**ALA2 Identifying and acquiring germplasm**

**Prerequisites**

eModule-2 in Crop Improvement course: Genetic Variation and Gemplasm Usage

**Purpose**

To make students aware of germplasm exchange process and legal issues associated with the process.

**Background**

A plant breeder needs to breed for various traits and need various kinds of germplasm to incorporate new or improved traits and diversity gene pool. Importing of germplasm nationally and internationally is one way to quickly create genetic diversity.

**Tasks**

Once you have set your breeding objectives next step is to acquire genotypes or populations possessing traits of interest to meet your breeding objectives.

1. For the crop which you picked in ALA1, please identify at least one breeding organization (public or private) that works on this crop from which you could obtain parental germplasm material.
2. The attached pdf file shows a Material Transfer Agreement (STA) document from ABC SEED COMPANY, COUNTRY. Examine this MTA to answer the following questions:
3. Who is the Provider of germplasm
4. Who is the Recipient of germplasm?
5. What purposes can this material be used?
6. What purposes can this material not be used?
7. Do you have the rights to transfer the Material under this MTA to another person or organization? (list the article of the treaty that provides for such transfer)? What are the conditions to do so?
8. If you used this material, list at least two different ways you would have an output (some type of result or product) and what is your obligation to the provider in terms of reporting any outputs?
9. Can you claim intellectual property rights to the material and limits access to other breeders in your organization or other organizations? Which article of the treaty covers this aspect?
10. If the material you received from the provider germinated very poorly, is there any liability on the part of Provider? Which article covers this aspect?
11. Who is responsible to obtain the phyto-sanitary certificate?
12. Who is responsible to obtain the import permit?
13. Compare MTA’s from two organizations (CIMMYT and ABC SEED COMPANY). What are the similarities and differences between them?
14. Prepare a request for obtaining seed of required germplasm (see additional information below for wheat germplasm from CIMMYT).

**Class discussion activity**:

What challenges do you anticipate in being able to obtain germplasm from an international center? From a commercial seed company?

**Additional Class activity**:

Familiarizing with steps to obtain germplasm from international breeding and research centers, such as CIMMYT.

* Link to get a seed request form (maize): <http://www.cimmyt.org/en/what-we-do/germplasm-and-seed/obtainseed>
* then click on ‘maize, or related species’ (<http://www.cimmyt.org/index.php/en/order-seed/maize-or-related-species-purpose>)
* then click on ‘international nurseries’ (<http://www.cimmyt.org/index.php/en/order-seed/maize-or-related-species-purpose>)
* then browse through the different nurseries available to determine which nursery is suitable for your breeding program (<http://www.cimmyt.org/en/order-seed/maize-or-related-species-purpose/international-nurseries>)
* Note the information you require to fill the SMTA. Discuss how soon you need to send the seed request to obtain this international nursery prior to planting at your location.