

Dixon National Tallgrass Prairie Seed Bank – Seed Collecting along Maternal Lines

When and why seeds should be collected along maternal lines:

In populations of fewer than 80 individuals it is recommended that seeds be collected along maternal lines, which means seeds from each individual plant (maternal line) must be bagged separately (as opposed to bulking the seed collection into 1 or 2 bags as we do for general seed bank collections).

For small populations, it is important to select equally from each parent's offspring (seeds) to maximize the genetic diversity that exists in the population when removing seeds from the collection to restore a new population. This can easily be done by removing the same number of seeds from each maternal line envelope. If seeds from small populations are combined in a bulk collection, there is less chance of a parent's offspring being represented when a portion of the seeds are removed for restoration. This is not so much an issue with large populations.

If a maternal line collection is made, be sure it is clearly marked on the datasheet, preferably where the number of species collected is recorded. Maternal line collections should not be made if there is a larger, more genetically diverse population in the region. **Do not make a maternal line collection without the consent of seed bank personnel.**