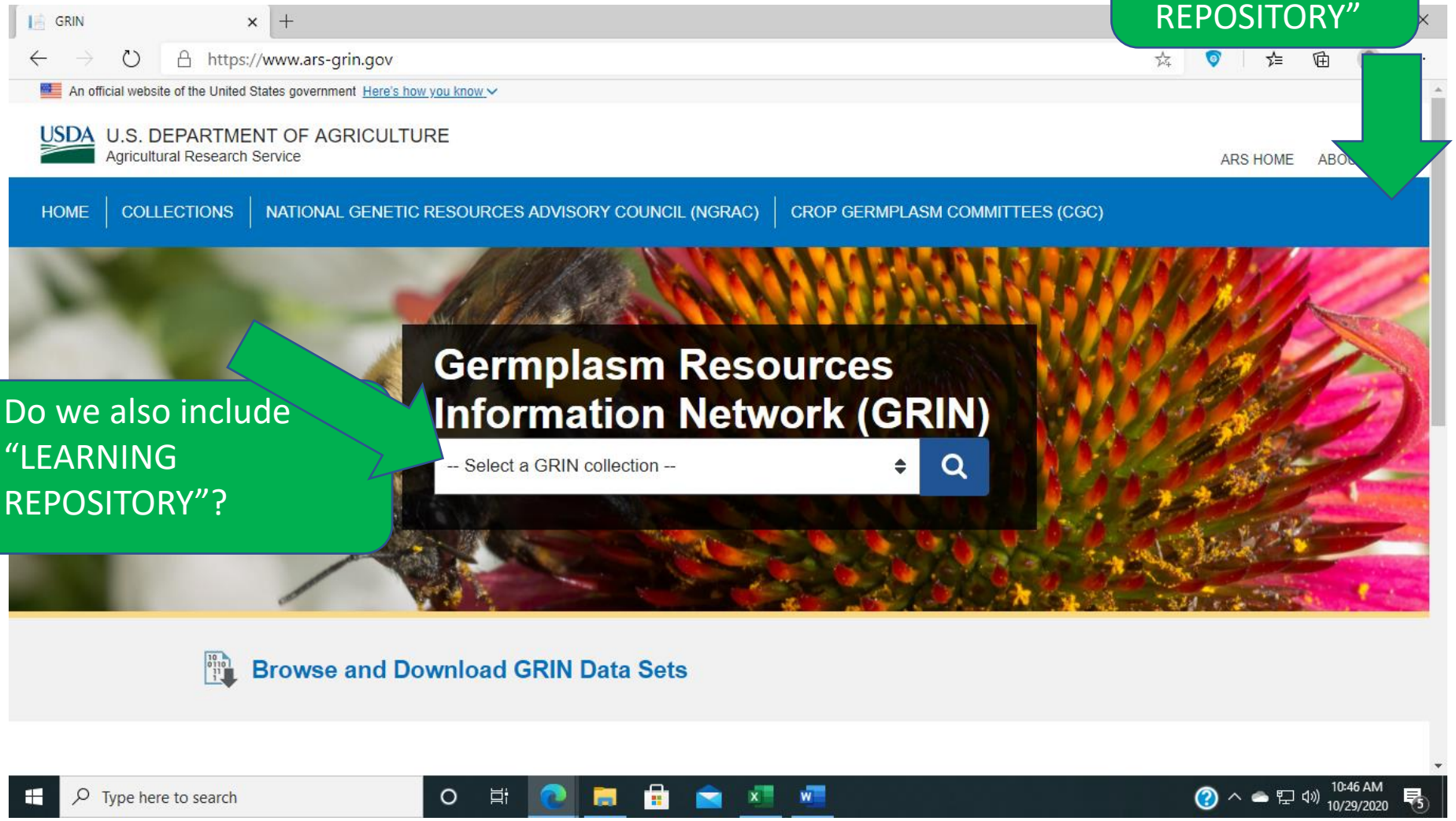
Storyboard for HEC Public Repository

Public View Side of Repository

https://www.ars-grin.gov/



