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China Report

AGRICULTURE

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17 January 1985

CHINA REPORT

AGRICULTURE

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NATIONWIDE INCREASES IN CULTIVATED AREA, MACHINERY

Hong Kong WEN WEI PO in Chinese 16 Sep 84 p 3

[Article: "Nationwide Area Ploughed by Tractors Amounts to More Than 500 Million Mu"]

[Text] Old China had practically no agricultural machinery industry. Only after the birth of New China was the production of simple farm implements such as new-style walking ploughs and horse-pulled harvesters started. As a result of over 30 years of hard work, China's agricultural machinery industry now has 13 major categories of products. According to statistics, at the end of 1983 nationwide farm machinery had a total of 245 million horsepower, 988 times that of 1952. Nationwide, there are now 841,000 large and intermediate-size tractors, 2,750,000 small-size and walking tractors, 275,000 agricultural trucks and irrigation and drainage power machinery having a total of 78,490,000 horsepower, 1,310,000 large and medium-sized machine-drawn farm implements, 26,350,000 hand and power-operated (dust) sprayers and 3,720,000 pieces of processing machinery for rice, oil and cotton. Of the agricultural machinery used in the rural areas and on the state farms, the quantity of the machinery produced in China is 99 percent and over 98 percent, respectively.

In 1983 the area nationwide that has ploughed by tractor amounted to more than 500 million mu. This makes up 34 percent of the entire area cultivated nationwide; 379 million mu, 56.6 percent of the total effectively irrigated area, were irrigated by mechanical and electrical equipment. The processing work of grain, cotton, oil and feed on the farm has now become mechanized or semi-mechanized.

Since the 3d Plenary Session of the 11th CPC Central Committee, the ability of individual peasants in China to purchase farm machinery has been greatly increased. By the end of 1983, there were 2,106,000 tractors individually owned by peasants, representing over half of the total number of tractors in China. Also, 90,000 agricultural trucks were individually owned by peasants, constituting 32.7 percent of the total number of trucks in the nation.

12704

CSO: 4007/28

PRC AGRICULTURAL DEVELOPMENT REPORTED

Beijing NONGYE JINGJI WENTI [PROBLEMS IN AGRICULTURAL ECONOMICS]
in Chinese No 9, 23 Sep 84 pp 3-4

[Article by Wang Guicheng [3769 6311 1368]: "Advancing with Giant Strides Along the Road of Victory--In Celebration of the 35th Anniversary of the Founding of the PRC"]

[Excerpt] The PRC has passed the 35th year since its founding. During these 35 years, although it was in a tortuous situation several times, China's agriculture still has scored universally acknowledged great achievements.

China's agriculture has had a remarkable growth in the past 35 years. Based on the constant price of 1970, the gross agricultural output value has increased from 42.8 billion yuan in 1949 to 158.4 billion yuan in 1979, at an average annual growth rate of 4.5 percent. When compared with other economically developed countries, China has held a fairly high rate. During the period from 1949-1979, the growth rate was 2.7 percent in Japan, 2.5 percent in the Soviet Union, 1.9 percent in the U.S. and 1.8 percent in West Germany. Especially since the 3d Plenum of the 11th Central Committee, China's gross agricultural output value has grown at an even faster speed when it reached 210.7 billion yuan in 1983, a 32.99 percent increase over 1979.

The increase of major agricultural products has been fairly rapid as well. During the period from 1952-1983, the grain yield went up from 16.39 million tons to 38.725 million tons, cotton from 444,000 tons to 4.4 million tons and oils from 2.56 million tons to 10.54 million tons, at a growth rate of 136 percent, 890 percent and 310 percent, respectively. In addition, the 1983 output of pork, beef and mutton reached 13.5 million tons, a 299 percent increase over 1952.

Along with the growth of agricultural production, the level of the peasants' consumption has been raised considerably. The 1982 level reached an average of 212 yuan per person, an increase by over 100 percent over 1952.

The development of China's agriculture is due mainly to the correct leadership of the CPC and the People's Government and the effort made by vast number of peasants and cadres at the grassroots level. In the past 35 years,

the party and the government led the broad masses of peasants to concentrate on two tasks: to restructure the economic system on the one hand and to carry out the technical transformation of agriculture and develop agricultural production forces.

Concerning the social-economic system, the major task was to conduct two profoundly significant reforms. The first was the land reform to eliminate the feudal land system. The successful completion of the land reform enabled over 300 million peasants who had little or no land to farm in the past to share 700 million mu of land, thus exempting them from paying about 70 billion jin of grain every year for land rent and from carrying a variety of added heavy burdens. The land reform has thoroughly eliminated the feudal system of land ownership by the landlord, established the system of land ownership by the peasants, liberated the agricultural production forces and prompted a rapid resumption and development of agricultural production.

The next reform was the socialist transformation of the small-scale peasant economy into a socialist cooperative economy. Although mutual aid and cooperation in China's agriculture had already been implemented at some revolutionary bases before Liberation, they were proposed to be a nationwide mission of the socialist transformation only after the New China was founded and the land reform was completed, and the cooperative transformation of China's agriculture had been basically accomplished by the end of 1956. Despite the emergence of many mistakes in the latter stage of this movement--such as requirements that were overly-swift and overly-pressing, forms that were invariable, means of work that were simple and crude and principles of voluntary participation and mutual benefit that were violated, followed by the fatally unwise move of organizing cooperatives into people's communes--the many readjustments during the 1960's, the reform of the people's commune system through "separating government administration from commune management" and the important readjustment of the relations of economic production in the system of agricultural collective ownership through the system of contracted responsibility for production with remuneration linked to output since the 3d Plenary Session of the 11th Central Committee have brought into being an economic system which is centralized as well as decentralized and combines features of both, they have also solved the problems of equalitarianism and the peasants' lack of decision-making power over management which have existed in the cooperative economy. These achievements, together with a number of other correct policies and measures, have significantly mobilized the peasants' enthusiasm for production and have promoted the development of the rural economy, thus causing an unusually excellent situation to emerge in the rural area. Presently, on the basis of the already existing cooperative economy and the self-managed specialized households, cooperation and combination in various forms are also seen in the rural area displaying a vast vista of the development of the rural cooperative economy.

Concerning the technical transformation of agriculture, the major tasks have been to carry out a large-scale transformation of the land for agricultural use (particularly leveling land and building water conservancy projects), giving step-by-step impetus to the mechanization of agriculture, universally adopting improved variety, increasing and rationally utilizing chemical

fertilizer, preventing and curing plant diseases, insect pests and weeds with modern technology; etc. All these measures have produced good results. During the past 35 years, more than 80,000 reservoirs with a total capacity of 400 billion cubic meters have been built in the whole country. According to the 1983 statistics, the irrigated area in the whole country reached 44.65 million hectares, representing a 124 percent increase over 1952 and making up 45.4 percent of the total area of farm land. The Old China had very few farm machines, but the situation has improved to the point where by the end of 1983 the total power of farm machines reached 245.13 million horsepower, 147 times greater than the 1.65 million horsepower in 1957. Presently, there are 840,000 large and medium-size farm tractors and 2.75 million walking tractors; the tractor-ploughed area reached 500 million mu, making up 34 percent of the total area of farm land; the amount of chemical fertilizer used in agriculture reached 73.84 million tons, at an average of 100 jin per mu which in 1952 was only 0.4 jin per mu; and the rural consumption of electricity reached 43.5 billion kwh, or an average of 31 kwh per mu. The application of agricultural science and technology to agricultural production is becoming daily more popular, and its development is particularly visible in the improvement of variety. Research on and testing of such advanced technologies as atomic energy, lasers and biological engineering are currently underway, with some having already made fairly great progress.

Now, the output of China's major agricultural products has reached a new level, which means, in normal harvest years, that the annual yield of grain can be maintained at 3.5-3.8 million tons; cotton at 4-4.4 million tons; and pork, beef and mutton at 13-14 million tons. This new level is exactly the overall achievement made by the aforementioned reforms of the agricultural production relationship and the agricultural technology.

12730

CSO: 4007/61

COMPREHENSIVE RESOURCE SURVEYS WIN ACCLAIM

OW250328 Beijing XINHUA in English 0228 GMT 25 Dec 84

[Text] Beijing, 25 Dec (XINHUA)--Some 40 percent of the 33.5 million hectares of wasteland in China can be used to grow grain and cash crops while the rest is suitable for grass, fodder and trees of economic value.

This is one of the conclusions drawn by Chinese scientists from comprehensive surveys of the country's natural resources in recent years.

Other survey projects included studies of agricultural climate, animal husbandry, mountain areas in southern China, grasslands and natural economic conditions in hilly regions.

Some of the results have been published in book or map form.

Forecasts of future development and distribution of animal husbandry and proposals to develop infra-structure for commodity production put forward by the scientists on the basis of their surveys have been adopted by government departments concerned.

A survey of the natural conditions and suggestions for the development of farming, forestry and animal husbandry in Jian, a mountainous area in Jiangxi Province, east China, have won acclaim from central and local government officials.

Several maps showing the distribution of hilly land, vegetation, water sources and their utilization as well as the distribution of grain yields in hilly areas have been brought off the press.

CSO: 4020/58

PLANNING COMMISSION MEMBER ON SOIL EROSION

OW261446 Beijing XINHUA in English 1432 GMT 26 Dec 84

[Text] Beijing, 26 Dec (XINHUA)--China will in 1985 introduce a land development scheme as important as population control, according to a senior member of the State Planning Commission.

The scheme will call for still more effective measures to protect the land from adverse effects such as soil erosion.

Soil erosion is now a serious problem in areas of over a million square kilometers, almost a tenth of China's land area.

Several billion tons of top soil is washed into rivers every year, hitting agriculture and causing the lower reaches and many lakes to silt up, the planning official said.

While mobilizing the entire population in water and soil conservation through three planting and other measures, he added, work will be done to achieve the best use of land, water and other resources.

The overall objective will be the achievement of a harmonious economic and ecological development.

Experimental schemes are already underway in 22 provinces, autonomous regions and municipalities.

One involves the highly industrialized Beijing-Tianjin-Tangshan area in northern China.

It is aimed at better distribution of cities in the area as well.

CSO: 4020/58

GUANGMING RIBAO ON DEVELOPING WASTELAND

OW270921 Beijing XINHUA in English 0904 GMT 27 Dec 84

[Text] Beijing, 27 Dec (XINHUA)--China has 33.5 million hectares of wasteland suitable for reclamation, the GUANGMING DAILY reports today.

Twenty million hectares, or 60 percent of this, can be turned into farmland, equivalent to over one-fifth of the country's existing fields.

These figures were obtained in one of the comprehensive surveys of China's natural resources carried out by scientific workers in cooperation with land reclamation departments in various provinces and autonomous regions.

Forty percent of the wasteland, suitable for pasture, is in northern China, and 20 percent, suitable for orchards, is in hilly areas in southern China. The remaining 40 percent can be used for growing grain and cash crops.

Development of the wasteland will help reduce the heavy pressure of China's huge population on the limited amount of farm fields. It will also help improve crop distribution and develop remote areas.

Large-scale reclamation is being planned for Heilongjiang Province and eastern Hulun Buir in Inner Mongolia for growing grain and soya beans.

Wasteland in southern and coastal China will also be developed.

CSO: 4020/58

NATIONWIDE STATISTICS FOR TREE PLANTING IN 1983

Beijing GUANGMING RIBAO in Chinese 27 Aug 84 p 1

[Article: "Forestry Restructuring Brings About a Good Situation; Afforestation Throughout China Has Already Surpassed the Plan for the Entire Year by 46.7 Percent, with Individual Peasants Accounting for 38.2 Percent of Afforestation"]

[Text] It has been learned from the nationwide Forestry Department and Bureau Chief's Conference currently being held in the city of Yantai in Shandong Province that this year there has been an unprecedented upsurge in afforestation throughout the country. According to statistics, by the end of June afforestation throughout the country had already surpassed the plan for the entire year by 46.7 percent. The task was completed ahead of schedule and there was an increase of 30.1 percent compared to the same period last year. Individual peasants accounted for 38.2 percent of the afforestation, which is an increase of 81.3 percent when compared with the same period last year, and 7,830,000 mu of the seedling area were completed, an increase of almost 20 percent compared to the same period last year. The tending of young trees increased to a large degree, with 97.2 percent more being tended than during the same period last year. There was marked improvement in the quality of afforestation.

The reason the speed and quality of this year's afforestation is better than in previous years, is, first, that the strategic position of forestry is being realized more and more by leaders of each area and each department, while the speeding up of forestry production has become an important task in all of society for the vigorous development of the economy. Second, there has been another step taken to relax the forestry policy, households specializing in forestry have developed very swiftly, the mountain area for private use has enlarged from last year's 250 million mu to 400 million mu and the households specializing in forestry of 21 provinces, areas and cities increased from 1 million last June to 3.5 million households. Third, funds for afforestation and raising seedlings are being changed from mainly relying on state subsidies to raising funds through other channels of the state, local area, peasants and society. Fourth, very good results have been achieved by implementing the responsibility system in forestry, farming, office work and schools. Everywhere the situation has appeared of state-operated tree farms contracting the afforestation through individuals, families, joint households and specialized teams, with collective mountain forests carrying out joint management contracts for loss recovery. All of these measures are for the thorough restructuring and creation of a new approach in forestry.

ROLE OF RURAL, SMALL TOWN INDUSTRY DISCUSSED

Beijing NONGYE JINGJI WENTI [PROBLEMS OF AGRICULTURAL ECONOMICS] in Chinese
No 8, Aug 84 pp 19-23

[Article by Wei Jie [7614 2638] of the Economics Department of Xibei University: "A Discussion of the Role of Rural and Small Town Industry"]

[Text] In the past few years, the new type of industry--rural and small town industry--which is quickly rising and developing in the countryside with characteristics distinctive to China and which faces the test of fierce competition, has continuously developed and grown in strength. Small towns have formed a group of superior industries, enterprises and products, have become an important force in our economic construction and have displayed a formidable vitality. Thus, strengthening the research on rural and small town industries is an objective demand for strengthening the socialist four modernizations with characteristics distinctive to China.

I

Although rural and small town industries have developed quickly in the past few years, experience has proven that they possess a strategic position and strategic role in building the cause of socialism with characteristics distinctive to China.

1. Rural and small town industry is a powerful motive force in the transformation from traditional to modern agriculture. This is displayed as follows:

(1) Rural and small town industry plays an important role in supporting, supplementing and promoting agriculture. First, it can supply agriculture with a large number of products that are critically needed and in short supply. For example, Wujin County in Jiangsu Province in 1983 alone provided agriculture with more than 90 million yuan worth of products that directly supported agriculture, and this constituted approximately 10 percent of the county's gross industrial output. Further, it also supplied a large number of products that indirectly supported agriculture. Second, it provides agriculture with a large amount of funds. For example, Henglin Township in Jiangsu Province's Wujin County directly supported agriculture with funds totaling 648,000 yuan in 1983, or 33.6 yuan per mu of arable land. Many small townships with quickly developing industries have especially taken a portion of their profits from industry and have subsidized farmland and

grain, have effectively aroused the enthusiasm of peasants to produce grain and have promoted the comprehensive development of agricultural production. Finally, these industries can arrange a large amount of surplus labor for villages. For example, in the 4-year period from 1979 to 1982, the rural and small town industries in Nantong arranged more than 724,000 [hours of] rural labor for villages, and thus constituted more than half of the excess labor in the countryside.

(2) Rural and small town industries can directly stimulate the comprehensive development of all rural industries. For instance, Hai'an County in Jiangsu Province is using local resources to develop the feed industry. It stresses the basic link of the feed industry, promotes the development of the animal husbandry industry and uses the animal husbandry industry to promote the development of methane as well as the food processing and the biochemistry industries and also uses the food industry to promote the development of the packaging and plastics industries. The development of these industries has also promoted the development of the production of grain, cotton and silkworm mulberries, and in turn has provided even more abundant resources for the feed industry and promoted the development of the feed industry and food industry. At the same time, this has also coordinated the development of commerce and foreign trade and has formed an outstanding, large and systematic cycle within industry and agriculture and between industry and agriculture. As another example, Rugao County in Jiangsu Province exercises initiative by using local resources to produce different types of foods and canned foods, and its annual output value totals 160 million yuan. The development of these types of farm produce and agricultural products has aroused the enthusiasm of the peasants in developing and utilizing all kinds of rural resources and has resulted in a correspondingly speedy development of the production of agricultural sideline industries. The aforementioned situation has given us the following inspiration: the development of the production of agricultural sideline industries leads to a rise in rural industry, which leads to a rise in the rate of agricultural productivity and abundant agricultural produce and sideline products and resources, which leads to a comprehensive development of the rural economy, which leads to an increase in all types of revenue. This form of development can be summarized as follows: use agriculture as a starting point, use rural industry as a chain, use the comprehensive development of the rural economy as a cycle and use the wealth and prosperity of the countryside as a last resort.

(3) Rural and small town industries can actively promote an increase in agricultural labor productivity. Currently there are two major factors that are influencing the rise in the productivity of our agriculture. First, agriculture's own accumulation is extremely limited, there are certain limitations to support by the state and it is difficult to improve rapidly the conditions for agricultural production. Second, there is a huge surplus of agricultural labor. This is just as the 1982 Document No 1 of the CPC Central Committee pointed out: "Concentrating a large amount of labor in a little more than a billion mu of arable land will cause a drop in productivity and a shrinking of the rural economy." The development of rural and small town industries is thus conducive to overcoming these two detrimental factors. Huangjin Village in Xingdong Township of Nantong County in Jiangsu Province is just such an example. There was only eight-tenths of a mu per person in

this "golden village," and originally it was one of the poorest places in the province. Since 1976, this village started up with 63 yuan, ran an embroidered clothing factory and produced pure embroidered silk clothing for export that combined modern clothing styles with ancient embroidery art. Currently, the number of workers in the factory has grown to 974, two-thirds of the village's labor have entered the embroidered clothing factory and the factory has more than 550,000 yuan in fixed assets. The processing of products has spread from the village itself to the entire township to outside the township, and the number of processing centers has grown to 51. In 1983 this factory realized 310,000 yuan in profits and handed over 240,000 yuan in tax revenue to the state. Over the years this factory has used a significant portion of its profits to support the basic construction of farmland and to purchase agricultural machinery. In 1983 alone, the funds used for this purpose exceeded 74,000 yuan. This caused a quick change in the appearance of the village, and the village became truly a "golden village."

2. Rural and small town industry is also an objective demand for establishing an industrial system that conforms to our national conditions. This is because:

(1) Rural and small town industry supplies big industry with fairly ideal "supporting factories," and it is able to suit the needs of specialized production. With the development of the economy, the division of social labor becomes more and more elaborate, the level of specialization rises and cooperation between economic units becomes more extensive. China's large mainstay industries require even more cooperation from small enterprises, and rural and small town industries can provide large industries with a large number of diverse, complete products. For example, Nantong County in Jiangsu Province is running an experimental electrical equipment factory and has produced a 23-meter far-infrared tunnel-style assembly-line working table with a heater for the production line for the kinescope imported from Japan by the Shanghai No 9 Radio Factory. The Japanese, upon learning about this, were extremely pleased.

(2) Rural and small town industries have created the conditions for urban industry to escalate exchange and develop high-quality products. For example, the Changzhou No 5 Cotton Mill in Jiangsu originally produced corduroy and always had aspirations to switch to producing polyamide-fiber blankets. It borrowed 1 million yuan and imported a few dozen sets of wool-spinning machinery and equipment. Yet due to the difficulties in expanding the old factory building, for a long time this equipment lay around outside. This mill later joined up with Wuxing Village in the suburbs and handed over all of its equipment and production responsibilities for producing grey corduroy to Wuxing Village and made room in the factory for the new equipment. Within a year's time it was capable of producing 300,000 blankets per year.

(3) Rural and small town industries constantly seek subsistence in the cracks of big industries, and thus they are able to fill in the gaps left by the big industries. For example, the Sanxing Village Electrical Equipment Plant in Haimen County of Jiangsu is a small village-run plant that produces loudspeakers. In 1981 it cooperated with the relevant engineers

and technicians of the Shanghai No 4 Light Industry Research Institute and successfully developed new 1980's products which our country used in its 1982 long-range missile tests in the Pacific Ocean. As another example, the Nantong County Steel-quality Furniture Factory is a small enterprise in a small town. With the cooperation and help of the relevant units, it successfully developed steel-plastic compound tubing, which is high-quality, anti-corrosive tubing material which the chemical, petroleum, construction and shipping industries use to transport their corroded materials, and it originated within the country. This product is as effective as rust-free steel and it costs only one-sixth as much. Engineering and industrial departments are unwilling to make this type of product, and chemical departments are not capable of making it, but rural and small town industries have made a contribution with these "peripheral industries." Moreover, rural and small town industries recover and reuse leftover bits and pieces, waste liquid and waste gas from big industries. Zhongxin Village in Tangjia Township in Jiangsu Province's Haimen County comprehensively uses the leftover bits and pieces from big industry and produces hot-selling copper flatirons which are well received in the domestic market. As another example, the Fengli Oil and Rice Plant in Jiangsu's Rudong County uses the waste liquid leftover from the production of MSG to produce a high-quality protein feed--dry yeast. It has a 65 percent protein content and costs as much as imported fish meal.

3. Rural and small town industries also play a role that cannot be ignored in establishing a reasonable economic network that suits our national conditions. Due to the effect of long-standing horizontal and vertical divisions and the division between the city and the countryside, China's economy departed from the demands of comprehensive rural economic development and one-sidedly developed large and medium-size cities with the result that relations between the city and countryside were cut off and a reasonable economic network could never be formed. The rise and development of these industries has vigorously overcome this type of situation. This is because:

(1) Rural and small town industries have spurred on the development of small market towns and have supplied the key link in the economic network between the city and the countryside. First, they have given rise to the existence of a large number of big and small factories in rural market towns, have caused a great increase in the population that has come to these factories and has brought about a prosperous rural market and commercial and other service trades have correspondingly developed. This development has caused a change in rural market towns from collection and distribution centers for agricultural produce and sideline products to rural political, economic and cultural centers. For example, due to the development of its rural and small town industries, the town of Tangqiao in Jiangsu's Shazhou County currently has more than 20 locally run factories with numerous products. In the town there is a train station, hotel, bank, general merchandise company, movie theater, hospital, etc., and it has truly become a political, economic and cultural center.

(2) Small market towns that have been spurred on by rural and small town industries have truly given play to the chain-reaction effect on the economic networks. With the continuous growth of rural and small town

industries in small market towns, small market towns more and more possess the different functions to act as economic centers at the lowest administrative level. They are joining together with the surrounding villages and forming the most basic structure of an economic network with many complex administrative levels. The development of rural and small town industries has also enabled small market towns to combine with the nation's large and medium-size cities and, according to the objective demands of economic development, form an economic network between the city and the countryside that has a high administrative level. Thus, the development of these industries has enabled large and medium-size cities to combine with a large number of small cities and towns. With small cities and towns strengthening their relationship with the entire countryside, rural and small town industries can establish a rational coordinated system for the social division of labor between the city and the countryside and form a mutually interlocking economic network with many administrative levels. The creation of this type of economic network indicates that economic, scientific, technical, cultural and educational relationships between the city and the countryside are truly entering a new stage.

4. Rural and small town industries have promoted the rapid development of commodity production and commodity circulation in the countryside. This is indicated in the following:

(1) The development of rural and small town industries has changed the structure of the traditional rural economy, and a fairly stable and clear industrial division of labor and of the commodity production system has gradually been formed within the countryside. For example, before rural and small town industries had developed, the rural division of labor, division of industry and commodity production were undeveloped in the rural areas of Suzhou, Wuxi, Changzhou and Nantong in Jiangsu Province. They were still categorized as rural economies; the main source of income for these areas came from the production of grain and cotton in the farming industry and there was only a single economic structure. But after developing rural and small town industry, they raised the proportion of industry in the agricultural economy, broke through the self-sufficient and semiself-sufficient economy of relying mainly on farming and especially relying on grain and cotton production and formed a rational rural economic structure that relied primarily upon commodity production. For example, in 1983 the gross output value from Nantong's small town industries totaled 2,678,000,000 yuan. This constituted 53 percent of the gross output value from all rural industries and led to the situation where the proportion of industry greatly exceeded the proportion of agriculture in the rural economy.

(2) Rural and small town industries have changed the past passive situation of a large portion of labor being tied up in farming and have caused rural labor to develop in a direction beneficial to commodity production. A large portion of the labor in Wujin County was originally engaged only in rural production. After these industries began to develop, a distinct change occurred in the labor structure. In 1983, 210,000 people worked in industry, and this constituted 33 percent of the county's total rural work force.

(3) Rural and small town industries have caused a tremendous increase in commodity circulation both within the countryside and between the city and the countryside. For example, in Jiangsu in 1981, the sales of products of small town industries in the Suzhou, Wuxi, Changzhou and Nantong regions exceeded 6 billion yuan, and this far surpassed the 2.5 billion yuan in sales of agricultural produce and sideline products. At the same time, because industries in small towns have a higher level of organizational structure than agriculture, the costs of their purchases of energy resources, raw materials, equipment and other means of production at the present stage constitute approximately 60 percent of the gross value of the output of rural and small town industries. In addition, the total sales of products and the volume of commodity circulation directly created by these industries already far surpass the volume of commodity circulation attributable to agricultural sideline industries.

(4) Workers' wages in rural and small town industries, the funds supporting the agriculture and the profits allocated by them can also stimulate the development of commodity production and commodity circulation. For instance, the Suzhou, Wuxi, Changzhou and Nantong regions in Jiangsu Province, due to the development of these industries, have expanded the scale of commodity production and commodity circulation in the countryside by an average of 2.3-fold. Wuxi County has the greatest expansion of production and circulation--nearly 6.5-fold.

5. Rural and small town industries also play a role that cannot be ignored in suiting the interests of the nation, the collective, the individual and the consumers. Under the circumstances of not increasing the targets of the nation's workers, not increasing total wages, not increasing the supply of commodity grain and not requiring a large amount of investment, rural and small town industries have enabled production capabilities to increase quickly. The production capabilities formed from 1970 to 1982 in these industries of the cities of Suzhou, Wuxi, Changzhou and Nantong and the Suzhou and Nantong regions were equal to the increases in the industrial production capabilities of three Nantong cities. Rural and small town industries in this way have quickly promoted the development of rural productivity, and the results are:

(1) We increased the income of peasants and improved the peasants' living conditions. For example, in 1983, the rural and small town industries in Wujin County used funds totaling 142.26 million yuan to raise the profit distribution of peasants, which amounts to 120 yuan in income per peasant or 32 percent of the average peasant's total income. The living conditions of peasants generally improved with the increase in income. According to statistics, in 1981 in the rural area of Jiangsu's original Suzhou, private individuals built 437,315 dwellings, each dwelling cost an average of 981 yuan, such that 428.92 million yuan, or 71.7 yuan per average rural dweller, were spent.

(2) We consolidated and expanded the collective economy. Most developing rural and small town industries are rural cooperative economies, whether in the form of the system of ownership of the means of production or in the distribution of commodities. The rise of this type of cooperative economy

has caused great changes to occur in the strength of the rural collective economy. First, it has caused a change to occur in the structure of the rural collective economy. The three levels of village, brigade and team are all economic entities. Of these, village and brigade economies hold a superior position, and the proportion of the three-level economy has assumed the shape of a pagoda. For example, in 1982 in Jiangsu Province's Wuxi County, whose rural and small town industries grew fairly quickly, village and brigade economies constituted 81.3 percent of the total. The three levels of the economy possessed a total of 405.84 million yuan in fixed assets, and the two levels--villages and brigades--accounted for 79.17 percent of the total. Second, rural and small town industries have provided a large sum of funds to the collective economies and have used these funds to change the basic conditions of rural production and uphold and expand reproduction, to readjust the remuneration of personnel from all agricultural sideline industries and to run collective welfare projects. This has had a tremendous effect on giving play to the superiorities of the collective economy and on consolidating the base of the national economy of agriculture.

