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CHINA REPORT

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CHEN WEI EXPLAINS ACCOUNTING CONCEPTS

Shijiazhuang HEBEI RIBAO in Chinese 19 Jan 86 p 3

[Article by Chen Wei [7115 0251] of the staff of the Hebei Provincial Statistical Bureau agricultural office: "Questions and Answers About Some Important Indices of Agricultural Economic Returns"]

[Text] 1. What is "total value of rural social production"? Is it the same as total value of agricultural output?

[Answer] Total value of rural social production refers to the total value of social production that is created by rural productive operations. It is the total quantity of goods produced and turned into currency by the five departments of material production: agriculture, industry, construction, transport, and commerce. At present, China has yet to officially make clear the standards for distinguishing cities and villages and for drawing concrete boundaries between them. Currently, villages still fall within the statistical category of the rural people's communes that existed before government and commune offices were split. From the township and village levels and below, all value of production from productive activities in the five areas described above--agriculture, industry, construction, transport, and commerce--that is carried out by cooperative economic organizations or rural households is listed as the total value of social production. Although state farms are not included, the total value of their agricultural production also should be included, according to unified national guidelines.

From this it can be seen that the total value of agricultural output is only one part of the total value of rural social production. Those who regard the total value of agricultural output as the total value of rural social production are wrong.

2. What is "the total value of agricultural output"? What are its components?

[Answer] The total value of agricultural output is the total quantity of agricultural products that are commercialized. This includes agriculture, forestry, animal husbandry, sidelines, and aquaculture. Agriculture (the cultivation of plants, or "planting", consists of two parts: the total value of production of primary plants (such as grain, cotton, edible oils), and the total value of sideline products (such as plant stalks). Forestry consists of

three parts: the total value of the wood grown in tree farms, of wood products, and of the bamboo trees cut by rural households or by cooperative economic organizations at the village-level and below. Animal husbandry consists of four parts: the production value of large and small domestic animals that are reproduced and grown, the production value of livestock that are raised, the total value of living animal products, and the total value of products from other animals that are raised. Sideline products consist of three parts: the total value of wild plants collected (including medicinal plants, firewood, etc.), of products from captured wild animals, and of rural families' joint operations with industry (refers to those that do not meet the four standards of industry--those preparing the four standards ought to be included within the total value of industrial production). Aquaculture consists of two parts: the total value of all natural aquatic products that are obtained and of all aquatic products which are cultivated.

When calculating the total value of agricultural output, it must be kept in mind that purposes vary and the prices used vary. In order to reflect the amount of value of products for a particular period (year), one should use current prices. Constant prices should be used to compare with the past. At present, the national unified prices are in 1980 constant prices. (If comparisons are made to the value of production in a year before 1980, one must first convert the values into 1980 constant prices.) Current prices and constant prices are different. Generally speaking, current prices are somewhat higher than constant prices. In some places, in order to double the value of output, constant prices are used for the base period (such as 1980), and then current prices are used for constant prices in the period of report (such as 1985). The degree of increase in total value of agricultural output cannot be compared in this kind of calculation and is wrong.

3. What is "net value of agricultural production"? What connection does it have with total value of agricultural output?

[Answer] Net value of agricultural production refers to the new value created in productive labor, during a set period, by agricultural laborers working in agriculture (including the five industries of agriculture, forestry, animal husbandry, sidelines, and aquaculture). It is an important component of national income. There are two methods for calculating the net value of agricultural production. One method is the production method. First, accurate calculation is made in current prices of material consumption in agriculture, then the material consumption in agriculture is subtracted from the total value of agricultural production. The result is the net value of agricultural production.

There are a number of specific items that fall under material consumption in agriculture. In general, they can be divided into three groups: a) that which is consumed in the course of production (such as seeds, feed, fertilizer, fuel, etc.); b) depreciation of fixed capital used in the course of production (such as agricultural machines and tools, equipment, draft animals, and production buildings); and c) expenses incurred by the laborers during the course of production (such as repair fees for machines and tools, production management fees, transport fees outside of production, etc.).

The second method of calculation is the distribution method. This involves an initial distribution of items based on the net output value of agriculture; the net output value of agriculture is composed of items distributed the first time. These items generally can be divided into remuneration for laborers within agriculture, savings, taxes paid to the state, profits, and interest. From this it can be seen that the net value of agricultural production and the total value of agricultural output are two separate concepts. The total value of output includes the total value of products, including those that are materially consumed (materials transformed by labor). The net value of production is the new value created by laborers after material is transformed by labor. The meaning of the two concepts is different. They cannot be interchanged.

4. What is "gross income"? Is it the same as total value of output?

[Answer] Gross income is the income from operations in a set year by a unit (including rural industries, collectives under unified management, new joint economic operations, and rural household operations) which can be used to meet that year's expenses. It is also the income distributed between the state, collectives, and peasants from agriculture, forestry, animal husbandry, sidelines, aquaculture, transport, commerce, restaurants, services, and other operations, as well as interest and rents and other non-production income. But it does not include income that cannot be distributed, or income that is borrowed or only temporary, such as income from loans, or pre-sale deposits, or state investments, or peasant investments, etc.

It should be clear that gross income and total value of output are two entirely different indices. Their scope, methods of calculation, and prices used are completely different. They cannot be interchanged. Some people regard total value of output as the same thing as gross income. This clearly is mistaken.

5. What is "net income"? How is per capita net income calculated?

[Answer] Net income is the portion of income left after all expenses are subtracted from gross income for a given year. Net income is also called distributed income. A portion of it is turned over to the state in the form of taxes. Another portion is kept for the use of the collective in the form of collective reserves. The remaining portion is the peasants' income. This method of calculation is one that is used at the time of collecting data about the entire situation. There is another method of calculation when surveying rural household registration. This begins with the above-mentioned sources of income, then adding all income that is not a loan (including remittances sent home from people working outside, the income from professional wages, income obtained from the state financial administration, income obtained from the sale of property, income from the gifts of relatives and friends, etc.). The former items can reveal the level of net income obtained by the peasants through productive operations, and the latter items can reveal the peasants' actual standard of living.

It can be seen from the above that gross income and net income are entirely different. Gross income includes all kinds of expenses. Net income does not include all kinds of expenses. It is that portion that can be distributed. It cannot be confused with the other concept. When calculating per capita net income, attention should be paid to the fact that the net income calculated by subtracting expenses from gross income cannot be used directly in dividing the year-end distribution for the participating population (now called the rural population). Instead, total net income, less taxes and the portion of "peasant income" held in reserve, should be divided by the annual average population (generally, the population at the beginning of the year, plus the population at the end of the year, divided by two, is a method that can be used).

12994/9871
CSO: 4007/277

RURAL CREDIT COOPERATIVES BETTER MANAGED

Beijing NONGGUN JINRONG [RURAL FINANCE] in Chinese No 23, 1 Dec 85 p 29

[Article by Credit Department, Agricultural Bank: "Savings and Loan Operations in Rural Credit Cooperatives Are Flourishing"]

[Text] Beginning this year, under the leadership of the Agricultural Bank, China's rural credit cooperatives have conscientiously implemented the stipulations and spirit of the Central Committee's 1985 Document No 1. They have supported reforms and revitalized the economy. At the same time tht they have broadly organized rural funds, they have also strengthened review of questionable loans and actively pressed for repayment of overdue loans. They have worked hard to support the financial needs stemming from the adjustments in agricultural production structures and in the development of agricultural production. They have played an important role in state implementation of controls on the macroeconomic level and in revitalizing the economy on the local level.

According to statistics compiled through the end of September, China's rural credit cooperatives had remaining sums of 65.44 billion yuan, an increase of 2.95 billion yuan over the level in the early part of this year and an increase of 920 million yuan over the same period last year. Within this total there was 51.8 yuan in individual peasants' savings deposits that were collected by the credit cooperatives, which was an increase of 7.11 billion yuan over the level in the early part of this year and an increase of 2.57 billion yuan over the same period last year, which was an increase of 47.4 percent. The principal reasons for this large increase in peasants' savings compared to the same period last year are the following: 1. The rural economy has expanded and peasant incomes have increased. Peasants have relatively more idle funds on hand. This has provided the material basis for credit cooperatives being able to organize individual peasants' savings. 2. The state has continuously raised the rate of interest paid for deposits. The savings policy has motivated the broad masses of peasants to save. 3. In order to attract idle and scattered funds from villages, expand rural savings, increase the financial strength of credit cooperatives, and ease the strain on rural funds, the broad numbers of credit cooperative staff members, credit station representatives, and cooperative member representatives have shirked hardships and gone door-to-door in the villages, promoting the savings policy and providing warm service.

As for loans, because all credit cooperatives have conscientiously adhered to the spirit of restricting the scale of credit and tightening monetary policy, 48.83 billion yuan in loans were made. Although this represents an increase of 6.8 billion yuan over the total made last year, loan collection is better than in any year in the past. Between January and September, 37.39 billion yuan was repaid, an increase of 14.49 billion yuan over the same period last year. . The remaining sum of loans was 46.89 billion yuan, an increase of 11.44 billion yuan over the level earlier in the year but an increase that was 7.69 billion yuan smaller than that of the same period last year. Particularly good results have been obtained in controlling loans to township and town enterprises. At the end of September, the remaining sum of loans to township and town enterprises was 16.40 billion yuan, a 2.92 billion yuan increase over the beginning of the year which was an increase of 2.24 billion yuan over the same period last year. Looking at credit cooperative loans to township and town enterprises throughout the country, those that deserved approval have been approved, those that deserved to be limited have been limited, and those that deserved to be terminated have been terminated. This is due to firm implementation of the regulations and policies of the Agricultural Bank and their falling within the scope of state macropolicies. Starting with the premise that the scope of loans should be more tightly controlled, these policies provide for the stable and healthy development of township and town enterprises.

As for loans to specialized agricultural households, especially large households, some credit cooperatives at the beginning of this year did not handle credit policy very well and made some bad loans to large specialized households. This put an added strain on rural finances. But since the second quarter of this year credit cooperatives have implemented the policies and spirit of the Agricultural Bank's centralized regulations. Control over loans to large specialized households has been strengthened. Deadlines have been set for repayment of bad loans. This has fundamentally changed the past phenomenon of large specialized households supporting themselves on loans.

At the same time, rural credit cooperatives should shift a considerable portion of idle deposits to the state Agriculture Bank. As of September, credit cooperatives had transferred 28.29 billion yuan to the Agricultural Bank (this includes the transfer of 18.33 billion yuan in preparatory funds). This is a drop of 9.53 billion yuan over the same period last year. This has been a major contribution to bank implementation of state macrocontrols and microvitalization of central credit entities.

At present, the broad masses of staff members in China's rural credit cooperatives are at work studying closely documents concerning the CPC Congress. They are expanding socialist and materialist construction, uniting beneficial opportunities that arise in the course of work during the busy season in rural finance. They are using various measures to promote rural savings and to collect overdue loans according to policy. They are continuing to improve the reforms and implement tighter controls on the scope of credit. They are following the principles of not expanding the scope of credit, of revitalizing the economy, and of supporting agricultural production. They are doing a good job in credit work in order to make still larger contributions to the prosperity of the rural economy.

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MEANS TO DIVERSIFY ECONOMY OF UNDEVELOPED AREAS EXPLORED

Beijing NONGYE JISHU JINGJI [ECONOMICS FOR AGRICULTURAL TECHNOLOGY] in Chinese No 12, Dec 85 pp 30-32

[Article by Pei Xiaolin [5952 1420 2651], Planned Economy Research Institute, State Statistical Commission, "Preliminary Exploration of the Industrial Stage of Economically Undeveloped Rural Areas and Measures For Dealing With the Situation"]

[Text] 1. Industrial Stage of Economically Undeveloped Rural Areas

Generally speaking, all industries that produce primary products are primary industries; the various kinds of processing industries are secondary industries; and tertiary industries are largely the various kinds of service trades. In China, Nei Monggol and most of the western provinces and regions are basically in the primary industrial stage, the output value of primary industries amounting to 96 percent or more. This is the first industrial feature of this area. The second characteristic is that the quality of primary industries remains at a fairly low level and is manifested in a low level of output as in the case of the farming industry, for example, in which the output value equals only one-fifth that of Zhejiang Province. In terms of area sown, grain yields per unit of area amount to only one-half those in Jiangsu and Hunan provinces. Second is a low commodity rate, such as in rural Guizhou where the commodity rate for primary industries is only 20 percent, which is only half that of Hubei and Jiangsu provinces. Reasons for these characteristics are as follows: First is a low rural labor productivity rate; second is a low level of investment of materials; and third is a poor environment for production. Consequently, in economically undeveloped rural areas, the input-output production function curve continues in a rising stage; not only is potential for increases in output great, but for a considerably long time to come there will be no trend toward incremental decrease in remuneration.

The current situation in economically undeveloped rural areas is the relatively low quality of the three key elements in the productivity system, namely workers, the means of labor and the objects of labor. They are interrelated and exhibit no outstanding differences. Performance of the three key elements is relatively low. The degree of their social integration in the labor process is also relatively low; however, they are coordinated are

without marked differences. Their basic evenness of quality and their basic coordination in function has conversely strengthened the stability of the existing structure within the system.

The socio-economic system in undeveloped rural areas is doubly blocked off. Most primary industry products may enter directly into the consumption area to satisfy people's needs for clothing and food. These areas are not subject to regular influences from the outside world but possess a stable ability to survive at a low level of self-sufficiency. Most economically backward rural areas are located in border areas, in mountains, or in old, young or poor areas. Geographically, they are located in high or remote areas where communications are not well developed, and the flow and exchange of people, financial and material resources and information within the system is restricted to an extremely great degree. This also inhibits the link up and concentration of these elements within the system and gives rise to numerous sub-systems of low performance that never come in contact with each other. The doubly blocked off nature of the system intensifies the close-knit structure existing within the system and attenuates the process of change in the structure.

2. Ways of Dealing With Industries In Economically Undeveloped Rural Areas

The largest and most universal problem that economically undeveloped rural areas face today is not inadequate food and clothing. Experiences gained in partially developed and developed areas shows the development of grain production first, and only after there is a surplus of food and clothing is there a change toward a large scale readjustment of the industrial structure and changes in the industrial structure. There is no other road that undeveloped areas can take. Is it possible to solve problems in having sufficient food and clothing through direct readjustment of the industrial structure or through development of large quantities of products that can be exchanged? My view is that it is possible in special areas, but that it is not possible in most areas. The main way for undeveloped areas to solve problems in having sufficient food and clothing remains reliance on development of local grain production or animal husbandry production. A notion prevalent nowadays holds that undeveloped areas simply cannot become self-sufficient in grain. This is a lopsided view. Our survey and analysis shows that both the western and southwestern parts of the country will be gradually able to achieve self-sufficiency during the Seventh 5-Year Plan and the Eighth 5-Year Plan.

Measures for dealing with the situation by main industries in economically undeveloped rural areas at the present time should be to strive to increase yields per unit of area for grain and pasturelands for the livestock industry while maintaining the ecological balance and a benign ecocycle. Cultivated land in undeveloped areas consists largely of intermediate and low yield fields requiring only more efforts with fine varieties, chemical fertilizer and water. Potential for increases in grain yields per unit of area are greater than in partially developed areas and in developed areas.

I believe that the stage for large scale readjustment of the structure of industries in economically undeveloped rural areas has not yet arrived. Large

scale readjustment of the structure of industries requires three minimal pre-conditions as follows: First is sustained and steady provision of adequate food and clothing with some surplus. Second is the emergence of a tendency toward relative incremental decrease in input-output payback in the objects against which labor works such as fairly high grain production or livestock production and commodity rates per unit of area. This requires the opening of new more economically effective objects of labor. Third is the presence of a certain amount of surplus labor forces and surplus funds, the manpower and financial resources to exploit new objects of labor being in existence. These three pre-conditions are not yet fully present at the present time in economically undeveloped rural areas. A surplus of goods and clothing is the most fundamental pre-condition for readjustment of the industrial structure. If there is inadequate food, the growing of cash crops will be virtually impossible. Even if a trend toward incremental decrease in input-output remuneration has taken place in grain production, it may still be possible to compel forcibly its continued development. Inadequate food and clothing restricts, in and of itself, restricts the development of exchange and makes it difficult to bring about further increase in cash earnings and to develop in the direction of high consumption in which people eat and dress well. This is to speak in terms of the general nature of the contradiction. It is also to say that most undeveloped areas still have to develop their grain farming industry and livestock industry first in order to obtain a surplus of food and clothing; only then can they carry out a readjustment of the structure of industry. However, to speak in terms of the special nature of the contradiction, there are really some areas that are capable of solving the problem of sufficient food and clothing more quickly and better through readjustment of the structure of industries. If some areas have no advantages for the growing of grain, it will be very difficult for them to increase yields per unit of area. By changing to the growing of cash crops or the development of orchards from which they can obtain high yields, their cash earnings will also be high and they will be able to buy the grain they need fairly readily. Not only will this very quickly solve problems with food and clothing, but they will be on the road to becoming prosperous. Some places have no money at all, so they do not fertilize their fields, with the result that grain yields can never rise. If they develop a brewing industry, they can get the money to increase investment in chemical fertilizer and they can use the dregs from the brewing process to feed hogs whose dung they can use to fertilize the fields and grain yields per unit of area will go up very quickly. In still other areas where the ecological foundation has been destroyed, the more they try to grow grain, the less able they are to solve their food and clothing problems in a vicious cycle. By withdrawing land from cultivation and returning it to forests, to pastureland or to fisheries while farming intensively the good land that remains, they can increase grain yields per unit of area, revive and build a benign cycle among farming, forestry, animal husbandry, sideline occupations and fisheries throughout the ecology for solutions to the problem of sufficient food and clothing. Our contention that the stage for large scale readjustment of the structure of industry in economically undeveloped rural areas has not yet arrived does not mean that there can be no readjustment. Small scale or partial readjustment of these areas is still necessary and is being regularly carried out. Whenever such a possibility exists, opportunities to carry out readjustments should not be missed. In short, readjustments of the internal structure of primary

industries in economically undeveloped rural areas should be subordinate to and should serve the growth of industries with a primary character. Such readjustments should benefit rise in yields per unit of area from grain production or livestock production and in commodity rates, and they should benefit a benign economic and ecological cycle.

First, readjustment of the structure should be both objectively necessary and not just a subjective desire. Necessary means economically and ecologically necessary, and feasible means that people's skills, the means of labor, funds and environmental conditions are able to handle and are suited to the new objects of labor. If there are no objects of labor of this kind, or if there are but there is no feasibility, then one can only return straightforwardly to the familiar work of the old objects of labor since the existing objects of labor are the foundation for economic development. Second, readjustment of the structure requires attention to a combination of benefits derived from individual parts and to overall benefits and a combination of near-term and long-term benefits that helps growth of the overall industrial quality. Growth of quality includes both materials and people. Looked at in terms of long-term development, human growth should be the main goal that we pursue. Translated in terms of backward areas, this is the growth of the consciousness and abilities of people in commodity production. Only through the growth of people can the economic development of undeveloped areas possess the most fundamental energizing agent and power.

In order to attract technology and capital from elsewhere to exploit local resources and to develop new vigorously developing industries, during the initial period economically undeveloped rural areas have to adopt a "policy of letting others make a fair profit." If the west is to facilitate the fairly large scale spontaneous transfer to western regions of technology and capital, it will have to provide economic inducements to people in the east, so they genuinely feel there is "gold" to be panned. Mutual assistance between east and west has to be on the basis of mutual benefit and mutual interest; however, at first, the lion's share of profits has to go to those who provided help in the east. This is because they are trailblazers who should derive benefit from pioneering. Because they are commodity production teachers, they should receive a teaching fee. Because they are complex laborers with a mastery of skills, they should receive a high payback. Because they came bearing funds to invest, they should reap extra bonuses. This is the only way in which the natural resources of the west which have been in a deep sleep for 1,000 years can be exploited for use, the only way in which the consciousness and capabilities of peasants in the western region can multiply and grow, the only way in which the commodity economy in rural villages in the west can flower and flourish, and the only way in which the double economic and natural blocking of the western region can be demolished quickly. The benefits that the west derives can be greater than the profits that the east obtains. These benefits are of great political significance and their economic effects are far reaching. Certainly, in the future the west will have real strength in skills and capital, and the distribution of profits will naturally undergo change.