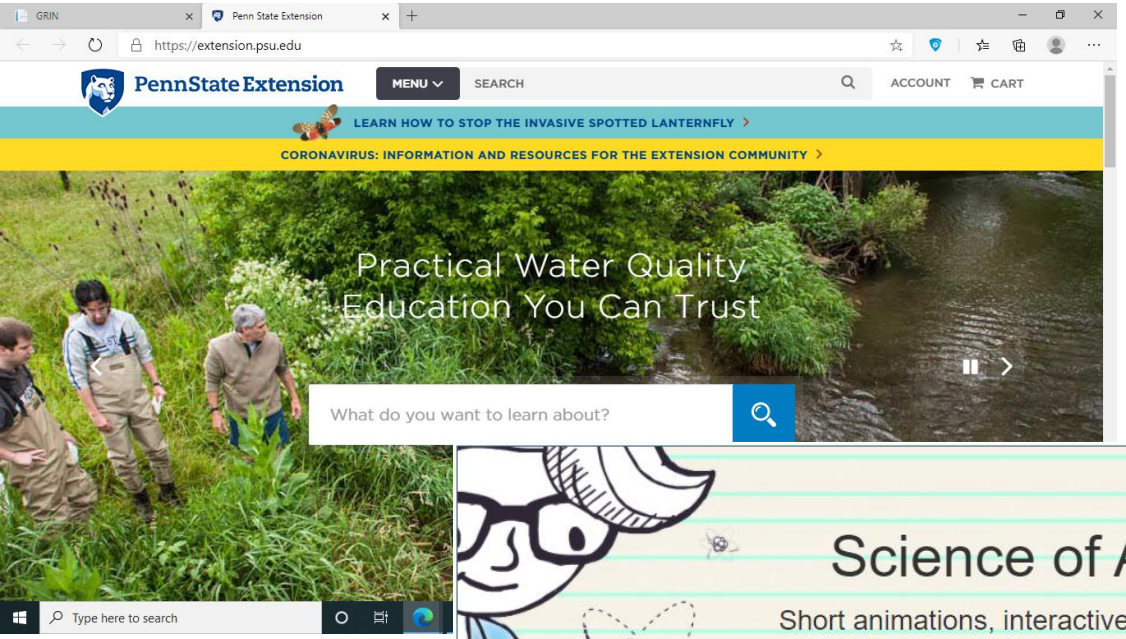
Add link here - "LEARNING REPOSITORY"

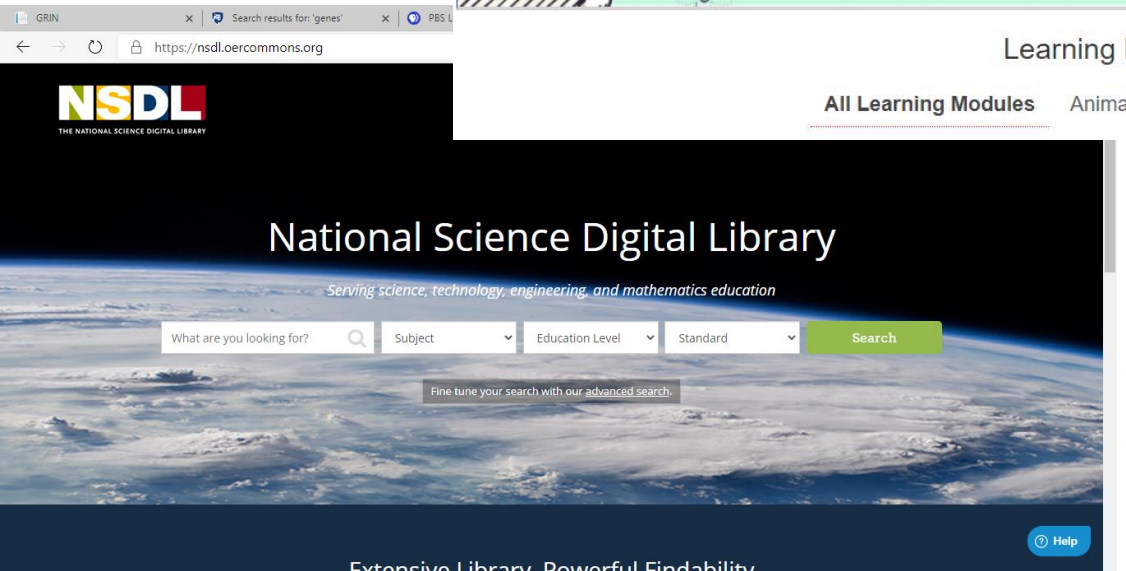
Do we also include "LEARNING REPOSITORY"?

