

HF 352 Section 1. Heritage Oilseeds and Grains Appropriation

**MN House Agriculture Finance and Policy Committee
January 26, 2023**

Dr. Brian Buhr, Dean, College of Food, Agricultural and
Natural Resource Sciences (CFANS)

Dr. Gary Muehlbauer, Head, Agronomy and Plant Genetics

HF 352, Section 1. Heritage Oilseeds and Grains Appropriation

\$2,500,000 in fiscal year 2024 is appropriated from the general fund to the commissioner of agriculture for transfer to the Board of Regents of the University of Minnesota to evaluate, propagate, and maintain the genetic diversity of oilseeds, grains, grasses, legumes, and other plants including flax, timothy, barley, rye, triticale, alfalfa, orchard grass, clover, and other species and varieties that were in commercial distribution and use in Minnesota prior to 1970, excluding wild rice. This appropriation includes funding for associated extension and outreach to small and BIPOC farmers.

Agriculture, Food and Natural Resources Importance to Minnesota



\$112 billion
annual economic impact
from Minnesota's food and
agricultural sector

 **30%**
of state's workforce

 **51%**
of state's land

\$17 billion 
annual agricultural sales

Sources:
State of Minnesota, Department of Agriculture, Department
of Labor and Industry, Board of Water and Soil Resources
AgriGrowth, 2020 Economic Contribution Report



Context: National Plant Germplasm System



Source: <https://data.nal.usda.gov/dataset/national-plant-germplasm-system>

- “Collaborative effort to safeguard the genetic diversity of agriculturally important plants.”
- Crop germplasm mission:
 - Acquire
 - Conserve
 - Evaluate
 - Document
 - Distribute
- Iowa State and Colorado State Regional Affiliates, ISU ~ \$522,000/yr.
- UMN researchers have access

Implied Requirements of HF352 for University of Minnesota: FACILITIES

CFANS - Food, Ag & Nat Res Sci, Col of



298,133
Assignable Area (ASF)



- Facility condition is poor and does not have necessary equipment such as growth chambers and coolers for long-term seed storage.

Crop Research Planning – Awaiting Funding for Investment - \$1.26 million*

Crop Research 28B:
\$328K



- No Cooling
- Mold/no insulation
- Failing mech. & equip
- Full design completed

Crop Research 38 & 38D:
\$380K



- Inoperable 20+ yrs.
- No insulation + mold
- Demolished chambers
- Prep temp and humidity

Crop Research 7:
\$325K



- Poor insulation + Mold
- Equip. failures
- Funding allows renewal

Crop Research 20:
\$230K



- Failing Equip.
- No Insulation

*** Estimate based on highly preliminary projections NOT FULL DILIGENCE**

Implied Requirements of HF352: MANAGEMENT AND OPERATIONS

- Activities:

- Assembly
- Evaluation
- Propagation
- Collection/Cleaning/Curating
- Storage preparation
- Database development
- Distribution and Delivery

- Recurring Costs:

- Personnel: 1 PhD manager, 1 technician staff, collaborating existing faculty (\$200k/yr. for 2-3 years startup = \$600k)
- Ongoing costs: 1 PhD manager (\$150k/yr)

Total time funded ~ 7 years - WOULD THIS BE SUSTAINABLE BUSINESS MODEL?



HF352 Summary

- UMN Has Overall Expertise and Facilities for Seed Storage
- Facilities are very poor condition and we've already begun assessment for our plant sciences programs.
 - May not have enough space and cost estimates required to bring to suitable use are rough and could be much higher.
- Operations and management require significant and ongoing investment and seed storage has a perpetual objective.
- Options: Partner with regional National Plant Genome Institute (ISU?)
 - Minimize scope and intensity to suit funding and do only propagation and storage.
 - Potentially no continuation of business operations after 7 years or funding exhaustion, but facilities remain valuable for seed storage alone and that may continue.

