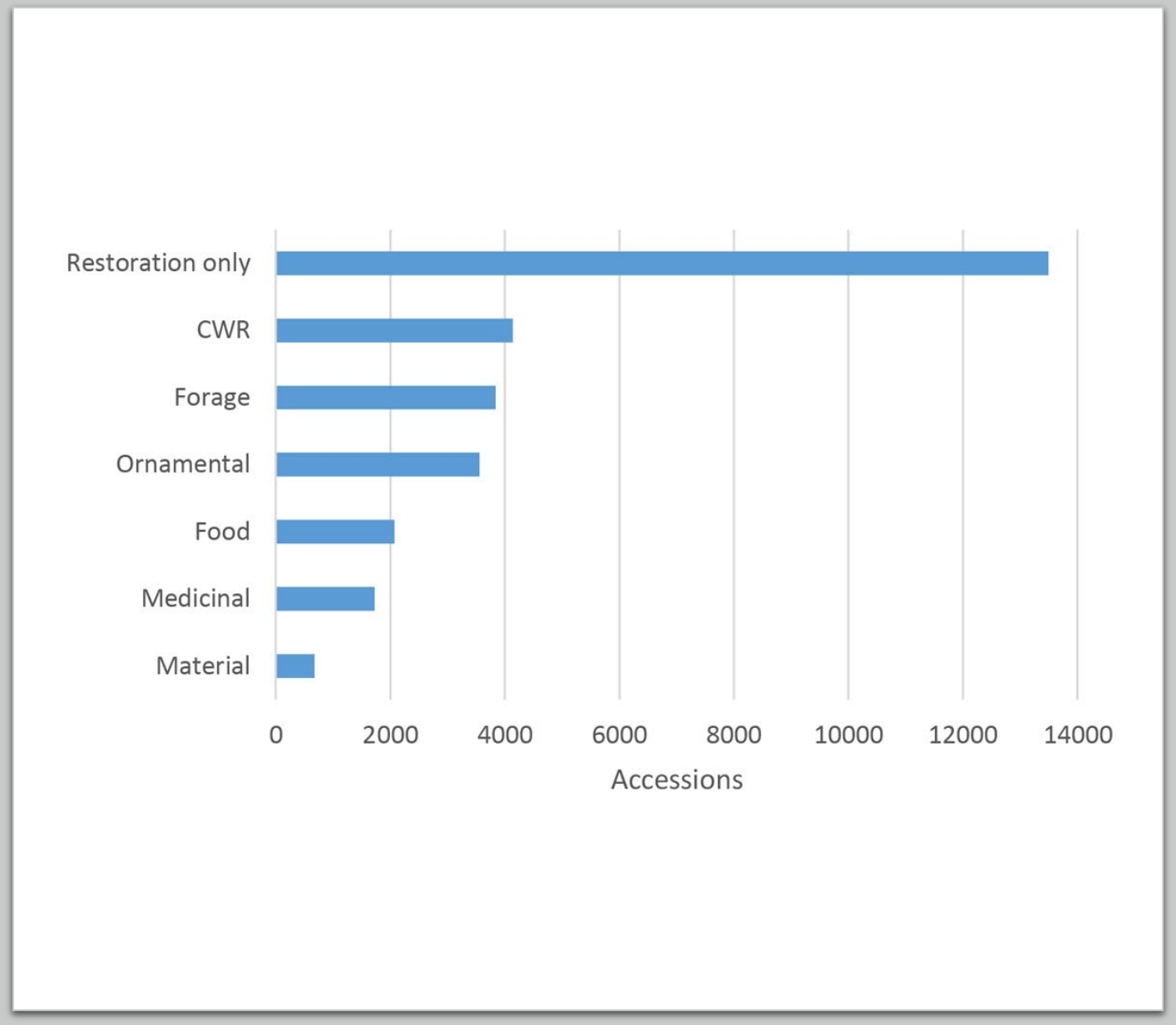
NPGS SOS Collection Potential Agricultural Use