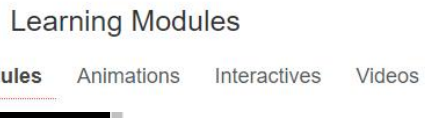
Deana Note: I went away from "edu repository" or "training repository" because I was thinking those make i sound like it is for teachers or HR tra but really anyone can use it, includir motivated learners. We do need a name/title for the repository, thoug

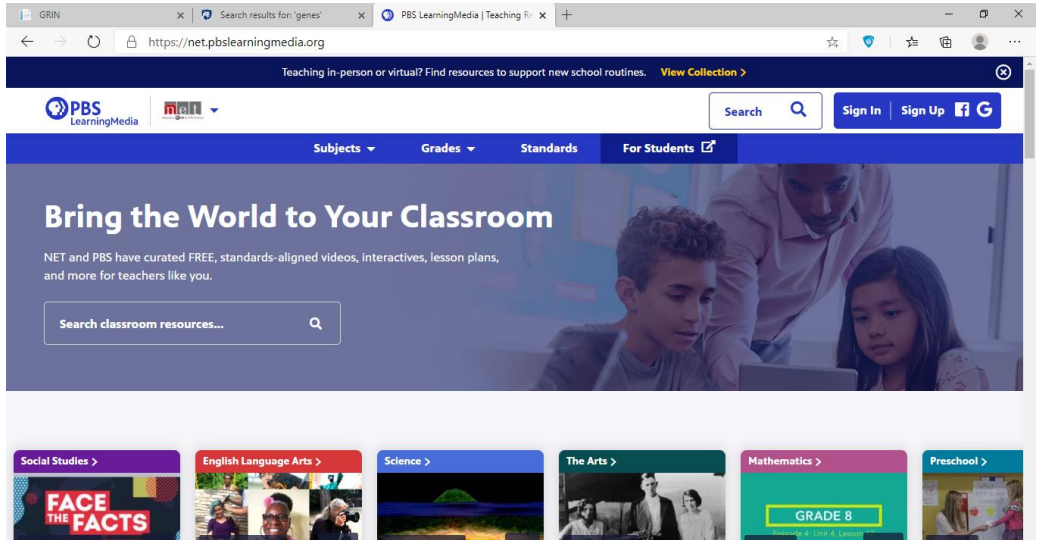
-Germplasm Learning Repository
-GerLeRep
-GermLearn
-LeGerm (Learning Germplasm)
-USDA Learn
-USDA Learning Resources
-USDA Learning Repository
-GLER (Germplasm Learning educati resources)
-GETR (Germplasm education & trai repository)
-GRIT (Germplasm Resources I___Tr
-GREAT (Germplasm Repository for Education and Training)
- GRIL (Germplasm resources I___ Learning)

Deana Note: Is it possible to make the repository landing page more visual?









PLANT GENETIC RESOURCES **KEY TO GLOBAL FOOD SECURITY**

Plant breeders utilize the genetic diversity of **plant genetic resources (PGR)**—the wide range of crop species and their wild relatives—to develop new crop varieties.

