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28 September 1982

CHINA REPORT

AGRICULTURE

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DEVELOPMENTS IN AGRICULTURE REVIEWED

OW131315 Beijing Domestic Service in Mandarin 2320 GMT 12 Sep 82

[Article by (He Kang): "China's Developing Agriculture"]

[Excerpts] Since the 3d Plenary Session of the 11th CPC National Congress, great changes have taken place in China's countryside. Agricultural production has grown in an all-round way. The living standards of peasants have markedly improved.

Since 1978, despite numerous national disasters, total agricultural output value has increased at an annual rate of 5.1 percent, as compared with an average annual growth rate of 3.5 percent from 1953 to 1981. Comparing the output of major agricultural products between 1978 and 1981; grain increased by 6.7 percent; cotton, 36.9 percent; oil-bearing crops, 95.6 percent; sugarcane, 40.5 percent; and beetroot, 135.4 percent; all representing the best records since the founding of the people's republic. Output of cocoons, tea, flue-cured tobacco and other cash crops also increased by a large margin. Before 1978, annual grain output hovered around 500 billion jin. In the last 3 years, despite a reduction in grain acreage, annual output has broken the 600 billion jin level.

Output of animal products also increased in an all-round way. Comparing 1978 with 1981, total pork, beef and mutton output of the country increased by 47.2 percent to reach 25.2 billion jin.

Output value of commune and brigade enterprises has increased at an average annual rate of 16 percent, making such enterprises an important force in consolidating and developing the rural collective economy.

Agricultural education is being restored and developed step by step. There are now 57 institutions of higher education in the fields of agriculture, animal husbandry and fishery with a total enrollment of more than 77,000. While improving the higher agricultural institutions, efforts are being made to do a good job in running the existing 264 secondary agricultural, animal husbandry and fishery schools. At the same time, governments at various levels are training agricultural cadres, particularly leading cadres, and the results are quite remarkable.

The excellent situation in China's countryside finds concentrated expression in marked improvement of the peasants' living standards. The vast countryside is stable and united, and the 800 million peasants are working contentedly and diligently. In 1981, the per capita income of peasants from the collective economy, not including income from household sideline production, averaged 116.2 yuan, an increase of 31.3 percent over the 88.5 yuan in 1978. The average per capita purchase of consumer goods in the rural areas in 1981 increased by 85 percent over 1978. Between 1978 and 1981, new houses built in the rural areas totaled 1.6 billion square meters in floor space. This is a result of increased income of the masses of peasants based on production growth.

We must also see that as the foundation of the national economy, agriculture is still relatively weak. At present, there are still some impoverished areas, and the peasants' problems have not all been solved. In some places, the party's policies have not been completely implemented. The state's investment in agriculture cannot be increased very much in the near future. To develop agriculture and carry on rural construction, we still must rely mainly on policies, on science and on fully tapping the potentials of existing agricultural equipment and facilities.

CSO: 4007/591

PRC COUNTIES SUPPLY MORE GRAIN TO STATE

OW261656 Beijing XINHUA in English 1521 GMT 26 Aug 82

[Text] Beijing, August 26 (XINHUA)--Once known as the "land of paupers" for its poverty, Fengyang County, Anhui Province, sold and delivered to the state as tax in kind a total of 100,000 tons of surplus grain in 1981.

This is one example cited in a recent release issued by the Ministry of Commerce to show the success of the new policy of encouraging rural prosperity. In 1981, according to the release, 560 counties across China each were able to supply to the state 100 million jin (50,000 tons) of surplus grain. These account for more than one-fourth of the total number of counties in China.

Of the 560 counties, 309 had reached or surpassed the 100 million jin level for five consecutive years. The other 251 counties mostly had been poverty stricken like Fengyang County in Anhui Province, the release said.

Changtu County in Liaoning Province supplied to the state 545,000 tons of surplus grain, ranking first among all counties in China. Seven other counties each supplied to the state at least 250,000 tons.

China's major grain-producing counties are in the lower and middle reaches of the Yangtze River, the northeast China plain, the Shandong peninsula, the Dongting and Poyang Lake areas in central China, the Pearl River delta in Guangdong Province and the Sichuan basin in southwest China.

While encouraging peasants to diversify the rural economy, the release said, the Chinese Government has over the past few years paid more attention to grain production. It has provided material, financial and other assistance to areas which had potential in grain production while supporting key grain-producing counties.

CSO: 4020/168

'RENMIN RIBAO' ON DEVELOPING FODDER INDUSTRY

HK240239 Beijing RENMIN RIBAO in Chinese 20 Aug 82 p 2

[Commentator's article: "Develop the Fodder Industry"]

[Text] The fodder industry is the basis for developing animal husbandry, which is an indispensable link in the entire national economy. The development of animal husbandry relies on good animals for breeding and advanced techniques in raising as well as the basic conditions such as the fodder industry.

Our country is teeming with fodder sources. Apart from fodder grain, chaff, bran and other oil-bearing dregs and cakes, there is much green and coarse fodder such as sugarcane bagasse, slivered sugar beet, brewing and industrial and sideline production waste materials, as well as leaf powder, sunflower stems and other coarse fodder sources. China has great tracts of grassland, which are also an important source of green fodder. These rich sources provide the material basis for developing the fodder industry.

Many economically advanced countries in the world develop their fodder industries mainly by using grain. We could not adopt this method, which is unworkable. According to the practical conditions of the country, with its big population, small area of cultivated land and grain shortages, and according to the prerequisite of raising economic results, we should discover a way of steadily developing the fodder industry. This means, in line with local conditions, opening up more fodder sources, strengthening comprehensive utilization, centering efforts on developing mixed feed and compound feed, correspondingly developing the premixed, concentrated fodder industry, and adding enrichment and fodder sources industries in order to form a comprehensive fodder industry system. The distribution of the fodder industry must be rational. The scale of the factories should be a combination of big, medium and small factories, with the medium and small factories as the key link. This is an effective way which is in line with the national situation.

It is very important to pay attention to the comprehensive utilization of fodder sources. Most of the present fodder is for simple use only. We feed animal and poultry on grain, we fertilize farm land with cotton and vegetable cakes or with green fertilizer. This method has caused much

waste. The rational method should be, first of all, to utilize the fodder, then to develop marsh gas by utilizing animal and poultry manure and finally, to use it for fertilizing farmland. The economic value of the same material, if used in different ways, may vary by 200 to 300 percent. It is necessary to conduct publicity among the masses, to set examples and to gradually realize scientific and comprehensive utilization in order to eliminate the waste of fodder step by step. The fodder industry and scientific research departments should intensify their scientific research on fodder. They should also invent fodder formulas for fattening and breeding animals according to the needs of different species of animals and fowl and give instructions on the development of the fodder industry.

The development of the fodder industry involves many economic departments; in particular, it requires close cooperation from the commerce, animal husbandry, agriculture, fishery, light industry, chemical and medicinal industries. It should adopt the policy of unified planning and separated management and arouse the enthusiasm of all parties concerned. Fodder companies at all levels of the commercial departments should open up new sources, and make full use of fodder grain, bran, chaff, cakes and dregs provided by the state to actively produce and manage fodder and coordinate their activities with the animal husbandry departments. They should also give technical instructions to the communes and production brigades on fodder processing and utilization. The animal husbandry departments should duly study nutritive standards and formulas for all breeds of animals, and give instructions on green fodder source production, storage and utilization. Other industrial departments and communes and production brigades concerned also shoulder important tasks. Special attention must be paid to raising quality and to carrying out feed experimentation and popularization in order to win customers' confidence in the development of the fodder industry.

CSO: 4007/583

'RENMIN RIBAO' VIEWS CONTRACT RESPONSIBILITY SYSTEM

HK090710 Beijing RENMIN RIBAO in Chinese 27 Aug 82 p 5

[Article by Lin Zili [2651 1311 0500]: "On 'Standard Output'--The Distribution Form of the Contract Responsibility System of Linking Remuneration With Output"]

[Text] As a great invention of the Chinese peasants, the various forms of the contract responsibility system linking remuneration with output have undergone selection, testing and continuous evolution in practice and already have become nearly mature. This system has steadily developed. The pure and typical form of the contract responsibility system linking remuneration with output--the overall contracting system--has been adopted in an increasingly greater part of our rural areas. At present, this system has been established in almost 70 percent of our rural areas and is, therefore, the most popular form. However, how we should explain the economic nature of the overall contracting system, especially its distribution form, is still a difficult question facing the people. When people talk about the special distribution features of the overall contracting system, often they only cite the following, which is much in vogue: "Hand over enough products to the state, give a sufficient share of the products to the collective and the rest belongs to the producers themselves." Of course, this is an appropriate description of the phenomena. However, this description fails to point out the basis for the calculation of the amount to be handed over, given and retained. Therefore, it cannot express the essence of this distribution. Quite a few other comrades have said that distribution in the overall contracting system is a "distribution according to contracts." However, they too have failed to make clear basis on which the amount that each party gets in the distribution is stipulated. Hence, up to now, the unitary form and essences of the distribution process of the overall contracting system have not been fully disclosed, expounded or proved.

Here, I would like to provide a tentative answer to this question.

"Linking Remuneration With Output" and "Workday"

In the past, people regarded distribution according to workdays, or workpoints, as the only form of distribution of the rural collective economy. However, practice over many years proved that this form, generally speaking, was not

suited to the actual conditions in most of our rural areas. In recent investigations in some rural areas, this writer talked about the workpoint problem with some basic-level cadres and the masses of peasants. All of them were of the opinion that the workpoint system is a complete failure. They said: "We tried quite a few forms of the workday system, such as the fixed workpoint method, the method of flexible assessment of the workpoints of laborers with a fixed standard, fixing workpoints according to the nature of work, and assessing workpoints in Tazhai's manner, but all these forms failed." "The workpoint system is a strange system. A man gets 10 workpoints for a day's work, but a married woman only gets 8 workpoints. Moreover, an unmarried woman gets only 7. Why does a girl get one more workpoint for a day's work after she is married?" "When the method of flexible assessment of workpoints of the laborers was adopted, an assessment meeting often lasted till midnight and broke up in discord. You cadres often go into conflicts when you discuss matters related to promotion. Why should we, peasants, not act in the same manner?" "Being the head of a production team, I should not be particular in assessing workpoints. Otherwise, no one would show any concern about my family members even if they were killed." "For a time, I vigorously tried to use the method of fixing workpoints according to the nature of work. We made very detailed regulations on the workpoints for different kinds of work. For example, a man will get a different number of workpoints when he has done the same amount of plowing work because the ox he uses differs in strength. Moreover, even if the ox is the same, the land he plows may differ, as so will the workpoints he will get. Even if the land he plows is the same, the weather may differ on the days he plows, and so will the workpoints he will get. As a result, there are countless different standards for different work, which, if printed, will form a huge volumed book. The peasants are not interested in these hairsplitting standards, and therefore, this method does not work." "Despite their physical weakness, those shrewd people will raise a hue and cry if they are not given full workpoints, while those who are not contentious will not complain if their workpoints are underassessed, but their enthusiasm for work will fall." "Even after the work is done and the workpoints assessed, you do not know how the value of a workpoint has been calculated, even if quite a large amount has been inappropriately deducted in the course of calculation. In the end, when the money and grain is paid to you, the amount is very small."

It goes without saying that it is very difficult to directly measure and compare different kinds of labor, especially labor of differing nature--labor that is different in the degree of complexity and skill. It is necessary to find an objective criterion. "Workdays" are the time one spends working. Therefore, as a concept, workdays cannot be used as a criterion to measure the actual amount of work a laborer has done, especially not the quality of his work. As a matter of fact, it cannot be used as any criterion, but can only be used as a counting "chip." If we want to know the actual amount and quality of labor, we should rely on people's assessment or on quotas. However, the experiences we have gained in many years proves that it is very difficult to satisfactorily assess labor. It is moreover very difficult to fix rational quotas because agricultural labor is, in the main, still manual labor and

working conditions are very complicated and always changing. Because of the limited education our peasants have received, it is very difficult for them to clearly understand and satisfactorily handle complicated matters. Therefore, if we can say that concentrated labor and simple cooperation is apt to give rise to the malpractice of blind command, especially when the cadres' competence of administration and management is poor, we can also say that the workpoint assessment system that is suited to this mode of labor is likely to give rise to the malpractice of "eating out of the same pot." Furthermore, because workdays are only counting "chips," when a peasant works, he only knows how many workpoints he will get, but he does not know the value of his workpoints. As a result, this makes it possible for what has been wasted through poor production management and what has been embezzled by cadres to be deducted from the value of the peasants' workdays when the final accounts are made at year end. This has seriously injured the initiative of the peasants and for a long time caused the agricultural production in our country to lack motivation.

There is no fixed pattern for socialist production relations. Our task is to create, in accordance with the demand resulting from the development of our country's productive force at each state, some concrete forms of production relations that are suited to the productive force and to facilitate its continuous progress. Since the workday system has been proved through practice not to be suited to the conditions of our agriculture, we should create new systems. Now, a new system has already been created by our broad masses of peasants. It is the system of "linking remuneration with output." One of the basic special features of the contract responsibility system linking remuneration with output is that the remuneration is calculated in connection with output instead of in proportion to workdays. The experiences of the past few years have fully proved that the implementation of the system that links remuneration with output has overcome the malpractice of "eating out of the same pot" and revived the internal vitality of our rural economy. For most of the rural areas in our country, the system that links remuneration with output is indeed much more superior to the workpoint system.

What Is the 'Output' in the 'System That Links Remuneration With Output?'

The "output" in the "system that links remuneration with output" is generally regarded as "output of products," or "final output of products." In other words, in distribution according to labor force, the latent form of labor is used as a criterion; in distribution according to workdays, the mobile form of labor is used as a basis of calculation; and in implementing the system that links remuneration with output, the distribution is carried out in accordance with the crystalized form of labor--the materialized form of labor. Because of the special features of agricultural production, it is hard to examine the quality of daily agricultural work. Only when the final products of the labor are produced can the effectiveness of the labor be proved. Therefore, "output" denotes "products" and is a "concrete thing." The above explanation is significant. However, it only points out the qualitative aspect of the

"output," but fails to disclose its quantitative aspect. However, it is impossible to carry out any distribution if there are no quantitative standards. This means that the quantitative standards are of even greater significance. Therefore, it is far from being adequate to explain "output" as "products." If we explain "output" as the "quantity of output" or the "value of the output," will this provide us with a quantitative criterion? The answer is still no. The quantity of output has quite a few different meanings. It may mean the actual quantity of output, the planned quantity of output or something else. Therefore, we still are not clear which it denotes. The "output" in the contract responsibility system linking remuneration with output that the broad masses of peasants have created in their practice is, in fact, a specific kind of "output" and has a specific meaning. In creating this system, the peasants cannot scientifically determine its meaning or form an accurate concept, therefore, this task is left to theoretical workers and the leaders of agricultural work.

The "output" in the "system that links remuneration with output" is neither the actual output nor the planned output. We can call it the "standard output." In the process of investigation, this writer put forth the concept of "standard output" to basic-level cadres and asked their opinions. Unexpectedly, I found that this concept was easily understood and accepted by them. This is because this concept tallies with their practice. Following is an explanation of this concept:

1. The standard output is fixed according to the average of the actual output of the assigned land in the 3 previous years under normal conditions, with the adjustment of an increment which is calculated on the basis of the land's reliable potential for increasing production. For example, in some production teams in Honghu County, Hubei Province, 5 percent is added to the average of the actual output in the 3 previous years to arrive at the figures of the standard output.

2. The essence of the standard output is the average amount of labor that people in a collective have to put in on the assigned land. This is determined by specific conditions in the contract responsibility system linking remuneration with output. These conditions are: 1) The land is assigned to workers equally per capita, or in accordance with the labor force or with the number of family members to number of workers and nobody is allowed to be assigned more land than another. 2) Farm cattle, plows, rakes and other common farm tools (walking tractors may also be included) are treated as fixed assets, revalued and allocated to households who receive them as loans and pay the collective for them. Thus, the collective keeps the value of these things and the peasants possess them. As a peasant in Guizhou said pithily: "Even if farm cattle, plows and rakes become privately owned, there will be no harm. You see, when we eat, we all have to privately own our pairs of chopsticks." This means that the farm cattle, plows and rakes are necessities for the peasants and should be owned by every household and that there is not much difference in the amount of these farm tools each household owns and,

therefore, it will not result in much disparity of ownership. This is indeed the situation. Because of the development of our agricultural production, basically, today the factors that can bring about remarkable results in increasing production and that give rise to differences in income are not these things. Rather, such items are large water conservancy facilities, fine improved varieties (such as hybrid rice), complex fertilizers and so forth. The large water conservancy facilities, the cultivation of improved varieties and other such factors should generally be controlled by the collective as concentrated undertakings or to be assigned to professional households by contracts. They should not be owned or monopolized by individuals. 3) The working capital that each contracting household has for the purchase of seeds and fertilizer differs and this disparity may gradually grow to a great extent. However, the amount they have and the amount they employ in their land are two different things. If there is no essential change in our agricultural technology, the working capital that has to be employed in the land is limited and excessive employment of working capital will reduce the effect or even bring about no effect. Generally speaking, all the contracting households can afford employing a rational amount of working capital in their land. If there are a small number of households that cannot afford to employ a rational amount of working capital in their land, the collective can assist them with loans or poverty relief funds. The collective can also stipulate the average amount of working capital that should be employed in the land and provide working capital in the form of goods or money. This method has been adopted in Yincheng County and other counties in Hubei Province. By adopting this method, the differences of the amounts the various contracting households employ will be reduced, thus reducing the disparity in their income. (The capital of a household also includes its fixed capital. However, all the capital that is employed in economic activities other than that which it carries out in its contracted undertakings, for example tractor transportation undertaking, cannot be included in the category of the capital employed in the undertaking of the responsibility system--the capital employed in its contracted economic activities. Problems related to economic activities that are outside the scope of contracted economic activities, that is, problems related to private undertakings, should be investigated separately.) Therefore, we can treat the land that each household is assigned by contract and the funds that each household employs in its land as being equal. Thus, we will be able to exclude the influence of the amount of funds and land on output and treat labor as the only factor that determines output. Although this is not entirely accurate, basically, this is a correct idea. Therefore, we can treat standard output as the average amount of labor that must be expended in the cultivation of contracted land.

3. Standard output is different from "workday." As we have analyzed, workday really cannot be used to measure labor; it is only a counting chip. On the other hand, the standard output is itself an objective criterion, which does not need the help of "assessment" or quota and can directly and very easily measure labor. For example:

The product of standard output and the percentage that should be handed over to the collective is the amount that should be handed over to the collective. The standard output minus the amount that should be handed over to the collective and minus the agricultural tax is equal to the remuneration for the contracted laborer. If one produces more than the standard output, what he produces in excess of the standard output should be added to his remuneration and thus amounts to his total income from the contract. On the contrary, if he produces less than the standard output, the shortage in output should be deducted from his remuneration, thus becoming his total income from the contract.

As soon as the standard output is stipulated, the share that should be handed over to the collective and the share that the peasant can retain are all determined by the standard output. Moreover, the standard output also constitutes a basis on which to calculate the share of commitments that each household should be assigned to and the share of other forms of distribution for the households. For example, in Yingcheng, Honghu and other counties in Hubei Province, a large amount of work that is not included in the contracted undertakings is assigned in this manner.

4. Standard output is the key link in the form of distribution in the contracting responsibility system linking remuneration with output. If in the past the distribution in our collective economy was carried out in accordance with workday, or workpoints, after the establishment of the contract responsibility system linking remuneration with output, the distribution can be regarded as a distribution according to standard output. Since standard output is a criterion to measure labor, distribution according to standard output is also distribution according to labor.

True, in our current practice of socialism, the principle of distribution according to labor can only be carried out approximately and not fully and completely. This is even true in the state-owned economy, let alone the distribution according to standard output in the contracting responsibility system linking remuneration with output, which cannot help but carry out this principle in such an inadequate manner. However, one thing is certain: compared with the previous system of distribution according to workday, that is, workpoints, distribution according to standard output approximates much more closely to distribution according to labor.

The Unique Feature of the Form of Distribution of the 'Contract Responsibility System Linking Remuneration With Output'

We have mainly expounded on the responsibility system assigning land in exchange for fixed levies, especially the essence of the relationships of distribution in assigning full responsibility to households. Now, we must analyze the unique feature of this form of distribution.

Generally speaking, the method of distribution in a collective economy is: the collective takes possession of the products first, and then distributes the products to individuals. However, the form is precisely the opposite in

the system of assigning land in exchange for fixed levies, in which the individuals take possession of the products first and then hand over a part of the products to the collective. This unique feature of this method is due to the dispersion of products. According to the contract responsibility system linking remuneration with output, before the production process begins, the standard output and the percentage that should be handed over to the collective should be fixed, which is thus, the income of the contracting households without taking into account the additional income due to overproduction or the reduction of income due to underproduction. All these should be reflected in the contracts that assign land in exchange for fixed levies. The distribution process is decided beforehand along with the formulation of the contracts. When the cycle of production comes to an end and the crops are harvested, only the implementation of the contracts is left, which is a very simple process. Because the labor of each contracting household is conducted separately, naturally, at the end of the production process the products first come into the hands of the producers. It would be entirely unreasonable that, in order to carry out the contract, the contracting households should first hand over all the products to the collective and then the collective keeps its share and returns the households' shares according to the stipulated proportion. To simplify the process, the contracting households only hand over to the collective the latter's share of the products. This is reasonable. (For example, the process in which you hand over to me 1,000 jin of grain, I keep 200 jin and give you back 800 jin, can well be simplified by your handing over to me 200 jin of grain.) Therefore, in order to be suited to the special form of the production process, it is inevitable for the distribution process to adopt a unique form. In the production process of the contract responsibility system linking remuneration with output, there are signs of the unity of unification and division. This is also the case in its distribution process. This is first shown in the process of the collective fixing the standard output in a centralized manner and then shown by the contracting households separately handing the products in accordance with the contracts.

If the standard output and the proportion to be handed over to the collective is fixed, and the standard remunerations of the contracting households are fixed accordingly, why should the workpoint system be retained together with standard output in some forms of the contract responsibility system linking remuneration with output, such as the system of linking remuneration with output for each laborer? In the opinion of some cadres and commune members in the rural areas, this is because of the following two reasons: 1) Some comrades still view the workpoint system as the stereotyped pattern of socialist agriculture. They have retained the workpoint system in order to give their systems the appearance of an orthodox socialist system and prevent it from getting a bad name. 2) By retaining the workpoint system, the distribution should undergo an additional process and thus provide opportunities for the continuance of some egalitarian practices and some cadres' practice of taking more than their shares. Obviously, these two reasons cannot be treated as rational grounds and are untenable. However, there is another

factor that we should take into account. Because the pricing of the industrial and agricultural products and the pricing of different kinds of agricultural products is not completely rational, the income of commune members varies as their products vary. This is to some extent owing to the pricing factor. As this factor has nothing to do with labor, we should exclude it in carrying out distribution. We should first fix the standard output so as to fix the total income from the contracted production, then we should take into account the price factor in fixing the percentage of the output that should be handed over to the collective. If the products, such as industrial and sideline materials, are high-priced and very profitable, the percentage should be greater. On the contrary, if the product, such as grain, is low in price and not very profitable, the percentage should be smaller. Generally speaking, by doing so we can also reduce disparity in income. However, in some places, where there is a remarkably great disparity between the income of the people in various trades, especially where agricultural costs are very high, industrial and sideline profits are very big and the agricultural production relies to a fairly great extent on the subsidy from the industrial and sideline production, the retention of workpoint as a chip for calculation may still be a means to facilitate the reduction of the disparity in income in various trades. In such circumstances, the workpoint plays a role similar to a kind of "internal pricing." Viewed in this way, the retention of workpoint system is necessary. At present, as the responsibility system, in which direct distribution without using workpoints is carried out, is being implemented in an increasingly widespread manner, even if the workpoint system is retained, as long as the contracting responsibility system linking remuneration with output is implemented, the only thing that determines people's income is still the output, namely the standard output. However, if, in order to facilitate the reduction of disparity of the income of the people in various trades or to achieve other goals, the local cadres and masses of people really find it better and more convenient to retain the workpoint system, the workpoint system should of course not be abolished. As a mere means of concrete calculation, whether we use or do not use the workpoint system will not have any decisive impact on the essence of the contract responsibility system linking remuneration with output.

CSO: 4007/591

'GUANGMING RIBAO' ON CAPITAL CONSTRUCTION

HK071424 Beijing GUANGMING RIBAO in Chinese 28 Aug 82 p 3

[Article by Li Wei [2621 5633]: "Capital Construction Projects Must Be Appropriately Concentrated"]

[Text] Within the industrial and communications front, the capital construction scheme is the crux of the planned economy. Capital construction is the expanded reproduction of fixed assets and the major means of expanded reproduction of the whole society. The target of planning is to coordinate the proportional relationship between various sectors of the national economy in the course of expanded reproduction. Therefore, conscientiously paying attention to the link of the capital construction scheme is the key to upholding the principle of taking planned economy as the dominant factor.

The economic imbalance occurring in socialist society is to a very large extent due to the blind expansion of production capacity. With regard to industry, while production is highly socialized, every plant's dependence on the external will be greatly increased. For example, a chemical plant with an annual output of 100,000 tons of synthetic fiber material and 50,000 tons of high-pressure polyethylene needs to be supplied with, apart from a vast amount of crude oil, more than 190 types of chemical materials totaling about 90,000 tons. It is obvious that in building plants like this that we must also consider starting some other projects to form a conveyance system or making appropriate arrangements to produce the raw materials needed. Otherwise, the plants will never be able to operate even though the construction is completed. Therefore, in a certain sense, to coordinate the proportional relationship between various sectors of the national economy with planning work means to coordinate the proportional relationship between the production capacity for various products. Once the production capacities are coordinated, the economy will operate with ease. On the other hand, if the production capacities are unbalanced, the planned production quotas will never be fulfilled and the principle of taking planned economy as the key factor can never be implemented. Under the condition of the production capacity being insufficient, the system of regulation by market mechanism will not work either. This is the real case, especially in the basic industry and basic facilities sectors. As long as the coal production capacity is insufficient, we can never produce more coal by the means of regulation by market mechanism; as long as the electricity generating capacity is insufficient, we can never [word indistinct] more electric power by means of regulation by market mechanism; and, similarly, as long as the railway transportation capacity is insufficient, the regulation by market mechanism will not work either.

In order to do a good job in the coordination of production capacities, we must take the planned aspect as the dominant factor in capital construction, and the power of examination and approval of capital construction projects must be appropriately concentrated. The power of examination and approval of all large-scale projects and some medium-scale projects which depend on the state for supplying energy and raw materials (including large- and medium-scale technical reform projects) must be concentrated under the control of the State Planning Committee. The power of examination and approval of those medium- and small-scale projects which do not have to depend on the state for supplying energy and raw materials must be concentrated under the control of the planning committees at the provincial level. Prefectures and counties can be granted the power of examination and approval for some petty and isolated capital construction projects. Planning committees must devote their main efforts to promoting the coordination work for long- and medium-term projects with a view to increasing production capacity and, from this basis, properly promote end-of-year and mid-year coordination of production plans. Attaching importance to end-of-year and mid-year balancing of production plans instead of coordinating and balancing production capacity construction is actually a fruitless approach.

Capital is the precondition for capital construction. Without the centralized distribution of funds as the mainstay, it will be impossible to take planned projects as the dominant factor in capital construction. The dispersion of funds will only lead to blind development under the condition of socialist public ownership. This is a rule which has been proved by the tortuous path of economic development in our country. During the First 5-Year Plan period, the degree of centralized distribution of capital construction funds was relatively high and the investment in those projects controlled by the central government amounted to over 70 percent of investments in fixed assets in the whole country. Therefore, economic development was relatively well coordinated and the development speed was relatively high under the existing complicated situation in which five economic components coexisted. During the Second 5-Year Plan period, funds were dispersed, as we had launched the great leap forward. The portion of investments in projects under the control of the central government in relation to total investment in fixed assets at that time dropped to below 40 percent. In addition, due to the wrong guidance, we witnessed a serious imbalance. During the national economy readjustment period, the proportion of investments in capital construction projects under the control of the central government increased to about 50 percent, the balance in the national economy was restored and the development speed also increased. During the 10 years of turbulence, the funds in the budget for investment in capital construction were allocated to central and local units according to a ratio of four-to-three-to-three, in other words, 40 percent of the investment funds was allocated to capital construction projects under the control of the central [phrase indistinct], and the rest was allocated to local units to facilitate their own projects. As a result, the portion of the investment in those projects under the control of the central government was reduced to about 35 percent. The present imbalance in the national economy was, in fact, shaped during this period of turbulence. And, apart from the mistakes made in economic guidance, the dispersion of funds was one of the important factors attributing to the economic imbalance.