Inasmuch as economically undeveloped rural areas are still primarily in an intermediate stage of development of primary industries for the most part, the

policy of major industries at the moment should be to impel primary industries to develop from being immature to being mature. Once primary industries are mature, the transition to being secondary industries for the most part will take place in the natural course of events. However, it is because primary industries are in the intermediate stage for the most part that laborers, the means of labor and the objects of labor remain at a fairly low level. The production methods of primary industries decide, in turn, the slow speed of growth of the three. Therefore, economically undeveloped rural areas must establish a psychology of fighting a protracted war and understand clearly the different starting points for economic development in different areas. The different stages of industry in different areas decides objectively obvious differences in their speed of development. In the face of such a stark reality, people are unable to effect change through an act of will. They can only acknowledge it and face it squarely, work from the speed of existing industries and conscientiously set about doing the basic work required. They will be able to realize a "take off" more rapidly later on.

One positively cannot have any illusions about undeveloped areas being able to transcend the speed of the stage of development of a local economy and being able to emulate the "take off" speed that one has observed in recent years in economically developed rural areas.

3. State Policies For Industries in Economically Undeveloped Rural Areas

For a fairly long time to come, the focus of state support to economically undeveloped rural areas should be on the food growing industry, the grassland animal husbandry industry, forestry, and mining among primary industries in order to give impetus to the development of primary industries in these regions from immaturity to maturity. Practice has shown an extremely small success rate from support that tries to skip a stage. Support for the development of secondary industries in economically undeveloped rural areas is not as effective as providing support to primary industries first. Certainly, because of the need to develop some industries needed to support agriculture and industry and to develop certain important natural resources, some secondary industries must also be operated in economically undeveloped rural areas. However, the secondary industries that are built must be in consonance with the local economy. They should guide the growth of local primary industries, and they should be in keeping with the quality of the local labor force if fairly good economic results are to be derived from them.

At the present time, China's economically developed rural areas have fairly strong capabilities and strengths for their own development. Of greatest importance for these areas is study of how to strengthen macroeconomic management and guidance. Partially developed areas are in a period of transition from having principally primary industries to having primarily secondary industries. A helping hand is needed most at the critical turn of events. Once this stage has been gone through, this sort of regions's capacity to accumulate capital by itself will be greatly enhanced and it will be able to rely entirely on its own resources to advance. In the short term, the funds used to support development of rural secondary industries should be considered for use mostly in this area. These funds may be the largest part of total funds for support of agriculture. Partially developed areas are geographically

situated nearer to undeveloped areas than to developed coastal areas, so once they have made a transformation, their role economically in radiating out toward and spurring on undeveloped areas may be somewhat stronger. Investment to support development of rural grain production in eastern China or central China has already or will shown a tendency toward incremental decline in payback. Consequently, consideration should be given to the focus of investment to support development of rural primary industries in a planned and gradual turn toward the western parts of the country. First of all, the focus of investment in the building of commodity grain bases should shift gradually and in a planned way toward the western part of the country. This way of doing things makes more economic sense than transporting grain to the west, no matter whether looked at in terms of the local situation or the overall situation, or in short range or long range terms. Second, greater investment is needed to build western pasturelands and forestry. Third, greater investment is need to build water conservancy projects and chemical fertilizer plants in the west. All parts of the west having the natural resources to support production of chemical fertilizer such as potash salts in Qinghai or phosphate rock in Yunnan and Guizhou should consider building chemical fertilizer plants nearby.

Primary industries are the foundation for secondary industries. If one were to say that the strategic focus in the build-up of China's economy will move westward during the next century, then the westward movement of the key area for investment in agriculture is close at hand.

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CSO:4007/228

S&T NEEDED TO DEVELOP AGRICULTURE PRODUCTION

Beijing NONGMIN RIBAO in Chinese 15 Feb 86 p 1

[Article by Lu Liangshu [4151 5328 1859], director of the Agricultural Academia Sinica: "Rely on the Progress of Science and Technology to Develop Agricultural Production"]

[Text] Establishment of a Modern System of Agricultural Technology

During the Seventh 5-Year Plan and under the preconditions that the rural economic system must continue to improve, we must fully realize the potential of science and technology and accelerate reform of agricultural technology in China. Our basic goals are: We should begin to establish a modern high-yield, high-quality, and high-efficiency, low-consumption system of agricultural technology which is adapted to specialization, commodity production, and modernization. We must simultaneously increase production efficiency on both a land and labor basis. Reform of traditional technology and development of advanced technology should proceed in parallel. We must develop knowledge-intensive technology on the basis of labor-intensive technology. We must develop the exploitation and use of agricultural resources, improved processing, and multi-purpose use technology. In order to achieve these goals, we should continue the five combinations in technological matters: Traditional experience with intensive cultivation should be combined with modern science and technology. We must carry out intensive farming. Biological measures should be combined with engineering methods, and the achievements of modern science and technology should be utilized. Technological and economic results should be combined with ecological results in order to establish the proper balance in the agricultural ecological system. Reform of agricultural technology must be governed by the demands of rural combined development in order to establish a multilevel structure in agricultural technology. We should introduce advanced foreign technologies selectively in order to accelerate the conversion of science and technology to productivity.

Diligently Promote, Establish, and Provide Training in Agricultural Technology

In order to meet the demands for agricultural modernization, the most important task in agricultural science and technology is to stress both

its promotion and the construction of a service system for establishing technology. In this way, science and technology will be efficiently converted to productivity. More than 400 counties in China have now established "three-combination" centers that provide demonstrations, promotion, and training. We are trying very hard to spread this approach throughout China by 1990. It will be coordinated with stations promoting agricultural technology at the township level, village technicians, science and technology demonstration households, and specialized households. The resulting service network will promote and establish agricultural technology at all levels. Agricultural science and research units should devote certain efforts to conducting combined research and demonstration projects: coordination of state "pilot plans"; strengthening the cultivation industries and postharvest storage and combined utilization of agricultural products; and research and demonstration projects in mountainous and wetland areas. We should begin scientific research centered upon development of township industries and areas producing agricultural commodities, particularly those areas which produce exports. We should encourage large numbers of scientific and technological personnel to deliver "coal in the snow" to rural areas, in other words to actually deliver science and technology to each household and help make poor areas rich.

We should use many different methods and approaches to train all types of agricultural scientific and technological personnel. In this way, we can raise the educational and scientific level of lower level rural cadres and farmers. During the Seventh 5-Year Plan, we must continue to operate well the 70 agricultural colleges and 368 agricultural middle schools. We should also appropriately increase the number of areas of specialization, expand the enrollment, and train specialized personnel of all types and levels. Some of the general rural middle schools should be converted into agricultural middle schools in order to train a new type of farmer having certain agricultural knowledge and production skills. We are striving to provide 2 agricultural technicians for every 10,000 mu of farmland and 1.5 veterinary technicians for every 10,000 animals by 1990. Using the county as the unit, we do all we can to accelerate the training of farming technicians and to ensure that science and technology demonstration households and specialized households fulfill their leadership functions.

Emphasize the Promotion of Existing Results from Science and Technology

During the Seventh 5-Year Plan, we should simultaneously improve production conditions and emphasize the promotion of existing results from science and technology. We should introduce appropriate advanced technology and stimulate an overall, continuous, and stable increase in agricultural production. There are 10 scientific and technological results that can be promoted and applied to large areas: 1) cultivation of crops with high and stable yields together with combined treatment-prevention technology; 2) establishment of a complete, countywide breeding system to provide improved crop, livestock, and poultry varieties--we should consider local conditions in promoting improved varieties and different hybrid combinations; 3) we should use a combination of organic and inorganic fertilizers and promote scientific fertilization techniques that consider both soil and crop

types; 4) new technology to coordinate farmland construction with engineering efforts to increase production and conserve irrigation water; 5) technologies to increase production in dryland farming that combine traditional methods with modern science and technology and are applicable to areas with different precipitation; 6) promotion of combined technologies to control livestock and poultry diseases, crop diseases, and damage caused by insects, weeds, and rodents; 7) technology to improve the productivity of low-yielding land; 8) cultivation techniques that involve mulching and plastic coverings; 9) farming techniques that use a combination of energy-efficient, multipurpose medium- and small-sized machinery; 10) diversified preparation and cultivation technology.

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NATIONAL

RESTRUCTURING OF FORESTRY ALONG LINES USED IN FARMING NEEDED

Beijing NONGYE JINGJI WENTI [PROBLEMS OF AGRICULTURAL ECONOMICS] in Chinese

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[Article by Wang Youchen [3769 1635 5256], Forestry Economic Research Institute, Chinese Forestry Academy: "Preliminary Exploration of the Restructuring of the Rural Forestry Economics System"]

1. New Tasks Faced in the Restructuring of Rural Forestry

Restructuring has scored marked achievements in recent years through the country's all-around practice in rural villages of contract responsibility systems linked to output. Under the impetus provided by the upsurge in the restructuring of agriculture, forestry has also explored numerous restructurings. From the central government to the local level, there has been a further liberalization of forestry policies and the adoption of some necessary measures from which the restructuring of forestry has gained certain benefits. Throughout the country more than 390 million mu of privately worked mountains have been assigned to 56 million peasant households and more than 80 percent of all production teams have spelled out ownership rights for mountain forests, have set up various kinds of forestry production responsibility systems, and households specializing in forestry, priority households and new cooperative economic organizations in forestry have appeared in a steady stream. New changes have begun to take place in forestry conditions. Nevertheless, restructuring of rural forestry has just begun to get underway, and there are numerous strenuous and daunting tasks in reconstruction that await our completion.

Rural forestry is still relatively backward in China today, and considerable problems exist. The decline in forest resources in recent years and the seriousness of ecological problems have become the most prominent of the three major hidden rural perils (overcutting of forests, reduction in the amount of cultivated land, and zooming population growth). The lack of firewood and the small amount of lumber available in rural villages is fairly universal. Responsibilities, rights and benefits in forestry production have yet to be sufficiently unified and peasant enthusiasm for forestry has not yet been aroused to the full. Forestry is overly centralized at every level and throttled by regulations. Forest region counties, communes and production brigades (townships and villages) lack self-determination; forestry science

and technology is outmoded; management and administration is haphazard; and productivity is low. The economic structure of forestry is irrational; the utilization rate of resources is low, and economic results are poor. Prices for timber are inequitable; the commodity economy is not well-developed; and forestry planning is devoid of vitality, etc. The crux of the problem lies in "leftist" thinking not having been completely smashed as yet, the still considerable strength of conservative habits, and the irrational economic system in forestry. In the forestry economic system, production relationships are not in keeping with productivity, and various abuses that get in the way of the development of productivity have not been thoroughly eliminated. Consequently, there is urgent need for restructuring. This is the first point.

The second is that as rural restructuring has continued to develop, a substantially large surplus labor force has come about in rural villages. Forestry presents a fine route for the workforce to leave the soil without leaving the countryside and for increasing value received from funds invested. Therefore, increasingly large numbers of peasants pin their hopes on the development of commodity production in forestry, hanker after readjustment, liberalization and stabilization of forestry policies, and await the restructuring of the economic system in forestry.

Third, in order to transform the outmoded situation in forestry, the strategic objectives in development of China's forestry require that by the end of this century the forest cover rate will reach 20 percent; timber output will reach 100 million cubic meters per year, and the output value of forestry will quadruple. Just to achieve the forest cover rate goal alone will require a net increase of 1 billion mu in the forested area, and this is a tremendous project. Attainment of the strategic goals in the development of forestry lies in restructuring. The hope for attainment of these goals reposes in 800 million peasants and the potential reposes in rural forestry. Therefore, acceleration of the restructuring of the rural forestry economy is an inherent requirement for the development of forestry.

2. Lessons of Experience From the Tortuous Development of Rural Forestry

During the past 35 years since founding of the People's Republic, achievements have been scored and progress has been made in the building of rural forestry production. However, one might say as a result of having taken a backward look at the course of events during this period that a very bumpy road has been traveled. Conscientious summarization and acceptance of the lessons of historical experience is of extraordinary importance to our theoretical understanding today of some problems in restructuring the forestry economic system and to courageous exploration and innovation in the practice of restructuring.

(1) On the issue of the system of ownership of rural forestry, as a result of the control exerted for a long period of time by "leftist" thinking that the larger and more public ownership the better, insufficient attention has been given to productivity and the system of ownership has been artificially and unremittingly altered, so-called advanced production relationships instituted, and "thorough transition" adopted. This has resulted in small collectives

being transferred into large collectives and large collectives being transformed into a system of ownership by all the people that has dampened the enthusiasm of hundreds of millions of peasants for the development of forestry production, and has fostered the growth of egalitarianism and blind guidance, has contravened economic claws and the characteristics of forestry itself, and interfered with development of forestry production.

(2) The influence of "leftist" thinking and dogmatism has fettered development of a cooperative economy in rural forestry for a long time. The USSR model was copied for China's state owned forestry, and for the country's rural forestry---particularly collective forestry in the southern part of the country--the methods used in state-owned forest zones were copied. Centralized operations, centralized management, centralized labor, and centralized distribution were instituted. Subsequently, after large scale operation of commune and production brigade forest farms, in particular, these methods became the sole form promoted for a cooperative economy in forestry, and some places adopted arbitrary coercion in instituting them. On the issue of the scale of operations of the cooperative economy in rural forestry, frequently the nature of the system of ownership and the scale of operations were discussed as though they were a single issue and as though the operation under centralized management of a commune and production brigade forest farm by a few score people or several hundred people was socialism. Forestry operations divided up among households organized into teams was regarded as going it alone and capitalist.

(3) The issue of the relationship between the means of production and workers, i.e., the issue of centralization and decentralization of ownership rights and use rights of the means of production, has never been handled well over a long period of time. Formerly the system of management for China rural forestry was "tri-level ownership, production teams being basic." Peasants and mountainland and means of production such as large machines and equipment as well as forests, which are the fruits of labor, were "jointly owned and jointly used." The linking of peasants and the means of production were realized on a society-wide scale. In the prevailing economic life, peasants engaged in forestry did not at all regard public owned mountain forests as being their own, nor did they regard themselves as the masters of mountain forests. Consequently, the peasants did not care about mountain forests and they lacked the enthusiasm need to protect forests and develop forestry.

(4) On the issue of distributions according to work, for many years a system of centralized labor and centralized distributions was used, workpoints being used as standards for judging the quantity of work and the quality of work. Workers had no direct connection with final results; distribution according to work existed in name but not in fact and became a mere formality. The result was "egalitarianism" and "eating out of a large common pot," with low production efficiency and poor economic results that seriously dampened the enthusiasm of workers for production and inhibited development of forestry.

As restructuring of the rural forestry economic system advanced, the foregoing problems have been in process of gradual solution. Following institution of the family contract system in forestry, ownership of the principle means of production such as mountains and the land has reverted to collectives with

operating rights being assigned to peasant households in a new form of public ownership of a division of the "two rights." Once the relationship between centralization and decentralization of forest ownership rights and operating rights was correctly handled, peasants and the means of production were directly linked, and it was possible for peasants to see and touch the results of their own work. They genuinely became the masters of mountain forests and their enthusiasm for production experienced an unprecedented upsurge. In addition, as production increased and earnings rose steadily, the peasants used accumulations from their own labors to buy new means of production. Furthermore, in the course of restructuring, numerous forms of cooperative economic organizations appeared. Examples were partnerships for the use of land and other means of production, funds and skills. The general method these partnerships used was to make distributions according to the amount of the means of production invested and in proportion to the number of shares held for the investment of funds and skills, breaking up distributions according to labor. Adoption of this form of distribution brought to the fore to the maximum extent possible all available manpower and material and financial resources to promote expansion of the building of forestry production. This was consistent with objective needs in development of a cooperative economy in forestry, and it has been widely adopted.

3. Thriving Forests, Benefits to the Nation, Bountiful Mountains and Prosperous People Are at the Heart of the Restructuring of Forestry

Restructuring of the rural forestry economic system has as its premise the maintenance of the socialist system in the restructuring of production relationships in forestry and restructuring of a series of interrelated links and places in the superstructure that are not in keeping with development of productivity, plus solution to some problems in the economic system that have hobbled development of productivity. The orientation and guiding thought in restructuring should be the emancipation of thinking, purging of "leftism" and destroying the old, seeking to innovate, and relying fully on hundreds of millions of peasants to plant forests, to nurture forests and to protect forests so that individuals, collectives, and the country all benefit. Once a good job of afforestation has been done, felling and planting should be linked to each other; multiple uses should be made of resources, and there should be a diversity of operations and all around development. Methods of administering and managing commodity production should be used in running forestry, forestry production thereby changing from a closed kind of commodity production to an open kind of commodity production, and building a forestry economic system imbued with vitality and liveliness. Restructuring must adhere to the principle of socialist public ownership of the basic means of production and adhere to the principles of distributions according to work and exchange at equal value; and it must adhere to the principle of suiting general methods to specific circumstances and seeking truth in facts. In the course of restructuring, natural laws and economic laws must be followed for genuine achievement of a combination of protection, development and use of forest resources; and economic, legal and administrative methods must be used to manage forests. A combination of individuals, collectives and the state must operate forestry in common; a combination of long-range, intermediate-range and short-range benefits must be obtained; and there must be a combination of responsibilities, rights and benefits; a combination of forestry, industry and

business; and a combination of farming, forestry and animal husbandry. In short, restructuring is to enliven all key production elements in forestry, to emancipate productivity, and to raise the level of forestry production, thereby gaining better economic and ecological benefits, invigorating the economies of mountain regions, improving the livelihood of peasants engaged in forestry and making sure that the green mountains long endure, that they can continue to be used forever, that forests will thrive, that the nation will benefit, that the mountains will be bountiful and the people will prosper. This is the fundamental goal in the restructuring of rural forestry. Restructuring of the rural forestry economic system is part and parcel of the restructuring of the economic system of the whole country. Tasks in this restructuring are also the fundamental tasks involved in the realization of socialism, namely a combination of the development of social productivity, creation of abundant social wealth, and continuous satisfaction of the ever increasing material and cultural needs of the people. Therefore, judgment of the success or failure of restructuring of the rural forestry economic system requires use as the principal criterion an evaluation of benefit to the development of social productivity. This consists of three specific points. The first is to determine whether the initiative and enthusiasm of peasants for the development of forestry has been stirred; the second is to determine whether the level of production in forestry and economic benefits have increased, and third is to determine whether the more forests are cut down the more remain, the more they are cut, the better the wood.

Restructuring of the rural forestry economic system is a complex and daunting task. There is no ready made model to follow in restructuring. How restructuring should be done is still in process of ferment and exploration. In particular, further research is required on the orientation, tasks, methods and steps to be taken in restructuring. Numerous views and ideas have to be tested through practice.

4. Let the Peasants Become the Masters of Mountain Forests

The peasants are the main force in the development of forestry. In mountain regions, in particular, the development of forestry is even more closely related to the peasants. The fundamental experience in the restructuring of agriculture has been a policy of liberalization with institution of family contracting and solution to the interrelated problems of responsibilities, rights, and benefits. As a result, the peasants became masters of the land. Development of forestry also requires restructuring and a policy of liberalization so that the peasants become masters of the mountain forests. Achieving this will require the following:

First is solution to the problem of perceptions. Number one is the need to change the notion that only the state or collectives are fitted for operating forests and correction of the method whereby serious attention is given only to the development of state-owned, commune and production brigade forestlands while ignoring reliance on the peasant masses to develop forestry. Number two is to see the potential that peasants provide for developing forestry. China is a vast land with scant forest resources, and a low forest cover rate in which the task of developing forestry is great and requires both a large workforce and much capital. Sole reliance on the state to solve this problem

is not sufficient; the broad masses of peasants have to be relied upon. As a result of the restructuring of agriculture during the past several years, rural villages have a large supply of surplus labor and idle capital that can be used to develop forestry. The potential that the broad masses of peasants hold for development of forestry is very great.

