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TAIHU AGRICULTURAL DISTRICT : THE DEVELOPMENT OF THE RURAL ECONOMY

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## 1. INTRODUCTION

Taihu agricultural district in Southern Jiangsu is an area of comparative well-being in contemporary China. The aim of this paper is to trace the development of the rural economy of Taihu in recent years, outlining the important policy decisions and advantages of the area which have worked to the benefit of the rural economy.

Taihu agricultural district is in itself not an administrative unit and inevitably this paper draws on material which refers to a particular part of Taihu - be it prefecture, county, commune and so forth - rather than the district as a whole. While geographical differences are inevitable within Taihu, sufficient physical similarity exists at a macro-level to justify viewing Taihu as a single geographical area and reaching conclusions about it.

## 2. TAIHU : THE SETTING

Though Jiangsu is one of China's smallest provinces, marked regional differences in agricultural production forms and outputs exist. She Zhixiang (p.104) points out that there are three different bioclimatic zones contained within Jiangsu : from north to south these are first, a warm temperate zone of deciduous and broadleaf forest with brown earths; secondly, a northern sub-tropical zone of deciduous and broadleaf mixed forests with yellow-brown earths; and finally, a middle sub-tropical zone of evergreen and broadleaf forests with yellow earths. The quantity of heat retained in the soil, and the water content of the soils in these zones, fluctuate and have a deep influence on the cropping systems.

Jiangsu has a varied topography and furthermore, because of their different proximity to the sea, the climates of Eastern and Western Jiangsu are somewhat different. These numerous factors have an important effect on farmland capital construction, soil improvement and the schedule of crops.

Since the early 1960's, on the basis of the natural conditions of the province, Jiangsu has been divided into six agricultural regions (see map : *The agricultural regions of Jiangsu province*). The general characteristics of these agricultural regions have been analysed by Shan Shumu *et al* and can be outlined in the following table:

TABLE 1. THE SIX AGRICULTURAL REGIONS OF JIANGSU, 1979

Agricultural district	Gross area (km <sup>2</sup> )	Rural population (millions)	Cultivable land (millions of mu)	Agricultural land availability (mu per person)
Xuhuai	34500	15	25+	1.7
Lixia he river	16700	7.7	11	1.43
Yanghai (coastal)	10900	5.3	7.6	1.4
Yanjiang	10700	8	8	1
Zhenyang	14500	5.35	7.75	1.44
Taihu	14800	8.2	10.25	1.25
Jiangsu province	102100	49.55	70.583	1.4 <sup>1</sup>

<sup>1</sup>Red Flag 19.5.1980, p.30 gives a figure of 1.2 mu per person

Compiled from materials in Shan Shumu et al, p.116-122.

The six agricultural districts can be divided into two groups. The first group consists of Xuhuai, Lixia river and Yanhai (coastal) agricultural districts in the north of Jiangsu. Traditionally backward, these areas have seen much improvement in their agricultural resource base since 1949 following extensive agricultural capital construction.

By 1978 Xuhuai was Jiangsu's fourth largest commodity grain base and had a broadly-based diversified economy, although its full potential still has to be realised. In 1978 Lixia was Jiangsu's second largest commodity grain base and was also developing into a pig-breeding base as well as exploiting its abundant aquatic resource potential. While dual problems of waterlogging and salinity keep grain yields low in Yanhai, cotton production has developed to such a degree that Yanhai is now Jiangsu's largest cotton base. In addition, Yanhai's fishing industry, centred on Beikan, Huanggang, Jianggang, Huangshagang and so forth, is strongly developed and the potential of its livestock resources is also growing.

The physical and economic characteristics of these three districts are synonymous with those of the North China plain, districts which have traditionally suffered from the high-output-poor trap. Yet, since 1949, they have made exceptional progress by the standards of the North China plain to a position today of comparative well-being.

In contrast, the second group of Yanjiang, Zhenyang and Taihu agricultural districts in the South of Jiangsu are markedly prosperous agricultural areas. While Zhenyang owes much of its prosperity to agricultural capital construction since liberation, all three districts now enjoy diversified economies and high commodity circulation rates.

Yanjiang grows cash crops - especially cotton, peanuts, jute, peppermint and spearmint - with much success. In addition its livestock economy is well developed. Zhenyang is considered to be a general foodstuffs commodity production base, annually supplying the state with 1200 to 1400 million jin of foodstuffs (Shan Shumu et al). In addition the district has as yet largely undeveloped potential for livestock-breeding as well as 37% of Jiangsu's forestry resources - although Maoist over-emphasis upon grain had a serious negative impact upon the economic forests within Zhenyang.

Taihu, however, remains the most prosperous agricultural district of Jiangsu. It is the province's largest commodity grain base, annually supplying the state with 3000 to 3300 million jin (1.6 million tons) of grain - a commodity rate of approximately 35%. This represents about half of Jiangsu's commodity grain. Average per-unit yields of grain easily exceed 1000 jin/mu with yields of 1600 jin/mu, 2000 jin/mu and even 2400 jin/mu common (Shan Shumu et al). At the same time, Taihu is an important base area for silkworm production, oil-bearing crops and fruit. Sideline production and commune- and brigade-run industrial enterprises have also developed to a marked degree.

In comparison to much of China, each of Jiangsu's agricultural districts would seem to be abundantly endowed with natural resources. However, there is little doubt that a distinction can be drawn between the southern agricultural districts of Jiangsu and the northern districts. Furthermore, the superiority of Taihu's resource base seems quite evident. Compare, for example, the multi-cropping index for each region in 1976 and that for selected places in 1975:

TABLE 2a. MULTI-CROPPING INDEXES FOR JIANGSU'S AGRICULTURAL DISTRICTS, 1976

Xuhuai	160 - 180
Lixia river	180 - 210
Yanghai (coastal)	180 - 210
Yanjiang	220 - 240
Zhenyang	220 - 240
Taihu	265

Compiled from materials in She Zhixiang, p.110

TABLE 2b. MULTI-CROPPING INDEXES FOR SELECTED LOCALITIES IN JIANGSU, 1975

Locality	Agricultural district	Index
Xuzhou	Xuhuai	163
Nanjing	Zhenyang	206
Yangzhou	Yanjiang	209
Zhenjiang	Zhenyang	226
Suzhou	Taihu	244
Jiangsu		200

Materials source : Shan Shumu et al, p.109

The southern districts, Taihu in particular, clearly have much higher multiple-cropping values than those of the north. Used as a proxy for productive capacity, the multiple cropping values would indicate that the southern districts appear to be areas of greater agricultural productivity.

The distinction between northern and southern agricultural districts noted above, is reinforced by observations concerning the economic structure of the rural economies of the various districts:

TABLE 3. GROSS AGRICULTURAL OUTPUT VALUE. THE IMPORTANCE OF THE VARIOUS AGRICULTURAL OUTPUTS IN THE AGRICULTURAL DISTRICTS OF JIANGSU, 1976. (%ages of gross agricultural output value)

Agricultural district	Agricultural output	Farming	Forestry	Animal husbandry	Sideline production <sup>1</sup>	Fishery
Xuhuai	78.6	1.7	12	6.6	1.1	
Lixia river	75.6	1.1	11.6	9.9	1.8	
Yanghai (coastal)	79.4	0.7	13	4.1	2.8	
Yanjiang	63.9	1.6	14.5	18.9	1.1	
Zhenyang	74.9	0.9	14	9.5	1.1	
Taihu	61.5	0.8	12.9	23.1	1.7	
Jiangsu province	70.8	1.1	12.8	13.6	1.7	

<sup>1</sup> Sideline production output value includes the output value of team-run enterprises

Materials source : She Zhixiang, p.113

The key element in Table 3 lies in the proportion of gross agricultural output value which Yanjiang and Taihu derive from farming on the one hand, and side-line production on the other, in comparison to other districts. These differences in the structure of the rural economy and productive capability inevitably shape the development opportunities available to the six agricultural districts. This paper intends to use materials drawn from Taihu to indicate how, in recent years, that district has developed its resource base and to note the particular advantages that Taihu possesses which other areas may not have in such abundance if at all.

