
Expanding Thai Agricultural Boundary of Knowledge: Lessons Learned from Thai AGRIS Centre

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Agricultural sector in Thailand is not only an economic sector for food production industry but also a fundamental activity that dominate most people's way of life. Therefore, any development in this area has a significant impact on Thai society as a whole. Thailand's agricultural sector needs to adopt modern technologies and, at the same time, utilize valuable local knowledge. It has to take into account national food requirements and preserving the environment.

Thai agricultural information comes from a variety of sources: academic institutions, government agencies, the private sector and local communities. However, these sources have not yet shared a common platform. In order to fully leverage these information resources, there was a need for a centralized repository at the national level to link these agricultural information into one integrated system that can serve the needs of the country most efficiently.

National Research Council of Thailand has announced a project of Thailand Research Indexing Hub. Thai e-Government Interoperability Framework (TH e-GIF) was setting up for data exchange standard. Agricultural knowledge repository is developed as one section of the research indexing hub in collaboration with the Thai agricultural research communities, organized by the Thai National AGRIS Centre. Now there are 18 agricultural organization and 44 faculties participate in this community to create a National Agricultural Repository.

Thai National AGRIS Centre has developed Thai Agricultural Knowledge Repository by using an open source software "DSpace" to create a community environment. DSpace is a software for academic, non-profit, and non-commercial organizations to build open digital repositories. An AGROVOC Thesaurus plug-in for AGRIS DSpace, which used for indexing, was developed with the support of the FAO. Data in the Thai WebAGRIS database will be transferred into the repository. There are more than 140,000 records and millions of pages of full articles in digital format. Thousands of agricultural scholarly journal articles and conference papers have already been submitted. And the rights for full text access has been granted through the system. This system has been established by the effort of Thai AGRIS Centre in partnership with other agricultural communities in the country. This repository is regarded as the **Agricultural Knowledge Repository for Thailand**.

Table 1 Digital sources of agricultural research information of Thai AGRIS Centre

Database	Type	Subject	Bib record	Digital object (file)	Standard	System	Owner ship	Authorize for distribute
Thai Agricultural Database	general and research document	agriculture-general	140,000	60,000	AGMES+ Dublin core	WebAGRIS	Author	-
Thai Agricultural Research Repository	research document	agriculture-general	3,000	3,000	AGMES+ Dublin core	Dspace	Author	Thai AGRIS
Agricultural Digital Library	eBook	agriculture-general	500	500	AGMES+ Dublin core	Dspace	Author	Thai AGRIS
Agriculture Library Catalogue	Book catalogue	agriculture-general	2,300	0	US Marc	KOHA	Author	-
Sugarcane Database	general and research document	cane and sugar	1,700	700	AGMES+ Dublin core	WebAGRIS	Author	Thai AGRIS
Thai Rice Database	general and research document	rice	6,500	3,000	AGMES+ Dublin core	WebAGRIS	Author	Thai AGRIS
Heavea Database	general and research document	para rubber	1,600	500	AGMES+ Dublin core	WebAGRIS	Author	Thai AGRIS
Corn and Sorghum Database	research document	corn and sorghum	950	950	AGMES+ Dublin core	WebAGRIS	Author	Thai AGRIS

Key factors for information sharing

Benefit derived and knowledge boundary expanded

The possibility of bridging the digital divide relies on the relationships among and the benefits derived by the stakeholders. The motivation of involved stakeholders to participate in the Thai AGRIS Centre depends significantly on the benefits these organizations can derive from the system, whereas, encouraging the use of information is the priority obligation of the Centre.

Most of the agricultural information available is research or academe-based and are used by highly educated people well versed in English. Difficulties for the users in rural and remote areas of Thailand still exist. The Thai AGRIS Centre has *adapted its content to meet the local needs* by developing the Thai agricultural bibliographic database in both the Thai and English languages. A nationwide agricultural bibliography and other related international databases can be searched through Thai AGRIS Information Service System and Thai AGROVOC (Thai agriculture Thesaurus). Thai AGROVOC, in particular, therefore helps expand the knowledge boundaries of Thai agricultural people from the local context to global knowledge. The system helps local researchers and communities in the country access agriculture information worldwide more easily.

Collaboration and Partnerships

The Thai AGRIS Centre's partnership with agricultural communities in the country is still in its development stage. Well organized and efficient coordinators are necessary, and capable information specialists are most needed.

Collaboration between the Thai AGRIS Centre and AGRIS/FAO has been mutually beneficial. The Centre receives technical assistance and training support from AGRIS/FAO, then provides training in information management to the staff of collaborated agencies. The Thai AGRIS Centre has provided 3 types of training as part of its information services strategy: 1) in-service training of member organization; 2) on-site training organized at the information provider's workplace per special agreement; and 3) system demonstration at academic conference sites. The main purpose of the Centre is to enhance capacities of the Thai AGRIS Center on data submission and its search ability to tap appropriate sources of information.

Policy approach and Financial sustainability

Policy and financial are considered as the key to success. Information sharing has to be regarded as a routine function in each agricultural information section together with financial support. As the volume of data increases and services are being expanded, more support in terms of resources is required.

The AGRIS Centre considers that the utilization of more information by policy makers or administrators might eventually impact on Thai national agriculture strategy. In fact, the success and failure of existing information networks depends on whether it can render concrete benefit to the policy-maker. In this sense, a closer relationship with policy makers is critical to make them understand the importance and power of information.

Meeting International Standard

The Thai Agricultural Knowledge Repository was built and structured according to accepted international standards and tools, and was adapted to suit national needs

while contributing to global information resources. The repository was developed based on AgMES standard.

The AgMES (Agricultural Metadata Element set) initiative was developed by the Food and Agriculture Organization (FAO) of the United Nations and aims to encompass issues of semantic standards in the domain of agriculture with respect to description, resource discovery, interoperability and data exchange for different types of information resources.

Value creation

Information is worthless if not used. But the same information becomes valuable when needed. Most of the time, the user does not appreciate how much resources and effort are invested on a piece of information. Preparing ready-to-use information for expected users is therefore vital.

Having been a service provider for the past 30 years, the Thai AGRIS Centre learned a lot from its experiences and has successfully adapted to the always changing demands. The Centre's mindset is now geared towards a more strategic approach to make use of limited resources more efficiently. The improvement of delivery times to meet customer demand and increasing value-added services are ongoing. Reprocessing and synthesizing existing information is another strategy for adding value and creating a new product for the user.

Thai AGRIS Centre intends to document research article and local knowledge, assemble available Thai agriculture information into a comprehensive knowledge base. The Centre is looking forward to collaborative arrangements with its partners as well as farmers' communities. Such should result in a better information management for farmers and the entire agricultural sector.

References

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