Next is the need for further liberalization of policies. The main reasons for the slow development of forestry for a long period of time have been rather tight control. Peasants have had no self-determination about their own collective mountain forests, nor have they had self-determination in the processing of the forest products produced from the timber. In addition, a policy of unified centralism in distribution and inequitable price policies have been pursued, with the result that peasants have been unable to obtain the compensation that their labor has deserved. The issue of fleecing the peasants has become an extremely prominent one in forestry, some collective forest farms becoming little gold mines for commune and production brigade cadres. The burden that peasants bear from assessments and deductions of one kind or another is very great. In order for peasants truly to become the masters of mountain forests, the influences of "leftist" thinking will have to be swept away and policies further liberalized. For example, some places have adopted policies for the liberalization of mountain forest contracting, expanding the area of privately-worked mountains and responsibility system mountains. Contract periods have been lengthened too. Most mountain forests have been apportioned among peasant households, or the system of privately-worked mountains and responsibility system mountains has seen a "merging of the two kinds of mountains into one kind of mountain which is known by the single name of privately-worked mountains." Partnerships in which partnerships hold shares have also been instituted, the share system being combined with family contracting of operations. Interest bearing loans for afforestation, cooperative afforestation, allowing the transfer of possession of wood from new forests at a price set in terms of money, and allowing the passing on to descendants of forest rights have been instituted. Production tasks involving the felling of timber have been assigned directly to households and final settlements are made with households, thereby reducing intermediate links and insuring direct benefits to producers. Timber markets have been liberalized, making it possible for producers and marketers to meet each other for an enlivening of dealings. Various unfair fee collections have been abolished, with the lion's share of profits on timber jointly marketed going to the peasants. This turning over of profits and delegation of rights has meant real economic benefits for the peasants who work the mountain forests, thereby arousing their enthusiasm for the development of forestry. This has been a miraculous cure for rural forestry.

Finally, China's agriculture has gone through a tortuous process in selecting a form of operation suited to forestry, finally settling on the family contracting system. In recent years, this has also been applied to forestry for rather good results. While maintaining collective ownership of the means of production, rights of use have been placed directly in the hands of the peasants, thereby directly linking producers to the means of production. Not only do the peasants have the right to use and manage the means of production, but compensation for their own labor is linked to production results, and benefits can no longer be egalitarianly and indiscriminately transferred or

taken over by others. This has been greatly welcomed by the broad masses of peasants engaged in forestry. Nevertheless, we are aware that restructuring in this regard has only just begun and that there are many places still requiring perfection and improvement. In addition, no matter the form of operations instituted, it is necessary to repose full confidence in the peasants, treating them on the basis of equality and mutual benefit. It is necessary to believe that under a socialist system, once productivity reaches a certain level, family contracting will tend to develop in the direction of combinations and socialization. However, this must come about in an orderly and systematic way; there can be no use of administrative fiat as was done in the past to give impetus to it.

5. Households and Partnerships Specializing in Forestry Are New Forms For the Greening of Barren Mountains and Development of Commodity Production in Forestry

Family operations are the mainstay for households specializing in forestry in a socialist economic form that has as its main goal commodity production. As a result of the further liberalization of policies in recent years, not only has the number of households specializing in forestry increased rapidly, but the scope of their operations has also changed. Out of the households specializing in forestry have emerged a new form in which combinations of households do contracting in forestry. Households specializing in forestry as well as households acting in partnership are required for development of the rural economy, and they are also an inevitable trend in forestry's greater production of commodities, greater specialization and greater socialization.

Households specializing in forestry as well as partnerships of households represent advanced productivity in rural villages. They occupy a specific sphere of operations and are able to readjust in an equitable way the economic structure of forestry and engage in economic diversification. They can make wide use of surplus rural workforces and idle funds; they can change forestry from being a form of production to a form of business that helps develop commodity production, that can use advanced forestry science and technology, that carries out intensive operations and that increases the level of operations. Afforestation done by both households specializing in forestry and partnerships is rapid, of high quality, and produces good results. Practice during only a short period of time has already demonstrated that households specializing in forestry and partnerships hold very great advantages.

In supporting households specializing in forestry and in supporting partnerships today, we have to provide active help in solving difficulties in production such as loans, supply of materials, passing on of information and providing scientific and technical services. They also need help with the planning of production and guidance of their production and business activities so that they sustain few or no economic losses and obtain better economic results. The contract system has to be improved and the legal system has to be strengthened to protect their legitimate rights and interests, to lighten extra burdens on them and get rid of their apprehensions.

Naturally, households specializing in forestry and partnerships are cooperative economic forms in forestry, but there are various other forms of different kinds as well. So long as they help in the development of forestry production, we should not emphasize one form at the expense of another.

Emphasis On Taking a Firm Grip on Restructuring of the Forestry Economic System in Forest Region Counties

Collective forest regions in south China should emphasize firm grip on restructuring of the forestry economic system in forest region counties, efforts being made in three regards as follows:

(1) An unleashing and delegation of authority in forest region counties, for a unification and carrying out of responsibilities, rights and benefits in forestry work.

The system of forestry administration and management in forestry region counties today is substantially one in which vertical leadership predominates, with level by level control at each administrative level. This forestry economic system in which central and local authorities are cut off from each other and there is overlapping not only produces a swollen bureaucracy with numerous levels, more people than there is work to do and low work efficiency, but lateral, internal economic contacts are cut off between producers, between trades, and between places. This system can only improve responsibility for the various quotas set by the state, but it cannot gain corresponding economic benefits. This way of doing things must inevitably greatly dampen the enthusiasm for the development of forestry of basic level leaders and the broad masses of peasants engaged in forestry in forestry region counties.

These shackles that bind the development of forestry must be broken. In order to do this, it is recommended that forest region counties institute an administrative and management method of "four guarantees and one liberalization" that combines responsibilities, rights, and benefits." By this is meant that forest region counties should guarantee completion of plan criteria assigned by the state for timber and major forest products; should guarantee completion of forest replacement and barren mountain afforestation tasks; should guarantee payment of taxes and profits assigned by the state; and should guarantee that the amount of timber felled is no more than the amount of growth to maintain ecological balance. Under these conditions, the state would give forest region counties the following: 1. Delegation of certain personnel rights. Forest region counties would be able to readjust or to establish official organizations as production requirements dictate, to hire technical and managerial personnel concerned, and to readjust and assign staff members and workers. 2. Delegation of certain financial authorities. After payment of profits and taxes, forest region counties would have the right to use earnings to expand reproduction, or use them for staff member and worker welfare, for the issuance of bonuses, or for the institution of variable wages. 3. Delegation of a certain amount of self-determination in administration and management. So long as they fulfilled state production plans, forest region counties could readjust and arrange production plans to reflect actual circumstances. They could simultaneously handle the disposition of products, engage in product cooperation, procurement and marketing at

negotiated prices, and set up joint operations that cross sector, industry and regional lines. By so doing there would be external pressures placed on forest production counties to fulfill state quotas. Internally, there would be impetus to develop forestry to gain greater economic results. In addition, forest region counties could put talent to use, could make the most of advantages, and could enliven economic self-determination. Responsibilities, rights and benefits would be closely linked, and within not very long period of time the condition of forest region counties would undergo tremendous change.

(2) Restructuring of the administrative and management structure of forestry in forest region counties.

In most forestry administrative and management organizations in forestry region counties today, there is no separation of government and entrepreneurial functions and administrative fiat is used to manage forestry. For example, forest management and forest labor are separate; felling and procurement are separate; water and land transportation are separate, and production and marketing are separate. Each goes its own way and they bicker with each other. This must be restructured. Government and business have to be in separate organizations in forest region counties. One should be county and township level forestry administrative units primarily responsible for the investigation and study of forestry programs and policies and for seeing that work is carried out. They would be responsible for the obligatory planting of trees for afforestation as well as for the care and protection and the financial work involved in special forests and shelter forests; and they would organize forestry scientific research and dissemination work. Second should be county and township integrated forestry, industry and commercial companies and, as circumstances require, separate specialized companies could be established at the primary county level for the management of forests, timber, forest products, transportation and capital construction. These companies could use economic methods and techniques such as the signing of contracts with townships and villages (communes and production brigades) and with specialized households and partnerships to carry out loose economic alliances. The companies could also guide them in carrying out forestry production. At the same time, county and township primary level companies should carry out open dealings with others. They should welcome investment of money or intellect in forest areas by commune members and people from elsewhere, or joint operations of all aspects of forestry production, splitting the profits.

(3) Carrying out of special economic policies and fostering development of forestry in forest region counties

Substantial readjustment of forestry policies is urgently needed for the building and perfection of contract responsibility systems linked to output in forestry. One such readjustment is to broaden the scope of family contracting from barren mountains and scrub forests to man made forests and natural forests. Second, contracting in forestry should be done for long periods without change. In general, contracts should cover a production cycle. Third, no matter the form of operations adopted, they should be predicated on helping to protect forests and to develop forestry. General methods should be suited

to specific circumstances, the desires of the masses should be fully respected, and diverse forms of operation should be encouraged. For collectively owned mature timber forests, collectively operated forest farms may be centrally administered. Alternatively share partnerships may be entered into or forest trees may be contracted to households for management at a converted monetary value. Energetic efforts should be made to nurture households and partnerships specializing in forestry. Forest region counties and provinces, counties and sectors as well as foreign partnerships should be permitted to develop forestry.

2. Development of forest region commodity production and enlivening of the flow of timber. Development of forestry commodity production requires the demolition of certain forbidden zones. First, a rise in timber prices should be permitted. Three different prices may be instituted for timber, namely a centralized procurement price, a premium price and a negotiated price (including a marketing guide price and a procurement protection price) whereby forestry operations not only preserve their capital but also make a profit. Second is the need to permit the transfer of possession of forest trees at a monetary value. Third is the need to adhere to the principle of taking the planned economy as the key link, market regulation being supplementary in the planned and guided opening up of timber markets in forest region counties. Marketing and forestry administration work has to be improved.

3. Channels for funds for forestry must be developed widely. First, insofar as its financial resources permit, the state should increase investment in forestry. After the state cancels centralized timber procurement quotas, there should be no reduction of investment in capital construction for forestry. Existing plan investment channels can be maintained, and assigned timber and investment in some capital construction may be linked. Second is institution of special accounting methods for forestry allowing reductions or exemptions from the collection of forestry taxes and profits and a reduction in withholdings of profits and taxes for use in the development of forestry. Third is a change in the past method of providing assistance without compensation for the growing of seedlings and for afforestation, using loans instead. The state must ear mark more loan funds for forestry, making them a part of forestry funds for centralized management and use. In order to improve results from the use of forestry funds and raise management levels, it is recommended that the state set up a Bank of Forestry responsible for managing forestry funds and for issuing negotiable forestry securities. Fourth is importation of funds in joint afforestation projects, attracting foreign capital and overseas capital as well as domestic industries concerned and individual households to invest in forestry.

7. Several Suggestions About Good Performance in Restructuring the Rural Forestry Economic System

Restructuring of China's rural forestry economic system is being carried out widely and deeply. In order to insure that this restructuring will proceed smoothly and score fairly good results, the following several suggestions have been especially made: First, it is necessary to bolster Party leadership at every level, and increase appreciation of the importance of restructuring of

the rural forestry economic system. In the course of restructuring, it will be necessary to overcome thinking that follows the beaten path and traditional concepts and to give full and enthusiastic support to new things. It will be necessary both to emancipate thinking and explore courageously and to seek truth in facts and act with prudence and safety. Second is diligent attention to pilot projects for reform of the rural forestry economic system. Pilot projects should be used to study the new situations, new experiences and new problems that arise in the course of restructuring and to explore direction, plot one's course, spread out from single points to whole areas, and give impetus to all around development of restructuring of the rural forestry economic system. Places having requisite conditions might try running special forestry zones. In addition, there should be a regular exchange of experiences about restructuring of the rural forestry economic system. Third, major problems existing in the present restructuring of the rural forestry economic system should be addressed, study of special topics to surmount them undertaken, and plans and recommendations for restructuring put forward.

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SCOPE OF FORESTRY RESPONSIBILITY SYSTEM EXPANDED

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[Article by Minister of Forestry, Yang Zhong [2799 6988]: "Perfect Further the Forestry Production Responsibility System"]

[Text] In recent years, the situation in forestry has become better with each passing year. Under impetus from the spirit of Central Committee document number 1 in 1985, there has been a continuing liberalization of policies, pervasive reforms and new development and progress. During the new year, the general line for forestry is to be a summarization of experiences, perseverance in reforms and efforts to change the existing state of affairs in forestry.

The contract responsibility systems linked to output instituted in farming in recent years are likewise applicable to forestry. A melding of the responsibilities, rights and interests of those engaged in forestry in accordance with the characteristics of forestry is crucial in giving impetus to the development of forestry. This work, taken together with the designation of mountains to be worked privately and the formulation of rights to mountains and rights to forests, has scored very great achievements. Nevertheless, very many problems remain. There are some complex problems that cannot be accurately assessed over the short term and that require exploration and the test of practice. There are three main problems in this regard that require solution as follows:

(1) How should collective tracts of commercial forests be operated? Central Committee document number 3 of 1984 pointed out that these "may be contracted for operation by specialized teams (or units), a new cooperative economy may be run of joint operations by shareholders, or families may contract operations." General methods must be suited to specific places and specific forests, the masses themselves making the choices. In the operation of large tract collective forests, Liujia Village in Luonan County, Shaanxi Province discovered a shareholder joint operation method. After looking at data on this method, leading comrades in the Central Committee made some written comments of agreement plus some notes. Subsequently, this was tried out with rather good results in Fujian Province and in some other provinces. Large tract, collective forest, joint shareholder operations is a new style cooperative economy that has vitality, and it is a method for self-transformation and

self-perfection of collective forest operating methods. The carrying out of centralized operations, shares being held by households (or individuals), households providing labor according to the number of shares they hold and receiving income according to the number of shares they hold with the right of succession and the right of transfer, decrease or increase share holdings being permitted, shares being divided up with no division of mountain forests and returns being divided up with no dividing up of forests pretty well solves contradictions among responsibilities, rights and benefits and also brings together new elements to expand operations. Certainly there are still other good methods. Each jurisdiction should make a conscientious summary and pick the best method to follow, thereby perfecting the method of operating large tract collective forests.

Subject to approval from authorities in charge, barren mountains and mountain forests that state-owned forest farms are unable to handle may be contracted to staff members and workers and to local peasants for handling. Alternatively, a portion of them may be designated for joint operations with the masses in surrounding areas with a division of earnings. In the case of problems inherited from history, in principle either a division of benefits with no division of forests or joint operations should be adopted with concurrent concern being shown to the interests of local areas and the masses. Support and guidance should be given the masses in making rational use of mountain region resources in order to cure poverty and become prosperous.

(3) Guidance should be given households specializing in forestry and to partnerships for their steady development. Households specializing in forestry and partnerships are the principal forces in rural areas for development of forestry. They are currently at an initial stage; they lack experience; they face considerable difficulties; and they need active policy and operational guidance as well as needed support in information, the growing of seedlings, techniques, funds and the circulation of goods. The scale of their operations has to be in terms of their own capabilities and with attention to results obtained. Operations should not be overly large; mostly different jobs should be done concurrently with little specialization of jobs being done, strengths and weaknesses being evened out. Jobs that really cannot be handled alone should be handled jointly, share participation expanded or turned over to others. Help should be given in setting up specialized societies and in setting up specialized service organizations. Legitimate rights and interest should be protected, and both assessments and egalitarianism and indiscriminate transfer of resources are strictly forbidden. They should be encouraged to be self-reliant, to achieve wealth through their own labor, and to follow a socialist orientation for steady development.

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SHORTFALLS IN TIMBER FOR AGRICULTURE EXPECTED

Beijing NONGMIN BAO in Chinese 2 Jan 86 p 2

[Article "Outlook Is For Continued Lumber Shortage in 1986"]

[Text] The Ministry of Agriculture, Animal Husbandry and Fishery lumber requirement plan proposals for 1986 shows that there will continue to be a glaring conflict between supply and demand. Lumber requirement plans for 1986 reported by directly supplied units in agriculture, state farm and land reclamation and aquatic products industries under departments and bureaus concerned in the ministry are higher than in 1985. Requirements for farming are 43,878 cubic meters; for state farm and land reclamation, 792,644 cubic meters; and for aquatic products, 168,265 cubic meters, these requested amounts being respectively 126, 108 and 105 percent higher than 1985 plan.

Reasons accounting for the rise in demand for lumber are as follows: First has been the needs in development of agricultural production and corresponding expansion in the size of agricultural science and technology and educational units, improvement of conditions, and increases in the construction area. Second has been a substantial number of new production and capital construction projects. Third has been the fairly rapid expansion of the aquatic products breeding industry in recent years and the rapid increase in the numbers of motorized fishing boats requiring nearly 3,000 cubic meters of lumber.

The 1986 principle used for distribution of primary materials is maintenance of a level lower than that of 1985. For this reason, the shortage situation in the supply of lumber throughout the agriculture, animal husbandry and fishing industry system will continue.

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ANHUI

INCREASED REVENUES DERIVED FROM TOBACCO SALES

Hefei ANHUI RIBAO in Chinese 25 Dec 85 p 1

[Article by Correspondent Ma Biling [7456 3880 3781]: "Fine Achievements Scored in Monopoly Sale of Tobacco in Anhui Province. More Than 800 Million Yuan in Taxes and Profits Collected in 1985, Making Tobacco One of the Mainstays of the Province's Finances"]

[Text] The correspondent learned at the work conference convened by the provincial tobacco monopoly bureau that economic benefits have steadily risen since implementation of monopoly dealings in tobacco in the province, making an ever increasing contribution to the state. In 1984, taxes and profits amounted to more than 700 million, and in 1985 profits and taxes increased to more than 800 million yuan, making this a mainstay of the province's finances.

Anhui Province first put into effect monopoly dealings in tobacco in 1983. During the past 2 years, the provincial monopoly bureau has carried out "Regulations Pertaining to the Tobacco Monopoly," has conscientiously reorganized tobacco marketing channels, has intensified market control of tobacco and has actively launched a laterally linked and varied production and business campaign to place tobacco industry production and dealings on a scientific track. During 1985, in particular, the provincial tobacco monopoly bureau has taken effective actions to stamp out handmade cigarettes and counterfeit brands of cigarettes to protect the states economic interests. In 1985, they also took note of the province's cigarette production being greater than its sales to launch lateral relationships with Beijing, Shanghai, Tianjin, Jiangsu, Zhejiang, Nei Monggol, Sichuan, Shanxi and Gansu to process cigarettes for them. As a result, full use was made of enterprises' production potential and their production became more flourishing with each passing day. After implementation of the tobacco monopoly, every enterprise in the province made new efforts at technical transformation and replacement of equipment, thereby greatly bolstering the quality of enterprises' production and production capacity gradually rose. In 1985, the province's output value of cigarettes vaulted into third place in the country, and output stood in fifth place. Cigarette quality also improved tremendously, with medium and high quality cigarettes accounting for 64 percent of the total cigarette output. Not only does this satisfy market needs, but it also increases economic results. As a result of jurisdictions at all levels having adopted flexible measures for joint operations and joint marketing, in 1985 the province sold a total of 1.68 million cases of cigarettes and exported 1,000 tons of cigarettes for an all-time high.

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BRIEFS

AQUATIC PRODUCTS DOWN IN BEIJING--Since controls on the prices of major secondary foods were removed last year, the sale of aquatic products in the markets of Beijing has dropped significantly. A survey of municipal aquatic products sales companies showed that sales between May and November of last year were 26.31 million jin compared to the 64.43 million jin during the same period of the previous year. This is a decrease of 59.2 percent. The main reason for this sales decrease is the removal of all state price subsidies for aquatic products after controls on prices were lifted. Price increases were, therefore, too great. Compared to the prices for other secondary foods, prices for aquatic products were higher and difficult for people to accept. The average wholesale price for all types of fish products was 0.58 yuan per jin before price controls were removed. After controls were lifted, the average price increased to 1.35 yuan per jin, an increase of 1.33-fold. Price increases for some popular varieties were even greater. For example, the retail price of cutlass fish (larger than 6 liang) increased from 0.6 to 2.2 yuan per jin, an increase of 2.33-fold; the retail price of yellow fish (larger than 0.5 jin) increased from 0.69 yuan to 3.4 yuan per jin, an almost 4-fold increase. Among other secondary foods, the price increase for eggs was only 16.6 percent and that for pork was only 35.4 percent. Changes in the relationship between prices for aquatic products and other secondary foods have caused shifts in people's buying habits. [Text] [Beijing NONGMIN RIBAO in Chinese 18 Jan 86 p 2] 13015/7051

CSO: 4007/264

FUJIAN

BRIEFS

SUGAR OUTPUT--As of 10 April, the province had pressed more than 4,580,000 tons of sugarcane and produced more than 510,000 tons of sugar, completing 109 percent and 107 percent respectively of the plan for the entire pressing season. It is estimated that sugar output will be 520,000 tons, an increase of 12.7 percent over the last pressing seasons's output of 460,000 tons. [Excerpt] [Fuzhou FUJIAN RIBAO in Chinese 28 Apr 86 p 1]

CSO: 4007/422

HEBEI

NEW CREDIT POLICIES REPORTED BY AGRICULTURAL BANK

Shijiazhuang HEBEI RIBAO in Chinese 1 Apr 86 p 2

[Article by Li Ruicha [2621 3843 5420]: "Hebei Agricultural Bank Advances New Credit Policies That Are Practical and Realistic and Feature Flexible Control, Reasonable Loans, and Support for Production"]

[Text] Recently, in view of the growth of rural commodity production in Hebei, the provincial agricultural bank has advanced new credit policies and increased loan flexibility.

