

GRADUATE EXIT SEMINAR

WANDERSON NOVAIS

Goat Browse Selectivity and Economic Performance during Restoration Grazing in an Invaded Oak-Hickory Forest



Oak and hickory species (*Quercus spp.* and *Carya spp.*) dominance and recruitment in eastern forests have been threatened due to fire suppression, shade-tolerant species encroachment, and non-native species invasion. Non-native species such as privet (*Ligustrum spp.*), multiflora rose (*Rosa multiflora Thunb.*), and oriental bittersweet (*Celastrus orbiculatus Thunb.*) compete for resources with and can exclude oak and hickory. The use of conservation grazing can be ecologically and economically sustainable. Goat meat or milk production provides a potential economic resource, and livestock grazing offers non-native vegetation control as an ecological benefit.

However, goats' general and browsing behavior varies between ecosystems, and this needs to be understood prior to their introduction. Additionally, the economic impact of using conservation grazing by goats should be tested. This research study found that the primary behavior of goats in an invaded oak-hickory forest was browsing and ruminating. The browsing behavior of goats was similar in different vegetation compositions. Goats consumed more woody vegetation than herbaceous and had a general preference for spicebush (*Lindera spp.*) and privet while generally avoided multiflora rose. Forest browsing is lower in energy, leading to body weight loss in goats, making it necessary to provide nutritional feeding supplements for positive net economic returns.

Advisors: Dr. G. Matt Davies and Dr. Benjamin Wenner

TUESDAY, MAY 4, 2021
10:00 A.M.

Join the seminar via Zoom:

<https://osu.zoom.us/j/97281556610?pwd=Yy9YQ2xaZ05nQWlNMkt2MWFSdEpTd09>

senr.osu.edu



THE OHIO STATE UNIVERSITY

COLLEGE OF FOOD, AGRICULTURAL,
AND ENVIRONMENTAL SCIENCES

— We Sustain Life —

CFAES provides research and related educational programs to clientele on a nondiscriminatory basis. For more information, visit cfaesdiversity.osu.edu. For an accessible format of this publication, visit cfaes.osu.edu/accessibility.