SOY – David Walker, Scott Jackson, J. Grover Shannon, Randy Nelson

Pathology: Dr. Glen Hartman

USDA has a lot of soybean cultivars- both G. max (domest) and G.soja (wild). They send it free of charge for research purposes.  They will only send 1 lb of seeds unless you request more (I was getting 600 g each time).  As long as they don't run out, you can order almost unlimited supplies.  If you would like more contacts, let me know.  Here is the website- just scroll down and type in Glycine max or soja and there >20,000 results for max and 2600 for soja.  You can also search by accession number if you know which cultivar you want.

<http://www.ars-grin.gov/npgs/acc/acc_queries.html>

J. Grover Shannon MO: Williams 82 (group III) and Hutcheson  (group V)

6 from Glycine max (cultivated):

- Williams 82 (reference genome) (group III)

- Hutcheson (group V)

Landraces of Glycine max: (get advice Randy Nelson)

6 from Glycine soja (wild):

- PI 468916​

G. soja leaflets much smaller, weedy but less vigorous growth than G. max.

Seeds much smaller

May need to grow G. soja early for similar growth

 Glycine spp. are very sensitive to photoperiod, so if you are using soybean lines from different maturity groups (MG’s), you  may need to grow them all on a long photoperiod for several weeks and then switch them to a shorter photoperiod to synchronize flowering. My advice would be to grow plants from whichever accessions you intend to work with at least once or twice before starting an elaborate experiment with them. You may find that you need to plant the G. soja seeds two or three weeks earlier than the G. max seeds. This might look questionable in writing up a protocol to compare plants from the two species, but if you plant all the seeds at the same time, the differences in vigor are also likely to create problems. (Note also, that G. soja seeds often have hard seed coats, so you can generally accelerate their germination by nicking the seed coat with a razor blade or otherwise scarifying the seed. This is seldom necessary with G. max seeds.)

lists most of the accessions in the USDA’s Soybean Germplasm Collection (it is out of date by a few years, but probably contains at least 97% of the current number of accessions. Although most of the information can also be found at the GRIN (Germplasm Resource Information Network) website

 For *Glycine soja* accessions, for example, you might want to select ones collected in different countries or geographically distant regions of a country.

Glycine max:

1. developed in the Midwest or Mid-Atlantic (elite US)

2. developed in the South (elite US)

a. Southeast (SC, GA, AL) late maturing- rainfall

b. Midsouth (AK, LA, MI, MO, TN) early maturing- irrigated

3. Williams 82 (IL) – contributed to many modern cultivars

4. Hutcheson (VA) – contributed to many modern cultivars

Available seed quantities could be a concern. The USDA Soybean Germplasm Collection typically only distributes 50 seeds of an accession for each request, so you would probably need to grow a few plants of each of your experimental genotypes to obtain sufficient seeds for your research. Dr. Randy Nelson ([randall.nelson@ars.usda.gov](mailto:randall.nelson@ars.usda.gov)) is the curator of the USDA collection, and would be the person to send your seed requests to. You might be able to obtain larger quantities of seeds from some obsolete U.S. cultivars from a breeder if you know that he or she has used that cultivar recently in research projects.