From 1979 on, in order to enliven the economy, we have taken some reform measures, such as expanding the decision-making power of enterprises, banks granting loans for investment in fixed assets, and so on. All these measures were indispensable and have achieved prominent results. However, we have also witnessed an overdispersion of funds. In addition, in reducing the scale of capital construction, we have mainly reduced investment in those projects under the control of the central government and have lowered the portion of the investment in the projects operated by the state to about 30 percent of the total investment in fixed assets. In such a situation, the funds which the state can pool are too limited to benefit those basic sectors of economic development such as energy, power, communications, port building and so on, and still less the raw material industry. The problem of overdispersion of funds must be comprehensively deliberated. We must not only adhere to the efforts of mobilizing the initiative of enterprises and their staff and workers, but also make adjustments in coping with the problems in fund allocation and in overdiversification of the power of utilizing funds. Only in this way can the state carry out in a reliable manner the guideline of taking the planned economy as the dominant factor while making regulation by market mechanism subsidiary.

CSO: 4007/591

NATIONAL

'GUANGMING RIBAO' DESCRIBES RURAL EDUCATION REFORM

HK070500 Beijing GUANGMING RIBAO in Chinese 28 Aug 82 p 1

[Article by Zhang Chengxian [1728 2110 0341], secretary of the party group of the Ministry of Education: "Reform Rural Education To Service the Building of a New Socialist Countryside"]

[Text] Recently, when he was receiving some foreign guests, Comrade Deng Xiaoping said: Our country is very hopeful. The key question at present is to train capable persons. In order to resolve this question, we must start with education. We must reform our country's educational system in order to facilitate the training of capable persons. Viewed from the overall structural reform of the national economy, reforms in rural areas have been carried out relatively faster and better. Conditions for reforming the educational system are also more favorable in rural areas and reforms there can be carried out faster and better. We must regard reforming rural education as a gap to break through in reforming the entire educational system and must make great efforts in this respect.

Since the 3d Plenary Session of the 11th CPC Central Committee, a series of the party Central Committee's rural economic policies have been implemented and great changes have taken place in the rural situation. The enthusiasm in production of the broad masses of peasants has been aroused. The situation in production is getting better and better. What must we depend on in gradually realizing the modernization of agriculture? Comrade Zhao Ziyang said that we must first depend on policies and second depend on science. On the basis of keeping up the peasants' enthusiasm, we must further improve and perfect various forms of production responsibility system according to the needs of production and the demands of the peasants. This is what we mean by depending on policies. The second thing is to depend on popularizing science and technology and to depend on science to change agricultural production conditions and the farming and breeding methods. Whether or not we can master science and technology means a world of difference. With science and technology, production will develop and income will increase. This directly involves the interests of the peasants. At present, the peasants are very eager to learn science and to make use of science. With the peasants' enthusiasm in learning and making use of science, the important position and function of education in the national economic construction and social

development becomes more obvious with each passing day. Under these circumstances, how to reform the rural educational system so that it can be better suited to the needs of the peasants' production and daily life and to the needs for building a new socialist countryside has become a question that needs study and a prompt solution.

Where should we start? I think that we should first set about restructuring rural secondary education. Only a very small number of full-time secondary schools below county level should be retained, for example, in a country, there should be one full-time secondary school for every 100,000 people. Generally speaking, all the rest should be converted into agricultural secondary schools or various vocational schools. Some schools can be changed into part-study, part-farming schools. Besides studying well basic cultural lessons, students in rural junior secondary schools may spend an additional year on agricultural lessons. The percentage of graduates from rural junior secondary schools enrolled in senior secondary schools is not high, accounting for 20-30 percent. Most of them have to become farm laborers. Without some agricultural knowledge, they will meet with difficulties when they return to work in rural areas. Therefore, we must take bigger steps in reforming rural secondary education.

In reforming the rural educational system, we must first of all straighten out ideology in running schools. China is a large agricultural country. What is the purpose of education in the vast rural areas? What kind of people must we train? This question must be clarified. The purpose of rural education is to serve the construction of a new socialist countryside and to train a new generation of peasants with socialist consciousness and culture. This slogan was put forth by Comrade Shaoqi as early as 1956. If the purpose of running rural schools is only to help a few students enter a higher school or to provide them with a chance of not taking up farm work, it will be a very big mistake! At present, the percentage of students enrolled by universities and colleges in our country is very, very small, accounting for only about 4-5 percent. The percentage in rural areas is even less. For quite a long historical period of time to come, the overwhelming majority of students in rural areas have to stay in rural areas to participate in production. Our country is a big agricultural country with a population of 1 billion people. Whether or not agriculture can develop rapidly involves the future and destiny of the party and the country. If the broad masses of rural youths attempt to leave the rural areas and go to cities, this will become a big social problem. Agriculture occupies an extremely important position in the economy. In our long-term plans, we must guarantee the work in four focal points: Agriculture, energy, communications and developing intellectual resources. If we do not do a good job in these four respects, the modernization program will be hopeless. If rural education does not serve agriculture and does not serve the peasants, we will commit a mistake involving the fundamental orientation. This problem has not yet been completely solved in the guiding ideology. In some localities, there is still much resistance in restructuring secondary education, running agricultural secondary schools and running various vocational schools. Therefore, we must further straighten out the ideology of running schools.

In restructuring rural secondary education, we must meet the needs of local peasants' production and daily life and must properly integrate favorable intellectual conditions with favorable natural conditions. Some localities have favorable natural conditions. They have rich resources and necessary conditions for developing various kinds of production. This is particularly so in remote areas where production and culture lag behind but favorable conditions and abundant resources are available. The problem is that the people there have not been educated and they lack the strength to open up these resources. In order to give play to the role of favorable natural conditions there, we must run more agricultural schools, forestry secondary schools, fishery secondary schools, animal husbandry secondary schools, tea secondary schools and other vocational schools to train rural technical personnel for agriculture, forestry, animal husbandry, fishery and sideline production and processing agricultural products. In short, we should run schools and train capable persons in accordance with local favorable natural conditions.

Recently, we held a national exhibition of achievements scored by secondary and primary schools which have adopted a part-work and part-study system, and many typical experiences in this respect were displayed. Some agricultural secondary schools have integrated education with production and scientific experiments. [word indistinct] popularize advanced science and technology, help local peasants do farm work, cultivate forests, breed aquatic, process agricultural products and develop a diversified economy. [sentence as printed] They have manifested the great vitality of agricultural secondary schools and are much welcomed by the peasants. Our schools should not only become centers of rural education but should also become centers for spreading advanced science and technology. They should also become general staffs of the peasants' production. These kinds of schools will then be closely linked with the interests of the masses and peasants. They will then be welcomed by the peasants! The reason why some agricultural secondary schools can survive despite the "gang of four's" fierce criticism of the two concurrently existing educational systems and labor systems is that they have great vitality. If we can run all rural schools as those mentioned above, we will make a great contribution to the modernization program and this will certainly be welcomed by the peasants. We should not think only of training a few students for higher schools.

In order to run well agricultural secondary schools and various kinds of vocational secondary schools, we must first solve the problem of improving the teaching quality. Not long ago, Shandong Province held a meeting to discuss restructuring rural secondary education. At this meeting, it was found that some agricultural secondary schools were run very well and were welcomed by the masses while others were not. The crux of the question is whether or not the students in agricultural secondary schools can really learn something and whether or not they are able to solve practical problems after their study. The Jiexiang Agricultural Secondary School is run very well. Why? This is because the county CPC committee attaches much importance

to it and has sent nine agronomists to teach there. The students can really learn things which are useful after they leave school. Some schools are not welcomed and have been closed. Why? This is because they were not properly run and the students did not learn anything there. In this respect, we must also give play to the role of agricultural and forestry universities and colleges, agrotechnical colleges, secondary technical schools and agricultural scientific research institutes. These units should give support to agricultural secondary schools and vocational secondary schools, help them pass on advanced scientific knowledge, train teachers and solve key problems and difficulties they come across in science and technology.

Then we must write and compile good teaching material. The education department has already assigned people to organize the strengths from various quarters to write and compile teaching material. We must also ask agrotechnical personnel and agricultural colleges and universities to write and compile teaching material for specialized agricultural course. In agricultural secondary schools, knowledge concerning rural policies and agricultural management and operation, such as how to implement the responsibility system, should also be taught. In training agrotechnical personnel, we cannot just help them master technology. We must also help them learn how to carry out economic management.

Finally, we must improve conditions for running schools. An important thing is to solve the problems of a production and labor base. In the past, some schools had a small farm, wooded land or pasture land. After implementing the production responsibility system, some localities were not very clear about policies concerned and compelled schools to hand over their property. The trees on their wooded land were felled and the crops on their farms were reaped by force. Some teachers were even beaten when they tried to protect their schools' property. This phenomenon should never be tolerated. Those who encroached on school property must be severely punished according to party discipline and state law. In order to solve this problem, some counties have issued property certificates, land certificates and forest certificates to schools. This is very good. Of course, it would be better if funds from local finance could be allocated for running schools. In some [words indistinct], part-study schemes are used to change the face of schools. Consequently, conditions for running schools have been improved and problems concerning the welfare of the teachers have been solved. In some schools, the students do not have to pay school fees and are given books free. These good examples are worth learning from.

In short, we must make great efforts in reforming secondary education. We must make education play its role in socialist construction in rural areas and bring about a new and dynamic atmosphere in rural education.

CSO: 4007/591

STATE COUNCIL REGULATION ISSUED ON NON-FARM USE OF FARM TRACTORS

Beijing NONGYE JIXIE [FARM MACHINERY] in Chinese No 6, 1982 p 2

[Article: "State Council Office Document, Notice on Limitations on Use of Farm Tractors for Non-farm Hauling"]

[Text] Following issuance of CCP Central Committee, State Council, and CCP Central Committee Military Commission "Notice on Conservation of Petroleum," (Zhongfa [1981] Document 20), and State Council "Directive on Conservation of Finished Petroleum Products," (Guofa [1981] Document 58), some jurisdictions have been uncertain about limitations on the use of farm tractors for farm hauling and non-farm hauling, and have asked for specific regulations. In order to implement better the spirit of the Central Committee and State Council documents, following joint study of departments concerned regulations on the limitations on use of farm tractors from non-farm hauling have been formulated as follows:

1. Commune and production brigade use of farm tractors and oared motor boats in field work and in the transportation of farm products to storage;
2. Transportation of commune and production brigade agricultural and sideline products to designated procurement points or collection points;
3. Hauling of local commune and production brigade means of agricultural production (such as seeds, chemical fertilizers, and farm machines) from communes or county seats as well as from nearby market towns and industrial plants in neighboring counties;
4. Following fulfillment of quotas for sales to the state of agricultural and sideline productions, hauling of local commune and production brigade privately retained agricultural and sideline products within the county or to nearby country fair markets in neighboring counties;
5. Short distance hauling of local commune and production brigade farmland capital construction materials and commune member means of production within the county or neighboring counties;
6. Use of farm tractors under emergency conditions for temporary emergency rescue.

All transportation not of a farm nature not included in the aforestated regulations shall be prohibited in accordance with the stipulations of Central Committee and State Council documents.

Should conflict exist between documents formerly issued by departments and the foregoing regulations, the foregoing regulations shall be effective.

Supplies of fuel required for farm tractors engaged in non-farm transportation in accordance with the foregoing regulations shall be made a part of overall planning in accordance with supply principles subject to availability of finished petroleum products.

Chinese People's Republic, State Council Office

27 April 1982

9432

CSO: 4007/534

ANHUI

REPORT ON CENTRAL FLOOD CONTROL

OW041421 Hefei Anhui Provincial Service in Mandarin 1100 GMT 2 Sep 82

[Text] The central flood control general command sent a message on 31 August to the committee for harnessing the Huaihe River, under the Anhui People's Government and the provincial military district, saluting the armymen and people who are fighting on the forefront of the struggle against floods.

The message says: Since the heavy rainfall along the Huaihe in late July, torrential rains again hit the same area in early August, causing the (Honglu) and (Shaying) rivers and the main course of the Huaihe to swell. The water level remains high, threatening the embankments along some tributaries and the middle reaches of the main course of the Huaihe.

Under the leadership of the provincial CPC committees and the people's government in Henan, Anhui and Jiangsu, and with the support of the People's Liberation Army, the broad masses of armymen and people have mobilized themselves immediately, united as one in their struggle and won another victory in resisting flood inundation along the Huaihe this year. During this struggle against flood inundation, Anhui Province has mobilized more than 100,000 armymen and people to patrol the dikes day and night, while opening up five flood escape channels to reduce water pressure.

Carrying forward its fine traditions, the PLA has fought bravely and continuously and shouldered the arduous tasks of carrying out engineering work to combat the floods and of evacuating the masses to a safe zone. For this, we wish to send our sincere regards and full respects to all cadres and the masses, PLA commanders and fighters and all workers who worked hard to harness the Huaihe, repair and strengthen embankments and carry out hydrologic work.

CSO: 4007/591

ANHUI PEASANTS SPEND MORE ON PRODUCTION MEANS

OW010055 Beijing XINHUA in English 1501 GMT 31 Aug 82

[Text] Hefei, August 31 (XINHUA)--Peasants in Anhui Province who pioneered the new policy of encouraging rural prosperity under the system known as "job responsibility" are spending more money on farm machines, tools, draught animals and other means of production.

In the first half of this year, according to provincial authorities, they spent 810 million yuan on means of production, 20 percent more than in the same 1981 period. The figure for the entire year of 1981 was 1,440 million yuan, 40 percent more than that of 1978, the year before the new rural policy became official.

Provincial authorities characterized the increase as a convincing proof that Anhui peasants are increasingly enthusiastic about this form of voluntary collective production. The peasants are working under the job responsibility system, in which production quotas are fixed on a household basis or assigned to smaller but more efficient groups and payment is made according to the harvest, in line with the principle of "to each according to his work".

From 1979 to 1981, provincial authorities reported, Anhui peasants bought 37,800 walking tractors, averaging 12,600 a year, compared to 85,000 for the period from 1962 to 1978, averaging 5,000 a year. In 1981, they applied two million tons more chemical fertilizer than in 1978, representing a 130 percent increase.

The number of draught animals in Anhui Province dropped from 2.84 million in 1953 to 2.54 million in 1978, as a result of policies discouraging peasants to raise animals for private use.

Under the new policies, said provincial authorities, the number of such animals had, by the first half of this year, reached 3.42 million.

The increase in peasants' spending on means of production, said provincial authorities, is also an indicator of their confidence in the current policy which, they have been assured, will not change so long as they do not want them to be changed.

In addition to buying farm machines and draught animals, authorities noted, peasants in many sections of Anhui Province have pooled money to build small hydroelectric power stations, roads and irrigation facilities. During the 1979-81 period, electricity reached an additional 3,480 production brigades (a brigade is usually a village).

Together with Sichuan and other provinces, Anhui has pioneered a series of methods for rural transformation in the past few years to eliminate discredited, ultra-left practices which impoverished its rural population of 45 million.

A latest development is the emergence of households specialising in productive undertakings other than farming.

In Anhui Province, authorities reported, 800,000 of the nine million rural households have become specialised in livestock or poultry breeding, handicrafts, commerce and other service trades.

Provincial authorities regard this as encouraging, showing that the rapid rural economic development has resulted in increased commodity production in the countryside, an initial change in the situation in which peasants produce mainly for their own subsistence.

Authorities in Chuxian Prefecture made a sample survey of 30 households specialising in livestock or poultry breeding. The number of pigs, cattle and sheep each of these supplied to the state last year was 23 times the average for each peasant household throughout the prefecture. The corresponding figure for poultry was 11 times.

CSO: 4020/168

ANHUI

BRIEFS

TIANCHANG COUNTY GRAIN--Total grain output of Tianchang County, Anhui, was 787.95 million jin in 1981, as compared with 521 million jin in 1978. In the 3 years between 1979 and 1981, the county delivered 579.6 million jin of grain to the state. The country's total summer grain output reached more than 180 million jin this year, a 4.5-percent increase over that of the last year. [OW081301 Hefei Anhui Provincial Service in Mandarin 1100 GMT 20 Aug 82 OW]

CSO: 4007/591

'BEIJING REVIEW' OUTLINES 'SPECIALIZED' HOUSEHOLDS

HK101432 Beijing BEIJING REVIEW in English No 36, 6 Sep 82 p 3

["Notes From the Editors" column by economic editor Jin Qi: "'Specialized' Peasant Households"]

[Text] Do rural households engaged in specialized work belong to the individual economy? Does its development conform to socialist principles? [passage published in boldface]

Peasant households that engage in special production work are a newborn thing resulting from the introduction of more flexible economic policies in the rural areas in 1979.

At present, most of these "specialized" households are engaged in livestock or poultry raising, and only a few specialize in the cultivation of crops or in forestry and fishery. The "specialized" households that have so far emerged basically fall under the following two categories:

The first is, the peasant households or individuals sign contracts with the collective (production team) to undertake a certain type of work, with the collective providing the necessary means of production. The income is shared by the collective and the contractor. This kind of "specialized" household or individual is a component of the collective economy.

The other form is developed from the peasant households' sideline occupations. In this form, the households or individuals involved usually establish economic ties with the collective or state-owned enterprises by means of supply-and-marketing contracts. They manage their work independently and are responsible for their own losses and profits. They don't share their earnings with the collective but only contribute a set amount to the collective accumulation fund. They are not divorced from the collective economy, and enjoy the same rights as other commune members and are assisted in their specialized task by their production teams.

According to incomplete statistics, there are now 560,000 peasant households specializing in livestock or poultry raising throughout the country. The advantages of this form of management were evident immediately after it was first tried out. The "specialized" households proved that they could

offer a higher rate of marketable produce and have become major suppliers of meat, poultry, eggs, fur and hide. Take Heilongjiang Province's Qiqihar for example. The rate of marketable fresh eggs provided by households specializing in chicken raising in that city is over 90 percent. Of the city's total marketable chickens, 68.3 percent are provided by the city's 6,000 chicken-raising households who also supply 83 percent of the fresh eggs.

Specialized production has been pioneered mainly by skilled and experienced peasants. They adopt scientific management methods, build well-constructed pens and sheds for the livestock and poultry and use nourishing mixed feed. They also attach importance to selecting quality breeds and take measures to prevent epidemic diseases. Thus, in general, they have achieved greater labor productivity and better economic results than ordinary peasant families.

Another advantage of the "specialized" peasant households is that relatively low investments are required to develop production while quicker and higher economic returns can be obtained. At present, since the government can only invest a limited amount in rural production and is unable to set up more state-run poultry and animal farms, the development of "specialized" peasant households is beneficial to increasing market supply and to the peasant households themselves.

Specialization is in keeping with the modernization of socialist agriculture. As the division of labour becomes more specialized, it will require appropriate co-operation, advanced technology and scientific management. In places where specialized animal- or poultry-raising households have developed fairly quickly, efforts are being made to build local fodder industries and set up factories that make light and small machines, technical services, breeding centres and epidemic disease preventing stations, and new types of technical and economic co-operation have emerged. Thus the "specialized" peasant households have strengthened their ties with the state or collective economies.

Of course, in the development of the "specialized" peasant households, problems such as seeking excess profits, profiteering, illegal hiring of labourers and exploitation may arise. To guard against this, our government will adopt policies and draw up plans to guide its development and will utilize legal means to prevent the emergence of illegal activities and punish the law-breakers. This will ensure that the "specialized" peasant households do not deviate from the socialist road.

CSO: 4020/168

'JINGJI YANJIU' ON ANIMAL FODDER POTENTIAL

HK131030 Beijing JINGJI YANJIU in Chinese No 8, 20 Aug 82 pp 75-76

[Article by Li Mingzhe [2621 2494 0772] of the Economic Department of the Agricultural Institute of Shenyang: "Tap Potentials for Speeding Up the Development of Animal Husbandry"]

[Text] Since the agricultural level of our country at present is very low, it is a problem to demand the speeding up of the development of animal husbandry. However, this is a problem that must be overcome in order to realize the modernization of agriculture. This article will present three suggestions concerning this problem. Any criticism and comments are welcome.

1. Tap Agricultural Potentials for Increasing the Yield of Fodder

The main contradiction of the development of animal husbandry in our country lies in the shortage of fodder. Thus, the key to the development of animal husbandry lies in tapping the potentials for increasing fodder and expanding the source of fodder.

Fodder for animal husbandry mainly comes from agriculture. Generally speaking, countries with well-developed animal husbandry generally have a well-developed agricultural industry which becomes a solid fodder base providing large amounts of crops and fodder for animal husbandry. Our country is densely populated, yet it has little cultivated land. Fields are mainly used for growing grain, thus it is impossible to spare more cultivated land for growing fodder. As a result, it is necessary to further tap agricultural potentials to increase the yield of fodder, so as to extend the fodder base on a large scale, while not greatly increasing the area occupied by fodder crops.

One way to increase the utilization ratio of the fodder base is, first, to increase the utilization ratio of fodder from agricultural byproducts. The yearly agricultural byproducts of our country total around 500 million tons, but only a small part is used as fodder. Peasants have all along used agricultural byproducts as fodder; for example, after corn ripens, they immediately gather the seeds and store the corn stalks while they are still green. This can be done without affecting the production of grain and will provide more than 2,000 jin of green-stored fodder per mu. The leaves of

sweet potatoes and the stalks of beans can also be used as fodder through green storage, dry storage, mincing, saccharification, alkalization and fermentation. However, today quite a few agricultural byproducts are used as fuel and fertilizer in the rural areas. To use byproducts as fuel and burn away large amounts of nutritious material is a gross waste of agricultural byproducts. It is also rather uneconomical to use byproducts as fertilizer. Therefore, we should, first, let agricultural byproducts satisfy the demand of fodder. After digestion by the livestock, part of the agricultural byproducts will become animal products and manure. The dung and urine, together with those agricultural byproducts that cannot be used as fodder, can then be used to produce marsh gas, which in turn becomes marsh gas manure. As a result, to enhance the utilization ratio of fodder from agricultural byproducts will speed up the reshuffling of the resources of fodder, fertilizer and fuel, thus greatly improving the ecological system of agriculture and rapidly increasing the productive rate of land.

Another way to tap agricultural potentials in order to increase the yield of fodder is to expand the area of fodder crops, while not occupying more cultivated land. Through interplanting, mixedcropping, intercropping and multiple cropping, the area of fodder crops should be expanded on condition that cultivated land is not occupied and they basically do not affect the production of other crops. We should make use of the fact that fodder crops are of many varieties, biological features, have great differences in ecological effect and great flexibility in the growing and harvesting period. We should plant fodder crops with other crops and display their role in improving soil quality and providing nitrogen, improve the utilization ratio of solar power and soil fertility, increase the yield of fodder, improve soil fertilization and encourage the reform of the agricultural system, and finally speed up the output of agricultural industry products. Another way to tap potentials for increasing the yield of fodder is to bring about the high yield of fodder crops. Dry crops, whose per-mu yield is higher than common crops, should be grown. Fodder crops with high nutritious contents, particularly protein, should also be cultivated. The per-mu yield of assorted grass can reach 10,000 jin. Its total digestive capacity is 2,330 kilocalorie, and digestive protein is 163.5 kilogram. Compared with the seeds and stalks of 800 jin of corn, we can have 464 kilocalorie more of digestive capacity and 108.2 kilogram of digestive protein. Another example is alfalfa, whose per-mu yield is around 6,000 jin. The digestive nutrient it contains is equivalent to 1,110 jin of corn or 1,010 jin of beans. The protein it contains is equivalent to 3,100 jin of corn or 620 jin of beans. The unit sum of fodder from unripe corn produced by 1 mu of land is more than the seed-producing corn. Here we can see that the development of high-yield fodder crops plays an important role in increasing the yield of the unit area of the nutritious material and improving the proportion of nutritious material on fodder bases. Therefore, we should master the characteristics of fodder crops, make use of their high-yield feature, select high-yield varieties and adopt high-yield measures in order to obtain the greatest amount of nutritious material on the smallest amount of land.

Increasing fodder by the measures adopted in the three aspects mentioned above will occupy little or no cultivated land or will occupy open space. But, it will need more labor. Therefore, this is a feasible way to speed up the development of animal husbandry in places where people are many but land is little.

2. Develop Grass-Feeding Animal Husbandry

The construction of animal husbandry and the construction of fodder bases are closely related. Based on a low level of animal husbandry and great shortage of livestock products, the main principle for developing animal husbandry will be to make full use of all available fodder resources.

The development of our country's animal husbandry of "taking pigs as primary importance" is inseparable from the development of usable fodder bases. Generally, peasants only use a little grain to raise pigs. Most of the fodder comes from agricultural byproducts, such as sweet potato leaves and the ivied leaves of peanuts. The peasants save the leftovers of daily life material, such as husks, the damaged leaves of vegetables and slop. At the same time, they make use of supplemental labor and spare time to collect various natural fodder. Pigs can eat mixed food, so they fit well within the development of fodder bases. However, sources of such kind of fodder are difficult to expand, and therefore cannot meet the demands of animal husbandry development.

In order to make full use of the newly developed fodder base which places primary importance on coarse crops, we must develop grass-feeding livestock, such as cows and sheep--ruminant animals that can feed on coarse crops. The development of grass-feeding animal husbandry also favors improving the present diet of having only one kind of meat.

The development of grass-feeding animal husbandry cannot be simply regarded as the utilization of grassland and saving of cultivated land. Although our country has large areas of grassland, the amount and quality of grass produced is low, both in agricultural and pastoral areas. In many areas, the capacity for keeping livestock has already reached saturation. Changes will only take place through basic and long-term transformation. In order to develop grass-feeding animal husbandry relatively quickly, importance should be attached to the immense potentials of 1.6 billion mu of cultivated land which might give a higher yield of coarse fodder.

At present various places in the rural areas of our country have a certain number of livestock which feed on grass, requiring extensive management, which badly needs improvement. For example, cows being scattered in the rural areas in Liaoning Province is relatively common. The only way to feed them is to put them out to pasture year round. There are no cow sheds and they mate freely. During winter and spring, a large number of them lose weight and die. Cows are raised merely for the sake of producing dung and not for producing meat. Through several years' experiments and research, the Xiaodung Stock Breeding Farm of Liaoning Province has put forward six measures to transform the present situation of scattered "dung cows" to commodity meat cows; storage of unripe corn stalks, building cow sheds, conducting hybridization, contracting households, developing marsh gas, and so on. This is an important step taken to implement the principle of developing grass-feeding animal husbandry. Each place should actively explore ways to develop grass-feeding husbandry in line with local conditions.

3. Develop Animal Husbandry for Both Draft and Meat

Experience has proved that during the [words indistinct] at the same time, beef and horsemeat, which are growing more and more important daily in the international market, are commodities which our country is badly in shortage of. If we develop draft animals for the dual purpose of meat and draft power, it will be an important measure increasing our country's meat supply and improving meat production. This will also be favorable to improving the situation of draft animals.

Collectivization has provided many favorable conditions for the development of dual-purpose animals used for draft power and meat, yet this favorable condition has not been fully displayed. For years, the number of large livestock throughout the country has not greatly increased. The amount of beef is less than 500 million jin and that of horse meat is even less. While draft animals which die of old age are mostly used for meat, they are sold at extremely low prices. This goes against the principle of the draft power-meat dual-purpose of animal husbandry which takes meat as the primary importance. To develop dual-purpose animals used for draft power and meat, we should first make full use of the reproductive capacity of the draft animals and overcome the present state of putting emphasis on labor, while making light of reproduction. We should raise reproductive rate of the draft animals in a planned and organized way. With an increase in the number of draft animals, we can keep the strong and get rid of the inferior. Those that are inferior can be fattened and the amount of work gradually shortened to the most suitable period. If the physical strength of horses begins to weaken at the age of 8-10 they should be removed from draft work and be fattened. This will improve the quality of the draft animals as well as fatten them. With an increase in the number of herds, we can expand the fattening of inferior livestock into fattening the young livestock. Attention should be paid to feeding during the fattening period so as to raise the amount of meat produced and improve the quality of meat. Dual-purpose animals used for draft power and meat not only provide cheap sources for draft power, but also high-quality manure. Moreover, they will provide relatively high income. All this is of great importance to the consolidation of the collective economy.

How to speed up the development of animal husbandry is an important strategic problem in the agricultural modernization of our country. Apart from proving theories, experiments and research on different programs should be carried out. Various experimental bases with different styles, each having its own characteristics, should be set up on the vast expanses of our country's land. This will have great significance on the advance of the development of theory and practice.

CSO: 4007/591

FOCUS OF FALL FARMING EFFORTS REPORTED

Focus in Sanming Prefecture

Fuzhou FUJIAN RJBAO in Chinese 21 Jul p 1

[Text] In Sanming Prefecture, which harvested a bumper early crop, there has been no slackening of grain production. While making sure of continuous cropping of the late rice area, autumn sowing of grains other than rice and wheat has been expanded by 120,000 mu.

