

Beyond Big Data: Smart Agriculture through Digital Culture

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Smart Agriculture is one of several flagships in Thailand to overcome the climate and market changes. One way to address these issues is to “farm big volumes of data” from several sources, and in some cases over long periods of time. The collected data needs to be integrated and analysed and then the results precisely applied to specific problems – and this creates added value not only for farmers but also

for all stakeholders along the food supply chain. At the most advanced level, remote-sensed data coupled with sensors’ data from weather stations or sensors arrayed on the ground can be processed to create a dynamic picture of environmental properties in a field. However, it's something that's already happening, crowd sourcing is also a good model to collect vast amounts of information from fields, i.e., crop yields, fertilizer applications, disease outbreak, flood damage and pest damage. This picture, see Figure 1, would be composed of many layers of heterogeneous data, which together can support specific management decisions and personalized service.^{1,2}

Typical collected data from fields in the new age of digital technologies are collecting through mobile devices. While the useful and visualized information from big data analytics can be sent through SMS alerts and accessed through social medias. In order to transform lives of farmers by relying on data-driven decision making, digital divide must be focused by building digital culture for the farmers and farm officers through training on data literacy, information literacy and statistical literacy which are the success factors in data-driven, and deduction reasoning for smart farming.

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References

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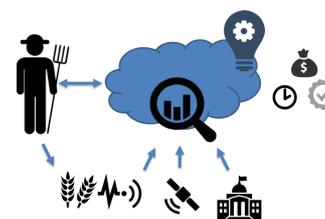


Figure 1. Smart Agriculture with farming big volumes of data.