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Chinese researchers transform a salt-alkali field into fertile land

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The city of Changzhou in north China, in Hebei province, is a desert region. However, the city has prioritized the comprehensive use of saline-alkali land, leveraging science and technology, growing appropriate crops, and intensifying the processing of farm products.

Cangzhou's National Dryland Alkaline Wheat Agricultural Standardization Regional Service and Promotion Platform project, the first of its kind nationwide, has been approved by the China National Standardization Management Committee. It covers the low-lying plains near the Bohai Sea as a planting area for dryland alkaline winter wheat.

Dryland alkaline wheat agriculture has developed in Cangzhou due to its unique natural conditions. In Cangzhou, winters and springs are dry, with low rain levels, and soils are salinized and alkalized to a high degree. Dryland alkaline wheat thrives in such an environment, while ordinary wheat struggles. A total area of 4.1 million mu has been cultivated on saline-alkali land in Cangzhou, which accounts for more than 70% of the saline-alkali land in Hebei Province.

Local agricultural technicians have been improving the yield of dryland alkaline wheat in Cangzhou year after year through repeated selection and improvement. A total of 4.67 million tons of grain was produced in Cangzhou City in 2023, completing the provincial grain production tasks. A total of 1.547 million mu were planted with dryland alkaline wheat, exceeding the target of 1.5 million mu. This saline-alkali land, which used to yield nothing nine out of ten years, is now not only a fertile farmland but also a major granary in Bohai Bay.

The grains of dryland alkaline wheat grown in Cangzhou are full and translucent, rich in calcium, potassium, iron, zinc, and other trace elements, with a protein content ranging from 13% to 16% (national standard is 12.2%).

As soon as the project is completed, over 1333 hectares of core demonstration sites will be established, radiating and driving the planting area of dryland alkaline wheat around the Bohai Sea, including Hebei, Shandong, and Tianjin, to reach 33,300 hectares.