

Agricultural Policies Under Reform in the DPRK

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Important shifts in North Korea's agricultural policy can be divided into three groups: increasing the capacity to stabilize food supplies, expanding basic agricultural production, and reforming management procedures. Policies to stabilize foodstuffs include aims at double-cropping, reforming potato farming, switching over to more self-sufficient grazing livestock, promoting pisciculture, and expanding bean cultivation. The government is going all out to provide the necessary supplies and materials to meet these goals.

Expanding Production

In order to expand the agricultural production base, the government is also pushing forward with a project to develop an additional 600,000 hectares of farmland. Farmland has been developed in Kangwon, North and South Pyongyang, and South Hwanghae provinces, and efforts are underway in Pyongyang and Kaesong. In addition, hydroelectric power plants and irrigation systems have been completed in the southern region and are under construction in the northern areas.

Management Reform

In order to expand production capabilities, management procedures were also revised. In 1996, a new management system was introduced, and economic incentives were strengthened in order to increase production. Due to chronic imbalances of supply and demand, the rationing system was cut back and measures were adopted to expand the

role of markets. Recognizing the difficulties of properly managing farms from a national level, productivity on cooperative farms was increased through introducing market competition while giving local managers more autonomy. A new management system was employed on a test-basis on some cooperative farms in 2003.

In 2004, the government implemented a new policy to expand bean production in order to meet the demands for vegetable proteins and to develop a more stable system of double cropping. While it is difficult now to estimate how productive this policy of increased bean farming will be, it should be expanded in order to solve current food shortages.

Double Cropping

Over the past few years, agricultural administration has focused on a policy of double cropping. The reason for this was to maximize food production on the North's limited farmlands. Double cropping of grains is being promoted to alleviate severe food shortages. In line with the North's double cropping policies, the amount of land used for fall wheat, spring wheat, spring barley, and spring potatoes was increased from 38,000 hectares in 1997 to 201,000 hectares in 2004. There are also efforts underway to continue increasing land designated for double cropping, but limited farming equipment and manpower is holding back this expansion. Because of the amount of labor necessary for the seeding and harvesting of crops, without a plan for solving the shortage of available labor, extending double cropping will be difficult to manage, even though double cropping would increase agricultural output if it could be successfully pulled off. While efforts have been made to balance food supplies, the seasonal and regional nature of agriculture cannot be fully overcome; however, continued double cropping is not possible due to the drain it causes on the soil. It is, however, an excellent way to help relieve short-term food shortages. Double cropping can not only

solve the North's current food plight but also help to smooth out the seasonal nature of agricultural production.

Ireland of Asia?

In an effort to stabilize food supplies, the DPRK has also begun to promote potato farming. Due to the climate and soil, potatoes can be a very valuable crop to North Koreans. They are harvested twice a year in the southeastern region and once a year in the northern region. These days, potatoes are the third most harvested crop, falling in place behind only rice and corn. Potatoes can be grown in both dry-field and intercropping cultivation. The North's focus on potato farming is a real epoch-making transformation, as it has gone so far as to reduce corn production in order to focus on expanding the potato crop. It is difficult to imagine ever reducing the amount of land set aside for corn under the previous leadership of Kim Il Sung. Now, by concentrating on potatoes and double cropping, 200,000 hectares of land have been put to use, and virus-resistant potato seed development has been expanded. While initial policies have been set in order to expand the area of land designated for potatoes, the reality is that increases in productivity have not yet come to fruition. As efforts focused on the development of a virus-resistant potato continue, North Korea is expected to eventually see growth in potato production, but to do so will require much effort and investment.

Moving on to Greener Pastures

Livestock farming policies focus on turning away from traditional animals such as cows, pigs, and chicken and instead raising animals that can manage to graze on their own, such as sheep, rabbits, ducks, and geese, in order to meet the animal protein requirements of the people. This policy has been successful in drastically increasing

the number of these less dependent animals. However, as these animals alone are not enough to meet all the animal protein needs of North Koreans, the government launched a project to construct a modern chicken farm in 2001. As the demand for feed is still a problem, the development of feed farms, chicken farms, and incubation centers needs to be approached simultaneously as a single project. North Korea also needs to develop a system for preventing and dealing with diseases related to the livestock industry, such as avian flu or cholera. As the North is approaching the need for animal proteins from many various directions, it is also promoting pisciculture, which is unfolding much like the policies toward livestock farming.

Fertilizer Shortages

In order to increase foodstuffs, more flexible management and extensive farming technology must be employed. Only until the end of the 1980s did North Korea use necessary amounts of fertilizer. When the North went through economic difficulties in the 1990s, the amount of fertilizer used was drastically reduced. Only since 1998 has South Korea and other nations provided fertilizer to the North as part of various aid packages, and since then the North has slowly increased the amount it uses. Increasing the amount of fertilizer would directly increase the amount of agricultural production in the North, but these days only one third of the required fertilizer is being used. The problem is that there is a lack of materials necessary for the North to produce its own fertilizer. If Pyongyang is to increase food supplies, it must find a way to provide a steady supply of fertilizer without relying on outside assistance.

