

OLD MACDONALD GETS A SENSORGovernment technology agencies are promoting a smart farming system they say saves on labour and water costs. **B4**

NSTDA touts smart system of farming

Agriculturists can save on time, costs

THARITTAWAT SAMEJAIDEE

Smart and precision farming has the potential to save costs and time for farmers, while pulling in necessary data about crops that could be useful in future cultivation planning, say people associated with agriculture technology.

They shared their views at a recent seminar about smart farming as part of the National Science and Technology Development Agency (NSTDA)'s annual conference.

NSTDA's National Electronics and Computer Technology Center (Nectec) has developed a precision farming system called HandySense that allows farmers to check their farm conditions using sensors in areas such as temperature, air and soil humidity, as well as light intensity, with results shown on a mobile app.

Farmers could then control the farming environment through the system, in areas such as watering time, to ensure crops are grown in suitable conditions.

HandySense is an open-source system that can be developed further by others for farm solutions.

HandySense has so far been deployed to farmer groups in 34 pilot areas covering all 11 districts of Chachoengsao without charges.

One HandySense user, Surapon Jarupong, owner of farming knowledge centre Smile Lemon in Chachoengsao, said normal farming practices require lots of labour and time to take care of the crops.

"With the deployment of the farming tech, things have changed as more time is saved and no workers are needed as I just look at a dashboard on my mobile phone to check the conditions," he said.

"One day when I had to go to other provinces, I checked the app and found that the temperature inside the greenhouse soared, and then I clicked to increase watering immediately to

reduce the heat."

Mr Surapon said the technology helps save on labour costs and ensures no water is wasted.

Prasit Pongsoon, chief executive and founder of tech farm solution provider Kitforward, said if HandySense is installed across the country, the data pulled in would be massive.

"If data is well managed and shared, this would be a boon for farmers," he said.

For example, data can be collected and analysed to shed light on the most suitable conditions for any kind of crops, including nutrients they want.

"Once the profile of each crop is established, we will be able to create mechanisms and tools to effectively cultivate the crops," said Mr Prasit.

Narit Duangkruaratchote, head of IoT & 5G Partnership at mobile operator Total Access Communication, said his company supports Sim cards for Internet of Things (IoT) devices linked to the HandySense system.

High-definition cameras, linked with the 5G network, can be used to monitor crops at farms, he said.



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“5G would make it smooth for image feeding,” he said.

The image recording through cameras can be used to assess the growth of crops and emergence of pests.

In the future, once multiple IoT sensors are used in certain areas, 5G would be useful to cope with them, said Mr Narit.

Naritchapan Penpondee, a senior assistant researcher at Nectec and developer of HandySense, said the project has been developed since 2015.

“One of the pain points is farmers still lack understanding about the use of technology. We are trying to educate them on how to use devices and apply a smart farming system,” he said.