Statistics for the 120,000 mu of early rice harvested in Sanming Prefecture show yields averaging 499 jin per mu. (For the same period last year, the harvest from 300,000 mu produced yields of 258 jin per mu). Forecasts call for an increase over last year by about 120 million jin for the early rice crop as a whole.

In view of the bumper harvest, Sanming Prefecture CCP Committee and government administrative offices has pointed out that a bumper summer harvest does not mean a bumper harvest for the year as a whole; though a single prefecture may have a bumper harvest, one must realize that some places in the province may sustain severe drops in output as the result of disasters; and one must look at the overall situation, set one's sights on the year as a whole, take a firmer grip on late crop grain production, and try to bring in a late crop that is greater than the early crop. In mid-July prefecture and government leadership comrades went into the grassroots to conduct a representative sampling after which they convened separate conferences of county (or municipal) CCP committee secretaries and of county magistrates (or municipal mayors), and rural technical cadres, which while making all around assignments of rural work for the last half of the year, also prominently emphasized late crop grain production and called upon leaders of counties (or municipalities) and communes to conduct grassroots inspections to assure that transplanting of seedlings is done for the late rice crop over the entire 1.4 million mu continuously cropped area, giving emphasis to three problems: One is the water conservancy problem, requiring continued organization for rush repairs on water conservancy facilities destroyed by floodwaters to assure water for use in transplanting the late crop. Second is supplementary sowing and thinning of plants to solve the lack of seedlings for transplanting. Third is organization of the allocation of tractors and draft oxen, with attention being directed to helping contracting households lacking manpower to achieve the "two rushes" [rush harvesting and rush planting] and

not missing the farming season. All counties (or municipalities) should also vigorously arouse the masses, on the basis of the foregoing requirements, to expand the growing of autumn grain. In addition to the 90,000 mu expansion of single late crops and the planting on ridges between fields of more than 200,000 jin more pulses than last year, the prefecture has also planted more than 240,000 mu of diverse crops such as sweet potatoes and potatoes, 200,000 more mu than last year. The prefecture has transplanted more than 40,000 mu of continuous crop late rice, and right now rush harvesting and rush planting are being done urgently.

Commentator on Guaranteeing Fall Planting

Fuzhou FUJIAN RIBAO in Chinese 21 Jul 82 p 1

[Text] Because of the mid-June flood and rice blast disasters in some prefectures of the province, plus a reduction in the area planted to early crop rice, forecasts call for several hundred million jin less rice to be harvested from the early crop in the province this year. We must face this new circumstance and new problem in grain production, strengthen leadership for late crop production, use every available means to increase grain output, recoup losses sustained in the early crop, and strive to fulfill grain production plans for the year as a whole.

Many reasons account for the early rice crop production decline. In addition to the particularly severe flood disaster, another major one has been excessive cutbacks in the grain growing area. Readjustment of the structure of agriculture for development of economic crops is essential; but some places slackened leadership of grain production to a certain extent, and a tendency toward free planting, "the masses growing whatever they liked" occurred. Grain fields were taken over at will to expand the growing of economic crops. This year the early rice area in the province is another more than 500,000 mu less than last year, and this amounts to a more than 300 million jin reduction in grain output.

"Positively no slackening in grain production while actively launching economic diversification" is an integrated program. After almost a year or two of readjustment, the grain area should not be further reduced. Following institution of agricultural production responsibility systems, rural communes and brigades must continue to pay attention to the acceptance of state plan guidance. If the tendency to heed the growing of whatever one likes continues, grain output will fall and economic diversification will be unable to rise. This must inevitably impair development of the entire national economy and provisions for the people's livelihood to the detriment of the situation as a whole. Therefore, assuring the grain growing area is a matter of major importance.

In order to assure the autumn grain area and fulfill this year's grain production plans, most important at the moment is that rural leaders at all levels increase the national concept. In addition, this should be linked to "432" education to help the peasants increase their understanding and correctly handle the relationships among the country, the collective, and individual commune members, and the need to fulfill production plans handed down by the state first.

Throughout the province, in addition to the early crop ricefields, there are almost 1 million mu of late seedling fields, nearly 2 million mu of peanut and soybean fields to be harvested in the summer, as well as reclaimed waterlands on which double cropped late rice may be grown. With serious attention to careful scheduling of seasons, a good job of growing sufficient late crop rice is entirely possible.

Sweet potatoes are a major crop in the province for which the potential for increased output is great. Energetic expansion of the growing of sweet potatoes is a major way in which to give attention to this year's late season production, and this must be placed in a prominent position for consideration. Peanut fields, forestlands, newly opened tea groves, as well as reclaimed coastal wildernesses may be used for the growing of sweet potatoes, and there are favorable conditions everywhere for expanded growing of diverse grains other than wheat and rice, and for growing autumn soybeans. In the farflung woodlands, corn, gaoliang, and such diverse grain crops may be grown, and gaoliang may be intercropped with peanuts. After the intermediate rice has been harvested, fall soybeans may be planted, and on ridges between fields more beans may be grown. Large amounts of soybeans may also be intercropped with sweet potatoes and sugarcane.

Agricultural units estimate that were it possible to tap the soil's full potential through additional exertions in planting and caring for single season late crop rice, double season late crop rice, and other fall grain crops, and through vigorous promotion of various effective scientific agricultural techniques, it would be entirely possible to reap a fine late crop harvest to fulfill production plans for the year as a whole.

Now is the extremely busy summer season of harvesting and planting. We must make every effort to do our best and to strengthen leadership to fulfill autumn grain planting tasks assuring both the area planted and the quality of planting!

9432

CSO: 4007/539

SUGGESTIONS MADE ON GETTING MORE SUGAR FROM SUGARCANE

Fuzhou FUJIAN RIBAO in Chinese 18 Jul 82 p 1

[Article: "Suggestions For Solving the Drop in Sugar Output Rate Resulting From Investigation and Research by Sugarcane Research Scientists and Technicians at the Fujian Academy of Agricultural Sciences"]

[Text] In view of the problem of decline in the sugar content of sugarcane and the sugar output rate during the just finished crushing season, eight specialists and researchers at units including the Sugarcane Institute of the Fujian Academy of Agricultural Sciences journeyed not long ago from Changle to Yunxiao to survey eight sugar producing counties (or municipalities) and 12 sugar refineries to analyze reasons for the decline in sugar in sugarcane and the sugar output rate, and to put forward three suggestions to remedy the problem.

As a result of survey and study, they believe there are numerous reasons for the decline in sugar content and the output rate of sugarcane during this crushing season, principle of which were the following: (1) Climatic factors. During this crushing season, the weather was mostly overcast and warm with decreased periods of sunshine. In Shanyou County, for example, from last September until March this year, there was 266 hours less sunshine than for the same period last year. This directly affected the synthesis and accumulation of sugar in the cane. (2) Crushing season factors. To generalize a little, the period between mid-December until early the following April is the period in which the sugar is highest in cane. However, because of the overly large amounts that many sugar refineries had to crush or because of mistaken estimates of the volume of sugarcane, many sugar refineries either started crushing early or delayed harvesting and crushing, which hurt the sugar output rate. For example, during the current crushing season, the Fuqing Sugar Refinery crushed more than 20,000 tons more sugarcane than during the last previous crushing season, an increase of almost 40 percent. But it delayed harvesting and crushing until 1 May. As a result sugar content fell 1.42 [as published]. Because it mistakenly estimated the volume of sugarcane, the Quanzhou Sugar Refinery advanced the crushing season, beginning harvesting and crushing in mid-March. As a result sugar content of the cane fell 1.23 [as published]. (3) Management factors. This includes incomplete application or delayed application of nitrogenous fertilizer during the sugarcane growing season, and failure to strictly observe the "four firsts and

four lasts" in cutting, hauling, and crushing the cane (first the cane that ripens early and last the cane that ripens late; first the perennial roots and last the new plantings; first the drylands and last the wetlands; and first from sandy soil and last from clayey soil, as well as problems of the raw cane changing as a result of being accumulated to await crushing, and dripping away of juice at the time of crushing.

In order to remedy the problem of a decline in cane sugar content and cane output rate, they suggested the following:

(1) Rapid use of research done on ripening accelerants. In years of normal weather, ripening accelerants can increase the formation and accumulation of the sugarcane's sugar content, and under unfavorable climatic conditions such as those of the current crushing season, their role is even more outstanding. It is hoped that all departments concerned will rapidly approve experimental research in this regard.

(2) Proper arrangement of the relationship between ability to crush cane to manufacture sugar and quantity of sugarcane production. Crushing should be concentrated during the time when the sugar content of the cane is at its peak (from mid-December to 5 April), with strict regulation of the cane crushing season to between 100 and 120 days (including time for washing boilers) avoiding early or late crushing. To do these things requires that the layout of sugar refineries and the quantity of cane for crushing at each sugar refinery be sensibly arranged. At the Shanyou Sugar Refinery, for example, despite several expansions, the amount of cane crushed still exceeds designed capacity by more than double, yet it is still unable to meet the needs of sugarcane development. Consequently, it is suggested that between Gaiwei and Xiaowei in Shanyou County a sugar refinery be built with a daily capacity for crushing can of 2,000 tons, and that between Jinjiang and Nan'an, a 1,000 ton per day capacity sugar refinery be built.

(3) Strengthening of scientific management. Agriculture, industry and commerce should all summarize the lessons of experience, work closely together, and vigorously spread knowledge of agricultural science, improve farming skills, particularly giving attention to incomplete or too late fertilization with nitrogenous fertilizer. Agriculture, industry, and commerce should coordinate the cutting, hauling, and crushing of sugarcane, make sensible arrangements, and strictly honor the principles of the "four firsts and the four lasts."

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CSO: 4007/540

SANMING CITY STRIVES FOR SELF SUFFICIENCY IN HOGS

Fuzhou FUJIAN RIBAO in Chinese 18 Jul 82 p 1

[Article: "Why Have the Households Specialized in the Raising of Hogs in Sanming City Developed So Rapidly?]

[Text] The availability of fresh pork as the fixed pork ration in Sanming City during the past month or so is very much related to the rapid development of households specialized in the raising of hogs and to key households.

The number of rural households specialized in the raising of hogs and the number of key households (not including specialized labor on farms) in Sanming City has increased from 130 households at the beginning of the year to the present 703 households. The number of hogs they are raising have also increased from the somewhat more than 3,800 head at the beginning of the year to the present somewhat more than 17,700 head. Specialized households in the city raising more than 100 head number seven. Statistics from the end of May show that state procurement of live hogs from the city increased by more than 90 percent over the same period last year, and that each hog averaged more than 200 jin in weight. It is expected that for this year as a whole procurement of locally supplied pork may amount to 2.7 million jin, or more than one-third the required amount, a twofold increase over last year. Half of this will come from specialized household and key household sales. Output value of the livestock industry as derived principally from the raising of pigs as a proportion of the city's total output value from agriculture also rose from the two percent of last year to more than 14 percent.

Why have Sanming City's households specialized in the raising of hogs and key households developed so quickly? Mostly because of the great determination of its leaders, the power of policies, and measures keeping apace.

Last year Provincial CCP Committee leadership comrades pointed out that rather than spend so much money to buy and transport live hogs from other provinces it would be better for this province to increase its investment in the development of live hog production. Leadership comrades from the Sanming Municipal CCP Committee and municipal government launched discussion of this matter, and everybody made some calculations. To supply the entire city, about 8 million jin of pork a year was required, and formerly more than 90

percent of this had to be bought and transported from elsewhere for an annual loss to the city of 1.8 million yuan. Were vigorous support given local hog raising to achieve self-sufficiency over a period of 3 years, even though the reduction of loss in money paid to buy hogs would not be translated into income into the city treasury, the supply of pork would be better assured, the earnings of the masses would increase, and the transportation shortage situation could be ameliorated. Therefore, the Municipal CCP Committee and municipal government made up their minds to give vigorous attention to hog raising.

During the last half of last year and the first half of this year, they allocated a total of 800,000 yuan to support specialized households and key households in the raising of hogs. In addition, as a result of experiments conducted at key sites and at many sites, it was decided to concentrate the use of this money on losses sustained for livestock feed. Last year 130 households in Yanqian and other communes universally promote the livestock feed formulas worked out by You Xindeng [1429 2450 4098], director of the Municipal Agricultural Bureau at an experimental site, obtaining fine results. Commune member hog raising changed from the former "want me to raise" to "I want to raise." Wu Yongcheng [0709 3057 2052], commune member in Gaoyuan Production Team, Dayuan Production Brigade, Chenda Commune raised 40 head of hogs in a single year, one of which died, and 39 of which were removed from inventory for increased earnings of more than 1,300 yuan. This year Wu Yongcheng signed an agreement with departments concerned for a large increase in the number of hogs to be raised, and he already has 155 head in stys. Under his influence, 14 of the 16 households in the production team (the remaining two households being hardship households with only one able bodied worker) became hog raising specialized households, the household with the fewest number of hogs raising 40.

Why is the enthusiasm of the households specialized in the raising of hogs so high? Mostly because the power of policies has been brought into play. The Sanming municipal government has stipulated that all who sign agreements to raise more than 20 hogs, all of which will be sold to the state when removed from inventory, are to be key households; if the number is more than 40, they are to be specialized households. For each head, 450 jin of blended livestock feed will be supplied at a low price (each jin at about 0.02 yuan less than cost), and when specialized households begin to raise the hogs, 100 yuan in assistance will be provided. Should specialized households or key households want to borrow funds, not only will they be helped with arrangements, but the interest within a period of 8 months will be paid by the commune from income from commune operated enterprises. So far this year funds totalling more than 450,000 yuan have been given 383 households. This amounts to 98 percent of the total amount of farm loans made in the city. In addition, the city also established a livestock veterinary service company responsible for regulating and transporting piglets, for leading livestock veterinary station personnel in all communes to assume sole responsibility for tasks within individual areas, and signing contracts with individual specialized and key households for the prevention and control of hog diseases. The Municipal CCP Committee and municipal government also decided to transfer to communes all income earned last year from the slaughter tax amounting to

somewhat more than 23,000 yuan, these funds to be used for the treatment of hog diseases and epidemic prevention.

As a result of the "four guarantees" of funds, livestock feed, piglets, and epidemic prevention, plus demonstrations given by representative households, commune member enthusiasm for the raising of hogs reached unprecedented heights. Li Changrong [2621 2490 2837] and his wife from Qiankeng Production Team, Zongnan Production Brigade, Chenda Commune formerly worked in commune enterprises. This year they asked to return home to become a hog raising specialized household, and they already have 121 hogs on hand. He used a loan of 600 yuan to build a pig sty above water, the hogs' urine being used to grow water cabbage, and they also grew 2,000 fish in the water. This year earnings from the raising of hogs and fish alone will likely reach more than 6,700 yuan, five times more than the couple earned last year in commune enterprises. People in rural Sanming used to say, "If you want to get rich, go up in the mountains and cut down trees," but now the word everywhere is, "If you want to get rich, raise hogs to promote grain and the growing of fruit trees."

By way of taking a firm grip on hog raising in Sanming City, aside from the city designating the deputy mayor responsible for hog raising with major decisions to be studied by the collective, this year the city also designated the director of the agricultural bureau specially responsible for the raising of hogs. During the first quarter of this year, the city first brought in only 300 piglets, and later on the director of the agricultural bureau and a delegation of 18 went to Zhejiang to buy and bring back 12,500 Yorkshire hybrid fine variety piglets. During the first 5 months of this year the municipal livestock feed company brought in from another province 2.06 million jin of corn. The municipal livestock veterinary service company also made four people responsible for purchase of livestock feed, and then issued each specialized household and key household 150 jin of mixed feed per head at negotiated prices. Since the lunar new year the city has trained five groups totaling 147 people as scientific hog raising mainstay cadres. Later on, these mainstay cadres gave training to all hog raising specialized households and key households in the city. In addition to veterinary cadres, all communes in the city invited 31 people excused from regular duties to provide technical guidance in hog raising and to do work in epidemic prevention and the treatment of hog diseases. As of 20 June, the death rate for hogs in inventory throughout the city was only two percent.

Now Sanming City is devoting strict attention to the work of selecting sows for retention for hog breeding in an effort to achieve self-sufficiency in piglets next year.

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CSO: 4007/540

FUJIAN

BRIEFS

PINGCHUAN COUNTY POTATO CROP--In Pingchuan County, Fujian, more than 35,000 mu of potato fields were recently damaged by this year's typhoon No 9. Commune members have been mobilized to replace the damaged plants with new seedlings and to crash harvest peanuts from damaged fields. [Fuzhou Fujian Provincial Service in Mandarin 1120 GMT 13 Aug 82 OW]

JIANYANG PREFECTURE GRAIN--Despite serious natural disasters last spring, Jianyang Prefecture, Fujian Province, procured over 370 million jin of summer grain by 22 August. [OW132323 Fuzhou Fujian Provincial Service in Mandarin 1120 GMT 26 Aug 82 OW]

PUTIAN COUNTY FARM PRODUCTION--Fuzhou, 20 Aug (XINHUA)--Fujian's Putian County made all-round development in agriculture, forestry, animal husbandry, sideline and fishery. Last year, it produced 600 million jin of grain, 250,000 dan of longan, 29,000 dan of loquat, 130,000 dan of hemp and 1.92 million jin of honey. [OW301445 Beijing XINHUA Domestic Service in Chinese 0158 GMT 20 Aug 82]

CSO: 4007/583

RULES LAYED DOWN FOR USED FARM MACHINE SALES TO PEASANTS

Beijing NONGYE JIXIE [FARM MACHINERY] in Chinese No 6, 1982, p 2

[Article by Yang Junzhi [2799 6874 3112], Tianshui Prefecture Farm Machine Bureau, Gansu Province: "Problems To Be Watched in Farm Machine Turnovers to Households at Fixed Prices"]

[Text] Statistics show that as of the end of 1981, 44 percent (244 machines) of the 563 privately operated tractors in Tianshui Prefecture had formerly been collectively owned tractors that had been priced and turned over to households. Following turnover of these farm machines to households, they were well taken care of and many dead machines came to life again, and those that had lost money for a long time turned a profit. However, existing problems are as follows:

1. For many machines, prices have not been fixed according to real extant value, the price set generally tending to be low. Some places handled idle machines or machines awaiting repairs as having been discarded.
2. In handling the tractor itself, nothing was done about associated farm equipment. As a result much of the former associated farm equipment was let stand for a long time till it became corroded, deformed, damaged, or useless.
3. Large numbers of machines were sent to outside communes or other counties, so when local brigades needed farm machines, they had to ask for help from outside brigades, which occasioned inconvenience for the masses in production and daily life.

On the basis of some commune and brigade experiences, in giving peasant households farm machinery at fixed prices, the following several problems should be watched:

1. The price should be fair. Cadres, tractor drivers, and purchasing personnel should jointly participate in arriving at a price. They should conduct a comprehensive and meticulous inspection of the machine's mechanical condition and degree of operability to produce a realistic evaluation, after which they should figure out depreciation charges on the basis of the machine's original value and number of years of remaining use (or actual amount of operation).

Where mechanical condition is good, the price set should be the original value minus depreciation expense. For ailing machines that are on their last legs, required repair expenses should also be subtracted, and finally approval should be given following mass discussion.

2. Whenever machines are priced for sale, particularly in the case of all kinds of tractors, principal farm implements that go with the machine that have been bought and that have definite value must go along with the machine.

3. Selection of purchasers must be made first within the production brigade and then outside the brigade. Joint household users are to be given preference over individual households and sales for cash are to be given preference over sales for credit. Small farm machines may be operated by individual households, and large farm machines may be operated by combinations of households to make sure they can afford to buy them, make use of them, and get the most out of the machines. Any farm machines that are to go outside the commune must be approved by the commune management committee.

4. When machines are turned over to households for payment, both buyer and seller must fill out and hand over a record that names the machine, gives its specified model number, its ex-factory date, number of year's use remaining, original value of machine, monetary value, mechanical condition, and associated equipment, attachments etc., which is to be filed with the commune farm machine management station as a matter of record. After the turnover to a household, except for special circumstances, no changes are to be made.

5. In turning machines over to households, it is necessary to proceed from realities, both respecting the will of the masses and looking after the interests of the state and the collective. In order to save bother, some communes have also arranged to sell to private individuals large and medium size farm machines that have been rather well used and taken care of. Such action is improper. These machines have been accumulated over the years through reliance on state support. They are a major integral part of the collective economy, and they are a material basis for consolidating and developing the collective economy. In addition, the investment in these farm machines is great, their efficiency high, and they have to be used in association with other equipment; they are suited to collective operations and centralized allocation. Attention should be given to the preservation of these machines and, under most circumstances, they should not be priced and turned over to peasant households.

9432

CSO: 4007/534

BRIEFS

WHEAT OUTPUT--Tianshui Prefecture, Gansu Province, has reaped a bumper wheat harvest this year. As of 15 August, the prefecture had procured over 52 million jin of wheat and overfulfilled its summer grain procurement plans. [SK200327 Lanzhou Gansu Provincial Service in Mandarin 1125 GMT 19 Aug 82]

RURAL POWER CONSTRUCTION--Since the third plenum, Gansu Province has invested 34.8 million yuan in rural power construction. At present, the province has 38,000 kilometers of high-voltage power transmission lines of over 10,000 volts for agricultural use. In 1981, the power consumption volume in the province's rural areas was 1.28 billion kwh, an increase of 100 million kwh over that of 1980. In the first 7 months of 1982, the power consumption volume in our rural areas showed an increase by a large margin. [SK240031 Lanzhou Gansu Provincial Service in Mandarin 1125 GMT 22 Aug 82]

CSO: 4007/583

BRIEFS

RURAL INDUSTRY--Since the third plenary session of the 11th CPC Central Committee, Guangdong Province has implemented the open-door policy. Rural communes and brigades in the province have vigorously engaged in the work of processing materials supplied by foreign firms and assembling parts supplied by foreign firms. Since 1979, they have signed some 5,400 contracts with foreign firms for processing and assembly line work and have earned processing and assembling charges of some \$110 million. In the first half of this year, rural communes and brigades in Foshan and Shantou prefectures and Guangzhou Municipality signed some 1,000 contracts, and the processing and assembling charges were some 20 percent more than in the corresponding period last year. With the development of processing and assembling work, the amount of state taxes taken in has increased by some 40 million yuan each year over the past 3 years, and the province has placed 140,000 people in jobs. Over the last few years, commune and brigade enterprises throughout the province have utilized foreign capital, amounting to some \$40 million, to import some 20,000 sets of all types of equipment. [HK251406 Guangzhou Guangdong Provincial Service in Mandarin 1000 GMT 19 Aug 82]

PEASANTS' SAVINGS--According to the statistics compiled by the Agricultural Bank in Guangdong Province, peasants' savings in Guangdong Province by the end of July this year were some 53 million yuan more than at the end of June. Peasants' savings throughout the province at the end of June amounted to some 2.63 billion yuan. The amount of peasants' savings in the province was the largest of all other provinces, municipalities and autonomous regions throughout the country. The average savings of a peasant in the province were 138.9 percent more than those of other peasants throughout the country. Although provincial grain production decreased last year, diversification in rural areas developed in an all-round way. The per capita average income distributed was, however, 17.2 percent more than in 1980. The per capita savings last year were 49.72 percent more than in 1980. From the end of 1978 to the end of 1981, on the average, peasants' savings in the province increased by 482.58 million yuan per year. Peasants' savings by the end of July this year was 21.5 percent more than by the end of last year and the per capita average savings was 57.72 yuan, 280 percent more than at the end of 1978. [Guangzhou Guangdong Provincial Service in Mandarin 1000 GMT 19 Aug 82]

HAINAN ECONOMIC SITUATION IMPROVES--Since the third plenary session of the 11th CPC Central Committee, Hainan region has reaped a bumper agricultural harvest for 3 consecutive years. The value of total agricultural output in 1981 was 30.8 percent more than in 1978 and the average annual increase was

9.4 percent from 1978 to 1981. Total output of grain in 1981 was 11.55 percent more than in 1978. Output of sugarcane in 1981 was 93.6 percent more than in 1978. Output of dry rubber in 1981 was 17.5 percent more than in 1978. Output of tropical crops, including pepper, pineapples, coffee, cashew nuts and citronella oil, increased in 1981 by 50 percent or more. Rural income derived from industrial and sideline production increased in 1981 by 29.3 percent. The afforested areas from 1978 to 1981 were 750,000 mu. With the development of production, peasants' income has increased remarkably. The per capita average income of peasants in the region in 1981 was 242 yuan, 151 yuan more than in 1978. The per capita average grain ration in 1981 was 490 jin, 130 jin more than in 1978. The urban and rural savings in the whole region in 1981 was 131 percent more than in 1978. According to statistics, 32,600 households of commune members in rural areas in the region built new houses in 1981 and the total housing area was 2.21 million square meters. Judging from the current production situation, the rural economic situation this year will be better than last year. [Haikou Hainan Island Service in Mandarin 0330 GMT 22 Aug 82]

HAINAN TROPICAL, SUBTROPICAL CROPS--After many years' efforts, Hainan region has become a main base of tropical and subtropical crop production in our country. At present, our region has 4.6 million mu of tropical and subtropical crops, including rubber trees, coconut palms, coffee, Chinese pines, lemongrass, pineapple trees, cashews, sisal hemp and betel palms. Some 1.24 million mu has been cultivated over the past 3 years since the third plenary session of the 11th CPC Central Committee. Over the past 3 years, each year the whole island has provided the state with an average of some 80,000 jin of dry rubber--66 percent of the state's of natural rubber--and 26,000 dan of pepper--half of the state's output. The total value of the region's output of tropical and subtropical crops in 1981 amounted to 580 million and was 156 million yuan more than in 1978. According to statistics, the Han areas in Hainan region produced 8,645 tons of canned pineapples in syrup this year, approximately 100 percent more than in the corresponding period last year and 52 percent more than in 1969. [HK301512 Haikou Hainan Island Service in Mandarin 0330 GMT 24 Aug 82]

RURAL SAVINGS--The amount of rural savings in Guangdong Province by the end of 1981 was 2.015 billion yuan and was some 100 percent more than at the end of 1978. Rural savings have increased by an average of 560 million yuan per year. However, rural savings in the 20 years from 1956 to 1976 increased by only 600 million yuan. The yearly increase in rural savings since the 3d Plenary Session of the 11th CPC Central Committee approximates the total increase in rural savings over 20 years. The amount of rural savings from January to July this year was 3.153 billion yuan and was 638 million yuan more than by the end of last year. The average per capita savings of the agricultural population is 65 yuan. [Guangzhou Guangdong Provincial Service in Mandarin 1000 GMT 6 Sep 82 HK]

AGRICULTURAL LOANS--From 1980 to the end of June this year, agricultural banks and credit cooperatives in Guangdong Province issued agricultural loans amounting to 8.85 billion yuan, which was more than the total sum of agricultural loans in the 28 years from 1950 to 1978. Of the 8.85 billion yuan in agricultural loans, 3.06 billion yuan was issued to support commune and brigade

collectives and individuals to develop grain production, cultivation, breeding and household sideline production. Over the past 2 years and more, agricultural banks and credit cooperatives in the province have also issued additional loans amounting to 5.29 billion yuan to commune and brigade enterprises to promote the development of the rural economy. [HK071518 Guangzhou Guangdong Provincial Service in Mandarin 1000 GMT 6 Sep 82 HK]

CAPITAL CONSTRUCTION--Over the past 3 years, Guangdong Province has built 13,000 factories, all of which have been put into operation. They account for one-third of the total number of factories built in the 28 years before the 3d Plenary Session of the 11th CPC Central Committee. Guangzhou petrochemical plant, Huangpu power plant, Foshan cotton textile mill, Zhongshan hot spring guesthouse and Zhuhai guesthouse have been built over the past few years. After the construction of the new power plants and cotton textile mills, electricity output in the province increased by 600,000 kWh and output of cotton textile mills has increased by 138,000 spindles, which respectively amount to one-half of the output before the 3d Plenary Session of the 11th CPC Central Committee. The housing areas completed are some 14.6 million square meters, which account for one-fourth of the total housing areas completed since liberation. With the construction of a large number of tap water facilities, the province's capacity for producing tap water has increased by 2.53 million tons. The water can now be supplied to many peasants in the suburbs and urban people in distant border areas. [HK101444 Guangzhou Guangdong Provincial Service in Mandarin 1000 GMT 10 Sep 82 HK]

CSO: 4007/591

HEBEI

PROVINCIAL GOVERNMENT HOLDS CENSUS WORK MEETING

HK261103 Shijiazhuang Hebei Provincial Service in Mandarin 0400 GMT 19 Aug 82

[Text] The provincial government recently held a work meeting on the population census, examining the progress of the census and planning the census tasks to be carried out in the province in the future.

Vice Governor Han Qimin gave a summation speech on the census registration work in the province.

