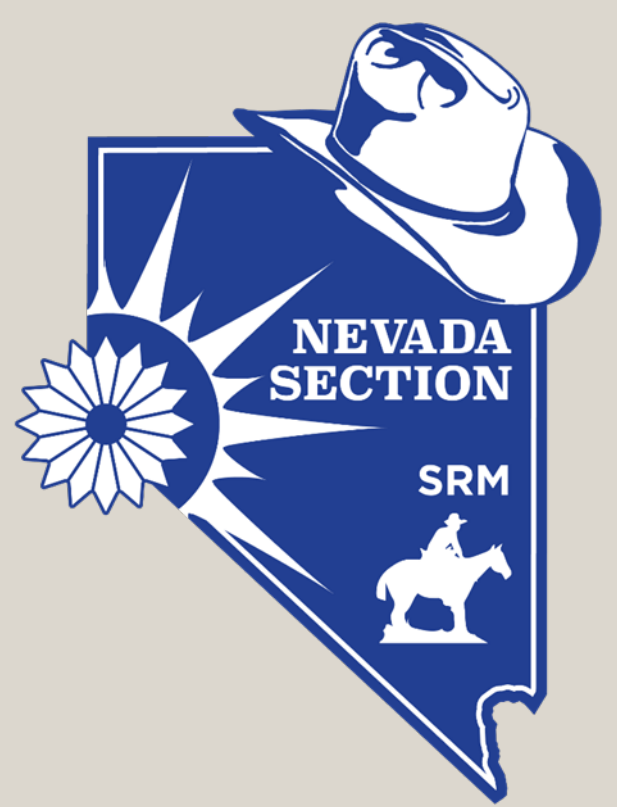


Seed Banks

The most important monitoring tool, your rangeland management plan doesn't include

