What is the Problem?
In order to meet international demand, there must be a significant increase in wheat production. This demand is the result of the following factors:

- Wheat is the most widely grown crop in the world.
- Wheat provides 20% of the world’s daily protein and calories.
- After rice, wheat is the second most important crop in the developing world.
- Wheat production has not satisfied demand in recent years.
- It is expected that by 2050, the demand for wheat will increase by 60%.

To tackle this issue, many initiatives are underway which are producing a large quantity of heterogeneous data related to this topic. The lack of harmonization has caused a lack of interoperability and reusability of this data, resulting in researchers throughout the world being unable to apply this information to their own projects.

What was the Goal?
Based on the real needs of the wheat community, the goal for the Wheat Data Interoperability Working Group is to build a common framework that would enable wheat related data interoperability.

What is the Solution?
To address this deficiency, the Working Group is working off its already existing set of assets to build an interactive “cookbook” containing
recommendations and guidelines on data descriptions, representations and linking and a repository of wheat-related linked vocabularies and ontologies built on Bioportal that allows for:

- Searching for a term across multiple ontologies;
- Browsing mappings between terms in different ontologies;
- Receiving recommendations on which ontologies are most relevant;
- Annotating text with terms from ontologies
- Building interoperability prototypes and assessing the gain of interoperability through them.

**What is the Impact?**
The activities of this Working Group are contributing to the overall improvement in the discovery, reusability, and interoperability of data within the wheat community. The outputs of this group are in use as a building block in the Wheat Initiative Wheat Information System (WheatIS), which is building the framework to establish a global wheat information system. Going forward, standardization and harmonization of wheat data will ultimately reduce variability and increase the relevance of wheat data related tools.

When Can We Use This?
Although the guidelines produced by the group and the Bioportal of wheat related linked vocabularies are still in development, they are accessible and usable, and can provide existing wheat-related data a larger relevance and impact going forward.

**What is the RDA?**
The RDA is an international organization that was formed in 2013 through funding from the National Science Foundation, the European Commission and the Australian government, with a mission to reduce barriers to data sharing and exchange, and accelerate data driven innovation worldwide.

**Contact Information:**
For information on how to access these resources, visit the Wheat Data Interoperability Guidelines located at http://istblogs.inra.fr/wdi/