The meeting pointed out that the census registration work in the province had been successfully completed because the CPC committees and governments at various levels had conscientiously strengthened leadership; the vast number of cadres, public security department cadres and policemen, and the census personnel had devoted great efforts; and the broad masses of the people had enthusiastically supported the census under the leadership of the CPC central authorities and the State Council. Proceeding from the scope of the whole province, we may conclude that the census registration has been carried out rather smoothly and the quality of our work is relatively good. The results of quality sampling conducted in 40 production teams and resident groups of 10 counties and municipalities and in various prefectures and municipalities of the province show that the error rate of all items in the census registration are lower than the standards set by the state.

The meeting urged all prefectures and municipalities to add to the achievements, make persistent efforts and strengthen leadership, so as to successfully carry out the census task through the end and to greet the opening of the 12th CPC Congress with real accomplishments.

Having planned out the tasks of population census in the future, the meeting asked all prefectures and municipalities to properly complete the following jobs: Quality sampling check and acceptance of census data; collating key figures from census data; coding of registration charts; preparing and printing the collated data; packing, storage, transportation and acceptance of these materials; improvement of regular census records; summation of various work; collating and storage of various files; and so on.

CSO: 4007/583

HEBEI

RURAL TANGSHAN REBUILDS FROM QUAKE RUINS

OW060249 Beijing XINHUA Domestic Service in Chinese 0135 GMT 3 Sep 82

[Report by XINHUA correspondents Lu Xiaoping and Hou Zhiyi]

[Excerpts] Shijiazhuang, 3 Sep (XINHUA)--After several years of construction, the rural economy of Tangshan Prefecture, Hebei Province, that was hit by a strong earthquake has been rapidly restored and developed. Commune members' housing conditions and living standards are now better than those before the earthquake.

The 1976 strong earthquake caused tremendous losses in both human lives and property in Tangshan Prefecture. It reduced to rubble houses with a total of 2.93 million rooms in rural Tangshan. The earthquakeproof, makeshift shelters set up at the ruin sites immediately after the earthquake are now replaced by tile-roofed houses surrounded by green trees. According to statistics compiled by the prefectural housing construction department, by the end of July 1982 the newly built houses contained over 140,000 rooms more than those destroyed by the earthquake. Now 880,000 peasant families have moved into new houses in the prefecture, an increase of more than 110,000 households over the pre-earthquake period.

In recent years, Tangshan Prefecture has readjusted its layout of grain crop planting according to its natural conditions by changing the past practice of blindly planting high-yield crops and grasping grain production only. As a result, the prefecture's total grain output has topped the mark of 5 billion jin for 3 years running, and it has also developed a diversified economy. In the past 3 years, each commune member has annually received an income of more than 100 yuan from the collective on the average and gotten a ration of 400 or nearly 500 jin of grain.

In the past 6 years since the earthquake, the state has provided Tangshan's earthquake-stricken rural areas with 171,390,000 yuan in subsidies for peasants to rebuild their homes, averaging 59 yuan per room.

CSO: 4007/591

PROVINCIAL GOVERNMENT NOTICE ON DEVELOPMENT OF FISHING INDUSTRY

Harbin HEILONGJIANG RIBAO in Chinese 16 Jul 82 p 1

[Article: "Use of Strengths in Resources to Hasten Development of Fishing Industry. Provincial Government Makes Decision To Call Upon All Jurisdictions. Fishing Industry is Major Element in Economic Diversification, and Use of Water Surfaces Should Be Seriously Regarded in Same Way as Cultivated Land is Seriously Regarded. Raising Should Be Taken as the Key Link In a Combination of Raising and Catching. State-owned Fishing Industry Should Be the Mainstay and the Collective Fishing Industry Should Be the Foundation, With Individual Raising of Fish Supplementary"]

[Text] "Decisions on Hastening Development of Fishing Industry Production" recently produced by the provincial government calls on all jurisdictions to give the same serious attention to use of water surfaces as is given use of cultivated land, giving genuine attention to the fishing industry as an integral part of agriculture and as a major part of economic diversification.

"Decisions" pointed out that acceleration of development of fishing industry production will not only solve the problem of food fish for the broad masses of urban and rural people, but will help in the readjustment of the structure of agricultural production, increase peasant earnings, and consolidate and strengthen the collective economy. The raising of fish neither competes with grain for land nor is there any need to worry about a market for products. In addition, it provides jobs for surplus rural labor, thus killing two birds with one stone. It is an undertaking with very good prospects. Since the Third Plenary Session of the 11th Party Central Committee, though there has been fairly rapid development of fishing industry production throughout the province; nevertheless, the present water surface utilization rate continues very low, and fishing industry production is still a weak link in large scale agriculture.

The "Decisions" called for a strengthening of work in the following regards:

Diligent Carrying Out of Programs For Fishing Industry Development With Formulation of Plans For Hastening Development. The program for development of fishing industry production is "mobilization of all forces to make full use of all water surfaces, taking raising as the key link in a combination of breeding, increasing, growing, and catching. The state-owned fishing industry

is to be the mainstay and the collective fishing industry the foundation, with individual raising of fish being supplementary state-owned enterprises, collectives, and individuals be spurred to rise together. Vigorous efforts should be made to develop commune and brigade raising of fish. First of all should be the arousal of communes and brigades to divert to such use the village bonds in which fish could be easily raised and tended, with communes and brigades where conditions permit using marshes and wetlands for the building of choice fishponds. They should also build ponds for the raising of fish near pump wells. They should hasten the building of commodity fish bases. Planning and implementation should be done in accordance with requirements for building of fishponds throughout the province in the 10 commodity fish base counties supported by the state, including Shuangcheng and Hulan. Standards should be adhered to in the building of fishponds, each one going into production and providing benefits as it is built. Efforts should be made to develop the raising of fish in suburbs. Food eaten in cities should be largely raised by the cities themselves, with the bring of fish from elsewhere being supplementary, making suburbs become "live fish repositories" for the raising of fish. A food job should be done in operating state-owned fish farms and in actively developing the raising of fish in reservoirs. Commune member household raising of fish is an integral part of fish production and should be given active encouragement and support.

Further Implementation of Relevant Policies to Stir the Enthusiasm of All Quarters For Development of the Fishing Industry. Water surface use rights should be put into effect and stabilized. Water surface use rights should be designated, and whoever owns a water surface should be able to work it. Various forms of joint operations may also be organized. Means of production required for development of fishing industry production such as lumber, chemical fertilizer, concrete, and diesel fuel should be supplied as a part of plan. The state will carry out a policy that combines assigned procurement and negotiated procurement for aquatic products. The state will centrally procure salmon, sturgeon, and huso sturgeon as well as salmon roe, sturgeon caviar, and huso sturgeon caviar, which is not permitted to be taken to country fair markets or to be purchased or sold at negotiated prices. Other freshwater fish (not including small adult fish) are to be proportionally purchased and, after state sales quotas have been fulfilled, they may be sold at negotiated prices. Fish generally raised by communes and brigades and fish raised by commune member households may be sold as they see fit. For aquatic products taken to markets, the highest price limit should be set. Industrial and commercial administrative and management departments should strengthen management, strictly outlawing profiteering and speculation, and efforts to jack up market prices.

A firm grip is to be taken on key measures to raise the fishing industries level of output. Fingerling production is to be increased with all possible speed in an effort to achieve self-sufficiency in fingerlings within the counties and apportionment of varieties within prefectures within 3 to 5 years. A good job of training should be done to spread fish raising techniques, and it is also necessary to make a part of agricultural capital construction plans for centralized planning the building of fishponds and the restructuring of water surfaces. Fishery policy management should be

strengthened, a good job done of protecting resources, energetic publicity given implementation of the State Council promulgated "Regulations on the Protection of Breeding of Aquatic Products Resources," and "General Order on Protection of Reservoir Security and Aquatic Product Resources," as well as of "Regulations on Aquatic Product Resources Breeding Protection" promulgated by Heilongjiang Province, bolstering of education in the provisions of the law, and attacks directed against criminal activities that cause serious damage to aquatic products resources and fishing industry production. The "Decisions" finally reiterated that each municipality and county people's government should strengthen leadership, and diligently solve existing real problems. All levels of aquatic product and water conservancy departments concerned should rouse their spirits and strive to work to advance development of fishing industry production.

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CSO: 4007/540

HEILONGJIANG

BRIEFS

WATER-DIVERSION PROJECTS--Three projects for diverting water from the Nenjiang River to the arid eastern part of Heilongjiang Province have yielded increasing benefits. In the past few years, the three projects have diverted 1.2 billion cubic meters of water annually. This has not only ensured a water supply for Daqing's petrochemical industrial use but also has provided irrigation water for over 500,000 mu of grassland and 300,000 mu of paddy and dry fields. [Harbin Heilongjiang Provincial Service in Mandarin 1100 GMT 20 Aug 82]

WHEAT PROCUREMENT--As of 23 August, Heilongjiang Province's Nenjiang Prefecture had procured 120.4 million jin of wheat, overfulfilling by 0.3 percent the wheat procurement plan. [SK280934 Harbin Heilongjiang Provincial Service in Mandarin 2200 GMT 27 Aug 82]

FIELD MANAGEMENT--As of 19 August, peasants in Heilongjiang Province had conducted late-stage field management on 27 million mu of autumn cropland. Some 122.8 billion jin of farm manure were accumulated, 40 percent of accumulation plan and an increase of 10 billion jin over the same period in 1981. [SK240038 Harbin Heilongjiang Provincial Service in Mandarin 1100 GMT 22 Aug 82]

WHEAT HARVEST--On greeting the convocation of the 12th National Party Congress, various state farms throughout Heilongjiang Province are vigorously marketing new wheat to the state. As of 19 August, these farms marketed 401 million jin of wheat to the state, 66.9 percent of the plan. This year the sowing acreage of wheat in reclamation areas decreased due to water-logging in spring and wheat output dropped due to drought and insect pests. Now these farms continue to market wheat to the state in an effort to fulfill the annual target of 600 million jin. [Harbin Heilongjiang Provincial Service in Mandarin 1100 GMT 21 Aug 82]

RAW MATERIAL BASES--Since the third plenary session of the party Central Committee, Heilongjiang Province has accelerated the building of light industrial raw materials producing bases. Now the province has built its western part into dairy products and beets producing bases, its eastern part into flax producing bases, its southeastern part into mountain fruit producing bases and areas along rivers into reed producing bases. As a

result, the province's natural resources have been fully utilized and light industrial production promoted. Over the past 3 years or so, total output value of light industry has increased by 44 percent. The proportion of light industry in the total industrial output value has increased from 29.3 to 33.2 percent. The development of diversified economy has brought more income to peasants. Comparing 1981 with 1978, peasants' per capita income increased by 35 percent. By engaging in beet industry alone, people throughout the province gained a total of 300 million yuan of income--15 yuan for each person. [SK230120 Harbin Heilongjiang Provincial Service in Mandarin 1100 GMT 21 Aug 82]

CSO: 4007/583

MEETING ON FARM JOBS FOR SCHOOL LEAVERS

HK250541 Zhengzhou Henan Provincial Service in Mandarin 1100 GMT 24 Aug 82

[Summary] "The Provincial Labor Department recently held an on-the-spot meeting in Wuyang County on employment on farms and in production teams for school leavers. The Wuyang County CPC Committee, the county people's government, the county labor department, commercial department and other departments concerned presented their experiences in providing assistance in establishing and operating farms and production teams for school leavers. The participants at the meeting visited breweries, soya sauce and vinegar shops, flour mills, tree nurseries, and so on, on the (Jiangdian), (Wucheng) and (Beiwudu) farms for school leavers, and listened to them presenting their experiences in establishing and running the farms for school leavers."

"Having been built into collective agricultural-industrial-commercial integrated enterprises, these three farms for school leavers now have a total of 296 staff and workers, of whom 203 were school leavers; and 790 mu of cultivated land. Last year, the grain production per mu on the three farms reached 810 jin. The farms handed over more than 160,000 jin of grain to the state last year and now have a grain reserve of 850,000 jin. The vast number of school leavers on the three farms have made great progress both in terms of political understanding and production techniques."

The meeting urged other places throughout the province to continue to properly run farms and production teams for school leavers and agricultural-industrial-commercial integrated enterprises, and to strive to improve economic returns, so as to provide more jobs for young people from urban areas.

CSO: 4007/583

BRIEFS

AGRICULTURAL CONSTRUCTION--Henan has scored good results in agricultural capital construction since the third plenary session. During the past 3 years the province has completed 466 million cubic meters of earth and stone work, dug 116,000 mechanically-operated wells, and built 2,800 mechanical and electrical drainage and irrigation stations. The province has also built or repaired 322,400 small reservoirs and dams, controlled soil erosion on 1,346 square kilometers, increased the effective irrigated area by 5.32 million mu, overcome flooding on 1.64 million mu, and increased by 1.48 million mu the area of land yielding good harvests irrespective of flood or drought. Since 1980, 1,946 communes--94.8 percent of the province's communes--have set up water conservation stations, which have promoted the good management and use of existing projects. Management and economic responsibility systems have been drawn up for most projects. [HK300912 Zhengzhou Henan Provincial Service in Mandarin 1100 GMT 29 Aug 82]

FISH PRODUCTION--Last year, 720,000 mu of the 800,000 mu of water surface area in Xinyang Prefecture where fish could be bred were used to breed fish. The prefecture's output of fish was some 30 million jin, a record. Henan Province's output of fish last year was some 60 million jin, 21.6 percent more than in 1978. According to incomplete statistics, 140,000 people in the province signed contracts for breeding fish last year, and output of fish was some 16 million jin. Over the past few years, the province has trained some 1,200 cadres, workers and rural specialized laborers in the production of aquatic products. [Zhengzhou Henan Provincial Service in Mandarin 1130 GMT 30 Aug 82]

COTTON PROCUREMENT--Over the past 3 years, Henan Province has fulfilled its cotton procurement quota of 1,839,800,000 jin, which is worth 3,356,100,000 yuan. Each of the 2.29 million cotton peasant households throughout the province has increased its income derived only from cotton by 1,272.20 yuan. Over the past 3 years, the state has raised the cotton procurement price by 35 percent and has implemented the policy of buying cotton at a higher price after the cotton procurement quota has been fulfilled. As the state has raised the cotton procurement price and bought cotton at a higher price after the cotton procurement quota has been fulfilled, each cotton peasant household throughout the province has increased its income by an average of 634 yuan. [HK310710 Zhengzhou Henan Provincial Service in Mandarin 1130 GMT 30 Aug 82]

AGRICULTURAL PRODUCTION--Since the third plenary session of the 11th CPC Central Committee, rural areas in Henan Province have seriously implemented the various rural economic policies of the party and taken such measures as are suitable to local conditions to establish various forms of the production responsibility system. With the implementation of the production responsibility system over the past 3 years, the province's total income derived from agriculture has increased by 38.3 percent. The province's total output of grain increased from 38.1 billion jin in 1978 to 41.7 billion jin in 1981. The average increase of output per year from 1978-81 was 100 percent more than in the 3 years before the third plenary session of the 11th CPC Central Committee. Despite serious drought this year, the province's total output of summer grain totaled 22.7 billion jin, 470 million jin more than in 1981. The average per-capita income distributed to commune members increased from 59.7 yuan in 1978 to 100.9 yuan in 1981. The average increase of income per year from 1978-81 was 300 percent more than in the 3 years before the third plenary session of the 11th CPC Central Committee. There were 12 counties and municipalities in 1981 in which the average per capita income distributed to commune members was over 150 yuan. There were 136 brigades in 1981 in which the average per-capita income was over 300 yuan. [Zhengzhou Henan Provincial Service in Mandarin 1100 GMT 24 Aug 82]

CSO: 4007/583

RURAL ECONOMIC STATISTICS SHOW PROGRESS

HK020432 Wuhan Hubei Provincial Service in Mandarin 1100 GMT 31 Aug 82

[Summary] Hubei's rural economy is making progress amid readjustment. There are seven main points of the economic results:

1. Agriculture has started to change from a single-product economy and its internal structure has gradually become more rational. The total output value of forestry, animal husbandry, sideline production and fisheries throughout the province increased from 29 percent of overall agricultural output in 1978 to 31 percent in 1981.
2. Agricultural production has scored overall development, with an increase in main agricultural products. In 1981, total agricultural output value, calculated according to unchanged 1970 prices, amounted to 8.997 billion yuan, an increase of 4.7 percent over 1978.
3. There has been remarkable increases in agricultural and sideline products supplied to urban residents and industrial construction. In 1981, the total value of agricultural and sideline products procured amounted to 4.59 billion yuan, an increase of 64.06 percent when compared with 1978. After deducting the price factor, there was still a rise of 16.5 percent.
4. Income has increased, expenditure has been reduced and economic returns have been raised. In 1981, the total income of the basic accounting units of the people's communes throughout the province was 6.86 billion yuan, an increase of 13.8 percent when compared with 1978, while expenditures fell by 1.2 percent.
5. Enterprises run by the communes and brigades have continuously developed amid readjustment. In 1981, the total income of the commune and brigade enterprises throughout the province reached 2.46 billion yuan. This shows a 39.8-percent increase when compared with 1978. According to statistics, at the end of 1981, the number of personnel employed by commune and brigade enterprises reached 1.445 million. This represents 10.1 percent of the total rural manpower. The net profits in the past 3 years were 969 million yuan, 265 million yuan of which were used in agricultural production.

6. The collective economy has expanded and production conditions have improved. In 1981, the 3-level economy of the communes possessed fixed assets with a total value amounting to 5.88 billion yuan. This shows an increase of 4.3 percent when compared with 1978.

7. The peasants' income has increased and their standard of living has improved. In 1981, the average income of the peasants throughout the province was 232.6 yuan. This shows an increase of 109.6 yuan when compared with 1978. The average per capita living cost reached 184 yuan, an increase of 35 yuan when compared with 1978,

CSO: 4007/591

HUBEI

BRIEFS

HOUSING, WATER SUPPLY--According to statistics, 9.88 million square meters of housing for workers in urban areas of Hubei Province were completed from 1979 to 1981. This housing area was 1.16 million square meters more than the total urban housing area throughout the province in the initial period of liberation. In the first half of this year, the housing area in urban, industrial and mining areas in the province was 5.05 million square meters and was 18 percent more than in the corresponding period last year. Over the past 3 years, the province has increased investments in the construction of water works. Wuhan, Huangshi, Xiangfan and Shashi municipalities and Echeng County, which were seriously short of water, have built or expanded tap water works. Now, the shortage of water supply in urban areas has been remarkably alleviated. [HK021435 Wuhan Hubei Provincial Service in Mandarin 1100 GMT 1 Sep 82 HK]

CSO: 4007/591

HUNAN

GOVERNMENT CALLS FOR ACTIVE SUPPORT OF POOR FAMILIES

HK261240 Changsha Hunan Provincial Service in Mandarin 1100 GMT 24 Aug 82

[Summary] "Recently the Hunan Provincial People's Government issued a circular, calling on the government at various levels throughout the province to do a better job of helping poor families in the rural areas.

"In order to help poor families carry out the plans for getting rich, it is necessary for the cadres at the commune and brigade levels and CPC members to implement the system of personal responsibility by dividing up the poor households into several parts and assigning each part to an individual who will be responsible for the households to the end. They should strive to impart good advice to the poor families and educate them to take an active part in physical labor, carry out family planning, be industrious and thrifty in managing a household and practice economy in their daily life.

"The circular pointed out that it is necessary for the agricultural, commercial, industrial, communications, foreign trade, banking and credit cooperative departments to regard the work of helping the poor in the rural areas as their bounden duty and actively support them in various aspects, such as manpower and financial and material resources.

"The circular stressed that in helping the poor it is first of all necessary to provide intellectual help. It is necessary to conduct patient and meticulous political and ideological work among the poor families and educate them to pull themselves together, have high aspirations, be self-reliant and overcome difficulties in order to change their poverty as speedily as possible."

CSO: 4007/583

MEETING ON STRAIGHTENING OUT ENTERPRISES

HK290342 Changsha Hunan Provincial Service in Mandarin 2310 GMT 28 Aug 82

[Summary] A Hunan provincial forum on straightening out enterprises, which concluded in Changsha on 27 August, stressed: "All work in the enterprises must be centered on straightening them out, and they must achieve new breakthroughs in rectifying the leadership groups, perfecting the economic responsibility systems and straightening out labor organization."

The meeting held: "The work of straightening out the enterprises in an all-round way, with the aim of improving economic returns, has been launched throughout the province. A lot of work has been done in the past few months and a certain degree of success has been achieved. However, viewing the province as a whole, the development is uneven. There has been no major breakthrough on some important problems." The meeting demanded that breakthroughs be achieved in the following respects in the next 4 months:

1. Rectify and build the leadership groups in accordance with the demand for them to be revolutionized, more knowledgeable, specialized and younger. This is the key to straightening out the enterprises. The pilot project units must all readjust and appoint their leadership groups this year.
2. Straighten out and perfect the economic responsibility systems.
3. Straighten out the labor organization well. It is necessary to cut down the number of nonproductive personnel and strengthen the production frontline.

CSO: 4007/583

PERFECTING RURAL RESPONSIBILITY SYSTEM URGED

HK260933 Changsha Hunan Provincial Service in Mandarin 1100 GMT 25 Aug 82

[Summary] At a provincial forum on rural work, Hunan Provincial CPC Committee Secretary Wang Zhiguo said that perfecting the agricultural production responsibility system is a long-term task of the party. Leaders at various levels must concentrate their efforts on studying the problems concerning the responsibility system and help the rural areas do a good job in this respect.

The forum, which was held in Changsha from 17 to 22 August, held that the situation of agricultural production in this province was good. A bumper harvest of early rice has been achieved. Except for 18 counties and cities which were hit by flood, early rice production in other areas has been increased.

"An important reason for the good situation is that the responsibility systems have been practiced, and this has brought into play the enthusiasm of the masses of commune members. At present, of the more than 510,000 production teams, 93 percent have practiced the responsibility system of fixing output quotas for each household and assigning households full responsibility for task completion."

The forum urged cadres to conscientiously study relevant central documents and Zhao Ziyang's speech, make investigation and study, sum up experiences and do the following jobs well:

- "1. Stabilize and perfect the responsibility system;
- "2. While establishing the land responsibility system, establish hill and water responsibility systems as well;
- "3. Ensure all contracts are fulfilled so that people will have more faith in them;
- "4. Manage commune and brigade property well."

The forum deemed the "professional households" and "key households" which have emerged in the countryside since the implementation of the responsibility systems are new things which will probably become an interim form of the professionalized and socialized production in the countryside. It urged various localities to attach importance to these new things and help them develop healthily.

The forum also discussed production tasks for the coming winter and next spring.

CSO: 4007/583

FARM MACHINERY GENERAL INSPECTION LAUNCHED

Beijing NONGYE JIXIE [FARM MACHINERY] in Chinese No 6, 1982 p 7

[Article by Su Xianyi [4725 7359 1837]: "One-time Provincewide Farm Machine Inspection"

[Text] Beginning in July 1981, Hunan Province launched a one-time province-wide farm machine inspection campaign.

The inspection has six component parts (termed the six inspections for short) as follows: Inspection to see whether associated equipment for internal combustion engines and tractors is rational; inspection of whether farm machinery responsibility systems have been implemented; inspection of forms of farm machine management; inspection of whether machine operators have been assigned without being rotated; inspection of mechanical state of the "three filtering devices" on internal combustion engines and tractors; inspection of actual quantities of fuel used by farm equipment and farm machines. According to incomplete statistics, 14,934 people throughout the province are participating in inspection teams (in counties fully engaged in inspection work, about 300 people are a part of work teams).

As of now, 44 counties and municipalities and 1,539 communes have completed inspections, and 19 counties have set up inspection pilot projects. Throughout the province, 160,000 internal combustion engines, 2.53 million pieces of associated farm implements, and 19,074 tractors have been inspected. Farm machine inspection work is to be finished throughout the province before the end of the year.

The main way in which the farm machine inspections are carried out is for leaders to take charge for level by level action, going from key points to wide areas, with the emphasis on effectiveness.

Prefecture and county farm machine bureau leaders personally participate in the work of inspection teams, and experienced managerial, repair, and machine operating technical personnel are transferred from the machine bureau and from prefecture and commune machine stations to do the work. Before inspections begin, the objectives, methods, and importance of the strengthening of machine management are widely publicized after which forces are assembled to carry out inspections within a concentrated period of time.

Generally, a county first sets up an inspection pilot project to carry out the "six inspections" machine by machine. At the Tieshi Commune in Hengnan County, for instance, in the course of inspection of 335 internal combustion engines and 29 tractors in the commune, the inspection team found that no responsibility systems had been set up for 28 percent of tractors and for 63 percent of internal combustion engines. Class A machines numbered only 18.6 percent of the total number owned; 33 machines had none of the "three filters;" 101 had no air filters; 50 had no diesel filters; and 11 had no engine filters. Air, diesel, and engine filters in good condition numbered 30, 30, and 55 percent respectively. While inspecting, the inspection teams also solved problems and provided technical instruction. They ran machine operator training classes during the inspection period, and set up responsibility systems for more than 80 percent of the operators; they repaired 102 internal combustion engines and six tractors. They performed one time maintenance on the "three filters" for all machines, replacing them where they were lacking, repairing broken ones that could be repaired, and changing those that could not be repaired. From the inspection pilot projects, they realized real effectiveness, accumulated experiences and assured smooth and all-around inspections in prefectures and counties.

The most suitable time for inspections is when they can be linked to seasonal maintenance and repair of machines and annual inspections and examinations. By disassembling machines for inspection, problems can be readily and promptly solved.

The provincewide farm machine inspection campaign has given the broad masses of farm machinery management unit comrades an education, made them realize the crucial importance of management work, has given them a taste of the pleasures of solid work, and has strengthened their confidence in doing a good job. It has produced an inventory of farm machines, and has promoted the rational matching of equipment and establishment of responsibility systems. It has improved the farm machine in-service rate and farm machine personnel technical levels. It has reduced the farm machine fuel consumption rate, and has improved economic effectiveness of farm equipment.

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CSO: 4007/534

BRIEFS

WINTER CROPS--According to statistics compiled by a provincial conference now in session on winter-sown crops, Hunan will sow more than 40 million mu of winter grain, oil-bearing crops, green manure and vegetables, nearly 4 million mu more than last year. [Changsha Hunan Provincial Service in Mandarin 2310 GMT 27 Aug 82]

PRICE CONTROL STRENGTHENED--In the first half of this year, in close coordination with one another, all relevant departments in Hunan Province seriously implemented the spirit of the documents of the State Council and the provincial government on commodity price control and strengthened market commodity price control. Consequently, market commodity prices throughout the province have gradually stabilized. The total level of the retail prices of commodities throughout the province in the first half of this year was slightly lower than in the fourth quarter of last year. The list retail prices in state-run units were basically stable while the negotiated retail prices of commodities were stable and even dropped. In the first half of this year, the whole province organized some 1,000 commodity price inspection groups, which inspected some 14,000 units, promptly corrected some commodity prices and dealt with a number of cases in violation of the policy on commodity prices. [Changsha Hunan Provincial Service in Mandarin 1100 GMT 24 Aug 82]

INLAND WATER TRANSPORTATION--Hunan Province has made full use of the favorable conditions on the Xiangjiang River, the Zishui River, the Yuanjiang River, the Lishui River and Dongtinghu Lake for water transportation, readjusted the transportation structure, speeded up technical transformation and laid stress on the realignment of rivers to tap their potential for water transportation and promote the development of inland water transportation. The volume of freight carried by water in proportion to the total volume of freight in the whole province has increased from 29.7 percent in 1979 to approximately 40 percent now. [Changsha Hunan Provincial Service in Mandarin 2310 GMT 12 Aug 82]

PEASANTS INCREASE INCOME--Since the third plenary session of the 11th CPC Central Committee, peasants' income in Hunan Province has increased year by year. The Provincial Statistical Bureau recently investigated the per-capita income of 780 households in 24 counties. The results of the investigation clearly show that the cash income of peasant households in the first half of this year greatly increased. The per-capita cash income of these 780 peasant households in the first half of this year was 97.73 yuan, 37.06 yuan more than in the first half of last year. Following the increase in cash income, peasants' purchasing power has greatly increased. [Changsha Hunan Provincial Service in Mandarin 2310 GMT 17 Aug 82]

CSO: 4007/583

YANCHENG PREFECTURE'S IMPROVED ECOLOGICAL BALANCE EXAMINED

Nanjing XINHUA RIBAO in Chinese 20 Jul 82 p 2

[Article by Jiang Niantao [1203 1819 3447]: "A Look at the Ecological Balance in Terms of Yancheng Prefecture's Agriculture"]

[Editor's Comment. The problem of ecological balance in agricultural production is an extremely important one. Naturally our concern for ecological balance does not mean forever holding to the farming methods of our ancestors and marking time in the same place without moving ahead. As this article emphasizes, it is necessary to proceed from realities, to create certain conditions, to destroy the ecological balance of low utility and to build an ecological balance of high utility so that all conditions will play a coordinated role within a harmonious system to provide maximum economic benefits. This is a problem that merits very good attention in all jurisdictions. Everybody can further explore views on the practical problems that the article raises.

