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The Democratic People's Republic of Korea, Factor 7: Animal Agriculture

The Democratic People's Republic of Korea: Improving Malnutrition by Increasing Animal Protein Cultivation and Political Engagement

Introduction:

In the Democratic People's Republic of Korea (North Korea, DPRK), there are no possibilities for growth and success for a majority of its population. The major problems in the DPRK are a totalitarian dictatorship with nuclear ambitions that oppresses its people. This has led to economic failure and agricultural failure. The major industry in the DPRK is arm smuggling and selling nuclear technology to other rogue nations. This has led to international sanctions and has further exacerbated the condition of its ordinary people. In the countryside, collective farms force ordinary citizens into eternal servitude yet the production of food and agricultural goods is pitiful. The workers in these farms and population in general suffer from repeated bouts of famine and malnutrition and millions of people have died in the last 20 years. Food is the biggest challenge with protein malnutrition being rampant. You are going to bed, your whole family is going to bed, and there is nothing else to do. You cannot stay up to watch TV or on the computer; the electricity shuts off at night. To top it all off, because of your diet, you and many others out here living on farms are protein deficient. This stems from your lack of access to animal agriculture, and dependency on staple foods such as potatoes, rice, and corn, all of which are highly produced here in the DPRK. A young boy may only ever grow to 5 ft. 5 inches out here and a young girl may only grow to 5 ft. 1 inch, because of the severe malnutrition issues outside of North Korea's capital city of Pyongyang. The major industry in the DPRK is an illegal arm-smuggling. This is one of the many problems faced North Korea is faced with many problems, but malnutrition because of protein deficiency is one that can be fixed through the addition of sustainable animal agriculture to North Korea's economy (Ireson).

Current Agricultural and Nutritional Landscape of DPRK

The Democratic People's Republic of Korea, or North Korea, as it is more commonly known today has a totalitarian dictatorship as its government under its current ruler Kim Jong-Un (Moore). To make itself look successful, it chooses a few cherubic kids to live in the capital city of Pyongyang, where they have a blessed life. However for the tens of thousands of children, and adults outside of Pyongyang, life is not so easy. While the plump cherubic kids in Pyongyang, have access to a variety of items including nearly unlimited access to food, it comes at the expense of the health of the people outside of North Korea's capital city (SFGate) . The typical farm family has, on average, two children with a family size of around four.. Their diet consists of the crops they grow. These crops are typically potatoes, corn, and especially rice. As one may be able to see, the diet has little to no protein and when women are pregnant; this protein is not sufficient to keep them or their future children healthy (Gunjal).

On paper, Kim Jong-Un, the country's current leader, has recently suggested it be twelve years of compulsory education. However, education is sometimes used as an excuse for child labor in the DPRK. There are universities to pursue higher education, however a degree from one of these universities may mean next to nothing in the future, when it comes to job opportunities. It is

almost impossible for people (other than elites) to receive a university education. In the more prestigious universities in North Korea, many children who are hard-working are passed over for admission simply because they have to be approved by a selection committee to get into the school. This selection committee may not look at one's grades, but whether or not one has political connections. These kinds of committees are found everywhere in North Korea, making it hard for good students to pursue higher education.

The people of the DPRK do not get any choice in their future employment. Very few students in North Korea get what many in America would consider "cushy" jobs. Many children are forced to be farmers without any choice in the matter. Jobs are also allocated based on what job one's parents had. A farmer's son will most likely become a farmer, even if the son wants to become a doctor. Usually farming stays in the family (School, Schools, Age, and Continuing).

Healthcare is another important issue in North Korea, because of severe malnutrition problems. The system is, according to the government, a "universal healthcare" system. The government states that healthcare is free, however, many people are forced to pay for the drugs, the equipment, and they have to make their own meals as no food is supplied for patients(Mack).

In the DPRK, only about 18% of the land is arable, due to the rugged mountainous terrain that makes up most of the country. This means that there are around 2.2 million hectares of arable farmland. The average farm size in the DPRK is around 466 hectares. The main crops grown in these farms are, in order of most numerous: rice, corn, and potatoes. Rice takes up nearly 30.1% of the farmland in North Korea, while corn and potatoes make up smaller percentages. Potatoes, as of late, have started becoming just as popular as rice. There is little to no new technology available, as many residents of the DPRK do not have access to important technologies such as a combine or a reaper that make it possible for farming to be done on the large scale. Because of this, subsistence agriculture is typically practiced. However, unlike most subsistence agriculture, farmers are only allowed 30% of the yields, while the other 70% is going to the government. Agricultural practices, such as wet rice, and tilling are very common in North Korea. Intense chemicalization, or overuse of pesticides and fertilizers has reduced soil fertility, increased soil acidity, and led to large-scale water pollution. These farmers have the most important job in the country, as North Korea's sufficiency depends almost entirely on their yields. When yields are bad, thousands starve.