These new credit policies are as follows:

1. The number of directive quotas will be reduced and the scope of guided planning will be expanded. In 1986 directive planning quotas will be reduced to three in number: loan volume, technical renovation loans, and township enterprise equipment loans.

2. A policy will be implemented allowing extra credit for extra savings. Any increase in the total quantity of deposits over and above the portion calculated in the annual plan may be used in the same year for circulating credit funds extraneous to directive quotas. The "extra credit" funds can be used first to increase agricultural credit and township enterprise circulating loan funds.

3. Based on different economic conditions in different areas, appropriate reductions will be made in the proportion of credit cooperative savings reserves.

4. Each case will be decided on its merits. Fixed asset investment credit will be strictly controlled based on approval of plans, and the supply of circulating funds will be made suitably flexible. Appropriate allowances will be made for impoverished regions and economically beneficial projects will be given priority support.

5. We must successfully handle funding for short-term loans. The various banks and financial institutions can scrutinize lending among themselves. Credit cooperatives will be permitted to utilize deposits over and above ample credit reserves at their own discretion. No provisions may be made for

directive transfers of savings responsibilities. Credit cooperatives that have a surplus or defecit of funds may make adjustments among themselves.

6. We must vigorously organize savings, enlarge deposits, and unearth more financial resources. We must increase the variety of savings deposits. At the same time as we handle existing kinds of savings, we must also work to initiate interest-bearing and bonus-paying accounts. We must also move step by step to try out accounts for durable consumer goods, house building accounts, savings for only sons or daughters, combinations of savings and loans, and both time deposits and active accounts.

7. We must support agricultural production. In 1986 rural credit investments should better reflect the policy of "active development of the diversified economy without any relaxation of grain production." We must give precedence to guaranteeing funds necessary for grain production, while suitably improving the proportion of credit for forestry, animal husbandry, and fishery. Credit cooperative funds must first meet the needs of agricultural production, and we should grant timely loans for production materials such as seed, fertilizer, pesticides, and medium and small farm implements. Simultaneously, we must support the adoption of advanced science and technology, improve production conditions, and achieve quality and diversity in agricultural produce.

8. We must work vigorously to support development and utilization of "mountains, oceans, and embankments." Over 50 percent of the farm credit funding in Hebei's provincial plan supports economic development in "mountain, ocean, and embankment" regions. The stress is on support for peasant households and joint households in developing cultivation, breeding, livestock, and mining industries, as well as processing industries for farm and sideline products.

9. We will actively support healthy growth in township enterprises. Based on central guiding policy to "offer enthusiastic support, plan prudently, give proper guidance, and enhance management," we must discriminate between different localities, projects, conditions, and uses, and arrive at controlled support. The focal points of support are on processing farm and sideline goods and on building materials, mining, transportation, and other preproduction and postproduction services. Among these, priority support will go to well-known, high-quality, special, and new products, as well as to exports that bring in a high rate of foreign exchange. We should suitably relax restrictions on circulating funds and tighten up loans for production equipment.

10. We must give active support to impoverished regions developing commodity production. In agricultural credit, one of the top priorities in banks and credit cooperatives at all levels should be to help impoverished regions cast off poverty and enrich themselves. In impoverished regions the proportion of deposit reserves in credit cooperatives may be lowered to 10 percent. In poor areas the proportion of self-supplied funds rural households need for production-expense loans may decreased: for over 1,000 yuan of credit the proportion may be lowered to 30 percent, for 500 to 1,000 yuan it may be decreased to 20 percent, and for less than 500 yuan it may no longer be emphasized. Realistic time limits should be placed on development loans in

impoverished areas, and they may be extended as appropriate based on the production cycle and the overall repayment capacity. Hebei will set aside 14 million yuan from its credit plan for specific loans to aid the poor, and it will also extract 10 million yuan from previous, recalled loans to increase support funding for credit cooperatives in poor areas.

11. We must enhance rural industrial and commercial credit. Based on contracts and market demand, each industry must organize production and procurement of grain, cotton, oil-bearing crops, and other large quantities of agricultural and sideline produce, and actively supply funds to the commercial sector, guaranteeing the fulfilment of procurement contracts. We must assure supplies of day-to-day necessities and production materials in accordance with the farming season, and we must give active support to agricultural, industrial, and commercial associations that cut across regions and industries.

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MANAGEMENT OF WATER RESOURCES MANDATED

Regulations Published

Shijiazhuang HEBEI RIBAO in Chinese 27 Dec 85 p 2

[Article: "Regulations on Management of Water Resources in Hebei Province, Approved by the Seventh Meeting of the Standing Committee of the Sixth Hebei Provincial National People's Congress on 21 December 1985"]

First Chapter. General Rules

Article 1. In order to develop for use and centrally manage the whole province's water resources and meet requirements for development of the national economy and the people's livelihood, these regulations have been formulated in accordance with the provisions of the constitution of the People's Republic of China and related laws in view of the shortage of water resources in the province, the serious waste of water, and the ever increasing needs of industry and agriculture for water.

Article 2. Natural water resources throughout the province are owned by the state, and state ownership of them may not be changed as a result of alterations in the ownership of land or water projects or of utilization rights.

Article 3. In the management of water resources, the principles of centralized planning, rational exploitation, scientific use, conservation in the use of water and prevention and control of pollution must be followed for optimum socio-economic benefits and ecological benefits.

Article 4. This article applies to the development, use, control and protection of water resources throughout the province, except in cases where national regulations apply.

Chapter 2. Development of Water Resources For Use

Article 5. All units that supply water must institute the principle of planned water supply. All units and individuals that use water must use water scientifically and conserve on the use of water.

Article 6. People's governments at all levels are to encourage, support and promote advance technical measures for the scientific use of water and conservation in the use of water.

Article 7. National procedures and related regulations on capital construction must be followed in the building of large and medium size projects for the use of water resources. Only after projects have been completed and examined for acceptance by the authorities concerned may they be put to use.

Article 8. Units and individuals that build small projects for the use of water resources must make application to municipal or county people's governments or their designated representatives and obtain a permit following approval before beginning construction. They must also bear responsibility for the management and protection of the water resources concerned.

Article 9. Depending on their function and size, projects built to make use of water resources may be operated by the state, collectives or individuals or operated jointly.

Article 10. All projects and facilities for the use of water resources are to be protected, and no unit or individual may destroy or damage them.

All activities that imperil the normal operation of projects for the use of water resources are forbidden.

Article 11. Fees for water resources must be paid to local authorities in accordance with regulations for water resources that have been developed for use. (For the time being no fees for water resources are collected from peasants who tap ground water for the irrigation of farmland.) These funds are to be dedicated for use in helping with the development, use, management and conservation of water resources and may not be diverted to other uses.

Article 12. Standards and methods for the collection of water resources fees are to be formulated in accordance with national economic policies and the status of water resources by provincial departments in charge of water resources and reported to the provincial people's government for approval and implementation.

Article 13. All departments in charge of water resources at all levels are empowered to conduct inspections of the amount of water used by all customers as specific circumstances require.

Chapter 3. Cities Management of and Collection of Fees For Water Usage

Article 14. The principles to be applied by cities in the distribution of water for use are as follows: Priority is to be given for the use of superior quality water in the people's daily lives. When there is a shortage of water, water for use in the people's daily life and water for the use of medical units, for vegetable production and for key industrial production is to be guaranteed first.

Article 15. Urban plans should include strict control over the amount of development of ground water, further boring of new wells generally not being permitted in areas where too much water is already being extracted. Existing pump wells are to complete registration procedures in accordance with regulations.

Article 16. Urban plans should provide that no unit may develop water resources for their own use without prior approval. All existing water resources for the sole use of units are gradually to be made a part of the overall urban water supply system.

Article 17. Departments in charge of urban water resources are to formulate equitable unit consumption quotas for industrial and mining enterprises and for operating units that use water (including units having their own water sources), and they are to establish a unit inspection system for the use of water. Industrial and mining enterprise should improve their water recycling rate, using the same water many times, cycling water used in production and recovering waste water for use.

Article 18. Fees are to be collected for water used within plan in accordance with national regulations, and an award price rate is to be applied for consumption of water below the quota allowed. A surcharge is to be made for that portion of water used in excess of quota. All fees paid for water in excess of quota and all water resources fees are to be paid from after-tax profits and are not to be applied to costs.

Article 19. A fixed amount of water is to be supplied for use in the daily life of city residents and a system of metering instituted for the collection of fees. A surcharge is to be collected for that portion in excess of the quota. Storeyed buildings and single storey dwellings having requisite conditions are to install water meters for individual households.

Chapter 4. Management of Rural Water Usage and Collection of Fees

Article 20. Development of ground water must be done in accordance with the availability of ground water and surface water resources, and following the principles of suiting general methods to specific circumstances, a rational pattern, use of deep, medium and shallow sources in combination, water in shallow strata being developed first. County authorities in overall charge of water resources are to make overall plans and decide the locations of wells. In areas where too much water is already being extracted, generally no further boring of pump wells is to be allowed.

Article 21. State and collective project facilities for the use of water resources will require a management organization or designated (concurrent) managerial personnel commensurate with the size of the facilities, and they are to exercise central control. Different forms of management responsibility systems are to be established with regular inspections and the issuance of rewards and punishments.

When pump wells are to be abandoned, a report is to be prepared for the overall control authority for county water resources.

Article 22. Water is to be supplied to irrigation ditches at so much per mu, a quota of water supplied and fees collected on the basis of metering.

The quota of water to be used by various kinds of crops is to be fixed by the overall authority in charge of county water resources in accordance with a province-wide plan.

Article 23. Municipal and county overall authorities for water resources are to fix the amount of water that agricultural pump wells may use for the irrigation of farmland, a quota of water to be supplied gradually being effected.

Centrally controlled pump wells used in agriculture are to institute the collection of fees for water lifting costs based on the measurement of water volume pumped or the period of time.

Article 24. Places having inadequate water resources should readjust in a planned way their agricultural crop patterns, growing, insofar as possible, high yield crops that require little water or that tolerate drought.

Chapter 5. Protection of Water Resources

Article 25. It is the duty of all units and individuals that use water to protect water resources.

Article 26. Municipal and county units in charge of water resources are to take action, insofar as safety and health conditions permit, to use water held in ponds, ditches, rivers and low-lying spots to augment water resources.

Article 27. Prior evaluation must be made of the effect on water resources of all new construction, expansions, or improvement projects and other facilities that may affect water resources, construction being permitted only following approval by water resources and environmental protection authorities.

Article 28. Local people's governments are to designate various degrees of water resources protection areas around water resources projects in accordance with requirements of project safety and protection of water quality. No unit or person may encroach upon or destroy such areas.

Article 29. Waste water and sewage that exceeds standards may not be discharged at will. Effective actions must be taken on water resources that have already been polluted and damaged to clean them up within a stipulated period of time to bring them to good condition. All expenses incurred are to be borne by units or individuals who caused the trouble.

In cases where contamination is serious and industrial and mining enterprises are unable to correct it within a short period of time, the enterprises are to be closed, suspended, converted or moved on a case-by-case basis.

Article 30. Water conservancy, geological and environmental protection departments are to follow the principle of a division of labor, each sharing

responsibilities according to their specialties to establish, as suitable, hydrological and water quality monitoring stations and networks and an observation network to observe the status of ground water, carrying out monitoring of water quality and water quantity in a planned way.

All water quality monitoring stations are to trace sources of pollution and inspect the situation with regard to the discharge of pollutants and pollution damage. Units and individual concerned must provide information and data, without any attempt to conceal or report falsely.

Article 31. Bodies of water in which harmful elements exceed nationally prescribed standards and endanger the health of the people may not be tapped for use as drinking water. Those already in use must be cleaned up and not used as sources of drinking water pending attainment of nationally set standards.

Chapter 6. Managerial Bodies and Their Duties

Article 32. People's governments at all levels are to regulate water in accordance with law. They are to exercise centralized management over water resources, discharge responsibilities at all levels, acting in accordance with the principle of a combination of overall control and a division of labor among departments.

Article 33. People's governments at all levels should take action to solve major problems arising in water resources work. They should turn in a good performance in the rational exploitation and scientific use of water resources under centralized plans and management from higher authority.

Article 34. Water conservancy administrative departments at all levels are the overall management authority for water resources. They are responsible for overall planning for and management of the all-around development, use, allocation and protection of water resources.

Article 35. City and small town construction and environmental protection units at all levels are the management authority for urban water resources. They are responsible, under the centralized planning and management of overall water resources management authorities, for management of urban water resources and for the prevention and control of the pollution of water sources throughout the province.

Article 36. All authorities concerned are to subordinate themselves to the centralized management of water resources for the province as a whole and to provide to departments responsible for overall management of water resources all pertinent information and data about water resources. Overall water resources management authorities must promptly prepare forecasts and guidance for the use of authorities concerned.

Chapter 7. Awards and Penalties

Article 37. Units and individuals who have done the following meritorious deeds are to be rewarded:

(1) Marked achievements in the protection and equitable use of water resources;

(2) Marked achievements in the scientific use and conservation of water;

(3) Major innovations and inventions in the course of work on projects for the exploitation of water resources;

(4) Major contributions in support of this regulation and in fighting against violations of it.

Article 38. Those who commit any of the acts hereinafter enumerated in violation of this regulation are not only to take remedial action within a stipulated period of time, but are also, depending on the seriousness of the situation as regarded by authorities concerned, to be ordered to make reimbursement of damages or be subjected to fines. Criminal violations are to be tried by legal institutions in accordance with law.

(1) Violations of conditions set in permits and unauthorized actions to change the purposes for which water is to be used;

(2) Inept management causing serious waste of water resources;

(3) Failure to follow regulations in the installation of water measuring facilities and in the payment of water resources fees and water fees;

(4) Exploiting and using water resources at will without having obtained permission to do so;

(5) Serious pollution of water resources and contamination of the environment;

(6) Transgressions of the use rights approved for others and destruction of designated protection areas leading to serious consequences;

(7) Damage to project facilities for the use of water resources;

(8) Other conduct in violation of this regulation that creates serious consequences.

Article 39. Water resources management authorities at all levels must strictly carry out national laws, regulations, programs and policies; handle matters impartially; and not act wrongly out of personal considerations. Violators are to be dealt with strictly depending on the seriousness of their infractions.

Chapter 8. Supplementary Regulations

Article 40. The meanings of terms used in this regulation are provided as follows:

(1) "Water resources" means ground water and surface water (including springs);

(2) "Pump wells" means wells that use powered water-lifting machines;

(3) "County" means county or autonomous county;

Article 41. Provincial water resources management authorities may formulate specific regulations for implementation based on this regulation, reporting them to provincial people's government for approval for implementation.

Article 42. This regulation is effective from the date of publication.

Commentary on Regulations

Shijiazhuang HEBEI RIBAO in Chinese 27 Dec 85 p 2

[Commentary: "Application of Legal Methods For Good Management of Water Resources"]

[Text] "Regulations on Management of Water Resources in Hebei Province" has already been passed by the 17th session of the the Standing Committee of the Sixth Hebei Provincial National People's Congress and has been promulgated for implementation. This is a major legal weapon for the province's management of water resources. The promulgation of this "regulation" for implementation will play a very great role for good performance in the rational exploitation and scientific use of water resources in the province.

A look at the current situation in the province's water resources shows a serious shortage of water resources and the taking of too much ground water each year, causing a drop in the water table as well as a halt in the flow of streams and an ever widening conflict between supply and demand for water. It also shows serious waste of water resources everywhere, and increasingly serious industrial pollution of water resources. This state of affairs is very much related to the lack of uniform regulations for the management of water and the existence of an anarchic situation in which everyone is a law unto himself in the exploitation of water resources for use. In order to bring about a gradual solution to the conflict between supply and demand of water resources in the province, the state has decided on a project for the northward diversion of waters from the south. However, this is a strategic goal that will not show results in the province in the near term. Consequently, we must work with resources that are available within the province, develop resources and reduce consumption, and take the road of planned use of water and conservation in the use of water.

The water resources issue is one that bears on the situation as a whole. People's governments at all levels must strengthen leadership and take timely action to find a solution to major problems in water resources work. Water conservancy departments at all levels must do a good job in the overall exploitation, use, management and protection of water resources. City and small town construction and environmental protection authorities at all levels must do a good job of managing urban water resources, and do a good job of prevention and control of the pollution of water resources. All units at all levels and the broad masses of people must support and subordinate themselves

to centralized management of water resources, opposing individual units and people being a law unto themselves. Hebei Province is currently in process of drawing up the Seventh 5-Year Plan for national economic and social development. The exploitation, use and management of water resources must be regarded as a major component of the plan. All jurisdictions must do across-the-board planning for water resources under their control, consider matters carefully, and attain the goal of rational exploitation and scientific use, and conscientious protection.

"Regulations For the Management of Water Resources in Hebei Province" is an important tool for "control of water in accordance with law" for people's governments at all levels throughout the province. All departments at all levels should study it carefully, genuinely carry it out, and use all effective methods to give it widespread publicity so that it becomes known in every household, the broad masses of people thereby coming to understand the important position, role and significance of water resources in the socialist modernization of the province, understand the basic content of the "Regulations" and consciously act in accordance with law.

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STABLE INCREASES IN GRAIN EMPHASIZED

Beijing JINGJI RIBAO in Chinese 16 Jan 86 p 2

[Article by reporter Tian Jijin (3944 4480 6855): "Rural Industries in Hubei Have Undergone Coordinated Development--Stabilization of Grain Production, Control of Cotton Production, Development of Diversification, and Breakthroughs in Animal Husbandry"]

[Text] [Editor's note] Agriculture provides the basis for the state economy, and grain production is the foundation of agriculture. When they direct farmers to reform the internal structure of agriculture, all levels of the agriculture, animal husbandry, fisheries department must implement the directive to "Never neglect grain production and enthusiastically develop diversification" so that increased grain production will be ensured.

Stable increases in grain production require adequate planting areas. We must consider grain transportation and local financial conditions when reducing land under cultivation or increasing land for forestry, animal husbandry, fisheries, and cash crops. Achieving stable increases in grain production will require vigorous utilization of new technology and increases in yield. Examples include promoting the use of improved varieties and the development of ground covers. In summary, reduction of grain-planting areas requires adequate consideration in light of local conditions. [End editor's note]

Reform of rural enterprise structure in Hubei has stabilized grain and cash crops have undergone coordinate development, and the commodity economy has been more active than ever before.

From 1979 to 1984, grain and cotton production in Hubei developed rapidly. Yearly production now exceeds 40 billion jin and 10 million dan respectively, and there are relative surpluses. Cash-crop development, however, has not been adequate, and animal husbandry is "stunted." In order to stimulate overall, coordinated development of agriculture, the entire province must seize this opportunity, reduce the grain-planting area, and develop cash crops. Hubei Province has conscientiously conducted investigations in order to reduce the grain-planting area adequately and avoid blind actions. Based upon the 1984 average yield of 570 jin per mu, the originally planned reduction of 5 million mu would have produced a decrease of 2.85 billion jin in Hubei grain production. Simultaneous conversion from common to preferred grain types and from poor-quality to good-quality rice resulted in a total production

decrease of 3 billion jin. On the other hand, development of the livestock industry requires an additional 2 billion jin of feed grain. Can the province support a reduction of 5 billion jin in grain production? The provincial CCP committee and provincial government analyzed the grain situation and concluded that production must be maintained because grain is the foundation of agriculture. Therefore, any reduction must be appropriate. They decided to reduce planting area by only one-half, or 2.5 million mu. In order to maintain grain production, the following measures were suggested: promoting the use of hybrid rice varieties to increase unit production; establishment of a commodity grain base; increased emphasis on corn varieties adapted to high elevations and grain production in poor, mountainous areas; and vigorous promotion of new technologies that will increase agricultural production.

