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**Prepared By:** FAS China Staff

**Approved By:** Adam Branson

**Report Highlights:**

The Chinese government unveiled its 14th Five-Year National Agriculture Green Development Plan (hereinafter referred to as “the Plan”) on September 8, 2021. The Plan, jointly issued by six departments, including the Ministry of Agriculture and Rural Affairs (MARA), the National Development and Reform Commission (NDRC), the Ministry of Science and Technology (MOST), the Ministry of Natural Resources (MONR), the Ministry of Ecology and Environment (MEE), and the State Forestry and Grassland Administration (SFGA) identified resource protection, pollution control, restoration of agricultural ecology, and the development of a low-carbon agricultural industrial chains as key goals to be achieved between the years 2021 to 2025.

## **General Information**

This report summarizes major content of the Plan. The Plan sets development goals and quantitative targets for the agriculture sector to achieve by the end of 2025. The targets include measures related to climate and sustainability as well as the development of China's rural areas. The plan includes aspects related to production systems and efficiency gains for the use of agricultural inputs, the development or revision of laws and regulations, as well as areas of support for the marketing of Chinese agricultural products. There are several examples of "projects" the government intends to carry out or support in pursuit of China's "green" agricultural development.

Please refer to the link, below, for the full text of the Plan in Chinese.

[http://www.gov.cn/zhengce/zhengceku/2021-09/07/content\\_5635867.htm](http://www.gov.cn/zhengce/zhengceku/2021-09/07/content_5635867.htm)

According to the Plan:

- The level of resource utilization will be significantly improved. Cultivated land, water and other agricultural resources will be effectively protected, and the utilization efficiency of natural resources will be significantly improved. Remarkable progress will be made in the management of degraded cultivated land. An agricultural production system based on the environmental carrying capacity of resources will be initiated.
- Environmental quality of production areas will improve significantly. The use of chemical fertilizers and pesticides will decrease. The level of resource utilization of agricultural waste will be improved and agricultural pollution will be curbed.
- The agricultural ecosystem will improve significantly. Arable land ecological zones will be restored while biodiversity will be protected and farmland ecosystems will be stabilized. The ecological characteristics of forests, grasslands, and wetlands will be enhanced.
- The supply of "green" agricultural products, including products with a designated geographic indication will increase significantly. The implementation of standardized and "clean" agricultural production will accelerate. The quality and safety of agricultural products will increase significantly and the function of agricultural ecological services will be improved.
- The ability to reduce carbon emissions and fix carbon will be enhanced. The greenhouse gas emission intensity of major agricultural products will be significantly reduced. The ability of agriculture to mitigate carbon emissions and adapt to climate change will be enhanced. Agricultural energy use efficiency will be improved.

Table 1. China: Select Green Ag. Development Indicators during China's 14<sup>th</sup> Five Year Plan

Category	Main Indicators	Year 2020	Year 2025	
Agri. Resources	National cultivated land quality grade	<b>4.76 *</b>	<b>4.58</b>	Target
	Coefficient of farmland irrigation water utilization	<b>0.56</b>	<b>0.57</b>	Target
Environment	Main crop fertilizer utilization rate (%)	<b>40.2</b>	<b>43</b>	Target
	Main crop pesticide utilization rate (%)	<b>40.6</b>	<b>43</b>	Target
	Comprehensive utilization rate of straw (%)	<b>86</b>	<b>&gt;86</b>	Target
	Comprehensive utilization rate of livestock manure (%)	<b>75.9</b>	<b>80</b>	Target
	Recycle rate of waste agricultural film (%)	<b>80</b>	<b>85</b>	Target
Agri. Ecology	Degraded farmland treated for acidification or salinization and converted to arable land (Unit: mu – a measure of land)	<b>NA</b>	<b>14,000,000</b>	Target
	Newly increased black soil protection and utilization area in Northeast China (Unit: mu)	<b>NA</b>	<b>100,000,000</b>	Binding
Supply	Number of certified green, organic, and geographical indication agricultural products (Unit: Number of products)	<b>50,000</b>	<b>60,000</b>	Target
	The overall compliance rate of agricultural product quality and safety routine monitoring (%)	<b>97.8</b>	<b>98</b>	Target

Note: The indicator data marked with \* is the data of 2019.