The major barriers to agricultural productivity are lack of technology available to most of these farmers, lack of proper agricultural practices, good seeds and fertilizers. In addition, these farmers are forced to give up 70% of their yields to the government.

There is a high rate of protein deficiency in North Korea. The government's inefficient rationing system, in which they take food from the hard-working farmers and ration it out in the cities, is not allowing the people of North Korea to be even able to access adequate protein. A characteristic of North Koreans is that they are short, something that occurs because they have severe malnutrition. This is because they do not have enough access to animals or animal agriculture. Their diet is only rich in potatoes and grain, with no discernible source of protein readily available. About 70 percent of North Koreans lack secure access to food, and nearly one-third of children under 5 have stopped growing. A lack of food access from international sanctions on food aid and trade on the Democratic People's Republic of Korea seems to exacerbate this trend and disproportionately affects average people in the country (Gunjal).

Main Factor Affecting the Food Security in DPRK: Lack of Animal Agriculture

As of late, because of rapid industrialization, all primary sector industries have declined. However, the DPRK, even with its lack of technology, and effective agricultural methods, has been brought to near self-sufficiency specifically in staple foods. Animal agriculture has not improved in recent years. The main form of animal “agriculture” today comes from rearing domestic animals. Many farms in the DPRK will keep dogs, goats, pigs, or rabbits. An important domestic animal is oxen, as that will help to plough the land and pull the weeds. These qualities make oxen very valuable, because tractors and more importantly, fuel is very expensive in North Korea. Animals are not for eating, because it is inefficient for a farm family to feed the animals their yields, rather than consume the yields themselves.

The only mention of animal agriculture by the DPRK’s Supreme Leader Kim Jong Un as stated in his letter to the first ever National Conference of Farm Sub-Work Team Leaders, was “Integrating animal husbandry and crop farming is also recommended.” This was interpreted as if increasing the amount of crops available to the animal industry; however, there was no discussion on how that was to be made possible. There was also no mention of the fact that more animal agriculture is needed in the DPRK to help solve malnutrition issues.

As noted above, there is a sustained problem in DPRK with malnutrition that may be ameliorated by increasing animal agriculture. Thus, there are various ways to increase sustainable animal agriculture that can be deployed that could greatly benefit the common people in DPRK. Most of these methods would require political advancements as well but food security and improved nutrition may help to change perspectives of average people in DPRK and could lead to a less adversarial leadership in the future as well. This is because the international community will have to make sure that the regime in DPRK does not create unnecessary obstacles to food security for the ordinary people. Thus, the community will need to make political advances in this area while continuing the pressure to decrease rogue behaviors from the regime. This is a tightrope that the international community must walk on in order to help the ordinary people.

Sustainable animal agriculture is the solution; however, there are many ways that this type of agriculture can be implemented. The least effective way that this can be implemented would be raising large land animals, especially beef. This is because to raise beef, you need fodder. This fodder is considerably more than the fodder that would be given to any other large land animal. The other problem with beef is that it emits large amounts of greenhouse gases, which is not the best for the environment.

The next path to take would be that of small land animals. Pigs and chickens, although much more efficient than beef, are still quite inefficient, as they use fodder, which can be directly fed to people. Pigs and chickens are also inefficient to the DPRK, because of lack of land where large numbers can be grown for the general population. They also do emit greenhouse gases, although considerably less than beef does.

The next path to take would be that of large marine life, especially fish. . However, the world fisheries are being depleted at an alarming rate, and large scale fish farms are high pollutants, and are not sustainable.

The final path would be that of small marine life like Mussels. Mussels are plentiful and very sustainable. They grow by feeding on plankton. . North Korea has a large coastline with ready access to the ocean, and ability to establish large mussel farms.

In the spring, when water temperature reaches nearly 15 degrees Celsius, mussels spawn. These mussels are growing, they have not gotten their shell yet, and they are in their “swimming stage”. In the “swimming stage” these mussels are known as seeds. All these farmers have to do is collect the seeds, place them in some kind of a vessel, such as a sock, and drop them in the water, and the mussels will grow. In a year’s time, they come back, and the mussels are ready. The water is also cleaner, as when mussels eat they feed on the plankton in the water, filtering it out. In just 1 mussel, there are around 20 grams of protein. If the DPRK can scale this efficiently, this could be a solution to their malnutrition problem. Mussel farming has been adopted mainly in the United States of America, specifically in the coastline areas from Rhode Island to Maine (Ocean Today).

Mussels could be better suited to North Korea’s climate, as freezing weather tends to hit North Korea from time to time, and the pigs and chickens and larger animals would have a much harder time surviving this climate. Given the nature of mussel farming and its sustainable effect on the environment, this could be a great solution to DPRK’s lack of animal agriculture.