Because both the reduction in planting area and measures to increase production were apropriate, the goal of "Stabilizing grain, controlling cotton, development of diversification, and a breakthrough in the livestock industry" was achieved in 1 year. All rural sectors have begun to coordinate development.

--Although total grain production was slightly lower than in the bumper harvest year of 1984, it was still the second highest production year since the liberation. Cotton production was 9.6 million dan and met the established goal.

--Total oil production was 13.8 million dan, the highest level in history.

--Hemp production increased greatly, total production being 5.74 million dan, double that of 1984.

--Fruit production increased 15 percent; tea production, 10 percent, tobacco production, 30 percent; and vegetable production, more than 30 percent.

--The livestock industry developed rapidly. Fourteen million pigs were slaughtered, an increase of 2 million compared to last year. Poultry production was 130 million, an increase of 30 million. Total egg production reached 850 billion jin, an increase of 200 million jin. The total value of livestock industry production was 2.8 billion yuan, an increase of 500 million yuan. Hubei finally discarded its reputation as a long-term meat importer.

Development of diversification has begun to change the uniformity of the rural economy. The ratio of grain to cash-crop production has changed from 85:15 in 1978 to 79:21. The commodity rate of all rural sectors has increased from 52 percent last year to 60 percent. Farmers' per capita income has reached 420 yuan, an increase of 20 yuan over last year.

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HUNAN

PROBLEMS IN GRAIN, CASH CROP MIX DISCUSSED

Beijing NONGYE JISHU JINGJI [ECONOMICS FOR AGRICULTURAL TECHNOLOGY] in Chinese No 3, Mar 86 pp 36-38

[Article by Wang Shouren [3769 1343 0088], Hunan Provincial Department of Agriculture: "Several Problems in Further Readjustment of the Structure of Agricultural Production"]

[Text] During 1985 we carried out in a planned way a rather tremendous all-around readjustment of the structure of agricultural production. Practice has shown the thrust of this readjustment to have been correct, and that it played a major role in establishing an equitable structure in agricultural production and even a new kind of rural industrial structure for vigorous development of the rural commodity economy and hastening the pace of peasants becoming rich. In particular, readjustment of the internal structure of the farming industry resulted in a reconfiguration and a reconstitution of all key elements in agricultural productivity between grain production and cash crops, and the effective destruction of the undiversified grain production structure to give impetus to rapid expansion of the growing of cash crops. However, inasmuch as readjustment of the structure of agricultural production during the last 2 years has been carried out in a new situation in which command planning has been abolished and in which centralized procurement and assigned procurement have been abolished, as well as in which there has been "an excess" of low grain sales, to a certain extent problems remain in loss of macro-control and blind readjustment that have impaired the economic and social benefits of readjustment. A critique of the lessons of experience of the past year show that genuine attention must be given the following several problems in making further readjustments to the structure of agricultural production.

1. Strengthening of the Basis For Readjustment To Insure Steady Increase in Grain

Sustained and stable development of agricultural production is the foundation for all-around vigorous development of the rural economy, and it is also a guarantee for the smooth development of secondary and tertiary rural industries. Grain serves as a strategic commodity for the prosperity of the country and the well-being of the people. Not only is it the most important material basis for social stability, but it is also an important guarantee for equitable readjustment of the structure of rural industry. It holds a decisive

position in the entire rural economy. Consequently, firm grip must be taken on grain production as the foundation for readjustment of the structure of agricultural production, and there can be no loosening of this grip at any time.

Relatively speaking, the grain foundation in Hunan Province has been fairly good for the past several years. In 1983, gross output of grain reached 53.07 billion jin or 963 jin per capita. In 1984, gross output was 52.26 billion jin, or 938 jin per capita. As a result of the bumper harvests of the 2 previous years, in 1985 problems existed for a time with "difficulties in selling grain" and an "excess" of low levels of grain sales occurred. This plus the adverse effects of policy factors brought about a decline in peasant enthusiasm for grain farming and a relaxation of leadership in grain production. In particular, the loss of a grain harvest from a more than 1.4 million mu growing area that resulted from not transplanting seedlings because of a drought disaster, as well as the planned reduction by more than 2 million mu of the grain growing area to use it for the growing of cash crops, the digging of ponds to raise fish and the removal of farmland from cultivation to permit it to revert to forests and lakes resulted in the loss of nearly 4 million mu of the grain growing area in a single year and a fairly tremendous decline in grain output. In 1985, gross output of grain for the whole province was approximately 48.6 billion jin, output declined to slightly more than 860 jin per capita. Figured in terms of 1984 needs for grain by inhabitants of towns and villages, seed grain, livestock feed and for industrial use, the province must produce 48.6 billion jin of grain to satisfy its needs. Thus, it is expected that 2 billion jin of grain will have to be removed from storage in granaries to meet the quota to be supplied to the state. Clearly the province's grain foundation is already extremely brittle. Unless matters are taken firmly in hand, this will inevitably have an adverse effect on readjustment of the entire agricultural production structure and the rural industrial structure. The year 1986 is one of particularly great significance for revival of the province's grain production. Whether or not a fairly large scale increase occurs will very greatly affect both grain production and readjustment of the whole structure of agriculture during the entire Seventh 5-year Plan period.

Experience during the past 2 years in the readjustment of the agricultural production structure shows a need to maintain steady increase in grain production, the key question being correct handling of the relationship between readjustment of the structure and grain production. One aspect of the problem is an equitable readjustment of grain crop and cash crop patterns on the basis of current productivity levels and possibilities for increasing grain yields per unit of area, stabilizing the grain growing area fairly well and tying reduction in growing areas to increases in yields per unit of area so that the amount of readjustment required is kept within reasonable bounds, the growing areas being kept stable for the most part with little readjustment. Another aspect of the problem is no ill-advised expansion of the grain-growing area, cutbacks in development of cash crops and aquatic products breeding, or even institution of a new "taking grain as the key link" in the face of pressure from declining grain output to the detriment of equitable readjustment of the structure of agricultural production. The key to maintaining a steady increase in grain output lies in further study of pricing

policies and inducements to rally peasant enthusiasm for growing grain. Emphasis should go to the spread and the application of new techniques, new actions and new varieties in a major effort to increase yields per unit of area. We have made some calculations that show that if no exceptionally large natural disasters occur, if the grain growing area is kept relatively constant, and if a major assault is launched on increasing yields per unit of area, Hunan Province's gross output of grain is likely to reach more than 51 billion jin in 1986. Most important is to tap the potential for increased yields per unit of area from the existing grain growing area. Were per unit of area yields for early and intermediate paddy and for dryland grain to revive to the levels of 1984, grain output for the area sown to grain in 1985 would increase 2 billion jin. Second in importance is expansion of the hybrid paddy growing area. Our preliminary plans, which are based on the plans of various jurisdictions and the availability of hybrid rice seeds in the province call for the growing of 24 million mu of paddy, up more than 3 million mu from 1985. Since yields of hybrid paddy average approximately 150 jin more per mu than conventional paddy, this action alone will increase output by 500 million jin. Third in importance is acceleration of the spread and use of new high yield fine varieties, a speed up in the replacement of varieties, and improvements in the make-up of varieties planted. In addition, if the harvest is normal, there is the prospect of recouping during 1986 some of the grain harvest lost from the grain growing area that was not transplanted or aborted due to drought, gross output of grain possibly approaching the 1984 level.

2. Expansion of the Growing of Cash Crops and of Aquatic Products Breeding Will Have To be Done Primarily Through the Tapping of Intensive Potential Plus All-Around Exploitation and Equitable Use of Resources

Readjustment of the structure of agricultural production entails a fundamental reform of the low quality and inefficient undifferentiated production structure of the past and the building of an optimized production structure in which proportional relationships of all industries are equitable and development is coordinated for more effective use of all natural resources and social resources, the level of agricultural productivity thereby expanding in an unprecedented way. Readjustment of the province's agricultural production structure in 1985 neglected, to a certain extent, the tapping of potential and all-around exploitation of resources. It was too much limited to undiversified readjustments to the existing farming area, and this adversely affected the readjustment of social results and economic results. Preliminary statistics show the overall situation in readjustment of the internal structure of farming in 1985 to have been as follows: a 2.45 million mu reduction in the grain crop growing area (including the area that was not transplanted or on which the harvest aborted as a result of natural disasters), and a 1.53 million mu increase over 1984 in the cash crop growing area. Gross output of grain was approximately 3.6 billion jin less than in 1984 for a 560 million yuan decrease in value (figured at 15.59 yuan per 100 jin of paddy), and an estimated 540 million yuan increase in output value from cash crops. This shows economic results gained from readjustment of the internal structure of farming not to have been very ideal.

Of course, suitable reduction in the grain growing area to expand cash crop and fishing industry production was entirely necessary, and it was also an

inevitable result of the development of a rural commodity economy. The problem faced today is that, objectively speaking, a conflict in the use of farmland results from the need for sustained increases in grain production, which is related to the cultivated land area, and the need for major expansion of cash crop and fishing industry production. Ways to solve the conflict between steady increase in grain production and energetic development of economic diversification include not only major efforts to increase grain yields, but also expansion of the growing of cash crops and development of fishing industry production in two ways. The first is tapping of internal potential, striving to increase yields and economic results from the existing area. The province's cash crop production and the breeding of aquatic products both seem much less intensively done than the growing of grain in Hunan Province; production conditions are also poor by comparison; yields are lower; economic results are poor; and depletion of resources is fairly serious. Thus potential for cash crop production and the breeding of aquatic products is greater. If one begins with a major effort to increase yields, rapid realization of a doubling of yields from the present area is entirely possible. Take citrus fruit, for example. The province's citrus growing area currently stands at slightly more than 1.1 million mu. But since standards used in establishing citrus groves were low and since care is non-intensive, the producing area is small and yields per unit of area are small. The year 1984 was a bumper one for citrus production everywhere in the province. Gross output reached 4.19 million dan; nevertheless, yields were smaller than 500 jin per mu. Were effective actions taken to tap potential and transform existing citrus groves so that 70 percent of the fruit bearing orchards would produce yields of 2,000 jin or more per mu and so that 80 percent of young trees would produce fruit on time, gross output of citrus fruit for the province could reach more than 10 million dan, more than double the gross output for 1984. The levels of production achieved by some advanced citrus growing countries, and results achieved in bumper yields from large areas in some places in China both show that yields of approximately 4,000 jin are entirely achievable. Ten mu of bumper crop citrus groves on the Baotashan Horticultural Farm in Nanjing Village, Tuoxiku District, Anhua County in Hunan Province produced yields averaging 9,218 jin per mu in 1983. 1984 was a scant year with yields of 5,000 jin per mu; and in 1985 yields again reached more than 9,000 jin. The growing of other cash crops and fishing industry production likewise face the problem of tapping potential. Output of aquatic products from water surfaces in Hunan Province averaged 102 jin per mu in 1984. Yields are forecast at 111 jin for 1985. With proper institution of contract responsibility systems, firm grip on the transformation and upgrading of existing water surfaces, expansion of superior breeding water surfaces, and scientific use of large water surfaces, output from aquatic products breeding can be tremendously increased and fishing industry production throughout the province will be able to top anything so far achieved. Second is comprehensive exploitation and equitable use of resources. The cultivated land area in Hunan Province is small, and the grain field area per capita is even smaller. But mountainland resources are plentiful; there are vast waterlands; and potential for development is great. There is a substantial amount of barren mountains, wasteland, and water surfaces that serve no productive purpose. With scientific exploitation, these are suitable for the development of production. In the future, not only can some land that is not suited for the growing of grain or that produces only poor result be converted to the

growing of cash crops or the digging of ponds for fish breeding, but development of grain production and fishing industry production need not compete excessively with grain production. The emphasis in expanding area should be placed on exploitation of resources and on actively studying the equitable use in multiple ways of existing resources to insure coordinated and steady development of both grain production and cash crops.

3. Firm Grip on the Three "Organic Links" To Guide Equitable Readjustment of the Structure of Agriculture

The first of the three organic links is the organic link between suiting general methods to specific circumstances and market demand. This requires both guiding the peasantry in making the most of strengths and avoiding weaknesses to make full use of local advantages, and effective use of market information to guide the peasantry in carrying out planting and goal-oriented production in accordance with consumption needs. Suiting general methods to specific circumstances can make fullest use of strengths in natural resources; however, this is not tantamount to being able to achieve dominance in the commodity economy. For example, though we emphasized fairly well the suiting of general methods to specific circumstances in past readjustments of the structure of agricultural production; nevertheless, we neglected to a certain extent the special economic laws that govern commodity production. As a result, development of some commodities was unable to meet changing market needs. This was particularly true of some noted local products such as Hunan Province's lotus, pearl barley, dragon tooth lilies, and edible day lilies. Because of the dislocation between production and market demand, plus failure to improve quality and the backward methods used in processing and packaging these products, slack sales, accumulation in inventory and a slump in prices has begun to appear in recent years. Therefore, in readjusting the structure of agricultural production, one must be certain to study market information, pay attention to the relationship between supply and demand and strive to improve quality in order to be able to translate product advantages into commodity advantages and gain the sought after economic results. Second is the organic link between guidance at the overall level and self-determination at the individual unit level, requiring both respect for the peasants' rights of self determination and the carrying out of effective overall control. In readjusting the structure of agricultural production, the authority to make readjustments must be handed to the peasants, on the one hand, enabling them to exercise self determination in production and operations in accordance with economic results. On the other hand, a bolstering of macroeconomic planning is necessary in conjunction with corresponding policy actions and economic methods so that development of production and planning of a guidance nature are dovetailed. One conspicuous problem in readjustment of the structure of agriculture in Hunan Province during 1985 was that in certain areas planning of a guidance nature was divorced from the development of production. In particular, output of some cash crops seriously exceeded plan and greatly exceeded both market ability to take them and personal ability to process them. At the beginning of the year, for example, plan guidance called for the growing of 260,000 mu of jute and ambari hemp for a gross output of 1.8 to 2 million dan. The actual growing area was expanded to 887,000 mu, however, and output of jute and ambari hemp was 3,297,000 dan, 3.4 times and 1.65 times again as much respectively as the original plan guidance. More than

700,000 dan remained in inventory even after normal processing and storage within the province plus sales outside the province. Third, readjustment of the structure as a whole must be organically linked to readjustment of the internal structure of individual industries, with the emphasis going to readjustment of the internal structure of individual industries. The kinds of things produced and the mix of products must be gradually adjusted in the direction of diversification, optimization, high yields and resistance to multiple growing problems in order to be able to meet diverse requirements for consumption and processing. Though Hunan Province has made some readjustments to the structure of varieties in recent years, the lack of differentiation remains a fairly prominent problem. In the grain field, development of livestock feed grains and raw materials for the food processing industry, notably barley, various kinds of beans and corn, has been slow. Though attention has been given to development of fine quality rice, the mix of early, intermediate and late maturing paddy is not sensibly matched. This hurts balanced, high yields. This is also the case with cash crops. The structure of fruit production is substantially one of three 80 percents, namely, oranges account for more than 80 percent of the total fruit growing area and total output. Among oranges, Satsumas account for more than 80 percent of the total growing area and gross output; and among Satsuma oranges more than 80 percent are late ripening varieties. Such a production structure is very much unsuited to diversified and balanced consumption.

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BRIEFS

MORE GRAIN, CASH CROPS--Jiangxi has actively stabilized and reformed the structure of rural enterprise. The rural economy exhbits a new coordinated and stabilized development. During last year's reform of rural enterprise structure, Jiangxi implemented the principle of "Major stabilization and minor reform." The province has also reduced the grain-planting area appropriately, increased average grain production, and maintained the steady increase in total grain production. Under these conditions there was a major development of cash crops. Two methods were used for the development of cash crops--plans and directives for major crops and an open policy for minor crops that allows regulation by the market. Compared to the previous year, the area planted in cash crops increased 1.16 million mu last year, while the area planted in grain decreased 1.1 million mu. Grain production, however, increased 1.3 percent. Among the cash crops, production of jute and ambari hemp was 2.5-fold higher than the goal, ramie production was 1.1-fold higher, sugarcane production increased 30 percent, and other minor crops such as lotus seed, melons, vegetables, and medicinal herbs also increased greatly. The livestock and aquaculture industries also underwent great development. Supplies of meat, poultry, milk, and eggs improved significantly, and 1.2 million hogs were exported. During the structural reform of planting industries, rural areas in Jiangxi emphasized increasing the rate of land utilization. Soybeans and mungbeans were planted in the sugarcane fields of Ganzhou Prefecture, and many schemes that alternated irrigated and dryland farming were tried. Melons, vegetables, and potatoes were planted before "two-season, late" rice in Yichun Prefecture, and income per mu increased by about 300 yuan. This method ensured increased grain production and the development of cash crops. [Text] [Beijing JINGJI RIBAO in Chinese 16 Jan 86 p 2] 13015/7051

EXPORT OF FARM PRODUCTS--Last year exports of farm products in Jiangxi earned more than $85,700,000 U.S. in foreign exchange. Last year state purchases of local and animal products for export exceeded 200 million yuan; state purchases of grain and oil for export were more than 170 million yuan. Rice exports earned more than $13 million U.S. in foreign exchange. Jiangxi exported 50,000 tons of fine-quality rice last year. The 15,000 tons of rice exported by the province alone earned more than 5,110,000 yuan in foreign exchange. Last year, Jiangxi shipped 210,000 head of hogs to Hong Kong and Macao, and earned more than $14 million U.S. in foreign exchange. Last year the province sold 603 tons of pressed duck, which accounted for more than 60 percent of the Hong Kong market. [Excerpts] [Nanchang JIANGXI RIBAO in Chinese 1 Apr 86 p 1] /13045

CSO: 4007/405

OUTLOOK FOR AGRICULTURE DURING THE NEXT 20 YEARS

Shenyang NONGYE JINGJI [AGRICULTURAL ECONOMICS] in Chinese No 6, Dec 85 pp 4-9

[Article by Zhao Tianfu [6392 1131 4395] and Zhao Rui [6392 6904]: "Preliminary Exploration of Liaoning Province's Rural Economic Development Strategy"]

[Excerpt] Strategic Objectives and Major Economic Criteria for Development of Liaoning's Rural Economy

Analysis of the foregoing shows that the following assumptions may be made about the strategic objectives for development of Liaoning's rural economy: By the end of the present century, rural villages in every jurisdiction throughout the province will have established one after another cultured and prosperous new socialist villages that have taken the first steps toward modernization of agriculture, that have industries that have developed in an integrated way, economies that produce commodities, and fine environments where the material and cultural life of the peasants and their socialist ethics have risen very greatly. The main major economic criteria that will be needed and can be attained by 1990 and 2000 are as follows:

1. Gross output value of agriculture (not including industry at the village level and below): This will rise from the 9.62 billion yuan of 1984 to 12.7 billion yuan in 1990 and 18.41 billion yuan in 2000. In 1990 and 2000, an increase of 77.9 and 157.8 percent respectively will have taken place over the 7.14 billion yuan of the 1980 base period in an incremental 5.9 and 4.8 percent annual increase respectively. The incremental rate of increase for the 20 year period will average 4.8 percent per year.

This will include an output value for the farming industry of 7.5 billion yuan in 1990 and of 9.5 billion yuan in 2000 from the 6.31 billion yuan base figure for 1984. Using the 4.92 billion yuan of 1980 as the base period, this will amount to a 52 and 97 percent increase. The incremental rate of increase for the 20 year period will average 3.3 percent per year.

The output value of forestry will rise from the 370 million yuan of 1984 to 740 million yuan in 1990 and will reach 1.48 billion yuan in 2000. This will represent an increase of 100 and 300 percent respectively over the 370 million

yuan of the 1980 base period. The incremental rate of increase for the 20 year period will average 7.2 per year.