(3) We brought about a flourishing market and expanded foreign trade. According to statistics from Jiangsu's Wuxi County, in 1982 rural and small town industry supplied the market with more than 200,000 electric fans; electric rice cookers and other household appliances; 150,000 bicycles for farming; more than 900 tons of knitted cotton goods; more than 11 million meters of silk and cotton fabrics; 6,070 tons of plastic goods; 480 tons of glassware; 350 tons of monosodium glutamate; 7 million household ceramics items; 1.5 million articles of clothing; 30,000 tons of phosphate fertilizer; more than 30,000 motorized tractors, pumps, and sprayers; 270,000 farm tools made from steel, wood and bamboo; more than 30,000 pieces (sets) of different types of electrical equipment; 1.1 billion bricks and tiles; 70,000 tons of cement; 10,000 tons of lime; and 1.2 million tons of rocks. The production of these products by rural and small town industries has supplemented the deficiencies in the urban market and commodity market. For the past few years, 38 products from Jiangyang County's rural and small town industries have entered the international market, the output value from sales exceeded 100 million yuan and foreign exchange revenue exceeded 50 million yuan.

(4) We increased revenue and supported national construction. For instance, the amount of funds handed over to the state by Wuxi County's rural and small town industries totaled 72.11 million yuan. This constitutes 67.4 percent of the county's total industrial and commercial tax revenue and 55.3 percent of the local revenue. From 1978 to 1981, the tax revenue that the state received from the rural and small town industries of Jiangsu Province's Nantong region increased an average of 27.7 percent per year.

II

Although China's rural and small town industries have currently begun to take shape and although there is a group of key enterprises and superior projects, from the viewpoint of the entire situation, however, the level of production is still not very high and the situation of "small and complete," "small and dispersed" and "small and low" is still serious. In the industrial structure

this is evidenced in the fact that many enterprises produce products with a high level of consumption of energy resources and raw and processed materials and that few enterprises comprehensively utilize agricultural produce and sideline products. In organizational structure, this is evidenced in the fact that there are many "all purpose" factories and few specialized production factories. In product structure this is evidenced in the fact that there are numerous primitive products and medium-quality products and few finished products. With regard to technology, this is evidenced in the large amount of low-performance equipment and small quantities of advanced technology and equipment. The existence of these problems has affected the further development of small town industries. Thus, we must adopt the following few measures as quickly as possible:

(1) We must proceed from the viewpoint of the entire situation, plan as a whole and truly place rural and small town industry to the coordinated production system of industry in the cities. This then requires that each locality draw up an industrial development plan as quickly as possible and carry out a readjustment and alliance for the products of their rural and small town industries according to the authorized industries. On this basis we must gradually organize the relevant urban and rural enterprises, enterprises of the entire people and of collectives and large, medium-size and small enterprises. We must form a specialized coordinated system for the rational distribution of labor and for the completion of a comprehensive system of large, medium-size and small enterprises. We must combine the individual superiorities of urban and rural industries, cause them to blend together, truly make them interdependent and mutually supporting and cause rural and small town industries to take gradually the road to small and united, to small and specialized, and to small and high.

(2) Every small town enterprise must make a good plan, select a project, undertake a feasibility study and competently handle raw materials, funds, technology and sales and should definitely not blindly develop and rush headlong into mass action. Enterprises should not resort to stopgap measures detrimental to long-term interests and should not weaken existing enterprises. They should not harm natural resources, pollute the environment and leave a legacy of trouble to our sons and daughters. At the same time, through counterexchanges, tackling key technological problems, information consultation and business training, they must continually improve the level of management and technology.

(3) Rural and small town industries must give play to their own superiorities, develop a new field of processing and especially develop those processing industries that continuously stimulate agricultural sideline industries. Generally speaking, rural energy resources and industrial raw materials are in short supply, yet the resources of agricultural produce and sideline products are fairly abundant. Thus, rural and small town industries must strive to develop the food industry, feed industry, packaging industry and other superior industries, and they must gradually be reduced to the point of abandoning altogether those industries which compete with big industries for energy resources and for raw and processed materials. We must encourage peasants

to run more small and decentralized processing factories that use agricultural produce and sideline products as raw materials, form a fairly reasonable agricultural product-processing production organization and carry out a comprehensive circulation of agricultural produce and sideline products, using an increase in the number of administrative levels.

12437

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LAND SIZE OF SPECIALIZED COMMODITY GRAIN HOUSEHOLDS, RETURNS

Beijing NONGYE JISHU JINGJI [ECONOMICS FOR AGRICULTURAL PRODUCTION TECHNOLOGY] in Chinese No 9, Sep 84 pp 24-26

[Article by Zhao Jinmei [6392 6855 2734], Ren Tianying [0117 1131 2019] and Chu Qinghe [5969 3237 3109] of the Shanxi Academy of Agricultural Science, the Resource and Zoning Research Institute: "A General Discussion of the Land Size of Households Specializing in Commodity Grain and Their Returns"]

[Text] After the implementation of the responsibility system throughout the countryside, households specializing in commodity grain have become a new type of economic structure that is appearing in the course of events as some of the labor force gradually leaves the land in the wake of the overall development of agricultural production away from farming alone toward farming, forestry, animal husbandry and sideline occupations. These specialized households are the foundation of grain production. What is the economically optimum size of land for households specializing in commodity grain? This is a new question for households specializing in commodity grain in the course of development, and here we will discuss a few opinions on the matter in light of our investigations.

Seen from the situation in a number of places in Shanxi, so-called households specializing in commodity grain generally take the amount of grain produced and sold by a household as the standard. According to surveys, most places consider a specialized household to be one that sells over 10,000 jin of grain, and a key household to be one that sells over 5,000 jin of grain. Seen from the level of Shanxi's grain production, it requires a certain amount of land to produce that much grain. On the basis of the 1982 provincial average of 311 jin of grain per mu, it takes 32 mu of cultivated land to produce 10,000 jin of grain. Consequently, specialized grain households must have a certain amount of land before they are able to help give full play to the strengths of specialized households, help promote science and technology and the use of agricultural machinery and help raise the yield per unit of area and the commodity rate.

At present, there are three land-size situations for Shanxi's households specializing in grain.

First, a large population, large labor force and a lot of contracted cultivated land. For example, Shouyang County is one of Shanxi's 28 commodity

grain bases. Compared to the provincial per-capita average of 2.3 mu of cultivated land, Shouyang has a per-capita average of 4.2 mu of cultivated land and a per-laborer average of 13.8 mu, making it 82 percent higher than the provincial average for cultivated land and one of the counties with a fairly large amount of cultivated land per capita. Forty-two specialized households with 10,000 jin of grain in the 3 communes of Zongai, Shanghu and Yangtou have an average of 5.7 persons per household, which is 2.1 more than the county average of 3.6 persons; the labor force per household is 2 persons, which is 0.84 more than the provincial average of 1.16 persons; and each household has an average of 39.15 mu of cultivated land, which is 1.56 times the county average of 15.3 mu. (See Table 1)

Table 1. Group Statistics in "Two Household" Grain Production in Shouyang County in 1983

Average household grain production (jin)	Households	Population	Laborers	Persons per household	Laborers per household
Over 100,000	2	42	19	21.0	9.5
50,000-99,000	15	157	64	10.5	4.27
40,000-49,000	8	60	29	7.5	3.63
30,000-39,000	72	425	197	5.9	2.71
20,000-29,000	488	2,459	972	5.04	1.99
10,000-19,000	3,715	23,669	8,998	5.03	1.91
5,000 -10,000	10,427	44,311	15,819	4.25	1.52
County average				3.62	1.16

Second, with the development of a diversified economy, people with technical skills are pursuing specialized projects in line with their own strengths and are leaving the land, which leads to land transfers and causes a lot of land to be concentrated in the hands of "old farm hands" who have a lot of labor and grain production experience. For example, at the time when they began to contract out land in 1981, the Nanping Production Brigade of Yongfang Commune in Gaoping County divided land according to the labor force, and there were not even 2 mu of dry field per person, creating a situation where everyone had land but no one had enough to cultivate. Later they started up 3 enterprises and drew off 117 male and female laborers, resulting in 283 mu of contracted land being concentrated in the hands of 9 peasant households to farm it, allowing their average amount of cultivated land per laborer to rise from 5 mu to over 20 mu and allowing them to become 10,000-jin grain specialty households. The Chaijiabao Production Brigade of Shouyang County's Jiechou Commune has 58 households with 250 people and 520 mu of cultivated land. Because industry and sideline occupations developed rapidly, in 1982 all the land had already been concentrated with 11 households, and of these, 7 sold over 10,000 jin of grain; in the Xinjing Production Brigade of Shenchu's Hanjiawa Commune, the Zhang Yiquan [1728 0046 0356] family, with 8 laborers, contracted for 405 mu of cultivated land in 1982 and had a grain yield of 49,100 jin. At the same time they produced 22,000 jin of linseed and earned 16,000 yuan in net income or 1,231 yuan per person.

Third, bringing barren mountains, slopes, gullies and sandy areas under control and extending the area of cultivated land. According to statistics, about 57,700 households in the province have brought small river basins under control. They constitute about 19 percent of the households in the mountainous areas and have brought under control about 14.78 million mu of land or an average of 256 mu per household. Some households in Ying County contracted over 200 mu of alkaline land, thus creating specialized commodity grain households on a fairly large scale.

Generally speaking, if you want to produce a certain amount of grain then you need a certain amount of land. And as for the question of the best amount of land for households specializing in grain to farm, seen from various angles, small will not do and large is not useful. We can neither uphold the present situation of equal distribution of land nor advocate "the bigger the better." For the proper size, we must start from the actual situation and decide in accordance with the production methods and management capabilities of the specialized household in order to achieve the optimal union of labor and land and get the greatest economic benefit from the labor and land; to allow labor, funds and equipment to achieve fullest utilization; and to allow people to put their talents to best use and get the most from the land's fertility. If they farm too much land and exceed their own individual farming capability, then it will certainly create a situation where: 1) the new science and technology cannot be applied and it will be hard to maintain the traditional cultivating techniques. 2) There will be extensive farming and the soil fertility will fall short of the need, the land's potential will not be brought into full play, per-unit yield will be low and benefits will be small. 3) Labor and land will fall out of harmony, they will not be able to manage and will certainly have to ask relatives and neighbors to "help out," thus adding too many expenses. Qin Tiantai [4440 1131 1132], branch party secretary of the Caoniang Production Brigade in Ying County's Cangzhai Commune is 36 years old this year. He has a six-member family with one male and two female laborers. In 1982 they contracted 36 mu of land, or 12 mu per laborer. They planted 21 mu of cotton and had a yield of 12,000 jin or 571 jin per mu. In 1983, the amount of land they were farming suddenly increased to 406.6 mu, or 67.8 mu per capita of 135 mu per laborer. Both the per-capita and per-laborer figures were 11 times those of 1982. Originally the Caoniang Production Brigade had fairly well-developed industries and sideline occupations. Of the total 386 laborers in the production brigade, 167 were in industrial or sideline production and 219, or 56.7 percent of the total labor force, were engaged in agricultural production. There were 18 mu per laborer and so the base figure was by no means low. And yet the land farmed by the Qin Tiantai family was 7.5 times the brigade average. As a result, the contradiction of large inputs and low benefits appeared. According to a briefing by Qin himself, the per-mu yield for 379 mu of grain fields planted in 1983 fell 31 percent, chemical fertilizer expenses were 6,688 yuan, or an average per-mu expenditure of 16.4 yuan. He depended on the help of others for most of the farm work. For the whole year, he needed 23,000 man-days, and he himself was only able to put in a little over 1,000 man-days at the most or only one-fourth [as published] of the actual labor. He said: "For the help of relatives and neighbors, I had to pay 2 yuan per man-day." Figuring from this, he had to spend another 4,000 yuan, or about 10 yuan per mu, for labor costs for the year. Adding in

the costs of seeds, water and electricity, he had to spend a total of 14,000 yuan or 35 yuan per mu. Calculated at a total yield of 160,000 jin for 1983, that was 393 jin per mu, and calculated at 0.18 yuan per jin, then the gross income per mu was about 70 yuan. Production expenses were about 50 percent, making the net income per mu only 35 yuan. So an investment of 1 yuan produced 11.2 jin of grain. And yet the Han Renbing [7281 0088 0365] household of the Hanjiachang Production Brigade, which is only 4 or 5 li down the road from this production brigade, has a family of nine people with seven laborers who farm 200 mu of land, making 22 mu of cultivated land per capita or 28.5 mu per laborer. But because the labor and land were in a proper balance, they had small production investments yet high per-unit yields and large profits for the grain they farmed. In 1983 they planted 188 mu of grain crops and according to Han's own estimates, they produced 117,000 jin of grain or an average of 594 jin per mu, with production costs of 20 yuan per mu and a net income of 86 yuan. An investment of 1 yuan produced 29.7 jin of grain. The economic results are strikingly higher than those of Qin Tiantai. (See Table 2)

Table 2. A Comparison of Two Households' Production Conditions and Their Results

Conditions	Qin Tiantai	Han Renbing
Number of people	6	9
Laborers	3	7
Amount of land farmed (mu)	406.6	200
Land per person (mu)	67.8	22
Land per laborer (mu)	135	28.5
Times increase over average land per laborer in the production brigade	7.5	2.4
1983 grain yield		
Total yield (10,000 jin)	16	10.5
Yield per mu (jin)	393	594
Per mu production costs (yuan)	35	20
Net income per mu (yuan)	35	86
Grain yield for each yuan invested (jin)	11.2	29.7

The above comparison shows that when there is too much land, the situation becomes one of extensive farming, and it is not advantageous to raising the yield per unit of area nor advantageous to raising the grain productivity for the entire society. At present, agricultural production is still basically a manual operation, and the land farmed per laborer by specialized households should not be too large but should be generally equal to one to two times the local average. According to a survey of Yanbei Prefecture, commodity grain specialty households feel that about 45 mu per household is about right, or 1.6 times the local average. In the Xiangyuan County survey they felt that doing a good job farming 1 mu of grain field generally requires an input of between 15 and 20 man-days, one strong laborer can put in 300 man-days a year, and so the farming capacity of one laborer is generally just over 20 mu.

Some of the statistical circumstances of commodity grain specialty households in Xiangyuan County are farmland plots of between 20 and 30 mu, making up 77.3 percent, with those between 30 and 50 mu making up 20.6 percent and those over 50 mu making up only 2 percent. According to our survey of 47, 10,000-jin grain specialty households in the Daxitou Production Brigade of the Lizhai Commune in Ying County's Pingquanshui Prefecture, the average household has 5.26 people with 2.46 laborers. Each household has an average of 36 mu of cultivated land, and both the per-laborer and per-household cultivated land are higher than the production brigade average by nearly 100 percent (0.95 and 0.88 percent, respectively). We carried out a random comparative survey of 10 households specializing in grain and 10 ordinary households in the Sanmencheng Production Brigade of Yijing Commune in an area of high fertility and good water supply in Ying County. The average per-household cultivated land for specialty households was 32 mu while that of ordinary households was 13.7 mu, or 1.3 times greater. And so the management scale of households specializing in commodity grain should start from the actual situation, and the amount of farm land, the amount of labor and the strength of the labor force must be suitable; for only then can they achieve the greatest economic benefits.

12452

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WAYS TO RESTRUCTURE CIRCULATION SYSTEM IN RURAL AREAS OUTLINED

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[Article by Yan Ruizhen [0917 3843 3791] of the Department of Agricultural Economics of the China People's University: "Three Basic Problems in China's Current Reform in the Field of Rural Circulation"]

[Text] In the circumstances of a natural economy, agricultural production is aimed basically at satisfying workers' self-supporting need, farm products are directly consumed after the process of production is completed and the process of circulation between production and consumption does not exist. Before the 3d Plenary Session of the 11th CPC Central Committee, China's rural economy was basically a semi-supporting one, the commodity rate of farm products was very low and only a very small portion of all products entered the field of circulation. This is the fundamental reason why China's rural commodity system is so imperfect, why circulation channels and markets are so underdeveloped and storage and why transportation and processing facilities are relatively backward.

Today, relatively great development has been made in the diversified economy of the rural areas, resulting in fundamental changes in the situation: 1) the overwhelming majority of the products of a diversified economy are commodities and are produced for sale. 2) Rural areas are not self-sufficient in most of the means of production needed by a diversified economy and must get them from urban industries and other sources through circulation channels. 3) Most products of a diversified economy (such as animal products, aquatic products, fruits and vegetables) are easily spoiled and difficult to store. In order to keep freshness, they must be put in the process of circulation in a timely manner and be quickly transferred to consumers. All this indicates that along with the development of a diversified economy we must restructure the commercial system of the rural areas accordingly and establish a developed rural commodity circulation system compatible with a developed commodity economy in the rural areas.

The requirements of a developed rural commodity circulation system are as follows: 1) we should allow the coexistence of multiple circulation channels, fully arouse the enthusiasm of the peasants for engaging in the commodity circulation of farm products and invigorate the rural economy.

2) We should distinguish between main channels and supplementary channels. The main channels should have high standards, they should be broad and open and able to handle large volumes of traffic, and it is impermissible for them to be clogged. Other channels should play a supplementary role. 3) The circulation channels of the commodity farm products should be short and have few middle links so that products can reach consumers quickly. 4) Buyers and sellers or their representatives should be able to meet with each other directly at fixed times and places so as to understand each other's circumstances and needs in a timely manner, exchange market information, make timely readjustments in the relationship between production and marketing and provide timely guides in production. 5) Commodity farm products are often bulky and difficult to transport, demanding that rough or even fine processing be carried out locally in the production areas and that communications, transportation and storage be modernized to reduce spoilage and loss in the circulation process of farm products. 6) We should strengthen planning in the circulation process of farm products and at the same time use various economic levers as supplementary means to regulate the balance between production and demand.

To meet the above requirements, we must fundamentally restructure the current rural commercial system and establish highly efficient farm product circulation channels. As far as the current situation is concerned, we must first solve the following three basic problems:

I. Reforming the Supply and Marketing Cooperative System

Before the 3d Plenary Session of the 11th CPC Central Committee, commodity circulation channels in China's rural areas consisted of state-run commerce owned by the whole people and collective commercial enterprises--namely, supply and marketing cooperatives--collectively owned by laboring people. In addition to state-run stores in market towns, rural commerce relied mainly on supply and marketing cooperatives. Supply and marketing cooperatives were in name owned by the collectives, but their funds came mainly from the state treasury. No extra dividends were given to commune members who held a few shares. The employees of the supply and marketing cooperatives were directly assigned by the state as state cadres who received fixed wages. The profits of the supply and marketing cooperatives were delivered to the state. Therefore, supply and marketing cooperatives were, in essence, state-run commercial outfits. Employees of such commercial enterprises had an "iron rice bowl." If they lagged behind in political and ideological work, they tended to develop a "bureaucratic business style," became unconcerned with what the peasants wanted and needed and made no effort to unclog the channels between the production and marketing of farm products.

Supply and marketing cooperatives are the main channels of rural commodity circulation. Therefore, the reform of the supply and marketing cooperative system should become the center of the reform of the rural commercial system. The first step in the reform of the supply and marketing cooperative system is to restore the true look of the collective ownership of the supply and marketing cooperatives and to continue to sell shares to the peasants on a large scale. This is not only to enhance the economic strength of

the supply and marketing cooperatives but, more importantly, to raise the peasants' political and economic positions in the supply and marketing cooperatives. Congresses at all levels elected by the peasants joining the supply and marketing cooperatives should be considered the authorities of the supply and marketing cooperatives which have the functions of making policy decisions and appointing and removing major employees. The boards of directors of the supply and marketing cooperatives at all levels should be directly elected by the congresses at all levels. Non-employees have no right to elect and be elected. The boards of directors may hire technical and managerial personnel to work for supply and marketing cooperatives and fire them at any time if they are incompetent. Only when the supply and marketing cooperatives are owned by the collectives and are granted decision-making power in management, fund utilization, income distribution and personnel appointment and removal under the guidance of the party's principles and policies, can they guarantee the orientation of whole-heartedly serving the peasants and become a main industrial force in promoting the all-round development of the rural economy.

The supply and marketing cooperatives should practice economic accounting and assume sole responsibility for their own profits and losses. Their income should come from the commissions they charge for marketing products or purchasing means of production for peasants. The more service they provide for the peasants in purchasing and marketing, the higher their profits and income and the greater the material interests of their employees will be. This will closely link the interests of the supply and marketing cooperatives and the interests of the peasants in developing the diversified economy and will encourage the supply and marketing cooperatives to show concern for the all-round development of the rural economy and provide active service for this development.

In the past, rural commerce was too complicated and work was overly divided. For example, grain and edible oil were procured by grain distribution stations, cotton by supply and marketing cooperatives, hogs and eggs by food companies and noodles made from bean or sweet potato starch by non-staple food companies; chemical fertilizer, pesticide and pesticide sprinklers were supplied by supply and marketing cooperatives, fuel for farm machinery by fuel companies, farm machinery by farm machinery companies and fodder by fodder companies. Due to the complicated and overly divided work, these departments have been unable to handle their work in peak seasons and make full use of their manpower in lax seasons, resulting in low efficiency in work. Since they each defend their own departments and argue over trifles, nobody is interested in supplying new products and new means of production. Having to deal with so many departments is very inconvenient for the peasants. Therefore, supply and marketing cooperatives should exercise unified control over the marketing of all farm products and the supply of all means of production in the rural areas. In this way, the peasants will only have to deal with one unit that is the supply and marketing cooperative. When conditions permit, supply and marketing cooperatives may also go beyond the limit of purchasing and marketing services and add such services as the rough and fine processing of farm products and storage. They may also incorporate credit cooperatives and supply and marketing cooperatives as

some localities and initiate such services as savings deposits, credits, technical guidance and insurance. Earnings from these services will become part of the income of the supply and marketing cooperatives.

The future task of the supply and marketing cooperatives is extremely formidable. In order to exercise these functions effectively, the area covered by the grassroots supply and marketing cooperatives should not be too large and should be based on the natural division of villages. In consideration of China's large administrative area, poor communications facilities and extreme difficulties in purchasing certain local and special products which are scattered and in small quantities, we may establish sales agencies in the mountainous areas and entrust peasants to carry out purchasing and marketing operations.

The grassroots supply and marketing cooperatives in some market towns have abundant funds, a large scope of operations and great income. Modern transportation, storage, processing and credit industries and cultural and technical service centers developed on the basis of these supply and marketing cooperatives have the possibility of becoming the embryos of modernized rural market towns and becoming the political, economic, cultural and scientific and technological centers of the rural areas.

An integrated county supply and marketing cooperative may be established above the grassroots supply and marketing cooperatives to make overall planning for the purchase and sale of the products of a rural diversified economy in each county. It will sell some of the commodity farm products gathered and delivered to it daily by the grassroots supply and marketing cooperatives at the wholesale markets under the jurisdiction of its county and distribute the rest to the national farm product sales network via integrated city or provincial supply and marketing cooperatives. Through the same network, the grassroots supply and marketing cooperatives may also purchase on the order of the peasants the means of production and consumption from integrated county supply and marketing cooperatives. Of course, grassroots supply and marketing cooperatives may also skip integrated county supply and marketing cooperatives and deal directly with wholesale markets.

In addition, it is also necessary to allow peddlers to engage in commercial activities. Those peddlers who go from street to street in remote villages and residential areas have very wide contacts with peasants and are quite competitive. They can handle small retail transactions which the supply and marketing cooperatives cannot handle. Their management method is extremely flexible. Therefore, they can play an active role in invigorating the rural economy and making up for the deficiencies of socialist commerce. Of course, they must have government licenses and engage in commercial activities that are allowed by state policies. They are by no means allowed to engage in profiteering, speculation and other illegal activities to benefit themselves at the expense of others. Because peddling is a form of trading farm products developed under the circumstances of a semi-supporting economy, it is a backward method and can only play a supplementary role.

II. Building the Wholesale Markets and Trade Centers of Commodity Farm Products.

To exchange commodities, there must be markets. At present, China's rural areas only have retail markets including various retail stores and country fairs. Country fair trade is a form of commodity circulation originally developed on the basis of the commune members' private plots and family sideline occupations. It has played an important role in selling above-quota goods which are included in the unified state purchasing plan, selling the third-category farm products and other odds and ends which are not included in the state plan, regulating surpluses and shortages among commune members and satisfying the needs of production and livelihood.

However, retail commerce is a product of the semi-supporting rural economy. It is no longer suitable for the new situation generated by the gradual development of today's rural commodity economy. Its small handling capacity is in no way able to handle the huge number of commodity farm products produced during commodity production. Because of this, many commodity producers cannot but carry their sample products and travel all over the county to find buyers. Some counties send out tens of thousands of people to promote their sales, resulting in a huge waste of manpower, material and money. Such a backward farm product circulation method is like carrying shoes to find feet. It must be changed quickly.

The substitute measure is to build farm product wholesale markets in addition to retail markets. Different kinds of wholesale markets may be built according to the nature and variety of farm products. For example, non-staple food wholesale markets may be established at the city level. Integrated county supply and marketing cooperatives in neighboring counties under the jurisdiction of a certain city will deliver to wholesale markets with their own transportation the non-staple food products gathered and delivered to them the day before by the grassroots supply and marketing cooperatives on the request of the peasants. At the same time, non-staple food wholesale stations in all districts (neighborhoods) of this city will send people to the wholesale markets carrying the orders they received the day before from grassroots non-staple food retail stores. The wholesale markets will sell the goods to district (neighborhood) wholesale stations at flexible prices in accordance with state regulations. The wholesale stations will then sell the goods at wholesale prices to grassroots non-staple food retail stores according to their orders. If the peasants do not like to sell their products through the supply and marketing cooperatives, they may transport them directly to the wholesale markets and sell them there. By the same token, the grassroots wholesale stores may also purchase good directly from the wholesale markets without going through wholesale stations. Wholesale markets may also have modernized storage facilities with which they can store farm products left over from the day's sales and charge a certain amount in storage fees.

In this way, the link of wholesale markets will make the following possible:
1) integrated county supply and marketing cooperatives which represent producers can be linked to wholesale stations which represent consumers to

establish regular, constant and direct contacts and reduce middle links. 2) According to the orders they received the day before, grassroots retail stores can get a fresh and needed variety of nonstaple food products at wholesale markets to enhance their planning and reduce their weaknesses. 3) Through daily contacts with wholesale markets, the integrated supply and marketing cooperatives can keep abreast of market developments and information, understand the consumers' immediate and future needs, give timely guidance in production and ensure that the products are marketable. Only by establishing such permanent and effective sales channels for commodity farm products can the diversified economy enter the course of sound development.

Farm product trade centers are another form of wholesale market. Farm product trade centers may be set up at the county level. Their task is to control in a timely manner the sources of farm products under their jurisdiction including the variety, standards and quantity of products. Through trade centers, purchasing units can contact goods owners and make transactions in farm products.

In addition, it is also necessary to publish the nationwide monthly NON CHAN PIN XIN XI BAO [NEWS ON FARM PRODUCTS]. Goods owners can directly advertise their goods in the paper and purchasing units can contact owners and purchase farm products through the paper.

III. Establishing Farm Product Planning and Pricing Systems That Protect the Interests of Producers and Consumers

There are two directions in which the farm products of China's diversified economy are circulated: 1) products of the first and second categories within the quota of unified and assigned purchases are procured according to the state plan and are included in state planning. 2) Products of the third category and above-quota products of the first and second categories may be procured by the state at negotiated prices or be traded at county fairs. At present, because the situation in the all-round development of the diversified economy is getting better and better and the per-mu yield is getting higher and higher, the proportion of above-quota products is increasing each day. Since the quantity of some farm products can already fully satisfy the people's daily needs, these products are being gradually excluded from the limit of unified state purchases and sales. It is thus clear that on the prerequisite of unified and assigned purchases which enable the state to control the basic means of subsistence that affect the national economy and the people's livelihood, both the absolute and the relative volume of above-plan purchases increase with each passing day.

The means of production needed by the diversified economy also have the same trend of development. Along with the increases in the quantity of grain and agriculturally oriented manufactured goods, some means of production which were originally supplied according to the state plan are now obtainable through free purchases on the markets.

Therefore, a new situation has emerged, that is, along with the development of the diversified economy and the increase in the quantity of products, the number of farm products and production means regulated by the market is steadily increasing. This is very conducive to invigorating the rural economy. However, because these farm products and means of production are traded freely on the market, their prices fluctuate substantially due to the effect of supply and demand; therefore, production must also be subject to market regulation. Take Luancheng County in Hebei Province, for example. In spring 1983, mixed fodder was priced at 0.14 yuan a jin and eggs were priced at 1.3 yuan a jin. By the summer of that year, the mixed fodder price went up to 0.2 yuan and the price of eggs went down to 1.05 yuan. This up-and-down pattern reversed overnight the situation in which chicken raising was profitable. Because the average chicken farmers could not make any profit, the number of chickens raised in this county dropped suddenly from 1.2 million (of which, 800,000 were grown chickens) in 1982 to 660,000 grown chickens by the autumn of 1983. Unlike crop planting, animal husbandry is very fragile. Once damaged, it is very difficult to restore it. The difficulty of selling hogs in the past 3 years in Luancheng County has ruined 70 percent of the hog-breeding farms in this county (whose number has dropped from the previous 100 to about 30). It is now very difficult to restore these farms.

