Introduction to Agroforestry
FOR595Y – Fall 2004

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Class: Mondays 12:25 – 3:15 pm, 2024 Biltmore Hall

FOR595Y is a special topics mini-course. Special topics courses exist so that "groups of students, under direction of a faculty member, may explore topics of special interest not covered by existing courses", and FOR mini-courses have "been devised to offer overviews of several subject areas relevant to forestry." Thus, we will have five weeks together to gain a basic understanding of the many practices encompassed by the interdisciplinary field of agroforestry. Students are expected to take active roles in the course, e.g. finding and reading appropriate literature, presenting case studies, leading and participating in discussions.

Week 1, 23 August:
- Lecture providing a comprehensive view of agroforestry (definitions, classifications, examples)
- Distribution of USDA National Agroforestry Center "Agroforestry Notes"
- Assignment of case study papers

Week 2, 30 August:
- Student presentation of case studies
- Each student will make a 15-min oral report presenting a case study of an agroforestry system or practice, followed by five min for discussion. The report will be based on one central manuscript, will draw from additional sources relevant to the subject, and will minimally include:
    - Full citation
    - Complete description of the practice/system
    - Explanation of its positive and negative features
    - Description of successes/failures in its implementation
    - Speculation as to its future promise (or lack thereof)
- A short written summary is to be submitted for distribution to the class, including at least one literature citation relevant to the case study and not provided in course materials

Week 3, 13 September:
Lecture and discussion regarding tree-crop interactions within agroforestry systems

Week 4, 20 September:
- Farm visit (Efland NC) to see early implementation stages of agroforestry practices
- Based on the visit, each student will write a brief paper summarizing the various agroforestry practices seen and the pros and cons of each. What could be done differently or added to the system?

Week 5, 27 September: Examination

Class grade will be derived equally from class participation, case study oral presentation, farm visit report, and exam grade.

References
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Definitions of Agroforestry
Editors. 1982. What is Agroforestry. Agroforestry Systems 1:7-12.

Definition and history of agroforestry
Gordon, AM, SM Newman, PA Williams. 1997. Temperate Agroforestry: An overview. In: Temperate Agroforestry Systems. AM Gordon, SM Newman (eds). CAB International, New York:1-8.

Agroforestry concepts (intensive, intentional, integrated, interactive), practices in USA, benefits
Gold, MA, WJ Rietveld, HE Garrett, RF Fisher. 2000. Agroforestry nomenclature, concepts, and practices for the USA. In: North American Agroforestry: An Integrated Science and Practice. HE Garrett, WJ Rietveld, RF Fisher (eds). American Society of Agronomy, Inc, Madison, Wisconsin:63-77.

General description of arrangements and benefits of MPTs in agroforestry
Burley, J. 1987. Exploitation of the potential of multipurpose trees and shrubs in agroforestry: In: Agroforestry – A decade of development. HA Steppler, PKR Nair (eds). International Council for Research in Agroforestry, Nairobi:273-286.

Classifying agroforestry practices and systems
Nair, PKR. 1993. Classification of agroforestry systems. In: An Introduction to Forestry. Kluwer Academic Publishers, Boston:21-37.

Development of agroforestry in USA
Lassoie, JP, LE Buck. 2000. Development of agroforestry as an integrated land use management strategy. In: North American Agroforestry: An Integrated Science and Practice. HE Garrett, WJ Rietveld, RF Fisher (eds). American Society of Agronomy, Inc, Madison, Wisconsin:1-29.

Description of agroforestry systems in North America
Williams, PA, AM Gordon, HE Garrett, L Buck. 1997. Agroforestry in North America and its role in farming systems. In: Temperate Agroforestry Systems. AM Gordon, SM Newman (eds). CAB International, New York:9-83.

Case Study References
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Budowski, G. 1987. Living fences in tropical America, a widespread agroforestry practice. In: Agroforestry: Realities, Possibilities and Potentials. H Gholz (ed). Martinus Nijhoff Publishers, Boston:169-178. **– tropical/Costa Rica/living fences –**

Fernandez, ECM, A Oktingati, J Maghembe. 1986. Los huertos familiares de los chagga: Un sistema agroforestal de cultivos en estratos multiples en el monte Kilimanjaro (norte de Tanzania). In: Sistemas Agroforestales. OTS and CATIE, San Jose, Costa Rica:375-389. **– tropical/Tanzania/home gardens –**

Hawke, MF. 1991. Pasture production and animal performance under pine agroforestry in New Zealand. For Ecol Manage 45:109-118. **– temperate/New Zealand/silvopasture –**

Hill, DB, TC Webster. 1995. Apiculture and forestry (bees and trees). Agroforestry Systems 29:313-320. **– temperate/bees –**

Kerkhof, P. 1990. Majjia Valley windbreak project, Niger. In: Agroforestry in Africa – A Survey of Project Experience. F Foley, G Barnard (eds). Panos Publications Ltd, London:113-123. **– tropical/Niger/windbreaks –**

Soemartwoto, O. 1987. Homegardens: A traditional agroforestry system with a promising future. In: Agroforestry: A Decade of Development. HA Steppler, PKR Nair (eds). ICRAF, Nairobi, Kenya:157-170. **– tropical/Indonesia/home gardens –**

Yu, G, Y Yu, J Fu, G Sun, F Han. 1991. Investigation on Paulownia-medicinal plants intercropping model systems in Bozhou. In: Agroforestry Systems in China. Z Zhu, M Cai, S Wang, Y Jiang (eds). Chinese Academy of Forestry, Singapore:93-96. **– temperate/China/intercropping/medicinals –**