Output value of animal husbandry will reach 3.01 billion yuan in 1990 and 5.2 billion yuan in 2000 from the 1.81 billion yuan of 1984. This will represent a 140 and a 316 percent increase respectively from the 1.25 billion yuan of the 1980 base period. The incremental rate of increase for the 20 year period will average 7.5 percent per year.

Output value of sideline occupations will reach 750 million yuan in 1990 and 880 million yuan in 2000 from the 710 million of the 1980 base period. This will mean a 142 and a 183 percent increase respectively from the 310 million yuan of the 1980 base period. The incremental rate of increase for the 20 year period will average 5.3 percent per year.

Output value of aquatic products will reach 700 million yuan in 1990 and 1.35 billion yuan in 2000 in a rise from the 420 million yuan of 1984. This will represent a 141 percent and a 365 percent increase from the 290 million yuan of the 1980 base period. The incremental rate of increase for the 20 year period will average 8 percent per year.

2. Output of Major Agricultural Products

Gross output of grain will rise from the 28.516 billion jin of 1984 to 32 billion jin in 1990 and 38.2 billion jin in 2000. This will mean a 31 and a 56 percent increase respectively from the 24.13 billion jin of 1980. The incremental rate of increase for the 29 year period will average 2.2 percent.

Gross output of pork, mutton and goat will reach 1.74 billion in 1990 and 3 billion jin in 2000 from the 1.1 billion jin of 1984. It will increase 102 percent and 248 percent respectively from the 860 million jin of the 1980 base period. The incremental rate of increase for the 20 year period will average 6.4 percent.

Poultry egg output will reach 800 million jin in 1990 and 1.44 billion jin in 2000 from the 436 million jin of 1984. This will be an 83 percent and 230 percent increase respectively from the 1984 base period. The incremental rate of increase for the next 6 years and next 16 years will be 10.6 percent and 7.7 percent respectively.

Dairy products output will reach 700 million jin in 1990 and 2.6 billion jin in 2000 from the 211 million jin of 1984. This will be a 232 percent and a 1,132 percent increase from the 1984 base period. The incremental rate of increase for the next 6 years and the next 16 years will be 22 percent and 16.9 percent respectively.

Output of aquatic products will reach 700,000 tons in 1990 and 1.68 million tons in 2000 from the 550,000 tons of 1984. This will be a 66.3 percent and a 300 percent increase respectively from the 1980 base period. The incremental rate of increase for the 20 year period will be 7.2 percent.

Output of timber will reach 1.5 million cubic meters annually and the forest cover rate for the province as a whole will reach 35 percent in 2000.

3. Output value of rural industry (not including industry in villages and small towns and below the village level) will reach 14 billion yuan in 1990 and 37.2 billion yuan in 2000 from the 5.82 billion of 1984. This will mean a 140 percent and a 539 percent increase respectively from the 1984 base period. The incremental rate of increase for the next 6 years and the next 16 years will be 15.7 and 12.2 percent respectively.

4. Output value of rural tertiary industries figured on the basis of 2 billion yuan for 1984 will reach 5 billion yuan in 1990 and 10.86 billion yuan in 2000. This will mean a 150 percent and a 440 percent increase respectively when figures for the 1984 base period are used to make calculations. The incremental rate of increase for the next 6 years and the next 16 years will be 16.3 and 11 percent respectively.

5. Output value of all rural industries (including the output value of all the aforementioned industries) will reach 31.7 billion yuan in 1990 and 66.47 billion yuan in 2000 from the 17.46 billion yuan of 1984. This will mean an 82 percent and a 280 percent increase respectively from the 1984 base period. The incremental rate of increase for the next 6 years and the next 16 years will be 10.4 and 8.7 percent respectively.

6. The gross output value of rural agriculture as figured from the 15.44 billion yuan of 1984 will reach 26.7 billion yuan in 1990 and 55.61 billion yuan in 2000. This will represent a 146 percent and a 413 percent increase from the 10.83 billion yuan of the 1980 base period.

7. Net output value of all rural industries for 1990, figured at 50 percent of the gross output value of all rural industries, will reach 15.85 billion yuan. Figured at 40 percent of the gross output value of all rural industries, it will reach 29.91 billion yuan in 2000.

8. Rural population (exclusive of the population of county seats). Authorities concerned forecast a population of 40 million for the whole province in 1990. Figured at 55 percent of total population at that time, this will mean a rural population for the whole province of approximately 22 million. By 2000 when the population of the whole province will be 44 million, figured at 40 percent of total population at that time, this will mean a rural population for the whole province of approximately 17.6 million.

9. Net national output value [gross output value minus taxes and interest payments] per capita of rural population (i.e., net output value of all industries) will by 720 yuan in 1990 and 1,699 yuan in 2000.

10. Net income [gross income minus expenses but not minus taxes and interest payments] from production per capita of rural population figured at 80 percent of net national output value per capita of rural population will amount to 576 yuan in 1990, plus an additional 10 percent of net income from sources other than production may bring the total to 633 yuan. In 2000, net income per

capita will reach 1,359 yuan, plus an additional 10 percent from sources other than production that may bring the total to 1,496 yuan.

11. Amounts of major farm products per capita for the province as a whole in 1990 and 2000 will be respectively 800 and 868 jin of grain and beans, 130 and 364 jin of fruit, 43.5 and 68.2 jin of meat, 20 and 32.7 jin of poultry eggs, 17.5 and 59 jin of dairy products, and 35 and 76 jin of aquatic products.

Strategic Actions

In order to realize the foregoing strategic objectives and criteria for development of Liaoning's rural economy, the main strategic actions that have to be taken are as follows:

1. Actively and steadily carry out a readjustment of the structure of rural industries.

Readjustment of the structure of rural industries is one of the most important strategic actions for realizing the strategic objectives in development of Liaoning's rural economy. On the basis of the guiding thought and strategic objectives for developing Liaoning's rural economy, future readjustment of the structure of Liaoning's rural industries will have to be carried out on three levels as follows:

First is in the farming industry where improvements have to be made on the basis of grain production and the supply situation for a gradual curtailment of the area planted to grain crops and expansion of the area sown to cash crops. In the future, except at commodity grain bases, it will be necessary to permit peasants to select freely the kinds of crops to be grown. In the selection of grain crops to be grown, peasants will have to be guided and helped to increase suitably the paddy and soybean growing area, to cut back appropriately on the growing of coarse grains, and gradually to increase gross output of fine grains [wheat and rice] from the present approximately 7 billion jin to 9 billion jin or more. In the growing of cash crops, emphasis should be placed on the growing of dry fruits [e.g. nuts, tree fungus and lily buds], or horticultural crops, and on various specialty crops, with vigorous efforts made to improve quality. The fruit orchard area should be expanded gradually from the present 5.3 million mu to 10 million mu and the level of intensivity of the growing of fruit be steadily increased.

Second is in agriculture encompassing farming, forestry, animal husbandry, sideline occupations and fisheries with accelerated development of animal husbandry, forestry and fisheries. Animal husbandry is a weak link in Liaoning Province's agricultural production, yet it is a crucial sector for the future improvement of the diet of the people in the province and for promoting a benign cycle within agriculture. Consequently, there has to be a rapid change in the weakness of animal husbandry to make it become a major industry within the agricultural economy. The output value of animal husbandry should be raised by 1990 to around one-fourth the gross output value of agriculture, and be increased to more than 30 percent of the gross output value of agriculture by 2000. Both the suburbs of large cities and grain

producing areas have to give precedence to the development of animal husbandry, and within the structure of animal husbandry itself, simultaneous with firm grip on the raising of hogs must be an accelerating of the pace of development of poultry, eggs, milk and herbivorous animals of high economic value, for which the turn over of funds is quick and market requirements have grown fairly rapidly. It should also be pointed out that the scale of development of Liaoning's animal husbandry should not be solely in terms of the province's own ability to produce livestock fodder and market demand within the province itself. It is necessary to raise sights to make the province into a livestock products base for the entire northeastern region that is able further to transform Jilin Province's surplus grain.

Hastening of the building of forestry is not only a fundamental way in which to improve the province's ecological environment, but also can solve the rural energy shortage and lack of lumber as well as increase the peasants' earnings. Liaoning Province has fine conditions for the development of forestry, and it also has an urgent need to develop forestry. However, the forest cover rate for the province is presently only 23 percent, and distribution is very uneven. Forests provide very few direct benefits each year. Consequently, it is necessary to accelerate the building of forestry. During the present century, the forest cover rate for the whole province should be increased from the present approximately 23 percent to approximately 35 percent. Afforestation must be done particularly fast in the fairly seriously eroded western mountain regions of Liaoning, in the windblown sand area of the northern part of the province, and along the southern coastal areas. Within forestry, general methods should be suited to specific circumstances to plan the proportions of timber forests, economic forests, firewood forests and various kinds of shelter forests. Long range benefits from the building of forestry have to be combined properly with short-range benefits from the building of forestry.

In the fishing industry field, very great development should take place during the present century in view of the increasingly great gap between supply and demand for aquatic products in Liaoning Province and the advantageous conditions present in the province for development of an aquatic products industry. Coals areas should devote serious attention to the protection and propagation of in-shore fishing industry resources, and also strive to develop fishing grounds farther off-shore and in blue water. Major efforts should be devoted to development of coastal beaches and shallows for the propagation of aquatic products. Inland area should make full use of reservoirs and ponds to breed freshwater fish. Investment should be made in the processing and preservation of freshness of aquatic products and in using them in multiple ways. The main emphasis should go on the raising of fish, with efforts being devoted simultaneously to raising, catching and processing, diversified operations including production, supply and marketing being the guiding policy for development of aquatic products enterprises. The level of intensiveness in the aquatic products breeding industry should be steadily raised. Within the aquatic products industry, rational planning should be done for the production of fish, crustaceans, shellfish, seaweed and other delicacies of the sea.

Third is in the overall rural economy where the pace of development should be hastened in secondary and tertiary industries including rural industry, the

construction industry, the transportation industry, business, the service trades and tourism. Rural industry will increasingly become a mainstay of the rural economy. Not only does it help improve the country's industrial pattern and hasten development of industry in general, but it also plays a decisive role in the realization of China's agricultural modernization and the building of burgeoning and prosperous new socialist villages. Liaoning is extremely blessed in terms of natural resources, funds, skills, markets, transportation and information for the development of rural industry. Consequently, special policies and forceful actions must be taken to create the various conditions necessary to provide support and encouragement to the development of rural industries run by townships, villages, individual peasants, households in partnership, and through joint ventures. Emphasis should be placed on the development of industries that make use of the advantages that rural villages provide such as the food industry, the livestock feed industry, the construction materials industry, small energy supply industries and the mining and smelting industry. It is necessary to continue to develop at the same time various industries such as machinery processing, clothing processing, etc., that spread from the cities. Cooperative efforts may also be made in conjunction with other provinces, capital from elsewhere and foreign traders to develop the processing of materials brought in from elsewhere, the assembly of parts brought in from elsewhere and compensation trade, plus the operation of all sorts of new industries in which we are able to compete.

Development of tertiary industries has just gotten underway during the past 2 years; nevertheless, its role in enlivening the rural economy and advancing development of the rural commodity economy is already extremely marked. Next it will be necessary to speed up particularly the development of communications and transportation, purchase and supply services, technical services, information services, finance and banking, and insurance services. The goal should be to make output value of secondary and tertiary industries amount to two-thirds or more of the gross output value of all rural industries by the end of the present century.

2. Constant reform and improvement of the rural economic system: Reform of Liaoning Province's rural economic system has already scored very great results. The great development of the rural economy in recent years has benefited largely from reform of the rural economic system. Nevertheless, with development of the rural commodity economy and solution to old contradictions, new contradictions have constantly come to the fore. There has to be constant reform and improvement of the rural economic system to meet needs in developing the commodity economy. The main strategic actions that should be given attention in this regard are as follows:

a. Use of various means for constant improvement and development of the rural cooperative economy, such as further improvements in cooperative economic organizations of a regional nature, encouragement and help to family farms for further development in the direction of specialized and cooperative modes of operation, and widespread development of a stock share cooperative economy and joint city and countryside economic organizations, etc., to meet needs for sustained development of rural productivity.

b. Reform and improvement of the rural economy's plan management system, with the emphasis on reform of those portions of the plan management system that rely solely on administrative fiat and on central control that is separated from local control; establishment under guidance of state plan of an economic system to regulate production and the system for exchange of goods that make fullest use of economic techniques such as the role of market regulation and wide application of price policies, tax collection policies and financial and banking policies, the peasants thereby being able to exercise full self-determination in their operating decisions.

c. Reform and improvement of the rural business system. The separation between cities and the countryside, the separation of one region from another, and the commercial system of state-owned businesses and the monopoly position of supply and marketing cooperatives has to be further demolished in order to expand the flow of goods and improve business efficiency as the business economy develops. It should be replaced with a less restricted, multi-channel, competitive commodity circulation system with fewer links so that channels for uninhibited flow of all kinds of commodities among rural villages and between cities and the countryside.

d. Reform of the inequitable price system. The inequitable plan price and fixed price system has to be reformed and full use made of the regulatory role of market supply and demand on prices so that price parities between industrial and agricultural goods, price parities among various agricultural products, and regional and seasonal price differences for goods can reflect at once changes in the value of goods and in the relationship between supply and demand.

e. The rural financial and banking system that stresses public finance and slights credit has to be reformed for full use of credit to amass and distribute social funds and to channel the direction of flow of funds in order to enliven rural finance and banking. This will require increasing the role of banks in dispensing rural funds, reviving the cooperative economic nature of credit cooperatives, building more diversified rural financial and banking systems, and using diversified means of developing rural capital markets. The rural tax collection system should also be reformed and improved on the principle of developing the economy and assuring supply.

3. Unremitting firm grip on the technical transformation of the rural economy: This requires, first of all, a greater technical transformation of agriculture, using organic agricultural techniques and inorganic agricultural techniques at the same time, traditional agricultural techniques and advanced modern agricultural techniques in combination, and the use of nature and the transformation of nature together for steady improvement in agricultural techniques in the gradual building of a modern system of agricultural technology in which the soil productivity rate, the labor productivity rate, and the net benefit rate from capital rise steadily and the agricultural ecology is able to improve steadily. In the farming industry, major efforts should be devoted to the propagation, dissemination and replacement of fine varieties; to improvement of the farming system and fertilization methods, to the spread and use of plant protection techniques that combine prevention and control through the use of both pesticides and biological methods; and to

development of agriculture through the conservation of water in growing paddy and the use of plastic mulch, and hot house farming facilities. In animal husbandry, not only should emphasis be devoted to fine breeds, but special attention must be given to the production and use of blended livestock feeds. In forestry and aquaculture, attention should focus on the study and application of modern science and technology. In farming, forestry, animal husbandry and the fishing industry, the emphasis should be on steady rise in the level of mechanization and improvement in basic production methods. The goal should be for all aspects of agricultural technology throughout the province to reach the level of a moderately developed country by the end of this century.

Simultaneous with emphasis on the technical transformation of agriculture must be vigorous efforts to bolster the technical transformation of rural industry and of tertiary industries. Rural industry in Liaoning Province has old equipment, antiquated technology and a low level of mechanization. Unless this state of affairs is changed, improvement of economic results will not be possible, and it will not be possible to survive and develop in the midst of fierce market competition. Thus various channels and methods must be used to hasten the transfer to rural villages of technical equipment, technical achievements and technical personnel from urban industries. Places having requisite conditions must also dare to import modern techniques and equipment from abroad. Efforts should be made so that village and small town industries throughout the province will be substantially able to become equipped with contemporary or modern techniques and equipment by the end of this century. A problem also exists in the technical transformation of rural tertiary industries. The emphasis of technical transformation in this regard should be on bolstering rural commercial base facilities for a very fast increase in capabilities to maintain the freshness of agricultural and sideline products and to store, process and transport them.

4. Improvement in the use and development of energy and water resources: As the urban and rural economies of Liaoning Province develop, problems with an energy shortage and insufficient water will become more and more prominent. Thus, special attention must be directed to these problems as part of strategic actions for development of the rural economy of Liaoning Province. A place of special importance must be given to the development of small energy sources such as small coal mines and small hydroelectric power industries. In addition, active efforts must be made to develop and use solar energy, wind energy and biological energy.

Conservation measures and measures for the exploitation of new water sources have to be taken in concert in order to solve the water shortage problem. The principal measures for water conservation will be in agricultural production through strengthened control in the use of water for farmland irrigation, plugging leaks in irrigation ditches, promotion of farming methods that conserve water, expansion of the use of plastic mulch, spray irrigation, drip irrigation, etc. In industrial production, control over the use of water has to be intensified and the recycling rate for waste water has to be improved. One way to exploit new water sources is to move water from other provinces, specifically the opening of the Songliao Canal, to bring water from the Songhua Jiang into Liaoning Province. Not only would this greatly ameliorate

the serious shortage of water sources in Liaoning, but it would also hold major significance for solving transportation problems in the three northeastern provinces and for making the northeast region's economy prosper. Yet another way to solve the lack of water sources in Liaoning Province is to build large reservoirs within the province in the upper reaches of the Taizi He, the Kou He and the Raoyang He, and to increase the water storage capacity of the Qing He reservoir. The latter method would require little investment for quick results, so efforts should be made to carry it out as soon as possible.

5. Accelerated building of small city and town, and rural communications and transportation: The building of rural market towns and rural roads is a strategic measure for promoting the blending of cities and the countryside and for making the city and countryside economies prosper. Preliminary statistics for 1984 show Liaoning Province as having a total of 103 organic towns with a population of approximately 3,254,000, or 9.1 percent of the population of the whole province. Output value of market town industries accounted for 14 percent of the gross output value of industry for the whole province. This has played a very great role in the prospering of the rural economy, culture and daily life. However, in comparison with other economically developed areas of the country, Liaoning's rural market towns remain very undeveloped. Future readjustments to the make-up of rural industries and coordinated development of tertiary industries will make imperative a very great expansion in the number of rural market towns. This will require a speed up in the building of small rural cities and towns insofar as conditions for the development of small cities and towns exist in individual jurisdictions. In the building of small cities and towns, general methods will have to be suited to specific circumstances. Some places will be able to develop composite small cities and towns; some places will be able to develop industrial or commercial small cities and towns, transportation and port cities and small towns, or tourism cities and small towns, etc. Efforts should be made so that by the end of this century the more than 1,100 places in the province that have township governments will form small cities and towns that become local rural political, economic, cultural and information centers.

Communications and transportation are links between the city and countryside economies, and they are a basic requirement for building a rural commodity economy, for improving the flow of goods between cities and the countryside, for making the economy prosper, and for building prosperous rural villages. Some developed countries in the world today are devoting extremely serious attention to communications and transportation, particularly to highway construction. Standard highway length per square kilometer has already become a criterion for judging the extent of economic development. Though communications and transportation are fairly well developed in rural areas of Liaoning Province, they still lag far behind needs for rural economic development. For this reason, the building of rural highways and waterways must become a major strategic future action. It will be necessary to act in a spirit of self-reliance and arduous struggle using civilians to carry out construction, civilian action with public support, state assistance, local contribution of funds, amassing of funds by units, and labor contributions by the masses to hasten progress in the building of highways and waterways. Highway construction should be emphasized in mountain regions, in particular.

Efforts should be made so that by the end of this century every fairly large rural habitation throughout the province will have a highway connecting it to the outside world over which scheduled transportation travels.

6. Training of rural construction talent and raising the quality of cadres and peasants: In the final analysis, hastening development of Liaoning Province's rural economy depends on skilled people. Though the cultural and educational level of Liaoning Province is fairly well developed in comparison with most parts of the country, and though talented people are readily available, nevertheless, there is a shortage of talent in rural areas. Therefore, the human talent issue is the crux in realizing the strategic objective of developing Liaoning's rural economy. Thus, extremely serious attention must be devoted to an investment in intellect in rural areas in the field of agriculture, and energetic efforts devoted to the training up of human talent to build rural villages and agriculture. Effective actions have to be taken, diverse methods used, and schools operated at different levels to build an educational system for all kinds of talent needed for rural villages and agriculture. City schools at all levels and of all kinds must become more geared to rural villages and focus more on needs in building rural villages and agriculture to expand the numbers of students enrolled. Rural villages must also be self-reliant to hasten the training of specialized talent. Simultaneous with serious attention and squarely facing the all-day system for training talent must be efforts to develop after hours education and short-term education in rural villages. Various means must be used so that by 1990 every township in the whole province will have at least 10 graduates from institutions of higher learning of various kinds and at least 30 graduates of technical secondary schools who are able to undertake various kinds of construction. Most rural villages throughout the province should make a junior middle school education the rule. By the end of this century, there should be 30 college graduates and 100 graduates of technical secondary schools engaged in work in every township, and in most rural villages throughout the province a 12-year senior middle school education should be the rule.