Taihu then is one of the richest agricultural districts in China. For many years it has been achieving stable high-yields in grain. At the same time rural Taihu can boast a broadly-based diversified economy and its industrial undertakings are expanding rapidly. It therefore comes as little surprise to discover that of the fourteen counties in Jiangsu which had an average annual per capita income of over 150 yuan in 1981, nine were to be found in Taihu (*Zhongguo Nongye Nianjian*, 1982, p.69).

The development of Taihu since 1970 can be broadly split into three phases. The first, beginning in 1970, saw the widespread introduction of triple-cropping into the area. This was very much a phase of increasing grain production by green revolution techniques helped by the continued contribution of diversified undertakings. The second phase, beginning in earnest in the late-1970s is one in which increased grain production was looked for primarily through the strengthening of the agricultural resource base, that is the extension, for example, of stable high-yield land to increase grain output rather than an insistence on triple-cropping, such stable high-yield land built from the profits of commune- and brigade-run industrial enterprises. At the same time diversification continued to develop. The third stage is a statement of the direction in which the rural economy has moved following the policy changes of the third plenary session of the eleventh C.C.P.C.C.

It should be emphasised that the phases of development noted above are not mutually exclusive within an agricultural district or even production unit. Taihu district is, after all, an area of 14,800 km<sup>2</sup> and there is considerable variation within it. Indeed there are a total of thirteen counties included in the Taihu agricultural district as well as the three major urban areas of Changzhou, Wuxi and Suzhou (see map *Taihu agricultural district, Jiangsu province* : the counties and major urban areas). Of the thirteen counties, eight - Jiangyin, Shazhou, Wuxi, Changshu, Taicang, Wu, Kunshan and Wujiang - form Suzhou prefecture

in the East of Taihu, whilst the other five - Yixing, Wujin, Liyang, Jintan and Danyang - make up part of Zhenjiang prefecture to the West of Taihu.

The eight counties of Suzhou prefecture seem to be quite distinguishable from the five counties of Zhenjiang prefecture as the following table illustrates:

TABLE 4. TAIHU AGRICULTURAL DISTRICT, 1979

	Suzhou prefecture (8 counties)	Part of Zhenjiang prefecture (5 counties)	Taihu (5 counties)
Rural population (millions)	3.38	4.8	8.2
Cultivable land (millions of mu)	6.61	3.65	10.25
Agricultural land availability (mu per person)	1.96	.76	1.25
Commodity grain supplied to the state (billions of jin)	2.35	.80	3.15
Commodity grain supplied to the state (jin per capita rural)	695.26	166.66	384.15

Some figures deduced. Compiled from materials in Shan Shumu et al,  
p.116-122. Sun Ming et al, p.50-52

However, while Table 4 does offer some justification to further distinguish Taihu into East and West Taihu, for the purpose of this paper material from Taihu agricultural district as a whole has been used, although most of the material has been drawn from East Taihu, that is to say from within Suzhou prefecture.

### 3. TAIHU'S GREEN REVOLUTION

The heart of the green revolution in Taihu lay in the change from double-cropping to triple-cropping. Shan Shumu et al reveal that 70% of all grain fields in Taihu were changed from double- to triple-cropping. A "two-three system" of cropping was introduced. That is to say, where there had formerly been a winter-crop and a summer-crop, there was now a winter-crop (barley, naked barley or wheat), an early-maturing spring rice crop after the harvesting of the winter-crop, and a late rice-crop. This system is that used by Songjiang county as explained by Mu Jiajun et al. Songjiang county is in Shanghai municipality, but its conditions are close to those in Taihu.

Under triple-cropping the results were far removed from those hoped for. Mu Jiajun *et al* give the example of Songjiang county comparing 1966 when the county double-cropped and 1976 when it triple-cropped using the two-three system:

TABLE 5. SONGJIANG COUNTY. ASPECTS OF GRAIN PRODUCTION, 1966 AND 1976

	1966	1976
Grain yields (jin per mu)	1500-1700	1400
Labour inputs (days per mu)	71.5	125.4
Farm cost (yuan per mu)	21.2	33.5
Value of work-day (yuan)	1.01	0.84

Compiled from materials in Mu Jiajun *et al*, p.38-40.

As the table shows, in Songjiang county when triple-cropping was introduced, yields fell, production costs rose and income was reduced. But the state gets additional grain at the usual low prices.

Similar observations were made by Zhou Zhengdu for Wuxi county. Although yields were slightly higher under triple-cropping (1000 jin/mu in 1976 in comparison to 983 jin/mu in 1966 when there was double-cropping), after subtracting 60 jin/mu for extra seed requirements and also an amount to compensate for the lower processing rate of the rice grown under triple-cropping, the 1976 figure is effectively lower than that of 1966. Consider the example of Dongting production brigade, Dongting commune, Wuxi county:

TABLE 6. DONGTING PRODUCTION BRIGADE. ASPECTS OF GRAIN PRODUCTION AND GROSS INCOME, 1966 AND 1976 (millions of jin unless stated)

	1966	1976
Total grain output	1.808	2.336
Adjustments to 1976 output figure:		
1. Expanded area		-.396
2. Extra seed requirements		-.060
3. Processing losses		-.190
Readjusted total grain output	1.808	1.69
Gross income from grain - after readjustments to 1976 output figure (thousands of yuan)	211	198.5

Compiled from materials in Zhou Zhengdu, p.75

What difficulties were experienced with triple-cropping? Initially, the growing season itself is very limited. Taihu has a frost-free period of 200 to 230 days and a cumulative temperature value of 4600 to 5000°C. This leaves tight planting schedules. Slightly adverse weather conditions can therefore have disastrous results. Xiong Yi comments that such a tight planting schedule leaves spring seedlings susceptible to frosts. The summer harvest may be forced early by high summer temperatures, and of course the size of the second summer crop is conditional in part upon the autumn weather.

The tight planting schedules favour the extension of barley production at the expense of wheat for the winter crop. Xiong Yi points out in comparison to wheat, barley is considered to have a lower food value as well as a lower processing rate. This point is confirmed by Zhou Zhengdu.

Similarly the intensity of the planting schedule leads to a rise in the use of Xian rice at the expense of Geng rice. In Suzhou prefecture for example, Yang Zuichun *et al* report that whereas Xian rice constituted only 9.1% of the 1966 double-crop harvest, in 1976, with triple-cropping, it made up 45.6% of the harvest. Xian rice is considered to be inferior in quality to Geng rice and has a lower processing rate. Indeed, Yang Zuichun *et al* comment on shortages in supply to urban centres of the preferred Geng rice.

The tight planning schedule also increases the demand on labour. Mu Jiajun *et al* note that the two-three system of triple-cropping significantly increased the amount of work the peasants had to do. Indeed, there are instances when harvesting and planting schedules were not met. As a result, in Cuiqiao commune's Weixing production brigade for example, annual average per unit yields reached only 680 jin per mu (Wujin County Agricultural Bureau). In addition, the long hours, especially in paddy fields, were attributed to the cause of increasing sickness amongst the peasants. Peasants also complained that the amount of work necessary in grain production left little time for side-line occupations (although Taihu, as illustrated in Table 3, was better off than most in this respect). Wang Yongnian for example, a peasant of Xuelang commune, Wuxi county, complained that he no longer had time to devote to pumpkin production. Furthermore, Song Linfei comments that in Nantong county, Yanjiang agricultural district, seasonality of labour demands are such that during the labour-intensive seasons of planting and harvesting, commune- and brigade-run industrial enterprises have to close to allow the peasants to return to the fields. There is no reason to doubt that this also occurs in Taihu.

