- need multiple bio reps (Pg x Bc combos) to avoid individual plant effects (vs. genotype effects)?

- must get bio reps BUT randomize isolate combinations and isolate positions (control for interaction effects & positional effects)

- will have 8x replication (2 bio reps per experiment, replicate each experiment 4x total)

If 1 isolate per leaf (or leaflet):

- 8 Pg x Bc reps

- 12 plant genos

- 100 Bc genos (actual = 96)

- 100 Bc \* 8 rep / 1 iso per leaf = 800 leaves

If 2 isolates per leaf:

400 leaves

If 4 isolates per leaf:

200 leaves

Lettuce: 4-6 leaves per plant

So: 200 plants if 1 iso/ leaf

100 if 2 iso/ leaf

50 if 4 iso/ leaf