In the 11 year period from 1970 to 1981, agricultural production in Yancheng Prefecture grew fairly rapidly. Grain output increased 4.1 percent annually; cotton output increased eight percent annual; live hogs in inventory increased 2.3 percent annually; and other economic diversification also developed fairly rapidly.

How were these accomplishments possible? People have carried out a summarization from different technical angles. Some say that the relationship between soil nurture and soil use was handled well; some say that the relationship between grain and cotton was handled well; some say that the relationship between agriculture and economic diversification was handled well. All are correct. The sum total of these experiences has been that this prefecture's numerous agricultural measures have fitted in with the objective laws of ecological balance.

Take the prefecture's coastal cotton growing area, for example. Overall, it has gone through four different forms of ecological balance. Each time that an old balance was destroyed a new balance was established and production moved ahead

one step further. Historically it was a naturally formed saline soil ecological system where the heavily saline soil contained 4 parts salt per 1,000 on which salt tolerant plants such as salt artemisia [7770 5548] and zhangmao grass [3742 3029 5430] formed a simple ecological balance, producing nothing of economic value. People brought salinity under control by digging ditches to remove alkalinity and by growing a grass cover. They grew a single crop of cotton a year letting the land lie fallow during winter. In this system, the material and energy in the cycle was very small, and ginned cotton yields amounted to only about 30 jin per mu. Subsequently, through multiple controls using liquid manure and the planting of woodlands, the stumbling block in the system, which was salinity, was reduced, and then conditions were changed from one crop a year to one crop each of wheat and cotton, winter fallow being changed to the growing of green manure in the gradual formation of a dryland grain and cotton crop rotation system in which wheat was sown in autumn and intercropped with green manure, and cotton and dryland grain were intercropped in spring. In this way the insertion of green manure gradually increased the ground cover, and the material and energy flow in the system were greatly increased. Cotton yields climbed to between 60 and 70 jin per mu, and grain yields reached between 500 and 600 jin per mu. During the early 1970's the intercropping of cotton and corn and summer green manure was tried, and by 1975 this had turned into an intercropping system in which wheat (or pulses) and green manure were sown in fall, and cotton, grain (corn), and green manure were sown in spring for three harvests of five different varieties. Today this system of intercropping covers 70 percent of the cultivated land along the sea-coast. In this way the fields are verdant all year round, the multiple cropping index is virtually saturated, the light utilization rate has increased, the drain on the soil of grain and a single crop of cotton is replenished by three crops of green manure and the return to the fields of crop stalks and stems, the soil becoming increasingly fertile, and the material and energy flow being greatly increased. As a result cotton yields have risen for 7 consecutive years since 1975 to more than 100 jin, and grain yields have been consistently around 1,000 jin per mu.

During this period some lessons were also learned from violation of ecological laws. Between 1969 and 1972 some communes and brigades attempted the conversion of drylands to wetlands. Large areas were planted to paddy rice, and the main crops for restoring soil fertility in the ecological system, green manure and pulses, were squeezed out. And just as salinity had been removed with water, it returned with water to become once again a stumbling block in the system. In addition, because of the raising of the water table, water engulfed the cotton, causing the cottonfield ecological balance to deteriorate, with the result that cotton yields fell and grain yields could not be made to rise either. Soil fertility gradually deteriorated over the years and the ecological system got worse and worse. Beginning in 1973, cadres and the masses here devoted great energy to reversing this vicious cycle and to revival and development of the former rotational cropping of cotton, dryland grain, and green manure.

The lessons of historical experience have demonstrated that the process of improving crop yields is a process of destroying ecological balances of low utility and building ecological balances of high utility, that it is a process of

increasing material and energy flow in the agricultural ecological system, and that it is a process of improving efficiency of material and energy conversion. In a well balanced ecology, all technical measures are able to play a coordinated role in a harmonious system. Otherwise, if no concern is shown the ecological balance, they cannot play a positive role, or they may even play a negative or destructive role.

In order to improve production capabilities in the agricultural ecological system, not only must there be a balance between nurture and use of the soil and a balance between grain crops and economic crops, but there must also be a balance among farming, forestry, animal husbandry, sideline occupations, and fisheries. Forestry remains a weak link in Yancheng Prefecture. Were it to be improved, the overall situation would greatly benefit. Breeding industries are both processing plants for farm products in the agricultural ecological system and are fertilizer processing plants. Today, the fruits and seeds that are the photosynthetic products of crops that we use amount, in the main, to only one third of entire biological output, the remaining two-thirds consisting of stalks, stems, chaff, and husks are consumed largely as fuel. This means that large quantities of the material and energy in the agricultural ecological system escape into the area and cannot continue in the cycle, which is very sad. Some of the stalks, stems, chaff, and husks are returned to the fields, and this is much better, of course, than burning them up. However, even when returned to the fields, only their physical properties are used; a substantial part of the nitrogen, phosphate, and potash minerals that they contain cannot be readily broken down and absorbed by plants, so the energy conversion rate is very low. Were most of the stalks, stems, chaff, and husks used for the feeding of livestock, not only would the energy stored in them be used, but the protein in them would be used too, and the manure resulting from their passage through digestive tracts would contain more nutrients and more micro-organisms that could be more readily absorbed by plants.

One of the major reasons why China's traditional agriculture has been able to endure for several thousands years has been that our ancestors created a body of planting and breeding methods that were compatible with the laws of ecological balance, and they created an invaluable food chain. We have the responsibility for scientifically summarizing our ancestors' and our own experience to build the optimum ecological system for the country's national circumstances so that our agriculture will develop more rapidly and tower among the world's advanced agricultures.

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CSO: 4007/539

BRIEFS

PREFECTURES GRAIN OUTPUT--Jiangsu's Xuzhou and Huaiyin Prefectures have turned themselves from poor prefectures depending on state relief in grain into new marketable grain production bases. In 1981, Xuzhou Prefecture's total grain output reached 7.17 billion jin, 2.7 billion jin more than in 1977. Huaiyin Prefecture's total grain output in 1981 was 8.05 billion jin, or 20.2 percent more than in 1978. [Beijing Domestic Service in Mandarin 1200 GMT 15 Aug 82]

WUJIANG COUNTY RICE--Wujiang County's 500,000 mu of early rice this year has brought a total output of more than 350 million jin with the average yield reaching 712 jin and 7 liang per mu. This represents an increase of 28 million jin and 43 jin and 5 liang respectively compared with last year. By 20 August, more than 160 million jin had been put into storage. [Nanjing Jiangsu Provincial Service in Mandarin 1100 GMT 25 Aug 82 OW]

CSO: 4007/591

BRIEFS

YICHUN PREFECTURE GRAIN--By 30 August, Yichun Prefecture, Jiangxi Province, had procured 591.68 million jin of summer grain, or 320 million jin more than the same period last year. [Nanchang Jiangxi Provincial Service in Mandarin 1100 GMT 1 Sep 82 OW]

XINJIAN COUNTY RICE--Xinjian County, Jiangxi Province, increased the output value of early rice by 16 million yuan in the first half of 1982. The county's gross annual value of industrial and agricultural output in 1981 exceeded 130 million yuan, or 4.8 percent more than 1978. [Nanchang Jiangxi Provincial Service in Mandarin 1100 GMT 26 Aug 82 OW]

LICHUAN COUNTY GRAIN--Lichuan County, Jiangxi Province, had delivered over 47 million jin of grain to the state by 20 August. This represents 102.76 percent of the summer grain procurement plan and is 18 million jin more than last year. [Nanchang Jiangxi Provincial Service in Mandarin 1100 GMT 26 Aug 82 OW]

SHANGRAO COUNTY GRAIN PROCUREMENT--As of 11 August, commune members in Shangrao County, Jiangxi, had overfulfilled the target of delivering 36.86 million jin of grain to the state. [Nanchang Jiangxi Provincial Service in Mandarin 1100 GMT 14 Aug 82]

CSO: 4007/583

BRIEFS

AGRICULTURAL PRODUCTION--Thanks to 3 years of readjustment, Jilin Province's agricultural economic structure has noticeably improved. Comparing 1981 with 1978, agricultural output value increased by 1.8 percent and output value of fishery, animal husbandry, sideline occupations and fishery showed increases ranging from 26.2 percent to 33.7 percent. Output value of commune- and brigade-run enterprises rose by 50.8 percent. Total grain yield increased by 0.8 percent. The proportion of forestry, animal husbandry, sideline occupations and fishery in the output value of agriculture as a whole increased from 25.2 percent to 31.1 percent. In 1981 the province marketed to the state 15.9 percent more commodity grain and 200 percent more oil-bearing crops than in 1978. Purchased amounts of grain, oil-bearing crops and other agricultural sideline products increased by over 100 percent. Commune members' income from collective distribution increased greatly as a result. [SK211325 Changchun Jilin Provincial Service in Mandarin 2200 GMT 20 Aug 82]

DIVERSIFIED ECONOMY--Taking advantage of the mountain resources, Jian County, Jilin Province, has vigorously developed the diversified economy. In 1981, this county received 23 million yuan in income from the diversified economy, 54.3 percent of the total income from agriculture. The average per capita income from the collective, plus the income from household sideline occupations, totalled 332 yuan, the highest in history. At present, this county has specialized technical teams composed of 1,600 persons and the number of peasants engaged in the diversified economy has increased 150 percent over 1978. [Changchun Jilin Provincial Service in Mandarin 1100 GMT 23 Aug 82]

MARKETABLE GRAIN BASE--Since the third plenary session, marketable grain base counties in Jilin Province have increased from 9 to 23 with total cultivated acreage accounting for 74 percent of the province's total. Most of these counties are situated in the fertile Songliao plain and are suitable for cultivating grains, soybeans, oil-bearing crops and beets. In 1981, the total grain and soybean output of these counties totalled 15.27 billion jin, 83 percent of the province's total. Marketable grain turned over to the state reached 5.94 billion jin, 89 percent of the province's total amount handed over to the state. The marketable grain output and the amount handed over to the state in 1981 increased 7.2 percent and 14.7 percent respectively over 1980. In addition, these counties produced 11 million dan of beets, 64 percent of the province's total, 3.72 million dan of oil-bearing

crops, 63 percent of the province's total, and 380 million jin of pork, beef and mutton, 76 percent of the province's total in 1981. [Changchun Jilin Provincial Service in Mandarin 1100 GMT 21 Aug 82]

GRAIN, SOYBEAN OUTPUT--Since the third plenary session, Nongan County, Jilin Province, has witnessed good harvests. In 1981, the total grain and soybean output of this county increased 31.4 percent over 1977, a record high. The output of oil-bearing crops increased 210 percent and sugar-bearing crops 340 percent over 1977. The average per capita income from the collective reached 160 yuan, an increase of 140 percent over 1977. [Changchun Jilin Provincial Service in Mandarin 1100 GMT 22 Aug 82]

CSO: 4007/583

LIAONING

BRIEFS

PROVINCIAL RAINFALL--Most parts of Liaoning Province had rainfall 25-26 August. The areas east of the Liao He had a moderate or heavy rainfall. West of the Liao He, there was light or moderate rainfall. The rain is good for field crops irrigation. [SK280932 Shenyang Liaoning Provincial Service in Mandarin 1100 GMT 27 Aug 82]

CSO: 4007/583

BRIEFS

GRASS PLANTING--Since the third plenary session, Nei Monggol has accelerated its efforts to prevent grasslands from deterioration and becoming sandy lands. Over the past 3 years, the region has planted grass on 17 million mu of deteriorated grasslands and built 82 million mu of man-made pastures. Thus, the region can have 4.5 billion jin of grass annually and basically have no problem feeding animals during the winter-spring period. The region used to have 1.3 billion mu of grasslands. Because of arbitrary reclamation and grazing during the 10-year turmoil, grasslands have deteriorated seriously. According to statistics, nearly 100 mu of grasslands deteriorate every day. If this continues, there will be no grassland left in 20 years. Nei Monggol's efforts have brought about good results. Last year the number of animals in the region was an all-time high. [SK291021 Hohhot Nei Monggol Regional Service in Mandarin 1100 GMT 28 Aug 82]

MINISTRY HOLDS MEETING--The Ministry of Agriculture, Animal Husbandry and Fishery and the State Bureau of Standardization held a meeting 14-18 August in Hohhot, Nei Monggol, to mark the inauguration of a National Technical Commission in charge of sheep and goats standardization. The task of the commission is to popularize the technology of standardization on sheep breeding. Liu Xigeng, adviser to the Ministry of Agriculture, Animal Husbandry and Fishery, (Wu Guowen), deputy director of the State Bureau of Standardization and Ba-tu-ba-gen, vice chairman of the Regional People's Government, addressed the meeting. [Hohhot Nei Monggol Regional Service in Mandarin 2300 GMT 19 Aug 82]

SAVINGS DEPOSITS--By the end of July, the balance of savings deposits in the urban areas of Nei Monggol region reached 712 million yuan. In the past 3 and 1/2 years, urban savings deposits throughout the region increased 476 million yuan, while during the years of 1949 to 1978, it increased only 253 million yuan. Urban worker per-capita savings averaged 171 yuan in 1979 and 263 yuan at the end of July. From 1979 to 1981, each urban staff member or worker had his income increased by 216 yuan, thanks to wage increases, bonuses and allowances. [SK201030 Hohhot Nei Monggol Regional Service in Mandarin 2300 GMT 19 Aug 82]

MARKETABLE GRAIN--Hetao area in Sayannur League, Nei Monggol, has substantially increased the marketable grain and cash crop output since the third plenary session. In 1981, the total grain output reached 1.3 billion jin, an increase of 160 million jin or 38 percent over 1978. The total output

of oil-bearing crops reached 1,066,000,000 jin, a 10-fold increase over 1978, and that of beets increased nearly 140 percent. The amount of grain produced in the Hetao area in the recent 2 years accounted for nearly one-third of the total grain output of the area. [SK240103 Hohhot Nei Monggol Regional Service in Mandarin 1100 GMT 22 Aug 82]

WOOL PROCUREMENT--By the end of July, Nei Monggol region had procured 85.9 million jin of wool, 2.93 million jin of cashmere and 1.9 million jin of goose down, showing a marked increase over the 1981 corresponding period. The procurement of cashmere is continuing. [Hohhot Nei Monggol Regional Service in Mandarin 1100 GMT 22 Aug 82]

LIVESTOCK PRODUCTION--Since the third plenum, Nei Monggol region has achieved a steady increase in livestock production. According to livestock breeding statistics for a few fiscal years, the region had 35.58 million head of livestock in 1978, 39.02 million head in 1979, 40.58 million head in 1980, and 42.18 million head in 1982. In addition to the increases in number, the region also upgraded the quality of livestock. By the end of June 1982, the number of fine and improved breeds of livestock of the region was 14.31 million head, among which the number of fine and improved breeds of sheep topped 10 million head and that of female livestock for reproduction increased to 17.7 million head. The region had 7.44 million head of draught livestock in 1982, an increase of 2.1 percent or 200,000 head, over the 1979 figure. So far, the region has 22.02 million head of privately owned livestock, showing a 1.7-fold increase over 1979. [SK020303 Hohhot Nei Monggol Regional Service in Mandarin 1100 GMT 30 Aug 82]

WHEAT PROCUREMENT--Hetao irrigated area in Bayannur League, Nei Monggol Region, has reaped a bumper wheat harvest in 1982. As of 2 September, this league had stored 121.2 million jin of wheat, an increase of 100 percent over the corresponding 1981 period, overfulfilling the annual wheat procurement plan ahead of schedule. [SK050721 Hohhot Nei Monggol Regional Service in Mandarin 1100 GMT 4 Sep 82 SK]

CSO: 4007/591

BRIEFS

SUMMER GRAIN OUTPUT--According to the statistics announced by the Provincial Statistical Bureau yesterday, total output of summer grain of Shaanxi Province this year was 49.865 billion jin, 9.6 percent more than in 1979; and the average per-mu yield of summer grain in the province was 314.3 jin, 11.9 percent more than in 1981. [Xian Shaanxi Provincial Service in Mandarin 0500 GMT 20 Aug 82]

CAPITAL CONSTRUCTION--Shaanxi Province has seriously controlled the scale of capital construction since the third plenary session and made rational readjustments in use of investment. The following new production capacity has been added during the past 3 years as a result of new construction: 40,000 tons of steel; 3.3 million tons of coal; 40,000 tons of crude oil; 280,000 kw of power-generating sets; 288 kilometers of electrified railroad; 48,000 cotton spindles; 200,000 tons of cement; and 187,000 school places at all levels. During the past 3 years state capital construction in the province has been halved, while provincial investment for nonproductive construction such as housing, culture, education, public health, welfare facilities and so on, has risen from 19 percent of total investment in 1978 to 35 percent. [HK021415 Xian Shaanxi Provincial Service in Mandarin 0500 GMT 25 Aug 82 HK]

CSO: 4007/591

PROVINCE'S PEOPLE'S LIVING CONDITIONS IMPROVED

SK300528 Jinan Shandong Provincial Service in Mandarin 2300 GMT 29 Aug 82

[Text] According to the data offered by the Provincial Statistical Bureau, since the third plenary session of the 11th party Central Committee, urban and rural populations throughout our province have improved their livelihood. In the 3 years from 1979 to 1981, the province spent some 10 billion yuan on increasing people's income and improving their living conditions. On an average, every person benefited with 134 yuan. Thanks to the increase of procurement prices for agricultural and sideline products, peasants throughout the province increased their income by over 2.9 billion yuan. In addition, peasants' enthusiasm for production was mobilized by the introduction of various forms of the responsibility system. As a result, production was promoted and peasants' income increased by a big margin. Compared to 1978, each agricultural population got 57.2 yuan of more income in 1981 from the collective distribution. Savings deposits of each peasant increased by 300 percent in those 3 years. In the four prefectures in western and northern province, each person earned 240 yuan or more net income, an increase of 190 percent over 1978. Savings deposits of each peasant increased by more than 10-fold in these 3 years.

From 1978 to 1981, workers and staff of units owned by the whole people and by collectives received some 5 billion yuan of profits thanks to wage increases, grade promotions, bonus issuances, subsidies for goods prices and employment expansion. The 1981 average income of each worker and staff member reached 755 yuan. After deducting living expenses and price rises, the income increased by 23.5 percent in these 3 years. The monthly per capita income for living expenses of each urban worker family was over 38 yuan, an increase of 43 percent over 1978.

Along with the great income increases of urban and rural residents, their purchasing power increased generally in the 3 years. In 1981 the expenditure of urban and rural residents on purchasing consumer goods totalled 11.5 billion yuan, an increase of 67 percent over 1978. Their consumption of clothing and food and general spending also increased comprehensively. For instance, the consumption of edible vegetable oil, pork, cotton cloth, sewing machines and bicycles increased by 20 to 70 percent respectively; that on wrist watches and radios increased by over 100 percent and that on television sets increased by 10-fold or more.

CSO: 4007/583

BRIEFS

AGRICULTURAL PRODUCTION--Qixia County, Shandong Province, has achieved good economic benefits by comprehensively developing agriculture forestry, animal husbandry, sideline occupations and fishery since 1979. The average annual increase in grain output in the past 3 years reached 20.24 million jin and in peanut output 21.67 million jin. The income from the diversified economy was 45.1 million yuan on the average. The per unit yield of grain reached 961 jin and that of peanuts 344 jin. Income from agriculture totalled 219 million yuan, of which 117 million yuan came from the collective diversified economy, 53 percent of the income from agriculture. The average distribution for each person reached 213 yuan. [SK240054 Jinan Shandong Provincial Service in Mandarin 2300 GMT 22 Aug 82]

JU COUNTY GRAIN PRODUCTION--Since the third plenary session, Ju County, Shandong Province, has taken on a new look. Comparing 1978 with 1981, grain output increased from 520 million jin to 610 million jin; income from the diversified economy, from 62 million yuan to 133 million yuan; and per capita distribution, from 57 yuan to 116 yuan. [SK291020 Jian Shandong Provincial Service in Mandarin 2300 GMT 28 Aug 82]

PROVINCIAL AFFORESTATION--Shandong Province scored a remarkable achievement in afforestation during the rainy season. The province afforested 94,000 mu of land and grew 33,900 mu of saplings, an increase of 81.1 percent and 100 percent respectively over the corresponding 1981 period. The province also built 14,000 li of roads in mountainous areas. [SK281027 Jinan Shandong Provincial Service in Mandarin 2300 GMT 27 Aug 82]

FARM MACHINES--Shandong Province has witnessed good farm machinery development since the third plenary session. By the end of 1981, farm machines throughout Shandong Province totaled 20 million horsepower, an increase of 40 percent over 1978. The number of tractors for agricultural use in 1981 was 63 percent more than in 1978. [Jinan Shandong Provincial Service in Mandarin 2300 GMT 26 Aug 82]

CAPITAL CONSTRUCTION--Thanks to the national economic readjustment policy, Shandong Province has accelerated its capital construction over the past 3 years. The province's capital construction investments from 1979 to 1981 totaled 7 billion yuan. During the 3 years, 3,888 large, medium-sized and small projects were completed and put into operation, which enabled the

province to increase fixed assets by 5.2 billion yuan. In the course of readjustment, the province reduced capital construction investments by 2.2 billion yuan in the 3 years. It also adjusted the investment orientation. The investments in nonproductive projects, such as housing and other projects for culture, education, public health and urban construction, amounted to 35.3 percent of the total capital construction investments in 1981 as against 17 percent in 1978. The province also adjusted the investments in heavy and light industries. Investments in heavy industrial capital construction declined from 52.3 percent in 1978 to 41.49 percent in 1981 and those for light industry increased from 8.17 percent in 1978 to 16.8 percent in 1981. The investments in energy construction in the past 3 years were 2.2 billion yuan, 31.4 percent of the total investments. Because of this, the province increased its coal cutting capacity by 4 million tons, its crude oil exploitation by 3 million tons, and its power installed capacity by 780,000 kilowatts. [SK290259 Jian Shandong Provincial Service in Mandarin 2300 GMT 26 Aug 82]

RURAL PEOPLE DEPOSITS--Over the past 3 and 1/2 years, rural people in Shandong Province have scored an over 200 percent increase in bank deposits over the sum accumulated in the 28 years before the third plenary session of the 11th CPC Central Committee. According to statistics, since the third plenary session, the number of households that have bank deposits has increased from 40 percent of the provincial total farming households in 1978 to over 80 percent at present. Of 124 municipalities and counties throughout the province, 13 municipalities and counties have scored over 100 yuan of per capita deposit. The deposit sum of Yantai Prefecture accounts for a third of the provincial total figure in this regard. [SK181048 Jinan Shandong Provincial Service in Mandarin 2300 GMT 17 Aug 82]

HOUSING DEVELOPMENT--Both rural and urban areas in Shandong Province have invested more money on housing construction. By constructing houses in a unified way with state funds, money raised from small and medium units which do not have the financial ability to build houses on their own and proceeds from sales of marketable houses, the province constructed urban housing totaling 14.76 million square meters in 1979-1981. Some 7.68 million square meters were in the nine cities of Jinan, Qingdao, Zibo, Zhaozhuang, Yantai, Weifang, Dezhou, Jining and Weihai. [SK212309 Jinan Shandong Provincial Service in Mandarin 2300 GMT 20 Aug 82]

GRAIN, INCOME--All the 410,000 basic accounting units in rural areas of Shandong Province have implemented the production responsibility system. Thanks to the system, new records were set in grain, cotton and peanut output despite serious drought for many years. The province's total grain output in 1981, in which the drought was the most serious, was the third highest since the founding of PRC. Compared with 1978, its 1981 cotton output increased by 340 percent and peanut output, 47.9 percent. Per capita peasant income from both collective and household sideline production was 189.7 yuan in 1981. Commune members' savings deposits totaled 2.478 billion yuan in 1981. Rural commodity retail sales in 1981 were 9.807 billion yuan, 57.7 percent more than in 1978. [Jinan Shandong Provincial Service in Mandarin 2300 GMT 27 Aug 82]

AQUATIC PRODUCTS--Shandong Province has achieved good results in developing aquatic products since the third plenum. In the first 6 months of this year, its aquatic product output was 233,500 tons, an increase of 10.9 percent over that of the corresponding 1981 period. Water areas for breeding aquatic products have expanded to 1.8 million mu so far, 170 percent more than in 1978. Per capita income of the 609 fishing production teams in the province increased 28 percent annually in the past 3 years. In 1981 it is 469 yuan, 146 yuan more than in 1978. [SK301008 Jinan Shandong Provincial Service in Mandarin 2300 GMT 29 Aug 82]

WHEAT ACREAGE--In order to contribute more cotton and wheat to the state, Dezhou Prefecture decided to expand wheat acreage to 5 million mu this year from last year's 4.2 million mu. The prefecture contributed over 3 million dan of marketable cotton last year, averaging 60 jin per head. The prefectural CPC Committee recently studied the seventh plenum communique and decided that the prefecture had failed to deliver an adequate amount of wheat to the state. [SK252332 Jinan Shandong Provincial Service in Mandarin 2300 GMT 24 Aug 82]

COMMUNE-RUN ENTERPRISES--Since the third plenum of the party Central Committee, income of commune- and brigade-run enterprises throughout Shandong Province has increased at an average rate of 10.6 percent a year. In the first half of 1982, income reached 3.25 billion yuan, an increase of 23.6 percent over the corresponding 1981 period. Meanwhile, some machinery enterprises have been closed down, suspended, merged or transferred to other units because their products do not meet market demand or they have high energy consumption and high production costs. The proportion of machinery enterprises in the number of commune- and brigade-run enterprises as a whole dropped from 34.1 percent in 1981 to the present 28.9 percent, however, that of light and textile enterprises increased from 41.5 percent to 52.5 percent. In 1981 these enterprises consumed 305 million yuan on supporting agricultural production, 530 million yuan on commune members' distribution and 600 million yuan on wages for commune members working for these enterprises. In addition, 270 million yuan were used to develop welfare projects. [Jinan Shandong Provincial Service in Mandarin 2300 GMT 19 Aug 82]

RURAL, URBAN MARKETS--Rural and urban fairs in Shandong Province have seen brisk business since the third plenary session. The retail sales of commodities in 1981 reached 16.4 billion yuan, an increase of 6 billion yuan over 1978 or an average annual increase of 16.4 percent. Except for some popular-brand products, the supply of meat, poultry, eggs, vegetables, fruits, sugar, cigarettes and wine has also pronouncedly increased. In 1981, service units run by the state, the collectives and the individuals increased 250 percent over 1978, of which service units run the collective increased 70,000 and those run by the individuals 200,000, a supplement to the shortage of state service units. [Jinan Shandong Provincial Service in Mandarin 2300 GMT 22 Aug 82]

CSO: 4007/583

SHANGHAI FOOD SUPPLIES CALLED AMPLE

OW050820 Beijing XINHUA in English 0702 GMT 5 Sep 82

[Text] Shanghai, September 5 (XINHUA)--Food is in ample supply in China's largest city of Shanghai as a result of more supplies being shipped in from other parts and increased agricultural and sideline production in the suburbs, according to the municipal Commercial Department.

This year, the department said, the city's more than five million urban residents will consume more vegetables and other non-staple foods than last year.

Each urban resident ate a little less than half a kilogram of vegetables a day in the first eight months of this year, more than last year. They also had more eggs and poultry.

Under the policy of suburbs serving the urban area, peasants have boosted vegetable and non-staple food production. From January through August of this year, peasants supplied the urban market with one million tons of vegetables, 50 percent more than in the same 1981 period, and 39,000 tons of eggs, an increase of 12,500 tons.

In the first half of 1982, the department said, Shanghai's retail sales rose 3.2 percent above the same 1981 period. Food sales went up 7.2 percent over the same period in 1981, which saw an 11 percent increase over the previous year.

The brisk food market is also manifested in unrationed supply of such food items as granulated brown sugar, duck eggs and some soybean products, all of which were rationed previously.

This year, the department said, Shanghai residents also have a better supply of beer and cold drinks, which used to be in short supply.

In addition, prices of melons, fruits and refined sugar have remained stable since the beginning of this year, according to the department. As a result of plentiful supply, chickens, ducks and pork were sold at reduced prices for a period of time.

Shanghai people ate more watermelons this summer than any previous year, the department reported. In the first half of July, urban residents consumed 75,000 tons of watermelons, averaging one kilogram per capita a day. "My family of three had about 50 kilograms of melon this summer," a woman told XINHUA.

Other fruits such as loquats, peaches, pears and pineapples are also in ample supply this summer.

For the customers convenience, most of the city's 100 food markets have added poultry and meat stands and will help kill fowls and remove the feathers.

