

China's Zaozhuang City adopts integrated water-fertilization and digital temperature-control systems

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Shizhong District of Zaozhuang City in east China's Shandong Province is harnessing smart agriculture technologies to enhance spring farming efficiency, with its 600-mu (40-hectare) Wonong Smart Agricultural Industrial Park leading the transformation.

The park's tomato crops, now entering harvest season, have achieved an 80 percent reduction in water use and a 30 percent yield increase through precision irrigation and nutrient systems.

Equipped with integrated water-fertilization and digital temperature-control systems, the park's greenhouses use sensors to monitor real-time environmental data, including temperature, humidity, and light.

Farmers remotely adjust irrigation, ventilation, and climate settings via smartphones, enabling "cloud-based spring ploughing" to counter unpredictable weather.

The park's 74 newly built high-standard greenhouses employ full-element nutrition fertilization, delivering tailored nutrient solutions directly to plant roots based on growth stages.

In addition, local agricultural experts provide on-site guidance to optimize pest control and crop varieties, ensuring stable production for the park's smart farming zone.