In order to reduce the unfavorable effects on producers caused by the imbalance between market supply and demand, the state should not take a laissez-faire attitude toward the farm products which are not directly controlled by the command plans and leave them completely to market regulation. Instead, it should adopt guidance plans to achieve a relative balance between production and marketing. According to short- and long-term forecasts on the consumption of farm products, state planning departments should set guidance plan targets for the output of farm products in different regions and help peasants fulfill them through the supply and marketing cooperatives at all levels.

Regarding the functions of market regulation, the state should increase its influence in the prices of the farm products of the diversified economy in order to reduce the producers' damage caused by the fluctuation of farm products' prices and protect their interests. Of course, this is also to protect the consumers' interests. There are three ways to do this: 1) fixing a standard price that will be accepted by both buyers and sellers by adding the average profit to the cost of a certain farm product; 2) using the stock of commercial departments to keep the fluctuation of market prices within a small range above and below standard prices; and 3) having the supply and marketing cooperatives establish price funds. If the supply and marketing cooperatives sell the peasants' products at prices higher than standard prices, they may deposit the excess profits in their price funds which can be used to compensate peasants when their products are sold at prices below standard prices. This ensures that the peasants can sell their products at standard prices regardless of circumstances so as to protect the interests of the producers and consumers.

RELATION BETWEEN AGRICULTURAL COSTS, RETURNS ON INPUT DISCUSSED

Beijing NONGYE JISHU JINGJI [ECONOMICS FOR AGRICULTURAL PRODUCTION TECHNOLOGY] No 5, May 84 pp 11-18

[Article by An Xiji [1344 1585 0123] of the Department of Agricultural Economics, Beijing Agricultural College: "On the Law of Changes in Return on Agricultural Input and Changing Trends in Agricultural Costs"]

[Text] In recent years, the question of the "law of diminishing returns" in agriculture has elicited the attention of and discussion by China's economic circles. Basically, there are two views. One view holds that in the process of modernizing agriculture, the most obvious feature is the diminishing returns on the input of material goods in a unit of area, and the diminishing returns, in turn, are a basic determining factor in the changing trends of agricultural production costs; moreover, they feel that this factor is a universal law. If the facts are true as stated, then in China's process of agricultural modernization, the formula that "diminishing returns lead to raising costs, which lead to continued inflation," seems to be an immutable law of economics. This is a very big and real problem that directly affects our agricultural developmental strategy and economic policies. The other view fundamentally denies the law of diminishing returns. But its proponents have given no convincing explanation, in economic theory, with regard to many economic phenomena that have appeared in the process of our agricultural modernization, nor have they refuted with facts the law of diminishing returns that has been proven through a great deal of scientific experimentation. Of course, Marx and Lenin could not foresee the specific process of China's agricultural development. For example, for 30 years the situation of diminishing returns and raising costs has existed in agriculture and it seems that the situation of "high output and high costs" is quite widespread, particularly in some prefectures, communes and brigades that had experienced a fairly early and fairly rapid agricultural modernization. With all of these, it seems it would be quite hard to call this a coincidence.

To start a discussion on this question of "diminishing returns," and particularly to start a discussion on certain agricultural technology policies and economic policies that are directly related to it, I have set out a few personal opinions. My views may be summed up in the following four points.

I. Under Unchanging Technological Conditions, Diminishing Returns and Increasing Returns Are Objective Laws

From about the middle of the 19th century, with the development of modern agricultural technology, many agricultural scientists explored the relationship between the input of agricultural production materials and the output of agricultural products through scientific experiments to find out whether or not there was a "law"-type relationship between them. For more than 100 years and through hundreds and thousands of experiments and analyses, and later with the participation of economists, they reached a fairly unanimous conclusion. We can sum up its main points: 1) With unchanging technology, continual inputs of various production resources into a unit area of land will bring about changes in the yields of agricultural crops; 2) there will be corresponding changes in the total output from a unit area of land, in the average yield and in the marginal yield of various variable resources; 3) the marginal yield from variable resources first shows a progressively increasing trend, followed by a progressively decreasing trend and finally it becomes a negative number. What we call the law of increasing returns and the law of diminishing returns simply indicates the law of gradually increasing marginal yields and gradually decreasing marginal yields or variable production resources. The law of the gradual increase and gradual decrease of marginal yields is a universal law obtained through scientific experimentation and strict analysis.

What we speak of here as various and variable production resources could be any kind of production resources in agricultural production, including productive labor, seeds, tools, fertilizer, water, agricultural chemicals, lights, etc. Of these, the ones most often used in scientific experiments are fertilizers, water, light, temperature, etc, and these production materials directly restrict the growth of agricultural crops and are also easy to control. In order to facilitate explanations, below we have used fertilizer to represent certain variable production resources that are continually put into agriculture. We can use a graph to express the laws of increasing and diminishing returns mentioned above, using Graph 1 to explain further. [See graph on following page]

1. From the application of no fertilizer (point 0 on the graph) to fertilizer application point C, that is, the point of greatest marginal yield (also called the point of inflection), the marginal yield from fertilizer ($\Delta Y/\Delta X$) shows a tendency to increase gradually. According to the results of experiments applying nitrogen fertilizer on paddy rice done by the Tianjin Paddy Rice Research Institute, the continual input of chemical fertilizer in a sphere of about 44 jin of chemical fertilizer per mu at point C showed an ever greater increase in rice yield (ΔY) for each jin of chemical fertilizer (ΔX).

2. With the gradual increase in amount of fertilizer applied from point C to point A, the total yield gradually increased along with it, and the average yield of the fertilizer also continued to increase, but the marginal yield of the fertilizer showed a tendency to decrease gradually. (Point A in the Tianjin experiment mentioned above was about 55 jin of chemical fertilizer per mu.)

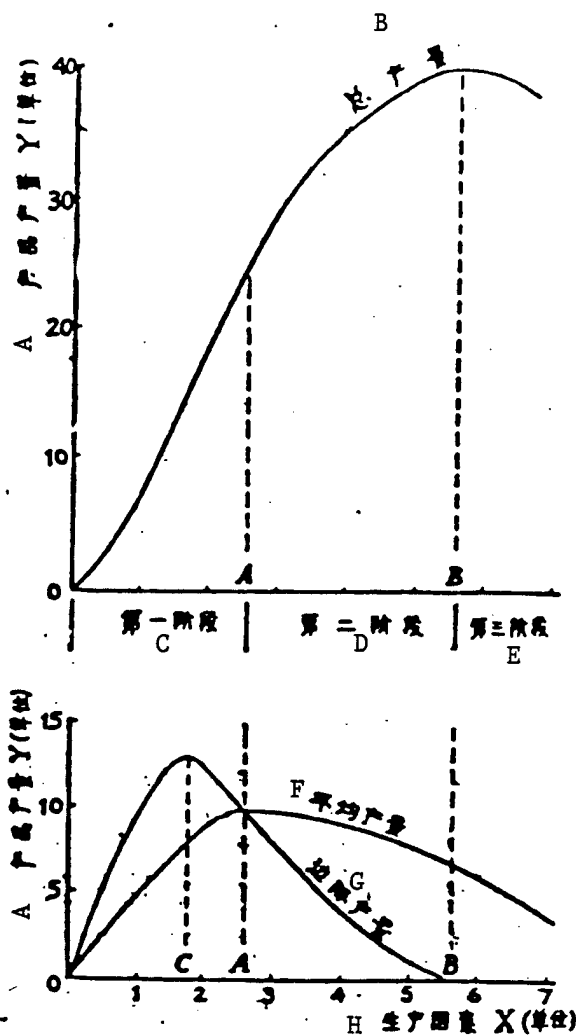


图1. 三种不同的投入产出效果及其相互关系

Graph 1. Yield Results for Three Different Inputs and Their Interrelationships

- KEY:
- A. Product yield Y (unit)
 - B. Total yield
 - C. First stage
 - D. Second stage
 - E. Third stage
 - F. Average yield
 - G. Marginal yield
 - H. Production factor X (unit)

3. From point A to point B, the total yield continued to rise, but the average yield and the marginal yield of the fertilizer both fell. Point B also corresponds to the amount of fertilizer for the highest total yield, that is, 80 jin of chemical fertilizer applied to a mu.

4. When fertilizer is applied beyond point B, the total yield begins to show a tendency to decline and the marginal yield, then, becomes a negative number. For example, according to the Tiancin experiment in applying fertilizer to paddy rice, when the amount of chemical fertilizer reaches 88 jin, the total yield falls from 988 jin, when 46 jin of fertilizer are applied, to 974 jin, and the average yield per jin of chemical fertilizer drops to 7.2 jin, with the marginal yield falling to -0.6 jin. This shows that the continued application of fertilizer beyond point B does not lead to increased yields but leads, rather, to decreased yields.

A great many scientific experiments both here and abroad prove that under conditions where technology does not change, the gradual increase in returns and the gradual decrease in returns are both objective laws and have universal significance.

Our study of the relationship between the input of production resources and the product yield is mainly for the purpose of determining the optimum amount of resource input and the most efficient distribution and utilization of production resources. The optimum amount of fertilizer to use must be between points A and B, that is, falling somewhere between the highest point of average yield for fertilizer and where the marginal yield is zero, and generally in the latter stage of the gradually decreasing stage for marginal yield, with relative production elasticity between 1 and 0, which is also called the second stage of production input.

The main reason that people stress the law of diminishing returns in the changing relations between agricultural economic management and production is because this law affects income distribution and determines the optimum amount of resources to use. The optimum amount of fertilizer to use should conform to the following formula:

$$\Delta Y / \Delta X = P_x / P_y \quad (1)$$

ΔX is the increase in resources, and

ΔY is the corresponding increase in resources;

P_x is the unit price of the resource and P_y is the unit price of the product.

The amount of resources used should follow this formula, and going too far is as bad as not going far enough, for both will result in a loss of net income for the production unit.

Historically, many people have always stressed the law of diminishing returns in marginal yield, always ignoring the law of increasing returns in marginal yield. But in fact, the law of increasing returns for marginal yields is an important basis for the rational distribution and effective utilization of

production resources which can be applied both to raising microeconomic economic benefits and to raising macroeconomic economic benefits. Therefore, I have brought it up here with the law of diminishing marginal returns. We must not only emphasize the law of diminishing returns but also stress the law of increasing returns.

To sum up, under conditions where technology does not change, continued inputs of certain production resources can result in the trend of gradually increasing returns and gradually decreasing returns, successively. These are objective laws and should be recognized as such and so stressed. We should stress them because in the process of China's agricultural modernization, only by drawing support from the knowledge of these two laws will we be able to formulate just the right amount of input for production resources under specific conditions or be able to decide the appropriate degree of intensiveness in farming and the most rational distribution of production resources and thus give full play to the role of each production resource. In this way we can raise the economic benefits and promote the development of agricultural production. Otherwise, we may suffer the consequences.

II. Rising Inputs and Returns Are Objective Economic Laws in the Course of Historical Development

In the course of historical development, science and technology are constantly changing and, scientifically speaking, there is no historical process with an unchanging technology. Any historical process always involves change prompted by a variety of production factors while only the pace of the change remains a variable. Just as Lenin pointed out: "The concept itself of additional (or constant input) of labor and capital is premised on changes in the mode of production and technological innovation."¹ Historically, along with the development of scientific technology and coordination of production, returns on additional labor and capital as an expression of value, show a tendency to rise. This is an objective law of economics.

Marx said: "The productive forces of labor develop constantly along with the steady progress of science and technology."² He also said: "Rising labor productivity lies precisely in the fact that whereas the portion of live labor decreases while the portion of past labor increases, the result is that the total amount of commodity labor [labor as commodity] decreases. Thus the reduced live labor will still be greater than the increased past labor."³ Marx' thesis has already been proven by the history of agricultural modernization in the last 100 years. Whether in America, with its extensive land and small population, or in Japan, with little land and many people, their historical experience in agricultural development proves that along with the development of scientific technology and production coordination,

¹ "Collected Works of Lenin", vol 3 p 87.

² "Collected Works of Marx and Engels", vol 23 p 664.

³ Ibid., vol 25 p 290.

agriculture's total labor productivity (live labor plus materialized labor) shows a tendency to increase continually, and thus the return on production inputs shows a tendency to increase gradually. For 80-odd years since 1880 in the developmental process of American agriculture, aside from the so-called Golden Age of Agriculture between 1900 and 1920, the average annual rate of increase for all inputs was lower than the rate of increase for production. During the period from 1940 to 1960, when America's agricultural modernization developed rather rapidly, the average annual rate of increase for all inputs was 0.2 percent and could be called too small to mention. (This is calculated at unchanging prices; the same is true below.) The average annual rate of increase for products (yields) during the same period was 1.9 percent, which is approximately 10 times the rate of increase for inputs. During those 20 years, the rate of increase for productivity was 1.7 percent. During the 1970's, American agricultural productivity rose at an average annual rate of over 5 percent. In the last 10 years, the developmental process for Japanese agriculture has been the same. At each stage, the rate of growth for products surpassed the rate of growth for inputs. Between 1880-1900, the average annual rate of growth for yields was 2.1 percent and the rate for inputs was 0.6 percent; between 1940 and 1960, the rate of growth for yields was 1.5 percent, and the rate for inputs was 1.0 percent. Nepalese agricultural technology is rather backward, with the input of modern agricultural technology only 1 percent of the total input. Yet the Nepalese experience also proves that in the historical process of agricultural development, the rate of growth for yields is generally greater than the rate of growth for inputs. Between 1967 and 1974, average annual agricultural productivity grew at a rate of 0.5 percent. For the past 70 years, with the development of science and technology, real productivity costs for wheat in Europe have continued to decline, and in the 1970's they were roughly equal to about one-half of those before World War I. The historical statistical data are not necessarily very accurate, but they are certainly sufficient to show the historical development trend. That is, an increase in both production capital and returns is a social and economic law. As Marx pointed out, the law of a continual rise in total labor productivity and a constant increase in returns on production inputs has already been proved by the historical experience of capitalist agricultural development. It should be even less true that socialist agriculture will inevitably develop in line with the tendency of diminishing returns. Just the opposite should be so, theoretically speaking. The rate of increase on returns in socialist agricultural development could even be a little faster.

Above, we explained the law of rising returns in agricultural production both in theory and from historical experience. What, then, is the best way to give expression to this law in actual management and administration? Is it the same as the tendency for gradually increasing returns discussed in the earlier section? Is it mutually contradictory with the tendency for diminishing returns discussed in the earlier chapter? What is the relationship between these three laws? And how are they brought into harmony? Here we will explain in a general way by using the following form of production functions.

$$Y = f (X_1, X_2, X_3 \dots\dots X_n) \quad (2)$$

In the equation, Y represents the product yield, and X_1 represents various production materials. For example, X_1 represents nitrogen fertilizer, X_2 represents phosphorus fertilizer, X_3 represents the crop variety, X_4 represents soil moisture, X_5 represents the original soil fertility and X_6 represents the amount of live labor, etc.

In the above section, the diminishing and increasing tendencies in the returns for nitrogen fertilizer which we explained with Graph 1 are only applicable to a situation where the production materials X_2 to X_n are all unchanging and to a situation where the production technology is unchanging. Only with these prerequisites will the increased amount of crop yield follow along with the changing amount of nitrogen fertilizer and, along with this, show a tendency to increase gradually and decrease gradually. This is a static economy, making history into a great river and with the situation spoken of here a cross section of that river. It does not refer to historical trends. If at the same time that we increase the application of nitrogen fertilizer, we change the quantity or quality of X_2 or X_3 --for example, if at the same time we apply additional phosphorus fertilizer, change to an improved seed variety, properly adjust soil moisture, change soil fertility, etc, then the three lines expressing yield in graph 1 will shift upwards and break out of the original situation of gradually increasing and gradually diminishing returns. The result of three experiments applying nitrogen fertilizer to wheat which were done in Anhui's Fengyang County in 1982 and 1983 show that when overall soil fertility differs (actually, when the overall technological level differs), the production function of nitrogen fertilizer for wheat also differs. (1) The Guangou plot was quite lacking in soil fertility, (2) the Yinjian plot had middle-grade soil and (3) the Chengbei plot had fairly fertile soil. Their separate production functions for nitrogen fertilizer are:

$$(1) \hat{Y} = 135.9592 + 114.61761gX$$

$$(2) \hat{Y} = -211.8736 + 326.81281gX$$

$$(3) \hat{Y} = 245.7249 + 175.63531gX$$

In the equations, $\hat{Y}$ is the amount of wheat measured in jin, and X is the amount of carbon ammonium [tan-an 8955 6941] also measured in jin.

In the three experimental plots, with the same 80 jin of carbon ammonium applied per mu, the per-mu yield was just 354 jin for the Gaunjian plot and 410 jin for the Yinjian plot and reached 580 jin for the Chengbei plot. When the per-mu application of carbon ammonium was 110 jin, the margin wheat yield for the Chengbei was 0.7 jin and 1.4 jin for Yinjian and for Guangou it dropped to 0.5 jin. To sum up, generally speaking, the more fertile the soil and the higher the overall technological level, then the higher the marginal yield for the same level of fertilizer applied and the later the appearance of the tendency for diminishing marginal returns. In the course of historical development, along with various technological innovations in

production and in line with scientific methods for organizing production, the marginal yield for total input will show a tendency to increase gradually and total labor productivity will continually increase. The technological changes spoken of here refer to commonly spoken of such as "breakthroughs" in technology, which can greatly hasten the rate of increase for returns and raise labor productivity over a broad area.

To raise another example, experiments done by the Northwest Agricultural Sciences Institute between 1973 and 1975 in applying nitrogen fertilizer and phosphorus fertilizer to wheat proved that if you properly mix the two production elements, nitrogen fertilizer and phosphorus fertilizer, you can change the process of change in returns on investments, extend the stage of gradually increasing returns and postpone the appearance of gradually diminishing returns. In actual production, regardless of time or place, the relations existing between various production materials and the product yield all differ. Among them, there are usually one or two production materials that are the keys to increased production at a certain time and place. This is the conclusion reached from the results of scientific experimentation and actual experience. Moreover, by using mathematical and statistical methods to do the necessary analysis of productive functions, you can discover exactly what these key links are, what their makeup is in terms of productive materials, and what their price range is. And so we can say this: Not only are the constant rise in total labor productivity and the rising trend in returns on inputs abstract historical laws, but now people have the possibility of conscientiously and concretely applying them in actual work.

III. Trends in the Past 30 Years in China's Agricultural Investment Returns and Agricultural Product Costs

For about 30 years, we have had a situation of diminishing returns in Chinese agricultural production. And this situation has been neither short term nor small. Now that we recognize that raising agricultural returns on inputs is an objective, historical economic law, how do we explain and understand this phenomenon? Taking grain as an example here, we see the changing situation in returns on inputs in Chinese agriculture.

According to a fairly large amount of survey data, the changes in China's total output value, total expenditures and total labor productivity for grain in the past 30 years are as presented in the chart below. (This material is not very exact and our method of calculation is also rather rough, but this can show the basic changing trends.)

Table 1. Changing Trends in China's Overall Labor Productivity in the Past 30 Years (Index)

<u>Year</u>	<u>1952</u>	<u>1957</u>	<u>1965</u>	<u>1976</u>	<u>1978</u>	<u>1981</u>
Total output value for grain	100	114	144	221	238	361

Total expenditures for grain	100	123	229	233	260	262
Total labor productivity for grain	100	93	63	95	92	138

And from Table 1 we can make Graph 2.

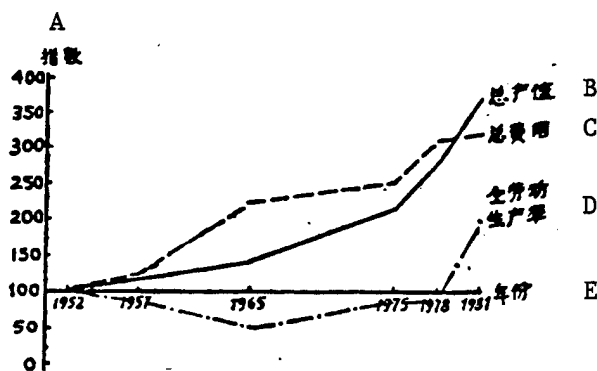


图2. 30年来我国粮食全劳动生产率变化 (指数)

Graph 2. Changing Trends in China's Overall Labor Productivity in the Past 30 Years

KEY: A. Index
B. Total output value
C. Total expenditures
D. Total labor productivity
E. Year

From the table's data we can see that the situation for returns on inputs in China's grain production can be roughly divided into two stages: 1952-1978, when return on inputs showed a basically declining trend, with a more rapid decline between 1952 and 1965. By 1982 they had still not regained the 1952 levels. Grain costs also continued to rise. During these 26 years, the labor cost index for grain rose from 100 in 1952 to 305 in 1978 and the materials cost index rose to 197. Yet during the same period, the per-unit yield for grain and the grain price index rose from 100 to 137, and from 100 to 173, respectively. This sort of situation, of course, obviously shows the tendency for diminishing returns on production inputs for grain. Since 1978, although there has been some increase in total expenditures, there has been a very broad increase in the total output value. The total labor productivity index was 138 in 1981, an increase of 46 over 1978, surpassing that of 1952 for the first time. During the period between 1978 and 1981, the return on inputs for grain beyond doubt showed an increasing trend. And this is a significant transformation in Chinese grain and

agricultural economic development in the past 30 years that is worthy of special note. It suggests that from this point on, China's grain and agricultural economy will travel a healthy developmental path and reverse the tendency of high agricultural production costs and low economic benefits that we have had for a long time. This experience is worth an additional thorough summarization. We still do not have in our hands data since 1981, but from the random data we do possess, we can see that the tendency for increasing returns on grain production inputs is still continuing. The pre-1978 situation of rising costs and diminishing returns on inputs was primarily due to faults in our work. Between 1952 and 1978, the per-unit yield index for China's grain rose from 100 to 137, and the average national rate of growth for grain was 2.4 percent (1952-1980). This rate is not slow. During the same period, the grain price index rose from 100 to 173, with the price for items of use in agriculture remaining stable. You can see that the reason for the increase in grain costs was not because of a stagnating level of production and inflation for items of use in agriculture but because of wasted labor and materials, which are what Marx called "useless labor."

According to statistics, labor expenditures contribute roughly 65 percent of the total expenditures in grain production costs and are the largest portion of the costs. During the period between 1952 and 1978, we put a large amount of machinery and power into agriculture. The main function of the machinery was to replace labor and raise live labor productivity and total labor productivity. But the amount of labor spent producing each jin of grain during this period did not decrease; on the contrary, it increased 2.05 times over the original amount. And since 1978, all areas that have implemented the production responsibility system that makes the family farm the main form had excessive rural labor of between 30 and 50 percent. Between 1980 and 1982, the labor used per mu for nine primary crops fell 23 percent, and yet the per-unit yield for grain also rose quite high and so the amount of the decline in labor costs per unit of yield for grain was even a bit higher. The situation between 1978 and 1982 is in a striking contrast with that between 1952 to 1978. Clearly, the decline in the returns on inputs before 1978 was not a function of the objective "law of diminishing returns," but it can only be blamed on wasted labor. Mentioning the fact of the huge surplus in China's rural labor force simply provides the possible conditions for applying "useless labor," and we certainly cannot view it as providing a scientific basis for inputting "useless labor," nor can we say that applying useless labor is a matter that conforms to some law.

The production costs for materials constitute about 35 percent of the total grain production costs, and fertilizer costs are over 40 percent of those material costs. According to incomplete statistics, for the 30 years prior to 1980 the application of 1 additional jin of chemical fertilizer increased the grain yield by an average of 0.8 to 1.2 jin, which, roughly speaking, meant that 1 jin of fertilizer equalled 1 jin of grain. This is an average figure and quite low for fertilizer efficiency. The actual situation is that in certain areas, communes and brigades where agricultural modernization developed fairly early and fairly fast, they had a very low return on their fertilizer due to too much application. For example, for each jin of

fertilizer applied by some communes and brigades in the Taihu basin, the average increase in yield for paddy rice even fell to about 1/2 jin. If we adopt the marginal analysis method, they have clearly already entered the third stage in Graph 1, that is, the stage where production elasticity has become negative. Theoretically speaking, part of the additionally applied fertilizer played the role of lowering the total yield. Between 1966 and 1979, the amount of fertilizer applied in these areas (and not only in the Taihu basin) still continued to increase. See Table 2 for an example using Jiangsu's Wuxi County.

Table 2. The Changing Situation in Returns on Fertilizer
in Wuxi County, 1966-1979

Year	Average Amount of Chemical Fertilizer Applied Per Mu in Jin	Average Paddy Yield Per Mu in Jin	Chemical Fertilizer Costs Per 100 Jin of Paddy In Yuan	Average Increased Yield of Paddy for Each Added Jin of Fertilizer Applied
1966- 1972	71.0	1,029.5	0.86	--
1973- 1975	126.2	1,280.0	1.18	4.5
1976- 1979	285.4	1,477.2	2.35	1.2

You can see from the above table that when the amount of fertilizer was increased from 71 jin to 126.2 jin, the average increase in the yield of a paddy for each jin of chemical fertilizer was 4.5 jin; when it was increased from 126.2 jin to 285.4 jin, each jin of chemical fertilizer was able to increase the paddy yield by only 1.2 jin, so some of the fertilizer clearly surpassed the boundary for economically rational fertilizer application, or surpassed what Marx called "the boundary for using machinery." Some communes and brigades have already entered the third stage of returns on fertilizer application, that is, a part of the fertilizer plays the role of lowering the total yield.

Another aspect is the severe fertilizer shortage in some less advanced areas. Their return on fertilizer input probably is still in the initial stage. Yet even in the stage of gradually increasing returns on fertilizer inputs, of course, the return on fertilizer is still rather low, and in the same sense that going too far is as bad as not going far enough, they have not done well in showing fertilizer's role in increasing yields.

The sum of the two items in grain production--labor costs and fertilizer costs--is, generally speaking, about 80 percent of total costs and only after the 3d Plenum of the 11th CPC Central Committee did this wasteful phenomenon show a fundamental change, as we gradually implemented the production responsibility system with the family farm as the main form.

Between 1965 and 1980, paddy production costs in Wu County rose at an average annual rate of 4.4 percent, while during the same period national paddy production costs fell at an average annual rate of 0.7 percent. This, along with the fact that the production costs for China's high-yield communes and brigades were all higher than Wu County's communes and brigades, makes some people feel that this is enough to prove the tendency toward diminishing returns and rising costs in the process of agricultural modernization, and so naturally they reach the conclusion that waste is unavoidable. But since 1978, China's historical experience in agricultural development has already proven that now that we have adopted policies that conform to objective economic laws and have improved our work, the phenomenon of waste will gradually be reduced and that we can fundamentally reverse the trend of diminishing returns and raising costs and can prevent the reappearance of this kind of situation in the fairly long run or on a fairly large scale. To use Jiangsu as another example, because of improved management and administration, and particularly since the implementation of production responsibility system, labor input for grain production has been reduced and production costs have fallen. Between 1978 and 1982, the per-mu labor input for grain in the whole province fell 33.6 percent, live labor productivity calculated in kind rose 75.5 percent and primary production costs fell 6.2 percent. If we exclude the factor of price increases for agricultural production items, then the extent of the decline in costs is even greater.

We can see from the above analysis that the law of gradually increasing returns, the law of diminishing returns and the law of historically rising returns under conditions where technology does not change are not at all contradictory but are mutually complementary. But in actual work, we can only realize the latter law by getting a very good handle on the former two laws. This, then, requires that when we carry out economic organizational restructuring in the process of agricultural modernization, we must have agricultural technology and economic policies that suit China's circumstances. To this end, we must reiterate here that the law of diminishing returns for agricultural inputs is only applicable under circumstances in which technology does not change, and yet historically, technology is constantly developing and changing. Therefore, speaking of its historical significance, this is a "law that does not become a law," and only the law of rising returns on agricultural input is a historical law.

IV. Agricultural Technology Policy and Economic Policy

The following is not a concrete discussion of China's agricultural technology and economic policy but only a few views on some problems connected with changes in the returns on successive agricultural investments.