CSO: 4020/168

SHANGHAI OFFERS MINORITIES MORE PRODUCTS

OW110308 Beijing XINHUA in English 0240 GMT 11 Sep 82

[Text] Shanghai, September 11 (XINHUA)--Shanghai, China's largest industrial city, has turned out 23 million yuan worth of products for minority nationalities in the first eight months of 1982, meeting its annual quota, according to the city's Industrial Department.

This figure represents a 15 percent rise over the entire 1981 figure, the department said. The products--in 100 varieties--include knitwear, georgette, georgette velvet, red cotton carpets, bath towels, pure silk sheets, cotton stockings, nylon lace trimmings, overshoes, hand-operated sewing machines and aluminium pots, as well as non-staple foods for the Hui nationality.

With 400 factories now undertaking to produce goods for minority people, Shanghai exceeds Beijing and Tianjin in both the amount and variety of products delivered to national minority areas. The municipality's products go to 14 provinces and autonomous regions across the country, including Yunnan, Guizhou, Xinjiang, Tibet and Inner Mongolia where minority people live in communities.

The Shanghai No 2 Silk Printing and Dyeing Mill has alone produced 140,000 meters of georgette with printed velvet flowers for the Xinjiang Uygur Autonomous Region since this year, exceeding the total volume Shanghai produced for minority nationalities in 1981. The mill, in a bid to improve quality and variety of its products, has sent technicians to nationality areas to solicit buyers opinions.

This year, the Shanghai No 1 Sewing Machine Factory established direct contacts with Xinjiang, Tibet and Inner Mongolia, and endeavors to produce hand-operated, portable sewing machines for herdsmen there.

In addition, the city's Industrial Department said, some Shanghai factories are also engaged in producing gold and silver ornaments for national minorities, such as earrings, ankle bracelets and hair clasps, as well as medicinal herbs.

China's 55 minority nationalities account for six percent of the country's total population, and are scattered in 50 to 60 percent of its land surface. The state has given special priority for materials and funds to developing national products since 1979. According to statistics from 21 provinces, municipalities and autonomous regions, the total output value of nationality products this year is expected to top 400 million yuan, an 11 percent increase over 1981.

CSO: 4020/168

'SHANXI RIBAO' ON SPECIALIZED, KEY HOUSEHOLDS

HK280432 Taiyuan SHANXI RIBAO in Chinese 21 Aug 82 p 1

[Editorial: "A New Thing That Merits Great Attention--On the Development of Rural Specialized and Key Households"]

[Text] With the establishment of the agricultural production responsibility systems, a large number of specialized and key households have emerged in our province's countryside. They are generally referred to as households that have become well off through labor. This is a new thing. It is an embryonic form of specialized commodity production and an interim form of the specialized and socialized production in the countryside. It will bring about a series of changes and merits our great attention.

In comparison with self-sufficient production, commodity production is much more progressive. At present, our agricultural production is basically a semi-self-sufficient economy. Both division of labor and specialized production have not been well developed, and efficiency in commodity production is low. After deducting those to be used by the peasants themselves, the agricultural and sideline products turned over to the state are very few. Without the full development of socialist commodity production and commodity exchange, the peasants will not be able to become better off and the modernization of agriculture in our country cannot be realized. The specialized production and commodity production promote each other. The development of the former will naturally promote the development of the latter, and vice versa. At present, more than 70 percent of the production teams in our province are practicing the contract system. This is a very effective form of the responsibility system. By practicing this responsibility system, the phenomenon of "eating out of the same big pot" has been changed and the commune members have really become masters and have really been granted the decision-making power in production and management. This form of responsibility system will continue to exist for a long time in the future. However, the contract system should also be developed along with the development of production so that it can become more perfect and be more advantageous to the development of production, as well as to the state, the collective and individuals, and win more support from the peasants. We must not be satisfied with the natural economy, which is characterized by self-sufficiency and "being small but perfect," and rely on it for a long time.

In other words, the contract system must be developed in the orientation toward specialization and socialization. The emergence and development of the specialized households have resulted in separating a part of the peasants from the "small and perfect" natural economy. They have been separated first from agriculture and planting, and then from animal husbandry and other trades. Specialization must gradually be realized in all trades and professions. At the same time, specialization itself also requires socialization, under which all trades and professions support and serve each other. Then the self-sufficient natural economy will be changed into the socialist commodity economy. In this sense, we may say that the emergence of the specialized and key households is a great breakthrough. It has a bright prospect.

The emergence of the specialized and key households in the countryside is not an accidental phenomenon. Since the establishment of the agricultural production responsibility system of fixing output quotas for each household and assigning households full responsibility for task completion, the peasants have been granted more decision-making power and their enthusiasm has been brought into play. As a result, in a rather short period of time, the problem of food and clothing of most peasants has been initially solved, and there is surplus labor in the countryside. What the peasants demand is not merely enough food to eat, but also more money to spend. They have increasing enthusiasm for developing the diversified economy and promoting commodity production. Hence, the emergence of a large number of specialized and key households. So, this is a natural result of practicing the responsibility systems. It is a fresh flower which has grown up on the soil of the agricultural production responsibility systems. Its growth and development will certainly promote the consolidation and improvement of the responsibility systems.

Some comrades doubt whether the specialized and key households are of the socialist nature. They hold that encouraging their development means encouraging the individual economy. This is not correct. Household management is a form of management in the socialist collective economy. Whether it belongs to the individual economy or the collective economy, and whether it is of the socialist or capitalist nature, this cannot be judged by the form of labor, but must be judged by the ownership of the means of production and the distribution of products. Cars are driven and planes are piloted by man, yet we cannot say that they are of the capitalist nature. In the slave society, people worked together, but we cannot say that it was a socialist society. With regard to the economic attribute, since the specialized households have a contract relationship with the collective and are new forms of the responsibility system, they are of the socialist nature. These households, which are independently managed, have to hand in to the production teams the accumulation funds, public welfare funds and management fees, and their production and sales are related with those of the state and the collective. As to the key households, which contract the fields under the responsibility of the collective and are simultaneously engaged in household breeding, planting or other industrial and sideline production, since they are closely related with the collective economy, accumulate funds for the collective economy and sell their products to the state in accordance with tasks assigned to them, they are members of the collective economy rather

than the individual economy, and are of the socialist nature. Household production can be specialized, and the production of the production teams can also become "small and perfect." It seems that under the concrete conditions in our country, even when agricultural production is specialized and socialized in the future, it is still quite possible that production will be managed by households and the household and group contract systems will continue to be practiced. We must not judge new things by old standards and always stick to the "leftist" ideas.

It has not been long since the specialized and key households were developed in our province. However, their advantages can easily be seen. 1) They blazed a new path for a number of peasants to get rich before the others. The goal we are striving for is for all to get rich. However, this does not mean that all people can become rich at the same time. Only when some people have become rich before others can more and more people become rich. 2) They have found a new way for the development of the diversified economy and have aroused the enthusiasm of more people in this respect. With the development of the specialized and key households, manpower and natural resources as well as talented people can be more effectively tapped and used. Both labor productivity and commodity production can be raised, and the range and quality of production can be further developed. 3) They have promoted the popularization of agricultural science and technology. With the development of the specialized and key households, which are motive forces in learning and applying science, traditional experiences can be further developed and advanced scientific knowledge can be popularized. The peasants are able to learn from them and raise their own scientific and technological level. Thus, the entire field of agricultural production will be greatly improved. 4) They have strengthened the ties between the party and the peasants. The specialized and key households have wholeheartedly supported the party's line, firmly carried out the party's principles and made more contributions to the state and the collective by getting rich faster than the others. They are examples for the broad masses of peasants. Their prestige among the peasants embodies that of the party's line and policies. With their personal and exemplary practice, they have strengthened the party's ties with the peasants. As a result, the party's line, policies and principles have been implemented better. Of course, since the specialized and key households are new things which emerged not long ago--and we still do not have enough experience--it is not strange that there are various problems on their road of advance. What we should do is to pay attention to and encourage their development, help them in production and offer necessary guidance so that they can develop more quickly and healthily. At present, many party organizations have attached importance to this problem. Our paper has also carried some articles and reports in this regard. We hope that the people's consciousness will be further raised, more measures will be adopted and a more solid job will be done in this respect.

CSO: 4007/583

WAYS TO INCREASE SOYBEAN PRODUCTION ANALYZED

Taiyuan SHANXI NONGYE KEXUE [SHANXI AGRICULTURAL SCIENCES] in Chinese No 2,
20 Feb 82 pp 19-21

[Article by Lu Shilin [0712 0013 7207], Shanxi Agriculture University, and
Li Ying [2621 7727], Shanxi Provincial Academy of Agricultural Sciences:
"Suggestions on Development of Shanxi Province's Soybean Production"]

[Excerpts] II. Status and Existing Problems in the Province's Soybean
Production

The area sown to soybeans in Shanxi Province is about 4 million mu, or about 6 percent of the area sown to crops. In 1975, it accounted for 1.83 percent of the area sown to soybeans nationally, and output amounted to 1.99 percent of the national total. It does not hold an important position in terms of soybean production for the country as a whole. Most soybeans are marketed locally and the commodity rate is low. Shanxi Province extends across more than 6 degrees of latitude from south to north and is an intersection zone for spring and summer soybeans. The terrain is complex; there are abundant soybean varieties to meet varying conditions, and more than 700 local varieties are currently in existence.

The current main problems in the province's soybean production are contraction of the area sown, not very high per-mu yields, and a decline in total output. A look at statistical data for the 30-year period 1949-1978 shows only 1,734,600 mu planted in 1978, 1,093,400 mu less than in 1949, and 5,463,000 mu less than 1954 when the area planted was greatest, meaning a 76 percent reduction. The 30-year average yield was 110.8 jin per mu. During 12 years, average yields were less than 100 jin per mu; during 15 years, average yields were between 100 and 140 jin per mu, and in only 3 years did yields average above 140 jin per mu. In 1977, the maximum yield year, yields were 192 jin per mu, while in 1972 they were only 84 jin per mu. The total annual average output during the 30 years was 408 million jin. The highest year was 1964, with 654 million jin, and it declined to 183 million jin in 1972. The average annual per capita output was 36 jin in 1964 and 16 jin in 1972.

III. Path for Development of the Province's Soybean Production

(1) Guaranteed Planting Area. In order to satisfy the people's needs, a gradual return to the 7-8 percent proportion of total area sown to crops, i.e.

5-6 million mu, is entirely necessary and appropriate. Expansion of the soybean growing area requires various methods including spring sowing, summer sowing, growing as a single crop, and intercropping. In some arid places that get little rain, where the soil is poor, where population is small relative to available land, and in places where corn and wheat yields are not high, the growing of soybeans as a single crop may be expanded. In areas that produce profuse amounts of corn, the intercropping of soybeans and corn should be advocated. As a result of the intercropping of soybeans and corn, the soybean growing area of the Fengcun production brigade in Yuncheng County increased from 252 mu in 1975 to 685 mu in 1971 [as published; presumably should be 1981], and total soybean output rose from 33,000 jin to 247,000 jin. During the same period total corn output increased from 1.68 million jin to 3.2 million jin. Intercropping of corn and soybeans in the Haocun production brigade in Yuci City produced on average 600 jin per mu of corn and 200 jin per mu of soybeans. Areas that have a 90-day growing season following the wheat harvest can grow summer soybeans. For 4 years the fine varieties farm in Wenxi County has sown summer soybeans, realizing an average 329 jin per mu. In Taigu County, the Nanyang production brigade harvested on average 340 jin per mu from 60 mu of summer soybeans.

(2) Popularization of Fine Varieties. Up until 1960, Shanxi Province grew mostly local varieties, but since 1970 it has bred Jindou Nos 1, 2, and 3. Jindou No 1 is early maturing and bumper yielding; it is highly adaptable, and may be sown in the spring in Yanbei Prefecture and in central and southeastern Shanxi, and it may also be sown in summer in some parts of central Shanxi. It may be grown as a single crop or intercropped. It is one of Shanxi's major fine varieties. The plants of Jindou No 2 are compact; they grow to equal heights, they are intermediate maturing, and their yields are consistent. They are a fine variety sown in spring in central and southeastern Shanxi and in summer in southern Shanxi. Jindou No 3 is early maturing and suited for spring sowing in Yanbei Prefecture and summer sowing in central Shanxi. The plants of Jindou No 4 have luxuriant foliage, and may be spring sown in central regions of the province and in Linfen Prefecture. South of Yuncheng Prefecture they may be resown following the wheat harvest.

The introduction of varieties is a major way to spread fine varieties rapidly. It is generally acknowledged that the soybeans from the northeast are best. However, because of the sensitivity of soybeans to light, the strong regionality of varieties, the narrow area to which they are suited, and definite requirements for soil fertility, little success has been gained from varieties introduced from elsewhere. For example, southeastern Shanxi introduced "Jin 8-14" from Liaoning Province, and it seemed to be fairly good, but then it failed as usual. Another example was "Zihua No 4" from Heilongjiang Province, which ripened early when sown in summer in southern Shanxi, but did not produce bumper yields. The growing season of "feng di huang" makes it suitable for central Shanxi, but because soil fertility there is inadequate, it cannot make the most of its bumper yield characteristics. The growing season of Qunxuan No 1 makes it suitable for spring sowing in central Shanxi, but the yield from it is not as high as from other fine varieties. Consequently, in introducing varieties, one must keep in mind adaptability both to the growing season and to environmental conditions. In general, introduction of spring sown

varieties from Liaoning and south central Jilin into central and southeastern Shanxi is likely to be successful. Heilongjiang varieties are suited to spring sowing in northern Shanxi, or to summer sowing in central and southern Shanxi. Early maturing varieties from northern Heilongjiang Province frequently mature early but do not produce bumper yields in Shanxi Province.

(3) Improvement in Farming Techniques. Improvement in soybean output requires diligent attention to the following technical measures.

1. Selection of fine varieties. For dry areas with poor soil, selection of varieties with unlimited pod formation, a lot of branching, and that have ovular large- or medium-size beans is best. In places where soil fertility is high and where there is a large amount of rainfall or else irrigation conditions are good, selection of varieties that form a limited number of pods and that have medium-size or large beans that are round or oval in shape is best. The number of days of growth required has to fit in with farming requirements; ripening can be neither too early nor too late, in order to make full use of the growing season. Varieties that have a flowering period that coincides with the rainy season need strong stability. Though small dark bean varieties are characterized by strong adaptability and resistance, most of them lodge, will not tolerate fertilizer, are of poor quality, and produce low yields. They should be gradually phased out in favor of yellow bean types.

2. Suitably close planting. Currently soybean planting density tends to be low, and missing seedlings or cracking of the soil around seedlings is serious. In northern Shanxi, early maturing spring soybeans are best planted at a density of 15,000 to 20,000 plants per mu. In central and south-central Shanxi, late maturing spring soybeans are best planted at a density of 10,000 to 20,000 plants per mu. In southern Shanxi, summer sown soybeans are best planted at a density of between 20,000 and 30,000 plants per mu. In deciding on density, consideration must be given to the characteristics of the variety. Jindou No 3 is suitable for close planting and may be planted 30,000 plants per mu. Jindou No 4 spring sown on dryland may be planted at a density of 10,000 to 12,000 plants per mu or at a density of 8,000 plants per mu on wetland. It may be multiple sown on wetland at a rate of 10,000 plants per mu.

3. Increase in soil fertility. Low soybean yields are closely related to poor soil fertility. Return to the fields of stalks is recommended, as is the spreading of organic fertilizer. Soybean root nodule nitrogen fixation cannot satisfy the total soybean needs for nitrogenous fertilizer, much less take the place of fertilization. In fertilizing, attention should be given to improving the effectiveness of root nodule nitrogen fixation. Experiments have shown that results are very good when large quantities of fertilizer are applied to the crop that precedes soybeans, and when fertilization is carried out with a mixture of organic and phosphate fertilizer as a weed fertilizer, with nitrogenous fertilizer being applied during the blossoming period.

4. Appropriate watering. Soybeans grown in wetlands require watering to provide sufficient basic soil moisture to assure full stands. They require saturation with water for blossoming and pod formation in order to increase the number of blossoms and to protect the pods. Restraint should be exercised

in watering young seedlings so as to encourage their resistance to possible future dry weather and so as to guard against lodging during the flowering and pod formation periods because of too much rainfall.

5. Improvement in intercropping farming techniques. In order to get bumper harvests from both corn and soybeans when they are intercropped, it is necessary to make sure that conditions are good for the penetration of light to the soybeans, and that soil fertility conditions are good for the corn. Corn varieties should have short stalks and large ears producing high yields. Soybean varieties should tolerate shade and resist lodging, and individual plants should have good yield characteristics. Generally speaking, they should not be planted too close together so as to be able to make full use of individual plant potential for increased yields. In determining proportions to be planted, the basis should be the local economic positions of corn and soybeans, and soil conditions.

6. Improvement in summer sowing farming techniques. Soybeans to be sown in summer should be early ripening varieties that are closely planted, sown as early as possible, cultivated early, and promptly watered and fertilized. Unlike spring sown soybeans, during the seedling stage there is no need to restrain watering against possible future dry weather, but rather the seedlings should be stimulated to grow as soon as they emerge.

7. Serious attention to use of new techniques. One new technique is the use of 2,3,5-triiodobenzoic acid as a soybean growth regulator, which can control soybean growth to prevent lodging and produces definite increases in yields. Use of herbicides such as baicaoxi [4458 5430 7910], trifluralin, lasu [2139 4790] and ligulong [0448 4474 7127] is very effective in eliminating weeds. Leaf fertilization with the trace elements molybdenum and boron is also an effective means of increasing yields.

(4) Prevention and Control of Diseases and Insect Pests. In Shanxi Province soybean pod borers are found everywhere, and in heavy years their damage rate is more than 30 percent. Currently there are no high-yield varieties that are resistant to pod borers. Use of cichlorvos for field fumigation and use of trichogramma are effective in controlling pod borers. Virus diseases infect soybeans everywhere in Shanxi Province. "Shanjin beans" may be used as antiviral stock parents for the breeding of disease-resistant fine varieties.

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CSO: 4007/330

EASTERN SICHUAN FLOOD-FIGHTING EFFORT DESCRIBED

HK150727Chengdu SICHUAN RIBAO in Chinese 6 Sep 82 p 3

[Report: "Responsible Person of Provincial Command for Fighting Floods and Drought Answers SICHUAN RIBAO reporter's questions on flood-fighting in Eastern Sichuan"]

[Text] Eastern Sichuan was hit by rainstorms from mid- to late July this year. People throughout Sichuan Province have shown great concern for flood-fighting in this flood-stricken region. A responsible person of the provincial command for fighting floods and drought recently briefed a reporter of this paper on flood-fighting in the flood-stricken region.

Question: Can you tell me the extent of this year's rainstorms in eastern Sichuan?

Answer: Historical records show that the July-August period in eastern Sichuan has always been a dry period. However, from mid- to late July this year, Daxian, Wanxian and Fuling prefectures were hit by rainstorms and catastrophic torrential rains three times in succession. Generally speaking, the rainfall ranged from 400-600 millimeters during this period. Yuelai commune in Shizhu County received the heaviest rainfall, amounting to 913 millimeters. As to the intensity of the rainfall, we can see that during this period, the heaviest hourly rainfall reached 100 millimeters and the heaviest daily rainfall reached 411 millimeters. These are very rare figures for this region.

The first rainstorm occurred from 15-18 July and primarily hit Tongjiang, Wanyuan, Xuanhan, Kaijiang, Daxian, Kaixian, Wanxian, Liaongping, Yunyang, Zhongxian and Shizhu counties and municipalities. This was followed by more rainstorms and catastrophic torrential rains from 19-24 July and 26-29 July. The third rainstorm, which occurred from 26-29 July, covered a large area as compared with the first and second rainstorms. More than 190,000 square kilometers of land were hit by the third rainstorm. As a result, the daily rainfall in 25 counties (stations) [Zhan 4541] ranged from 100-279 millimeters. As a result of continuous rainstorms and catastrophic torrential rains, torrents of water rushed down the mountains, the rivers overflowed their banks and large areas of eroding hills, cave-ins and land slips were created. According to a preliminary investigation, there are more than 10 eroding hills, cave-ins and mud slips in the three prefectures.

Question: What are the conditions of those areas in eastern Sichuan which have been hit by the natural adversity this year?

Answer: Prior to the arrival of the rainstorms, meteorological departments had timely forecast the rainfall; all areas fully mobilized the masses to make many preparations against floods, and the masses and goods and materials in areas liable to be flooded were transferred to other areas without delay, thus reducing losses. Because the rainstorms broke with tremendous force and intensity and lasted a long period of time, they still caused great losses in people's lives and property; a total of 30 counties and municipalities in Daxian, Wanxian and Fuling prefectures were hit by the natural adversity. A total of 22 counties (municipalities) in the three prefectures were severely hit by the natural adversity. They are: Wanxian Prefecture's Wanxian Municipality, Wanxian, Kaixian, Yunyang, Liangping, Zhongxian, Chengkou, Fengjie and Wuxi; Daxian Prefecture's Daxian, Daxian Municipality, Xuanhan, Kaijiang, Pingchang, Quxian and Wanyuan; and Fuling Prefecture's Shizhu, Qianjiang, Fengdu, Dianjiang, Pengshui and Wulong. A total of 13 county towns, namely, Xuanhan, Daxian Municipality, Kaijiang, Daxian, Quxian, Wanyuan, Kaixian, Wuxi, Shizhu, Dianjiang, Fengdu, Pengshui and Qianjiang, and 184 farms and townships either suffered waterlogging or were submerged. The Shizhu County town was submerged three times. During the third submergence, the average depth of water was 1.5 meters; with the exception of a highland where the county CPC committee, the county people's government and the county people's armed forces department were situated, all other parts of the county town were submerged. The county towns of Daxian, Xuanhan, Quxian, Kaijiang and Kaixian were all submerged twice and suffered great losses. In the three prefectures, there are more than 6.23 million victims of the natural calamity, more than 210,000 people are homeless, more than 240,000 houses either collapsed or were washed away by the flood; over 7 million mu of farmland were hit by the natural calamity, 630,000 mu of cultivated land were destroyed by the flood, over 34 million jin of grain of the state and commune members and more than 20,000 domestic animals were washed away by the flood. The flood also destroyed 12,000 embankments, warehouses and weirs, 1,501 kilometers of irrigation ditches, over 300 hydro-electric power stations and nearly 1,000 highway bridges. The big land slip in Yanyang County's Baota commune is 3 kilometers long and over 1 kilometer wide. Due to the flood, the houses, food stations, breeding farms, retail shops, district hospitals, commune clinics and cold storages belonging to 400 commune households and 29 production teams slipped away through the land slip and some of them slipped into the Changjiang River. Due to the emergence of a big land slip in Zhong County's Shaoxi commune, 6 brigades and 24 production teams suffered the following losses: nearly 2,000 mu of farmland were damaged; 758 houses belonging to 244 households were destroyed, thus making 1,114 people homeless. In the fourth Tuoxiang brigade, Hujia commune, Yuexi District, Kai County, more than 300 mu of land subsided; and 310 houses owned by a commune unit, a supply and marketing cooperative, 10 units and 16 commune households all subsided. It is true that the scale of this year's flood in eastern Sichuan was smaller than the large-scale flood in the province last year. However, as far as eastern Sichuan is concerned, this year's flood has created very serious conditions.

Question: What kind of flood-fighting tasks have been carried out and what achievements have been scored by the flood-stricken region? What is the current situation?

Answer: You have recently issued separate reports on the flood-fighting work in the three prefectures. In short, following the emergence of this flood, the stricken region's party committees and governments at all levels quickly adopted effective measures in leading the struggle against the flood. Responsible comrades of party committees and governments at all levels promptly hurried to the flood-fighting front, and directed and organized work of saving the flood-stricken masses, the goods and materials of the state and the masses' property. PLA commanders and fighters also actively participated in the flood-fighting struggle, thus promptly saving many people who were besieged by the flood. Party committees and governments at all levels promptly sent powerful work teams to the flood-stricken areas to help promote work there, in line with the principle of self-reliance and the principle of offering mutual help among the masses and collectives with the support of the state, they organized and mobilized the masses to quickly carry out the struggle to provide for and help oneself by engaging in production and to rebuild their villages and towns. At present, proper arrangements have been basically made for the livelihood of severely afflicted households, flooded crops have been salvaged, field management has been strengthened and some late-autumn crops have been planted. The great majority of flood-stricken factories, mines, enterprises and shops have restored production and resumed business.

All areas have adopted measures to readjust the economic policy toward severely afflicted communes and brigades and have mobilized the masses' enthusiasm for flood-fighting and for providing for and helping themselves. For example, Xuanhan County, the most severely afflicted county in Daxian Prefecture, has reclaimed and restored more than 22,000 mu of cultivated land which are all sown to sweet potatoes, taros, vegetables and other late-autumn crops.

Question: What measures have been adopted by the provincial authorities to assist the people of the eastern Sichuan's flooded areas in restoring production and rebuilding their villages and towns?

Answer: The provincial CPC committee and the provincial people's government have attached major importance to the flood in eastern Sichuan [words indistinct] on behalf of the provincial CPC committee and the provincial government, provincial CPC committee secretary Yang Rudai and provincial vice governor Liu Haiquan went to the flood-stricken areas to express sympathy and solicitude for the people there and to direct the flood-fighting work. Moreover, the provincial CPC committee and the provincial government sent three groups to the flood-stricken areas to express sympathy and solicitude for the people there and to assist them in their flood-fighting. They also held several meetings of responsible comrades of provincial organs, mobilized all departments to tap the potentials of goods and materials and financial potentials, tried in every possible way to help the flood-stricken areas, and allocated a lot of chemical fertilizers, steel products, cement, gasoline, diesel oil, kerosene and relief funds to the flood stricken areas. Moreover, the provincial agricultural [words indistinct] and promptly granted subsistence loans to victims of the flood. At present, some goods and materials are still

being allocated and transported to the flood-stricken areas. The loving care shown by the provincial CPC committee and the provincial people's government is a great inspiration to people of the flood-stricken areas.

Under the leadership of party committees and governments at all levels, people in the flood-stricken areas have bravely waged an arduous struggle for more than a month and have scored initial achievements in flood-fighting. In today's flood-stricken areas, the masses are in a stable mood, prices remain stable, public order is fine, and the fervent upsurge in providing for and helping oneself by engaging in production is in the making. They have this fighting slogan: flood-free areas try in every possible way to achieve a greater production output; areas hit by minor floods try in every possible way to realize a production increase; areas hit by severe floods try in every way to reduce losses to the slightest degree; and great the victorious opening of the 12th CPC National Congress with achievements in fighting floods and reaping bumper harvest.

CSO: 4007/591

PROVINCE REPORTS ON LOCAL INDUSTRY, AGRICULTURE

HK261110 Chengdu Sichuan Provincial Service in Mandarin 0030 GMT 25 Aug 82

[Summary from poor reception] "According to SICHUAN RIBAO, since the third plenary session of the 11th CPC Central Committee, our province has gradually readjusted the national economy and has maintained a relatively high rate of development in industrial and agricultural production." By the end of 1981, the total industrial output value of the following municipalities and counties, respectively, exceeded 100 million yuan: Luzhou, Leshan, Yibin, Neijiang, Daxian, Wanxian, Mianyang and Nanchong municipalities; and (?Gulin), Jianyang, Jiangjin, Ziyang, Zizhong, Nanchong, Emei, Deyang, Fuling, Jiangyou, Guanghan, Hechuan, Santai, Meishan, Yongchuan, Baxian, Dazu, (?Gong), Weiyuan, Langzhong and (?Yingjing) counties.

By the end of 1981, each of the following offered more than 100 million jin of commodity grain to the state: Mianyang Municipality; and Luxian, Anyue, Deyang, Mianzhu, Anxian, Jiangyou, (?Yuexi), Guangan, Daxian, Duanhan, Bazhong, Dayi, [names indistinct], Baxian, Changshou, Jiangbei, Shuangliu, Jiangjin, Hechuan, Tongliang, Yongchuan, Dazu, Jiangping, [names indistinct], Ziyang, [names indistinct], Hejiang, [name indistinct], Renshou, Meishan, Pixian, Xindu, Guanghan, Pengxian, (?Tongxing) and [name indistinct] counties.

By the end of 1981, each of the following 29 counties' total output value of diversified economy exceeded 100 million yuan: Baxian, Shuangliu, Jiangjin, Hechuan, Tongliang, Yongchuan, Wanxian, Kaixian, Zhongxian, Yunyang, Neijiang, Zizhong, Ziyang, Jianyang, [name indistinct], Luxian, [name indistinct], Renshou, Nanchong, Nanbu, Suining, Santai, Zhongjiang, Pengxi, Daxian, Xuanhan, Bazhong, Dazhu and Quxian.