Not only do demands upon labour rise, at the same time, increasing production costs often mean lower incomes (see Tables 5 and 6). She Zhixiang shows that in 1976, production costs in Taihu were as high as 40% of gross agricultural revenue. The examples of Songjiang county and Dongting brigade are just two of many units where increased production costs had given rise to a fall in income in spite of rises in yields.

There were also problems with fertilizers, more often than not there were shortages. Even in Suzhou prefecture where local supplies were available, it was only of one variety of chemical fertilizer. The soil in the prefecture lacks phosphorous and potassium and such trace elements as copper and molybdenum. Agricultural chemicals with low toxicity, high effectiveness and low residual toxicity were still in short supply (*Red Flag* 19.5.1980). Furthermore, the increased use of pesticides with the introduction of triple-cropping resulted in the building up of a higher resistance in the various pest populations to the chemicals used.

Finally there was a decline in soil fertility. Xiong Yi comments that the increasing flooding of the land under triple-cropping reduced the organic matter content of the soil and the constant ploughing and tilling lowered the soil quality. He concluded : first, the plough layer was becoming shallower and the soil in it rigid and more difficult to cultivate; secondly, the layer beneath the plough layer was becoming thicker with a deeper hard pan developing; and thirdly, the nutrient balance was lost.

However, not all the Chinese media materials expressed like opinions. Liu Sanhao et al accused Mu Jiajun et al of "not seeking truth from facts". In other words, they claimed that the figures given for Songjiang county were incorrect. Similarly, Li Erhuang and Huang Pinfu separately reported figures for Suzhou prefecture which ran counter to those given by Zhou Zhengdu. Huang Pinfu for example, reported that in the years 1971 to 1979, using the two-three system, total grain production in Suzhou prefecture was 54,860 million jin (annual average output of 6850 million jin - 3.425 million tons) whereas grain production during the years 1963 to 1970, when only one summer crop was harvested, was only 42,900 million jin (annual average output of 5360 million jin - 2.68 million tons).

Li Erhuang and Huang Pinfu both agreed that increased yields had been achieved at the expense of high production costs which had lowered income, but the fault for that, they argued, lay not with the system itself but with inefficient management and the continued existence of the "price scissors".

It seems most likely that triple-cropping under the two-three system will give increased yields but only at the expense of high production costs and lower incomes. Such a conclusion for Suzhou prefecture is reached by Zhang Liufang as the following tables demonstrate:

TABLE 7(a). SUZHOU PREFECTURE. GRAIN PRODUCTION FIGURES, 1966 AND 1978  
(100 million jin)

	Winter crop			Paddy (unprocessed rice)			Total grain production
	Wheat	Barley	Sub-total	Xian	Geng	Sub-total	
1966 (double-crop)	649	228	877	476	4732	5208	6084
1978 (triple-crop)	1144	577	1721	2688	3472	6160	7880
Increase in 1978 over 1966	495	349	844	2212	1260	952	1796
Net increase after processing							1126
Additional adjustments to 1978:							(Sub-total)
1. additional seed requirements				-34		-251	-285
2. processing losses <sup>1</sup>				-59		-176	-235
3. additional food consumed with increased labour inputs							-140
Total adjustment to 1978 figure							-660
Actual increase in 1978 over 1966							466

<sup>1</sup>100 jin of Xian rice is equivalent to 92 jin of geng rice  
100 jin of barley is equivalent to 83 jin of wheat

Compiled from materials in Zhang Liufang, p.113-116

TABLE 7(b). SUZHOU PREFECTURE. GRAIN PRODUCTION COSTS AND INCOME, 1966 AND 1978

	1966 Double-cropping	1978 Triple-cropping
Labour cost per mu (units of labour day)	74.42	108.68
Material expenses (yuan per mu)	64.27	82.85
Gross farm income } (millions of		181
Gross farm expenditure } yuan above the		191
Net farm income } 1966 figure)		-10

Compiled from materials in Zhang Liufang, p.113-116

Ultimately, whether triple-cropping in Taihu was judged as a success or failure by individual commentators depends on their political standpoints. Those who see increased output as the measure of success will claim that triple-cropping under the two-three system is successful. This would be the view of Li Erhuang (p.94) for example who comments, "in the final analysis does the two-three system increase output or not? This is the major criterion for weighing the success of this cropping system". Similarly, Lu Shijian (p.105) notes that:

"Increasing the multiple-cropping index and promoting yields per unit area of the cultivated land are important projects in increasing grain production. For this reason, reform of the cropping system by increasing multi-cropping is basically correct".

Against this standpoint of increased grain production regardless of the impact upon income, are those who argue that incomes must not be sacrificed for the sake of marginal increases in grain production. The supporting arguments for this view are numerous. Xiong Yi for instance, putting forward an ecological argument. Wang Yongnian argues from the point of view of freeing peasants for side-line production and hence higher incomes, others argue that labour demands are too great. There is the suggestion of Zhang Zhizheng who argues that the level of multi-cropping reflects the high state demands for grain from Taihu. If state quotes could be reduced, multi-cropping could be lowered. Such arguments to reduce triple-cropping being made at a time of poor yields due to adverse weather conditions combined with the ending of the Maoist stress upon grain production. Whatever the motives behind these arguments the result was a move away from the extensive use of triple-cropping to increase grain production.

Wujin county for example, felt that triple-cropping was effective as long as the area given to it was not more than 30% of the total cropped area. In this way, claimed the Wujin county agricultural bureau, increased grain yields could be achieved without the hardships and difficulties experienced when the whole

area was triple-cropped.

However, the experience of Wujin county was not universal. Sun Ming et al comment that between 1976 and 1981 a significant retreat from triple-cropping occurred within Suzhou prefecture. As a result, grain yields, no doubt hampered by adverse weather conditions, fell rather than show an increase:

TABLE 8. SUZHOU PREFECTURE. ASPECTS OF GRAIN PRODUCTION, 1976 AND 1981

	1976	1981	Decrease from 1976 to 1981
Total sown area of grain crops (millions of mu)	13.38	11.78	1.6
Double-cropping : net area (millions of mu)	4	2.04	1.96
Triple-cropping : net area (millions of mu)	7.39	5.42	1.97
Grain yields (jin per mu)	1287	1019	268
Gross grain output (billions of jin)	7.4	5.7	1.7
Net transfer of grain to the state (billions of jin)	1.951	.700	1.3

Compiled from materials in : Sun Ming et al, p.50-2

Sun Ming et al continue by noting that production units such as Taoyuan commune which continued triple-cropping were in fact able to increase grain yields despite the adverse weather conditions, at a time when other units were faced with lower yields. They attributed the lower yields to inefficient management and production techniques used by production units which had used numerous ecological and income arguments to retreat from triple-cropping. However, it is significant that Sun Ming et al also note two further problems which hampered grain production in Suzhou prefecture following the relaxation of triple-cropping.

The first problem concerned rice varieties (Sun Ming et al, p.55):

"Following the changeover from the triple-cropping system to the double-cropping system, the double crop of rice should each show an increased output. But due to the neglection, for a long time in the past, of the study and raising of high-yield rice strains, high-yield seeds were lacking for the single-cropping of rice and this naturally restricted the rice output."

The second problem involved both the increasing emphasis upon industry and a growing competition for land. As Sun Ming *et al* point out (p.55):

"Some of the communes, brigade and teams were mainly interested in industry and in sideline production because of their larger output value and greater profitability. They preferred to plant economic crops such as cotton, edible oils, hemp, tobacco and so forth although these may not have all been suitable to local conditions. This adversely affected grain output".

Indeed, the sown area of economic crops increased by 440000 mu between 1976 and 1981, at the same time the sown area of grain crops decreased by some 1.6 million mu (Sun Ming *et al*).