First, based on 30 years of experience in agricultural construction the objectives of China's agricultural modernization construction should include the overall heightening of economic benefits. Otherwise, if we solely make raising the per-unit yield the objective, then we will probably produce a situation of high yields with high costs and low income and so agricultural development will not be able to develop very much. At present, China has already decided to substitute the national income index for the total output

value index as the standard of measurement for the developmental condition of the national economy. This is a major reform in economic management work and has important significance for agricultural modernization construction. We must stress increasing national income and must also further emphasize raising overall labor productivity and increasing the returns on agricultural investment.

Second, in agricultural technology reform, we must stress overall technology and the integration of various technologies. We must avoid as much as possible doing only one task or generally making "a certain technology the center." Historical experience and scientific experiments both have proven that technological links that play the role of increasing yields and increasing income at a certain time and place are probably not the key links for increasing yields and increasing income at another time and at another place. If we hang on to a particular link without letting up and over-doing it, contrary to expectations we can extend the course of agricultural development. When we go to a particular area or production unit, we should strive to find from actual experience or from scientific experiments the crucial links for increasing yields and increasing income for that place and at that time. This link could possibly be the application of more nitrogen fertilizer or more phosphorus fertilizer, improved varieties, irrigation, drainage, the prevention and treatment of damage from insects or disease, agricultural mechanization, the agricultural labor force, etc. It might be one or several of these. By getting a hold on the right link, we can enjoy twice as many results with half the effort and the returns can show a gradually increasing trend. Therefore, speaking about the overall situation in agricultural technological reform, we should emphasize the overall nature, while in a particular place, we should emphasize adaptability and the adoption of a particular tack. We need to have a total direction in agricultural technology reform and yet must also have measures that suit different agricultural regions.

Third, we must emphasize the principle of overall balance in the distribution of agricultural resources. What we mean when we say overall balance is that we must harmonize present benefits with long-term benefits and harmonize benefits for the whole with benefits for the parts; we must not only see the necessity and even the urgency of a thing, but we must also stress its possibility and adopt policies and objectives which suit national strength.

12452
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REQUIREMENTS FOR RURAL ECONOMIC RETURNS DISTRIBUTION OUTLINED

Beijing NONGCUN CAIWU KUAIJI [RURAL FINANCIAL AFFAIRS] in Chinese No 10,
6 Oct 84 pp 14-23

[Circular issued by the Commune and Team-run Enterprise Administrative Bureau of the Ministry of Agriculture, Animal Husbandry and Fishery: "On the New Requirements Contained in the Table of Distribution of Economic Returns in the Rural Areas This year"]

[Text] The Commune and Team-run Enterprise Administrative Bureau of the Ministry of Agriculture, Animal Husbandry and Fishery on 23 August issued a circular to the departments (bureaus) of agriculture, animal husbandry and fishery, commune offices and economic control offices (stations) of various provinces, autonomous regions and directly subordinate municipalities. The circular says that the "Table of Distribution of Economic Returns in the Rural Areas" for 1984 has been approved by the State Statistics Bureau, and the draft table and the explanations of the indexes are now being mailed out to cope with the urgent need. Various provinces, autonomous regions and directly subordinate municipalities may reprint the appendixes accordingly. Those who are not in a hurry to use them may hold off the reprinting until the official documents of the Ministry of Agriculture, Animal Husbandry and Fishery and the State Statistics Bureau are transmitted to the lower levels. The changes in the table of distribution of economic returns for 1984 and the several requirements are hereby notified as follows:

I. With Regard to Changes in the Statistical Scope

There are slight changes in the original statistical scope in the table of distribution of economic returns in the rural areas. In line with the spirit of CPC Central Committee Document No 4 for 1984, the statistical scope in the table of village and town enterprises has expanded to include "some of the cooperative enterprises jointly operated by commune members and cooperative industries and individual industrial enterprises in other forms," thus, the statistical scope within the table of distribution of economic returns in the rural areas should be reduced correspondingly. The specific contents of the expanded portion under the table of village and town enterprises are as follows:

Some of the cooperative enterprises jointly operated by commune members: these refer to cooperative enterprises jointly operated by a number of commune members, commune members and non-commune members, commune members and collectives, commune members and foreign businessmen and overseas Chinese and compatriots from Hong Kong and Macao in various forms (combination of capital, technology, labor and sites).

Cooperative enterprises in other forms: these refer to industrial enterprises originally run by production teams and to cooperative industrial enterprises originally run jointly by a number of production teams, by production teams and commune members, by production teams and non-commune members and by production teams and foreign businessmen, overseas Chinese and compatriots of Hong Kong and Macao, respectively.

Individual industrial enterprises: these refer to industrial enterprises of an individual economic nature. The enterprises receive investments from and are run by individuals (households) with the means of production owned by individuals (households) and the income, after payment of a tax, to be distributed and used by the individuals. They include industrial enterprises in which production and operations are completely undertaken by family members of the investing and operating households and also include industrial enterprises operated by hiring the amount of labor allowable under state policies.

The requirements constituting the statistics of enterprises of the three above-mentioned forms are: (1) a relatively fixed organization, a production site and production equipment and personnel; (2) an accounting system (equipped with independent accounts for independent calculation of receipts, expenditures and profit and loss); (3) a period of operation within a year of over 3 months; and (4) possession of a "business license" obtained from the local industrial and commercial administrative departments. However, for part of the agricultural cooperative enterprises jointly operated by the commune members, it may be included in the statistical scope so long as it meets the first three requirements.

All enterprises meeting the above-mentioned statistical requirements will not be counted in the table of distribution of economic returns in the rural areas; on the contrary, they still should be totaled statistically. As usual, statistical enumeration of specialized households in the table of distribution of economic returns will be in line with the past requirement.

II. With regard to the Increase and Decrease of the Statistical Indexes

The table of grain distribution is to be abolished. This table was set up in the past for the primary purpose of analyzing relations among the state, collectives and individuals in grain distribution and of understanding the food grain level of commune members in various localities at a time when the food grain situation throughout the country was tight. Now with the reform of the rural economic system and the increase in grain output, the compilation of this type of statistics is no longer very significant because the relations of grain distribution and utilization have greatly changed and

grain consumption on the part of peasants has substantially improved. Thus, the grain distribution table is abolished in accordance with the opinion of various localities.

III. With Regard to the Statistical Methods

The demand as a whole still puts an emphasis on proceeding from realities, flexibility and variety. In places where conditions are ready, a three-segment, equidistant sample investigation method should be used (the trial plan for sample investigation of the distribution of economic returns in the rural areas for 1983 will remain effective) but in calculating the total figures, the weighted mathematical averaging method should be adopted (it was stipulated in 1983 that the simple mathematical averaging method should be used). Places not yet ready for sample investigations may adopt the method of typical investigations and calculations and other methods. All figures obtainable from account books should be filled in and reported as book figures.

IV. The commune will be the reporting unit but the tasks of specific investigation, examination and verification of materials and the collection of data will be the responsibilities of the agricultural departments. The county, prefectural and provincial statistics departments and the agricultural departments should jointly study the statistical figures, check them carefully in order to come up with identical figures before submitting them separately to the superior departments and to avoid having two sets of different figures.

V. With Regard to the Data on Counties with a Per-capita Income over 500 Yuan

Counties with a per-capita income of over 500 yuan should fill in and pool figures in accordance with the items listed in the statistical chart on the distribution of economic returns in the rural areas. It is requested that any materials that in writing sum up the experience of these rich counties (including the provincial and county levels) be reported and forwarded.

VI. It is required that the materials listed by counties that are forwarded by various provinces, autonomous regions and directly subordinate cities be printed by the ministry in unified forms for distribution to various counties, which will fill out the information for the provinces concerned so that they may forward them to the annual reporting and data-gathering meeting. There is no need for the prefectures which have access to the table with by-county figures to send copies to us again. It is requested that the summary reports on the distribution of economic returns and other pertinent data be expeditiously brought to the annual reporting and data-gathering meeting.

VII. It is requested that the forecast for the outcome of the distribution of economic returns for 1984 be forwarded to us before the end of November. Various provinces autonomous regions and directly subordinate cities are requested to act in accordance with this request if no notification about any change is received hereafter.

The circular also issued two tables in the form of appendixes: "The Situation on the Distribution of Economic Returns in the Rural Areas" and "A Statistical Chart on the Per-Capita Income Level of Commune Members by Groups according to Counties" together with "Explanations of the Indexes in the "Table on the Distribution of Economic Returns in the Rural Areas."

Appendix I: The Situation on the Distribution of Economic Returns in the Rural Areas (a total of 42 indexes)

A. Total income, among which are:

1. Income of specialized households
2. Income from sales of products

(1) Group classification based on the form of operations

1. Income from unified operations and contracted operations
2. Income of the new integrated economic entities
3. Income from commune member' self-managed undertakings

(2) Group classification based on source of income

1. Agricultural income, among which is income from grain crops.
2. Forestry income
3. Income from animal husbandry
4. Income from sideline occupations
5. Income from fishery
6. Income from allocation of funds by the village and town enterprises
7. Other incomes

B. Total costs

(1) Production costs, among which are agricultural production costs and commune members' self-managed production costs which are included in the production costs.

(2) Administrative expenses

(3) Other expenses

C. Net income

(1) State tax, among which is the tax paid by specialized households.

(2) Collective retention of funds, among which are:

1. Public accumulation funds
2. Public welfare funds

(3) Earnings of commune members, among which is the cadres' remuneration.

D. Commune members' direct wage earnings from the village and town enterprises

E. Total income of commune members

Average per-capita income (yuan)

Supplementary Data

1. The population compiled and listed in the chart (10,000 persons)
2. Labor force compiled and listed in this chart (10,000 able-bodied workers)
3. The number of households compiled and listed in this chart (10,000 households), among which is the number of specialized households (10,000 households).
4. The number of new integrated economic entities compiled and listed in this chart (unit)
5. The number of new integrated economic households (household)
6. The number of households put forth (selected) for compilation and listing in this chart (household)
7. The total value of collective fixed assets compiled and listed in this chart
8. The total value of fixed assets of a productive nature owned by the commune members themselves, among which are those purchased and built with income from the current year.

Appendix II: Statistical Chart on the Per-capita Income Level of Commune Members by Groups According to Counties (total of seven indexes)

The number of counties and population compiled and listed in this chart

1. The number of counties and population under 100 yuan
2. The number of counties and population from 100-300 yuan
3. The number of counties and population from 300-400 yuan
4. The number of counties and population from 400-500 yuan
5. The number of counties and population from 500-600 yuan
6. The number of counties and population from 600-700 yuan
7. The number of counties and population over 700 yuan

Appendix III. Explanations of the Indexes in the Table of Distribution of Economic Returns in the Rural Areas (draft)

1. Total Income:

This refers to the income of a unit in unified operations and contracted operations and new economic integrated units (various forms of cooperatives) and the income of the self-managed enterprises by the commune members in the

current year that can be used to defray the expenses in the same year, and non-productive income such as the income interest and rentals distributed among the state, the collectives and commune members from agriculture, forestry, animal husbandry, sideline occupations and fishery and transport, commerce, eating and drinking establishments, service trades and labor services and other undertakings. However, it does not include that income that cannot be used for distribution or in the nature of a loan or temporary receipts such as income from loans, deposits for advanced purchases, state investments and investments by commune members. In computing total income, the income from unified and contracted operations, from the new integrated economic entities and from the self-managed enterprises by the commune members and the portion produced, consumed and used by the commune members themselves should all be included and the portion contracted by the commune members should be computed based on the actual amount of income received.

The total income does not include the income of the village and town enterprises which originally used the commune or teams as the basic accounting unit, nor the income under the new enlarged portion of the statistical scope in the table of village and town enterprises (for details see the "Circular on the Table of Distribution of the Economic Returns in the Rural Areas for 1984").

2. Income of specialized households:

The specialized households included in this chart statistically comprise such specialized households as the contracted peasant households and self-managed peasant households. The income of specialized households represents the total income derived from various forms of production and operations. The requirements for a specialized household generally include the entire labor force or the principal labor force in the household that engages in a certain production and operation; the income derived from that production constitutes a substantial proportion of the total household income, and the percentage of marketable products and the level of average per-capita net income are fairly high. Specific criteria will be in deference to the stipulations of various localities.

3. Income from sales of products:

This refers to the income derived from the sales of agricultural, forestry, animal husbandry, sideline and fishery products by the cooperative economic units and individual commune members to the state and other buyers in the current year. It includes income from grain deliveries to the state, state grain purchases and other agricultural products used to offset the payment of the agricultural tax, but it does not include the portion consumed and used by the unit and commune members themselves and the portion used as gifts to relatives and friends.

4. Income from sales of agricultural products:

This refers to the income derived from selling agricultural and plant-growing products such as grain, cotton and oil-bearing crops by the cooperative economic units and individual commune members.

5. Income from unified and contracted operations:

This refers to the income derived from the unified operations and unified distribution (contracted distribution) still being practiced in the cooperative economy and from various types of productive operations under the contract system (including the portion of excess earnings).

6. Income of the new integrated economic entities:

This refers to the income derived from productive undertakings by the various types of economic organizations (namely the cooperatives in various forms) integrated by the peasants themselves since the 3d Plenary Session of the 11th CPC Central Committee. The formation of these new integrated economic entities should be according to the principle of voluntary participation and mutual benefits among the laborers; they must have a fixed organizational scale and relative stability; and they must distribute according to work or take distribution according to work as the dominant factor and achieve a certain accumulation. Specific criteria should be in deference to the stipulations of various localities.

A commune member household participating in the new economic integration will be counted as one household, whether it involves all its household members or a single laborer or whether it participates in more than two integrated entities. In computing the number of integrated entities, those of a transregional nature should be counted statistically by the communes and teams (villages and hamlets) where the integrated organizations are located so as to avert duplication in calculation.

With regard to the income of "some of the cooperative enterprises jointly operated by the commune members and other forms of cooperative enterprises" coming under the statistics listed in the table of village and town enterprises, the number of integrated entities and households will not be included statistically (for specific details, see "The Circular on the Table of Distribution of Economic Returns in the Rural Areas for 1984").

7. Income from commune members' self-managed undertakings:

This refers to the income, in its original sense, from the commune members' family sideline occupations, private plots, fodder fields and authorized reclaimed wasteland, in other words, income from productive undertakings having no contractual relations with the cooperative economic units, including the portion of income produced, consumed and used by the commune members themselves.

8. Agricultural income:

This refers to the total income of the cooperative economic units and commune members from grain, industrial crops, vegetables, fruits, aquatic plants (water chestnuts and lotus roots) and other major products and sideline products they turned out in the current years under self-management. However, the green manure and greenfeeds needed in production will not be listed as income. By-products needed in making compost will also not be listed as income.

9. Income from grain crops:

This refers to the total income from major grain crops harvested and from sideline products produced by the cooperative economic units and the commune members under self-management during the current year.

10. Forestry income:

This refers to the income from forest products (tong oil tree seeds, oil-tea camellia seeds, rattan, palm flakes and various types of forest seeds), income from felling bamboo and trees and income from selling saplings. It should be calculated on the basis of all the products. This income, acquired through the planting, nurturing and other laboring process, is different from that derived from gathering wild plants, which should be included in the income of sideline occupations. Income from tea and fruits should be considered as agricultural income.

In computing forestry income, the portion from the self-managed undertakings of the cooperative economic units and commune members and the portion of excess production by the commune members after fulfilling the contracts should be included, whereas for those who failed to fulfill the tasks, the actual income should be counted statistically.

11. Income from animal husbandry:

This refers to the income from selling slaughtered poultry, other small animals and animal and fowl products:

(1) Income from domestic animals, fowls and other small animals will be computed according to the products sold and slaughtered; animal and fowl breeding and the gain in weight of domestic animals and fowls will not be considered income.

(2) Income from the products of living domestic animals, fowls and other small animals (such as eggs, sheep wool, honey and beeswax and so forth) should be computed totally according to the products.

(3) Income from animal products (such as bristles and sheep skins) after the animals are slaughtered or have died should be computed totally according to the products. The income from selling large animals by the cooperative economic units and individual commune members in pastoral and semi-pastoral areas should be considered as income from animal husbandry. The income from selling beef in the agricultural areas should also be considered income from animal husbandry; however, the income from selling off draft animals under the category of fixed assets cannot be considered income from animal husbandry. The barnyard manure from domestic animals and fowls will not be computed as income. In computing income from animal husbandry, the portion from the self-managed undertakings by the cooperative economic units and the commune members, the portion from excess production by commune members after fulfilling the contracts (those who failed to fulfill the tasks will be computed according to the actual income) and the income from

the portion of animal and fowl products produced, consumed and used by the cooperative economic units and commune members themselves and evaluated in terms of money should all be included in the statistics.

12. Income from sideline occupations:

This refers to the income from gathering wild plants and hunting wild animals by the cooperative economic units and individual commune members and the income from the "team-run industries." It also includes income from transport and productive labor services. However, it does not include income from such services as washing clothes and barbering (service income should be listed under other incomes) and "team-run industries" that meet the four requirements of village and town enterprises.

13. Fishery income:

This refers to the actual income from freshwater and seawater products such as fish, shrimp, crabs, shellfish and aquatic plants which are naturally aquatic and artificially bred, including the portions sold, produced and consumed by the commune members themselves. In computing fishery income, the portion of excess production by the cooperative economic units and commune members after fulfilling the contracts should be included in the statistics, and those failing to fulfill the tasks should be computed statistically according to their actual income.

14. Income from village and town enterprise allocations:

This refers to the labor remuneration (converted wages for the teams) paid directly by the village and town enterprises to the production teams for distribution for the labor services rendered to the village and town enterprises by the labor force of the original production teams and to funds taken out from the profits of village and town enterprises for distribution by the production teams during the current year.

15. Other income:

This refers to the total income other than the income from the various productive undertakings mentioned above such as from practicing midwifery, washing clothes, barbering and other service-type incomes and income derived from material gains in taking the inventory of reserve grain, the annual price hike of products before the sale and income from interest and rentals. However, income in the nature of a loan will not be included.

16. Total cost:

This refers to the total amount of various types of expenses in the current year that should be defrayed from the income earned from different types of production and undertakings in the year. Various expenses refer to the production, costs and management and other expenses including expenses incurred directly by the cooperative economic units and the extra money spent by the commune members for the purpose of overfulfilling the contracted tasks and also the expenses needed by the commune members in the self-managed undertakings.

17. Production cost:

This refers to the expenses incurred in different types of production in the current year that should be defrayed as production costs from the income earned in various types of production and undertakings in the current year. These include expenses paid directly by the cooperative economic units and by the commune members themselves.

18. Commune members' production cost in self-managed undertakings:

This means the production cost incurred in earning an income from various forms of production in self-managed undertakings during the current year.

19. Management expenses:

This refers to the expenses incurred by a unit in operation and management during the current year such as for office stationery, paper, account books, books and newspapers, lighting, heating and traveling expenses and management expenses payable to the communes and teams (villages and hamlets). The commune members are actually paying these types of expenses, but they should not be calculated if the amount is relatively small and is not suitable to differentiate clearly from certain family expenses.

20. Other expenses:

This refers to various miscellaneous expenditures other than production costs and management expenses such as interest payments and material losses in taking inventory and so forth which should be reported according to the actual amount involved during the current year.

21. Net income:

This refers to the balance from the "total income" of the current year after subtracting the "total expenses."

22. State tax:

This refers to the actual amount of the taxes of different categories payable to the state during the current year in accordance with the state tax law. For example, the public grain evaluated in terms of money, the tax on agricultural; forest and special local products, the tax on slaughtering animals, the fishery tax, the industrial and commercial tax and other tax revenue and the tax refund after payment should be computed on the basis of the actual amount by deducting the amount exempted. All taxes originally paid by the production teams in a unified manner, the amount paid by commune members according to the contractual tasks by households and the tax paid by the new integrated economic entities and specialized households should all be included in the statistics.

23. Specialized household tax:

The specialized households will pay the actual amount of the tax as stipulated in accordance with the state tax law.

24. Collective retention of funds:

This refers to the public accumulation fund, the production cost fund, the public welfare fund and the reserve grain fund taken out by the cooperative economic units from the production they directly managed, as well as funds payable by the commune members of production teams under an all-round contract to undertake specific jobs by households to the collectives as funds similar in nature to the public accumulation funds and public welfare funds. Funds delivered by the commune members, some of which are used to subsidize the "five-guarantees" households, dependents of servicemen and revolutionary martyrs, teachers of schools run by the local people and barefoot doctors should also be included in the statistics.

25. Public accumulation fund:

This refers to the fund retained for expanding reproduction from the money delivered by those under the contract system and from the profits made through the unified operations in the current year. The production cost under over-all planning and the public accumulation funds taken out from other sources of funds should not be included.

26. Public welfare fund:

This refers to the livelihood subsidies drawn from the collective retention funds to help support the "five-guarantees" households, dependents of servicemen and revolutionary martyrs, hardship households, teachers of schools run by the local people, barefoot doctors and other personnel and from expenses for running collective welfare projects. It does not include cadre remuneration.

27. Income of commune members:

This refers to the amount of money left for the commune members after deducting various expenses, state tax and collective retention funds from the total income of the cooperative economy and the self-managed economy. Remuneration for the cadres is included under this category.

28. Commune members' wage income earned directly from the village and town enterprises:

This refers to the income from wages, subsidies and bonuses received directly from the village and town enterprises by the commune members in the unit for the productive labor which should also be included in the income of those commune members who engaged in productive labor in "some of the cooperative enterprises jointly operated by commune members" and in "other forms of cooperative industry." It does not include the allocation funds of the village and town enterprises in the total income.

29. Total income of commune members:

This refers to the sum total of "commune members' income" and the wage earnings received directly from the village and town enterprises.

Supplementary Data:

1. The population compiled and listed in this chart:

This includes commune members who participate in the cooperative economy and the self-managed economy and are engaged in labor in the village and town enterprises and the number of people who rely on their income for a livelihood.

2. The labor force compiled and listed in this chart:

This refers to the full-time and part-time labor force regularly engaged in productive labor in the cooperative economy and the self-managed economy.

3. The number of households compiled and listed in this chart:

This refers to the number of households participating in productive labor in the cooperative economy and the self-managed economy and earning an income therefrom.

4. Details about the number of units and households of the new integrated economic units compiled and listed in this chart can be found in Index Explanation No 6.

5. The number of households put forth (selected) for compilation and listing in this chart:

This refers to the number of sample households and typical households selected by the method of random sampling and other methods for investigation of the distribution of their economic returns.

6. The total value of collective fixed assets compiled and listed in this chart:

- This refers to the total value of the fixed assets of the cooperative economic units compiled and listed in this chart.

Fixed assets mean assets with a unit value of over 30 yuan that have been used for over 2 years. Assets not meeting the two above-mentioned requirements are considered to be low-value, consumable items. Various localities that already have formulated specific stipulations may still handle the fixed assets in accordance with their own stipulations. In the course of setting up the production responsibility system, the production teams had distributed the fixed assets among the commune members, thus transferring ownership; regardless of whether or not the money for these fixed assets is

paid for, they should not be considered collective property. On the other hand, in the case where the ownership still belongs to the collective, the fixed assets should then be considered collective property regardless how they are managed or in what form they are used.

7. The total value of fixed assets belonging to the commune members of a productive nature:

This refers to the total value of fixed assets owned and used by the commune members for production and operation.

8. Those assets purchased and built with income from the current year:

These refer to those fixed assets purchased and built by commune members to be used for production and paid for with a portion of the funds drawn from the income earned during the current year. The money borrowed, loans received and deposits on hand at the time of the purchase and building are not included.

12662
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COST ACCOUNTING OF FARM PRODUCTS REVIEWED

Beijing NONGYE JISHU JINGJI [ECONOMICS FOR AGRICULTURAL PRODUCTION NOLOGY] in Chinese No 7, Jul 84 pp 41-44

[Article by Chen Shaoliang [7115 4801 5328] of the Zhangjiakou Prefectural Agricultural Bureau in Hebei Province: "A Probe into the Cost Accounting of Farm Products Based on the Unit of Household"]

[Text] Along with the development of the agricultural production responsibility system and the emergence of many specialized and major households and of multifaceted economic integration, conscientiously guiding peasant households to do a good job in the cost accounting of farm products seems to be increasingly important each day. Now I will make a preliminary probe into the cost accounting of farm products based on the unit of household.

I. Doing a Good Job in Three Basic Tasks

To do a good job in the cost accounting of farm products based on the unit of household, we should do a good job mainly in the three basic tasks:

1) verifying the acreage of all crops; 2) fixing the amount of work a worker can finish each day and the amount of remuneration in accordance with the age, sex, physical condition and technical level of workers in the accounting household; and 3) calculating the depreciation value that should be included in the cost of production in the current year.

II. Adopting Necessary Cost Accounting Cards

1. Adopting the incoming and outgoing crop product registration card which is used to register the quantity of various crops harvested, the quantity of products sold, income from sales and the quantity and value of products retained for private use. See the format of Table 1.

Table 1. Incoming and Outgoing Crop Product Registration Card

		Unit jin, yuan						
Year		Name of Incoming Crop Product	Quantity	Year		Name of Outgoing Crop Product	Purpose	Quantity Value
Month	Date			Month	Date			

2. Adopting the commune member family income registration card which is used to register the quantity and value of various income resources of the accounting household. See the format of Table 2.

Table 2. The Family Income Registration Card for Commune Member

Unit: jin, yuan

Year		Item	Quantity	Value	Year		Item	Quantity	Value
Month	Date				Month	Date			

3. Adopting the material expense registration card which is used to register the quantity and value of the material consumption of the accounting household. Direct and common expenses should be entered on separate cards. See the formats of Tables 3 and 4.

Table 3. Material Expense Registration Card A

Name of Crop:

Acreage of Crop:

Year		Type of Material Consumed	Unit	Quantity	Unit Price	Value Name and Quantity or Value of Farm Manure
Month	Date					

Note: direct expenses for the registered crops should be entered on this card.

Table 4. Material Expense Registration Card B

Year		Title	Unit	Quantity	Unit Price	Value	Remarks
Month	Date						

Note: common expenses for several crops which cannot be directly entered under a certain crop should be entered on this card.

4. Adopting the labor consumption registration card which is used to register the situation of various kinds of labor. See the formats of Tables 5 and 6.

Table 5. Labor Consumption Registration Card

Month	Date	Total	Corn						Indirect labor			
			Plowing & Raking	Sowing	Weeding	Fer- tili- zing	Pest Pre- vention	Harvesting & Drying				

Table 6

Month	Date	Kind of Farm Work	Crop	Direct Labor	Labor Hour	Indirect Labor	Labor Hour

Note: indirect labor refers to labor consumption which cannot be directly entered under a certain crop such as draft animal labor, manure-collecting labor, common labor and management labor.

5. Adopting the cost-of-living registration card which is specially used to determine the cost of living of commune members. In the cost accounting based on the unit of household, this card can be used to record the cost of living of the accounting household as in Table 7.

Table 7. Commune Members' Cost-of-living Registration Card

Unit: Yuan

Year		Explanation	Number	Amount	Year		Explanation	Number	Amount
Month	Date				Month	Date			

III. Calculating Material Expenses

1. Material expense registration. All accounting peasant households should write down in detail on separate cards the consumption of various materials in the course of production, such as seeds, fertilizer and pesticide, in accordance with the limit of expenses included in the cost of production. As for production expenses that need to be shared by several crops, it is necessary to calculate the amount of the expenses apportioned for each crop and enter it on the expense card for each crop. The computation formulas are as follows:

The cost of mechanized operation per standard mu (apportionment rate) = $\frac{\text{the total expense of mechanized operations}}{\text{the total number of standard mu in mechanized operations completed in a year.}}$

The apportioned expenses of animal power operations for a certain crop = $\frac{\text{the number of days of animal power actually used on this crop} \times \text{the cost of animal power per day.}}$

2. Material expense addition. If expenses cannot be entered under a certain business or crop when they are made, they can be first entered in the following expense registration statement. At the end of each year, when conducting single-item cost accounting, such expenses may be apportioned in accordance with the number of mu of various crops covered by such expenses and then be entered in the column of apportioned expenses for each crop. See the format of Table 8.