CSO: 4007/583

TIANJIN

BRIEFS

BANK DEPOSITS--Over the past 3 years Tianjin Municipality has scored a marked increase in the bank deposits of urban and rural people. According to statistics compiled at the end of July, the sum of urban and rural people's bank deposits reached over 940 million yuan, a 590 million yuan and 169 percent increase over the figure of the corresponding 1978 period. The number of households in the municipality that have invested deposits in banks has reached 3.97 million, a 1.97 million family and 92 percent increase over the 1978 figure. These deposits greatly contribute to raising funds used in developing production. [Tianjin City Service in Mandarin 1430 GMT 25 Aug 82]

PEOPLE'S LIVING STANDARDS--Tianjin's people have improved their living standards over the past 3 years. Urban and rural people's total income in 1981 was 50.1 percent more than in 1978. According to a survey of 500 worker families, 1981 per capita cash income for living expenses registered a 38.6 percent [increase] over 1978. Excluding price fluctuations, the actual increase was 28.9 percent. Commodity retail sales in 1981 were 42 percent more than in 1978. Comparing 1981 with 1978, the number of bicycles every 100 households have increased 31 percent, sewing machines, 25 percent, and televisions, 10 times. The people's expenses for food declined from 48.3 percent in 1978 to 41.7 percent in 1981, and those for clothing and other daily necessities rose from 20.1 and 28 percent to 22 and 33.6 percent, respectively. [SK290331 Tianjin City Service in Mandarin 0030 GMT 27 Aug 82]

CSO: 4007/583

REGION DEVELOPS COMMUNE, BRIGADE ENTERPRISES

HK251347 Urumqi Xinjiang Regional Service in Mandarin 1300 GMT 24 Aug 82

[Text] Since the third plenary session of the 11th CPC Central Committee, commune and brigade enterprises have developed enormously in our region. According to the statistics of the Regional Bureau for Management of Commune and Brigade Enterprises, the total income of all the commune and brigade enterprises in our region in 1981 was 313 million yuan, a 56.7 percent increase over 1978. With an average growth rate of 19 percent annually, the accumulated income in the 3 years from 1979 was 950 million yuan. The present fixed assets of the commune and brigade enterprises in the region are 250 million yuan, 25 percent of the total fixed assets of the three levels of the people's communes. At present, they own more than 12,000 various kinds of machines for agricultural production, constituting a major component part of the collective economy. The development of commune and brigade enterprises in our region has increased the state's revenue and supported agricultural and livestock production as well as increased the personal income of the commune members. In the past 3 years, the commune and brigade enterprises have supplied more than 20 million yuan in taxes to the state, invested 64 million yuan directly in agriculture and provided 280 million yuan for distribution to commune members. (Que Er Ze) commune in Hutubi County had not a single commune and brigade enterprise 3 years ago. In the past 3 years, however, it has utilized the local natural resources to establish enterprises, including coal mines and lime and carpentry enterprises. Its income in 1981 reached 680,000 yuan, constituting 48.4 percent of the total income of the three levels of the commune. The labor man-hour distribution to each commune member was raised from 0.6 yuan to 1.6 yuan.

At present, the commune and brigade enterprises in our region are continuously implementing the readjustment policy and earnestly reorganizing the work. They are further perfecting the management system to raise economic returns. In the first half of this year, they earned a total income of some 110 million yuan, an increase of 15.3 percent compared with the corresponding period of last year.

CSO: 4007/583

BRIEFS

COMMENDATION CIRCULAR--The Xinjiang Regional People's Government recently issued a circular to commend the prefectures and units which had overfulfilled their wheat procurement quotas for this year. Seven prefectures, autonomous prefectures and municipalities were commended, including Urumqi, Bayingolin, Kashi, Aksu, Shihezi, Hotan and Bortala; the first, second, fifth, sixth and eighth agricultural divisions of the Xinjiang Production and Construction Corps; 7 units at the district level, including Urumqi and Hami administrative bureaus; 20 counties and municipalities; and 33 farms of agricultural regiments of the Xinjiang Production and Construction Corps. They had overfulfilled their wheat procurement quotas for this year before 25 August. The circular demanded that the prefectures and units which have fulfilled or overfulfilled their wheat procurement quotas for this year continue to sell more wheat to the state and to the prefectures and units which have not yet fulfilled their wheat procurement quotas to help them fulfill their quotas for this year. All places must attach importance to autumn field management in order to reap a bumper harvest of autumn grain. [HK040620 Urumqi Xinjiang Regional Service in Mandarin 1300 GMT 3 Sep 82 HK]

GRAIN, OIL OUTPUT--Since the third plenary session of the 11th CPC Central Committee, the grain and oil production situation in Xinjiang region has been good. The region has overfulfilled its procurement quotas every year. The quantity of grain and oil stored in granaries has exceeded the previous highest records and the livelihood of the people in urban and rural areas has been remarkably improved. The herdsman's standard grain ration has increased from 300 to 380 jin. Pastoral areas which do not cultivate oil-bearing crops will be subsidized with edible oil. The average per capita income of agricultural population in the region has increased by 51.03 yuan. The number of urban households which have surplus grain has increased from 50 percent to some 80 percent. [Urumqi Xinjiang Regional Service in Mandarin 1300 GMT 20 Aug 82]

ANIMAL HUSBANDRY--Since the third plenary session of the 11th CPC Central Committee, animal husbandry in south Xinjiang region has quickly developed. According to statistics, the total number of livestock has increased from 12.1446 million head at the end of June 1978 to 15.0451 million head at the end of June this year, an increase of 23.88 percent. The annual rate of increase was 5.5 percent. [Urumqi Xinjiang Regional Service in Mandarin 1300 GMT 20 Aug 82]

DRYLAND GRAIN PRODUCTION POTENTIAL SURVEYED

Hangzhou ZHEJIANG RIBAO in Chinese 9 Jul 82 p 1

[Article: "Great Potential To Be Tapped in Early Crop Grain Production. Area Amounts to One-Fourth Total Cultivated Area, Yet Output Amounts to Only One-Sixteenth"]

[Text] Editor's Note: Summer and autumn dryland grain constitutes a weak link in Zhejiang Province's grain production. People have for long devoted major attention to the "main chance" production of rice in grain production, and that is very much as it should have been, of course. However, lack of attention to dryland grain production also results in unnecessary losses. In some counties the dryland grain area amounts to almost one-half the total cultivated area, yet dryland grain production has been given no place of importance. Some counties do not even have a single technical cadre in charge of dryland grain. Such a state of affairs differs widely from the requirement that there be no slackening of grain production. Granted that there has to be some equitable arrangements for grain and economic diversification in agricultural production, among various varieties of grain itself, a problem of equitable arrangements also exists. Only when arrangements are appropriate can the strengths of each one emerge, on all around bumper harvest be realized, and the requirements of all parties be satisfied. This problem very much merits attention.

Broad Uses For Dryland Grains With Output Does Not Keep Apace

Not long ago a reader in Shaoxing wrote a letter to this newspaper in which he asked, "Why is it that even people in Shaoxing cannot get the moldy bean curd to eat for which the place is famous?" This city's non-staple food company replied that there are no longer sufficient soybeans and even a clever housewife cannot be expected to cook without rice!

In a similar vein, the managers of six alcohol plants in the province recently assembled in Hangzhou in a difficult quest for ways to find dried sweet

potatoes for use as a raw material. Only 30 percent of the third quarter "ration" has been made ready, and between 70 and 80 percent of all alcohol required in the province is made by them. Were they suddenly to "stop cooking", a chain reaction would certainly occur. Authorities concerned have been forced to consider use of corn to replace dried potatoes to produce alcohol, but this would entail a change in the technological flow process, so further consideration has to be given advantages and disadvantages, gains and losses.

Before a final verdict is in in one place, a livestock feed company is alarmed in another. The corn that is used as the principal raw material for processing blended livestock feeds has never been sufficient to meet needs, and some livestock feed processing plants have had to put up with either feast or famine. Were corn to be shifted to the production of alcohol, the shortage would become even greater. In order to accelerate development of livestock production, the province has decided that it will find a way this year to increase blended livestock feed output by 300 million jin. Right now 60 livestock feed processing plants are under construction. If the corn does not become available, how will it be possible to translate increased production plans into reality?

Though the several examples given above are one-sided, they graphically reflect the shortage in supplies of soybeans, sweet potatoes, and corn.

Maximum annual output in Zhejiang Province of the three summer and autumn dryland staples, soybeans, sweet potatoes, and corn, amounted to 2.76 billion jin or more than 17 percent of total grain production for the year as a whole. Last year output of these three staple crops fell by more than 1.2 billion jin from the year of maximum production, being less than 6 percent of total grain output. [The Chinese regard tubers and pulses as grain.] But the growing area amounted to about 24 percent of the grain growing area. This tremendous drop in dryland grain production means not only that the needs of people's livelihood will not be satisfied, but development of livestock production will be impaired; a shortage of industrial raw materials will be created, and grain production itself will be hurt.

Zhejiang Province presently uses about 2.7 billion jin of grain annually for livestock feed, most of it being paddy. This does not pay at all. Were corn production to be revived to its all-time high level, i.e., to more than 600 million jin, it would be possible to process more than 2 billion jin of livestock feed into blended livestock feed, increasing the return on the livestock feed by 30 percent. In other words, it would amount to a grain production increase of between 700 and 800 million jin. Today this amount of grain is lost.

For many of the products for which the province's industries currently use between 400 and 500 million jin of grain such as for alcohol and monosodium glutamate production, sweet potatoes might be used just as well. Use of potato starch as a raw material produces a high utilization rate at a low cost. However, because some industrial plants cannot be converted to use of this raw material, they have had no choice but to convert to use of husked rice. Such cases have not been few by any means. Were the supply and demand situations in

balance for industrial use of grain, at the very least a saving of several tens of thousand tons of grain could be effected. However, today this amount of grain is wasted.

The province's Langi large green beans, its Pinghuyuan green beans, and its crude soybeans have been long renowned throughout the world for their high protein content and their delicious taste. For each ton of such "famous beans" exported, between 3 and 5 tons of wheat can be gained in return. Formerly we used to export between 3,000 and 4,000 tons of soybeans annually. What a pity that last year we exported none of these famous beans, thus losing up to 10,000 tons of wheat for nothing.

If the 1.2 billion jin drop in dryland grain is figured in another way, it amounts to an annual decrease by more than 2 billion jin of grain, and this amount of grain would require more than 1.4 million mu of "shuanggang [7175 4854] fields" to grow.

Lack of Mental Conception and No Study of Production

But why has the province's dryland grain production declined? Mostly because people do not understand the importance of developing dryland grain production. Quite a few comrades suppose that places that take "miscellaneous grains other than wheat and rice" as key grains are becoming increasingly fewer, so why waste a lot of effort on them. Such a narrow understanding greatly blocks development of dryland production, and low yields and small harvests from dryland fields damage, in turn, the enthusiasm of producers, creating a vicious cycle.

As a result of the lack of serious attention to dryland grain production, for a long time no attention has been given the breeding of superior varieties, and serious regression has occurred. In some places the per hundred grain weight of the renowned Lanqi large green beans has dropped from 35 grams to about 30 grams. Successor varieties that produce high yields, ripen early, and resist disease are even more lacking. Sweet potato varieties Shengli No 100 and Dannong Baipi still carry the burden after 20 or 30 years. Seed production is another weak link. The province's "supreme headquarters" for seed production, Dongyang County, has provided small quantities of poor quality seed corn in recent years, and there is no use even talking about the breeding of the finest hybrid corn combinations, of course. Farming methods are the old ones used during the 1950's and 1960's. For example the plastic film technique for growing seedlings so much used in rice production is seen extremely rarely in dryland grain production. The poor fertility of drylands has also not been improved for a long time. Tuber blight, sweet potato weevils, bean aphids, soybean virus diseases, and corn leaf spot have also occasioned frequent declines in dryland crop production for lack of treatment, shortages of pesticides, or failure to provide prompt prevention and control.

Some policy regulations also do not favor development of dryland grains. In some places, for instance, dryland grain crops are not purchased by the state, with the result that producing areas have much of many kinds to eat, which impairs mass enthusiasm for increasing production of dryland grain.

The sum and substance of the foregoing is that dryland grain production has no place in mental conceptions; little research is done on techniques; arrangements for production are lacking; and encouragement is absent in policies. These are all reasons for the failure of dryland grain production to rise and its continued retrogression.

Numerous High Yield Experiences Exist And Urgently Require Summarization and Promotion

The potential for development of dryland grain production in Zhejiang Province is actually very great. Fall soybeans test planted by the Lanqi County Agricultural Research Institute produced yields of 421 jin per mu, while soybean yields for the province as a whole last year averaged only half this record. In units such as Dongmen Production Brigade in Dajing Commune, Leqing County, wide area growth brought yields of 2,000 jin per mu of dried sweet potatoes (and yields of 3,000 jin per mu from individual plots), while yields of dried sweet potatoes for the province as a whole last year averaged only 721 jin, or one-third. Jianshan Commune in Dongyang County persevered in active promotion of hybrid spring corn producing yields of only 291 jin per mu in 1976, which reached 673 jin in 1979, and 706 jin per mu in 1980 from 120 mu. In 1981, 2,777 mu of spring corn produced a fine harvest of 819 jin per mu, which was 2.5 times the average corn yield for the province as a whole. Were these representative advanced experiences to be promoted, so that similar levels could be attained on one-third of the province's present dryland grain growing area, total output could be increased by 1.2 billion jin.

Drylands lend themselves to intercropping, and the masses also have experience in this regard. Consequently, changing from two crops a year to three or four crops a year in an increase in the multiple cropping index offers yet another great potential for increasing dryland grain output. Representative sampling done at many points on the province's current level of dryland grain production shows it to be one-third lower than from wetlands. When Tianqiao Production Brigade in Jiaotan Commune on Liuheng Island in Putuo County switched from the growing of a crop of wheat and a crop of sweet potatoes each year to a three crop system of wheat, corn, and sweet potatoes, its grain output increased by from 300 to more than 500 jin per mu, and for 8 consecutive years grain yields have exceeded 1 ton per mu. When Tongpu Production Team in Puxi Commune, Ruian County instituted a five crop multiple crop system, yields last year averaged 1,505 jin per mu (figures for beans not being converted to unprocessed food grain) for a 34 percent increase in grain output. They also realized a combination of soil use and soil nurture and increased soil fertility.

In addition, by using odd bits and pieces of land, great prospects exist for increasing the growing of dryland grain. Departments concerned calculate that simply by growing a crop of soybeans on the paths between fields, more than 200 million jin more beans per year could be harvested.

In Zhejiang Province, soybeans and corn are concentrated mostly in the Jinqi hill basin, while sweet potatoes are grown largely in the mountain area of southern Zhejiang. The relative concentration of growing areas makes for the

promotion of new techniques and new varieties. This plus readjustment of certain economic policies to further arouse enthusiasm for production, and support for commune and brigade initial processing of products to increase economic benefits from the growing of dryland grain, and a new situation in dryland grain production would be bound to occur.

9432

CSO: 4007/541

PROVINCE MAKES PROGRESS IN CAPITAL CONSTRUCTION

OW300210 Hangzhou Zhejiang Provincial Service in Mandarin 1030 GMT 29 Aug 82

[Text] Since the third plenary session of the 11th CPC Central Committee, our province has achieved good investment results by readjusting the orientation of investments in capital construction and using construction funds in a more rational way. As a result, investments in fixed assets for light and textile industries, including investments in technical facilities, increased 200 percent over the previous 3 years thereby strengthening power industry development and boosting power generating capacity by 400,000 kw, or one-fifth of the total generating capacity in the province. Our province generated 9.6 billion kwh of electricity in 1981, nearly double that in 1978. Achievements have also been made in capital construction and designing.

Output of high-demand industrial products for daily use also increased greatly after the ratio of investments was readjusted, namely, by increasing investments in light industry, building other facilities and paying more attention to the production of industrial goods for daily use. As a result, compared with 1978, the increase in output in 1981 is as follows: Sewing machines increased by 220,000; bicycles by 260,000; wristwatches by 400,000; television sets by 120,000; light bulbs by 9 million.

In the past 3 years, more new houses were built in cities and towns totaling 8.87 million sq m in floor space for 180,000 workers and staff members. School buildings for institutes of higher learning were also expanded, covering 440,000 square meters. In the meantime, roads, transportation, water supply for daily use and the environment have also been improved in cities for the convenience of the masses.

CSO: 4007/583

BRIEFS

HOG PROCUREMENT UP--As of the end of June, 5,539,300 hogs had been purchased in the province in 58.3 percent fulfillment of this year's assigned quotas, and for a 26,000 head increase over the same period last year. Live hog production in the province was rather good this year with numbers in inventory steadily rising again, and peasant enthusiasm for hog raising being fairly high. The provincial government decided to institute an assigned quota policy beginning this year, which it guaranteed to remain unchanged for 3 years. Implementation by governments in all jurisdictions has been very good. With an increase in live hog procurement, market supplies of pork in the city and countryside within the province have improved. During the first half of the year pork sales were equivalent to 3.86 million head of hogs, 34,000 head more than during the same period last year. At the same time state plan export quotas and transfers to other provinces were also fulfilled. During the off season for supply of pork, business departments and pork cold storage plants everywhere did their best to store pork. As of the end of June, pork stored throughout the province amounted to the equivalent of 1.03 million hogs, an increase over the same period last year of 320,000 head. [Text] [Hangzhou ZHEJIANG RIBAO in Chinese 13 Jul 82 p 1] 9432

XIAOSHAN COUNTY RICE--Xiaoshan County has reaped a bumper early rice crop this year. For the county's total acreage of more than 330,000 mu of the crop, the average unit yield has exceeded 800 jin per mu. [Hangzhou Zhejiang Provincial Service in Mandarin 0400 GMT 24 Aug 82 OW]

CSO: 4007/591

'YUNNAN RIBAO' ON IMPROVING RESPONSIBILITY SYSTEM

HK080801 Kunming YUNNAN RIBAO in Chinese 25 Aug 82 p 1

[Editorial: "Perfecting and Improving the Agricultural Production Responsibility System Are Long-Term Tasks"]

[Text] The forum on the agricultural production responsibility system held by the provincial CPC committee put forward the task of making great efforts to initiate a new situation of perfecting and improving the responsibility systems. This is an important guiding ideology and working principle for further perfecting the responsibility systems.

In the past 3 years, in following the party Central Committee's important strategic policy on accelerating agricultural development since the 3d CPC Plenary Session, and continuing to proceed from practice and guidelines according to different classifications, the agricultural production responsibility system in our province has developed actively, steadily and healthily. Facts have proved that, for the whole province practicing responsibility systems in various forms, with stress on the system of each household being responsible for task completion, is in line with the characteristics of our province, which is situated in the border areas, has many mountains and few plains, is inhabited by many nationalities, and whose population is scattered and commodity economy underdeveloped. It suits the actual situation of the management level and productive force level of our province, and reflects the demands of the objective economic laws. The establishment and development of responsibility systems has changed the phenomena of excessive centralism in management, an excessively single-product economy, and the leadership method of merely relying on administrative commands, and we have surmounted the disadvantages of the phenomena of a "loud noise" in work and "everybody eating from the big bowl" in distribution, thus greatly arousing the productive initiative of the peasants and breaking a new path for developing production and rapidly enlivening the economy.

The institution of the responsibility system has enabled the rural economy to gain motive force from within, and has been warmly welcomed and supported by the peasants of various nationalities. It will be of far-reaching influence to the development of the rural economy, politics, culture and other areas. In order to vigorously promote the development of the rural commodity economy

and to further raise the level of the productive force, we need to further perfect the responsibility system and make tremendous efforts in this respect.

At present, we need to further grasp the perfection of responsibility systems, because first of all this large-scale transformation involves hundreds and thousands of families, and due to time restraints, lack of experience and rapid development, the ideological understanding and leadership work of our cadres fall short of the demands, there are bound to appear various kinds of problems. Through the efforts made in the past 6 months, we have gained great achievements in solving these problems, but there are still many problems remaining caused by uneven development. We cannot underestimate these existing problems. In the current favorable situation, we must correctly treat these problems. If we are self-satisfied and slack and careless regarding our achievements, or turn a blind eye towards these existing problems, then we are bound to suffer losses. Only by correctly treating the existing problems and being determined to make great efforts in solving them can we initiate and perfect a new situation in the responsibility systems.

Another important and fundamental reason for the stress on further perfecting the responsibility systems is that the responsibility systems are constantly developing along with the needs of the production development. The responsibility systems in their various forms possess both adaptability and limitation and they must go through a process of gradual perfection. Perfection is relative, not absolute. A thing may be perfect today, but tomorrow, with the development of production, the masses may find it imperfect and needing improvement, therefore another new task for perfecting and creating new experiences is put forward. This kind of transformation is determined by the objective law that relations of production must suit the development level of the productive force, and this transformation would be greeted by the masses. The correct attitude is that we must persist in historical and dialectical materialism and constantly promote the responsibility systems. Those who consider the perfection of responsibility systems just as solving some remaining problems are one-sided in their viewpoint. All kinds of responsibility systems need perfecting and improving. We cannot regard the perfecting of responsibility systems as only a perfection of a certain kind of responsibility system, and we cannot attribute the problems of rural areas to the responsibility system or even consider the perfecting of a responsibility system as correcting a deviation. In the course of perfecting the responsibility systems, it is necessary to have a clear and unified understanding of the concepts of "centralization, division of work, responsibilities, specialization and linkage," and solve well the existing problems of centralization and division of work.

At present, we have proposed emphasizing the perfecting of responsibility on establishing and perfecting the responsibility system for diversified economy. This brings into full play the superiority of our province and promotes the rapid development of rural commodity production and the needs for overall prosperity of the rural economy, and is also a pressing demand of the masses.

We must be aware that diversified economy at present is a weak link. Diversified economy comprises a variety of items, and the conditions are rather complicated; its responsibility system is far more complex than the responsibility system for farmland. To solve this problem is certainly no easy job, and it cannot be accomplished in one move. Only by having a very clear guiding ideology and rapidly establishing and perfecting the responsibility of diversified economy can we get quick results. Putting the stress on grasping the establishment and perfection of diversified economy responsibility systems certainly does not mean that the handling of the remaining problems of the farmland responsibility system is of less importance. The remaining problems of the farmland responsibility system should be conscientiously and seriously handled in time and in accordance with the existing policy of the party. In addition to perfecting the farmland responsibility system, we must also, at the same time, establish and perfect various kinds of scientific and technical responsibility systems.

The implementation of the responsibility system is a great readjustment in the agricultural relations of production based on maintaining public ownership of the means of production; it is far more complicated and arduous than in the period of running agricultural cooperatives. New problems and conditions are emerging one after another and they need to be promptly studied and solved. Therefore, party committees at all levels should act as they did in the cooperativization period, and concentrate all energy on earnestly improving and strengthening leadership. Under the conditions of arduous work and pressure of time in rural work, it is particularly important that the party committees at various levels inspire their enthusiasm, arrange unified planning, stress the main points, personally engage in practice, strengthen investigation, sum up the experiences of the masses, respect the initiative of the masses and adroitly guide action according to circumstances. There are some leading cadres who seldom go to the grassroots units and seldom make any investigations. They attend endless meetings all day long. There are also some departments that are lax in discipline. This kind of phenomena must be thoroughly changed. Energetically training grassroots cadres and sending work teams to the grassroots in a unified way are effective measures to perfect the responsibility system and do well in the various tasks in rural areas. But leading cadres must personally take up the matter, they must personally lead the work teams to go to the grassroots and not just assume command without going on the expedition and let things drift. Perfecting the responsibility system is the task of the whole party, and we cannot consider it as the work of a certain department. The establishment and perfection of the responsibility system affects all walks of life. Commerce, finance, supply and marketing, industry and communications, culture and education, public health, family planning and the departments of the party and government should go into the forefront of agriculture, conscientiously investigate problems and effectively improve their work in time to suit the new conditions and solve new problems.

CSO: 4007/591

RURAL, URBAN MARKETS FLOURISHING, STABLE

HK20414 Kunming Yunnan Provincial Service in Mandarin 1100 GMT 22 Aug 82

[Summary] Since the third plenary session of the 11th CPC Central Committee, rural and urban markets throughout the country have been unprecedentedly prosperous. Agricultural production and the diversified economy as well as production of daily consumer goods have greatly increased and commodity prices are stable as a whole. In the wake of agricultural and industrial developments, the purchasing power of the people in rural and urban areas has increased.

In 1981, the turnover of commodities was 38.6 percent more than in 1978. Sales of food, clothing and daily necessities significantly increased. Comparing 1981 with 1978, the volume of meat supplies increased by 44.1 percent. On average, the consumption of meat per capita increased from 17.7 jin in 1978 to 23 jin in 1981. Sales of sugar increased by 12.8 percent; cigarettes by 52 percent and wine by 73 percent. Comparing 1981 with 1978, sales of bicycles increased by 51.5 percent, wristwatches by 94.7 percent, sewing machines by 110 percent, transistor radios by 210 percent and television sets by 1,000 percent. With regard to daily necessities, which were in short supply in the past, such as soap, thermos flasks and iron wire, there is now ample supply. Over the past 2 years, since various economic sectors, circulation channels and management methods have been implemented, commerce of various economic sectors in rural and urban areas has rapidly developed. In 1981, retail networks for daily commodities and for food and drinks amounted to some 28,600 outlets, an increase of 230 percent over that of 1978.

The development of rural fairs and urban sideline production markets is very fast. By the end of 1981, some 2,275 fairs in rural and urban areas had been restored. The volume of business increased by 170 percent over that of 1978. At present, business in rural and urban areas is very prosperous, supply is abundant and commodity prices are stable.

CSO: 4007/583

AUTHOR: ZHANG Xiaolong [1728 2556 7893]

ORG: Wheat Research Laboratory, Sichuan Agricultural College

TITLE: "Study on the Grain Filling of Wheat"

SOURCE: Beijing ZHUOWU XUEBAO [ACTA AGRONOMICA SINICA] in Chinese No 2, 1982 pp 87-93

TEXT OF ENGLISH ABSTRACT: Results of two-year study on the grain filling of wheat showed in the following:

The pattern of the growth of wheat kernel presented in a S-shaped curve. It consisted of three stages of seed formation, filling and ripening. The dry weight of kernel varied with different varieties and with the same variety in different years. It was mainly influenced by the filling rate and the duration of the filling stage. However, filling rate showed much influence on the increase of kernel weight than that of the duration of filling.

The dry weight of kernel had a significantly positive correlation with the maximum value of the dry weight of the vegetative organ per kernel (DWVOK), but negatively correlated with the reduction of DWVOK. Therefore, the filling index of kernel could be used as a criterion to measure this relation, as it accurately reflected the characters of the accumulation of the nutritious substance of plant and its

[continuation of ZHUOWU XUEBAO No 2, 1982 pp 87-93]

transformation to kernels to determine the condition of the grain filling and its potentiality for filling.

When the sink was not contented with the source, the kernel showed wrinkled. Using filling index to determine the balance of source and sink, the reliable data could be obtained. It showed that between the ideal balance (limit = 1) and the absolute balance (limit = 0), the greater the filling index, the higher the balance of the sink and the source, and the fuller the seeds. The filling index had little relation with the maximum volume of sink, but significantly correlated with the maximum value of DWVOK.

The author expresses his gratitude to associate professor LI Yaoquan [2621 1031 2938] for his participation and counsel in work done in late 1979; the author also thanks selected students from Nong 77 class for their participation in work done in 1980.

AUTHOR: WANG Liquan [3076 7787 3123]
ZHU Hanru [2612 3352 1172]
LIANG Zhuqing [2753 4554 7230]
ZHENG Yiren [6774 3015 0088]
GUAN Qiliang [4619 0796 5328]
YUAN Miaobao [5913 1181 5508]

ORG: WANG, ZHU, LIANG, and ZHENG of Zhejiang Agricultural University; GUAN and YUAN of Department of Biology, Hangzhou University

TITLE: "A Preliminary Study on Intergeneric Crosses Between Wheat Variety AR. Chinese Spring (6x) and Hordeum Bulbosum (4x)"

Source: Beijing ZHUOWU XUEBAO [ACTA AGRONOMICA SINICA] in Chinese No 2, 1982 pp 95-101

TEXT OF ENGLISH ABSTRACT: Some intergeneric hybrids between wheat variety Chinese spring ($2n = 6x = 42$) and *H. bulbosum* ($2n = 4x = 28$) were obtained by dripping GA₃ to the wheat stigmas one day after pollination and then by culturing the young embryos in vitro 12-16 days later. It was found that the hybrids were self-sterile, while in backcross with monosomic 5B of Chinese spring as the male parent, three B₁F₁ plants were obtained. The morphological characters of F₁ and B₁F₁ manifested an apparent hybrid vigor. Both the shape and structure of spikes of B₁F₁ were similar to those of F₁, the long and awned spikes were like the male parent, and the polyanthous spikelets like the female parent. The

[continuation of ZHUOWU XUEBAO No 2, 1982 pp 95-101]

awns of F₁ and B₁F₁ were shorter than those of their male parent. The flag leaves of B₁F₁ were longer than those of F₁ and their parents evidently. Furthermore, both of F₁ and B₁F₁ showed resistance to *Fusarium* spp. and *Erysiphe graminis* as their male parent. There were 24-30 chromosomes in a number of pollen mother cells of F₁ at metaphase I; while there were 45-49 chromosomes (20-21 pairing disomes and 3-7 monosomes) in most pollen mother cells of B₁F₁ at diakinesis. When B₁F₁ was self- or back-crossed to either parent, a partial fertility was obtained. It is expected that an alienaddition line of wheat may be obtained by selfing and backcrossing through generations.