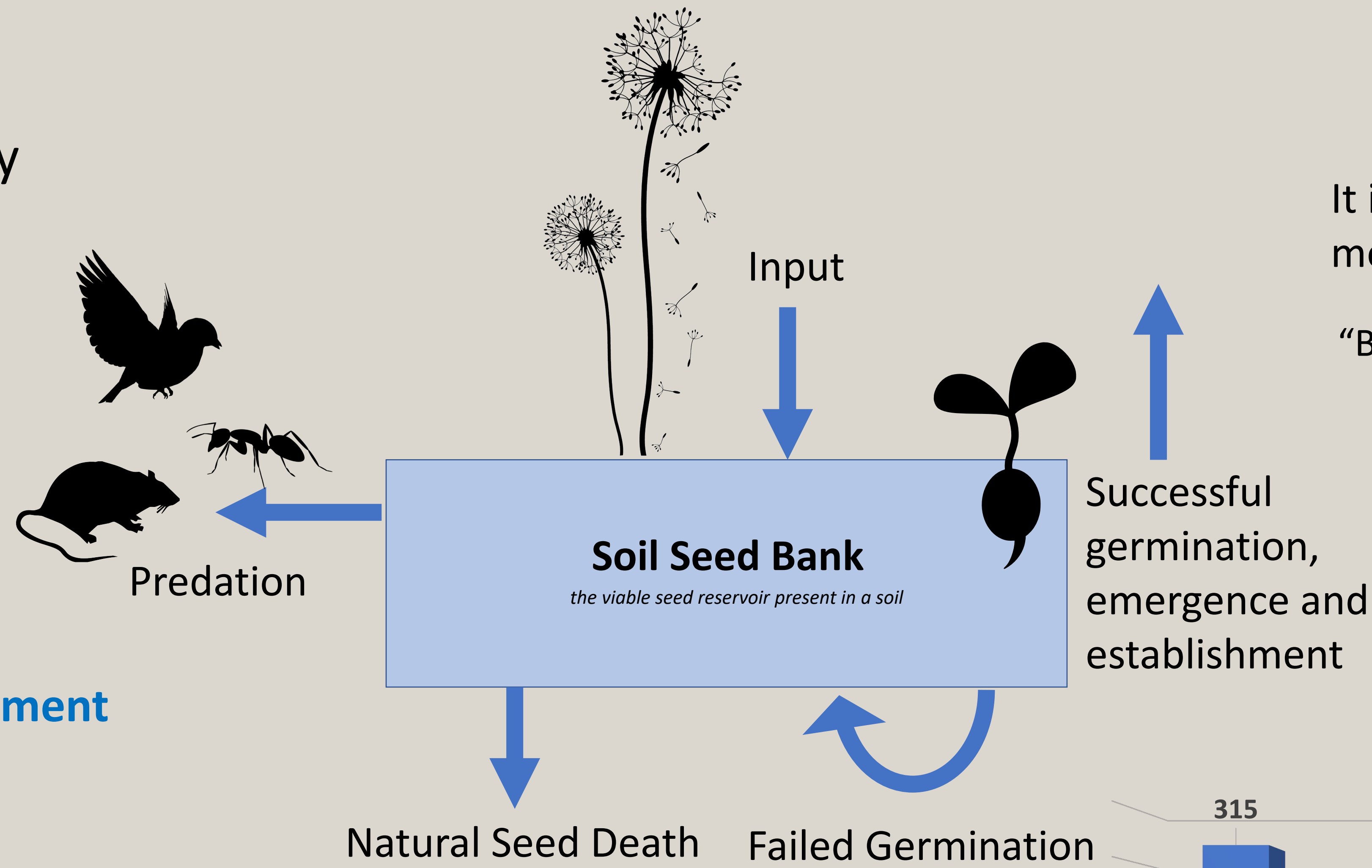


Daniel.harmon@usda.gov
Charlie Clements,
Mark Freese (NDOW)



Seed Bank Soil Bioassay

Identifies the number of viable seeds in a given area of soil

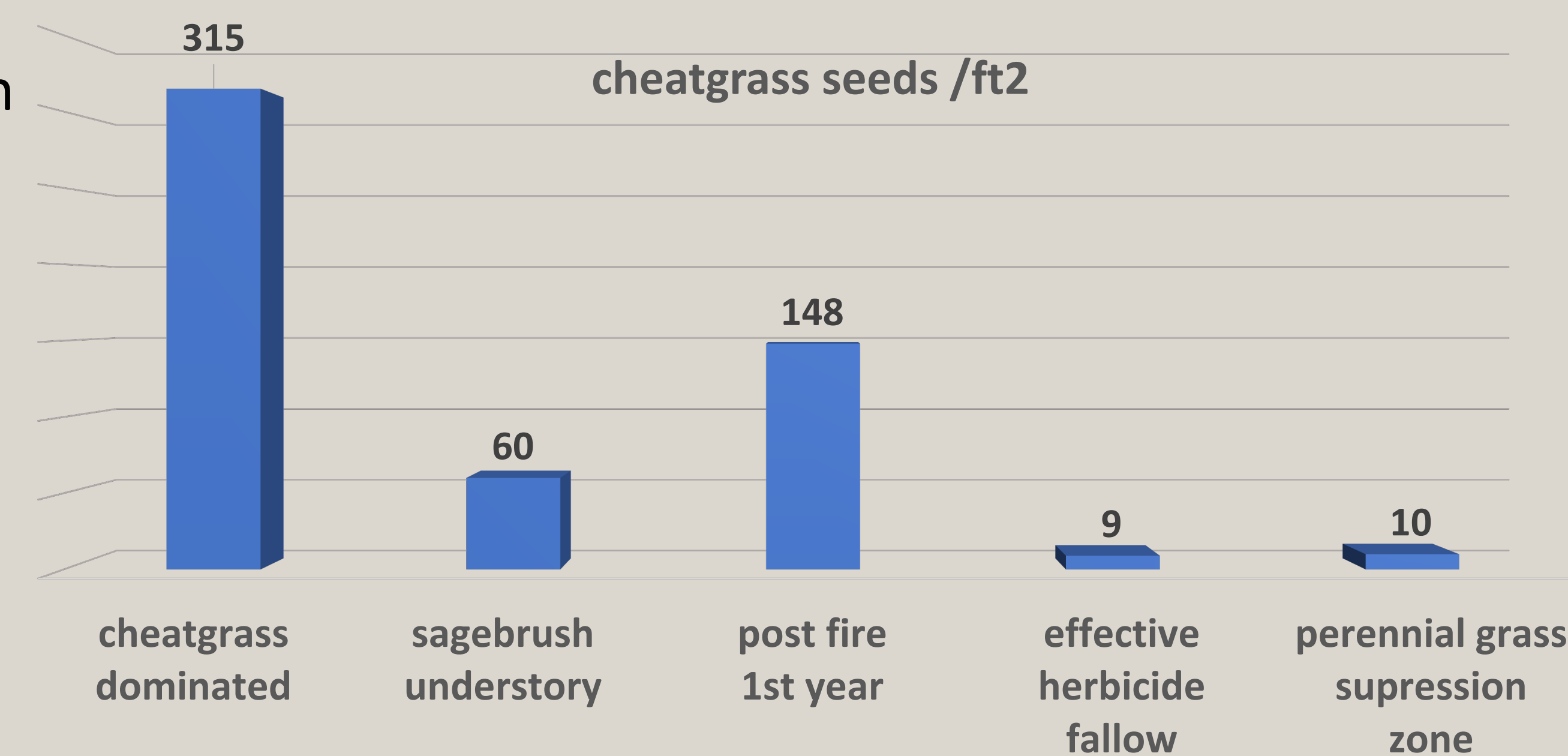


It is hard to find a mention of seed banks in most rangeland monitoring programs

"BLM AIM Strategy does not assess seed banks"