By doing this, North Korea can allocate the money that was once used to fund inefficient agricultural methods like subsistence farming and also get new international aid towards mussel farms, making their country more sustainable, and giving access to more protein to families all over the country. The large intervention that would be required here would be that of the World Bank, which can impose a structural adjustment program on North Korea in return for a loan, which North Korea can use to help start up the mussel farm business (Ocean Today). This money is necessary to set up the infrastructure of the mussel farms, and to get the proper equipment.

Increasing sources of protein will help to decrease malnutrition and will increase growth and decrease disease susceptibility amongst ordinary North Koreans. This will be important for food and health security for vast majority of people in DPRK.

Recommendation: Establish shellfish farming (Mussel) and increase small animal farming in DPRK to establish a sustainable animal agriculture

The best solution would be for The World Bank and donor countries from the United Nations to help with a start-up investment in the DPRK’s mussel farms. A multi-national marine advisory board could advise DPRK on establishing proper site selection and technical expertise. In addition, there will be original small- scale farming developed as pilot projects across 3-5 sites that are deemed suitable. Later, as the project expands, larger, more sophisticated mussel farms could be established. It would be important for the international community to ensure that the protein harvesting will benefit the average resident of DPRK. In addition, a separate committee can provide expertise in small animal farming. Here the tactic would be to bring large-scale commercial animal farming methods and provide necessary equipment and expertise to DPRK.

There are two main issues with this plan. The first is to convince the World Bank to loan the money required for these mussel farms to work. This would be an issue simply because the World Bank would not know if they are getting their money back, especially in dealing with a country like North Korea. They would normally impose a structural adjustment program to help deal with this issue. However, the structural adjustment programs, which promote international trade, issue small businesses more consumers than they can serve, and as a result lead them to bankruptcy. The best way to solve this problem would be to involve the World Bank in the committee selection process. In this way, the World Bank is able to be involved with the initiative, while they also ensure that they can get their money back.

Secondly, to acquire the funds required from the World Bank and other donor countries, the DPRK's government must be willing to create conditions of engagement with the West. The West will likely demand human rights and limitations on its nuclear aspirations. If this does not happen, North Korea will have no chance of ever starting this initiative successfully, and they will be incapable of solving one of the many important issues that is present in their country. This may seem unlikely, but unfortunately no solutions can be reached to any problem the DPRK is having without these huge changes. Thus, there will be a need for the international community to establish better political relations with the DPRK regime. They will probably have to make compromises that will involve decreasing threats of sanctions and keeping up other international pressure to reduce their rogue tendencies. It will be a tightrope that the international community will have to walk in order to procure greater food security for the masses.

The three main sustainable development goals highlighted by this solution are: zero hunger, good health and well-being, as well as reduced inequalities (United Nations). By 2030, with the addition of mussel farms to the Democratic People's Republic of Korea's economy, at least 50% of hunger will have stopped, as mussels are a cheap way for even the poorest of residents of North Korea to obtain food. However, the mussel growing business will not expand enough to eliminate hunger completely. Good health and well-being will between 50-75% achieved as much of the malnutrition problems faced by poorer residents in the DPRK will have been nearly fixed by mussel farming. Finally, mussels will help to reduce inequalities by at least 75% as cheap access to food will help to change the large gap between the rich and the poor found today in True Korea.

Conclusion:

In conclusion, one of the most strategic food related problems in DPRK is malnutrition. The malnutrition manifests as protein deficiency due to lack of animal agriculture. This is a serious problem that is affecting the health of millions of people and causing serious diseases and growth issues. One of the interesting and unique issues in DPRK is that the problems are intertwined with a dictatorship that has been imposed by the current President Kim Jong-Un and his father. The solution to improve the health of people is to increase animal protein availability in a sustainable manner. The most sustainable way to increase animal protein availability is to encourage and foster small animal farming and mussel farming. This is entirely adaptable in DPRK since the resources required are present. Mussels have the ability to provide high quality animal protein along the coastline of DPRK. Mussels have also been proven to be the most sustainable meat (Leveaux). Mussel farm technology has been employed elsewhere in the world successfully, such as in the United States of America. This approach can be supplemented with small animal farms like chicken and pigs. These are not as sustainable as mussel farming but can provide diversity of protein sources. As mentioned previously, the issue of malnutrition is inexorably linked to the political situation in DPRK. In order to solve the problem, better relationship between the DPRK government and the international agencies like UN need to be established. A loan would need to be taken from the World Bank to set up the infrastructure and to employ the proper equipment. The World Bank should impose a committee selection process in charge of making sure there is no corruption in the mussel farming industry. The committee selection process is a much more toned-down approach. Rather than imposing a structural adjustment program, a committee selection process will allow for North Koreans to feel more in control of this industry, while allowing the World Bank to also feel in control of their investment, which will foster trust between both sides. This program will call for some kind of communication with the west. Since the government of DPRK is regarded as a 'pariah' government; the international agencies and

western powers will need to reach a compromise with the DPRK government with a greater goal in mind—solving the malnutrition problem and health issues for millions of innocent citizens of DPRK.

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