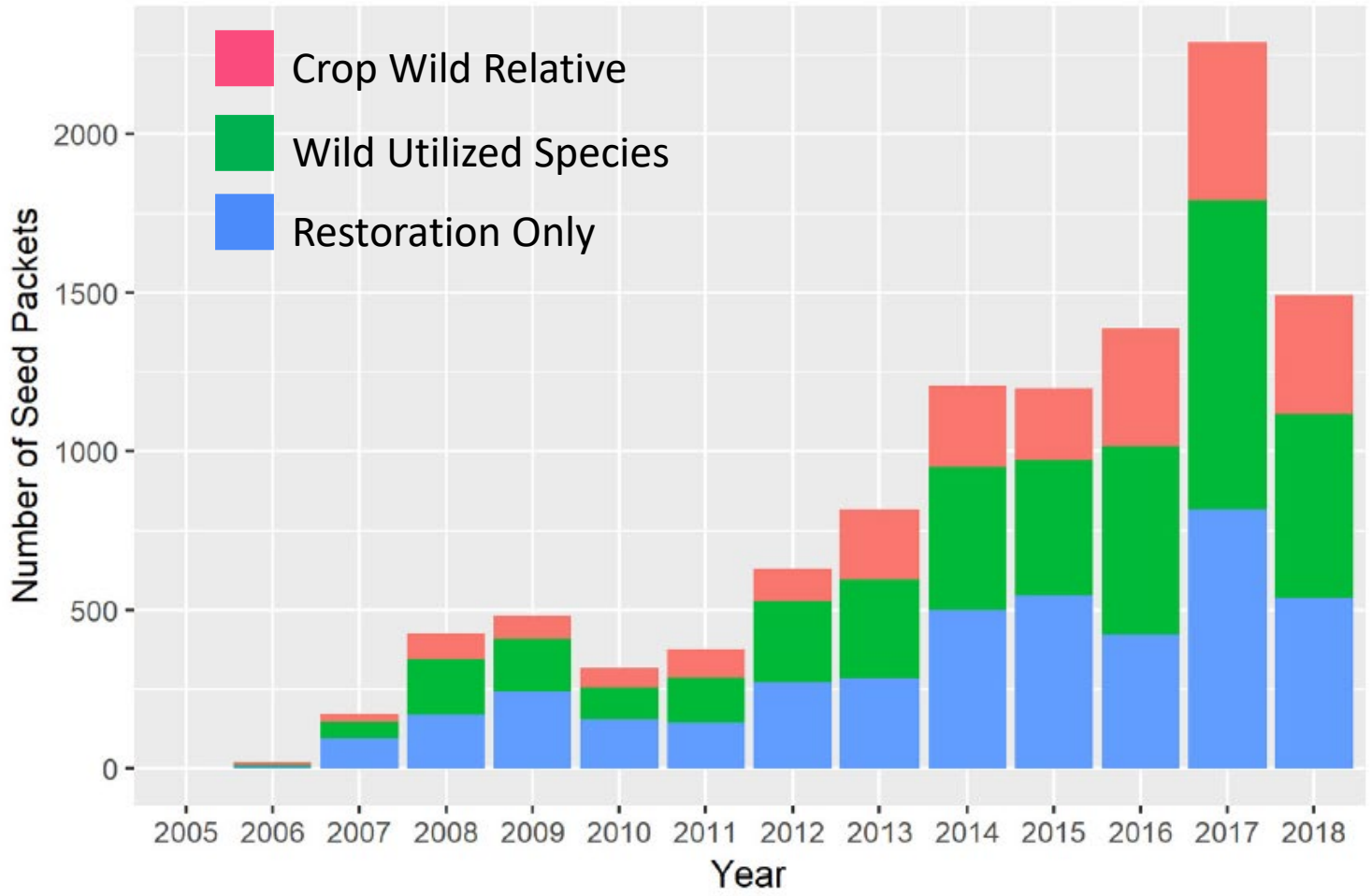
Number of accessions

- Taxa used for restoration only