Table 8. Common Material Expense Registration Statement

Name of Crop	Acreage	Mechanization Operation Expenses	Animal Power Operation Expenses	Other Direct Expenses	Common Farming Expenses	Management Expenses & Other Expenses	Total

IV. Labor consumption registration.

1. When calculating labor consumption, accounting households should use the amount of work done by an average worker in 8 hours as a standard man-day. As for stronger or weaker workers, it is first necessary to work out different basic work points for the 8-hour work of different workers in accordance with their physical condition and technical level and then convert their basic work points into standard man-days. The computation formula is: standard man-days = basic work points x work hours ÷ 8. In order to make cost accounting more accurate, the number of work hours of all workers should be recorded every day. Direct labor consumption for a certain crop such as in plowing and raking, sowing, fertilizer, weeding, pesticide spraying, cultivating and harvesting should be entered in the column of direct labor consumption for this crop. Indirect labor consumption should be apportioned in accordance with the variety of crops after the process of consumption is completed and then should be entered in the column of indirect labor consumption for different crops. If there are too many varieties of crops, indirect labor consumption may also be first entered on crop indirect labor consumption registration cards (see the format of the indirect expense statement) and then be apportioned and entered in the column of indirect labor consumption for different crops all at once when calculating production costs after the autumn harvest.

2. Manpower expense calculation. Since production teams discontinued unified distribution after implementing the family responsibility system that links production with management, work value may be priced according to living expenses required by a local worker to carry out reproduction. The computation formulas are as follows:

The unit price of a man-day=

$$\frac{\text{living expenses for an accounting household to carry out labor reproduction in a month}}{\text{the total number of standard man-days actually used by an accounting household in a month}}$$

The manpower expense of a certain crop= the number of standard man-days used on this crop x the unit price of a man-day.

V. Cost Accounting

In order to calculate the unit cost of different crops or businesses accurately, it is imperative first to register honestly and clearly the product output of different crops or businesses, income from main products and by-products, live and material labor consumption and apportioned common expenses under the classification of different crops or businesses before conducting cost accounting. The computation formulas are as follows.

The total cost of a certain crop = the number of standard man-days used on this crop x the unit price of a man-day + the material expenses of this crop.

The per-mu cost of a certain crop = $\frac{\text{the total cost of this crop}}{\text{the total acreage of this crop (mu)}}$.

The per-100-jin cost of the main products of a certain crop =

$$\frac{\text{the total cost of this crop} - \text{the value of by-products}}{\text{the total output of this crop}} \times 100.$$

The per-jin cost of the main products of a certain crop = the per-100-jin of the main products of a certain crop $\div$ 100.

I will now talk about cost and profit analysis.

1. Cost analysis methods. There are many methods for analyzing the cost of farm products such as the comparative method, the step-by-step detailed method, the elimination method and the relative method. Because most current peasant households are inexperienced in cost accounting, I will only concentrate on introducing the comparative method here.

The comparative method is also called the comparative analysis method. It is applicable to the comprehensive comparative analysis of the data of different production and technical measures or technical plans such as labor consumption, investment, output, costs and profits. The comparative method can be subdivided into three kinds: 1) the historical comparative method or the dynamic analysis method which is to compare item by item the cost indexes or cost computation statements of different historical periods with those of the current period to study the growth and decline in various indexes, because by comparing or calculating these indexes we may keep abreast of the trend of development in the growth and decline of the cost of a certain crop and reveal the items that need to be improved to help

adopt effective improvement measures aimed at those items. 2) The between-unit comparative method which is to compare similar cost indexes with those of specialized and major households or other peasant households and of new economic integrated bodies in our village or in neighboring villages to help discover concrete measures to improve management and administration, promote scientific farming and increase economic results. 3) The plan comparative method or the standard comparative method which is to compare item by item the actual cost computation statements of the current period with projected costs or standard-cost computation statements to help understand how well projected costs and standard costs are observed.

When using the comparative method to analyze the cost of farm products, we must pay attention to the question of comparability--namely, having comparable common bases such as the unified economic content of indexes, unified computation methods, unified time units, etc.

The comparative method can also be used to analyze the cost level of farm products and its changes. The main way to do this is first to determine the actual costs of the current period--namely, total costs and unit costs--and then find out the causes and degrees of their increases and decreases by comparing them with the cost indexes or standard-cost indexes of the preceding period or a certain base period. The computation formulas are as follows:

The absolute value of the increase or decrease of the per-mu (jin) cost of a certain crop = the actual unit cost of this crop - the unit cost of the preceding year or a certain base period.

The percentage of the increase and decrease of the unit cost of a certain crop =

$$\frac{\text{this year's actual unit cost} - \text{last year's or a base period's unit cost}}{\text{the unit cost of this crop in the preceding period or a certain base period}} \times 100 \text{ percent.}$$

On the same principle, we can also calculate the ratio between the increases or decreases of actual costs and those of projected costs, between those of the costs of our own unit and those of other units to help guide accounting households in improving management and administration.

2. Providing a farm product cost analysis chart. In order to help peasant households better understand the cost composition of various crops, we need to provide a farm product cost analysis chart when calculating the cost of farm products. See the format of Table 9.

Table 9. Farm Product Cost Analysis Chart

Unit: mu, jin, yuan

Unit: mu, jin, yuan																						
名 (2) 称	(1)项 目	面 积	产 量	主 产品 收入	副 产品 收入	(6)(7)(8)(9)(10)		(11) 物 化 劳 动 消 耗										(12)成 本				
						活 消 直接 用	劳 工 间 接 金 额	种 子 费	肥 料 费	农 药 费	机 械 费	排 灌 费	畜 力 费	其 他 费	接 共 费	同 业 费	管 理 费	其 他 支 出	总 成 本	亩 成 本	百 斤 成 本	斤 成 本
玉(3)米						(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)	(22)	(23)	(24)	(25)	(26)	(27)	(28)	
小(4)麦																						
高(5)粱																						

Note: this chart includes total figures, values and calculated costs of aforementioned cards. It can help peasant households understand the cost composition of all crops.

Key:

- | | |
|--------------------------------|------------------------------------|
| 1. Item | 15. Seed Expenses |
| 2. Name | 16. Fertilizer Expenses |
| 3. Corn | 17. Pesticide Expenses |
| 4. Wheat | 18. Mechanized Operation Expenses |
| 5. Chinese sorghum | 19. Irrigation & Drainage Expenses |
| 6. Acreage | 20. Animal Power Expenses |
| 7. Output | 21. Other Direct Expenses |
| 8. Income from Main Products | 22. Common Agricultural Expenses |
| 9. Income from By-products | 23. Management Expenses |
| 10. Live Labor Consumption | 24. Other Expenses |
| 11. Material Labor Consumption | 25. Total Cost |
| 12. Cost | 26. Per-mu Cost |
| 13. Direct Labor Expenses | 27. Per-100-jin Cost |
| 14. Indirect Labor Expenses | 28. Per-jin Cost |

3. Cost and profit analysis of farm products. 1) The analysis of the cost items of farm products. In order to make all peasant households better understand whether the expenditures on the cost of farm products are reasonable so as to find out ways to tap potential and reduce costs, while using the comparative analysis method, we may also use the detailed analysis method to analyze in detail each item in the two major components of the cost of farm products--labor and material expenses. The computation formula is: the percentage of a certain cost item = this cost item ÷ total cost x 100 percent. 2) Analysis of the profits and profit rate of farm products. The profits of farm products refer to income from farm products after deducting the cost of products and taxes. The amount of profit reflects the amount

of the economic results in the production of farm products. Computation formulas for the profits of farm products are: per-mu profit = per-mu income - per-mu cost - per-mu agricultural taxes. The profit on every 100 jin of main products of a certain farm product = income from every 100 jin of main products - the cost of every 100 jin of main products - agricultural taxes levied on every 100 jin of main products.

Computation formulas for the profit rate are as follows:

Per-mu profit rate = $\frac{\text{per-mu profit}}{\text{per-mu cost}}$ x 100 percent.

The profit rate of every 100-jin main products of a certain product =

$\frac{\text{the profit of every 100 jin of main products}}{\text{the cost of every 100 jin of main products}}$ = 100 percent.

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PART-TIME FARMING IN SUZHOU COUNTRYSIDE DISCUSSED

Beijing NONGYE JISHU JINGJI [ECONOMICS FOR AGRICULTURAL PRODUCTION TECHNOLOGY] in Chinese No 8, Aug 84 pp 31-34

[Article by Zou Huiqu [6760 0565 0575], Yan Yinglong [0917 5391 7893] and Shi Xunru [4258 1852 1172] of the Suzhou City Industrial and Agricultural Department and the Jiangsu Provincial Academy of Social Sciences: "An Approach to Concurrent Part-time Undertakings in the Economically Developed Rural Areas"]

[Text] I. Momentum of Concurrently Engaging in Agriculture Is Developing

Engaging concurrently in another part-time occupation is a worldwide agricultural economic phenomenon. In the industrialized countries in general, one-fourth to one-half of the farm households earn over half of their income from the non-agricultural sectors. Engaging concurrently in another part-time occupation is nothing strange to the people of our country. In fact, in the economically developed rural areas in Suzhou, engaging concurrently in another part-time occupation has become a common practice in the course of economic development. Relatively speaking, engaging concurrently in another part-time occupation under the household-based contract system means a specialized operation different from the comprehensive operations (diversified undertakings) of the cooperative economic organizations; it refers to the practice whereby in addition to operating their main undertakings (be it crop growing or industrial or sideline production), peasant households can also engage concurrently in other part-time occupations. At present, the rural areas in Suzhou are universally moving toward developing agriculture by engaging concurrently in other part-time occupations. This practice is manifested mainly in the following:

I. Equalized Designation of Fields Is Becoming More Universal.

In the course of promoting the output-related system of contract responsibility, the "three fields system" has been instituted to designate fields to grow grain for the people, fodder fields for hog raising and responsibility fields to the labor force engaged in farming. As this practice develops, another trend of equalized designation of fields based on the agricultural population has also extensively emerged. This is particularly true in the

economically fast-developing and comparatively well-off rural areas and the suburban districts in cities and towns with smaller per-capita acreage of arable land. The proportion of production teams in Shazhou County where the fields were designated based on population has increased from the original 5 percent to the present 41 percent. The number of hamlets in Fushan Village in Changshu City, where fields were designated on the basis of population, now accounts for two-thirds of the total number of hamlets. This practice in making continual headway in areas that rely heavily on manual labor and engage in one-crop farming and in areas far from the key cities. On the one hand, this is due to the fact that the peasants, proceeding from their own economic interests, are making every effort in search of other employment opportunities with better economic results than in farming. As a result, they are unwilling to contract for more land in order not to bind themselves hand and foot and prevent themselves from earning more income. On the other hand, because they are well known for being hardworking, the peasants in Suzhou who engage in industrial and sideline production travel back and forth between the farmland and the factories during their leisure hours and holidays to work regularly in the factories and seasonally on the farms. In this way, they can earn "double incomes" from "double employment," and thus they are unwilling to divorce themselves completely from the arable land now that they can solve the contradictions in regulating grain and forage.

2. Agriculture in Many Rural Areas Has Been Changed from Main Undertaking into "Sideline Occupation."

The emergence of a large number of specialized households and specialized hamlets as a result of industrial development in the rural areas has greatly accelerated the process of undoing farming operations. The total rural industrial output value in Suzhou City last year came to 3.314 billion yuan, or 60.1 percent of the total industrial and agricultural output value, in which agriculture accounted for 20.8 percent and diversified undertakings 19.1 percent. In the light of its proportion in total output value, agriculture, to a certain extent, has fallen to a subordinate position, thereby bringing about a change in the family income of peasant households. Analyzed on the basis of data gathered in an investigation on the family livelihoods of 90 peasant households in Wuxian County at the middle economic income level, the total family income in 1983 came to 225,500 yuan, of which agricultural income took up 36 percent and non-agricultural income 64 percent; 86.7 percent of the peasant households have become households engaged concurrently in farming.

3. The Existing So-called Households Specializing in Crop and Cotton Growing Bear the Prominent Feature of Engaging Concurrently in Part-time Occupations.

According to incomplete statistics, there are 47,900 households in Suzhou specializing in crop and cotton growing. This figure accounts for 31 percent of the total number of various types of specialized households and 3.9 percent of the total number of peasant households. These households specialized in grain and cotton growing, which were formed mostly from households with a large population and bigger labor force engaged in farming, are mostly engaged in undertakings not involving arable land. For example, of the 143 households

specialized in grain and 556 persons in Fenghuang Village in Shazhou County, 92 percent of the peasant households and 44.7 percent of the labor force are engaged in undertakings not involving arable land. In 1983, Chen Xingzheng [7115 5887 2398] of Yuanping Village in Wujiang County under Suzhou City was the biggest contract household for the most arable land. He signed a contract for 51 mu of arable land and at the same time raised more than 10 sows and meat hogs together with 1,250 ducks for eggs and geese for breeding. His total annual income amounted to 44,000 yuan, of which over 60 percent came from undertakings not involving arable land. The nature of engaging concurrently in other part-time occupations, therefore, is very evident.

As seen from the situation in Suzhou, the forms of engaging concurrently in other part-time occupations include "agriculture concurrent with industry," "agriculture concurrent with sideline occupations," "industry concurrent with agriculture," "sideline occupations concurrent with agriculture" and so forth. Of the total family income or net income, over half was derived from agricultural operations in the form of taking "agriculture concurrently with industry" and "agriculture concurrently with sideline occupations;" over half came from non-agricultural operations in the form of "industry concurrent with agriculture" and "sideline occupations concurrent with agriculture."

At present, the operations in the form of "industry concurrent with agriculture" and "sideline occupations concurrent with agriculture" are fast developing in the Suzhou rural areas which may be divided into two categories based on the different levels. The first category of concurrent part-time occupations is of a contractual character. It is a form of "taking industry as the leading factor and doing spare-time farming" as shaped by the regional, comprehensive and multi-level cooperative economy with the rural industry as the main body and by accommodating the large surplus labor force in the rural areas.

The second category of concurrent part-time occupations is of a self-employed nature. The self-employed type of household economy operating in the form of taking industry concurrently with agriculture and sideline occupations concurrently with agriculture is developing very rapidly in some places where the industry had a slow start and the collective economy is relatively weak. Shenyang Village in Shazhou County is a large village with a population of 30,000 and its total rural industrial output value was under 20 million yuan. The village had a labor force of 18,600 men, and the industries at the county, village, hamlet and production team levels employed 4,415 men, or 23.7 percent of the total labor force. And the labor force spared by various types of self-employed, concurrent part-time undertakings totaled 4,475 men or 24 percent of the total labor force. Individuals engaged in undertakings not involving arable land in this village last year earned a total income of 5.44 million yuan, or 85 percent of the total agricultural income. This type of self-employed, concurrent part-time occupations is not only a pattern for developing agricultural production in economically underdeveloped places in Suzhou but also an important way for the peasants to become well-off.

II. The Historical Inevitability of Engaging in Part-time Farming Concurrently

Part-time farming has profound historical roots in the rural areas of Suzhou. Since the State of Wu of the Spring and Autumn Period set up its capital in Suzhou, and with the development in the subsequent years under the Qin, Han, Sui, Tang and Song dynasties that followed, the social economy in Suzhou had been flourishing. Bai Juyi of the Tang Dynasty once said: "What this country consumes today comes mostly from areas south of the Changjiang River. Of the many prefectures, Suzhou is the largest." Lu You of the South Song Dynasty also commented: "When crops ripen constantly in Suzhou, food will be abundant across the land." If we study Suzhou from the standpoint of the form of operation, the historical foundation that brought economic prosperity to Suzhou was precisely the kind of concurrent part-time farming symbolized by "men farming and women weaving," thereby integrating crop growing and livestock breeding by households with household handicraft industries. The founding of the socialist system after Liberation had provided a broad prospect for the peasants to take the cooperative road and, while engaging in farming on an adequate scale, also engage in other concurrent part-time occupations. The implementation of a series of principles and policies has given impetus to the rise of rural industries, propelled commodity production and rapidly expanded commodity exchange, thus making the development of concurrent part-time occupations possible. The development of part-time farming as a concurrent occupation has its own natural, economic and social bases.

1. The Natural Basis for the Existence of Concurrent Part-time Occupations Is the Fact That Economic Reproduction Is Interwoven with Natural Reproduction in the Course of Agricultural Production.

Marx said: "The process of economic reproduction in this sector (agriculture), regardless of its special social nature, is always interwoven with the process of natural reproduction." The objects of agricultural production are livestock and plants. Take crop growing for instance. On the one hand, the process of production takes place in Mother Nature in which both economic law and the law of nature play a role in bringing about tremendous instability. On the other hand, because the period of agricultural production is long, farm labor has a strongly seasonal character, the time of production does not coincide with the time of labor and the demands for labor in the process of production are very uneven. During the three busy farming seasons in the rural areas in Suzhou where the farmwork is more concentrated, the seasonal character is strong, the tasks arduous, and the labor short and the people have to work 14-15 hours a day; after the busy seasons are over, although very little work is left to be done during the extended period of field management, both surplus labor and surplus time increase correspondingly. This situation makes it necessary to find a way for the surplus labor to increase income. Concurrent part-time occupations exist and develop precisely to conform with these characteristics in agricultural production. Practical experience has proved that if agricultural labor is shifted to rural industries or directed to engage in other forms of production so that the laborers can return to the production teams to do farmwork

during the busy seasons and use their spare time during the morning and evening in other times to help their households in field management, it will be able to utilize fully and regulate working hours rationally to do farm-work in the right season and help develop enterprises in the villages and towns.

2. The Economic Basis for the Existence of Concurrent Part-time Occupations Is the Tense Relations Between Manpower and Farm Acreage, the Shifting of Labor Toward Undertakings Not Involving Arable Land and the Low Economic Results in Agriculture.

Our country has a huge population with a per-capita arable land distribution of only 1.67 mu which is equivalent to 5.3 percent, 11.8 percent and 11.6 percent, respectively, of the per-capita farmland in Canada, the United States and the Soviet Union. In Suzhou, the per-capita arable land came to only 1.16 percent, or 69 percent of the national per-capita acreage; thus relations between men and arable land are strained. Consequently, more and more laborers are leaving the arable land to take up other pursuits, a very natural thing to do. Suzhou has a labor force of 2,649,300 men, of which 1,175,000 men, or 44.4 percent, have shifted to engage in undertakings not involving arable land. Among them, the labor employed by village and hamlet enterprises accounts for 29.1 percent of the total rural labor force; the labor force engaged in diversified undertakings amounts to 12.4 percent and the labor force engaged in other trades comes to 2.8 percent. This is one aspect.

On the other hand, because the economic results from one-crop grain production are low, it is necessary to achieve comprehensive economic results by pursuing concurrent part-time occupations so as to maintain and expand agricultural reproduction. Moreover, due to the irrational pricing of agricultural products, even one person can handle 5 mu of arable land at present, and the annual income only amounts to about 500 yuan, which comes to about 60 percent of income from other trades. As a result, some people remarked that "it is better to work in the factory than on the farm, and it is better to do business than to engage in manual labor." Engaging in concurrent part-time occupations will enable the peasants to "enjoy the economic gains together and share the risks in agriculture," and in this way this practice will promote the all-round development of agriculture, forestry, animal husbandry, sideline occupations and fishery and industry, commerce, transportation, construction and catering services and at the same time raise the household comprehensive economic results thereby forming a structure of virtuous cycle that runs at two tiers and brings into play the role of the two-tier "regulation of the microeconomy."

3. The Social Basis for the Existence of Concurrent Part-time Occupations Is the Currently Existing Gap Between Industry and Agriculture and Between the Cities and the Countryside.

In our investigation in the countryside, we have discovered that even the income of those engaged in farming is not lower than the commune members doing other work, the level of agricultural mechanization is relatively

high and the young and able-bodied peasants still aspire to work in the factories and do not want to contract for more arable land. As a result, a similar tendency of designating fields based on population has emerged. The No 10 and No 12 teams of Zhashang Hamlet under Sigang Village in Shazhou County have the highest per-capita income in Suzhou, the per-capita distribution of arable land is 0.57 mu, the per-capita labor is 0.91 mu and the per-mu mechanized power is 0.87 hp. In recent years, with the all-round development of agriculture, sideline occupations and industry, the per-capita income in 1983 went up to as high as 1,600 yuan. This type of production team that has achieved a well-off level early is fully ready to let a portion of the labor force be organized into specialized teams or specialized households to engage in specialized production. However, because nobody wants to contract for more arable land, the method of contracting out arable land based on the average number of people has to be adopted to take part in industry concurrently with agriculture.

It is therefore obvious that engaging in concurrent part-time occupations is a transitional economic formation in the course of transformation from traditional agriculture to modern agriculture and from an economy of self-sufficiency and semi-self-sufficiency to large scale commodity production. It is an intermediary that cannot be overstepped.

III. The Necessary Conditions for a Transformation from the Process of Engaging in Concurrent Part-time Occupations to Specialization

Agricultural modernization and agricultural production are closely related and mutually promoting, and agricultural modernization needs a correspondingly adaptable specialization in agricultural production; the development of specialization in agricultural production will inevitably accelerate the process of agricultural modernization. Nevertheless, we hold that concurrent part-time occupations should play the role of a "bridge" in the entire process of the transformation from traditional agriculture to modern agriculture in this pattern: the "small but all-embracing" agriculture in the formation of the self-employed economy--the economic formation of concurrent part-time occupations--and the economic formation of specialization. Or it may be simply described as agriculture--participation in both industry and agriculture--or the separation of agriculture from industry. These three economic formations, different but related, will ultimately complete the entire process of agricultural modernization.

Although engaging in concurrent part-time occupations by peasant households at present involves a number of business operations, it is not a simple duplication of the "small but all-embracing" type of operation by comparison but a process of continual progress and improvement. First, the foundation is different. The engagement of concurrent part-time occupations prevalent in the economically more developed rural areas came into being on the foundation of the comprehensive development of agriculture, sideline occupations and industry that eventually brought about a certain division of labor and trades (even though this type of division is of a primary level and crude); it has broken through the boundary of the natural economy of self-sufficiency and is closely related to the development of commodity production, and it appears to be an "expansive model." Second, the contents

are different. The engagement in concurrent part-time occupations places stress on shifting the rural labor force to engage in undertakings not involving arable land as a prerequisite. It gears the household economy, which engages in undertakings not involving the arable land, to take part in agriculture concurrently to develop commodity production further by diverting the enormous labor force leaving the farm to engage in forestry, animal husbandry, sideline occupations and fishery and industry, commerce, construction, transportation and service trades or by developing specialized households and specialized villages. Third, the developmental trend is different. Engaging in concurrent part-time occupation will lead to the accumulation of funds and experience for specialized production, provide employment opportunities for the surplus labor force in the rural areas, pave the way for assembling the farming experts to work on the arable land and create conditions for specialized agricultural production.

In coping with the development of the productive forces, engagement in concurrent part-time occupations is an intermediary course essential to achieving the "two changes" and following the orientation of specialization and socialization. How long a distance is this course? It will have to be determined by the conditions provided by the level of the development of the forces of production. We are of the opinion that in transforming from the process of undertaking concurrent part-time occupation to specialization, it is necessary to satisfy these demands at the same time during the transition as a whole. First, the annual income of peasants engaged in specialized agricultural production should be higher in the year of rich harvest and not lower in the year of poor harvests than commune members in other lines of work. This is an essential condition for the peasants to take part in agricultural production without worry. Second, with the level of agricultural mechanization rising substantially, the use of farm machinery in work should be raised from the present 30 percent to about 70 percent. Steps should be taken to mechanize plowing, irrigation, plant protection, transplanting of rice seedlings, harvesting, threshing and transportation so as to extricate the peasants from cumbersome work that mainly involves manual labor. Third, a more complete system of socialized services should be instituted to satisfy the demands of the specialized producers in the agricultural field in technology, funds, supply and marketing, storage, processing, transportation, market information and operational guidance and other areas. Fourth, more labor should be diverted from agriculture to engage in undertakings not involving arable land and provide it with a stable income. In the rural areas in Suzhou, it is necessary to shift 70 percent of the labor force in order to concentrate the arable land step by step in the hands of farming experts. To this end, it is necessary again to shift 700,000 persons in order to carry the per-capita load of more than 6 mu. Fifth, the social status of personnel engaged in farming should be elevated and prejudice against agriculture eliminated. In short, the process of agricultural specialization in our country will be a comparatively long process. This is determined by the characteristics of agricultural production and the actions of the people in earnest pursuit of the maximum economic results.

BRIEFS

GREAT POTENTIAL IN COTTON--Recently, in Xinxiang Municipality of Henan Province, a popular science exhibition of the comprehensive utilization of cotton was held and an experience exchange meeting was convened by the China Agriculture Society, China Cotton Society, etc. It is believed that the comprehensive utilization of cotton sideline products has very great potential. In 1 mu of cotton sideline products, there are 14 jin of short cotton linters which will produce 8.5 jin of man-made fibers; 26 jin of cottonseed oil which can be manufactured into soap and artificial cream besides being edible; 64 jin of cotton kern cakes which, after processing and refining, will provide more than 60 jin of cotton kern powder; 23 grams of aniline cotton phenol and 9.28 jin of more than seven kinds of important amino acids; and 60 jin of cottonseed shells which can culture 60 jin of mushrooms or 2 jin of tremella. Furthermore, the residue can produce furfural and furfural resin, and 400 jin of cotton straw can produce 8 shaving boards or 16 fiberboards. Cotton is also a nectariferous plant, and thus more than 10 jin of honey per mu can be obtained if bees are kept in 20 mu of cotton field. The total output of cotton sideline products per mu can reach 1,100 yuan. [Article by the China Agriculture Society] [Text] [Beijing NONGCUN GONGZUO TONXUN [RURAL WORK NEWSLETTER] in Chinese No 5, 5 May 84 p 11] 12705

LARGEST SEED RESERVE BUILT--China is one of the countries in the world with the longest agricultural history and richest resources of agricultural crop seeds. At present, the state has already collected more than 250,000 sets of agricultural crop seeds. In order to preserve properly these national treasures and the common wealth of mankind, the Chinese Academy of Agricultural Science has built the largest agricultural crop seed resource reserve in China. This seed reserve includes a 0°C reserve and a 10°C reserve for the purpose of slowing down the metabolism of the crop seed and of prolonging its vitality through the control of temperature and humidity. It not only is more economical than the traditional method of seed rejuvenescence and seed preservation but also prevents the mixing and variation of seeds. The seed reserve of Chinese Academy of Agricultural Science will be put to use in the next 6 months of this year, and the academy will assume the responsibility of reserving, arranging and studying the agricultural crop seed resources of the whole country. [Article by Guang Pin [1684 7340]] [Text] [Beijing NONGCUN GONGZUO TONGXUN [RURAL WORK NEWSLETTER] in Chinese No 5, 5 May 84 p 11] 12705

SILK PRODUCTION, EXPORTS--Beijing, 25 Dec (XINHUA)--China has become the biggest silk producer and exporter in the world, according to the China National Silk Corporation. China's exports of raw silk and silk fabrics make up 90 percent and 40 percent of the world's total respectively, an official said. He expected a record production of 290,000 tons of silkworm cocoons this year, 14 percent more than in 1983 or 10 times what it was in 1950, shortly after the People's Republic was founded. Domestic sales this year are expected to go up 12 percent over last year, he said. Silk fabrics for making Western-style suits, ties, women's dresses and shirts are among the best sellers. [Text] [Beijing XINHUA in English 0715 GMT 25 Dec 84 OW]

CSO: 4020/58

GREEN 'GREAT WALL' NEARING COMPLETION IN CHINA

OW260815 Beijing XINHUA in English 0753 GMT 26 Dec 84

[Text] Yinchuan, 26 Dec (XINHUA)--Trees have been planted on more than 2.3 million hectares of northern China this year, according to statistics from the Forestry Ministry.

This is more than twice the figure set out in the state plan, and means that the first stage of the northern afforestation scheme, scheduled for completion in 1985, is now nearly finished.

The first stage, started in 1978, involves the building of a shelterbelt system, with nearly six million hectares of trees, known as the green "great wall," across 396 counties in 12 provinces, municipalities and autonomous regions.

Surveys showed that by the end of 1983, 4.4 million hectares of trees had survived, for a survival rate of 55 percent. This year's survival rate is about 70 percent, according to forestry experts and this means that trees on 1.3 million hectares planted this year will survive. Thus bringing the total to 5.7 million hectares.

Shelterbelts are now protecting about 6.6 million hectares of farmland and have checked soil erosion over 31.5 percent of the areas along the Wuding, Sanchuan and many other rivers.

The forest cover in the Xishan area west of the Shanxi Provincial capital of Taiyuan has increased to 21.9 percent from 8.3 percent in 1977. Most of the shifting sand in the Yulin area in Shaanxi Province has been brought under control.