Uses

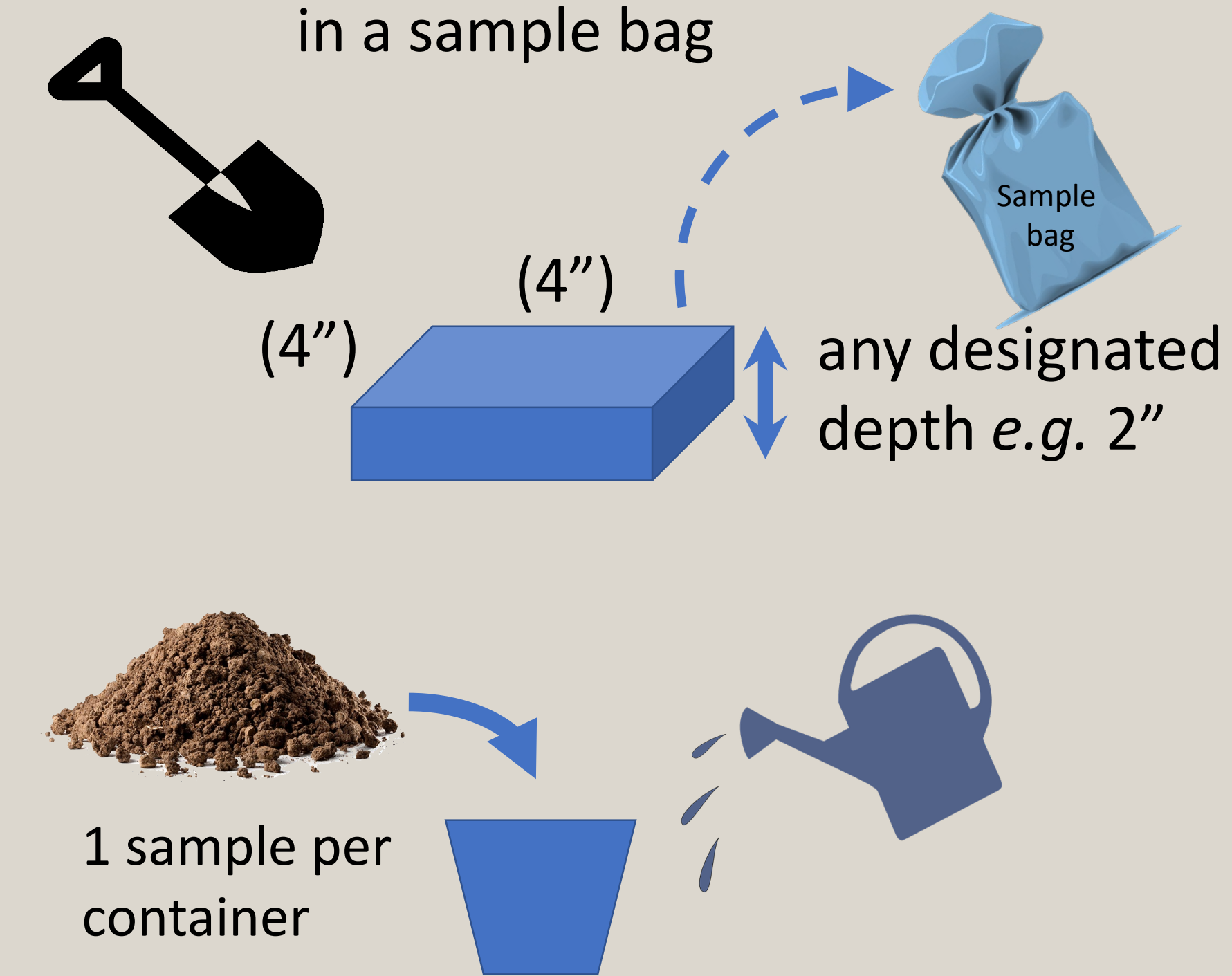
- Estimate weed populations
- Predict plant community recruitment
- Determine herbicide efficacy
- Predict post fire plant establishment
- Predict weed competition for rehabilitation seedings