9432
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USE OF MACHINERY IN FARMING, ANIMAL HUSBANDRY INCREASING

Hohhot NEIMENGGU RIBAO in Chinese 28 Nov 85 p 1

[Article by Chen Xiaojun [7115 1420 6511]: "Mechanization of Region's Farming and Animal Husbandry Burgeons. Diverse Forms of Operations Co-exist, Household Ownership and Household Operations Predominating"]

[Text] As reform of the farming and pastoral region economy advanced in the course of the Sixth 5-Year Plan, mechanization of the Nei Monggol Autonomous Region's farming and animal husbandry burgeoned. This brought about a heartening situation of highly efficient development of the mechanization of farming and animal husbandry in which diverse operations co-exist, ownership and operations by farmer and herdsmen households predominating. In 1984, the farming and animal husbandry industries in the region had 6,286,000 horsepower of farm machines versus 5.66 million horsepower in 1980 for an 11 percent increase. This included 11,859 tractors, up 113.4 percent from 1980; 63,586 small tractors in 1984 versus 15,506 in 190 in a more than fourfold increase; 99,078 agricultural and sideline products processing machines of various kinds, up 8.2 percent from 1980; and 19,600 hauling machines for farming and animal husbandry versus 34,713 in 1980 for a 160 percent increase.

During the Sixth 5-Year Plan, two features emerged in the region's farming and animal husbandry industries as follows: First was destruction of the narrow patterns of the past with a change from the sole mechanization of farming to mechanization that served the overall development of diversification in farming, forestry, animal husbandry, and sideline occupations, agriculture, industry and business, transportation, construction and the service trades. Peasant and herdsman needs for different kinds of machinery became greater and greater, the numbers needed became larger and larger, and requirements for technology and quality became higher and higher. Second was destruction of the former pattern of mechanization being done solely by official organizations and the emergence of diverse patterns of operations in which individual households predominated, but in which state-owned organizations and collective cooperation was also a part. As of the end of 1984, individual households were using more than 83,000 tractors. This was 82.4 percent of all the tractors owned in the region. Farm machine specialized households who specialized in the use of machines for farming and different kinds of specialized households using farming and livestock industry machines for planting, raising of livestock, processing and transportation are in process of becoming the principal forms for the use of machinery in the farming and animal husbandry industries.

NEW EXTENSION EFFORTS SUCCESSFUL IN DISSEMINATING TECHNOLOGY

Yinchuan NINGXIA RIBAO in Chinese 23 Dec 85 p 1

[Article by Fan Xuehong [2868 1331 1347] and Li Yong [2621 0516]: "Advanced Production Technology Gives Agriculture Golden Wings with Which to Fly"]

[Text] During the period of the Sixth 5-Year Plan, some advanced agricultural production technology has been been extended in Ningxia, giving agriculture golden wings with which to fly. During the past 5 years, Ningxia has emphasized extension. It has promoted 13 projects, including plant cultivation and protection, nurture of soil fertility, and has obtained excellent economic returns. Total grain production in Ningxia rose from 2.25 billion jin in 1980 to 3.08 billion jin in 1984. Although in 1985 there were serious natural disasters, it is predicted that total grain production still will be more than 2.8 billion jin.

After the 3d Plenum of the Eleventh CPC Congress, Ningxia's agricultural production has shown unprecedented development. The broad masses of peasants are demanding more and more in agricultural science and technology.

Every level of agricultural technical extension departments in Ningxia have proceeding according to actual circumstances and have selected a number of new agricultural technologies for extension. These require little investment, offer promising returns and a relatively simple process of extending their application into the field, and are appropriate to Ningxia's conditions. Excellent results have been obtained. For example, rice production is a special strength of Ningxia. During the period of the Sixth 5-Year Plan, gradual extension of the application of field cultivation with plastic films, hybrid rice varieties, and other new cultivation technologies has resulted in average rice yields increasing from 945 jin per mu in 1980 to 1,114 jin per mu last year. This is an increase of 169 mu. Single-cropped rice yields are the highest in China. The extension of high-yield, low-cost technologies for rice has won a national award in agricultural technical extension. In wheat production, the extension of wheat and corn interplanting, the use of multiple and intercropping techniques and the planting of spring wheat on medium- and poor-quality fields, and the use of comprehensive, improved cultivation techniques have increased per-mu yields approvimately 100 jin on 1 million mu of medium- and poor-quality fields in the irrigated area that were planted in spring wheat. After the extension of intercropping techniques for wheat and corn, per-mu yield of corn was more than 250 jin. The gradual extension

of plastic cover techniques is another significant accomplishment for agricultural extension in Ningxia during the Sixth 5-Year Plan. At present, vegetable cultivation in fields covered with plastic film have been extended to 110,000 mu. The value of their per-mu production is 100 yuan more than that of vegetables planted in the exposed earth. In addition to this, plastic film cover of seedlings and cultivation of economic crops also has been very successful.

At the same time that agricultural technologies are extended in the area irrigated by the Huang He, dryland agricultural technologies are also being extended in Ningxia's mountainous southern districts. In Guyuan County, new techniques have been used this year in planting wheat on 160,000 mu. Although weather conditions have not been advantageous, good results of an average per-mu yield of 236 jin were obtained. Average per mu yields reached 312 jin on 50,000 mu of demonstration fields in Xiji County.

During the Sixth 5-Year Plan, Ningxia also has put much effort into extending other effective techniques, such as plowing stalks back into the ground, planting with green fertilizers, and using chemical herbicides. These have improved the soil and increased the amount of organic material. They have helped increase production of agricultural crops.

During the Sixth 5-Year Plan, Ningxia has been able to achieve such good results in agricultural extension because of the emergence of a basic agricultural extension system throughout the region. At present, most counties and cities have agricultural technical extension centers, townships have agricultural technical stations, villages have technical extension offices, and every team has one or two households that are science and technology demonstration households. In accordance with the special characteristics of particular villages and the seasonality of the various crops, agricultural extension units at every level each year sponsor agricultural technical training classes for each period. Some 150,000 have been trained in these classes. At the same time, wired broadcasting systems have been used for promotion, exhibitions have been sponsored, science and technology fairs have been organized, question-answer windows have been established, and other techniques have been used to help get technical agricultural information to the peasants. The regional and country agricultural extension departments have printed more than 1.2 million pamphlets covering all kinds of technical material. This has helped the broad masses of peasants to study and apply science.

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BRIEFS

FORESTS SEEDED BY AIR--Shaanxi has achieved great success in aerial seeding of forests. It has the highest rates of success over successive years for creating forests in northern China. Shaanxi's large-scale afforestation program of aerial seeding began in the early 1970's. The first area seeded by air was the Qinbashan area. During the past 17 years, 8.07 million mu of forests have been created by aerial seeding. Shaanxi has the highest rates of success over successive years for creating forests in northern China. It has hastened the greening of Shaanxi's highland and border districts. At present, the Qinbashan District has already established a number of timber-producing bases, including 82 that are each over 10,000 mu in area. Within Shangxian, Danfeng, and Shanyang counties, there is one large forest that has reached 250,000 mu. At the same time, many years of experimental aerial seeding of Shaanxi's areas of loess plateaus, hills, and gullies, and areas where sand is blown by the winds along the ancient Great Wall also has achieved good results. Experience has been gained which can serve aerial afforestation work after today in China's three northeastern provinces. [Text]
[Xi'an SHAANXI RIBAO in Chinese 24 Jan 86 p 2] 12994/9871

CSO: 4007/277

SICHUAN

AQUATIC INDUSTRY 'REQUIRES MAJOR DEVELOPMENT'

Chengdu SICHUAN RIBAO in Chinese 23 Feb 86 p 2

[Article by Sichaan Aquatic Bureau: "Aquatic Industry Must Undergo Significant Development"]

[Text] After the 3rd Plenum of the 11th CPC Central Committee, the Sichuan aquatic industry has entered a new period of development. Under leadership provided by all levels of the CPC Committee and government and with the support of the relevant sectors, a diversified responsibility system for fisheries was implemented, and fishery management was strengthened. Results of these actions were obvious, and the aquatic industry in Sichuan has developed very rapidly. Total production of aquatic products in Sichuan reached 129,000 tons last year, exceeding the goal established in the Sixth 5-Year Plan by 44,000 tons. This was more than twice the 1980 production. Major farmers (fishermen) specializing or partially specializing in aquatic production have begun to leave natural economic conditions behind and to enter the unlimited commodity economy. The fishery economy has become stronger and stronger. There is, however, a significant disparity between the development of the aquatic industry and people's demands. Some problems and difficulties have appeared, e.g., services and essential components, such as fingerlings, technology, and feed, could not adapt to the speed of development. Yields are also relatively low, and the emphasis at all levels of the aquatic management sector has not completely shifted toward strengthening overall control and serving the lowest level, We need to clearly understand this situation, conscientiously solve the problems, and stimulate the major development of the aquatic industry.

The provincial CPC Committee and government have clearly identified the guiding principles and goals for our aquatic industry during the Seventh 5-Year Plan. These are: "Development of the aquatic industry depends upon breeding, and this should be conducted at the individual household level.

Breeding, reproduction, and harvest should be combined. The state, communities, and individuals should work together and try to quadruple production by the end of the century. Annual production should increase to 500,000 tons or more, and per capita consumption should increase from 1 kg to 5 kg." In order to achieve these goals, our aquatic industry should establish a solid foundation within the next 5 years and develop sufficient strength for the following 10 years. This will require the continued

implementation of central and provincial CPC Committee documents concerning the accelerated development of the aquatic industry. The guiding principles of aquatic production must also be corrected, and reform should provide momentum for increasing economic results. Specifically, we must carry out the following:

We must continuously implement and improve the diversified responsibility system for fishery production. At the present time, more than 20 percent of provincial waters where fish can be cultivated, such as ponds, reservoirs, and lakes, have not implemented the fishery responsibility system; in some of the waters where the responsibility system has been implemented, profits have been very low because contracts were lacking. Many problems also remain in the establishment and utilization of some large- and middle-sized water systems because of unsolved problems with the management and responsibility systems. Under the direction of local governments, all levels of the aquatic production sector should diligently pursue effective measures to solve these problems and fully utilize the water available for fish culture. State farms and stations must reform and perfect their responsibility systems and establish healthy regulations. All levels of the aquatic production sector must coordinate management and services with economic work in order to create conditions were an economic entity can be formed.

Development of production must be based mainly upon internal efforts. There is great potential for the development of the aquatic industry in Sichuan. For example, the average national yield for fish cultivated in ponds was 82.5 kg per mu in 1984. In Sichuan, the yield was only 43.5 kg, a very large disparity. At the present time, beside further implementing and perfecting the fishery production responsibility system we must fully realize the potential of all types of water resources. We must publicize typical experiences with high quality and yields and conduct further trials. Advanced cultivation techniques and superior fish varieties should also be publicized.

We must reform production procedures and management conditions and increase profits. This year, central planning and open management must be implemented for the establishment and utilization of large- and middle-sized water systems. We must consider local conditions and develop crib and breeding high quality fish in running water. We must realize the potential of large- and middle-sized water systems and strongly develop family-type fish cultivation and that in rice paddies.

We should continue to adopt diversified methods, to effectively publicize science and technology, and to conduct educational programs. This year, we must act in accordance with the relevant regulations and fully utilize the results of classifying fisheries in the entire province. We must rapidly shift the emphasis of aquatic science and research toward fish cultivation by the general population and toward small-scale, intensive cultivation methods. We should now stress the introduction and promotion of new varieties. Experience has shown that fish cultivation using running water and crib techniques can be successful in Sichuan. These methods deserve vigorous promotion. Mixed particulate feeds should be developed,

and production should be small-scale and adapted to the demands of fishery development. Trained personnel are critical for the new development of the aquatic industry. We should not only vigorously stress education to train qualified personnel for the aquatic industry, but we must also fully utilize the strengths of existing technological personnel. We must systematically establish technical training classes in order to put advanced science and technology into the hands of the producers as soon as possible.

We should enhance management of the fisheries industry. We must raise the status of fisheries management to the same level as that of production. We must continually enhance the expansion of fishery industries and speed up the improvement of its management so that fishery management can progress from simple protection of natural waters to the protection of waters used for artificial cultivation. "Fishery industry regulations" were recently issued, and all areas should studyaand promote these regulations. When the relevant provisions and details of the regulations are implemented, in-depth studies of their implementation should be conducted. In order to solve existing problems, all areas should coordinate with other relevant sectors such as security, legislative, and environmental protection.

We must revitalize the marketing of aquatic products. The aquatic sector should change its former tendency to emphasize production and neglect marketing. They should seek new means and forms to revitalize marketing of aquatic products in order to be able to meet the increased market demand that will appear after price restrictions are removed. We suggest that local areas adopt some policies and measures this year that are even more flexible and adaptable. They should apply open management techniques, such as multiple economic components, multiple channel marketing, and management diversification. All levels of aquatic production companies should separate administration from production and establish economic entities as soon as possible. They should also begin active economic cooperations that extend beyond their area and industry and perform their service work well. Planning should be centralized in all large- and mid-sized cities, wholesale trading markets for aquatic products should be established, and more sales networks should be established. These actions will allow peasants to come to the cities to sell their aquatic products.

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SICHUAN

PEANUT MARKET, PRODUCTION IMPROVEMENTS EXPLORED

Chengdu SICHUAN RIBAO in Chinese 28 Mar 86 p 4

[Article by Tao Meichuan [7118 5019 0278] under the rubric "Production and Market Analysis": "The State of Peanut Production and Marketing in Sichuan and Ways To Improve Production"]

[Text] Encouraging prospects have emerged for peanut production in Sichuan's farming industry. Although Sichuan is not the nation's primary production areas, we possess several clear distinguishing features: First, the production area is relatively concentrated. In the established production area around the city of Neijiang, each county continues to exploit appropriately pooled advantages in a manner adapted to local conditions. The new production area of Nanchong Prefecture has followed this example, and its gross peanut yield has jumped to second place in Sichuan. Second, improved varieties are fairly widespread. The nationally renowned "Tianfu No 3" variety was bred in Sichuan, and after it was disseminated throughout the province per-mu yields rose 40 to 50 percent. Third, we have vast sales markets. Because their quality is good, Sichuan peanuts are well-received on domestic markets as well as in foreign trade. In addition, we have established a fairly stable foreign export base. These are all conditions that favor expansion in peanut production and improvement in the ratio of marketable peanut products.

Since the 3d Plenum of the 11th CPC Central Commitee, there has been a sustained growth trend in Sichuan peanut production. In addition to the prerequisite of "grain in hand" among farmers, readjustment of agricultural composition and the market pricing mechanism have played obvious roles in bringing this about. Grain fields were maintained at a stable level while cotton growing area in Sichuan was readjusted to some extent, yielding a favorable geographic area for expanded peanut cultivation. Past crowding of grain and oil-bearing crops onto a single plot of land, where they compete for fertilizer, has been largely alleviated. Peanuts themselves possess nodule bacteria which function in nitrogen fixation, and their vines, leaves, and shells provide material for fodder and fertilizer. They are very beneficial in breeding and cultivation industries. Simultaneously, the state has reduced the peanut procurement assignment by 14 percent and increased the purchase price by a large margin. Along with increased production, this has brought an increase in the quantity of peanuts that may be disposed of by the farmers

themselves. In addition, through production and marketing the farmers can directly observe and obtain market information, and this has aroused initiative among farmers to develop commodity production.

Right now the farmers are concerned about whether Sichuan needs to continue developing peanut production. To answer this we must first look at national and provincial market situations. The departments concerned forecast that on the national market current production and sales of the peanuts themselves are at an appropriate level and supply and demand are balanced, but the production of peanut oil is insufficient for the market and supplies fall short of demand. As for Sichuan, because the production area is small and concentrated and the market area is large and vast, there are still insufficient peanut supplies to meet demand, not to mention using surplus peanuts for processing peanut oil. Calculating based on 1985, the year of highest yield, peanuts reserved for seed and for home consumption amounted to approximately 45 percent of total output. Aside from what was sold to the state, the remainder sent to market added up to less than 200 million jin. Because we cannot yet meet market demand the trading price is still holding at the previous year's level, which is 10 to 20 percent higher than the state's list price. We must also realize that, even with a significant increase in peanut output, after we meet urban and rural nonstaple food requirements and wind up with surplus peanuts we can still develop intense processing and multipurpose uses for peanuts. Sichuan peanuts have a high oil content, and if we process them into peanut oil we can sell the oil in the various coastal provinces. We can also process peanuts into peanut butter and artificial butter to satisfy various levels of demand. Peanut shells and kernel coatings can also be processed into many useful products to improve economic results.

From this we can see that there are bright prospects for peanut production in Sichuan. Right now, production, scientific research, and management sectors must cooperate to begin the job: First, we must carry on with a management system that combines state procurement with market regulation. Only that way can we give consideration to both essential state needs and the many levels of consumption among the people. State procurement assignments and purchase prices must be relatively stable; it is inadvisable to make frequent adjustments. In addition, we must assign responsibility to households through the use of contracts, and after contract assignments are completed surplus peanuts may be handled by the farmers themselves. To help farmers obtain fairly accurate information and thus develop commodity production based on market demand, prices in multichannel operations should not fluctuate widely. Second, we must improve the level of scientific planting. The way to improve peanut yield under the prerequisite that "grain production must not be slackened," is to vigorously tackle unit production and improve quality. In Sichuan's 30-odd primary peanut-producing counties, in 1984 the highest per-mu yield was 378 jin (in Yingshan County), and the lowest was a mere 152 jin. The per-mu yield in the vast area of Zitong County measured 209 jin, though mulched planting was practiced on 500 mu of this area and yielded 593 jin per mu. Obviously, in Sichuan vast potential exists for peanut output per unit of area. If we disseminate science and technology, such as selection of improved breeds, prudent fertilizer application, mulch ground covers, and interplanting of peanuts with wheat, we may achieve a major increase in yield. Third, we must gradually develop households specialized in peanut production, encourage

intensive farming, and have the departments concerned do a good job on pre-production and post-production services. Where the conditions are right we must also provide high-efficiency, energy-saving stoving equipment and alleviate the pressures of increased yield coupled with drying problems. Fourth, scientific research and management sectors both must research multipurpose uses for peanuts and their by-products and then supply the technology to producing areas in order to exploit their advantages and improve economic results.

12510
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SICHUAN

CONTINUOUS DEVELOPMENT OF SWINE PRODUCTION, SALES

Chengdu SICHUAN RIBAO in Chinese 21 Feb 86 p 2

[Article: "Swine Production and Sales Are Experiencing Steady Development in Sichuan"]

[Text] Swine production in Sichuan will continue its steady development in 1986. Expected developments include: farmers' enthusiasm for swine breeding is high; rural specialized households engaged in swine breeding are developing rapidly; the number of swine ready for slaughter is increasing; management is operating smoothly; pork supplies are abundant; and meat markets are prosperous and active.

1. Swine production is developing steadily, and its overall situation is good. According to a survey covering 32 counties in Sichuan that was conducted last November, the total number of swine in stock has increased 4.4 percent compared to the same period last year. Boars and sows have increased by 1.3 percent, piglets have increased by 1.75 percent, and breeding fat swine have increased by 5 percent. The number of piglets and breeding swine in pens will be sufficient to replace those that are being slaughtered in 1986. Considered in terms of the numbers of available swine, breeding swine weighing more than 100 jin have increased 12.2 percent, while large pigs weighing more than 130 jin have increased 17.5 percent compared to the same period last year. Thus, the swine supply this spring is quite sufficient.