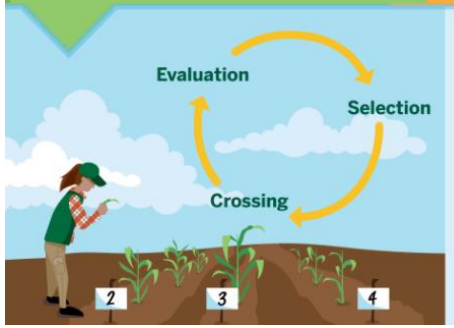
PGR include current and traditional varieties and related wild plants.

Crop wild relatives are the ancestors of crops and related species found in their native habitat.

Landraces are traditional varieties selected by farmers for adaptation to local conditions.

Crop varieties have been developed by plant breeders and farmers.

Genebanks acquire, maintain, document, and distribute PGR.



After thorough PGR evaluation and often subsequent breeding with current crop varieties, a new improved variety with novel traits is developed.

GENEBANKS AND CONSERVATION

Plant genetic resources—the wide range of crop varieties and their wild relatives—are critical to safeguard food security, now and in the future.

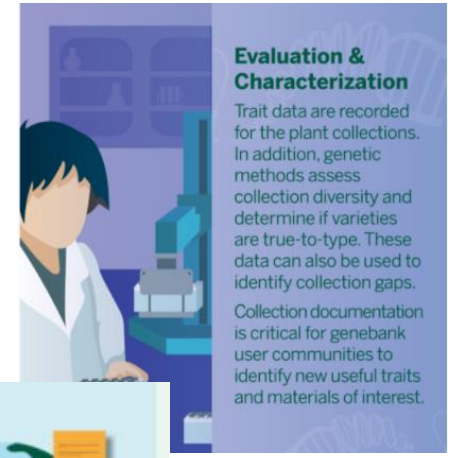
Acquisition

Collections represent a wide range of genetic diversity. New plant materials come from plant explorations and exchanges within a country and internationally.

Foreign imports are inspected or tested to make sure they are free of pests and pathogens.

Maintenance

Plant genebanks are responsible for keeping collections alive and healthy. Seeds in cold storage must be periodically germinated to make sure they are still alive. Sometimes collections are maintained as field or greenhouse plants.



Evaluation & Characterization

Trait data are recorded for the plant collections. In addition, genetic methods assess collection diversity and determine if varieties are true-to-type. These data can also be used to identify collection gaps.

Collection documentation is critical for genebank user communities to identify new useful traits and materials of interest.

Regeneration

Plants may be grown in the field or greenhouse using techniques that do not alter each sample's genetic composition.

Documentation

Data for the source, traits, genetics, and maintenance history of genebank collection materials are kept in databases. One example is GRIN-Global, which provides up-to-date information for the genebank collection of the U.S. National Plant Germplasm System.

Distribution

Samples from plant genebanks are provided to scientists who need access to novel genetic variation and traits for research and breeding.

Secure Backup

Duplicate collections are maintained at a secure secondary location. This ensures that collections will not be lost as a result of disease, pathogens, or environmental disasters. These back-up collections are often safeguarded as seeds in cold storage. Dormant tree buds, shoot tips, pollen, and seeds may be preserved in liquid nitrogen.

Somehow incorporate the
from infographic to maintain
Users click on the category for
erials in that topic area. Then they
onnections. ADA accessible?

CONTENT CATEGORIES FOR LEARNING MATERIALS

Plant Breeders

1) Germplasm Resources
- crop wild relatives
- landraces
- modern crop varieties
- genebanks

2) Plant Breeding Process
- plant germplase resource evaluation
- crossing
- offspring evaluation
- selection for next round of crossing
- improved varieties

3) Real World Examples
- Insect Resistance
- Higher Yielding
- Disease Resistance
- More Nutritious
- Climate Change Effects

Genebanks

1) Acquisition
- plant explorations
- international importing/inspections
- donations

2) Maintenance
- cold storage
- field storage
- greenhouse storage
- germination testing

