Figures from first batch (15/30) of vegetation data from livestock (5), vegetable (5), and diversified (5) farms in the Upper Valley of New Hampshire and Vermont in summer field season 2022. Although relevant to begin analyzing vegetation data after half of the dataset was collected, we found that for Project 1: Exploring the tree planting and protecting culture of farmers in the Northeast: Opportunities for Agroforestry, it would be more relevant to begin analyzing data after dataset is completed in 2023.



The distribution of tree species across livestock, diversified, and vegetable operations sampled across the Upper Valley of Vermont and New Hampshire. Species were sampled on 60 meter transects from the closest field edge 1.5m on both sides on the central line.



Livestock Primary production type





Distribution of diameter of breast height (DBH) diversified, livestock and vegetable operations sampled across the Upper Valley of Vermont and New Hampshire. Species were sampled on 60 meter transects from the closest field edge 1.5m on both sides on the central line. Mean DBH differed across the three operational types (df=2, F=42.46, p=2e-16)



Distribution of diameter of breast height (DBH) across forest types on diversified, livestock and vegetable operations sampled across the Upper Valley of Vermont and New Hampshire. Species were sampled on 60 meter transects from the closest field edge 1.5m on both sides on the central line. Mean DBH differed across forest patch types (df=2, F=47.53, p=2e-16)



Non-metric multidimensional scaling (nMDS) plot based on Bray-Curtis dissimilarities derived from tree abundances recorded from samples from farms across the Upper Valley of Vermont and New Hampshire. Species were sampled on 60 meter transects from the closest field edge 1.5m on both sides on the central line. Shaded ellipses indicate 95% confidence intervals based on standard error of the group, production type.

Understory



Simpson's diversity index of understory across livestock, diversified, and vegetable operations sampled across the Upper Valley of Vermont and New Hampshire. Species were in 0.5mx0.5m quadrats every 10 meters along 60 meter transects from forest edge. Mean diversity differed across the three production types (df=4, F=52.36, p=1.06e-05)



Simpson's diversity index of understory species across livestock, diversified, and vegetable operations sampled across the Upper Valley of Vermont and New Hampshire. Species were in 0.5mx0.5m quadrats every 10 meters along 60 meter transects from forest edge. Mean diversity differed across the three production types (df=2, F=11.36, p=1.56e-05)



Non-metric multidimensional scaling (nMDS) plot based on Bray-Curtis dissimilarities derived from understory abundances recorded from samples from farms across the Upper Valley of Vermont and New Hampshire. Species were in 0.5mx0.5m quadrats every 10 meters along 60 meter transects from forest edge. Shaded ellipses indicate 95% confidence intervals based on standard error of the group, production type.



Simpson's index plotted against distance on the transect (0 represents closest to field) for understory species. Plot shows negative linear relationship between simpson's diversity and distance from field edge (df=447, F= 112.5 on 1, p-value: < 2.2e-16).