

On the Colorado Plateau and in Southeastern Utah, seeding is used to restore and remediate land degraded by fire, grazing, oil and gas drilling, and recreational overuse. Many widely available seeds of common native species are cultivars, which are artificially selected in a manner similar to agricultural crops. The differences of genotypes within a species can lead to community changes that cascade throughout an ecosystem, ranging from changes in nutrient cycling to changes in vertebrate communities. If and how genotypes of restoration materials may impact disturbed communities is unexplored. We intend to leverage restoration sites with plants of documented cultivar or wild-type genetic identities to research the taxonomic composition and function of soil microbial communities associated with each plant genotype. With partnership from the BLM Colorado Plateau Native Plant Project, we hope to add to the characterization of the importance and delicacy of desert soils and their health in the Southeastern Utah area. This work helps inform the mandate of the National Seed Strategy to use genetically appropriate seed in restoration. We are excited to share our work with both the scientific community and general audiences, by submitting a manuscript to an academic journal and collaborating with Science Moab, respectively.