- Taxa having potential other uses



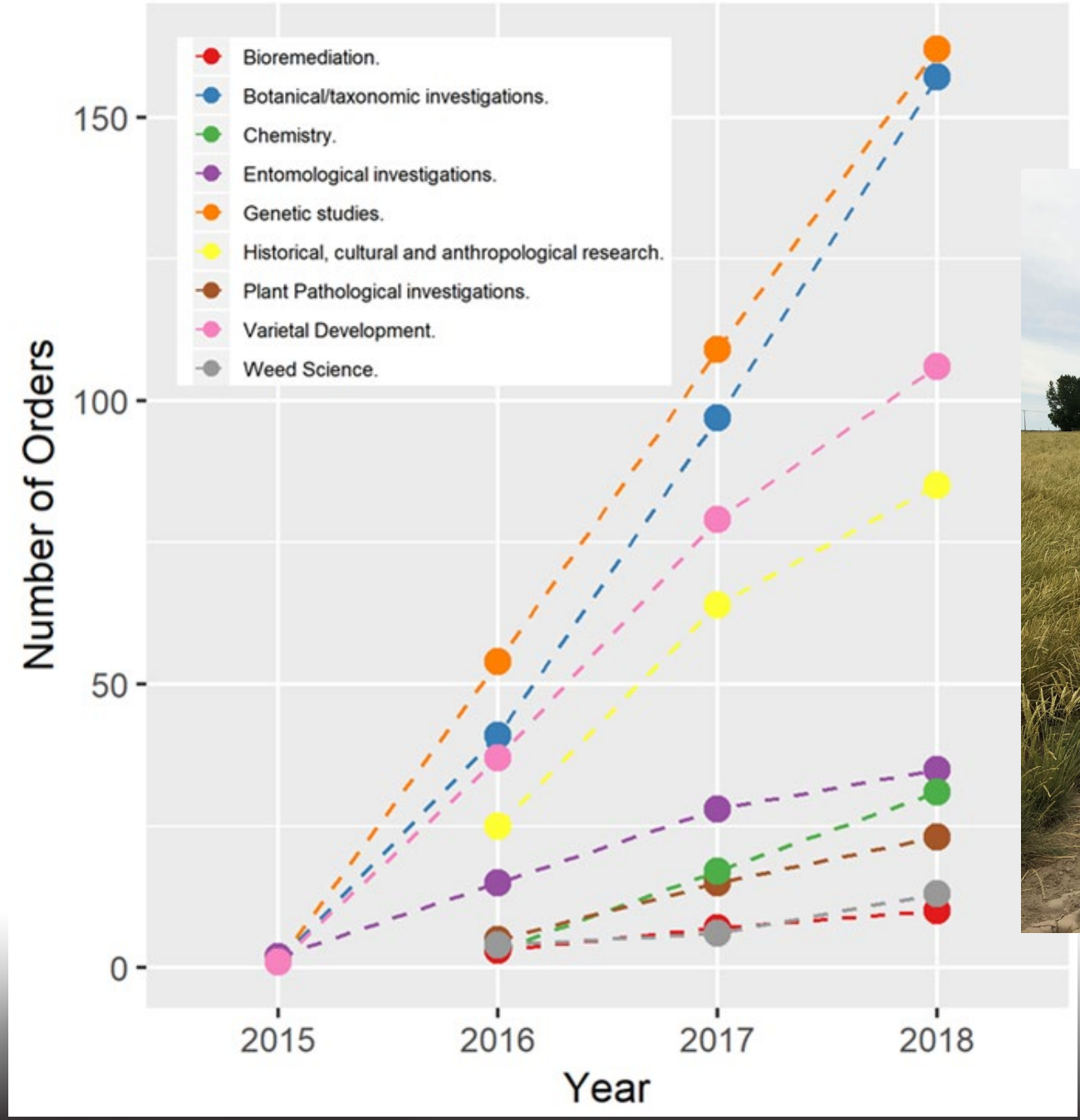
Greene et al. Crop Sci. (2019)