Nevertheless, despite the problems in grain production, the policy of using industry to support agriculture became increasingly popular towards the end of the 1970's at the expense of extensive multi-cropping.

#### 4. INDUSTRY SUPPORTING AGRICULTURE

"In view of the weak financial position of the country, it will not be possible for a certain period to stimulate grain production by means of such measures as greatly raising the price for State grain purchases, or to lower the basic figure for grain purchases, or to expand the scope of excess-quota purchases. Hence, we should approve and actively encourage the use of profits from industry and side-line production to subsidize grain production".

Sun Ming *et al* (p.56)

The increased importance of commune- and brigade-run industrial enterprises in Jiangsu as a whole is reflected in the following table:

TABLE 9. JIANGSU. GROSS OUTPUT VALUE OF COMMUNE- AND BRIGADE-RUN INDUSTRIAL ENTERPRISES (billion yuan)

1970 <sup>1</sup>	0.69
1979 <sup>2</sup>	7.3
1982 <sup>3</sup>	13.17 <sup>a</sup>
1983 <sup>1</sup>	15.8

<sup>a</sup> This figure of 13.17 billion yuan for Jiangsu represented 20% of the gross output value of all China's commune- and brigade-run industrial enterprises.

Compiled from materials in: : Zhao Ming (a), k.19  
2 Red Flag 19.5.1980, p.36  
3 Zhao Ming (b), p.1

Indeed, Zhao Ming (b) notes that in 1982, the commune- and brigade-run industrial

emterprises of five counties, all within Taihu - Wuxi, Jiangyin, Shazhou, Changshu, and Wujin - had gross output values above the 1970 figure for the whole province.

In 1982, the gross output value of commune- and brigade-run industrial enterprises in Wuxi county reached 980 million yuan (Zhao Ming (b)). This followed a decision by the county committee to vigorously develop industry in order to support agriculture. This followed the poor results of the two-three system of triple-cropping which had been adopted by Wuxi county. Grain production in particular had suffered. The county committee decided that in developing industry, one key aspect would be that each commune and production brigade should establish a good repair and spare parts factory and a grain and silage processing factory. In order to develop these industries they would be given preferential treatment in resource and labour allocations.

The advantages to Wuxi county of this development in commune- and brigade-run industrial enterprises were numerous. Aside from producing goods and services for agriculture, the profits from industry were to be used to provide accumulation funds with which to strengthen the agricultural resource base. In Wuxi county, Hua Huiyi *et al* noted that agricultural development was funded from accumulation funds almost entirely made up of industrial profits. From 1971 to 1977, industrial profits rose to 290 million yuan of which 100 million yuan was paid to agriculture. Of the recent investment in basic field construction and agricultural mechanization within the county, 90% was derived from the profits of industry.

Wuxi county committee also maintained that an income standard should be set so as to reduce the differences between incomes in industrial and agricultural occupations. In other words, the profits of rural industry would be used to subsidize the wages of agricultural labourers so as to maintain enthusiasm for farm production. Hua Huiyi *et al* point out that agricultural income levels in Wuxi county in 1977 were maintained despite the natural disasters which reduced yields during that year. The subsidy of agricultural incomes by industrial profits was held responsible.

Qianzhou commune is one of the thirty-five communes in Wuxi county. It has a population of 36000 occupying an area of 35 km<sup>2</sup>. The commune has greatly prospered from the development of its industry:

TABLE 10. QIANZHOU COMMUNE. SOME ECONOMIC INDICATORS, 1952, 1957,  
1970, 1979

	Gross agricultural output value (million yuan)	Gross output value of side-line occupations (million yuan)	Gross industrial output value (million yuan)	Per capita distributed income (yuan)	Grain yields (jin per mu)
1952	1.805	0.356	-	-	290
1957	2.18	0.430	-	42	310
1970	3.76	0.925	1.53	75	900
1979	5.5	5.45	36.0	165	1670

Materials source: Jing Hua, p.19

Qianzhou has 80 commune- and brigade-run industrial enterprises including farm machinery plants, a small shipyard, brick and tile yards, grain and fodder processing workshops and so forth. Most of the profits from these enterprises - in 1978 6 million yuan from a gross industrial output value of 25 million yuan (Jing Hua) - contributed to collective accumulation funds. Thus, agriculture in Qianzhou benefitted not only from the provision of goods and services but also from construction of water conservancy projects financed by accumulation funds. Between 1970 and 1978 for example, Qianzhou commune built a 19 kilometre dyke across low-lying land, dug numerous river courses and underground drainage canals and set up five pumping stations. Grain production, as illustrated by Table 10, increased as a result, as did incomes. Indeed, as Zhan Wu notes, in 1978 54 to 65 per cent of total peasant income was derived from the distribution of industrial profits. Such a figure represents a considerable income subsidy.

A further advantage offered by the development of commune- and brigade-run industrial enterprises is to take up some of the surplus labour which exists in the countryside. Shen Shisheng et al show that Nansha commune, Shazhou county has developed its industrial enterprises to employ much surplus labour. In 1982 Nansha commune had over 32000 agricultural labourers with 15800 mu of cultivable land, only 0.5 mu per person. Following the introduction of a production responsibility system in 1982, labour productivity was raised and the contradiction of a large work-force and a little land was emphasised even more. Thus, the commune, through the extension of its existing industrial enterprises and the development of previously untapped resources, sought to

solve the problem of surplus labour. As the following table illustrates, it met with considerable success:

TABLE 11. NANSHA COMMUNE. PLACEMENT OF SURPLUS LABOURERS, 1982

Occupation in which vacancies were found	Number of surplus labourers employed
Industrial workers in the existing 50 commune- and brigade-run industrial enterprises	1000
Quarrymen in the existing 10 stone-extraction quarries	1000
The expansion of side-line production	600+
The production and the development of economic forests	70
The construction industry	400
Involved in the development of production in specialized households	50+ households

Compiled from materials in: Shen Shisheng *et al.*, p.2.

Furthermore, a number of these industrial enterprises can provide a stable demand for industrial raw materials and hence encourage production of such raw materials in the countryside and provide peasants with a stable source of demand and income.

Looking at Suzhou prefecture as a whole, the contribution of industry to the rural economy is quite striking:

TABLE 12. SUZHOU PREFECTURE. ECONOMIC STRUCTURE, 1980

	Agriculture	Industry	Sideline production	Total
Gross receipts (billion yuan)	1.171	3.915	0.691	5.098
Gross receipts (%ages of total)	19.61	67.15	13.24	100
Average per capita income (yuan)				164.79
Source of average per capita income:				
(i) in Yuan	49.36	74.29	41.09	164.74
(ii) as a %age of the total	30	45.1	24.9	100

Compiled from materials in Sun Ming *et al.*, p.52.

As Sun Ming *et al* (p.52) comment:

"The rapid growth of industry in the communes, production brigades and production teams has provided plentiful funds for the development of agricultural production. According to the statistics compiled by the bureau of statistics of the prefecture, during the four years from 1977 to 1980, the funds provided by the industries of the communes, production brigades and production teams of the prefecture to agriculture amounted to 415 million yuan, of which the amount provided in 1980 alone was some 104 million yuan. This was 120% more than the state investment in agriculture in the prefecture. In addition, the industries provided agriculture with a large quantity of material resources and took up the burden of producing, for the prefecture, medium-size and small farm tools as well as equipment for water conservancy projects."

However, while the balance of opinion expressed in the media on the rise of rural industry has been favourable (not surprisingly given the advantages to the state, plus better incomes and livelihood), there are still numerous problems to be faced. As already noted, Sun Ming *et al* point out with some alarm the fall in Suzhou prefecture's grain production in recent years. They comment (p.55) that "some of the communes, brigades and teams were mainly interested in industrial and in sideline production because of their larger output value and greater profitability ... This adversely affected grain output." Clearly competition between grain production and increasing income remains a problem in some production units.