Note: 15 mu equals 1 Hectare (Ha)

Target/Binding: Either a bound or expected target of the Green Ag. Development Plan

The six primary areas that the Plan focuses on are:

**1. Strengthen the protection and utilization of agricultural resources and enhance China's sustainable development of agricultural lands and rural areas**

- **Strengthen arable land protection and land quality construction/development:** 1) Strictly observe the established “red line” of maintaining 1.8 billion mu of arable land; 2) Improve arable land quality and build 1.075 billion mu of “high-standard” farmland by 2025; 3) Improve the protection of black soil lands in northeast China so that by 2025, the protection and utilization of black soil lands covers 100 million mu; and, 4) Strengthen the management of degraded arable land so that during the "14th Five-Year Plan" period, a total of 14 million mu of arable land is treated for acidification and salinization.
- **Improve the efficiency of agricultural water use:** 1) Develop dry land farming by adapting to climate conditions; 2) Integrate and promote water-saving technologies. During the "14th Five-Year Plan" period, an area of 60 million mu of high-efficiency water-saving irrigation will be added; and 3) Strengthen agricultural water management.
- **Protect agricultural biological resources:** 1) Strengthen the protection of agricultural germplasm resources and complete the third national survey of crop germplasm resources; 2) Strengthen the protection of aquatic biological resources; 3) Strengthen the prevention and control of invasive alien species. Carry out invasive alien species surveys and monitoring. Develop an early warning system and establish invasive alien species monitoring stations (points) in border areas and at major ports of entry, major grain production areas, nature reserves, and large commercial roadways.

**Projects on Agricultural Resource Protection and Utilization**

- A) High-standard farmland construction: Build 1.075 billion mu of “high-standard” farmland focusing on permanent basic farmland, functional grain production areas, and important agricultural production protection areas.
- B) National black soil protection: Protect and utilize 100 million mu of black soil lands through implementation of soil erosion control, farmland infrastructure construction, and arable land cultivation.
- C) Treat and restore of degraded cultivated land: Carry out acid-reducing improvements in areas of south China where the acidification of arable land is prominent and implement soil improvement and fertility programs in the salinized arable lands of north China.
- D) High-efficiency water-saving irrigation projects: An area of 60 million mu of high-efficiency water-saving irrigation will be added. Promote high-efficiency water-saving irrigation technologies such as low-pressure pipeline water delivery irrigation, sprinkler irrigation, and micro-irrigation.
- E) Construct a national marine ranch demonstration zone.
- F) Prevent and control invasive alien species. Establish a national-level invasive species monitoring network and early warning platform. Build field monitoring sites, natural enemy breeding bases, and deploy comprehensive invasive alien species prevention and control zones.

## 2. Strengthen the prevention and control of agricultural resource pollution and improve the environmental protection of agricultural production areas

- **Reduce usage of fertilizers and pesticides and increase application efficiencies**
- **Promote the utilization of livestock manure and straw resources**
- **Strengthen “white” pollution control:** Promote the recycling of plastic agricultural films along with the recycling and disposal of packaging waste.

### Projects for Environmental Protection and Governance in Agricultural Areas

- A) Reduce chemical fertilizer over application.
- B) Reduce pesticide over application.
- C) Support pilot projects for “green” planting and animal farming systems (e.g., applying animal waste to farmlands).
- D) Develop “healthy” aquaculture farming.
- E) Support the comprehensive utilization of agricultural straw.
- F) Support the recycling and processing of agricultural film.
- G) Support agricultural pollution control projects in key river basins.
- H) Develop pilot projects for agricultural pollution control as well as the supervision and guidance related to agricultural pollution control.

## 3. Strengthen the governance and restoration of the ecology of cultivated lands

- **Improve the arable land rotation and fallow system.** Adhere to crop rotation as the primary and fallow practices as a secondary agricultural production system. Under the premise of ensuring China’s national food security, adjust and optimize the scale and scope of arable land crop rotation and fallow production systems. Carry out crop rotation in the Northeast, Huanghuaihai and Yangtze River basins. Carry out fallow farming in areas where groundwater has been over-exploited or in severely degraded areas to promote arable land recovery and sustainable development.
- **Implement pollution control measures for cultivated land.**
- **Implement a classification system for the management of arable land soil quality.** By 2025, the safe utilization rate of contaminated arable land should be around 93 percent.

### Projects for Agricultural Ecosystem Protection and Restoration

- A) Promote grain and oil crop rotation in the cold northeast area, the northern agricultural and pastoral zone, the Huanghuaihai area, and the Yangtze River basin. Create fallow pilot projects in areas that include groundwater overexploitation areas.
- B) Continue large-scale greening of the country.
- C) Protect aquatic organisms in the Yangtze River Basin.