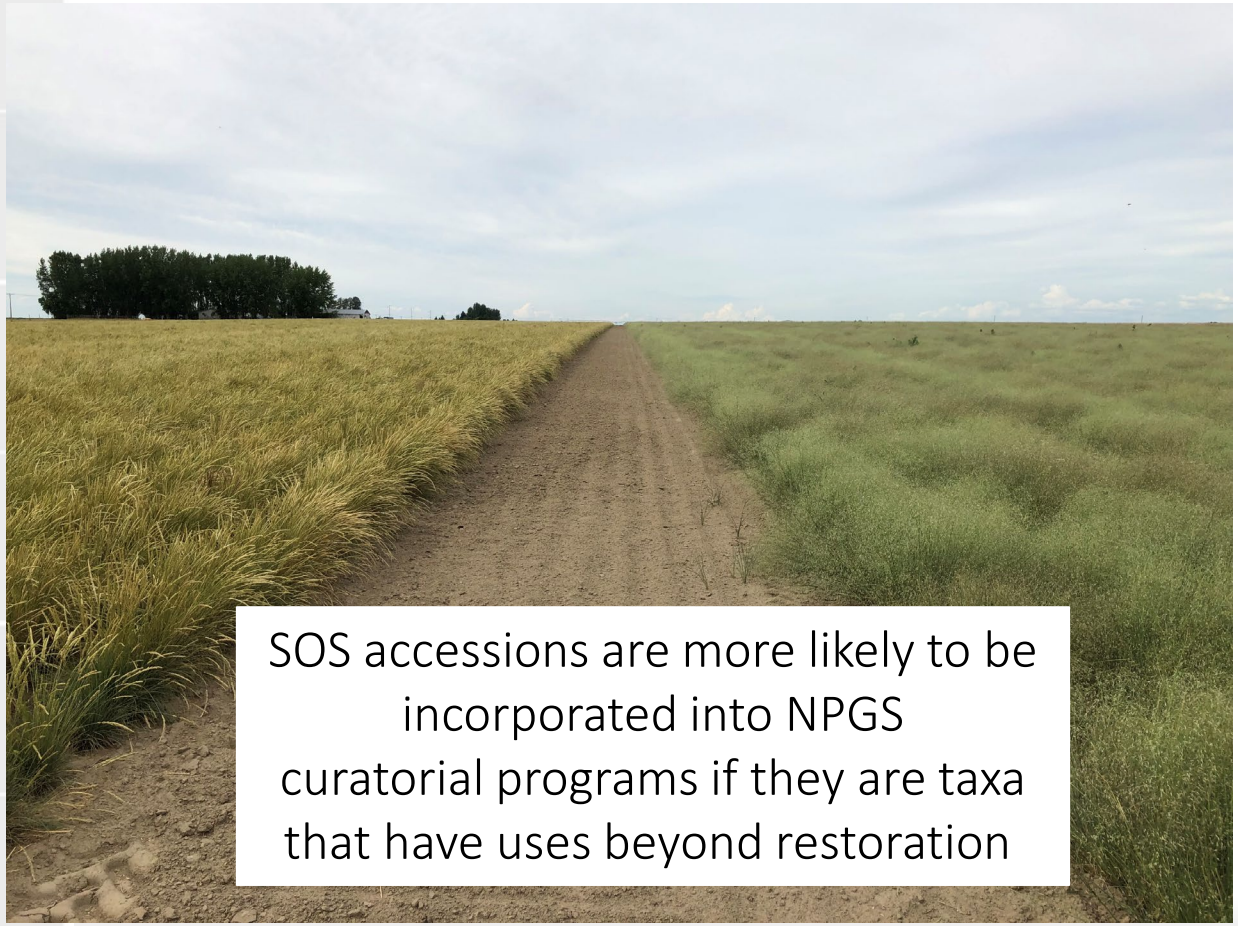
NPGS SOS Collection Distribution by Use Category



Greene et al. Crop Sci. (2019)