The policy of encouraging all individuals and collectives to contract for barren hills and deserts for planting trees has contributed to this year's success. Trees planted by individual peasants cover 70 percent of the total afforested this year.

CSO: 4020/58

BEIJING

BEIJING PEASANTS BARE INCOME IN NEWS CONFERENCE

OW191341 Beijing XINHUA in English 1300 GMT 19 Dec 84

[Text] Beijing, 19 Dec (XINHUA)--Peasants from a Beijing village took the unusual step of calling a news conference to announce that their gross per capita income reached 2,000 yuan, the highest in suburban Shunyi County, the BEIJING DAILY reports today.

The news conference was the first ever given by Beijing peasants.

The village, Baigenzhuang, is located in eastern Beijing. All of its 340 residents formerly grew grain on their 53 hectares of cropland. Only 10 percent of the labor force is now used to grow the same amount of grain, while the other peasants have turned to local industries or sideline jobs.

A 1,300-meter asphalt road was built last year to link the village with a main highway.

Telephones have been installed in the houses of Baigenzhuang's businessmen and factory directors and all the village's families have bought washing machines.

CSO: 4020/58

BEIJING

BEIJING PEASANTS' INCOME EXPECTED TO RISE

OW200915 Beijing XINHUA in English 0845 GMT 20 Dec 84

[Text] Beijing, 20 Dec (XINHUA)--Per-capita income of peasants on Beijing's outskirts is expected to rise 12 percent to 582 yuan (about 209 U.S. dollars) this year, 63 yuan (about 22.6 U.S. dollars) more than last year, according to a sample survey just concluded by the city's statistical bureau.

The survey was based on a random sampling of 480 peasant families in eight suburban districts and outlying counties.

Many villages are richer now that there is more rural industry. Peasants in Baigezhuang village in Shunyi County earned 2,000 yuan (about 717 U.S. dollars) each this year.

All of its 340 residents formerly grew grain on their 53 hectares of cropland. Only 10 percent of the labor force is now used to grow the same amount of grain, while the other peasants work in local industries or sideline jobs.

According to the survey, per-capita expenditure of the 480 families was 540 yuan (about 194 U.S. dollars) this year, 41 yuan (about 14.7 U.S. dollars) more than in 1983. Of this, 212 yuan (about 76 U.S. dollars) went on food and 50 yuan (about 18 U.S. dollars) on clothing.

Purchases of televisions, tape recorders, washing machines and electric fans in these districts or counties rose 20 percent, 36 percent, 190 percent and 77 percent respectively, per-capita expenditure on these items being 42 yuan (about 15 U.S. dollars), [figure indistinct] percent more than in 1983.

CSO: 4020/58

SEZ AGRICULTURAL DEVELOPMENT STRATEGY EXAMINED

Beijing NONGYE JINGJI WENTI [PROBLEMS OF AGRICULTURAL ECONOMICS] in Chinese
No 7, 23 Jul 84 pp 17-22

[Article by Zhang Changcai [1728 7022 2088], Institute of Economics, Jinan University: "Strategic Problems Concerning an Agricultural Development Strategy in the Shenzhen Special Economic Zone"]

[Text] How to accelerate the development of agricultural production in the special economic zones [SEZ] has become a new task for our research on an agricultural development strategy. A short time ago, the Central Government decided to open 14 coastal cities further. Added to the 4 original SEZ's of Shenzhen, Zhuhai, Amoy and Swatow, a total of 18 coastal cities will become the forward line of our country's opening to the outside world. The Central Government has requested that the special zones be both developed in material production and also have a lofty socialist culture and that they truly become "windows to technology, administration, knowledge and foreign policies." It is worth looking into how such a spirit can be practiced in SEZ agriculture. In recent years, the Shenzhen SEZ has made some inquiries. Comrade Zhang Changcai's article, "Several Problems Concerning an Agricultural Development Strategy in the Shenzhen Special Zone," is published below as a reference for developing agriculture in the newly opened coastal cities and in some inland areas.

Agricultural production problems in the Shenzhen SEZ in Guangdong are a new topic worthy of serious study. Because, historically speaking, those countries and regions of the world that set up SEZ's generally only process agricultural and sideline products; practically none is directly engaged in agricultural production. Therefore, some people feel that the purpose of the Shenzhen SEZ is mainly to develop industrial production and that there is no need to preserve and develop agricultural production. However, practice in these few years has proved that the special zone must not only preserve agricultural production, it must also energetically develop it. This article will make a simple study of the policies, goals, key points and measures of the Shenzhen SEZ's agricultural development strategy as well as the question of transferring agricultural technology introduced into the special zone to the economic area of the Pearl River Delta.

I. Strategic Policies for the Development of Agriculture in the Special Zones

The strategic agricultural development policy in the Shenzhen special zone must start from reality, bring into full play and utilize the advantages and favorable conditions in the zone itself and energetically develop agricultural production. We must adhere to the strategic policy that agriculture serves the construction of the zone, the expansion of exports and the Pearl River Delta economic area.

(1) The zone's agriculture must serve the construction of the zone.

According to the demands of the party's Central Committee and the State Council, we must make the Shenzhen SEZ a multipurpose special zone engaged in the diversified trades of industry, commerce, agriculture, animal husbandry, the housing and construction industries and tourism. Therefore, how to evaluate the position and role of agriculture in the construction of the special zone is an important premise related to whether agriculture will be properly treated and made to serve and be suited to the special zone's construction.

Presently, the Shenzhen special zone is still in the preliminary stage. The gross agricultural output value accounts for a relatively large proportion of the city's overall industrial and agricultural output value. Thus, the position and role of agriculture must not be belittled. Following gradual improvements in the zone's investment environment and conditions, and the vigorous development of other trades, and giving priority to industry, agriculture will not be ignored because of the pace of increases in output, and economic results cannot match those of other trades. For example, a problem strongly deserving our attention is that in the past many large cities have slighted agriculture.

The Shenzhen SEZ must correctly handle relations between giving priority to industry and energetically developing agriculture. In particular, at the same time as we introduce industries that are capital intensive and technology intensive in a planned and chosen way, we must correspondingly introduce a definite number of projects in agriculture and other trades. Our practice during the past few years in the special zone proves that the vigorous development of agriculture and other trades can be spurred on, provided that industry is given priority. The rapid development of agriculture and other trades is favorable to industrial development and thus promotes the development of industry in turn. Therefore, priority must clearly be given to industry, but the development of agriculture should definitely not be neglected nor slighted. Such a multipurpose special economic zone itself will determine that agriculture has an important position and demands that its positive role in the zone's construction be brought into full play.

Following rapid development in the SEZ, the city of Shenzhen has developed from a small town of only 20,000 persons to its present status of a middle-size city of 200,000 people. Later, after a sudden increase in the city's population due to the development of foreign economic cooperation and technological exchanges, businessmen investing in the zone and tourists will increase each year (in 1983 there were more than 6 million people). All this demands that agriculture be energetically developed to provide a great

number of fresh and live agricultural and sideline products to satisfy the needs of markets in the zone and better serve the construction of the zone.

(2) The zone's agriculture must serve to expand exports.

The Shenzhen special zone is adjacent to the markets of Hong Kong, which has more than 5 million persons. It is favorable to the expansion of our export trade and the promotion of the zone's economic development to bring into full play Shenzhen's advantageous factors, to produce a large amount of top-grade fresh and live agricultural and sideline products for export and to seize the Hong Kong markets.

Based on an analysis of the relevant statistical data concerning the vegetables which appeared on the market in Hong Kong, except for 176,000 tons which were produced by Hong Kong itself, the remaining 335,000 tons were imports. Our country produced 180,000 tons of this figure, or 56 percent. Foreign vegetables accounted for 100,000 tons, or 29 percent, and Taiwan Province for more than 50,000 tons, or 15 percent. In 1982, Hong Kong imported 250,000 tons of fruit, of which we supplied 100,000 tons; the United States, 130,000 tons; and other Southeast Asian nations and our province of Taiwan, 20,000 tons. In 1982, Hong Kong also imported more than 39,200 tons of freshwater fish; we supplied more than 90 percent of this amount. We also supplied the majority of pork, beef, lamb and live poultry. The above illustrates that Hong Kong needs us to supply a large amount of fresh and live agricultural and sideline products. Shenzhen bears a particularly important responsibility in this.

(3) The zone's agriculture must serve the Pearl River Delta economic zone.

The Shenzhen special zone is an important component part of the Pearl River Delta economic zone. The Shenzhen zone borders on Hong Kong and is well informed on international news. Therefore, agriculture in the zone not only must become an export base producing fresh and live agricultural and sideline products but can further become an export base processing these goods for the Pearl River Delta economic zone. At the same time, the special zone's agriculture must be based on the needs of the Pearl River economic zone and serve the development of the zone even better by introducing a group of agriculture and technology projects in a planned and chosen way, adopting efficient methods and transferring it to the zone without delay.

II. The Strategic Goals of Agricultural Development in the Special Zone

The strategic goals of the Shenzhen special zone's agricultural development must be to strengthen energetically the modernization of agriculture, to suit measures to local conditions, to give full play to its superiority and to develop agriculture, forestry, animal husbandry, sideline and fisheries industries and agriculture, industry and commerce comprehensively by gradually mechanizing, specializing in and socializing agricultural production. To satisfy the demands of the markets in the zone and to expand exports, we must construct a production base for fresh and live agricultural and sideline products; develop the production of meat, fruit and vegetables, poultry and eggs, aquatic products and fresh flowers; and improve commodity production

rates. We must greatly improve the peasants' material standards on the basis of developing production.

In order to realize the strategic goals of the special zone's agricultural production, we must see the favorable conditions that already exist.

1. Natural conditions are good. Shenzhen is located between 113.47° and 114.8° east and between 22.28° and 22.43° north. In the east it borders Dapeng Wan Bay; in the west, the mouth of the Pearl River. Half of it is mountainous and hilly, the other half is coastal beach. The land is fertile, the temperature is warm and rainfall is abundant. The average annual temperature is 22.4°, with about 1,800 mm of rainfall. These natural conditions are entirely favorable to the development of the planting, breeding and animal husbandry industries.

2. There is great potential for production. In Shenzhen there is on the average about 5 mu of cultivated land per agricultural laborer, yet the per-unit yield for crops has been low in the past due to extensive cultivation. There are more than 10,000 mu of shoals and more than 200,000 mu of hilly land that have not been developed or utilized. There is great potential for developing the planting, breeding and animal husbandry industries.

3. Commodity markets are broad. Shenzhen borders on Hong Kong and transportation by land or sea is convenient. People say they are "linked by a bridge and joined by a bay." Agricultural and sideline products exported for sale to Hong Kong enjoy the advantages of a short transporting distance, a quick supply to markets and little spoilage; a high percentage of the products remains fresh and alive; and they have a good competitive edge. For example, considering the exports of pigs, cows and fish sent to Hong Kong, pigs have a more than 80 percent survival rate; cows, more than 70 percent; and fish, more than 50 percent. These commodities exported from Shenzhen all basically survive. Particularly in cases when inland or foreign goods cannot be transported because of natural disasters or transportation problems, Shenzhen has an obvious advantage in exporting fresh and live agricultural and sideline products. At the same time, Shenzhen's customary exports of fresh and live agricultural and sideline products enjoy a high reputation in Hong Kong such as Shajing oysters, Longgang chicken, Nantou litchis, Yanshan watermelons, Longhua sand pears, Buji persimmons, Pingshan tangerines, Shiyan plums, Xixiang vegetables, etc. Therefore, the exported agricultural and sideline products are greatly welcomed by travelers in Hong Kong and the exchange rate is particularly high.

Concerning supplies to markets in the special zone, there will be more business for agricultural production and supplies to sales markets will be broader following rapid increases in the zone's population and the development of the tourist industry, as demands for fresh and live agricultural and sideline products become greater and greater.

4. It is relatively convenient to introduce advanced agricultural techniques, equipment and fine breeds. Peasants on the outskirts of Shenzhen have many relatives in Hong Kong who are engaged in industry, commerce, agriculture or

animal husbandry. They have countless economic ties, and this is extremely favorable to making introductions in agriculture.

In recent years some special policies and flexible measures have been implemented in order to achieve the strategic goals for developing agriculture in the special zone, and some peasants have begun to get rich.

1. Some peasants in the border areas are allowed to cross the border to grow vegetables and raise fish. In the New Territories, vegetables are grown on 1,318 mu, fish are raised on more than 3,000 mu and oysters are raised in an area of 19,813 mu. The net income from this is HK\$20 million.
2. New outlets have opened up, and some peasants are allowed to go to the New Territories to sell fresh and live agricultural and sideline products and bring back production materials and goods for personal use.
3. The household responsibility system has been implemented. They also regularly turn things in to the higher authorities. A sum of HK\$150 is paid for every mu of arable land (originally wasteland) that is turned over to the village CPC committee, and all of the remainder reverts to the responsibility household.
4. Some peasants in the border areas are freely allowed to arranged their planting.

The economic results from agriculture have been greatly improved and a group of peasant households with incomes exceeding 10,000 yuan has emerged, due to relaxed policies and the adoption of special measures. In 1982, there were more than 2,300 households citywide that had gross incomes exceeding 10,000 yuan. Of this, within the special zone, there were 1,430 peasant households in the villages of the Luohu District, or 15.4 percent of the villages in the special zone. Every household in the four villages of Yunong, Yumin, Luohu and Luofang had incomes of more than 10,000 yuan. Luofang village among these was still backward prior to 1978; the per-capita income was only a little more than 200 yuan. There has been a great change in that village since the special zone was set up. In 1982, the per-capita income overall was 2,068 yuan and the income of all 35 households there exceeded 10,000 yuan. Presently, the entire village's farming, transportation, irrigation, weed killing and crop protection systems are mechanized. Every peasant household has imported ploughing and weeding machines, motorized shoulder-carried sprayers, automatic flamethrowing weed killers and (?farm water recovery equipment [nongyong shuiyuan 6593 3938 3055 0626]).

III. Key Points of the Special Zone's Agricultural Development Strategy

We hold that based on the needs of the strategic principles that agriculture in the special zone must serve to construct the zone and to expand exports and that it must serve the economy of the Pearl River Delta, the key point of the Shenzhen special zone's agricultural development strategy must be to develop agriculture, industry and commerce together while giving priority to planting and growing. Since starting the special zone, the agricultural and

economic structure and the distribution of agricultural production have been tentatively reformed and readjusted to implement the key points of the agricultural development strategy.

1. Planting and growing have priority. The area for planting and growing vegetables has been expanded and the area for rice has been readjusted and reduced. The whole city has eliminated a rice area of 650,000 mu. The area for vegetables has risen from more than 5,000 mu in 1978 to 210,000 mu in 1982. In 1982 the gross output of vegetables was more than 689,000 dan, of which over 558,000 dan were exported. In 1982 alone, more than 8,000 mu were newly planted with various fruit trees, of which litchis accounted for 7,800 mu. The same year, 1,000 mu of gladioli were planted and all of the 10 million flowers produced were exported.

While reforming and restructuring the agricultural and economic structure and the composition of agricultural production, a group of modernized chicken, pigeon and milk cow farms and aquatic breeding bases has been set up. The city presently has 45 intensive chicken farms. In 1982, there were 3.6 million live chickens bred, a 16-fold increase over 1978; more than 1.7 million were exported, a 42-fold increase over 1978. In 1982, the area of fish ponds and fish farms increased 5-fold and 2.3-fold, respectively, over 1978. Gross output increased 3.5-fold and 4-fold, respectively. In 1982, exports of fish and shrimp increased 11-fold.

2. Agriculture, industry and commerce are being developed together. In the past w years, there has been a relatively large development in the introduction of foreign funds by various villages. Various areas, counties, communes and brigades in Shenzhen have signed 1,050 contracts or agreements with foreign businessmen and over 850 have gone into operation. Presently, there are 1,700 city, county and town enterprises. In 1982, their incomes exceeded 91 million yuan (including industrial costs that were turned in), or 47.9 percent of the entire rural economy's gross income. Due to the rapid development of economic construction in the special zone, much of the land in the Luohu district within the zone has been appropriated for construction and farm land has continuously decreased. Therefore, the agricultural and economic structure of the zone is being readjusted in a planned way; the policy of "introducing foreign imports to the interior" is being actively developed; accumulated funds and appropriated land fees are being used for investments of a developmental nature; and industry, commerce and the processing, communications and transportation industries are being set up. In 1982, a total of 273 enterprises were set up in rural areas of the special zone, at an investment sum of 92.86 million yuan. The annual income figure was more than 20.33 million yuan, or 54.9 percent of the special zone's rural economic income. At the same time, 3,885 persons were employed, or 32.7 percent of the zone's entire rural labor force.

Border area commune brigades are reviving and developing a small amount of trade. Under the principle of "export your own products, import for your own needs," the peasants are permitted to export surplus goods, after fulfilling their state quotas, directly from commune warehouses or by entrusting foreign trade departments to act on their behalf. All foreign exchange

earnings are reported to the Bank of China. Sixty percent of the figure is given to the state and the remaining 40 percent is for the producer to import production materials or needed means of subsistence. In 1982, the whole city had an income of U.S.\$13.71 million from small-scale trade.

The gradual reform and restructuring of the agricultural and economic structure and the composition of agricultural production have promoted the rapid development of agricultural production, and the economic income of the rural brigades and agricultural households has obviously improved. In 1982, the city had a gross agricultural and economic income of 220 million yuan and the per-capita income was 393 yuan, increases, respectively, of 1.47 and 1.9 times those of 1978. Of the 238 agricultural brigades in the city, 9 had per-capita incomes higher than 1,000 yuan. The Luohu area, within the special zone, had a per-capita income of 685 yuan, a 4.2-fold increase over 1978.

IV. Strategic Measures for Agricultural Development in the Special Zone

In order to realize the strategic goals for agricultural development in the special zone, we must implement the following major methods in addition to fully utilizing and bringing into play its favorable factors.

(1) We must continue to reform the agricultural and economic structure and further readjust the composition of agricultural production.

In recent years, the agricultural and economic structure and the composition of agricultural production in the Shenzhen special zone have been tentatively reformed and readjusted. However, grains still have priority on tilled land, economic crops account for only over 20 percent and the self-sufficient economy has not been fundamentally changed and cannot meet the zone's development and export needs. Therefore, further readjustment is necessary. The key is to develop fresh and live agricultural and sideline products that are the most urgently needed by the special zone and the markets in Hong Kong. Every year we must change some rice paddies into vegetable, flower, fruit and freshwater growing areas and, under the premise of having self-sufficient rural grain rations, supply the non-rural population with grain from the same province or with state allocations or imports.

As for readjusting the composition of agricultural production, we must start from reality, suit measures to local conditions, consider overall development, practice comprehensive utilization, take care of the ecological balance and modernize agriculture. We must adopt the "three-in-one combination" and "three-in-one spurs," uniting animal husbandry with the aquatic-product industry so that the former spurs on the latter; uniting breeding with growing, with the processing industry, so that the former spurs on the latter to promote the overall development of agriculture, forestry, animal husbandry and the sideline-product and fisheries industries. Hereafter, we must gradually dig fish ponds near chicken and hog farms, locate chicken and hog farms near fish ponds and grow fruit and vegetables near livestock farms. To have comprehensive utilization and improve economic results, fodder should be used to develop animal husbandry and animal night soil should be used to feed fish or grow fruit and vegetables.

(2) We must continue to relax rural economic policies, encourage and help rural individuals or groups to contract for projects of a start-up nature and upgrade the specialization, socialization and modernization levels of agricultural and sideline-product production.

There are more than 200,000 mu of barren or mountainous land in Shenzhen that are not being developed and nearly 10,000 mu of beaches that are not being fully utilized. This is of great potential to the development of agricultural and sideline-product production. Although the rural labor force is small, its zeal has still not been brought into full play due to the influence of many years of "leftist" thinking. Therefore, we must comply with the spirit of the party Central Committee's 1983 Document No 1 and 1984 Document No 1 in continuing to relax rural economic policies. In particular we must encourage and assist agricultural households or groups to contract for projects of a start-up nature related to the "five barrens" (i.e., barren mountains, hillsides, cropland, bodies of water and beaches), adopt preferential measures and improve their zeal for contracting.

(3) We must actively set up agronomic study centers and combine scientific research, production and teaching to improve the level of agricultural techniques.

We must vigorously develop agricultural production, relying first on policies and then on science. Shenzhen's agricultural techniques are still backward. Not only are yields low but product quality is poor; this is disadvantageous to competing in the Hong Kong market. In order to change the status quo, in 1983 the Shenzhen people's government set up an agronomic research center in coordination with the Ministry of Agriculture, Animal Husbandry and Fisheries and the provincial academy of science. It will also gradually build research centers for vegetables, fruit, flowers and plants, animal husbandry and aquatic products in order to engage in scientific research, production and teaching combined, but scientific research will be foremost in principle. A series of scientific research activities from production and processing on through to packaging and transport will be used to improve the quality of fresh and live agricultural and sideline products and to strengthen competitiveness in the Hong Kong market. At the same time, the educational system will be reformed to improve the scientific, technical and cultural needs of the peasants.

(4) We must reform the circulation and administration systems, reduce transport links and improve economic results.

The commodity circulation and administration system currently used by Shenzhen often divorces domestic trade from foreign trade, creating divisions between supply and marketing, raising costs and causing great waste and many losses in foreign trade, which are very unsuitable to the development of agriculture in the special zone. Because of this, some tentative reforms were carried out on the foreign trade system in effect during September 1981. For example, our foreign trade agencies in Hong Kong decreed that foreign businessmen going to chicken farms directly for weighing and shipping would pay 91 percent of the day's Hong Kong wholesale prices. In this way, our side is not responsible for

transportation costs, losses en route or handling charges. Economic results greatly improved and on the average an additional HK\$1.91 per bird were gained. As for fruit and vegetables, in 1983 fruit and vegetable companies began handling both exports and domestic purchasing, changing the former practice of rushing to buy when vegetables were in short supply both at home and from foreign trade and of dumping them when plentiful, incurring losses for both producers and sellers.

In the future we must further reform the present circulation administration system. We must set up and perfect chicken farms and the fruit and vegetable, aquatic-product, foodstuff and native-product businesses; unify domestic and export sales; combine domestic and foreign trade; and make an administrative system in which supplies and sales are coordinated.

(5) We must develop a "coordination of introductions from abroad with the domestic scene" and speed up the establishment of export bases for fresh and live agricultural and sideline products.

"Coordinating foreign imports with domestic work" is an effective measure for solving Shenzhen's current problems in setting up a base to produce fresh and live agricultural and sideline products for export, where funds are short, labor resources are insufficient, technology is backward and equipment is inferior. Therefore, we should adopt joint investment ventures, cooperative growing and breeding, compensatory trade or other methods to introduce fine breeds, technology, equipment, funds and management experience from Hong Kong or overseas. At the same time, the problems of a lack of funds, insufficient labor and backward technology and equipment can be solved by coordination with concerned domestic provinces, cities, counties and firms. Domestic coordination increases the appeal of rural areas in the special zone for foreign funds. This plays a great role in promoting the acceleration of setting up a base for Shenzhen to produce fresh and live agricultural and sideline products for export.

V. The Strategic Task of Transferring the Special Zone's Advanced Agricultural Techniques to the Pearl River Delta Economic Zone

Technology has been introduced rather swiftly since the special zone was set up. There have been 375 agricultural items, and foreign businessmen plan to invest HK\$239 million; HK\$132 million have actually been invested. A group of modernized planting and breeding bases have been set up in agriculture, animal husbandry and the fisheries industry. For example, the Guangming Overseas Chinese Livestock Farm has imported more than 3,000 head of fine cattle from New Zealand and 24 tons of fresh milk from Japan. Utilizing lightweight and handy milkers for milk cows, 24 head of cattle can be simultaneously milked, increasing the milk production rate and protecting the cows' nipples. A set of American-made hog-breeding pens with six areas for sows, boars, piglets, young stock and middle-aged and adult hogs has been imported. Fine Belgian hogstock has been imported; 6 months of rearing yielded 200 shijin in weight with 70 percent lean meat. Swedish-made automatic temperature and humidity-controlled hatching equipment for a monthly hatching of 70,000 duck eggs has been introduced. In addition, in recent years the Shenzhen

special zone has imported many superior breeds, such as Sanhuang and Hongbei chickens, yellow-finned porgies, Danish long white hogs, Belgian Hamburg summer hogs and others. The Brazilian striped-leaf iron tree and split-tailed mallows imported by the municipal academy of forestry and the 18 fine varieties of vegetables, fruit, flowers and plants which the municipal institute of agronomy plans to import are all high-priced and bring brisk sales on the international market. Some of these can fill in our blanks. In the area of trimming and cultivation techniques, we have adopted advanced liquid cultivation and drip irrigation techniques, opening a broad new area in agronomic research and production. If these advanced techniques, equipment and fine breeds can be transferred and expanded in a timely manner to the Pearl River Delta economic zone, this will have a major role in speeding up the modernization of agriculture. Therefore, agriculture in the special zone must also undertake the strategic task of transferring advanced agricultural techniques, equipment and breeds to the Pearl River Delta economic zone.

(1) We must train agricultural, technical and business administration cadres in a planned way. We must earnestly make plans. Some can be trained in the agricultural technology training centers within the special zone; some can be part of the overall provincial plan and be specially trained in the concerned agricultural institutes and schools or the provincial agricultural-technique training centers; and some high-level technical personnel and administrative candidates can be sent for training to centers in Hong Kong or abroad according to the needs of agricultural development. Only in this way can we boldly use the advanced agricultural techniques and equipment that is introduced, digest and master it and form them into a new technology which is our own by improving on and creating from it, simultaneously transferring it to the Pearl River Delta economic zone.

(2) We must continue domestic coordination. Domestic coordination is a relationship of economic cooperation between the special zone and inland areas. I believe that the development of domestic coordination can be divided into two stages, namely, a preliminary and a mature stage. The preliminary stage can be broadly adopted when the special zone is just being formed. Because the zone lacks capital, technical strength and economic management experience, it needs to utilize the inland's capital, raw materials and technical strength to increase its ability to digest advanced techniques and its development strength, creating a good investment environment with favorable conditions to attract even more investors. Following the swift development of the zone's economy, the preliminary stage of domestic coordination will turn into the mature stage. In this stage, the advanced techniques, equipment and scientific and management experience will be mainly transferred and extended to the inland areas. At the same time various scientific, technical and business administration talent will be transported inland. Therefore, in domestic coordination work, preliminary coordination is a means of achieving the goal of mature coordination. To reach this goal, in the future we must give particularly high regard to mastering the preliminary form, considering the transfer of advanced techniques and business administration experience to the inland as an important standard for evaluating the domestic coordination of enterprises in the special zone. We must praise and give rewards to those enterprises which do this work well and criticize, penalize or even close down those which

fail. In addition, while striving to transfer the advanced agricultural techniques introduced into the special zone directly to the economic zone of the Pearl River Delta, we must continue to relax policies and allow concerned agricultural enterprises in the special zone to spur on the coordinated efforts of some important agricultural projects in the Pearl River Delta economic zone.

(3) We must introduce a group of advanced techniques and equipment in a planned way. We must unify our planning for projects that are introduced and introduce advanced techniques by choice, in a measured way and with key targets, based on the needs of economic development in the Pearl River Delta economic zone. Presently, it is most important to introduce some crucial equipment that is scarce at home and from which we can draw on the techniques, and introduce equipment that is favorable to the technological transformation of agriculture and projects that require a low investment and yield quick results and a high profit. On the one hand, these advanced techniques and equipment should be used for the special zone's economic construction. On the other hand, they will improve the economic results of the techniques which are introduced by transfer to the Pearl River Delta economic zone when they are mastered and digested and have blazed new trails.

