Fertilizer use-related policies

China

May 2018

General information

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Fertilizer consumption</strong> (NPK, thousand tons of nutrients)</td>
<td>49,887</td>
<td>48,584</td>
<td>51,118</td>
</tr>
<tr>
<td><strong>Fertilizer production</strong> (NPK, thousand tons of nutrients)</td>
<td>57,920</td>
<td>57,494</td>
<td>59,731</td>
</tr>
<tr>
<td><strong>Fertilizer use</strong> (kg/ha of arable land + permanent crops)</td>
<td>407</td>
<td>397</td>
<td>376</td>
</tr>
</tbody>
</table>

Area of the 5 major crops (Average 2014-2016)

Source: FAOSTAT 2018

<table>
<thead>
<tr>
<th>Maize</th>
<th>Rice</th>
<th>Wheat</th>
<th>Soybeans</th>
<th>Potatoes</th>
</tr>
</thead>
<tbody>
<tr>
<td>35</td>
<td>30</td>
<td>20</td>
<td>5</td>
<td>5</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Average 2013-2015</th>
<th>Area (million Ha)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agricultural Land</td>
<td>520</td>
</tr>
<tr>
<td>Arable Land</td>
<td>111</td>
</tr>
<tr>
<td>Permanent Crops</td>
<td>16</td>
</tr>
</tbody>
</table>

Source: FAO Stat, 2018

Summary

<table>
<thead>
<tr>
<th>Subsidies</th>
<th>Fertilizer Use</th>
<th>Fertilizer Value Chain</th>
<th>Nutrient Management</th>
<th>Soil Management</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regulations</td>
<td>Fertilizer Use</td>
<td>Air Quality</td>
<td>Water Quality</td>
<td>Climate Change</td>
</tr>
</tbody>
</table>

Source: FAO Stat, IFA Data, 2018
The Chinese political system gives priority to long-term planning. Every five years, the Party Central Committee issues guidelines that lay out the political priorities for the country. The document, called the **Party Congress Political Report**, is one of the policy pieces that holds the most authoritative power. These priorities are then laid out more specifically by the **National Development and Reform Commission** (NDRC) every five years in economy-wide and general **five-year plans (FYP)**. They give direction and planning to relevant ministries to further decline policies in five-year plans by sector (agriculture, economy) or sub-sector (crops, livestock), these plans further act as policy guidance and benchmarking for subsidiary bodies (e.g. provincial governments).

Additionally, and in order to indicate policy priorities for the year, the **Party Central Committee and the State Council** release every year the **“No.1 Central Document”**. This statement is the first policy statement of the year, which for the last thirteen years mostly focused on agriculture and rural areas.

The current FYP (2016-2020) for Agriculture furthers the previous ambition to modernize the Chinese Agricultural sector, and gives continuity to the objectives and requirements detailed in the last plan. One of its notable new feature is an ambitious environmental policy that calls for the **reduction of fertilizer use: The Action Plan for Zero Growth of Chemical Fertilizer use by 2020**. As the plan is implemented, the agricultural sector is set to transform from a production focus to a holistic mode, encompassing production, competitiveness and environmental concerns.

To achieve its environmental goals, the administration relies on **four different tools**: i) Financial and regulatory tools including credit policies and fiscal incentives; ii) Structural tools addressing propriety and cooperative issues; iii) An health and sanitation framework issuing norms and performing controls; iv) Education, research and development. Hence, the policy actions are to be seen as a strategy that will support key actions aimed at ensuring a more scientific and informed fertilizer application, and achieving zero growth in fertilizer use. These measures take the form of targets, supported by fiscal and financial incentives, education, and technological support.

### Subsidies

**Fertilizer Use**

As a way to buffer price variations in agricultural inputs and to reduce the income gap between urban and rural populations, the government provides a single payment scheme called **“agricultural support and protection subsidy”**. First implemented on a pilot basis in 2015, it has been extended to the whole country in 2016. The scheme merges three previously separated payments (direct payment to grain producers, subsidy related to agricultural inputs including fertilizers, and seed variety subsidy) into one single and direct payment to farmers.

As a major effort towards the zero growth of fertilizer consumption by 2020, the government implemented in September 2015 a **policy that removes VAT (13%) exemptions** that applied previously to all fertilizer products, from production to retail.

**Fertilizer Value Chain**

Fertilizers transport subsidies have been revoked in 2015. **Electricity subsidies** have been abolished in 2016. **As for natural gas subsidies**, the government has been gradually phasing out the preferential price policy for fertilizer producers since 2013.

**Nutrient Management & Soil Management**

There are no subsidies for nutrient and soil management.
Regulations

The government has gone far in developing agricultural sector-specific laws and regulations to prevent and control pollution. This followed a recent realization of the harmful side-effects of excessive agricultural intensification, and the importance of the control of agricultural non-point source pollution, while still acknowledging the importance of fertilizers in achieving food security and development.

Since 2014, the government has issued policies that aim at monitoring, preventing and controlling pollution, and promoting sustainable agriculture. These measures act as a legal and policy basis for the Action Plan for Zero Growth of Chemical Fertilizer Use by 2020.