Specific Uses



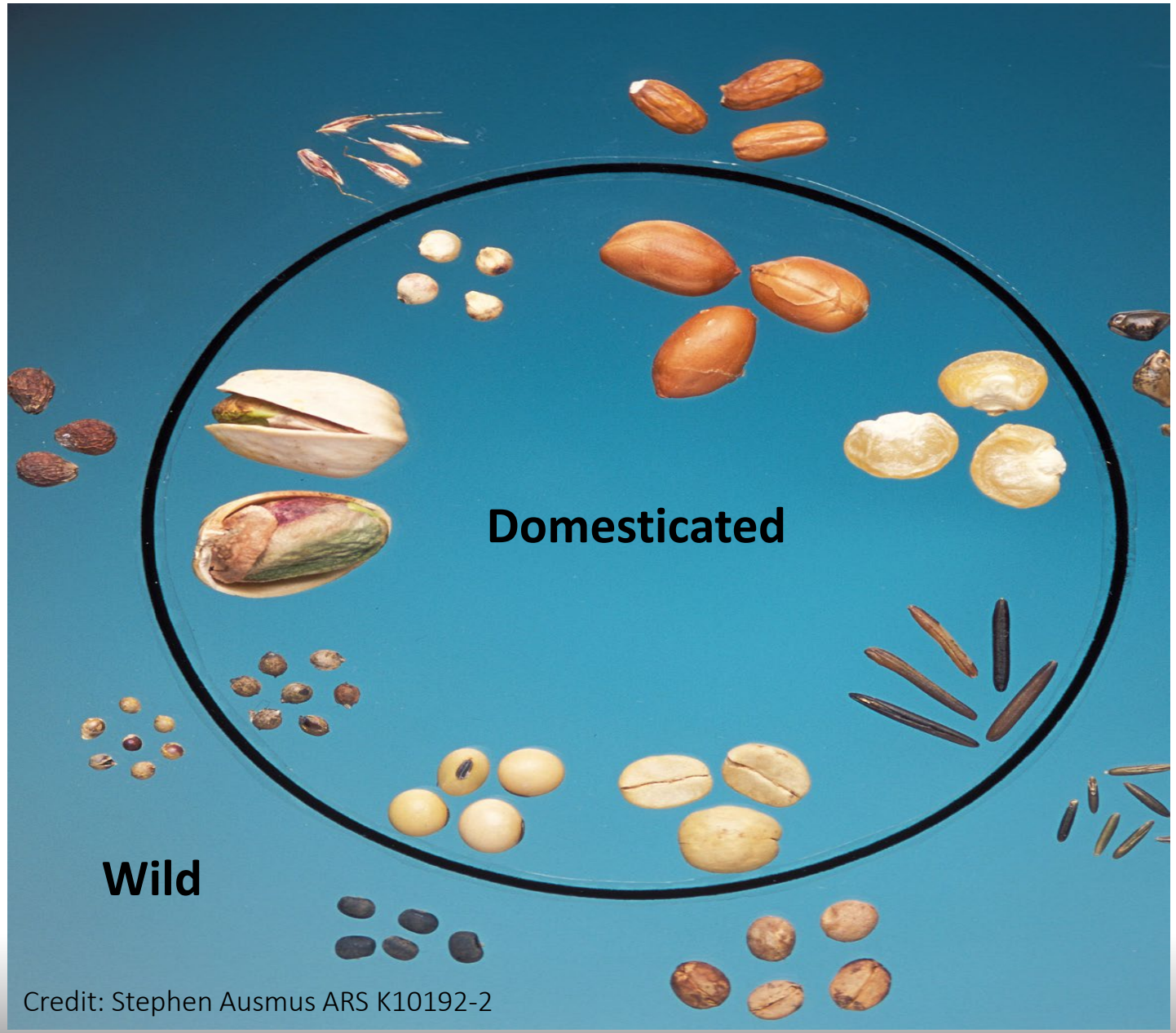


SOS accessions are more likely to be incorporated into NPGS curatorial programs if they are taxa that have uses beyond restoration

Greene et al. Crop Sci. (2019)

Wild species are much more difficult to manage than are domesticated species!

- Wild-collected seed has quality issues (i.e., *in situ* environment less optimal for good seed production)
- Production methods unknown (germination, seed production, storage)
- Seed testing and increase more difficult; dormancy, harvest quantity frequently low