Industrial enterprises have also been subject to blindness in development. There is much duplication of production and direct competition with state-owned industry. As a result, productive capacity is not fully utilised. In addition, these commune- and brigade-run industrial enterprises must be self-sufficient in their raw material supplies. State plans will not - and cannot - provide the raw materials for such enterprises. Furthermore, many of the products produced are not included in state planning and the costs and risks of marketing must also be borne by the enterprises themselves.

Wu Jiaming *et al* note the possibility of a solution to blind development in Changshu county. The county significantly helped the 2000 commune- and brigade-run industrial enterprises by supplying market information and analysis to reduce the commercial risks of each enterprise. Indeed, according to Wu Jiaming *et al*, Changshu county seems to have adopted wide-ranging control over the development of commune- and brigade-run industrial enterprises within the county so as to ensure that such enterprises have a complementary role, in no way supplanting larger-scale county-level industry or the industrial enterprises of nearby cities - although this wide-ranging control could represent a return to commandism as much as a solution to blind development.

Emphasis in Changshu has been put upon the development of traditional industries - textiles, embroidery, leather and hide manufacture and so forth - where local knowledge and skill can be utilised to the full. In this way, it is argued, Changshu county has been able to develop its industry avoiding excessive competition and market risks and reaping the benefits of increased incomes and an improved agricultural resource base;

TABLE 13. CHANGSHU COUNTY. ASPECTS OF DEVELOPMENT, 1978, 1982  
(millions of yuan unless stated)

	1978	1982
Gross industrial and agricultural output value	700	1750
Net revenue		145
Commune- and brigade-run gross industrial output value	416	750
Value transferred in wages and collective profits from commune- and brigade-run industry to the collective		
1. Total	42.5	85
2. Average per capita distribution (yuan)	50	100

Compiled from materials in: Wu Jiaming et al, p.1.

However, Hua Huiyi et al note that in some instances the accumulation funds generated from the profits of these industrial enterprises had been used badly. Indeed, far from strengthening the agricultural resource base, sometimes the reverse has been true. Zhan Wu (p.69) notes that units with much industry "can accumulate capital faster to assist other units, especially the poor communes and brigades". Yet all too often the rich units develop their own cultural facilities rather than expanding productive ability in poorer units. A Red Flag 16.11.1981 report on Shazhou county gives the example of accumulation funds spent on (p.54) "a basketball court with bleachers (seats) to hold more than 600 spectators, a stereoscope cultural gallery and a fine arts and photographic service department" in Zhao Feng village. Similarly in Miaoxiang village (p.55) a workers cultural palace was built to include "a theatre with more than 1000 seats, 2 complete sets of 16 mm film projectors, a 500-seat story-telling room, a recreation

room ..." and so forth.

Yet within Shazhou there are, *Red Flag* 16.11.1981 admits, communes and teams with weak collective economies but it seems that accumulation funds are quite rigidly controlled by units below the county-level, such units - not unsurprisingly given the fluctuations in rural policy since 1949 - preferring to improve their own lot rather than encouraging their weaker neighbours.

##### 5. CHANGES SINCE 1978 - EXPANSION AND SPECIALIZATION

The 3rd plenary session of the 11th CCPCC marks an important watershed in recent Chinese agricultural policy. The official removal of the Maoist emphasis upon grain - although grain production remains very much to the fore in policy decisions - and the introduction of new management forms - production responsibility systems, specialized households and so forth - into the countryside seem to have given basic-level production units much more opportunity to shape their own production possibilities. Certainly in Taihu, there appears to be a new dynamism in the rural economy.

The introduction of numerous forms of production responsibility system into both industry and agriculture are said to have had a major positive influence on Taihu's rural economy. Pan Shui *et al* for example outline four forms of production responsibility system used by the commune- and brigade-run industrial enterprises in the suburban counties of Suzhou city. The first form, responsibility for quotas based upon the fulfillment of output quotas, is most common in enterprises with a comparatively large scope of production, where output value and profits are high. The second form, responsibility for profits, is based upon the need to fulfill certain profit expectations. This form is most common in small-scale industry where profits are low.

The third form, where responsibility for profits and losses is assumed by the workers, is most common in small concerns, handicraft industries and certain service trades. The final form, an individual contract responsibility system, is one in which an individual assumes responsibility for the completion of certain tasks. This is most commonly found in industries where numbers of workers are very small.

Pan Shui *et al* give numerous examples where the introduction of a form of production responsibility system is said to have reversed the fortunes of an enterprise. In Jiangyin county, Xijiao commune steel rolling mill,

after the introduction of an individual contract production responsibility system monthly output, production quality and profits all rose by as much as 57%. Similarly in Wujiang county, Shengze commune, the Mulan silk fabric factory, after the introduction of a production responsibility system, not only did output increase but quality was also improved. The production of goods designated as "Top quality" rose from 67.8% of total output to 91.8%.

According to the county committee administrative office, the introduction of numerous farm production responsibility systems into Kunshan county in 1982 did much to increase peasant enthusiasm for farm production:

TABLE 14. KUNSHAN COUNTY. ASPECTS OF DEVELOPMENT, 1981, 1982

	1981	1982
Grain output (millions of jin)	750	900
Rapeseed output (millions of jin)	50	65
Average per capita collective distribution (yuan)	204	310
Production investment resources (yuan per mu)	41	64

Compiles from materials in: Kunshan county committee administrative office, p.2.

The claim that all of the improvements of 1982 displayed in Table 14 were solely due to the introduction of production responsibility systems is doubtful. Nevertheless, it would seem that the introduction of production responsibility systems in Kunshan county has had some beneficial impact upon agricultural productio

The emergence of specialized households seems to have had some considerable impact upon the rural economy of Taihu, although no figures are available as to their exact numbers. The specialized household can promote the development of the agricultural resource base in a similar manner to the commune- and brigade-run industrial enterprises : through the use of their profits in agricultural capital construction and as an income subsidy; through supplying important agricultural goods, services and equipment; and by providing employment for surplus labour (as already described by Shen Shisheng in Nansha commune, Table 11).

In some instances, specialization of production has taken place to such

an extent in a particular unit, that a small number of grain-producing specialized households are fulfilling a significant percentage of the state grain quota. Zhang Shucheng et al quote as example Bacheng commune in Kunshan county. This commune contracted out 15 mu of land to each of 403 grain-producing specialized households, the average contract being to produce over 16000 jin of commodity grain. This meant that only 8.2% of the total number of households in Bacheng commune contracted out 22% of the land in that commune and were responsible for 25% of the commodity grain which the commune had to produce. The commune assisted such grain-producing specialized households through subsidized fertilizer supplies, investment resources, scientific advice and so forth.

Such specialized households it is claimed should be able to reap economies of scale from the larger parcels of responsibility land which are allocated to them, although in Bacheng commune the economies do not appear to be that great. Of much greater significance, because specializing in grain production is likely to be less profitable than specializing in another crop or diversified undertaking due to low state prices for grain, are the local subsidies which are often given to the grain-producing specialized household so that their incomes match those of other specialized households.

One such example of local subsidy to aid grain-producing specialized households is given by Lin Zili. He uses material from Yixing county on the west shore of Lake Tai. In Yixing, incomes are distributed according to the agricultural work contracted and at the end of the year an amount is set aside from the profits of commune- and brigade-run enterprises, the profits of side-line occupations (that is, the portion retained from the profits of specialized households) and other sources, and this amount is distributed amongst commune members who have contracted to engage in grain farming (the amount distributed based on the amount of marketable grain turned over to the state). In other words, as well as industry supporting agriculture, sideline production, here in the form of specialized households, performs a similar function, providing a local subsidy to those engaged in grain. Certainly this system seems to work in Yixing county. After its introduction in 1982, the summer grain harvest surpassed the previous record harvest by 14.4%, output per mu of early rice reaching 743 jin, 16.6% above the previous high. Zhou Qiren et al commenting that 10% of the peasant households in Yixing contract 25% of the county's farmland and produce 40% of total grain output.