3) Evaluation and Characterization
- trait data
- genetic diversity assessment

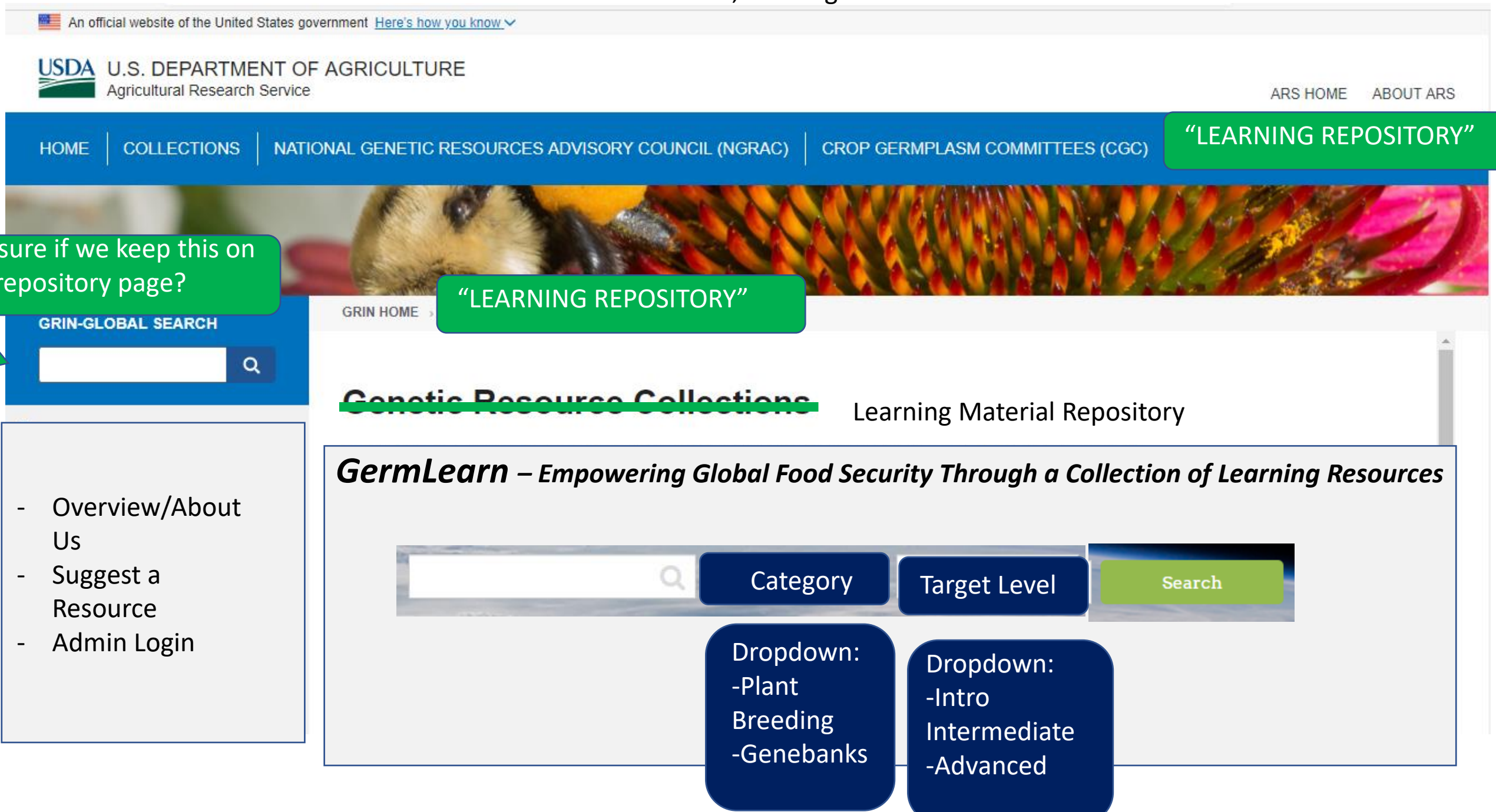
4) Regeneration
- field techniques
- greenhouse techniques
- guiding principles

5) Documentation
- data collection
- GRIN-Global
- US National Germplasm System

6) Secure Backup
- importance
- techniques for duplicating collections

7) Distribution
- who requests samples
- reasons for distribution
- methods for distribution

Deana Note: For now, working with the current framework…



Overview / About Us

Blah blah …description of project and mention of the specific USDA grant #

Suggest a Resource

Goes to a form similar to the admin side, but doesn't require a login. Used by anyone who wants the team to add another resource to the repository.

