Grazing and Diversity

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Two sides of the diversity question

1. How do we use grazing-based systems to achieve goals related to conservation of diversity?

2. How do we use diversity to improve grazing-based systems?

Scale of diversity | Strategy/target | Outcome/metric
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Ecosystem | Forage systems across the landscape | Provisioning, regulating, and supporting ecosystem services
Species | Forage species mixtures |
Genetic | Forage blends and variety mixtures |
1. Diversity in grazing systems

A. What role does plant diversity play in the functioning of grazing-based systems?

B. What is the most effective strategy for increasing plant diversity in these systems?
2. Diversity of grazing-based systems

Open pasture

Photo credit: Nicole Antaya

A field being hayed

Hayfield

Silvopasture

Photo credit: Bret Chedzoy
Agroecological and biogeochemical implications of conversion to silvopasture?

Established winter 2015 (1-ha plots)

Silvopasture 70% cleared

Open pasture 100% cleared

Forest control 0% cleared

UNH Organic Dairy Research Farm

Mature open pasture
Agroecological and biogeochemical implications of conversion to silvopasture?

Measuring dynamics of:
- C and N
- $\text{H}_2\text{O}$/hydrology
- Forage
- Timber
- Plant establishment invasion

Silvopasture

Open pasture
Questions

• How do we best balance our food production and conservation goals?

• How do we determine if production of livestock products (as opposed to other forms of agriculture or other land uses) is the best use of a given parcel of land?

• Where does agroforestry fit within a landscape that must continue to deliver a diverse range of ecosystem services?