing China's agriculture, we are confronted with many important problems and tasks, for instance, economic structure and management of modernized agriculture, application of modern agricultural science and technologies and their economic results, agricultural specialization on a regional basis and implementation of the distribution of "to each according to his work". These problems can not be solved both in theory and in practice without the participation of agricultural economists.

However, sabotaged by Lin Biao and the "gang of four" in the last decade, research work in the theories and personnel training of agricultural economics practically came to a standstill. Following the smashing of the gang of four, the Party and Government adopted immediate measures in this field. The research institute of agriculture economics was set up under the auspices of the Chinese Academy of Social Sciences, while the research institute of agricultural economics of the Chinese Academy of Agricultural Sciences was restored. Departments of agricultural economics in the institutions of higher learning have one after another begun to enrol new students and post-graduates. Thus research work in agro-economics is rapidly being restored and expanded. In order to strengthen studies in the theories of agricultural economics and to promote the exchanges of research results and relevant data, a Chinese Society of Agricultural Economics has been established. To speed up China's agricultural modernization, it is not only necessary to sum up its own experience, but also to learn from advanced experience and theories of science from other countries. As an agricultural economist, I eagerly hope to strengthen academic exchanges with my colleagues of foreign countries, and I will do my share in promoting mutual understanding among peoples of all countries and in safeguarding world peace.

DISCUSSION OPENING – B. STAVIS

I wish to express my thanks, and I am sure the thanks of all members of the Association, to Mr Zhan Wu for coming here and for presenting such a clear and concise overview of China's experiences over the past three decades. Our general concern about the human condition makes us all most interested in what has been happening to the fifth of humanity in China. Our academic concern makes us especially interested in the results of one of the major distinctive rural development programmes in human history – a programme based on revolution, land reform, a collective ownership of the means of production, and mass consciousness in a concerted effort to achieve both growth and equity.

Zhan Wu's paper highlights one particular factor, namely the importance of political stability. Implicit in this statement is an acknowledgement that agriculture has done well in years of political order, and has suffered in years and places of political turmoil. A full understanding of agricultural and rural development will require an understanding of political policies and processes at the central and local levels.

To meet Glenn Johnson's strict deadline, Zhan Wu sent in his paper many months ago; and after he sent it in, China's State Statistical Bureau published a set of statistics which permit a clearer description of agricultural performance (Table 1). The figures show a long term growth rate in grain production from the mid-1950s to the late 1970s of about 2.2 per cent per year. Population has grown at about 1.9 per cent per year, so grain production per caput has grown at 0.3 per cent per year. If popula-

TABLE 1 *Agricultural production indicators*

	1953	1957	1977	1978
Population (million)	595.5	656.6	948	959
annual growth rate			1.89%	
Grain and soya (million tons)	166.3	195.0	282.7	304.7
grain/capita (kg)	(279)	(297)	(298)	(317)
average		(288)		(307)
annual growth rate			0.3%	
Cotton (million tons)	1.174	1.64	2.049	2.167
cotton/capita (kg)	(1.97)	(2.50)	(2.16)	(2.26)
TOTAL Value Ag. (billion yuan)		53.7	134.0	145.9
ag. value/cap (Y)		(81.7)	(141.4)	(152.1)

Sources: 1953, 1957, State Statistical Bureau, *Ten Great Years*, 1959.

1977, 1978, State Statistical Bureau, "Communique of China's 1978 National Economic Plan," *Peking Review*, No. 27, 6 July 1979, p. 38.

tion growth can be reduced, obviously per caput production can be greater. Grain production has been close to 300 kg/per caput, a relatively high level compared to other countries in Asia – roughly 30–40 per cent above India. It is enough to supply a generally adequate grain diet on average, but does not provide much surplus for local crop failures, or for a meat diet. Cotton production per caput has remained fairly constant, fluctuating with weather and other factors. The total value of agricultural output per caput has gone up dramatically as the rural economy has diversified into high value products. However, we do not know the costs of production and the net revenue from agriculture. It is entirely possible that the net revenues from agriculture have been stagnant. I hope Mr Zhan Wu can comment on the problem of rising costs of production.

China's government budget figures have also been released after the paper was completed, and these figures highlight the complex combinations of policies which are needed. The total rural budget will be about 24 billion yen. However, total investments in industry are almost 60 billion, and national defence takes 20 billion – a lot, but less than expenditure on agriculture. There are other expenditures for culture, science, technology, education, and public health. In short there is a wide range of policies which must be carried out simultaneously.

As Mr Zhan Wu has hinted, a full understanding of rural development in China will require great sensitivity to regional differences. It appears that regions with good infrastructure, with water resources and with access to industrial supplies and urban markets have been growing rapidly. However in some areas, such as North China, this growth has been from a poor beginning and the standard of living in such regions is still not high and may be vulnerable to the vagaries of nature. This, combined with internal transport and procurement problems, accounts for continued substantial grain imports. These regions have been growing rapidly because of labour intensive public works, but also because of conventional technology. They have been supplied with large amounts of modern inputs, including chemical fertilizer (of which China is now the world's third largest producer) and modern means of water control, including low lift pumps and tube wells. Machinery has been widespread, particularly for ploughing. Mr Zhan Wu has noted that 46 per cent of China's cultivated area is machine ploughed. I hope he will comment further on the impact of such extensive tractorization on cropping patterns and on employment.