In industry, the numerous new management forms which have emerged often involve a degree of integration either within a production unit or between production units. An undated *Wuxi Ribao* article, for example claims that in Wuxi county almost 500 factory enterprises have carried out some kind of inter-regional economic co-operation and integration, although the article carried little detail as to what kind of integration takes place.

Jiangyin county, Huatu commune, Huaxi production brigade is an example of an "Agricultural-Industrial-Commercial" complex. Zhou Zhenfeng indicated that there were 84 integrated industries in Huaxi production brigade. He notes that since 1978, Huaxi has integrated the management of agriculture, industry, sideline production and commerce. As a result production levels and labour productivity have all greatly changed.

The advantages of agricultural-industrial-commercial complexes are that they promote agricultural sideline production and the diversified economy. In addition, Wang Songpei notes that they provide an outlet for surplus rural labour; they can reduce transport costs between towns and countryside as a result of the *in situ* processing of agricultural produce; by-products can be more easily utilised for manure or fodder and so forth. Zhou Zhenfeng certainly believes that Huaxi has been able to fully utilise these advantages to improve the brigades economic basis. Indeed, with 90% of Huaxi production brigade's work force now engaged in industry and sideline production enterprises, virtually all the peasants can rely on a steady income regardless of weather conditions and adverse agricultural purchase prices.

The re-emphasis which has been placed upon diversification has certainly encouraged further economic development in Taihu. It has already been noted in Table 3 how significant Taihu's diversified undertakings were in 1976 and there is no reason to doubt that since 1978 diversification has further developed in Taihu.

She Zhixiang notes that cash crops are an important constituent part of Taihu's diversified undertakings. Oil-bearing crops in Taihu for example, make up half of Jiangsu's total output of these crops. The same is true for silk output. In addition, a third of Jiangsu's freshwater fishing industry and a quarter of the province's pigs are to be found in Taihu. Tea is also an important crop and 90% of the commodity production of oranges is developed within the district.

There are numerous reasons why the diversified economy in Taihu has grown, some of which have already been mentioned in other contexts. First, as already noted above by Wang Yongnian, triple-cropping meant that the peasants spent less time in diversified undertakings. With the reductions in the areas of triple-cropping, it should be expected that some fresh development of the diversified economy would occur as a result.

Secondly, again as noted above, it is to be expected that local arrangements would be made to supply enterprises with raw materials, especially given the state's refusal to supply such enterprises with raw materials. With the growth of such industry, cash crop and sideline production would be expected to develop accordingly.

Again, Taihu contains a number of Jiangsu's largest cities. As the old Maoist slogans decrying diversified undertakings as being "tails of capitalism" are rejected, so will diversified undertakings develop in order to cater for growing urban needs. In Suzhou prefecture, for example, Sun Ming *et al* note that the fishing and rabbit industries developed in response to urban demand. Indeed, though forestry still occupies a relatively minor role in Suzhou prefecture, urban demand has given rise to the development of economic forests, that is to say, fruit orchards, tea plants and so forth.

The introduction of production responsibility systems undoubtedly stimulated a growth in the diversified economy. Not only did production responsibility systems give more freedom to the peasant to develop diversified undertakings, the production responsibility system whereby responsibility for output was given to households also encouraged specialization by product amongst households, which gave rise to the phenomenon of households not taking up responsibility land - and hence not producing grain - but simply developing their own particular diversified undertaking and reaping the rewards of higher incomes.

Furthermore, production units themselves have developed "service companies" to encourage the vigorous development of a diversified economy. Chen Sheng *et al* note that in Taicang county, all twenty-two communes have developed a diversified economy service company. Such service companies can assist in the development of a diversified economy in numerous ways. First, they can offer the production unit - be it commune, production brigade or whatever - important market information which they might otherwise not have access to. Secondly, they can assist in the external purchase of specific breeds or varieties of goods needed by those engaged in diversified undertakings.

Chen Sheng et al give the example of Fuqiao commune service company which assisted producers engaged in diversified undertakings by purchasing 4000 head of young poultry, 30 varieties of fish (40000 fish being purchased in all) and 1000 jin of jute.

Thirdly, the service companies train a number of households in the technical skills of production. These households become specialized technical households and offer their skills to producers engaged in diversified undertakings. Finally, the service companies can facilitate the availability of investment funds.

Similarly, agricultural research institutes have helped the development of diversified undertakings in Taihu. Shi Kaixi (a) notes that the aquatic production of Youchegang village, Dongting commune, Wu county on the eastern shores of Lake Tai has been improved by technicians stationed in the village since 1980. Shi Kaixi (b) notes that in 1982 the potential yield of fish per mu in the vicinity of Youchegang village was estimated at 47 jin, while current yields were put at only 8.5 jin of fish per mu.

To improve yields the research technicians recommended that the breeding period be extended with the breeding of carp particularly emphasised. In addition, they recommended that breeding enclosures be constructed and that the vegetation on the shores of Lake Tai be developed. In this way aquatic production has already improved and it is believed that aquatic production of Youchegang village can increase by some 560% on the 1980 level of production.

She Zhixiang notes that diversified undertakings might be best developed by increasing the scale of specialization in diversification. That is to say through the increasing designation of areas as commodity production bases. He offers two examples of such specialization in Taihu, the silkworm production which is concentrated in Wuxi and Wujiang and the cultivation of orange trees in the East and West Dongting hills.

However, some problems remain in further developing the diversified economy of Taihu. In some instances extension of the area sown with cash crops has occurred to the detriment of the resource base. She Zhixiang notes for example, that the enclosing of tideland to expand cash crop cultivation led to a reduction in the water and fishing areas and an increase in silting. Similarly, the same author comments that peasants used water plants as fertilizer with the result that water quality was lowered so much in some places that fish breeding grounds were destroyed - ironically lowering fish yields at a time when more

people were engaged in the fishing industry.

We have already noted that Sun Ming et al complain that the peasants' increasing concern with economic crops has prompted a decline in grain production in Suzhou prefecture. This decline in grain output is made more significant because pig production is partly dependant on grain for fodder:

TABLE 15. SUZHOU PREFECTURE. PIGS. YEAR-END TOTALS, 1976, 1979, 1981  
(millions)

1976	6.11
1979	8.31
1981	6.62

Compiled from materials in: Sun Ming et al, p.53

After the improvements of 1976 to 1979, the decline in grain production, exacerbated by adverse weather conditions, had a serious impact on production in Suzhou prefecture as Table 15 illustrates.

So, while diversification has been encouraged in Taihu and much progress has been made, some problems still remain. Indeed, as Chen Guanxun et al note in relation to the development of lake fishing, the resource base of Taihu has yet to be fully utilised. However, there can be little doubt that much change is occurring in the rural economy of Taihu in the current phase.

#### 6. COMMERCIAL DEVELOPMENT - THE KEY TO SUCCESS

One problem which continues to beset the countryside in much of China is the inability of the commercial system to bear the increasing burden placed upon it by the revival in the rural economy. Indeed, the revival itself can be severely hindered by commercial problems. The increasing use of specialized households, the wide-ranging sideline undertakings, the development of agricultural-industrial-commercial complexes, and the growing importance of commune- and brigade-run industrial enterprises all represent growing specialization of production and an ever-increasing rate of commodity circulation in the rural economy.

However, the extent to which such production undertakings may be developed and the ability of production units to adopt certain beneficial management forms will be determined by the effectiveness of the commercial infrastructure.

