

FEATURE

China experiencing a drone 'revolution' in agriculture

Farmers are becoming proficient drone pilots, as they monitor their crops, distribute seeds and fertilize more efficiently

by Dave Makichuk October 26, 2020

https://asiatimes.com/2020/10/china-experiencing-a-drone-revolution-in-agriculture/?mc_cid=bdaff65a03&mc_eid=049d5e1b07



*Agricultural experts say a drone is 50 to 80 times faster than the traditional way of spraying pesticides on a farm.
Credit: China Daily.*

While China is leading the way in military uses for drones, it is facing a revolution of sorts in another sector.

The use of unmanned aerial vehicles or drones in agriculture is expanding in China at a speed unmatched in other countries thanks to advances in autonomous navigation technology and the presence of competent operators, Nikkei Asia reported this week.

Justin Gong, co-founder of XAG, a Guangzhou-based drone company that specializes in working with small-scale farmers, told Fortune magazine that his company's drones help farmers monitor their crops, distribute seeds and fertilize more efficiently.

According to Gong, XAG now has 42,000 drones flying over 1.2 million flights every day.

“Drones are over 10 times more efficient than skilled manpower and they are cost-effective and environmentally friendly,” said Li Liping, a major grain grower in the county-level city of Xiangxiang in central China’s Hunan Province, Xinhua reported.

The 51-year-old farmer, who learned to fly the machine three years ago, said he no longer needed to wade through the fields to spray and fertilize since drones have replaced manual work.

“It was so exciting to see the drone taking off,” said Li as he recalled the first time he used the machine in the summer of 2018.

As the Covid-19 epidemic wanes across China, farmers are encouraged by local governments to expand their planting areas and increase their production input. The city of Xiangxiang, for example, is ready to see a bumper summer harvest of early rice.

Li has grown some 20 more hectares of early rice this year and expects to see a major rise in grain output with drones being a great help, Xinhua reported.

Xiao Jianliang, an owner of another major farmland in Xiangxiang, has also benefited greatly from the use of drones in agriculture.

Xiao said he acquired his drone license in late 2017 after a 15-day intensive training program, and the skill of flying drones has brought him additional income as the machine boosts the efficiency of sowing and crop-dusting.

Farmers like Li and Xiao are among a growing number of Chinese farmers who are introducing smarter and innovative ideas to boost their agricultural production, Xinhua reported.

They are skilled drone pilots, capable of designing the most efficient flight routes and heights, analyzing the flight path to fill the gap and calculating the precise amount of fertilizer and pesticide for the land.

“A revolution in agricultural production is taking place because of mechanization and intelligent intensive farming, especially in pioneering areas like Xiangxiang,” said Li Xiangping, an agricultural expert in Hunan.



An XAG drone sprays crops (Photo courtesy of XAG)

As the demand for the machine is predicted to rise in the coming years, farmers including Li and Xiao also expect more intelligent and economical drones equipped with longer battery life.

As part of the nation's efforts to boost smart farming, drones are coming to be more involved in the sector. Moreover, an intense competition in the agricultural drone market is making the drone prices plummet, CGTN.com reported.

He Guozhu, a 58-year-old farmer in south China's Guangdong Province, says the warm climate in this part of the country enables farmers to grow two rounds of crops annually.

He switched to the new technology to spray pesticides for the first year, as agricultural drones are no longer some rocket science for many Chinese farmers.

"I started using drones in March. We used to use the traditional way of spraying pesticides, carrying a tank on our backs," he told CGTN.com.

"Using a drone can be a bit more costly, but farmers won't breathe in toxic pesticides while working. It's hard to find farm laborers, and most are old right now, as young people leave for cities," said He.

He feels the pinch brought by the exodus of young people to big cities, part of the ramifications of China's urbanization.

He himself manages land that measures nearly eight hectares, as his children – like many other youngsters in his village – have left for city for a different life. The drone is capable of spraying his patch of field in about an hour, which

used to be a week with eight people, CGTN.com reported.

"A drone is 50 to 80 times faster than the traditional way of spraying pesticides," said Luo Xiantian, an agricultural drone operator.

Two big drone making companies in China, including DJI and XAG, take up some 80% of the Chinese market shares. Further, both companies have extensive networks abroad, with DJI focused on making camera drones and XAG on agricultural drones.

In September of last year, DJI unveiled a new drone model dedicated to agriculture, which is believed to be the world's first fully integrated multi-spectral imaging drone built to power farming and enable an efficient environmental land management.

"These drones are very effective if large-scale plant diseases and insect plagues happen, which is the reason why they have been widely used in China in recent years, especially since 2017," said professor Lan Yubin from South China Agricultural University.

"Drone technologies have been growing fast, but the fierce competition in the drone market is driving the prices lower."

According to DroneFromChina.com, DJI plans to further invest 10 million yuan in agricultural drones and on cultivating drone operators — it will also open 1,000 brick-and-mortar retail stores, train over 20,000 professional drone operators and establish more than 600 training branches across the nation.

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