Methods to Measure Seed Banks

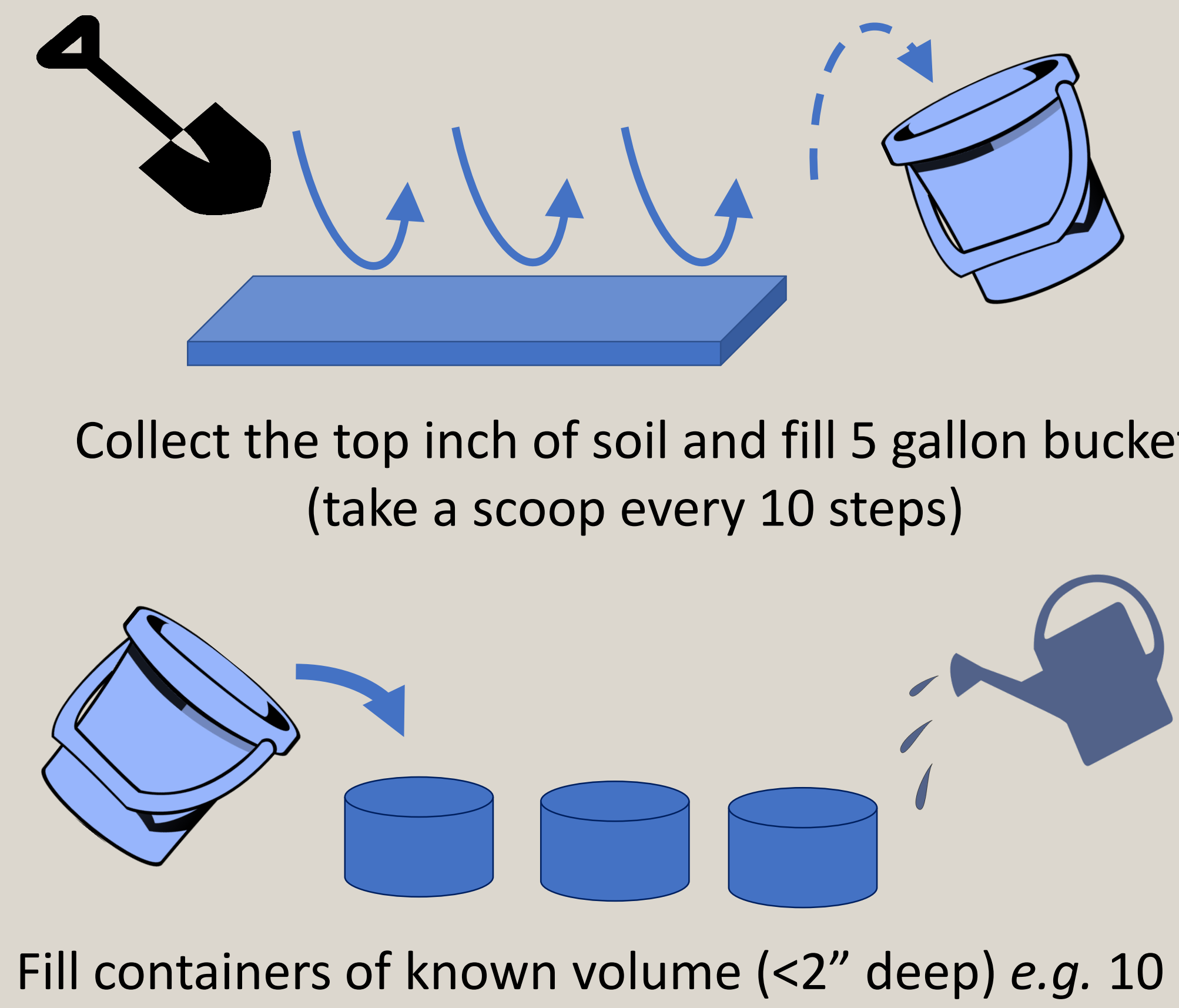
Sample by Area

Collect multiple samples of a known area of soil (i.e. 4' x 4") place each in a sample bag



Sample by Volume

Collect the top inch of soil and fill 5 gallon bucket (take a scoop every 10 steps)



Seeds per ft² or m²

Area: e.g. 4"x4" multiply by 9 = 1ft²

Volume: e.g. 10oz multiply by 7.98 = 1ft²

(ft² x 10.76 = m²)

Count the number of seedlings = number of viable seeds (multiple weeks) (may require stratification treatments or Gibberellic acid for dormant seeds)