The problems which currently beset the commercial infrastructure are essentially two-fold: first, physical inaccessibility to markets, that is a lack of adequate roads, waterways, the means of transport and so forth; and secondly, bureaucratic inaccessibility to markets, that is to say, the absence of an appropriate marketing organisation to market the produce of the rural production units.

In both of these respects Taihu seems better off than most. Shen Shisheng *et al* for instance noted that the development of commune- and brigade-run industrial enterprises in Nansha commune was greatly facilitated by the existing network of communications. However, not all areas were fortunate enough to have such a good communications network and much investment has taken place in various areas within Taihu in recent years to improve transport links.

Wang Liang (a) gives the example of Wujiang county where water communications were well developed but road links remained poor. While the cost of transport by waterway was low, transport remained slow, inconvenient and unfavourable for the development of industry and sideline production. In the prosperous South West of Wujiang for example, the agricultural production of Taowu and Tongluo communes was well developed but industrial enterprises remained undeveloped because of inadequate road transport facilities.

According to Wang Liang (a), the five communes in the South West of Wujiang county decided to adopt locally-run assistance plans to develop road communications with expenditures being shared. They were able to successfully build roads and other communes in Wujiang followed on from their experience to considerably expand the road network of the county:

TABLE 16. WUJIANG COUNTY. THE EXPANSION OF ROAD LINKS SINCE 1949

	New road constructed (kilometres)	The number of communes on main roads <sup>1</sup>
Pre - 1949		8
1950 - 1979	3	9
1980 - 1983	59	19
1984 (projection)		23 (the whole county)

<sup>1</sup> No definition of main road was given in the text

Compiles from materials in: Wang Liang (a)

The expansion of the road network by 59 kilometres, alongside the construction of over 80 bridges has contributed significantly to the development of Taowu commune for example. Since 1980, the commodity rate of its produce increased by 41% and trade to the city (principally Suzhou) increased by some 52%.

A similar case of self-help in the development of transport is given by Wang Liang (b). Dongshan commune in Wu county is one of Lake Tai's many small peninsulas and communications links have traditionally been backward. Although Dongshan commune has always produced great quantities of fruit, silkworm cocoons, aquatic produce and so forth, the dependence on water transport involved many linkages, lengthy delays and great inconvenience. As a result wastage and spoilage was high.

In 1976, although the state was unable to supply investment funds, Dongshan commune decided to construct 13 kilometres of toll road, with each brigade contributing labour, materials and finance. Since the completion of the road the abundant agricultural produce of the commune has been transported by road avoiding excessive wastages.

To offset the inability of the commercial bureaucracy to market produce, numerous organisational forms have developed in Taihu. Shen Shisheng for example as has already been noted in Nansha commune, commented on the development of households which specialized in commerce. Again, the diversified economy service companies of Taicang county noted by Chen Sheng et al, in addition to those functions already commented on, have attempted to improve the commercial possibilities for producers in Taicang. According to Chen Sheng et al each commune's service company has adopted numerous measures to improve collective purchasing and marketing, these measures include the development of processing, storage and preservation of agricultural produce. Fuqiao commune for example, has at least 90 households engaged in commercial activities. Finally, the service companies have encouraged the development of village trade markets.

Gu Hong et al note that in 1982 the service companies helped market twenty different products with an output value of over two million yuan. However, much work has still to be done as Gu Hong et al point out that in Taicang county in 1982 1000 dan (50000 kg) of fish, 600 dan (30000 kg) of peaches and 30000 dan (150000 kg) of green vegetables were still wasted because of commercial inefficiencies.

Little quantitative data - transport costs, availability of transport and so forth - exists on the adequacy or otherwise of the commercial system in Taihu. Most authors indicate that the situation is improving, albeit because of the interventions of bodies outside the official state commercial system, but there are still problems to overcome, problems which will inevitably prevent the rural economy of Taihu developing to its full potential despite the significant progress which has been made in recent years through the introduction of production responsibility systems into industry and agriculture, the development of specialized households and so forth.

#### 7. CONCLUDING REMARKS

With the problems of triple-cropping for the moment behind it, Taihu district offers an example of all-round development in the rural economy: a sound agricultural base; a wide range of diversified undertakings; and many varied industrial enterprises. In comparison to much of China, incomes are high. Furthermore, the broadly based nature of the rural economy acts as an insurance against natural disasters. Although the impact of adverse weather conditions is still felt, such blows are now softened.

While some problems still remain with grain production, industrial bottlenecks and so forth, the structure of the rural economy exhibited by Taihu indicates that much potential exists for the gathering of accumulation funds from rural industry for the strengthening of the agricultural resource base as well as subsidizing agricultural incomes. Taihu is not only more likely to accumulate funds for investment in agricultural capital construction and hence further expanding production ability (even though this may not necessarily mean an increase in agricultural output value), but also its ability to subsidize local grain production in the face of low official grain prices should ensure continuing high-yields, high incomes and further specialization in production.

Nevertheless, simply to offer up the development of Taihu in the current phase as an example to others to follow would belie the fact that Taihu does possess numerous advantages which, if not unique to the area, certainly distinguish Taihu from much of the Chinese countryside.

First, as already noted by Shan Shumu *et al*, Taihu does have a good natural resource base and has always been considered one of the richest areas of China. This underlying wealth helps Taihu to begin to solve some of its problems through a "self-help" policy - a policy necessary in the light of

the state's inability to provide the resources for agricultural and other capital construction - or even to pay fair prices for commodities. This self-help policy has been noted by Wang Liang for example in his two articles on the development of transport links in order to facilitate commercial activity.

Similarly Ye Yuchang reveals that in Wuxi county 15 communes have developed a joint rice-seedling nursery to improve the supply of quality rice-seedlings. The factory's development financed by the 15 communes themselves. Again, Lu Nianzu notes the rise of education facilities in Jiangyin county. These facilities are designed to assist those peasants who want to develop their agricultural production but do not possess sufficient cultivation techniques. In addition the facilities should facilitate the development of sideline production and commune- and brigade-run industrial enterprises. These education facilities, rice-seedling factories and so forth, could not exist without the financial resources provided by the production units involved.

The ability of the production units of Taihu to accumulate investment funds because of the existing resource base is a crucial advantage in the further promotion of all aspects of the rural economy, not least by improving upon the weaknesses which still face Taihu.

A second advantage which Taihu possesses is the proximity of major urban centres - Changzhou, Wuxi, Suzhou and Shanghai. Indeed, it must be said that the production of Taihu district bears many of the hallmarks of "periurban" production, and it must draw considerable advantage from the various urban centres. In addition, the introduction of the Chang Jiang economic zone, according to the *Western Economic Herald* 29.9.1983 and Gu Xiulian, may well strengthen Taihu's rural economy still further (though as yet the influence of the economic zone seems more bureaucratic supposition than physical reality).

The influence of the major urban centres upon Taihu's rural economy seems likely to increase in the future. Not only do rural production units receive assistance from factories and scientific research units of such cities, as described by Gu Shengguan *et al*, recent administrative changes have been such that many of the counties in Taihu are now city-administered counties.

Guo Zujin (*a*) and Bi Ruizhen *et al* separately point out the advantages that Jiangyin, Wuxi and Yixing counties will now have as a result of being administered from Wuxi city. The new system purports to strengthen the management of communes and commune enterprises; to supply the commune- and

and brigade-run industrial enterprises with market information, technical advice, price management and so forth; to further economic integration between urban and rural production units; to improve circulation channels between the town and the countryside; to prevent excessive competition between urban and rural enterprises and so forth.