2. Farmers' enthusiasm for swine breeding is high, and rural specialized households engaged in swine breeding have developed rapidly. Last year, total grain production in Sichuan decreased, and grain prices have increased somewhat. Market prices for rice, wheat, corn, peas, and hu [5519] beans have increased by 0.04-0.05 yuan per jin. Farmers' enthusiasm for swine breeding was not affected, however, and swine production continued to develop. The price per jin for piglets has increased from 0.83 yuan last year to 1.19 yuan. Reasons include: First, grain production in Sichuan had increased for 8 consecutive years, and rural areas have grain in reserve. Among the major spring crops, sweet potatoes production was high in many areas. Its good harvest provided feed resources for swine breeding. Second, sales prices have increased by 0.1 yuan after price restrictions on swine were removed. Farmers selling 1 pig can increase their income by 20 to 40 yuan.

From the standpoint of the development of specialized households engaged in swine breeding, there were about 600,000 specialized households in Sichuan in 1985. This was a 22.45 percent increase compared to 1984. Continued increases in the number of specialized households will further stimulate the development of rural swine commoditization.

3. Pork is in plentiful supply, and consumption levels continue to increase. Calculations based upon the above survey indicate that there will be about 44 million swine slaughtered in Sichuan in 1986. The state will purchase about 40 percent, and other management channels will take the remaining 60 percent. About 4.4 million swine will be exported. Per capita pork consumption in Sichuan is 36 jin, an increase of 2 jin compared to 1985.

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CSO: 4007/328

BRIEFS

SICHUAN LARGEST PORK SUPPLIER--Sichuan has become China's lagest pork supplier, and 1985 production reached 2.6 million tons or one-sixth of China's nationwide annual production. Per capita pork consumption in Sichuan was 24 kg, the highest in China. Swine breeding is now the most important segment of livestock production in Sichuan. It generates 500 million yuan in taxes and profits, one-tenth of Sichuan's budget revenue. Last year, pork exports to the domestic market were 300,000 tons, and the swine commodity rate reached 60 percent. The livestock industry in Sichuan had been stagnant for a long time; total meat production in 1978 was only 1.1 million tons. During the Sixth 5-Year Plan, the Sichuan livestock industry implemented many reforms. Farmers were allowed the right to self-management, and productivity was rapidly unleashed. The swine-breeding industry has now expanded from specialized households to combined households and major breeding households. The average annual slaughter per household is 30 to 40 animals, but some household's slaughter is as high as 500. In 1985, Sichuan slaughtered 43 million hogs, a number equal to the total of the previous 10 years. Total production value was 6.6 billion yuan, or more than 21 pecent of total agricultural production value. [Text] [Beijing RENMIN RIBAO OVERSEAS EDITION in Chinese 10 Jan 86 p 1] 13015/7051

RURAL SAVINGS--For the past few years, with the stimulation of the rural economy, peasant income has increased, living standards have improved, and Sichuan's rural savings have increased. During the 6th 5-Year Plan, total savings increased from 800 million yuan to 4.3 billion yuan, the average annual increase was 40 percent. In the first quarter of 1986, provincial rural savings increased by 350 million yuan, and average per capita savings surpassed 50 yuan for the first time. [Excerpt] [Chengdu SICHUAN RIBAO in Chinese 21 Apr 86 p 1]

CSO: 4007/405

GREATER INCENTIVES TO GROW GRAIN RATHER THAN CASH CROPS URGED

Kunming YUNNAN RIBAO in Chinese 28 Mar 86 p 3

[Article by Xu Liangdong [1776 5328 2767] and Sun Guoqi [1327 0948 2759]: "Equitable Readjustment of Price Parities Between Grain and Cash Crops Is the Key to Stabilization of Grain Production"]

[Text] Very great development has taken place in the province's agricultural production in recent years, and development has been even faster in grain production. In 1984, the province's gross output of grain was 20.1 billion jin for an all-time high. However, as a result of parity prices between grain and cash crops not being entirely equitable, rational readjustment of the structure of rural industry and steady development of grain production have been adversely affected. Poor performance in grain production will have an adverse effect in turn on the people's livelihood and all aspects of economic construction.

Inequities in price parities between grain and cash crops today are manifested largely in the gap between earnings from production of grain crops versus cash crops. The growing of grain is not as profitable as the growing of cash crops.

A survey shows that net output value per mu figured in terms of list procurement prices is four times higher for flue-cured tobacco than for grain, three times higher for sugarcane, and three times higher for jute. Net earnings per mu are five times higher for cash crops than for grain, including more than eight times higher for flue-cured tobacco and approximately five times higher for sugarcane and jute. In addition, award sales of grain are granted for the growing of most cash crops, and benefits are gained on the difference between list and market price in the purchase of chemical fertilizer. There are also other subsidies or repayment of profits for certain cash crops. Large scale cash crop growing areas have an advantage in producing high yields at low cost, making earnings even higher than from the growing of grain. The growing of grain crops is not as profitable as the growing of cash crops in terms of benefits from farmland utilization, from cash return on labor, or from return on investment. Grain production is in a disadvantageous position. For this reason, readjustment of the rural industrial structure requires extremely close attention to grain production. But the key problem is the need for equitable readjustment of procurement

parity prices between grain and cash crops. Application of such economic methods can be more effective than any other administrative or compulsory measure.

Procurement price parities for farm products reflect proportional relationships among magnitudes of value for various farm products. Since production costs are the basis for price, cost parities for different farm products generally reflect the proportional relationship of magnitudes of value for farm products. I believe that cost parities among farm products may serve as important standards for judging whether current procurement parities for various farm products are equitable. This judgment may then serve as a basis for further analysis of earnings from the production of different crops and the status of the relationship between supply and demand, thereby determining equitable parity price policies and properly readjusting the inequitable price parities that currently exist between grain and cash crops. In principle, the limit for equitable price parities between cash crops and grain is that they should not exceed cost parities. This is because maintenance of cost parities means maintenance of corresponding cash earnings rates.

Serious attention to grain production requires stabilizing the grainfield area. Insuring steady increase in grain output requires not only equitable readjustment of procurement parities between grain and cash crops, but also the bolstering of plan guidance and necessary administrative intervention, the handing down of norms for growing areas for major farm products and for purchases, and the concluding of procurement agreements. Multiple actions in all regards should be taken to ameliorate the paradox between the growing of grain and the growing of cash crops.

The following economic actions may be taken on prices over the near term:

1. Change in the payment of an increased price for procurement of grain in excess of base figures, universally instituting a fixed proportional increased price, appropriately increasing earnings of grain growing peasants, and stirring peasant enthusiasm for producing more grain. Naturally, such a goal of raising grain prices has to be gradually carried out as national financial and material resources permit.

2. Prices are high and profits are large for some cash crops. Ill-advised expansion of growing areas has taken place as a result and there is a relative glut of products. Prices should be lowered or else agreements should be concluded for plan procurement, with procurement outside of the plan made at a lower price.

3. Prices of grain rations supplied to cash crop growing areas should be raised so that procurement and sale prices are the same, the "inversion" situation that exists being abolished.

4. Revamp or eradicate award sales of goods for cash crops, price subsidies, and return of profits, and foster and encourage grain production.

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CSO: 4007/377

PROGRAM OUTLINED FOR IMPROVING TOBACCO SALES

Kunming YUNNAN RIBAO in Chinese 28 Mar 86 p 3

[Article by Li Liangsheng [2621 5328 3932]: "Devote Serious Attention to the Study of Yunnan's Flue-Cured Tobacco Development Strategy"]

[Text] Study of Yunnan's Flue-Cured Tobacco Development Strategy Is an Objective Necessity for Yunnan Province's Socio-Economic Development.

Flue-cured tobacco and its processing is an important source of revenue for the province's treasury that holds a decisive position in Yunnan's economy. Development of Yunnan Province's flue-cured tobacco production has been very erratic in recent years, with numerous ups and downs that have directly had an adverse effect on development of Yunnan's economy and society. This has also adversely affected coordinated development of grain and cash crops in readjustment of the structure of rural industry. Consequently, study of a development strategy for Yunnan's flue-cured tobacco has become an objective necessity in Yunnan's social and economic development.

Yunnan's flue-cured tobacco growing area covers 62 counties in 9 prefectures, autonomous prefectures, and municipalities. In 1984, the flue-cured tobacco growing area occupied 1.68 million mu and output of flue-cured tobacco was 5.5 million dan. Since Yunnan's flue-cured tobacco is of excellent quality, not only does it supply raw material for the province's cigarette production and for export, but it also supplies tobacco for blending in cigarettes made by 84 cigarette plants in 22 provinces, municipalities, and districts throughout the country. Flue-cured tobacco is an important economic mainstay in development of Yunnan's economy. Although the flue-cured tobacco growing area amounted to only 2.8 percent of the total growing area of the province in 1984, its output value accounted for 11 percent of the gross output value of the province's farming industry. Income derived from the growing of flue-cured tobacco is also higher than from most other crops. In some cases, earnings from the growing of flue-cured tobacco may amount to between 700 and 800 yuan per mu, and earnings are generally around 400 yuan per mu. Flue-cured tobacco has become a main production avenue whereby the masses become rich. Development of flue-cured tobacco production also promotes development of the tobacco industry. Output value of the province's tobacco leaf re-curing and cigarette manufacturing industry amounts to approximately 30 percent of the output value of the province's light industry and 15 percent of gross industrial output

value. Since flue-cured tobacco and cigarettes are commodities on which the state collects taxes, in recent years, industrial and commercial tax revenues from flue-cured tobacco and cigarettes have amounted to 50 percent of the province's gross financial income. These revenues have provided large amounts of funds for expansion of Yunnan's industrial and agricultural reproduction and for improving the people's standard of living. Nevertheless, in recent years, Yunnan Province's flue-cured tobacco production has fluctuated greatly in its development. During the past 3 years, flue-cured tobacco production has both fallen and risen several hundredfold, and this has been extremely disadvantageous for development of Yunnan's economy. In addition, as a result of ill-advised development and neglect of improvements in quality, the problem of a decline in flue-cured tobacco quality has become a prominent one in recent years that has caused large amounts of low-quality flue-cured tobacco to be produced and slack sales of cigarettes that have accumulated in inventory. In addition, as a result of the sudden ups and downs in the single category of flue-cured tobacco production, coordinated development of the internal structure of the farming industry has inevitably been affected in readjustment of the structure of rural industry. Since flue-cured tobacco is of crucial importance to the province's socio-economic development, a special study of a development strategy for it is necessary.

Study of a Development Strategy for Yunnan's Flue-cured Tobacco Must Be Premised on Market Demand.

Flue-cured tobacco production is commodity-type production for a singular use, which is to provide a raw material for cigarette production. Speed of development of its production is strictly controlled by market consumption; therefore, the theoretical problem in studying a strategy for development of Yunnan's flue-cured tobacco is to study the relationship between flue-cured tobacco production and consumption, finding the dynamic patterns between them. If the objective dynamic patterns of the market are departed from, and one proceeds solely from the partial benefits flue-cured tobacco provides as a commodity from which the state derives high tax revenues in increasing local financial revenues, and in increasing peasants' earnings, one might easily overlook market demand, form an exclusive concept of production, and take ill-advised actions that will inevitably damage the national interest and the peasants' interests. Consequently, any study for formulating a development strategy for Yunnan flue-cured tobacco must center on the market, a diligent study of the supply and demand situation in China's flue-cured tobacco market as well as the market for Yunnan flue-cured tobacco at home and abroad.

Flue-cured tobacco output has grown very quickly in recent years, particularly following the state's decision in 1981 to increase the procurement price for flue-cured tobacco--when price regulations stimulated flue-cured tobacco production resulting in conspicuously greater production than sales of flue-cured tobacco. In 1982, a total of 34.44 million dan of flue-cured tobacco was purchased throughout the country, creating the accumulation in inventory of more than 23 million dan of flue-cured tobacco. As a result, during 1983 and 1985, the state rigorously controlled the flue-cured tobacco growing area; nevertheless flue-cured tobacco continued to accumulate in inventory throughout the country. In 1985 the tendency toward ill-advised expansion of the growing of flue-cured tobacco became fairly serious, and the excess of

production over sales became even more pronounced. China's exports of flue-cured tobacco and cigarettes comes to only between 3 and 5 percent of national output in most years; most of the market for flue-cured tobacco and cigarettes is inside the country.

Acting on the basis of domestic and foreign market demand, in 1985 the national plan called for Yunnan to produce 6 million dan of flue-cured tobacco, 5.89 million dan of which it purchased, basically maintaining a balance between production and sales. At the same time, in order to control output of flue-cured tobacco by all tobacco-producing provinces and regions, a clear-cut ruling was made that the procurement price that would be paid for all flue-cured tobacco production that exceeded the state plan by 15 percent or more would drop by 15 percent. Despite this ruling, during 1985 flue-cured tobacco production in Yunnan Province shot up, output reaching 10 million dan. Peasants lost income on the amounts in excess of the plan not only because of the drop in procurement price, but also because they had to find markets for it themselves. In a situation throughout the country of flue-cured tobacco production begin greater than sales, selling flue-cured tobacco became very difficult, and it is expected that Yunnan Province will accumulate approximately 3.4 million dan in inventory.

This shows that any ill-advised action in the production of flue-cured tobacco can cause huge losses for Yunnan's economic development.

Some Ideas About Strategic Goals in Development of Yunnan Flue-cured Tobacco

The following ideas are proposed with regard to near-term and long-term strategic development goals on the basis of the position and the tendency toward change for Yunnan flue-cured tobacco in domestic and foreign markets:

Near-term goals. Using nationwide cigarette consumption of 21.25 million cases in 1984 as a basis for calculations, the country needs to produce 28 million dan of flue-cured tobacco. On the basis of an average annual increase in cigarette consumption of 1.725 cases for the whole country from 1982 through 1984, as the people's standard of living rises, cigarette consumption after 1985 will also steadily rise. Each year cigarette consumption will be slightly higher than the average for the past 3 years. At a rate of increase of 1.8 million cases per year, by 1990 the country will have to produce 32.05 million cases. When foreign exports and loses are added in, the country will have to produce approximately 42 million dan of flue-cured tobacco. Figured in terms of the proportion for each of the country's three major cigarette producing areas, Yunnan's flue-cured tobacco production will have to be held at 9.8 million dan. Flue-cured tobacco production for each year from 1985 through 1999 should use the 5.5 million dan of 1984 as a basis for annual incremental increases of 720,000 dan. Maintenance of this speed of development will require going from the 1.68 million mu flue-cured tobacco growing area of 1984 to expand growing by an average of 220,000 mu per year. In view of the relatively small farming area in Yunnan Province, this will help keep the grain crop growing area basically stable and continue to increase the gross output of grain. It will also help coordinated development among cash crops.

Long-term goals. As population increases and as consumption rises, by the year 2000 the country will have to produce approximately 68 million dan of flue-cured tobacco if it is to maintain a balance between supply and demand. On the basis of national development goals, the growing of flue-cured tobacco in Yunnan Province will have to be increased to approximately 15.8 million dan. Using 9.8 million dan as a basis, in every year for the 10 years after 1990 an increase of 600,000 dan will be required. Such a quantitative analysis is based mostly on market supply and demand relationships.

We believe that in order to realize Yunnan Province's flue-cured tobacco strategic development goals, the guiding polices for development of flue-cured tobacco in Yunnan should be as follows: on the basis of market demand, maintenance of quality first, selective growing areas, and steady development.

Maintenance of quality first is a major policy in Yunnan Province's flue-cured tobacco development strategy. In order to strengthen Yunnan's competitive position in flue-cured tobacco markets, victory must be won through quality, with the proportion of higher and medium grade tobacco increased. By 1999, the percentage of premium quality tobacco should be increased from the 5.58 percent of 1984 to 8 percent, and the percentage of medium quality tobacco should be increased from 59.12 percent to 62 percent, premium and medium quality tobacco together accounting for 70 percent of the total. By 2000, premium and medium quality tobacco should amount to 80 percent of the total in order to keep up with the levels of other major tobacco countries in the world producing the same kind of tobacco.

Maintenance of quality first is an objective necessity in both domestic and foreign markets today. Because of limitations on the amount that domestic and foreign markets can take, over the near term there can be no greater increase in the amount of flue-cured tobacco that Yunnan produces. As far as quality is concerned, however, throughout all of China and in the world as a whole, production of premium and medium quality tobacco is conspicuously unable to keep up with sales. In order to make the most of Yunnan's advantage in the production of flue-cured tobacco, insure that quality comes first, and use sales to spur production, the following policies should be adopted now:

First, selective growing areas. It is necessary to select the optimum natural conditions and the areas possessing pre-eminent skills for priority development to make the most of Yunnan's ability to produce flue-cured tobacco, while at the same time concentrating and selectively building production bases, developing in the direction of specialization, regionalization and intensive operations. The record in the growing of tobacco shows that tobacco growing should be concentrated in the following 44 key counties: Yuxi, Jiangchuan, Chengjiang, Tonghai, Huaning, Yimen, Eshan, Xinping, Qujing, Zhanyi, Malong, Xuanwei, Fuyuan, Luoping, Shizong, Luliang, Yiliang, Lu'nan, Xundian, Gaoming, Huize, Chuxiong, Mouding, Nanhua, Dayao, Wuding, Luquan, Lufeng, Zhaotong, Ludian, Qiaojia, Yanjin, Daguan, Zhenxiong, Yiliang, Weixin, Jianshui, Shibing, Mile, Luxi, Xiangyun and Midu. As for Binchuan County, which has developed fairly rapidly in 1986, whether or not it ranks as a superior quality growing area will depend on an evaluation of the inherent quality of its flue-cured tobacco. The development of other counties as tobacco growing areas will have to be similarly regulated. This is

particularly true of places that lack fuel or are cut off from transportation, which should shift to the growing of other crops in order to maintain the growing of flue-cured tobacco in Yunnan in places having high quality and high yield environmental conditions.

Second, in order to maintain the superior quality and high yields of Yunnan's flue-cured tobacco, commensurate policy actions will have to be formulated. Flue-cured tobacco is a Category II agricultural product for state centralized procurement and centralized marketing, and the speed of its development has to be under the guidance of state plans. Plans for the whole province have to be based strictly on state plans and development objectives for formulation of annual plans. Procurement units have to act strictly in accordance with state-set grade standards in the purchase of flue-cured tobacco within plans. For portions that exceed plans, a price that is 15 percent the procurement price is used. In addition, all taxes on flue-cured tobacco in excess of the plan that have been collected by the county are turned over to the provincial treasury. For plans handed down to each county by the province, procurement contracts have to be signed with producers.

Third is establishment of a fine variety supply system that centrally supplies seeds to insure that fine flue-cured tobacco is produced throughout the province. As the scientific research system improves, an umbrella organization for flue-cured tobacco production throughout the province should be established for scientific research, production, and management. A fine seed supply should be the central responsibility of flue-cured tobacco managerial units. There should be a strict inspection system to insure the purity, cleanliness, and sprouting rate of all fine seeds that are supplies to meet nationally set standards.

Fourth, in order to advance the development of flue-cured tobacco production, readjustment and improvement is required in the realm of cigarette production to improve the kinds of cigarettes that are available, developing cigarettes with a multiplicity of flavors, and cigarettes that have curative effects. During the last few years in particular, there has been a welter of Yunnan cigarette brands that have hurt the reputation of "Yunnan tobacco." Today 5 cigarette factories in the province turn out a total of 53 different brands of cigarettes. It is suggested that units responsible for commercial and industrial administration carry out a complete survey and straightening out of cigarette brands, making a major effort to reduce the number of brands in order to insure the reputation of 16 department and province level fine quality product brands such as "Yunyan, Hongshancha, Hongtashan, and Dazhongjiu." At the same time, it is necessary constantly to improve cigarette quality, to intensify technical improvements, and to overcome current quality problems of stiff, empty, or loose cigarettes. Cigarette specifications should be diverse with attention given to the production of a proper number of long, thin cigarettes. Quality of packaging should be improved, with efforts made to make packaging pleasing to the eye and tasteful, developing in the direction of luxuriousness and elegance.

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YUNNAN

BRIEFS

RURAL SAVINGS--In the first quarter of this year, rural savings in Yunnan continued to increase. As of the end of March, deposits surpassed more than 1.25 billion yuan, an increase of 55,260,000 yuan over the end of 1985. The average monthly increase was 18,420,000 yuan. [Excerpt] [Kunming YUNNAN RIBAO in Chinese 26 Apr 86 p 1]

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