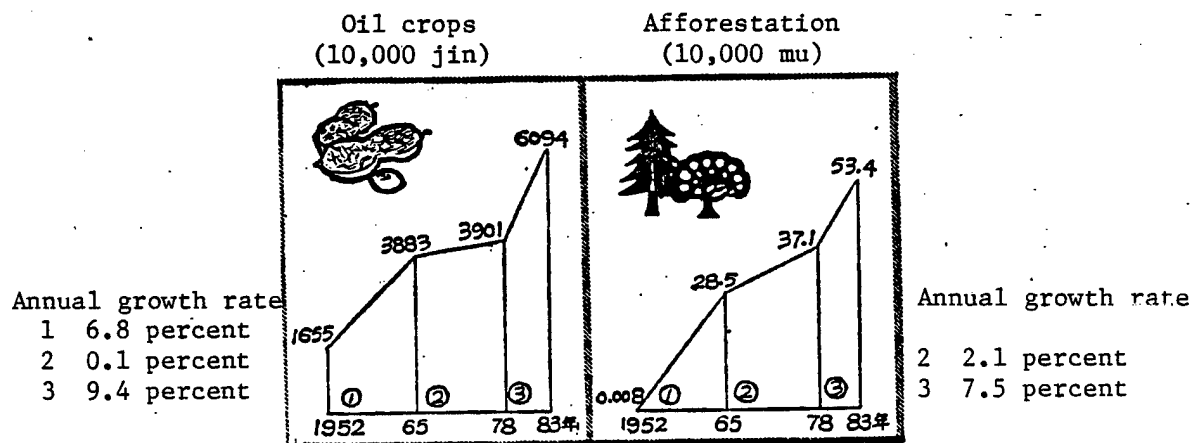
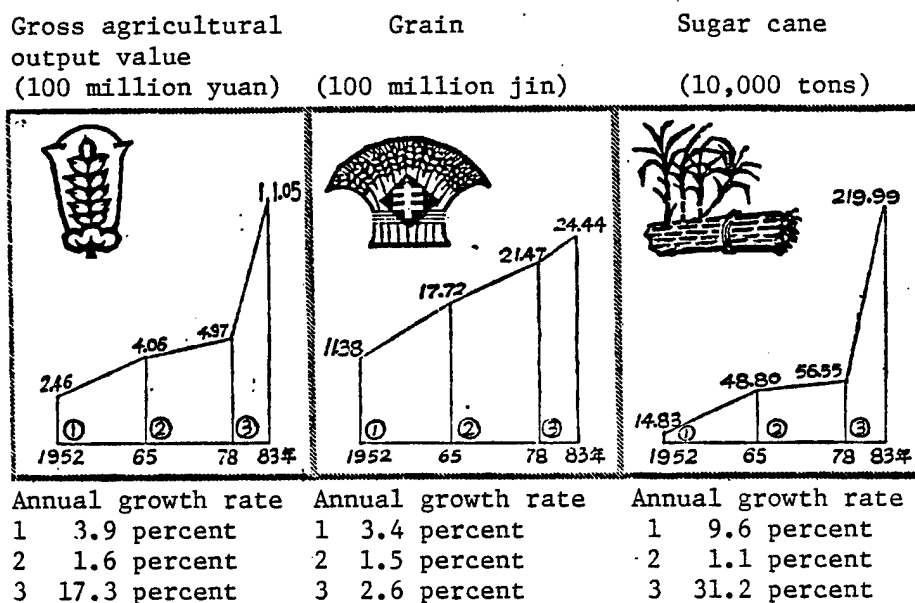
12615

CSO: 4007/12

GRAPHS OF AGRICULTURAL GROWTH IN HAINAN

Haikou HAINAN RIBAO in Chinese 9 Sep 84 p 2

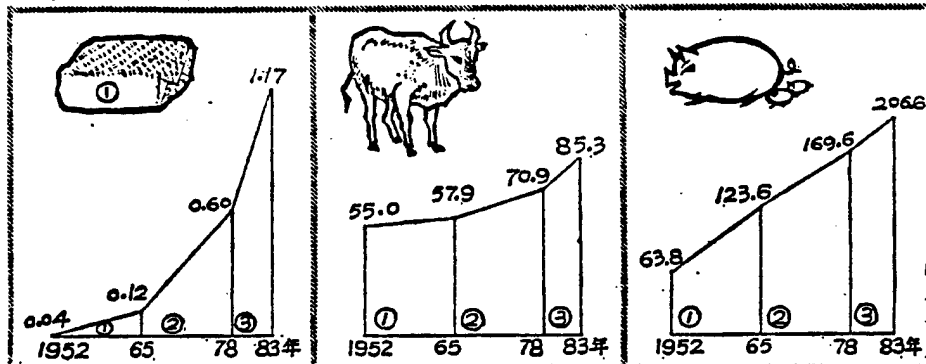
[Text] The Hainan Administrative District's Agricultural Growth Achievements



Rubber
(dried bricks
10,000 tons)

Cattle (total
annual inventories,
10,000 head)

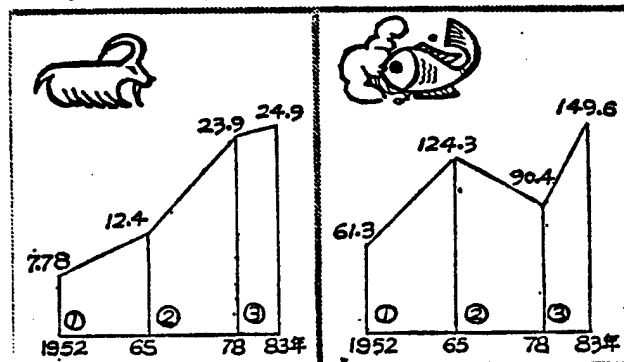
Pigs (total annual
inventories,
10,000 head)



Annual growth rate		Annual growth rate		Annual growth rate	
1	9 percent	1	0.4 percent	1	5.2 percent
2	13.1 percent	2	1.6 percent	2	2.5 percent
3	14 percent	3	3.8 percent	3	4 percent

Sheep and goats
(total annual
inventories,
10,000 head)

Aquatic products
(10,000 dan)



Annual growth rate		Annual growth rate	
1	3.7 percent	1	5.6 percent
2	5.2 percent	2	-2.4 percent
3	0.8 percent	3	10.6 percent

12431
CSO: 4007/39

PROBLEMS OF RESERVOIRS, INVESTMENT IN IRRIGATION

Beijing ZHONGGUO SHUILI [WATER CONSERVANCY IN CHINA] in Chinese No 8,
15 Aug 84 pp 18-19

[Article by Lei Xilu [7191 6932 4389] of the Economic Research Institute of the State Planning Commission: "Several Matters Must Be Resolved Concerning Utilization of Benefits of Existing Irrigation Projects"]

[Text] Since the founding of New China, water conservancy construction in Guangxi has made great achievements. It has had the effects of giving security to people's lives and property, increasing industrial and agricultural production, supplying water for industry, providing a livelihood for urban inhabitants and providing energy for rural production and the people's livelihoods. The following is only an example of the results of irrigation on the growth of agricultural production. This example may lead to a general view concerning other areas.

	With irrigation jin/mu	Without irrigation jin/mu	Percentage of products with irrigation to those without
Paddy:	496	226	215
Early-season rice	529	218.7	241.9
Middle-season rice	440	235.7	186.7
Late-season rice	454	216	210.2
Corn:	277	137	202.2
Early- and middle-season corn	302	134	225.4
Late-season corn	200	119	168.1
Sugar cane	10,000	2,500	400
Peanuts	170	121	140.5

The effect of water conservancy construction, a series of correct plans, policies and measures, the system of household contracted responsibility linking remuneration to output and the scientific method in agriculture, etc., have created a good agricultural harvest in Guangxi. In 1983, the production of grains, sugar cane, oil crops and jute and bluish dogbane was 2.4 times, 14.6 times, 1.8 times and 85.1 times, respectively, greater than in 1949, and the production of flue-cured tobacco also increased 33.3 times compared with that of 1952.

However, at the same time there are also the following problems:

1. Faulty and dangerous reservoirs are urgently waiting to be dealt with. There are 4,626 large, medium-size and small reservoirs in the whole region at present. Most of these reservoirs were built during the "Great Leap Forward" period in 1958, and in most of the projects safety and quality problems exist in different degrees. According to the examination standard issued by the Ministry of Water Conservancy, there are 1,356 faulty and dangerous reservoirs which belong to the third and fourth categories, and they are 29.3 percent of the total number of reservoirs in the whole region; among the 1,356 reservoirs, the 154 large and medium-size faulty and dangerous ones make up 100 percent of all the large and medium-size reservoirs. These reservoirs not only threaten the lives and property of the people who live in the lower reaches as well as the safety of industrial and agricultural production but also influence the full utilization of the reservoir. According to statistics, due to the problems that exist in different degrees in the large and medium-size reservoirs, the water in reserve must be controlled. In an ordinary year, the water in reserve will be reduced by about 4 billion cubic meters, which are 44 percent of the effective storage capacity of these reservoirs.

In recent years, 60 of the large and medium-size faulty and dangerous reservoirs had already been dealt with, and there are still 94 waiting to be handled, with a needed investment of about 434 million yuan.

2. Arrangements should be made urgently for those who emigrated from the reservoirs. The total number is 372,000, and they are so designated because they emigrated at the time when these reservoirs were built and completed. In the past during the construction of these reservoirs, the fact that emphasis was placed only on the project and no sufficient attention was paid to the aftermath of their emigration has caused problems in various aspects of their lives, production and transportation. Settlement of these problems is urgent. Since the beginning of 1980, each year the autonomous regions spend 8 million to 10 million yuan on these problems. At the end of 1983, preliminary arrangements were made for 120,000 people, and 251,000 people still remained to be settled. These old emigrants were not satisfied with the primary arrangements because the standard for settlement was comparatively low. According to the estimate of the regional water conservancy office, an investment of 158 million yuan would be needed to settle the problems of the emigrants' lives and transportation problems without including the maintenance expenses of production.

A total investment of 592 million yuan is needed for the two projects mentioned above. This is equal to 19 times the investment of 31.5 million yuan for the capital construction of the whole region's water conservancy program in 1984. That is, according to the investment level for the capital construction of water conservation in 1984, even if the total amount of investment is used in dealing with the faulty and dangerous reservoirs and in making arrangements for the emigrants, it is still impossible to settle completely the problems in these two areas by the year 2000.

3. The funds for the big repairs and transformation project of the present water conservancy installation must be studied and settled. Now, concerning the various types of water conservancy projects constructed in the region, some were already used for 20 or 30 years. Due to bad management and maintenance on the project and the unsettled funds for the big repairs and for transformation work, the effective results of the project have been deteriorating every year. Some have even lost their efficiency. According to the statistics of the 13 years between 1971 and 1983, because of the loss of efficiency and damage to the project, land occupied for urban and rural capital construction and other causes, 34.76 million mu of effective irrigation area in the whole region have been totally reduced. In the same period, more than 2 billion yuan of the investment for the capital construction of water conservancy works and the operating expenses for irrigation and water conservancy were spent on the construction projects. Thus, 3,577,000 mu of new and efficient irrigation areas have been added, but this increase offsets the reduced irrigation areas mentioned above. The result is that there is only an 11,000-mu increase in the effective irrigation areas. Moreover, in the 4 years from 1980 to 1983, there has been an increase of 600,000 mu of irrigation area, but in the same period, 680,000 mu were lost. The increase and the reduction canceled each other, and the balance was a net decrease of 80,000 mu. If this condition continues like this, it will not take long to have a great part of the water conservancy work in a useless condition, which will have a disadvantageous influence on our four modernizations of construction. The main reason for this condition is the unsolved problem of investment funds for repairs and transformation work on the present water conservancy installations. Each year, industrial enterprises have been collecting construction and depreciation funds for the construction and transformation of its present enterprises; no such funds have been collected for the construction and transformation of water conservancy installations, and these funds are not included in the present water charges, which are 3.5 yuan per mu on average. Even such low-water charges are not paid in some regions. Some county leaders have a one-sided comprehension of the spirit of Document No 1 of 1984. Because they consider the dutiful payment of water charges for agricultural irrigation an unreasonable burden on the peasants, they encourage the peasants to refuse payment of such charges. Some county leaders even announce with such notices: "The government of this term will not demand the payment of water charges." Thus, it is hard to maintain the operational expenses of some water conservancy works and the wages of their personnel, so naturally, there are no funds for the repair and construction of the projects. In recent years, the state has fixed up 60 million to 70 million yuan for the operational expenses of irrigation and water conservancy. This fund is far from adequate for use on the settlement of problems left by the water conservancy works of the past. It is simply hopeless to make arrangements for the repair and transformation of the present water conservancy facilities.

If funds for repairs and transformations are included in the water charges, the water charge for 1 cubic meter will be about 1.6 fen. If it is estimated according to 600 cubic meters per mu for the water used on irrigation, the water charges for irrigation will be approximately 9.6 yuan per mu. Thus, the whole region will be able to collect water charges for irrigation at 200

million yuan a year, and the fund for the repairs and the transformation project could be basically settled.

The three problems related above existed not only in Guangxi but also in some of the other provinces and the autonomous regions. At present, there are a considerable number of faulty and dangerous reservoirs that need to be dealt with. Furthermore, the irrigation area that has been deducted because of the need of repair and loss of efficiency of the water conservancy project and the occupation of more land by urban capital construction is greater than the irrigation area that has been increased because of the newly constructed projects; the effective irrigation area in the whole country has tended to descend. How can we solve these problems? The following measures are proposed to repair these faulty and risky reservoirs and to make arrangements for these "old emigrants":

(1) The investment in water conservancy capital construction must first be used mainly on repairing the faulty and dangerous reservoirs and making arrangements for the "old emigrants." It is necessary to insure that these investments are well used, to forbid strictly any diversions of and extravagance with these funds and to enhance its functions fully.

(2) Areas which benefit from the reservoir will undertake part of the responsibility of making arrangements for the emigrants. Some regions have contracted the arrangement for the reservoir emigrants in the areas benefited by the reservoir. It will be worthwhile to sum up and popularize this measure further.

(3) There must be no more decrease in the amount of investment on water conservancy capital construction. In the past 2 years, the investment on water conservancy capital construction in the whole country has been the lowest since 1971. There has been a decrease of 46.2 percent in 1982 compared with the level of 1978, and if a further decrease takes place, it will be even more unfit for the requirements of the four modernizations of construction.

(4) We suggest that the ministries and commissions concerned of the Central Committee and the leaders of all levels of provinces, municipalities directly under the central government, autonomous regions, localities, counties and townships make the decision as early as possible to settle these two problems. The problem of arrangements for the emigrants should be made before 1990; even if the present investment in water conservancy is not sufficient, it is still necessary to increase the investment or allocate special funds to settle the problem of the "old emigrants."

With regard to the funds for the repairs and transformations of the present water conservancy installations, we suggest taking the following various measures for the settlements:

(1) The state will allocate funds or subsidize whereas the regions which receive the benefits will invest funds and supply labor for large-scale flood control work.

(2) Water charges for irrigation, watering and drainage works will be collected based on the benefits obtained by the regions; concerning water charges, repairs, transformation work and other charges will be considered.

(3) On the premise that the projects should be well managed and used, the project management unit will actively promote a diversified operation to increase income for the big repairs and for the transformation projects.

(4) Along with financial and economical growth, the state (including the central and local governments) will gradually increase and allocate part of the investment for the big repairs and for the transformation projects.

A method of responsibility by levels will be taken for making arrangements for the old emigrants of the reservoirs, for disposing properly the faulty and dangerous reservoirs and for settling the funds for the water conservancy installation repairs and transformations. Whoever did the repairs and construction projects will be responsible for the consequent problems. With regard to the method of responsibility by the levels, the responsibilities must be practiced by all the organizations concerned such as the ministries, provinces, autonomous regions, municipalities directly under the central government, localities, counties, regions and townships; leaders at all levels will work out plans of settlement and practice the contract system; the responsible unit or responsible person will sign the contract and take full responsibility for the investment, assignment, quality and period of completion; and, furthermore, a system of rewards and punishments will be stipulated for the fulfillment of assignments in the contract or of assignments unfulfilled.

It is important to teach the cadres and peasants to protect the water conservancy works constructed by collective efforts or by the state and to fight against any damage to the water conservancy installations. The collection and payment of water charges according to regulations is the bounden duty of the people and units concerned in the benefited regions. This is different from assuming unreasonable burdens. These terms should be united with the construction of a civilized township or districts and the households of five merits. Regarding those who damage the water conservancy installations and refuse to pay water charges without a proper reason, the governments of all levels should handle them seriously in accordance with the laws, decrees, rules and regulations of the state (law and economic sanction included).

12705
CSO: 4007/17

SUGAR BEET PROCUREMENT REPORTEDLY TO BE IMPROVED

New Policy Announced

Harbin HEILONGJIANG RIBAO in Chinese 23 Sep 84 p 1

[Article by Liu Honglu [0491 4767 6424]: "Heilongjiang Provincial Government Announces New System of Sugar-beet Procurement for This Year: Many Channels of Procurement Will Be Employed, and Prices Will Be Set According to Sales Period and Beet Grade"]

[Text] The Heilongjiang Provincial People's Government issued orders today for the implementation of new arrangements for sugar-beet procurement this year.

This year's procurement work will dispense with the old system, under which sugar mills handled everything, and adopt a multichannel approach, including procurement by the state, joint operations, collectives and individuals, so that peasants can make deliveries locally and choose their own delivery sites. Accounts will also be settled in cash, and procurement stations will not be permitted to make deductions on behalf of any other unit so that peasants can receive direct benefits from the procurement process.

In terms of policy, the state has retained the standard price of 75 yuan per ton but has replaced the previous, flat-rate 10-yuan extraprice subsidy with a system that is to vary according to sales period. Specifically, this system provides that sales completed during the warm period (prior to 20 October) shall receive a subsidy of 7 yuan per ton, those conducted during the frost period (21 October through 30 November) shall receive 5 yuan and those delayed until the freezeover period (after 1 December) shall receive 15 yuan. This system will encourage peasants to harvest their sugar beets at the proper time, insure sugar-beet quality and alleviate overconcentration of sales at one time. Sugar beets that are poor in quality are to receive reduced prices: Beets having sugar contents of 10.1 to 14 percent will still be purchased at the state's standard price of 75 yuan per ton but will not be awarded the 10-yuan extraprice subsidy; beets having sugar contents of 10 percent or less will receive 50 yuan per ton and will not be awarded the differentiated subsidy. This system will encourage peasants actively to adopt technical measures to increase beet sugar content so that peasants earn more money and sugar mills obtain more sugar.

At this very moment, the beets are building up their sugar contents. We hope that the peasants will begin harvest after 1 October.

Orders for Implementation Issued

Harbin HEILONGJIANG RIBAO in Chinese 26 Sep 84 p 1

[Article by Gao Mingyin [7559 2494 5030]: "The Heilongjiang Provincial Government Convenes a Telephone Conference on Sugar-beet Procurement Work Throughout the Province"]

[Text] The Heilongjiang Provincial Government convened today a telephone conference on sugar-beet harvest and procurement work throughout the province, and Vice Governor An Zhendong [1344 2182 2639] announced new policies concerning sugar-beet pricing and the management of procurement work for this year.

He stated that two major reforms will be made in procurement pricing: Extra price subsidies will be readjusted, and poor-quality sugar beets will receive lower subsidies and prices (for details, consult the 23 October edition of this newspaper, p 1). All relevant departments must consciously and fully implement this policy, and no perfunctoriness, much less obstinate resistance, will be tolerated. Meanwhile, propaganda work must be conducted among the peasants to explain the policy and facilitate smooth implementation thereof.

He stated that, in order to resolve effectively the "difficulties in delivering and procuring sugar beets," the old method under which sugar mills handled everything will be replaced this year with a multichanneled approach involving the state, joint operations, and individuals.

He ordered all localities to organize joint command centers or offices for procurement headed by country executives or assistant executives and including all relevant departments, to organize efforts to supervise procurement work and to provide liaison and cooperation among all quarters. Each township government must dispatch specialized personnel to conduct thorough investigation among the peasants and at the grassroots level so as to insure the quality of sugar beet procurement. The peasants must be taught to uphold conscientiously the state's interests and be told extraprice subsidies will be withheld for sugar beets whose leaves have been broken off. Banks must insure supplies of funds for procurement and may no longer make deductions on behalf of any other agencies when settling accounts, so as to enable peasants to benefit from procurement. Agencies in charge of public security, industry and commerce, pricing and weights and measures must actively participate to insure smooth implementation of this work. Railroad agencies must make proper arrangements for transport, guarantee ample supplies of rolling stock and refrigerator cars and make sure that all the sugar beets are shipped before the end of next February. Communications and transport agencies must bring vehicles operated by the state, collectives, and individuals under unified control, strictly enforce the unified system for freight fees and prevent all overcharging and exploitation of the peasants. Any truck driver who is found to have extorted the peasants must be resolutely punished. All sugar

mills must consolidate their procurement staff, improve their systems of economic responsibility, treat the peasants warmly, weigh produce accurately and enforce quality standards in a practical manner. Sugar mills and beet management stations must unify their organizations; properly supervise procurement stations run by joint operations, collectives, and individuals; and strictly punish such illegal acts as favoritism, embezzlement, bribery, collusion, fraudulent reporting and false claims.

12431

CSO: 4007/39

NEW STRATEGY FOR DEVELOPING SUGAR INDUSTRY OUTLINED

Harbin HEILONGJIANG RIBAO in Chinese 23 Sep 84 p 1

[Article by Liu Jinglin [0491 2529 2651]: "Developmental Strategy for Heilongjiang's Sugar Refining Industry"]

[Text] Heilongjiang's beet-sugar refining industry enjoys a multifaceted, comprehensive set of advantages, occupies an important strategic position and accounts for one-half of the nation's total beet-sugar output. The development of the industry is not a question of the output of a single product, a single industry or a single sector but rather constitutes a crucial matter affecting the development of agricultural, animal husbandry, the food industry and the invigoration of the market and relating to the rationalization of the economic structure and the improvement of the economic operations of the entire province. Sugar refining must develop into a major pillar of our province's industrial sector.

In accordance with social need and practical conditions, relevant departments have outlined the following strategic objectives for Heilongjiang's sugar refining industry. Under the general policy of improving economic results, we must strive to quadruple gross agricultural and industrial output value and sextuple [fan san fan 5064 0005 3972] the taxable profits in industry. During the first stage, through 1985, sugar output must reach 450,000 tons, output value must total 310 million yuan and taxable profits must net 135 million yuan. During the second stage, through 1990, output must reach 550,000 tons, output value, 430 million yuan and profits, 165 million yuan. And during the third stage, through the year 2000, output must reach 800,000 tons, output value, 1.8 billion yuan and profits, 240 million yuan.

To achieve these objectives, we must adopt the following four policies.

1. Policies To Increase Sugar-beet Production and Expand Refining Capacity

Establishing raw-materials bases, improving yields and increasing sugar content are important ways by which to expand beet-sugar output. To produce 800,000 tons of sugar, 6.4 million tons of beets will be required, and if beet yields average 2 tons per mu, 3.2 million mu will have to be devoted to the crop. In view of Heilongjiang's land area, this objective is entirely possible. But to avoid taking up too much cultivated land, we should make

improving yields and increasing sugar content our main avenues of attack. To achieve these objectives, we must create high-yield, high-sugar raw-materials bases, tailor measures to suit local conditions, achieve rational distribution, concentrate cultivation, develop improved varieties, increase fertilizer application, expand the irrigated area, reform cultivation technology and disseminate the use of paper tubing to cultivate seedlings for later transplant. Linking pricing to quality will induce peasants to farm scientifically and increase sugar content.

To expand our processing capacity, we should persist in our efforts to integrate transformation and new construction and continue to make intention primary. Prior to 1990, we must rely primarily on transforming old factories and equipment, which approach requires less money and yields faster results. Thereafter, through the year 2000, we should both steadily expand existing sugar mills to appropriate sizes and build proper-sized new mills in areas having sufficient supplies of raw materials and suitable transportation. When one analyzes the average technological and economic indicators, it appears that existing, large sugar refineries are better than medium and small ones. But this is not to say that bigger mills are better. Appropriateness is what we need, and 1,500-ton, 2,000-ton and 3,000-ton capacities seem to be the right sizes for sugar mills in the different regions of Heilongjiang. The sugar beet loses much weight when processed, the ratio between the raw material and final product being 8:1. To reduce transport load, we should place refineries in cities and towns that are centers of beet production and that have convenient transportation and adequate water supply. Refinery sites must have sufficient access to sugar beets, and we must also take into account the current distribution of mills and be carried to avoid overconcentration.

2. Policies Relating to Technological Transformation and Improvement

Although the technological transformation of the sugar refining industry has been fairly rapid in recent years, a major gap is still apparent when the industry is compared to the technological levels abroad. We should conduct a selective and phased transformation of each type of mill; emphasize technological improvement in both retooling old mills and building new ones; adopt as much as possible new domestic and foreign technology and equipment that is automated, efficient, high-volume and energy-saving; avoid continued additions of backward equipment, as was done during the 1950's and 1960's; and gradually replace outmoded equipment. At present, the import and absorption of foreign technology, equipment and complete sets of equipment provide an effective approach to improving the technological level of Heilongjiang's sugar-refining industry. Yet at the same time, we must place even greater emphasis on the characteristics of China's agriculture, climate and processing periods and on strengthening study of and resolving the technological problems specific Heilongjiang's sugar-refining industry.

3. Policies Concerning Comprehensive Utilization and Development

Comprehensive utilization in the sugar-refining industry facilitates full exploitation of natural resources and improvement in economic results. In

the past, molasses was employed to produce alcohol, but other uses of the product must be found in the future, such as to produce monosodium glutamate, citric acid, lysine and the like. Beet pulp is an important byproduct of the industry and provides an excellent source of animal feed, so we should attempt to dry that product and sell it abroad and domestically. And if ways can be found to reuse the wastewater employed by mills for flushing, alcohol dregs and filter residue, we can transform waste into treasure and prevent environmental pollution.

The development of the sugar-refining industry and of all related sectors and industries must be coordinated. If sugar refining is coordinated with agriculture, we can both insure ample supplies of sugar beets and promote the development of agriculture. If sugar refining is coordinated with animal husbandry, the refining industry can supply feed for animals, promote the development of animal husbandry and obtain a certain amount of revenue. And if sugar refining is coordinated with the food industry, sugar can be used to undertake secondary and tertiary processing. Thus planning for the development of the sugar-refining industry must be linked with that for agriculture, animal husbandry and the food industry.

4. Policies Relating to Fund Raising and the Improvement of Management

The problem of financial resources is key to the development of Heilongjiang's sugar-refining industry. In the past few years, relevant departments in our province have discovered through practice some new, multichanneled methods of raising funds, such as allocations from the state, bank loans, special technical funds, loans from trusts, loans from sellers, raising funds within the province and accumulating money from the masses. In the future, we must carefully study specific policies and methods of accumulating and utilizing funds, manage and use funds properly and increase the effectiveness of the funds we employ.

The rapid development of the sugar-refining industry requires corresponding improvement in the quality of management and appropriate reform of the managerial system. We must improve sugar-beet procurement and supervision work, strive to reduce losses in storage and transport, strengthen target management improve production technology, emphasize quality, create good new products, avoid losses, improve sugar-content recovery, stress energy conservation, reduce energy consumption, focus on expenditures and reduced processing costs. We must organize cadres and workers for further study and training to teach them about management and technology. We must adopt progressive managerial methods and techniques, stress key links, introduce automated control systems and employ computers. And, even more importantly, we must reform the system of management and discover a new path to managing the sugar-refining industry and sugar-refining enterprises.

12431

CSO: 4007/39

STATE FARM SYSTEM IN HEILONGJIANG RECLAMATION AREA PROSPERS

Harbin HEILONGJIANG RIBAO in Chinese 27 Aug 84 p 1

[Article: "Heilongjiang Reclamation Area Turns from a Vast Wasteland into a Granary, Forming China's Largest State Farm System, Which Has 32 Million Mu of Cultivated Land, an Overall Mechanization Level of 90 Percent and an Annual Grain Production of Over 6 Billion Jin with Over 3 Billion Jin Turned over to the State Each Year"]

[Text] Under the guidance of the spirit of the 3d Plenary Session of the 11th CPC Central Committee, Heilongjiang's reclamation area--China's largest and most highly mechanized state farm system--broke the shackles of the "left" and sought out a path of development with distinct Chinese features. With an unparalleled outburst of vitality it achieved a historic change in the course of bringing the main crop of grain from low production to high production, the economic structure from single-crop farming to a diversified economy and the economic results from high losses and low profits to low losses and high profits. In the last 30 years the nation has stressed opening up and developing the "Great Northern Wilderness." Today it has become worthy of the name Great Northern Granary. In 1983 its total value of production from agriculture and industry increased by 49 percent compared to 1978, reaching 25.4 billion yuan. It strongly supported the construction of the four modernizations.

