

Problems and Future Needs for Balanced Fertilization in China: A Summary

By Sam Portch

China must import more potash to meet its balanced fertilizer needs, to achieve economic and fertilizer use efficiency. Policies are needed to speed the registration of new fertilizer products, so Chinese farmers are not at a disadvantage compared to farmers in other countries. The fertilizer sector should encourage foreign investment to speed the production and distribution of soil and crop specific bulk fertilizers. Also, education and extension programs need to be expanded. China should establish the long-term objective of privatizing the fertilizer sector.

At the first Balanced Fertilizer Situation Report Meeting in 1991, a tremendous shortage of potash was reported. The effect was low crop production, reduced nitrogen (N) and phosphorus (P) fertilizer use efficiency, continued soil degradation, negative environmental impacts and lower profits for farmers, which affected China's economy. After five years, only limited improvements were made in the N:P₂O₅:K₂O balance and Chinese farmers and the Chinese people continued to suffer. Hence, it was important to address the issue of balanced fertilization in a second Situation Report.

Many speakers have praised the Balanced Fertilizer Demonstration Program of Canpotex Limited for its success. Farmers and the general public understand the benefits of balanced fertilization. Still, potash supply remains far short of demand because of import restrictions and quotas.

All Chinese speakers indicated that the only way to improve balanced fertilization is to drastically increase potash imports. It was clearly stated that although organic manure must be used as much as possible, organic sources are insufficient to sustain high crop production.

Economic analysis indicates that the longer China waits to increase potash applications to its crops, the greater are its economic losses, the difficulty and cost of improving soil fertility, and environmental damage. In short, the longer it takes, the more China stands to lose. Thus, the question: Why delay?

Bulk blending (BBFei) is a highly effective way of providing balanced, soil and crop specific, high quality N, P and potassium (K) fertilizers to farmers. The Guangdong model BBFei donated by Canada in 1988 was successful, but BBFei has not spread widely outside Guangdong. Why? The answer frequently heard is inconsistent government policy.

China has proclaimed that market economics of supply and demand should establish the prices farmers pay for fertilizers. But, many levels of government control prices. Such controls...seemingly helpful to farmers...are harmful because they lower foreign investment in BBFei facilities. Thus, this cost-effective method of achieving balanced fertilization is unlikely



Balanced fertilization and good crop growth...for high yield, sustainable agriculture.

to be widely adopted in China. Farmers are often willing to pay more for a quality balanced fertilizer, but are left without the tools to practice balanced fertilization.

Five years ago, most fertilizer used in China was applied to grain crops. Today, it is uncertain how much organic or inorganic fertilizer is applied to cash or grain crops. Thus, care is needed when evaluating the impact of fertilizers on grain crops. The calculation of total fertilizer consumption versus grain production is no longer reliable. It indicates that while NPK use increased, the rise in grain production was not proportional. An incorrect conclusion could be reached; that is, NPK fertilizer use efficiency for grain sharply declined, when actually a shift in fertilizer use from grain to vegetable and other high value crops was, in part, the reason.

Everyone is concerned about the rise in “fake” fertilizers marketed in China. This must be stopped. But, China’s fertilizer rules, regulations and policies must consider farmer needs first. Regulations, while strict, should be expeditious so farmers have quick access to new products, both domestic and foreign, as quickly as farmers in other countries. Regulations must be enforced in a timely and equitable manner. This requires the establishment of effective and impartial monitoring systems and enforcement of regulations. However, when considering regulations, fertilizers are like any other product. The best regulator is an educated consumer. Increased efforts to inform farmers about fertilizer quality is necessary.

Fertilizer policy in China should set a clear and ultimate objective to completely privatize the sector...from production, importation and distribution to sales and services. Examples in both developed and developing countries show privatization, with appropriate government controls, is the most economical and efficient system for the fertilizer sector. This cannot be achieved in a few years. It requires long-term planning, massive training, infrastructure changes, new financial systems, field staff, etc. If started today, the goal could be reached in 7 to 10 years. It is a challenge that must be achieved to feed China’s growing population. Time is short. China cannot afford to waste it.

Lester Brown, President of World Watch Institute (USA), recently stated that soon China would not be able to feed its growing population and that this situation would disrupt world grain markets unless China’s agricultural policies were changed. It is believed China will make the necessary policy changes to more efficiently farm its land. **BCI**