

Practice of Precision Agriculture in Thailand: a case study in an *Edamame* Farm

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Abstract

Climate-smart agriculture is one of the techniques that maximize agricultural outputs through proper management of inputs based on climatic conditions. We have developed IoT-based field environment monitoring technology appropriate for tropical country like Thailand. Demonstration has been made in vineyard, rice paddy, edamame field, lemon and eggplant farms. In this lecture, the practice in edamame farm will be focused. The results demonstrate that field parameters such as air temperature, humidity, soil moisture, and precipitation greatly influence the crop yield and that these variables closely correlate to each other. Furthermore, it was shown that the weather parameter data can be a useful tool not only for monitoring the farm efficiently, but also for predicting future crop yield.

Keywords: Precision Agriculture, Edamame Farm, Internet of Things

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References

1. T. Pobkrut and T. Kerdcharoen, "Soil sensing survey robots based on electronic nose," in Proceedings of 2014 14th International Conference on Control, Automation and Systems (ICCAS 2014), Seoul, pp. 1604-1609, 2014.
2. U. Dorji, T. Pobkrut, and T. Kerdcharoen, "Electronic nose based wireless sensor network for soil monitoring in precision farming system," in proceedings of 2017 9th International Conference on Knowledge and Smart Technology (KST), Chonburi, pp. 182-186, 2017.