#### **4. Build a green and low-carbon agricultural industry supply chain to improve agricultural quality, efficiency, and competitiveness.**

- **Building a green agricultural supply chain:** 1) Promote the green transformation of the agricultural product processing industry. Adhere to the direction of processing loss reduction and recycling, and coordinate the development of primary processing, intensive processing and by-product processing and utilization of agricultural products. Promote the marketing of agricultural products and improve field pre-cooling, storage and preservation. Improve systems for crop drying and product grading. Develop facilities and equipment to reduce post-harvest loss. 2) Develop green and low-carbon transportation of agricultural products. Build a diversified transportation and distribution network that integrates water, land and air, and that is convenient and efficient. Accelerate the construction of cold chain logistics infrastructure covering the main agricultural production areas and consumption areas. Improve the cold chain logistics service system for agricultural products. Accelerate the transformation and upgrade of agricultural product wholesale markets that accounts for processing, refrigeration and freezing, inspection and quarantine, and waste treatment. Strengthen the construction of digital market information systems and promote traceability within agricultural product supply chains. Promote the green e-commerce model of agricultural products and innovative business models such as cold chain co-distribution of agricultural products, fresh e-commerce and cold chain home delivery, central kitchens and cold chain distribution of food materials, etc., to achieve efficient match making of market demand and cold chain resources. 3) Promote the consumption of green agricultural products. Improve the green agricultural product standard system, strengthen the certification management of green food, organic agricultural products, and agricultural products with a geographical indication. Further promote the use of agricultural product traceability systems and increase the marketability of green agricultural products.
- **Promote the development of agricultural industrial scale and recycling:** 1) Promote the development of industrial integration; 2) Promote the development of low-carbon recycling.
- **Improve agriculture product variety, quality brands and standards:** 1) Promote variety cultivation; 2) Promote quality improvement; 3) Promote the construction of agricultural brands and 4) Promote standardized production.

#### **Projects on Green and High-Quality Agricultural Products**

- A) Develop variety, quality, brands, and standards in agricultural production. Strengthen standard guidance and technological innovation. Select and breed high-quality varieties. Build 800 green standardized agricultural product production bases, 500 standardized demonstration farms for livestock and poultry, and create more than 1,800 various agricultural brands.
- B) Establish and revise agricultural green production standards. Formulate and revise 1,000 industrial standards related to agricultural green production, formulate and revise 2,500 national food safety standards for agricultural and veterinary drug residues, and establish and improve a standard system for high-quality agricultural development.
- C) Green, organic, and geographical indication agricultural products certification. Support green, organic, and geographical indication certification of agricultural products. The certified products should reach over 60,000 and the number of production enterprises should reach 27,000.

- D) Protect the geographical indication agricultural products with a focus on grains and oils, fruits, tea, vegetables, Chinese medicinal materials, animal husbandry and aquatic products. Support the development of 1,000 agricultural products with a geographical indication.
- E) Establish national agricultural product quality and safety counties.

## **5. Improve the innovation system surrounding green technology and strengthen the scientific and technological support for agricultural green development**

- **Promote agricultural green technological innovation**
- **Speed up the promotion and application of green applicable technologies**

## **Projects in Support of Agricultural Green Development Science and Technology**

- A) Integrated application of green technology. Carry out joint research and innovatively develop and apply agricultural green production technologies such as soil improvements, fertigation, waste recycling, and green processing.
- B) Research and develop green inputs such as green and efficient fertilizers, biological fertilizers, soil conditioners, high-efficiency, low-toxicity and low-residue agricultural and veterinary drugs, feed additives, and degradable mulching films.
- C) Research and development of green agricultural machinery equipment.

## **6. Improve the legal, regulatory, and governance mechanisms for agricultural green development**

- **Improve laws and regulations:** 1) Improve the system of laws and regulations and promote legislation for agricultural “green” development. Establish/revise China’s Fisheries Law; Livestock Law; Agricultural Product Quality and Safety Law; Entry and Exit Animal and Plant Quarantine Law; New Plant Variety Protection Regulations; Basic Farmland Protection Regulations; and other regulations. 2) Develop supporting regulations and research, formulate, and revise regulations on the prevention and control of crop diseases and insect pests as well as the management of invasive alien species. 3) Strengthen enforcement of agricultural resource and environmental protection, agricultural product quality and safety, and the production and use of agricultural inputs. Implement law enforcement actions on agricultural product quality and safety. Increase investigations and punishments for violations.
- **Improve government investment incentive mechanisms:** 1) Improve agricultural environmental protection policies. 2) Improve compensation mechanisms for ecological protection. 3) Establish investment mechanisms that improve fiscal policies and increase public financial support for green agricultural development. Establish and improve upon green finance policies such as credit or insurance and explore the establishment of agricultural ecological compensation and other pledged financing loans.
- **Establish a market price adjustment mechanism:** 1) Establish a market price mechanism for green products. 2) Cultivate green agricultural trading markets.

### **Attachments:**

No Attachments.