Credit: Stephen Ausmus ARS K10192-2

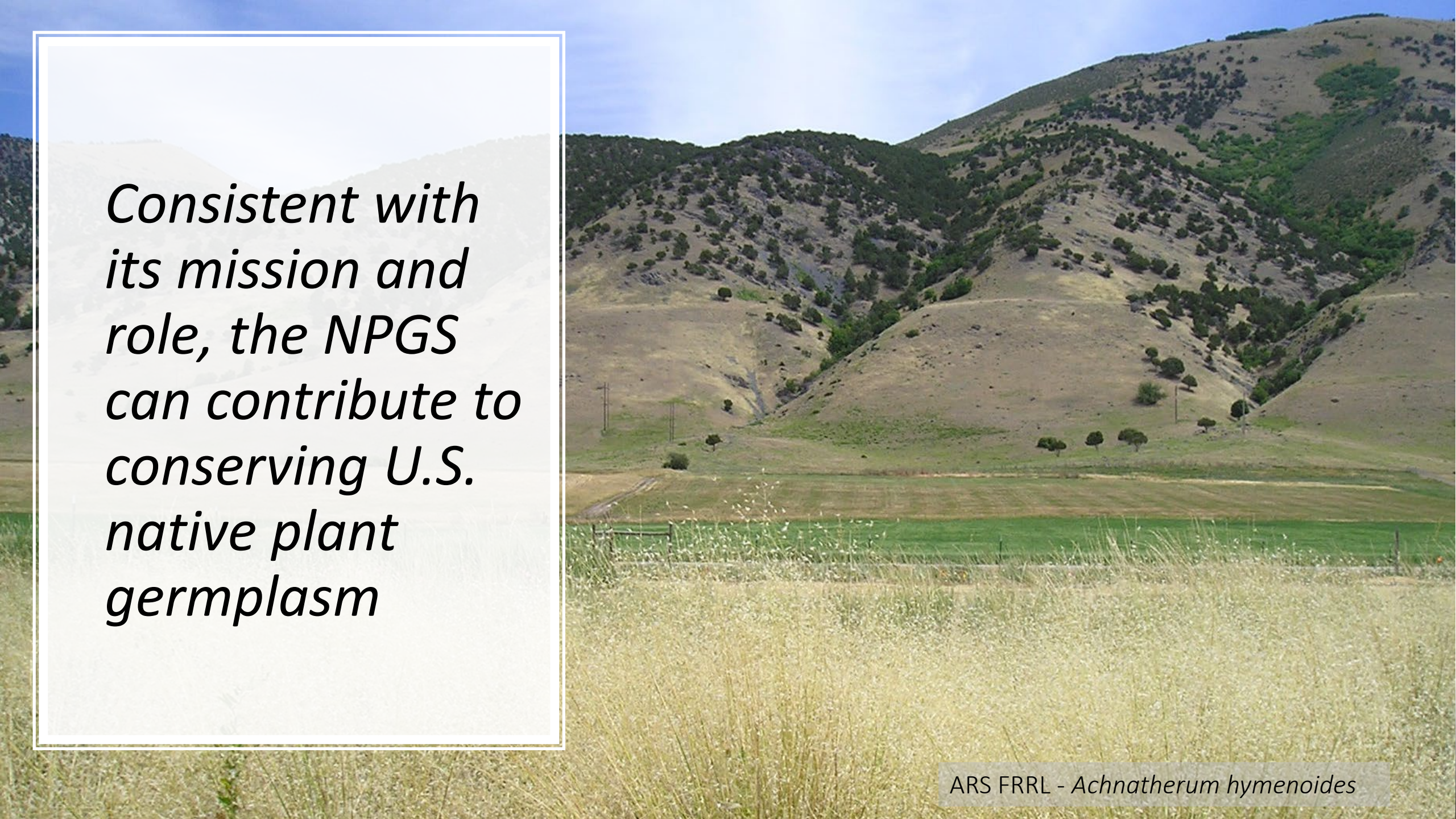
Challenges

- ~8,000 SOS accessions not actively curated (preserved & distributed)
- Resource constraints, especially at PGITRU (infrastructure & personnel)
- Research - seed testing, storage and production, genetic diversity, evaluations, ...

Solutions

- Effective partnerships/collaborations (National Seed Strategy)
- Funding for research on PGR management of wild taxa
- Dedicated curatorial program for native PGR
- Strategic development of NPGS native plant collections
  - Content/size driven by balancing user & conservation needs against available management resources

Consistent with its mission and role, the NPGS can contribute to conserving U.S. native plant germplasm



ARS FRRL - *Achnatherum hymenoides*

Acknowledgements

- USDA Agricultural Research Service
  - PGITRU - M. Cashman, L. Taylor, R.C. Johnson, L. Martin, B. Hellier
  - NLGRP - C. Walters, D. Carver, Seed Testing/Data Management team
  - National Programs - P. Bretting, P. Vadas
  - M. Schori, K. Williams, DBMU/GRIN-Global team
- Washington State University
- DOI Bureau of Land Management
  - P. Olwell, A. Lindquist, L. Prescot, …

Thank you!