The authors express their thanks to the Crop Institute of the Chinese Academy of Agricultural Sciences for providing parental pairs of Chinese spring wheat monosome 5B variety seeds; the authors also thank the Institute of Genetics, Chinese Academy of Sciences, for providing *Hordeum bulbosum* seeds.

10424
CSO: 4011/225

Experimentation

AUTHOR: SUN Hanzhong [1327 3352 1813]

ORG: Jinjiang Prefecture Institute of Agricultural Sciences

TITLE: "Hybridization Breeding of Sweet Potato and the Inheritance of Its Major Properties"

SOURCE: Fuzhou FUJIAN NONGYE KEJI [FUJIAN AGRICULTURAL SCIENCE AND TECHNOLOGY] in Chinese No 4, 10 Aug 82 pp 1-5

ABSTRACT: Following the successful breeding of Jinzhuan Nos 7, 8, and 9 in the middle 60's, the author and colleagues have again bred out 7 sweet potato varieties which began in 1974 to participate in tests all over the province. Demonstrations in the perfection have proved these new varieties to be higher yielding than the control. For the purpose of further improving the breeding efficiency, the authors have observed the offsprings of some hybrid groupings. As sweet potato is a cross-pollinated plant, the inheritance of its characteristics is a relatively complex situation and a large quantity of segregation is involved. The emergence of some characteristics remains closely related to the parents of the hybrids, however. Regardless of the parents, there are the 3 types of segregated offsprings of high, medium, and low yielding to demonstrate the non-cumulative effect, yet when one of the participant in the grouping is a high yield variety, the probability of high yielding offspring is higher. A Japanese scientist suggested that random hybridization may reduce the negative proportional relationship between the root tuber yield and the starch content. The author observed that the rate of dried sliced tuber and the starch content are in a

[continuation of FUJIAN NONGYE KEJI No 4, 1982 pp 1-5]

proportional relationship, with a correlation coefficient of about $r = 0.9$. In the selection of offsprings, when a high dry tuber material is obtained, a high starch content material may also be obtained. The inheritance of other characteristics, such as the color of the meat, the speed of growth of the root tuber, the color and the shape of the top leaf, etc. are also reported.

AUTHOR: OUYANG Jieru [2962 7122 2638 1172]
HUANG Jinlong [7806 6930 7893]

ORG: Both of Putian Prefecture Institute of Agricultural Sciences

TITLE: "Summarization of Research on the High Yield Cultivation Technique of Sweet Potato"

SOURCE: Fuzhou FUJIAN NONGYE KEJI [FUJIAN AGRICULTURAL SCIENCE AND TECHNOLOGY] in Chinese No 4, 10 Aug 82 pp 6-8

ABSTRACT: The institute has continued its research on the high yield cultivation technique of sweet potato since it broke the 10,000 jin/mu barrier in 1973. In these 8 years, the yield has been above 10,000 jin/mu in 6 years, with that of the 2 remaining years above 800 jin/mu. The yield of 1976 was the highest at 15,031 jin/mu. In Dec 78, the editorial board of the book "Sweet Potato Cultivation Science in China" inspected the institute's high yield field and registered 13,410 jin/mu and the yield of two nearby demonstration teams to be 13,049 and 13,560 jin/mu respectively. This paper summarizes its high yield cultivation technique to be mainly the following: (1) Making the soil deep and loose by planting green manure and adding fine sand to make the raised mound; (2) Selecting a suitable superior variety and planting the strong seedlings shallowly; (3) Making the mound high and large and planting the seedlings reasonably dense; (4) Reasonable application of fertilizer and water with intensive management according to the phenomena of growth. Growth indices of the early, within 60 days after planting, intermediate, 61-120 days, and late stages, 121-200 days, are explained.

AUTHOR: WU Yongqing [0702 3057 3237]

ORG: Fuzhou Municipal Agricultural Technology Station

TITLE: "Easy Identification of Development Stage of Young Spike of Rice and the Application of the Knowledge of the Development Stage"

SOURCE: Fuzhou FUJIAN NONGYE KEJI [FUJIAN AGRICULTURAL SCIENCE AND TECHNOLOGY] in Chinese No 4, 10 Aug 82 pp 9-12

ABSTRACT: Through a comparison of the cytological and the morphological methods of identifying the development stage of the young rice spike, the author believes that it is simpler and faster to use the method of combining the stem leaf-age and the number of leaves-to-come. The stem leaf-age may be used to determine the 1-2 stages and the number of leaves-to-come to determine the 3-8 stages of development of the young spike. For the early rice, application of nitrogen fertilizer during the 1st stage does not produce much difference in yield. Generally, spike fertilizer should be applied only when there is an obvious indication of fertilizer deficiency during the middle stages of development. For late rice, application of spike fertilizer in the first stage in a highly fertile paddy will create obvious yield reduction. Obvious yield increase result may be obtained if about 20 percent of the total fertilizer is applied to paddies of medium and low fertility of late rice during the glume flower evolvment stage.

AUTHOR: FU Zibi [0265 1311 4310]

ORG: Fujian College of Agriculture

TITLE: "Occurrence, Prevention, and Control of White Leafhopper"

SOURCE: Fuzhou FUJIAN NONGYE KEJI [FUJIAN AGRICULTURAL SCIENCE AND TECHNOLOGY] in Chinese No 4, 10 Aug 82 pp 18-21

ABSTRACT: White rice leafhopper, *Sogatella furcifera* (Horvath), is one of the major pests of rice occurring everywhere in Fujian Province and producing severe damages. In China, this pest is distributed from Hainan Island in the south all the way to Heilongjiang in the north, but there are more generations of it in a year in the south. For example, 3-7 generations occur in Yingkou of Liaoning, 4-5 generations in southern Jiangsu and Zhejiang, 7 in Shaxian of Fujian, 8 in Linzhou of Hunan, and 9 in Yulin Prefecture of Guangxi in a year. The relationship between incidence of this pest and such environmental factors as the weather, the available food, the quantity of its natural enemies, and the cultivation technique are explained. Reasonable application of fertilizer, scientific management of water, timely sunning of the paddy may suppress the development of this pest. Control techniques, including elimination of weeds and application of DDVP, etc. during the nymph stage of the pest, etc. are advised.

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CSO: 4011/228

Meteorology

AUTHOR: ZHANG Xueren [1728 1331 0088]

ORG: Liaocheng Prefecture Weather Station, Shandong Province

TITLE: "Periodicity of Droughts and Floods in Liaocheng Prefecture"

SOURCE: Beijing QIXIANG [METEOROLOGICAL MONTHLY] in Chinese No 5, 10 May 82 pp 16-17

ABSTRACT: The book, "Drought and Flood Data of the Recent 500 Years in North China and the Northeast" has provided the condition for an historical analysis of these weather conditions that are harmful to agricultural production and the livelihood of the people. The analysis revealed that in the prefecture, there are periodicities of 2-5 years, 10-20 years, and 100-200 years in the distribution of droughts and floods. Within a cycle, only 25 percent of the time a dry period turns into a wet period; in other words, in 75 percent of the time a dry period is followed by a normal period. In a similar manner, only in 20 percent of the time, a wet period changes into a dry period while in 80 percent of the time, a wet period is followed by a normal period. This paper does not attempt to explain the underlining mechanism of the cyclical distribution of droughts and floods. The author does believe that the result of the study may provide a background for forecasting droughts and floods and may even be used directly as the basis for such forecasting. The technique and the process of the analysis and the number of dry years and the number of wet years from 1483 to the present, divided into various periods, are reported.

AUTHOR: WANG Zhengze [3769 2973 3419]

ORG: Data Office, Shanxi Provincial Bureau of Meteorology

TITLE: "On the Abundance and Deficiency of Moisture in the Growth Season of Major Crops in Datong Region"

SOURCE: Beijing QIXIANG [METEOROLOGICAL MONTHLY] in Chinese No 5, 10 May 82 pp 21-23

ABSTRACT: The 20-year mean precipitation per year in Taiyuan region of Shanxi is 479.3 mm, but in 5 years of the 20 years, the annual precipitation is in the range of 450-500 mm while in the remaining 15 years, there is a deficiency of 135.8 mm in the mean, which is the equivalent of the moisture requirement of 90 m³/mu. It is therefore obvious that the mean precipitation does not reflect the actual condition; it only provides a pseudo-security, harmful for agricultural production. Moreover, precipitation is also highly seasonal within a given year. For the purpose of clarifying the changes of abundance and deficiency of precipitation during the growth period of major crops in Datong region, the author and colleagues used resonant wave analysis of Fourier's series to demonstrate short term fluctuations of precipitation by removing the influence of the annual and semi-annual cycles. The theoretical basis and the practical significance of the seasonal standard precipitation, $\bar{y}_t$, remain to be studied in the future.

AUTHOR: GUO Jinxiu [6751 6651 0208]
GUO Damin [6751 1129 2404]

ORG: GUO of Central Meteorological Station; GUO Tianjin Municipal Weather Station

TITLE: "A Contrast Between the Gale Over North China Sea and on the Coast"

SOURCE: Beijing QIXIANG [METEOROLOGICAL MONTHLY] in Chinese No 5, 10 May 82
pp 30-33

ABSTRACT: Textbooks generally indicate that the wind speed difference between the sea and the land is force-1-2 or 3-6 m/sec. As the observed data on the sea increase in recent years, it has been discovered that the facts are not so with respect to the actual conditions on Bohai and Huanghai. The data of the decade of 1970-79 are used in the paper for a statistical analysis of winds of the 3 directions of NNE-E, N-WNW, and WSW-SSE, as observed on the island and sea stations of Bohai and Huanghai to compare with the data observed from selected land stations of Tianjin, Dandong, Laiyang, and Dongtai. Seasonal changes of frequency and speed of winds of various directions are compared, as well as the directional changes of the north and south gales, the average wind speed among the various regions of the sea and between the sea and the land. Results indicate that aside from a few individual cases, the average wind speed observed by the coastal stations is no more than 2 m/sec different from the wind speed observed by ships of the respective seas. Details of the comparative analysis are reported.

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CSO: 4011/202

AUTHOR: YU Haoshu [0151 7729 2579]
CHAO Shuyi [2513 2579 2034]

ORG: Both of Central Meteorological Station

TITLE: "Circulation Characteristics Associated With the Condition of Wetness in the West and Dryness in the East in Summer 1981"

SOURCE: Beijing QIXIANG [METEOROLOGICAL MONTHLY] in Chinese No 6, 10 Jun 82 pp 2-5

ABSTRACT: In the summer of 81, rainstorms appeared continuously in the western part of China to create great flood damages while in the east, rain was scarce in most areas to produce the high temperature and dry weather condition. This phenomenon of wetness in the west and dryness in the east was the result of a change of atmospheric circulation of the Northern Hemisphere. The characteristic of the 500 mb circulation field of the Northern Hemisphere in the summer of 1981 is described as follows: The polar vortex leaned toward the Western Hemisphere; in the Europe Asia border region, a blocking high was stably maintained and an average low trough developed in the Qinghai-Xicang plateau. The Indian monsoon low continued to be more intense than normal and the force of the West Pacific secondary high continued to be more forceful than normal. The West Pacific secondary high was very intense. For these reasons, the cold and warm air masses often converged in the western part of China. These and other variations of the atmospheric circulation of the Northern Hemisphere and their close relationship with the distribution of precipitation in the summer of 1981 in China are analyzed in the paper and used to account for the torrential floods in the western part and abnormal drought in the eastern part of China in that year.

AUTHOR: WANG Shuyu [3769 2579 5940]

ORG: Jilin Provincial Research Institute of Meteorological Sciences

TITLE: "Cold Injury Classification in North China"

SOURCE: Beijing QIXIANG [METEOROLOGICAL MONTHLY] in Chinese No 6, 10 Jun 82 pp 26-28

ABSTRACT: Based upon the difference of local distribution of the type, the frequency, and the yield reduction rate of cold injury to crops, this paper divides the North East into 5 areas of cold injuries and 12 subareas for the purpose of formulating plans of agronomy, forestry, and animal husbandry and providing a scientific basis for the reasonable arrangement of crop varieties to establish a technical system of cold weather resistance measures. Temperature and precipitation data of the period from May through September in 1961-70 and the rate of yield reduction due to severe cold of the various areas of the North East during these years are used to compute the type, the index, and the frequency distribution of cold injuries and to produce, finally, maps depicting the distribution of frequency of severe cold injury to grain and bean crops, during the spike evolvment stage of rice, during the blooming stage of rice, etc. The cold injury characteristic of each of the 5 regions and 12 subregions thus classified is respectively described.

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CSO: 4011/203

AUTHOR: LIU Zheng [0491 6927]
ZHU Qiqing [2612 0366 3237]
TANG Lihua [0781 7787 5478]
XU Jungxiang [1776 0193 4382]
YEN Chuliang [1438 2806 5328]

ORG: ALL of Nanjing Institute of Soil Science, Chinese Academy of Sciences

TITLE: "Geographical Distribution of Trace Elements-Deficient Soils in China"

SOURCE: Beijing TURAN XUEBAO [ACTA PEDOLOGICA SINICA] in Chinese No 3, 1982
pp 209-223

TEXT OF ENGLISH ABSTRACT: The geographical distribution of soils deficient in trace elements including boron, molybdenum, manganese, zinc and copper in China has been studied. Five nationwide maps of the content of these elements are compiled based on the soil map of China on the scale of 1:10,000,000. These maps show that in the country there are not only the soils which result in trace elements deficiency of plants, but also the soils which result in the imbalance of trace elements of plants. All these soils will affect the crop yield.

There are large areas of boron-deficient soils in the eastern and southern China. The content of boron in soils varies with the soil types and parent materials. Laterite, lateritic soil and red earth derived from granite and other igneous rocks, gneiss and sandstone are lower in total and available boron. Symptoms of

[continuation of TURAN XUEBAO No 3, 1982 pp 209-223]

boron-deficiency of crops may be observed on these soils. In the case of severe boron-deficiency, even complete failure of rape yield was found.

Many molybdenum-deficient soils are distributed in China including two main Mo-deficient soil regions. One of these is the region of loessial soils and light-colored meadow soils derived from alluvium of the Yellow River, in which the contents of total and available molybdenum are low. The other one is the region of laterite, lateritic soils, red earth and yellow earth, in which the content of total molybdenum is high and content of available molybdenum is low. Good response of leguminous crops to molybdenum fertilizers has been found on these soils.

Manganese-deficient soils mainly distribute in the area of calcareous soils of northern China, especially derived from alluvium of the Yellow River. The manganese-deficient soil map is compiled according to the content of the active manganese. It is found that the distribution of manganese-deficient soils coincides with the distribution of calcareous soils.

Zinc-deficient soils are also mainly distributed in the area of calcareous soils. However, the symptom of zinc-deficiency can be observed on orange and tung trees in acid soil area of south China, and on rice in calcareous paddy soil area.

[continuation of TURAN XUEBAO No 3, 1982 pp 209-223]

The supply of copper in majority of soils in China is adequate with the exception of the organic soils of which the area is very small. Purplish soils derived from purplish sandstone and shale as well as lateritic soils derived from granite are low in available copper according to the results from chemical analysis, but without calibration of field experiments.

Deficiency of trace elements are closely correlated with plant varieties. Trace element deficiency affect both the yield and quality of crops. Reasonable application of trace element fertilizers are beneficial to plants on the trace element-deficient soils. The distribution of the localities of crop response to trace element fertilizers coincides basically with the distribution of trace elements-deficient soils on the maps.

AUTHOR: YAO Xianliang [1202 6343 5328]
YU Defen [0060 1795 5358]

ORG: BOTH of Nanjing Institute of Soil Science, Chinese Academy of Sciences

TITLE: "The Physical Properties of Red Earth and Its Productive Significance"

SOURCE: Beijing TURAN XUEBAO [ACTA PEDOLOGICA SINICA] in Chinese No 3, 1982
pp 224-236

TEXT OF ENGLISH ABSTRACT: The physical properties of the major red earths widely distributed in the tropical and subtropical China were studied. The results showed that the clayey red earth containing about 60 percent clay particles formed under certain tropical bioclimatic condition not only had the particular chemical properties, but also possessed special physical behaviors. Their characteristics such as water retention and movement, soil rupture modulus, soil adhesion and Atterberg's constants were quite different from the soils with clayey texture, but similar to the soils with sandy texture. One of the important reasons resulting in the physical behaviors mentioned above is attributed to the abundance of the water table microaggregates in these soils.

The unique physical properties of clayey red earths is of great significance to its rational exploitation, utilization and management.

Xu Fuan [1776 1381 1344] took part in field investigations.

AUTHOR: LIN Minhai [2651 3189]
LAI Qingwang [6351 1987 2489]

ORG: BOTH of Jiangxi Provincial Research Institute of Red Earth

TITLE: "The Composition and Properties of Humus in the Cultivated Red Earth and Paddy Soil Derived From Red Earth"

SOURCE: Beijing TURAN XUEBAO [ACTA PEDOLOGICA SINICA] in Chinese No 3, 1982
pp 237-247

TEXT OF ENGLISH ABSTRACT: The composition and properties of humus in the cultivated red earth is influenced to a great extent by farming measures. Especially, under the conditions of organic manuring and rice planting, the composition of humus may go beyond the influence of geographical zonality and degree of humification can be increased significantly; the value of $\Delta \log K$ can be decreased gradually and the ratio of humic acid to fulvic acid may be more than 1. The ratio of H.A./F.A. in paddy soil derived from the red earth with higher fertility is 1.4, that in paddy soil with medium fertility is about 0.5 and that in paddy soil newly reclaimed is 0.2-0.3 which is similar to that in virgin red earth; the ratio in dry farming red earth with higher fertility is about 0.9. All these mentioned above showed the characteristics of soil humus under cultivation and manuring of high yield rice, and the ratio of H.A./F.A. might be considered as the main index of fertility of red earth. This study also showed that the variation of contents and properties of humus of red earth was restricted in the surface soil, and with

[continuation of TURAN XUEBAO No 3, 1982 pp 237-247]

the duration of cultivation it was gradually influenced in the other horizons of the profile.

Because of excess of water and lack of oxygen, the composition of humic acid in paddy soils derived from red earth with lower and medium fertility is simpler than that in upland soils, though the humus in these soils is accumulated faster.

After a long period of rice planting, the rotation of rice and upland crops can regenerate the soil organic matter and improve its quality, being conducive to the improvement.

The authors express their gratitude to associate professor LIU Kaishu [0491 7030 2885] for his counsel; the authors also thank LI Zhen [2621 2823], ZHOU Muqing [0719 1970 0615], PENG Jingshuang [1756 7234 7208] and DING Xianmou [0002 6343 5399] for taking part in the work.

AUTHOR: LIAO Xianling [1675 0341 5376]
XU Yinhua [1776 6892 5478]
ZHU Zhaoliang [2612 0340 5328]

ORG: ALL of Nanjing Institute of Soil Science, Chinese Academy of Sciences

TITLE: "Investigation on Nitrification-Denitrification Loss of Fertilizer Nitrogen in Submerged Paddy Soil"

SOURCE: Beijing TURAN XUEBAO [ACTA PEDOLOGICA SINICA] in Chinese No 3, 1982 pp 257-263

TEXT OF ENGLISH ABSTRACT: The loss of fertilizer-N in submerged paddy soil was investigated with ^{15}N -labelled ammonium sulfate in special designed pots. The gaseous composition of the atmosphere in the upper-space above the water in the sealed pot was controlled by transmitting air or N_2 gas during the experiment period (4-6 weeks after transplanting). The N loss through nitrification-denitrification was estimated by deducting the $^{15}\text{NH}_3$ volatilized from the deficit in the balance sheet of ^{15}N -labelled fertilizer-N. The results obtained are described as follows:

1. In the neutral paddy soil investigated, nitrification-denitrification was the most important pathway of the losses of fertilizer-N.

[continuation of TURAN XUEBAO No 3, 1982 pp 257-263]

2. The loss of fertilizer-N in the treatment of transmitting N_2 gas through the upper-space in the sealed pots approximated to that of transmitting air, implying that nitrification-denitrification taken place in the oxidized layer on the soil surface and the reduced layer under it may not be the sole mechanism of nitrification-denitrification losses of fertilizer-N applied as basal dressing in soil.

3. The losses of fertilizer-N in the pots with rice were markedly lower than that without rice. The competition of the absorption of ammonium by rice plant with nitrification may be the reason of the decrease of N losses.

4. In the treatment of transmitting N_2 gas through the upper-space in the pots without rice, there was still a significant loss of fertilizer-N expelling the soil ari by transmitting N_2 gas through the solum before flooding had little effect on the reduction of N losses. Therefore, it is necessary to further investigate whether any other oxides might be able to act as an electron acceptor in the oxidation of ammonium in submerged paddy soil, resulting in a subsequent denitrification loss.

ZHANG Shaolin [1728 4801 2651] and XU Yongfu [1776 3057 1381] took part in some of the work. The ^{15}N contents of specimens were measured by the Mass Spectrum Section of the Nanjing Institute of Soil Science; the contents of clay particles in soil specimens were measured by Xu Fuan [1776 1381 1344] and YU Defen [0060 1795 5358].

AUTHOR: YOU Changfen [3266 7022 5358]
SHI Yaqin [2457 0068 3830]
ZHOU Dezhi [0719 1795 2535]

ORG: ALL of Nanjing Institute of Soil Science, Chinese Academy of Sciences

TITLE: "The Distribution of Actinomycetes in the Coastal Saline Soils of Northern Jiangsu"

SOURCE: Beijing TURAN XUEBAO [ACTA PEDOLOGICA SINICA] in Chinese No 3, 1982
pp 264-272

TEXT OF ENGLISH ABSTRACT: The paper deals with the effect of salinity of saline soil on distribution and antagonistic properties of streptomycetes. The results obtained are summarized as follows:

1. The number of actinomycetes is closely correlated with the salinity of saline soils in northern Jiangsu Province. It decreases with the increase of soil salinity while it is less than 0.2 percent. The curve of actinomycetes tends to be flat, when soil salinity is over 0.2 percent.
2. Out of 632 antagonistic actinomycetes, 456 were isolated from six specimens of saline soils with different salinity. The number of actinomycetes in cultivated land with low salinity is higher than that in virgin land with rather high salt content. However, the percentage of antagonists in total actinomycetes in virgin

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saline soils is higher than that in cultivated land.

3. Numbers of the groups of streptomycetes in cultivated soils are larger than that in virgin saline soils, and the kinds of group are different greatly between the two soil types. Aureus group is predominant in the desalinized soils cultivated for 20 years, while in virgin saline soils with high salinity. Roseosporus is predominant, and Cinereus comes to the next.

4. Streptomycetes with wide antimicrobial spectrum commonly occur in cultivated soils, among which Aureus and Griseofuscus are more effective in antagonism against both bacteria and pathogenic fungi. The antagonistic intensity of those groups range from 40-70 percent. In virgin soils, most of the isolates with antagonistic action belong to Roseosporus, Cinereus, Glaucus and Flavus groups and their antagonism are usually confined to Staphylococcus aureus, Bacillus subtilis or Monilia albicans.

AUTHOR: BU Zhaohong [0592 0340 1347]
WAN Hongfu [5502 3163 1381]

ORG: BOTH of Nanjing Institute of Soil Science, Chinese Academy of Sciences

TITLE: "Preliminary Study on the Application of Analytic Method of Synthetic Value in Soil Classification"

SOURCE: Beijing TURAN XUEBAO [ACTA PEDOLOGICA SINICA] in Chinese No 3, 1982
pp 283-295

TEXT OF ENGLISH ABSTRACT: The analytic method of synthetic numerical value is a mathematical method in which the principal composition analysis and the discriminatory analysis are integrated into a single combination. In experiment of classification of soil spectra, with this method, not only the soil samples can be divided into different types by calculation, but also the delimitation index of various soil properties (reflectivity of wave band $\rho_{\Delta\lambda}$) can be calculated. Therefore, it may be regarded as the method with a bright prospect in the practice and research of soil classification.

In the application to the subdivision of alkaline soil, this method exhibits its simplicity and reliability to a larger extent. The results obtained in the experiment of subdivision of alkaline soil by this method may be useful for the classifying of the alkaline soils of Huang-Huai-Hai plain into lower categories. The basic concept of analytic method of synthetic numerical value, in addition to its

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application in soil classification, may also provide a way for processing the data involved in spectrum reflective characteristics of soils and may be possibly used in the soil classification and identification of remote-sensing image as well.

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AUTHOR: XUAN Jiexiang [1357 1367 4382]

ORG: Nanjing Institute of Soil Science, Chinese Academy of Sciences

TITLE: "Mathematical Model for the Movement of Potassium Ions to Rice Roots"

SOURCE: Beijing TURAN XUEBAO [ACTA PEDOLOGICA SINICA] in Chinese No 3, 1982
pp 296-304

TEXT OF ENGLISH ABSTRACT: There have been several mathematical models for the transportation of nutrient ions in soil towards single root or root system of a single plant. But whether these models can match the root systems of the rice plants grown in a clump remains to be verified. In order to test the models, rice plants were grown in a box consisting of two compartments separated by a sheet of nylon sieve to form a plane of rice roots. A comparison was made between the values of relative concentration of potassium ion in soil near the root surface predicted from Nye's model and those measured with a miniature potassium selective electrode.

The results obtained showed that the measured values of relative concentration of potassium ion in the soil of rice rhizosphere were approximate to the theoretically calculated values, and their agreement was even better when water flux increased. It is possible to predict ion concentration near root surface using mathematical models even under more complex situations.

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In this experiment it was also observed that there were a deficit zone of potassium and a neutral or weak alkaline pH environment in micro-areas of rhizosphere of rice plant.

AUTHOR: FU Shaoqing [0265 4801 3237]
SONG Jingyu [1345 6855 3768]

ORG: BOTH of Institute of Soil and Fertilizer, Sichuan Academy of Agricultural Sciences

TITLE: "The Study on Method of Determination of Soil Available Phosphorus in Relation to the Phosphorus Forms"

SOURCE: Beijing TURAN XUEBAO [ACTA PEDOLOGICA SINICA] in Chinese No 3, 1982
pp 305-310

TEXT OF ENGLISH ABSTRACT: This paper deals with the relationship among the methods of available phosphorus determination, phosphorus forms and response of crops to superphosphate on three main soils in Sichuan Province. Results obtained from the experiment showed that Olsen and Al-Abbas methods were suitable for fluvisol and purple soil. Fe-P and Al-P could be extracted proportionally by these methods from soils and both of them were the phosphorus resources in the soils for the crops investigated. Bray II method was suitable for yellow soil. Ca-P and Al-P were extracted proportionally by this method, and Ca-P was the phosphorus resource in the soil for the crops investigated.

AUTHOR: WANG Zhumei [3769 4555 5019]
ZHOU Mingzheng [0719 7686 6927]

ORG: WANG of Hangzhou Municipal Institute of Agricultural Sciences; ZHOU of Institute of Soil and Fertilizer, Zhejiang Provincial Academy of Agricultural Sciences

TITLE: "Studies on the Relationship Between Soil Basic Fertility and Peak Output of Rice in Paddy Soils of Zhejiang Province (Preliminary Report)"

SOURCE: Beijing TURAN XUEBAO [ACTA PEDOLOGICA SINICA] in Chinese No 3, 1982
pp 315-322

ABSTRACT: From experiments and investigations conducted by the authors, the highest obtainable paddy yield of a plot is determined, to a considerable extent, by the basic fertility of paddy soil of the particular plot. Application of fertilizer can raise the paddy yield somewhat, but the yield increase is closely related to basic soil fertility. The higher the basic soil fertility, the relatively lower is the effect of fertilization for a higher rice output. Therefore, the authors proposed that it is better to apply organic manure in a proportion of about one-half (never less than one-third) of the total nutrient supply of the particular plot. Thus, the basic soil fertility will be increased year by year together with an enhanced soil environment as the decayed organic matter changes into fertile humus. To support their conclusion, five tables in the paper provide

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data from the authors' experiments. One figure shows the relationship between the basic rice yield and the highest obtainable yield by using an empirical formula.

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