The total area of Heilongjiang's reclamation area is 58,000 square kilometers, mainly distributed in the outlying district from the east at the Wusuli River west to the lesser Xingan Mountains. Before liberation, this area was an overgrown wilderness with traces of human presence seldom seen and was called the "Great Northern Wilderness." In 1947 in order to support the war of liberation, the first group of state farms was established. After liberation, the affiliated organizations of the state, the localities, armed forces and public security one after another came to the reclamation area to operate farms, especially in 1958, when Gen Wang Zhen led 100,000 demobilized servicemen into the Great Northern Wilderness. This greatly increased the speed of progress in the reclamation area. At the present time 32 million mu of cultivated land have been developed, and they have over 20,000 large and intermediate-type tractors, over 12,000 combined harvesters, 150,000 various types (pieces) of agricultural tools and machinery and an overall farm mechanization level of 90 percent in this, China's largest state farm system. For a long

period of time due to a lack of experience and blindly copying certain foreign farm styles, it was especially influenced by the errors of the "left," its grain average yield per unit of area fluctuated around 200 caddies and losses were incurred for the majority of years. In just 5 years from 1974 to 1978, the ratio of losses to profits was 4 to 1, with the net loss being 470 million.

After the 3d Plenary Session of the 11th CPC Central Committee, the reclamation area summed up the experiences and lessons of the past and sought out a path of development for the state farm that had distinct Chinese features. It carried out a series of economic reforms in breaking through the long existing situation of a unitary system of ownership by the whole people, with the state being the sole undertaker of management and the single source of employment and using the single pay grade assignment method and other such hindrances. It organized over 500,000 staff and workers, constituting 95 percent of the total number of people, to participate in various forms of contract production. A new method of production was started for a labor force of 100,000 people, and support was given to 120,000 family members and children of staff and workers to engage in collective or individual production, causing the farm economy to acquire a new motive force. During the 5-year period from 1979 to 1983, except for losses incurred in 1981 due to an especially large crop failure caused by waterlogging, the other 4 years all had a net profit, with a profit of 320 million yuan still being made. Grain production in each of these 4 years was approximately 6 billion caddies, which constituted roughly one-half of the amount that the entire country's agricultural reclamation system produced. Each year it turned over more than 30 billion jin of grain to the state, which was two-thirds of the amount produced by the entire country's reclamation system. In 1983, the grain yield per unit of area was 252 jin, and the total production was 65.9 billion jin, with 38.5 billion jin turned over to the state. These figures, compared to 1978, showed increased of 15 percent, 36 percent and 75 percent, respectively. Then in 1980, once again the highest level in history was achieved. During those years, 92 of the entire reclamation area's 97 farms had a net profit and among these 11 doubled their output value.

The reclamation area's main agricultural service trades and industrial enterprises that used agricultural by-products for raw materials have also been greatly developed. In 1983 the output value of over 690 industrial enterprises accounted for one-third of the overall industrial and agricultural output value. Among industrial products numbering in the hundreds, 30 products of milk, candy, canned goods, wine, paper and 10 other varieties were judged to be high-quality products by the state and provincial agricultural, animal husbandry and fishery ministries. In addition, it also had over 60 varieties of products which entered the international market with an annual trade exchange rate of 140 million yuan.

On the 35th anniversary of National Day, news again spread of success in the reclamation area: 12 million mu of wheat were enjoying a bumper harvest, 15 million mu of field crops were doing well and the broad masses of staff and workers were filled with pride and enthusiasm while striving for bumper crops. They were determined to increase the pace of economic reform and go a step further in better farm management in order to make a new and larger contribution to the modernization of China's agriculture.

DEVELOPMENT OF SMALL CITIES, TOWNS AT DIFFERENT LEVELS

Beijing NONGYE JINGJI WENTI [PROBLEMS OF AGRICULTURAL ECONOMICS] in Chinese, No 8, 1984 pp 16-18

[Article by the Political Research Office of Hunan Province's Yueyang Prefecture Party Committee: "There Must Also Be Different Levels in the Development of Cities and Towns; A Survey of the Small Cities and Towns of Yueyang Prefecture"]

[Text] Currently, Yueyang Prefecture of Hunan Province has initially formed four administrative levels for its small cities and towns--county seats, key towns at the county level, towns at the township level and markets. Yet the development and circumstances of different cities and towns are completely different from the people's impressions. Currently, we possess the initial basis for the construction and installation of county seats. Key towns at the county level are considered to be the "favorite" of all small cities and towns in the countryside. Yet even though peasants have deep feelings for towns at the township level and for markets, a few comrades in the party and political organizations at the county level and above and in the concerned departments in the cities and towns are indifferent toward these township-level towns and markets. These comrades are always thinking about building and expanding "towns at the county level," but they feel that towns at the township level and markets are "not that useful." Because of the control and influence of this type of thinking, leaders from the county level to the township level concerning the so-called "organic town" only confine themselves to towns at the county level and do not consider markets and towns at the township level. With regard to the local finances of Linxiang, Pingjiang and Huarun Counties from 1971 to 1983, a total of 13.33 million yuan was invested in the construction of cities and towns: 95 percent of this was invested in county seats and 5 percent was invested in key towns at the county level. Towns at the township level and markets did not receive a single cent.

From the viewpoint of the circumstances of our survey, in the construction and development of small cities and towns, the large should be combined with the small and the high level combined with the low level, and we should form a network of cities and towns that has many administrative levels, many types and many functions.

First, different types of small cities and towns in the countryside all possess the functions and characteristics of cities and towns. It is clear from our

survey that whether people admit it or not, towns at the township level and markets are in fact similar to county seats and key towns at the county level. They are all economic entities in the countryside that are at an administrative level higher than that of the villages, they all possess characteristics different from villages and maintain a close relationship with the villages, they are all densely populated (including the population that comes from the countryside and does not participate in rural production work but is mainly engaged in industry and commerce) and they are collecting and distributing centers for agricultural produce and sideline products. According to statistics from 27 towns at the township level from Miluo, Xiangyin and Huarong Counties, the areas of the cities combined do not exceed 8 square km, and the population engaged in nonagricultural production labor exceeds 41,000, or an average of more than 1,500 people per town; last year the volume of retail sales of social goods totaled 72.56 million yuan or an average 2.687 million yuan per town, and the total volume of business from agricultural trade markets amounted to 11.626 million yuan, an average of 445,000 yuan per town. In addition, the social productive forces of these small cities and towns are more advanced compared to the villages, the transportation is more convenient, information on commodities is more up-to-date and consumption and other economic activities are more concentrated than in the countryside. Moreover, they have a corresponding range of service. It is clear that they are indeed small cities and towns or can be classified as small cities and towns.

Second, from the viewpoint of the special characteristics of commodity production, after establishing a joint contract production responsibility system and after changing the unified accounting system of cooperative brigades, thousands upon thousands of peasants have become producers of commodities, and household management has become the basic-level cell of the rural commodity economy. This type of commodity production, viewing the situation as a whole, is on a large scale and involves great volumes, but from the viewpoint of farmers, it is scattered and involves small batches. Small cities and towns which act as places of commodity exchange really cannot help being spread all over the place, that is, some are large and some are small, some are faraway and some are near. Yueyang Prefecture has 5 counties, an area of 11,450 square km and 630,000 farms. Each township has an average area of 69 square km and an average of 3,730 farms. Just think how difficult it would be for peasants to buy and sell in such a large prefecture if the county seats did not have key county-level towns and township-level towns to act as supplements and if keytowns at the county level and towns at the township level did not have markets to act as supplements! Moreover, even if some of these towns use processing methods to handle aquatic products, fruit, meat, vegetables and other special local products, with regard to transportation they ought to be near and not faraway. Being faraway creates waste and being near is beneficial in preserving freshness and cutting costs.

Third, currently there are many different economic sectors, many circulation channels and many forms of management in China. We must correctly handle the relationships between the different economic sectors, between the circulation channels and between the different forms of management, and we must establish a suitable place for the development of commodity production and commodity exchange. But in the construction and development of small cities and towns at different administrative levels, we can make known the strengths of each

town and avoid their weaknesses as well as give consideration to their benefits. Because the level of productivity and the conditions of transportation are different, county seats and key towns at the county level help to develop the state-run economy and expand the main channels in the realm of communications; towns at the township level and markets help to develop the collective and individual economies and expand secondary channels in the realm of communications. This point can be proven in our key investigation of the economic activity of 24 cities, towns and markets in 1983. In that year, the industrial and commercial output of the 24 cities, towns and markets totaled 483,581,800 yuan, including:

Unit of measure: 10,000 yuan

	Total Commercial and Industrial Output	State-run Economy	%	Cooperative Economy	%	Individual Economy	%
County seats	27,314.13	22,643.4	82.9	3,250.38	11.9	1,420.35	5.2
Key county towns	8,896.7	6,289.97	70.7	1,725.96	19.4	880.77	9.9
Township towns	10,258.17	6,801.17	66.3	2,420.93	23.6	1,036.07	10.1
Markets	1,889.18	1,044.72	55.3	474.18	25.1	370.28	19.6

Unit of measure: 10,000

	Volume of Business	State-run Commerce	%	Collective Commerce	%	Individual Commerce	%
County seats	21,458.13	17,402.54	81.1	2,746.64	12.8	1,308.95	6.1
Key county towns	7,887.31	5,418.58	68.7	1,609.01	20.4	859.72	10.9
Township towns	7,611.26	4,738.38	62	1,917.74	25	955.14	13
Markets	1,855.84	968.75	52.2	514.07	27.7	373.02	20.1

It is clear from the tables above that the proportion held by each sector of the economy and the role played by each channel of circulation progressively increases or decreases according to the administrative level of the town. This explains why we must organically synthesize the development of different sectors of the economy and plan the administrative levels of small cities and towns according to a prefectural-level city.

Fourth, since cities and towns are the result of social and economic development, the scope and rate of their development are also processes of economic development. They have their own objective laws and are restricted by social and economic activities, geographic position, natural conditions and communications conditions as well as the state's financial resources. The natural, economic and technological conditions of most villages are different, the level of the development of the agricultural economy and the industrial economy is not uniform and the production, lifestyle and purchasing power of the broad masses of peasants are different. This means that the development and construction of small cities and towns must be diverse. Specifically, whether we are building a county-level town or a township-level town, we must not make a subjective determination but must mainly look at the size of the population, and

any town with more than 2,000 people engaged in nonagricultural industry should be established as a town at the county level. Furthermore, we must also consider whether or not the town exists as an economic entity; otherwise, if there is a concentrated population but no economic entity has been formed, the town cannot be of service to the surrounding countryside and more than ever will be unable to spur on the surrounding countryside.

At the same time, the state's financial resources are limited, and the hope that the state will immediately use a large amount of funds to engage in the construction of cities and towns is not realistic. But the development of small cities and towns at many different levels can spur on millions upon millions of peasants, and a reliance on the human, material and financial resources in the countryside itself to build up small cities and towns will help both to reduce the burden of the state and to develop and build up small cities and towns quickly.

Fifth, from the viewpoint of the policy decision to shift the population from the countryside, by the end of the century one-half to one-third of the rural labor force will be engaged in farm work. In this way it is not possible for the masses to want to be transferred completely or partially to large or medium-size cities. It is also not possible for all or most of the masses to be transferred to the few county seats. Thus, the most reliable road is to develop small cities and towns at many different levels and to allow the excess labor force not only to transfer to county seats but even more so to transfer to key cities at the county level, to towns at the township level and to markets.

Sixth, the construction of small cities and towns at many levels is beneficial to a gradual realization of rural "urbanization." Currently, the level of rural productivity is fairly low and undertakings in transportation and communications are fairly backward. In the 20 townships discussed in our key survey, production teams involved in the opening of roads constituted only 40 percent of all production brigades, and farms with motorized means of transport constituted only 0.4 percent of all farms. Building small cities and towns and developing a few towns at the county level and markets at present not only helps peasants process and sell agricultural produce and sideline products in their own neighborhoods but also helps peasants purchase everyday consumer goods nearby. At the same time it also serves as a preparation and as an initial step in the development of urbanization in the countryside. In a few years, after social productive forces are fully developed and undertakings in rural transportation are advanced, today's markets, towns at the township level and key towns at the county level will become modernized small cities and towns. However, we must cause the level of productivity and transportation undertakings in the vast countryside to achieve an extremely objective level. This in no way is something that can be achieved overnight but is something that requires a long period of time. Thus, starting now, we must pay attention to building up and developing small cities and towns at many different levels. This truly is an important measure for closely combining the countryside's long-term benefits with its immediate benefits and for reducing one step at a time the differences between the city and the countryside and between industry and agriculture.

AGRO-INDUSTRIAL INTEGRATION IN ECONOMICALLY DEVELOPED AREAS

Beijing NONGYE JISHU JINGJI [ECONOMICS FOR AGRICULTURAL PRODUCTION TECHNOLOGY] in Chinese No 8, Aug 84 pp 29-31

[Article by Xiao Ting [5135 7200], Kun Sheng [0981 3932] and Liu Tian [0491 3944] of the Agricultural and Industrial Department of the Wuxian County CPC Committee, Jiangsu Province: "'Agro-industrial Integration' Is the Way To Raise Production and Economic Results in the Economically Developed Areas"]

[Text] Suzhou, Jiangsu Province, has been listed as an economically developed area because some of its economic targets surpassed the average national and provincial level with some others ranking among the best. Based on the economic structure characterized in the main by its "multiple levels and comprehensive form," that is, from the commune, the production brigade and the production team to the present "combination entity," the households under contracts have each become an independent economic entity at its own level. They engage not only in agricultural production but also in the pursuit of comprehensive development of forestry, animal husbandry, sideline occupations, fishery and industry, commerce, transportation and the service trades. The household contract system of responsibility with remuneration linked to output is fully suited to the economically developed areas. However, the characteristics of "multiple levels and comprehensive form" of the economically developed areas have caused a vast difference in labor remuneration in specialized production under the original three-level economy (the commune, the production brigade and the production team) and in the three-occupation production (agricultural, sideline and industrial production) under conditions in which the same amount of labor was put into production. Unequal distribution has impeded both the synchronous development of production in the three fields and the improvement of economic results. In industry and sideline occupations, particularly in industrial production, because its conditions are better than in agriculture, economic results are higher than in agriculture and the labor remuneration is greater than from agriculture, with the personnel of the three occupations "doing the same work but not getting the same pay." This has resulted in sharper contradictions between agriculture and industry: in agriculture, "everyone wants to eat rice and everyone is also afraid to take up farming," in industry, "one's income is guaranteed once he enters the factory." Jinshan Commune in Wuxian County has achieved highly gratifying results in trying out the method of management of "integrating agriculture with industry" after the output-related system of contracted responsibility was instituted.

Jinshan Commune, located on the slope of Lingyan Mountain in the Suzhou suburbs, is one of the more prosperous communes in Wuxian County because of its high grain yields and industrial development. The whole commune is composed of 7,680 peasant households with a population of 27,632 people. It has 24,294 mu of arable land, a total labor force of 17,494 men, 20 production brigades and 220 original production teams. Its per-mu grain output in 1982 came to 1,228 jin and the total income from production in the three occupations amounted to 32.34 million yuan, of which income from agriculture accounted for 10.7 percent, from animal husbandry, sideline occupation and fishery 2.3 percent and from commune and brigade-run industrial enterprises 87 percent; the income of commune members from collective per-capita distribution was 269.90 yuan, of which 85 percent came from industrial distribution. The total value of commodities from the economic undertakings in the three fields in the entire commune came to 21,635,400 yuan or 71 percent of the total income, of which the value of industrial commodities accounted for 85.2 percent of the total commodity value. A major contradiction appeared in the winter of 1983 when the household contract system of responsibility with remuneration linked with output was instituted in the entire commune: a wide gap existed between agricultural and industrial income as a result of the irrational distribution of the labor force in the three occupations after the contract arable fields were distributed. For example, if the food grain acreage is taken out from the total acreage of arable land, the average per-capita farm labor can only contract for 1.87 mu of responsibility fields, computed on the basis of a normal harvest year. The average net income will come to about 115 yuan (labor cost included), and in that case, the average annual per-capita labor income amounts to only 215.05 yuan. Computed on the basis of the average annual remuneration in 1982, a laborer engaged in industrial production earns an income of 602.80 yuan a year. The difference between the two represents a one to three ratio. The income gap is even wider if computed on a household basis comparing those with more members engaged in industrial production (also a few all-worker households) with fewer members doing industrial work (also a few purely peasant households). Even if the instability factor in agricultural production and the laborious factor in farming are not included here, the contradictions will become more acute in the event of poor harvests due to natural disasters. As a result, some peasant households are found to be unwilling to contract for responsibility fields, since they would earn an income by trying something else even if they cannot work in a factory. This state of affairs has a great impact on stabilizing agriculture and developing grain production. Thus, in implementing the household contract system of responsibility with remuneration linked to output in line with local prevailing conditions, the management system of "integrating agriculture with industry" was also instituted in an all-round manner.

With regard to integrating agriculture with industry, "agriculture" refers broadly to agriculture, forestry, animal husbandry and fishing, and "industry" means village and town industrial enterprises. The so-called agro-industrial integration means the merging of agricultural and industrial production of the original three-level economy into one entity with the whole labor force doing farm work and industrial work and letting agricultural and industrial production permeate each other. Notable results have been achieved after 1 year of practice in designating "food grain fields" for farming based on the entire population and in contracting out responsibility fields based on the

entire labor force. The output-related system of contracted responsibility was applied to the households. At the same time, with all the labor force participating in production in village and town collective industrial enterprises, the system of contracted responsibilities for operation was also instituted.

I. Develop Three-occupation Production, Bring About Improvement in Three Areas

The whole commune achieved a synchronous increase in agricultural, sideline and industrial production in 1983, with output (value), labor productivity and economic results elevated to some extent. In spite of the unusual natural disasters that hampered the commune's grain production, the total grain output came to 30.51 million jin, which was equal to that of 1982, the year of bumper harvests. Grain production turned from deficit to profit for the first time. According to a rough estimate, the total grain output value in 1982, subtracting the material consumption and labor cost, showed a deficit of 1,000,200 yuan. In 1983, the peasant households acquired the decision-making power in operations after the household contract system was instituted, which resulted in minimizing various kinds of labor consumption to a large extent. Furthermore, the enthusiasm for grain growing soared following the integration of agriculture with industry. As a result, the total annual grain output value came to 4,304,000 yuan; material consumption, 1.61 million yuan; labor costs, 1,843,000 yuan; profits, 851,000 yuan; and percentage of profit from output value, 19.7 percent. Income from the commune's collective sideline production under contract totaled 2.3 million yuan or an increase of 27.1 percent over 1982. In spite of the unfavorable conditions plagued by energy and raw material shortages and price changes, the village and town industrial enterprises' total output value amounted to 36.66 million yuan or a 30.33 percent increase over 1982 or an increase of 4.1 percent over the value under contracts. Of the total output value, pretax profits accounted for 4.87 million yuan, an increase of 44.9 percent over 1982; the increase in profits was higher than the increase in output value, thereby achieving the goal of raising economic results. The total income from the commune's collective economy amounted to 42,518,000 yuan, setting a record with a per-capita income of 1,538.72 yuan.

II. Overall Planning for the Interests of the Three Occupations to the Satisfaction of the Three Sides

The development of production in the three fields has made state planning possible, invigorated the collective economy and raised the income level of commune members, thereby bringing satisfaction to the state, the collective and the commune members. The result of the final accounting on distribution in 1983 showed that a total of 7.58 million jin of grain were sold to the state and delivered as planned; an estimated 131,000 commodity hogs [as published; 13,100?] were sold, overfulfilling the assigned quota by 3.9 percent. Taxes paid to the state by the village and town enterprises for the whole year totaled 2.29 million yuan, an increase of 30.8 percent over 1982, and not a single household was delinquent in paying the amount of 270,000 yuan in the agricultural tax due. The collective public accumulation increased by about 8 percent. The per-capita income of commune members, combining the income from contractual jobs and income from collective distribution such as wages

from other work and agricultural subsidies, amounted to 428 yuan, an increase of 58.5 percent over 1982. After fulfilling their contractual tasks, commune members also developed the self-managed economy vigorously. The net income from the commune's self-managed economy totaled 1,875,000 yuan and the per-capita income was 68 yuan; combining the two, the actual per-capita income for commune members in 1983 came to 496 yuan.

III. Three Changes Have Occurred After Relations Among the Three Occupations Were Harmonized

After the "integration of agriculture with industry," and due to the fact that "every household engages in agriculture, industry and sideline occupation and every family has become small but all-embracing," the remuneration for personnel engaged in the three occupations, after some adjustment is made within each household, has become very even, and as a result, three changes have taken place: first, relations between the cadres and the masses are becoming more harmonious. The commune members said: "Now there is no need for us to enter the commune- and brigade-run factories through the back door!" The cadres also extricated themselves from disputes arising from assigning workers to the factories. Second, the broad masses of commune members are showing more interest in the collective economy. In the past, those who engaged in farming criticized those who worked in the factories by saying that "commune- and brigade-run factories are good for those who work there, but they have nothing to do with us peasants." But now with every commune member becoming a commune- and brigade-run factory worker, they are showing more interest in the collective economy to look after the direct economic benefits. Third, family relations have become more harmonious. In the past, some people refused to support the old people and relations between mothers-in-law and daughters-in-law in some families were strained, but now the old people are entitled to retirement pay and every household has workers and staff members holding two jobs (engaging in factory work and in farming). The old people who used to be "chased out of the house" are now "much sought after."

Jinshan Commune mainly adopted three measures in integrating agriculture with industry, namely, "arrangement, calculation and implementation." First, by arranging each household in order to achieve the overall placement and distribution of the labor force in the commune, the result was that more than 6,200 able-bodied workers throughout the commune were shifted simultaneously toward collective industries and sideline occupations. Second, based on the estimate of the capability of the collective industries and sideline occupations to expand production and accommodate the labor force, steps were taken to see to it that an "increase in manpower must be commensurate with an increase in income" and do away with the negative manpower shift which resulted in "several people sharing a bowl of rice." Third, after tentatively arranging each household and each person in order, specific methods were introduced: 1. An old-age retirement system was instituted, and male and female laborers reaching the full age of 55 and 46, respectively, were retired from the three occupations with an annual retirement subsidy of 120 yuan each to be paid by the commune and the brigade. They were encouraged after retirement to engage in household sideline production and supportive household chores to the best of their ability. The commune retired a total of 3,036 old members. This has not only shown the superiority of the collective economy but also solved the

problems of an aged and feminized labor force in the rural areas and has raised the quality of the labor force. 2. The labor force newly absorbed by the commune-run enterprises mostly worked in quarrying, processing, transportation units requiring manual labor and units that involved fewer technical processes but had a potential for expansion. A total of 2,080 laborers were employed. 3. Some middle-aged women and other laborers who cannot work too far away from home were given jobs in the commune and brigade enterprises handling sideline production. A total of 730 was employed. 4. A total of 300 manpower was newly added to vigorously advancing the circulation and service trades. The above four channels have basically brought about a situation in which "everyone farms and works."

The trial implementation of the management system of integrating agriculture with industry represented a bold reform in the collective economic management under the guidance of the spirit of the CPC Central Committee's 1983 Document No 1. The initial success of this kind of management system is due to the fact that it is suited to the local level of productive forces. For example, to begin with, Jinshan Commune is rich in collective economic resources, its collective industrial and sideline enterprises are fairly well developed and it has conditions to accommodate more laborers to engage in developmental production. All this has provided specific conditions for instituting the reform in management. Generally speaking, areas under this category, where resources are better developed and utilized and arable land is limited, have very little room to maneuver around by relying on extensive production. Only by relying mainly on intensive production can they raise the economic results. However, it is far from enough just to take into account these economic results from a peasant household scale or in light of the scope prescribed by a certain production project. The characteristics of "multiple levels and comprehensive form" have dictated that a substantial increase in economic results must be considered comprehensively in the light of the scope of an area as a whole.

The practical experience of Jinshan Commune has provided us a useful experiment on how to perfect the responsibility system and invigorate the collective economy, and by integrating theory with practice, it is truly an experience that other economically developed areas can use for reference. Of course, this is "the first time ever" that the commune has done this. Many problems have yet to be straightened out, such as the problem of how to transform each family and household from being "small but all-embracing" to "small but specialized," how to handle the contradictions between the limit of accommodating the labor force and the continual increase of the labor force and how to keep abreast with circulation, services and so forth.

12662
CSO: 4007/20

PEASANT-RUN TV SYSTEM ESTABLISHED IN LIAONING

OW270738 Beijing XINHUA in English 0650 GMT 27 Dec 84

[Text] Shenyang, 27 Dec (XINHUA)--A peasant-run close-circuit television system, the first of its kind in northeast China, has been put into operation in Shenyang, capital of Liaoning Province.

The system worth 70,000 yuan was imported by peasants of Keyan New Village. The cameraman, editor, announcer and mechanic are all members of the village.

While providing its own video-taped shows, the system can also relay programs of the central and local television stations.

The village head said that the system will be used to spread information of commodity production, help peasants acquire general and scientific knowledge and enrich their leisure time.

The industrial and agricultural output value of the 152-household village was 5.5 million yuan in 1983, 16 times that of 1978.

Their per-capita income in the same period shot up eight times--to 1,200 yuan. Many families now have televisions, refrigerators, washing machines, tape recorders, cameras and motorcycles.

A well-equipped television studio will be built and a television training school set up in 1985, the village head said.

Local peasants in the Shenyang area are already running telephone offices, cultural centers and cinemas.

CSO: 4020/58

SHANDONG

SHANDONG DRIVE TO IMPROVE WINTER FARMLAND

OW230854 Beijing XINHUA in English 0845 GMT 23 Dec 84

[Text] Jinan, 23 Dec (XINHUA)--Shandong Province, a major grain producer in east China, has launched a winter farmland improvement drive, according to provincial authorities.

The aim is to create better conditions for the development of rural commodity production, the authorities say.

More than 5.5 million peasants have been involved in the present drive and 16,000 projects have been completed, improving irrigation facilities for 106,000 hectares of farmland. Another 14,000 are underway.

The province also encouraged planting of trees, building of fish ponds and other projects and turned public reservoirs and ponds over to peasants for raising fish under contracts.

The projects were undertaken with funds raised by peasants and production units. Many projects have been contracted to peasants or production units. This practice has helped ensure quality and accelerate the speed of construction.

CSO: 4020/58

SHANDONG

BRIEFS

GOOD GRAIN HARVEST ANTICIPATED--Jinan, 22 Dec (XINHUA)--Shandong Province, one of China's major grain producers, has reported increased harvest over 1983, itself a good year. Total farm output value is expected to top 29 billion yuan, 11 percent over 1983, according to officials here. Grain output is estimated at 30 million tons, 3 million tons more than last year. The cotton harvest is expected to be 1.6 million tons, 375,000 tons up. The annual gross income of Shandong's rural collective enterprises will reach 12 billion yuan this year, 20 percent more than 1983, officials said. [Text] [Beijing XINHUA in English 0715 GMT 22 Dec 84 OW]

CSO: 4020/58

SHANXI

BRIEFS

SHANXI GRAIN PROCUREMENT--Specialized grain storage households in Shanxi Province have increased to more than 2,000. Thus far, these specialized households have stored more than 634 million jin of grain for the state, accounting for 25 percent of the total procured in the province. [Excerpt] [Tianyuan SHANXI RIBAO in Chinese 6 Dec '84 p 1 SK]

CSO: 4020/58

LOCAL GOVERNMENT AIDS CATTLE BREEDING IN TIBET

OW241240 Beijing XINHUA in English 1158 GMT 24 Dec 84

[Text] Lhasa, 24 Dec (XINHUA)--A cattle breeding center with a sperm bank and three liquid nitrogen depots is to be built in Tibet to accelerate cattle improvement in the region, according to the local animal husbandry bureau.

The regional government has appropriated 1.4 million yuan for the project.

Thirty-two cattle breeding stations were built in 16 counties in 1983 and 1984, with an investment of 500,000 yuan from local government. These stations have bred 3,100 head of improved strain of cattle and 30,000 are expected for 1985.

Each improved cow weighs more than 150 kilograms and yields an average of three to 3.5 kilograms of milk daily, 300 to 400 percent more than the originals. Their meat output is more than double the previous local breeds, which number 780,000 in the region.

The cattle improvement stations provide free services to Tibetan herdsmen, covering breeding, delivery and control of diseases. Compensation will be made for deaths of cows or calves resulting from the breeding process, local animal husbandry bureau officials said.

Local government also has free breeding centers for yaks and sheep. There are now 230,000 improved sheep all over Tibet.

CSO: 4020/58

END