Reliance on Manual Labor

. Over the past several years, the use of agricultural machinery such as tractors and distribution machinery has continued to decline. These days, as few as approximately

64,000 tractors are in use, or only 57%. Most tractors are rusting away and cannot be effectively used. This puts a crimp in the expansion of double cropping, and causes crops to be lost. In order to foster double cropping, planting and harvesting work need to quickly be improved, and the use of agricultural machinery needs to be increased. As 15% of crops are lost after harvesting, harvest time needs to be reduced, the efficiency of harvesting equipment needs to be increased, and distribution and storage facilities need to be improved. What is more important, however, is increasing the amount of agricultural equipment and the provision of fuel for tractors, irrigation, threshing equipment and distribution.

Irrigation Projects

Even with economic problems, the expansion of the North's agricultural base is necessary for the future of its farming. This has been done through the promotion of large-scale waterway construction companies and land management corporations. With a loan from OPEC, the government has completed its southern irrigation system and is in the process of improving a system in the northern region. The southern irrigation system began providing water to farms in the Haedang valley in 2004, and if the northern system is complete in 2005, it will not only supply water to the North Pyongan region, but because it will be able to do it cheaply, it is expected go a long way toward solving that region's irrigation shortages. Government land management schemes have managed to secure new farmland areas, yet will face limitations due to failure to pursue new water distribution networks and mechanization in these areas. It is, however, still impressive that the government managed to take what steps it did in light of the negative economic situation.

Structural Changes

Not only does North Korea need to reorganize its agricultural system and local management practices in order to overcome current food shortages, but it must also be aware of the fact that this reform is necessary for overall economic reform as well. In 1996, the government introduced a new management system in order to stimulate agricultural productivity and mobilize agricultural workers. The new system reduced the number of workers per team to between seven and ten, lowered quotas so that workers could more easily meet requirements, and gave workers the freedom to do as they pleased with any surplus. By lowering the number of workers, farm management teams took on a much more homogenous appearance, usually made up of relatives or close neighbors. Introducing the quota system gave the farmers economic incentive to produce by allowing them to have any product above and beyond the required quota. The majority of these surpluses found their way to local markets, where prices were as much as twenty times higher than official prices at government stores. One problem, however, is that in reality, due to poor management and equipment, meeting these quotas is still difficult.

Incentives

The changes to the system were expected to positively affect farmers' incomes, but failed to stimulate the farmers. This is not only because of the inability to supply the materials needed to boost production, but also because inefficiency in the lower tiers of the management structure does not allow for workers to take advantage of the incentive system. The powers that be are now coming to realize that in order to stimulate production, the system must be revamped and incentives and competition need to be the driving forces.

Privatization on the Way?

Since 2003, selected cooperative farms in Hwanghae, Hamkyung, and Pyungan have been under a new management system on a trial basis. This new system gives the local manager less of a role than it does to the collective team, allowing for more autonomy and emphasizing the incentive for production above and beyond set quotas. This new system has not yet been officially adopted, but the government has taken steps to privatize farm management and change the management system. Eventually, by adopting this system on a nationwide basis, new market measures can help maximize agricultural production.

As for livestock, a plan is being worked out under which each farmhouse would be supplied with three or four dairy cows, and incentives for milk production would be adopted. In addition, by adding such stipulations as allowing newborn calves to stay on the farm, etc., more economic incentives are being implemented, raising production rates. It is expected that this type of farm management system will continue to expand in the future. As this type of farm management system develops, income levels would naturally rise as well.

Market Reforms

North Korea carried out decisive economic reform measures on July 1 2002. The focus of these measures was transitioning to market-style economic management. The idea of state-guaranteed low cost food and supplies has transformed into a market-pricing system based on the incomes, and the purchasing power, of everyday laborers. Another important policy change has been the decentralization of some of the central government's authority and the increased empowerment and autonomy in planning and execution granted to local governments and individual businesses that have lowered their reliance on Pyongyang. The result was a weakened central rationing system that was less able to supply previous levels of foodstuffs, increasing the burden of

procurement felt by individual families. With demand outstripping supply in the markets, the difference in market and government prices grew, increasing the economic burden on those working outside of the agricultural field, but then it also increased the economic incentive of production for those of them in factories around the country. The central government still continues to control the market to some degree, but generally, supply and demand drive the prices of agricultural goods, and these relative price fluctuations drive those in the non-agriculture industries to maximize their purchasing power by being more aware of on what it is they are spending their money.

Gradual Progress

By creating a competitive atmosphere both between and within cooperative farms, the demand for an improved management system that would increase productivity intensified, and managers' authority grew. The manager has more choices over selection of crops and more power to divvy up any crops above and beyond quotas according to the productivity of each worker. As land-use fees and unit costs must be paid, administrative goals are not focused on maximizing output, but rather on maximizing profits. While these new management systems are limited, they are new systems nonetheless. While the scope of the new systems is small, the introduction of incentives and autonomy can increase production. More change is needed, and as the farms continue to produce more. As this surplus continues to find its way to the market, the expansion of market activities will become more regular, driving productivity both in the agricultural sector and beyond.

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