Admin Login

Goes to a form for people to fill out to upload content/provide a link that populates the information into a searchable database

ONLINE FORM ITEMS TO FILL OUT WHEN UPLOADING/ENTERING LEARNING MATERIAL TO REPOSITORY

Title of Material :____
Author (name and contact info): _____
Keywords: _____
URL (or file upload): _____
Contact (if not an author):____

Peer-Reviewed:
_ No
_ Yes (& describe/list)

Language:
_ English
_ Spanish
_ French
_ Chinese

Estimated Learner Level:
_Introductory
_ Intermediate
_ Advanced
_ Student/Learner
_ Teacher/Instructor/Trainer

Or from NSDL:
_High School
_Community College (Lower Division)
_College (Upper Division)
_Graduate / Professional
_Career/Technical Training
_Adult Education

Type of Content:
_ Short Article
_ Video
_ Image
_Inforgraphic
_ Animation
_ Interactive eLesson
_ eBook
_Webpage
_ Teacher Lesson Plan / Guide
_ Quiz
_ Online Course for Academic Credit
_ Online Course for Professional Development (Badging)
_ Other

Which category(ies) does the material best align?
__Plant Breeders
_Germplasm Resources
_Plant Breeding Process
_Real World Examples

___Genebanks
_Acquisition
_Maintenance
_Evaluation and Characterization
_Regeneration
_Documentation
_Secure Backup
_Distribution

Summary of Content:

Blah blah blah

Example of a Public Search

HOME | SEARCH RESULTS FOR: 'CROP WILD RELATIVES'

Search Results For: Crop Wild Relatives (3746)

Clicking on this opens the resource in a new window.

CURRENT FILTERS

- wheat
- Videos

CLEAR ALL

3746 Results | View 25 results | Sort by relevance

Filter results by keyword

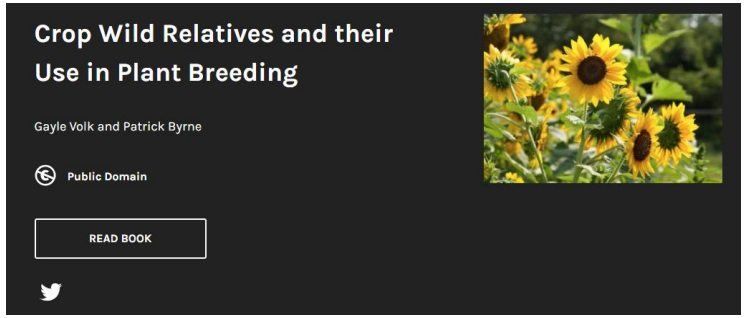
Type of Content:
Infographic (1)
Videos (1)
eBook (1)
Online Course (1)

Language:
English (3)

Estimated Learner Level:
Introductory (1)
Advanced (2)

CATEGORIES **__Plant Breeding** **___Genebanks**

Plant Genetic Resources - The Key to Global Food Security
by Patrick Byrne and Gayle Volk
This infographic educates the general public on the significance of plant genetics and germplasm, and more specifically how those genetics apply to global food security.



Crop Wild Relative and Their Use in Plant Breeding
by Gayle Volk and Patrick Byrne
The purpose of this chapter is to demonstrate that food crops do not necessarily originate where they are consumed. Food crops have been domesticated from their wild origins and have been transported worldwide. It also explains how crop wild relatives offer genetic diversity to genebanks and breeding programs.