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# Implementation of Rich Metadata Formats and Semantic Tools using DSpace

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This poster explores the customization of DSpace to allow the use of the AGRIS Application Profile metadata standard and the AGROVOC thesaurus. The objective is the adaptation of DSpace, through the least invasive code changes either in the form of plug-ins or add-ons, to the specific needs of the Agricultural Sciences and Technology community. Metadata standards such as AGRIS AP, and Knowledge Organization Systems such as the AGROVOC thesaurus, provide mechanisms for sharing information in a standardized manner by recommending the use of common semantics and interoperable syntax (Subirats et al., 2007).

AGRIS AP was created to enhance the description, exchange and subsequent retrieval of agricultural Document-like Information Objects (DLIOs). It is a metadata schema which draws from Metadata standards such as Dublin Core (DC), the Australian Government Locator Service Metadata (AGLS) and the Agricultural Metadata Element Set (AgMES) namespaces. It allows sharing of information across dispersed bibliographic systems (FAO, 2005). AGROVOC[68] is a multilingual structured thesaurus covering agricultural and related domains. Its main role is to standardize the indexing process in order to make searching simpler and more efficient. AGROVOC is developed by FAO (Lauser et al., 2006).

The customization of the DSpace is taking place in several phases. First, the AGRIS AP metadata schema was mapped onto the metadata DSpace model, with several enhancements implemented to support AGRIS AP elements. Next, AGROVOC will be integrated as a controlled vocabulary accessed through a local SKOS or OWL file. Eventually the system will be configurable to access AGROVOC through local files or remotely via webservices. Finally, spell checking and tooltips will be incorporated in the user interface to support metadata editing.

Adapting DSpace to support AGRIS AP and annotation using the semantically-rich AGROVOC thesaurus transform DSpace into a powerful, domain-specific system for annotation and exchange of bibliographic metadata in the agricultural domain.

## References

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