Enhancing Environmental and Economic Benefits of Woodland Grazing

PROJECT GOALS
There are 527,000 acres of unmanaged woodland grazing in Minnesota; 40% of those acres are located in the central and north-central regions where beef production is taking place. Opportunities exist to manage these acres for grazing to reduce soil erosion, improve water quality, enhance species diversity, and improve economic productivity of the producer. Silvopasture, the practice of intentionally combining and managing trees, forage (grasses), and livestock (i.e., cattle), exhibits potential to enhance environmental and economic benefits within Minnesota’s hardwood transition zone where livestock production is practiced. Barriers exist in adopting silvopasture in MN because of a lack of knowledge and understanding of best management practices for woodland grazing. This study will evaluate, assess, and monitor effectiveness. Three sites will be established in central and north-central MN. In each site, three pastoral systems will be established: 1) silvopasture 2) unmanaged woodland grazing, and 3) traditional open pasture.

COMMUNITY IMPACTS
There are about 5,000 livestock producers in our region. Through outreach and extension activities such as workshops, field tours and development of a best management practices manual of woodland grazing, at least 4% of livestock producers in the region will be provided with education about managing their woodland grazing for profits and environmental protection, and these producers will consider using silvopasture as a tool in their livestock production.

ENVIRONMENTAL IMPACTS
Silvopasture can create a healthier agricultural landscape and increase stewardship by:

- Improving water quality; complex root systems may mitigate the effects of nitrate leaching into groundwater
- Promote species diversity (flora and fauna) compared to traditional pasture and woodland grazing
- Improve forage quality and quality; opening tree canopies will allow light to penetrate the ground, triggering seeds stored in the seedbank to germinate and grow; shade provided improves forage digestability

ECONOMIC IMPACTS

- Increase timber value by producing higher quality timber stands
- Produce higher quality and quantity of forage that could increase animal nutrition, productivity and weight gain
- Shade from trees could lower stress to animals; hence, positively affect livestock production

COMMUNICATION AND REACH
Project partners include University of Minnesota and Extension researchers/scientists, graduate students, and three farmer cooperators whose land is being utilized. The project will collaborate with numerous organizations and institutions, including the Leader Lions Forage Council, the Soil and Water Conservation Districts, the Minnesota Cattlemen’s Association, the University of Missouri and others, to share project results and strengthen healthy, sustainable communities.

CRSDP INVESTMENT
$15,000