At the same time mountainous areas in general appear not to have shared in this growth. They had previously been poor and some of them remain poor or have deteriorated over the last decades. This problem has been particularly severe in the Upper Yellow River plateau. In this region, erosion has been a serious problem for centuries and it seems to be increasing. The total amount of silt in the Yellow River has increased from 1.3 to 1.6 billion tons per year over the past 25 years. This appears to be due to a policy of forcing these areas to be self sufficient in food, even if they are not well suited for grain production. They have been unable to

specialize in animal husbandry and in forestry products, which would have been more stable ecologically. At the same time there have been major constraints on out-migration from these areas, so that population pressures remain high. The problem of how to develop poor mountainous areas remains a problem in China as in other countries.

The collective ownership system in China has presumably had a major impact on equity. It is for this reason that we have not heard this morning about small farmers who cannot get credit or about landless labourers being forced to migrate. I would, however, note that there are few consumption or income surveys available from China, which could allow empirical confirmation of the equity impact of Chinese policies.

At the same time the Chinese experience has shown some of the difficulties in managing collective agriculture. Pressure for egalitarian wages has been strong, and this has meant weak individual incentives for planning; arbitrary bureaucratic commandism has been a constant problem. In the last few years there have been new examples of commandism, in which production teams have been forced to adopt a costly triple cropping pattern.

The problem of who controls the managers is a political problem which was identified by Greek philosophers over 2000 years ago, and it has not yet been settled and is probably a problem without final solution. In the past decade the Chinese have made some remarkable experiments with mass participation, training, ideological consciousness and face to face criticism and self criticism as a way of controlling the controllers. It now appears that this system has not worked adequately, except when strong willed local leaders were present.

The Chinese are now accepting much more conventional approaches, namely reinforcing the property rights of collective units and encouraging voluntary negotiations of contracts between production units. They are trying to end the bureaucratic command of targets and other economic relationships. The Chinese are contemplating competition between suppliers, and are requiring more rigid accounting of profit and loss and more market interactions to ensure efficiency. These modes of interaction seem particularly important as the economy grows more complicated and as enterprise and regional specialization become more important.

I hope that over the years to come we can find out the most important question, namely, how do people feel subjectively. Do they feel they have a good balance between individual, family, village and national rights and obligations? Do they feel they are participating in creating their own future? Has socialism reduced the problem of alienation that otherwise seems an unavoidable part of modernization?

To return to Mr Zhan Wu's point on political stability, I wonder if bureaucrats will easily give up control of the economy to market forces. I wonder if everyone in China agrees with the definition of socialism that emphasizes economic efficiency? Is not some political struggle likely in the future?

These are not the kind of questions that the speaker or anyone here can

answer in a few minutes. Rather, the answers will gradually emerge after years of normal scholarly exchange, which we are all pleased to have initiated today.

GENERAL DISCUSSION – RAPPORTEUR: SHEILA DICKINSON

In response to questions about methods of price determination Mr Wu explained that for the main commodities prices were fixed by government through a price control bureau. For some unimportant commodities local authorities could decide the prices. At rural fairs, however, prices could be negotiated between buyer and seller.

It was suggested that the reward system was important and also that the effect of distributing to each according to his work was similar to that now introduced in Eastern Europe. Mr Wu had not studied the latter point. He explained, however, that although food grain was distributed partly according to basic needs it was also partly distributed according to the work contribution, as was the whole of the cash distribution.

A discussant asked what were the two most important human factors in raising productivity and how they were incorporated in the production process. In response it was suggested that a good job had to be done in ideological terms and good democracy practised. In addition attention must be paid to the national economic interests involved and this was now being currently discussed. The most important point was the principle of “to each according to his work”. When this had been followed enthusiasm was high, productivity and output rose and costs were reduced. There was a great difference where the principle was not accurately observed and egalitarianism was practised. Control over production costs was, however, a weak link and in certain areas costs had risen because of an increase in physical inputs.

The nature of individual enterprises at local level was also queried. Mr Wu explained that the enterprises described in his paper were owned by communes, production brigades or production teams and their autonomy had to be respected. Private enterprises referred only to household sidelines. In reply to a question about the adoption of mathematical economics, Mr Wu explained that this was a new subject which they were just beginning to learn to use.

The importance of stability was emphasized. It was suggested that this and other material reasons for China’s agricultural development might not be available elsewhere, and the question was raised whether Chinese experience could be replicated in other developing countries. It was also pointed out that increased mechanization, with an increased requirement for capital and reduced requirement for labour, implied more specialization and the emergence of new kinds of organization and might lead to a clash between the aims of employment and growth.

Participants in the discussion included Walton J. Anderson, Ichiro Kaneda, Raphael S.J. Shen, I. Fendru and Benedict Stavis.