

# **China is Promoting Technological Services for Soil Testing and Formulated Fertilization**

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To stop the excessive use and low utilization of fertilizers, China launched the subsidy policy for the soil testing and fertilizer recommendation technology.

Focusing on five segments of “testing, formulating, producing, supplying and fertilizing”, agricultural agencies launched soil testing and manure trial, formulated scientific fertilization scheme, promoted the use of formulated fertilizers, and generalized the scientific technique of fertilization.

Since the start of the subsidy policy in 2005, the central government had invested 6.4 billion yuan almost covering all agricultural counties. With the soil testing and fertilizer recommendation technology being generalized to about 86.667 million hectares of lands, the efforts reduced 8 million tons of irrational fertilizers and successively lifted the utilization and the level of scientific fertilization, benefiting 180 million farmers.

The central government in 2012 spent 700 million yuan as subsidy to support 2,463 selected counties, farms and units to apply the soil testing and fertilizer recommendation technology.

The MoA launched the overall-promotion of the soil testing and fertilizer recommendation technology in tens of thousands of villages in 2012, and assigned 100 fertilizer factories nationwide. Selected by the agricultural departments on the provincial and county levels, the fertilizer producers supplied formulated fertilizers to 100 counties and directly connected with 1,000 demonstration towns and 10,000 demonstrativon villages.

In accordance with several documents and regulations set by the Ministry, regional agencies detailed and strengthened the implementation of the overall-promotion, made great efforts to the application of the soil testing and fertilizer recommendation technology on staple crops while expanding it to garden crops, which played an important role in upgrading the stable increase of grain production, lifting agricultural efficiency and continuously raising the rural incomes.

Statistics shows that in 2012, the MoA gathered and analyzed 1.32 million earth samples and 170,000 plant samples, accomplished 10.64 million tests of primary, second and micro nutrients, 650,000 tests of plant nutrients, as well as 35,000 field experiments of fertilizer efficiency.

In 2012, agricultural departments held 95,000 technical training courses, trained 1.024 million key technicians, 264,000 fertilizer salesman and 26.79 million farmers, and handed out 220 million pieces of training materials as well as fertilizers suggesting cards. The MoA also organized 22,000 on-the-spot observation tours and 31,000 science fairs, painted 230,000 wall slogans, made 150,000 posts on online newspapers and magazines, broadcast 29,000 times on radio and TV, and sent 2.46 million messages. A total of 121,000 demonstration areas were set up, covering 5.56667 million hectares, and the techniques were applied to a total of 90 million hectares of farmlands. Across the year, 180 million farmers

enjoyed technological services in soil testing and formulated fertilizers for free.

There were altogether 831 fertilizer factories joining the cooperation program between farmers and factories for the generalization of formulated fertilizers, under which over 8 million tons of fertilizers had been generalized to 37.333 million hectares of farmlands.

According to statistics, compared with the farmlands fertilized in the traditional way, the demonstration plots whose soil had been tested before fertilization had a better yield, with wheat, rice and corn yielding 5.6%, 5.6% and 6.3% higher, respectively .

In the demonstration areas, every hectare of farmlands could reduce the amount of unnecessary fertilizers by 15 to 30 kilograms and save 525 yuan in cost on average. Breakthroughs had also been made in the generalization of the soil testing and fertilizer recommendation technology for garden crops like fruit trees and vegetables, leading to a 1200-yuan reduction of per-hectare cost in demonstration zones. Nationwide, more than 1.5 million tons of irrational fertilizers had been reduced, which, according to experts, equals to save 4 million tons of coal or cutting 10 million tons of carbon dioxide emission.

In order to continuously expand the soil testing technology, agricultural departments on all levels took affirmative measures, strengthened the supervision, management and implementation, so as to ensure the successful completion of tasks and indicators. The affirmative measures are as follows.

First, launching soil testing. In accordance with the principle of rotating every three years, agricultural departments launched the soil testing and got a preliminary understanding of the soil nutrient status of 96,667 million hectares of farmlands, offering a scientific guideline for the usage of formulated fertilizers.

Second, setting formulation for fertilization. Based on the soil analysis and field experiments on the county level, different kinds of fertilizers were formulated for different areas and plants, facilitating farmers and fertilizer producers.

Third, carrying out farmer-factory cooperation. In 2012, agricultural departments of different levels held colloquia on the coordination of the production and demanding of formulated fertilizers, and guided large and medium-sized fertilizer enterprises to build direct sales outlets as well as fertilizer matching and supplying outlets in rural areas.

Fourth, helping farmers with subsidy policies and career services. With the help of the farm machinery purchase subsidy policy, agricultural agencies actively guided farmers to purchase fertilizer machines. They also ameliorated the extensive application of fertilizers, generalized new fertilization technologies, and lifted the efficiency of fertilizers in 2012.

Fifth, strengthening supervision and guidance. By painting slogans of scientific fertilization on walls, demonstrating fertilization methods in villages, and holding a series of training as well as soil testing in fields, regional departments made utmost efforts to generalize the soil testing fertilization technology. Besides that, they paid much attention to the evaluation and supervision of the fulfillment of tasks of provincial governments, making sure that all measures were properly implemented.

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