Another main piece of regulation policing agriculture is the Sustainable Agricultural Development Plan released in 2015. It calls for action for the next 15 years in the crop, animal and aquaculture industries by enacting the following principles:

- Match environmental carrying capacity with agricultural production;
- Promote innovation alongside the enforcement of environmental protection;
- Strengthen short-term pollution control measures while promoting long-term measures for sustainable resource utilization;
- Scale up successful models through piloting and demonstration;
- Use both government guidance and market incentives to promote sustainable production.

Fertilizer Use

In February 2015, the Ministry of Agriculture unveiled its “Action Plan for Zero Growth of Chemical Fertilizer Use by 2020”. The plan is a follow-up to the objectives stated in the government’s No.1 Central Document of 2015, which required a major transformation of Chinese agricultural production: from high productivity thanks to high input levels and high pollution, to high productivity achieved with high efficiency mindful of the environment.

A new framework for fertilizer use

The Zero Growth Action Plan stated objective is to achieve a less than 1% annual growth rate of mineral fertilizer use from 2015 to 2019. It is also to create a framework for fertilizer use informed by science and efficient practices. To achieve its endeavor, the plan lays out five key tasks: i) Promote soil testing and formulated fertilization; ii) Promote improved fertilization methods; iii) Promote application of new fertilizers and new technologies; iv) Promote the use of organic fertilizers; v) Improve cropland quality.

Support of organic fertilizers

As part of the Action Plan for Replacing Chemical Fertilizers by Organic Fertilizers in Fruit, Vegetables and Tea Plantations, the government introduced a Plan for Establishing Green Oriented Agricultural Subsidies System that provides various financial incentives, including tax breaks on organic fertilizers.

Air Quality & Climate Change

Greenhouse gases reduction measures

The Law on the Prevention and Control of Atmospheric Pollution issued in 2015 calls for the creation of cross-sector measures against the pollution “caused by the burning of coal, industrial production, motor vehicles and vessels, dust as well as agricultural activities”.

The goal is to reduce atmospheric pollutants, such as “greenhouse gases, including particles, sulphur dioxide, nitrogen oxides, volatile organic compounds, and ammonia”.

The law gives authority to the State Council to evaluate province-level compliance with their air quality targets, and requires the use of “satellite photogrammetric measurement and long-distance monitoring so as to analyze the sources and future trends of atmospheric pollution in these key areas.”

Water Quality

The umbrella scheme laying out targets, timeframe and strategy for water is the ‘Water Pollution Prevention and Control Action Plan’ (“Water Ten”), enacted in April 2015. As other 10-Year plans, it requires cross-ministry cooperation and guides policies related to water pollution under different sectors (Agriculture, Energy, Economy…).

It involves the implementation of a national plan to curb agricultural non-point source pollution. The Plan states its ambitions to extend nation-wide coverage for soil testing by 2020.

Measures to prevent agricultural pollution

In 2015, the Ministry of Agriculture disclosed a scheme in its Opinions on Taking Measures to Prevent and Control Agricultural Non-point Source Pollution that aimed at reducing water pollution by promoting soil testing,
fertigation, and non-mineral fertilizers such as recycling of straw.

Farmers are also required to respect the nutrient carrying capacity of the land, although specific thresholds are yet to be defined.

❖ Provincial Implementations Examples

At province-level, some constituencies have developed actions to achieve the zero-growth rate targets for mineral fertilizer use. So is the case in the Liaoning and Sichuan provinces, where the administrations have in both places taken an educational and technological approach to reach the objectives.

a) Liaoning

The province has designed an Action on Zero Growth of Chemical Fertilizer Use on Fruit Trees by 2020 and a Technical Plan to Reduce Chemical Fertilizer Use for Apples. Both compel to the zero-growth target of fertilizer use over the 2015-2019 period. Measures aim at improving fertilizer efficiency and reducing their use by encouraging farmers to use non-mineral fertilizers, and bolster the benefits of fertigation.

b) Sichuan

Sichuan’s province is implementing the policy by testing pilot projects to be further expanded upon success. The administration has started unrolling soil testing and the use of formulated fertilization projects in 127 counties, out of a 150 counties target. Just like in Liaoning, fertigation and organic fertilizers are key measures.

In order to gain traction from farmers, the province is focused on showcasing pilot projects in which it is providing the enabling technology and necessary training to stakeholders.

Useful references

- SAIN Policy Documents
- London School of Economics: Climate Change Laws of the World, China
- OECD: Fertilizer and bio-fuel policies
- World Bank: Law Library
- China’s Ministry of Agriculture
- China’s Ministry of Finance
- China’s Water Regulations: China Water Risk
- Nutrient Challenge: Policy Database

DISCLAIMER

The information above is provided for general information purposes only. The International Fertilizer Association tried to gather all the available information regarding fertilizer use-related policies in this country, but cannot insure its full exhaustiveness and accuracy. Any change or evolution happening after the release date of this country sheet will appear in an updated version.