While such a change might be considered for the most part more administrative than practical, numerous examples of improvement under the new system of city-administered counties is given. Guo Zujin (b) for example, notes that clothing factories in Wuxi and Yixing counties have been given job assignments by the city clothing industry which has enabled the county factories involved to operate at full capacity. Previously they had operated at half-capacity. Similarly Bi Ruizhen *et al* point out that the integration of dying and weaving operations between a Wuxi silkcloth printing and dyeing mill and Qianzhou commune has resulted in an increased output of silk cloth. There seems to be some justification for believing that numerous counties in Taihu can benefit from being city-administered counties even if the cities benefit rather more.

A third advantage of Taihu is the density of small town urban development, that is to say the density of county towns and rural market towns, some of which may also be commune headquarters. According to Zheng Zonghan, Taihu has the highest density of small towns in the whole of China. Such small towns are important not only because much commune-run and all county-level industry is to be found in them, but also because they often have good existing communications networks. Thus, Wu Xiang for example, argues that such small towns can develop commercial functions and become key links in the commercial system which is able to serve the rural production units.

The advantages outlined above become self-reinforcing. As Taihu has these advantages its rural economy becomes richer and in turn can improve itself. Indeed, Taihu has been able to take full advantage of the new management structures and changed state attitudes in agriculture in the current phase, compounding the benefits already bestowed upon it by advantageous natural conditions, the proximity of major urban markets, the good network of small towns and so forth.

Furthermore, as Lin Zili notes in Yixing county, Taihu seems to want to fulfil its obligations to the state with the minimum disruption necessary to a goal of seeking the maximum gain possible from the fullest utilization of its wide resource base. In Taihu, county and other authorities are using the

management structures and agricultural policy of the current phase to limit the state's role in their affairs as much as is possible. This is shown for example in the fact that the handling of large local accumulation funds remains very much at the county-level. Similarly, this desire to limit state intervention in local affairs is seen in its advantageous use of a household form of contracting output, a flexible responsibility system which the state originally introduced for the benefit of backward areas (*People's Daily*, 23.1.1983). The flexibility inherent in this responsibility system gives Taihu much control over its productive ability, ostensibly for a considerable period of time given the current prevalence of long-term (15 years and more) agricultural responsibility contracts, (*Xinhua*, 16.11.1984), and also enables the peasants to develop production to their own advantage. Such development is not spectacular in the context of East Asia outside China, but the apparent willingness of the state to allow production units to develop as they have done in Taihu is quite striking by Chinese standards. However, this may well be a development the state ultimately feels it cannot tolerate, the increase in tax revenue generated by rural industry and so forth being considered by the state to be insufficient compensation for the decrease in commodity grain supplies to the state. Nevertheless, in the meantime there can be little doubt that the peasants of Taihu will make the most of the opportunities open to them.

However, as long as the ability of the existing resource base to fulfill grain quotas, produce surplus commodities and sustain diversified undertakings and industrial enterprises continues, this ability is likely not only to be the key to continued development of Taihu, but also the key to further polarisation of wealth in the Chinese countryside. The benefits and advantages which Taihu possesses and has effectively utilised has stimulated development in its rural economy, springing the high-output-poor trap. Yet those areas with a less advantageous resource base, the North China plain for example, cannot expect similar development. Although some improvements will be expected following the policy changes of 1978, such areas will remain entrenched in the high-output-poor trap.

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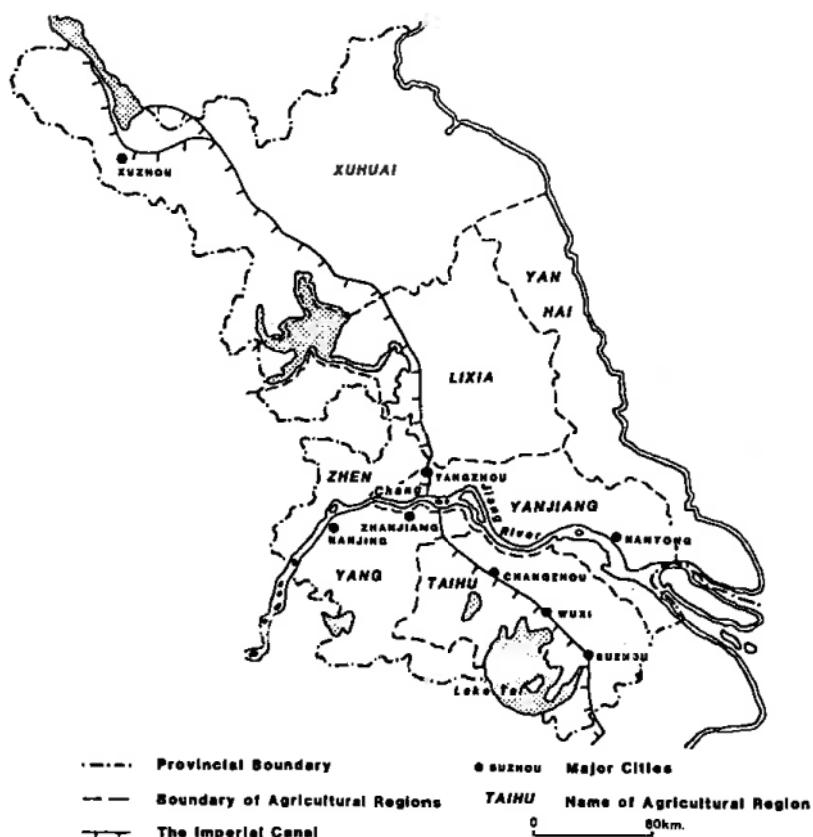
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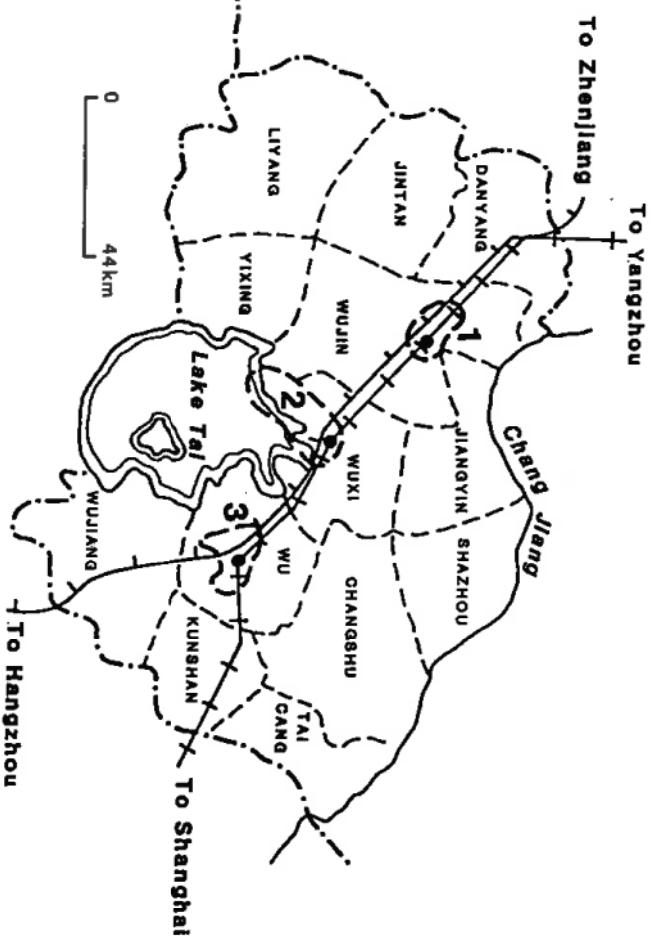
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The agricultural regions of Jiangsu province



Source : She Zhixiang, p.105.

Taihu agricultural district,  
Jiangsu province: counties  
and major urban areas



— — — The border of Taihu agricultural district (The South-Western border of the region has been extended to the provincial boundary for convenience)

- - - County Boundary

— + — Railway

— - - Imperial Canal

(3) Urban centre & Suburban district: 1. Changzhou 2. Wuxi 3. Suzhou

Source : Shan Shumu et al., preface.

