

## China, Arab States cooperation on water conservation in agriculture

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China and Arab states have constantly deepened cooperation under the frameworks of the Belt and Road Initiative (BRI) and the China-Arab States Expo, implementing a series of water-conserving projects. China has offered many new solutions for Arab states to alleviate the shortage of irrigation water.

The Egyptian government recently piloted a digital precision irrigation system among hundreds of farmers.

The system samples data with its sensors buried in the soil and tells farmers when they should water the crops and how much water is needed. Farmers can obtain information about their crops, including the soil moisture content through a mobile application. They can start the irrigation remotely with just a few clicks on the screen of their mobile phones. The system cuts farmers' water consumption in irrigation by around 20 per cent.

Apart from Egypt, Saudi Arabia is trying to grow crops with seawater, and the United Arab Emirates (UAE) is building greenhouses and water-conserving farms in the desert.

The Middle East and North Africa region is home to five per cent of the global population, but it owns only one per cent of the world's renewable water resources.

China's Ningxia University and Egypt's Ain Shams University have jointly established an intelligent water-conserving irrigation laboratory in Cairo, the capital of Egypt, as well as two bases for irrigation experiments that cover a total area of 21.3 hectares.

It is learned that the irrigation system can send water to the roots of crops, which is greener and more efficient than traditional irrigation methods. It can be controlled remotely by farmers with their mobile phones.

So far, the system has been used on over 2000 hectares of land.

With the soil improvement technologies offered by a Chinese biotech company, date palms are growing exuberantly on a China-Africa saltwater agriculture demonstration farm in the Sahara Desert in southeast Morocco. Each year, the water consumption per date palm has been reduced from 600 to 200 litres.

In the UAE, a research team from China's Chongqing Jiaotong University launched cooperation with local enterprises to carry out experiments to "turn sand into the soil" on a piece of barren land stretching 10 square kilometres in Abu Dhabi.

"China has made surprising achievements in agriculture and water resource management, which are worth learning for countries in the Middle East and North Africa region," said Sinan Bacha, director of the Regional Centre for Remote Sensing of North African States (CRTEAN), Tunisia.