

ARE 425 Contracts and Organizations in Agriculture

Fall 2018: Tuesdays & Thursdays, 3:00-4:15 PM, 1150 Nelson Hall.

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Course Description:

This course deals with agricultural contracts and organizational structures in agriculture and food industries. The covered material relies on the economic theory to explain observed empirical phenomena. The approach also relies on the use case studies of different contractual arrangements observed in the U.S. agriculture and food sectors. The content delivery consists of instructor's lectures, guest lectures and class discussions. Grading is based on exams, class project (term paper), homework assignments and class participation.

Prerequisites:

Intermediate microeconomics (ARE/EC 301) or an equivalent course from another institution is required. This requirement could be waived only by the instructor.

Course Objectives:

In contrast to the historical reliance on spot or cash markets, various type of contracts as hybrid organizational forms are becoming increasingly popular in many sectors of agriculture, food industries and elsewhere. The main objective of the course is to educate students about the role and functioning of contracts as hybrid organizational forms that span the space between markets and firms. The main objective of the course is to train students in economics of contracts thereby preparing them to successfully compete in modern job markets.

Student Learning Outcomes:

At the conclusion of this course, students are expected to be able to:

- explain the difference between the transactions cost and agency theories of the firm,
- identify the problems associated with asymmetric information;
- explain the role contracts play in the organization of modern agriculture and food industries,
- compare and explain the difference between production and marketing contract,
- understand the difference between a profit maximizing firm and a cooperative,
- design a payment scheme that would correctly align the incentives of contracting parties in light of asymmetric information problems.

Readings:

Regrettably, there is no single textbook for this course, so the readings will include various chapters from different books and scientific journal articles, all of which will be timely provided via Wolfware/Moodle. Students are strongly encouraged to take comprehensive lecture notes as these will serve as the principle guide when studying for the exams.

Policies and Procedures:

1. Attendance.

- a. You are allowed to have 1 unexcused absence during the entire semester. For each additional unexcused absence, you will lose 1% of the grade up to maximum of 5%. For more then 6 unexcused absences you will receive a final grade F for the course.
- b. Documented excused absences should be presented to the instructor. For a full statement of the university attendance policy see:
<<https://policies.ncsu.edu/regulation/reg-02-20-03>>.

2. Calculation of course grade. A weighted average grade will be calculated as follows:

a. Midterm exam	25%
b. Final exam	30%
c. Term paper	30%
d. Homework assignments	15%
TOTAL	100%

One should expect the following performance/grade schedule:

$97 \leq A+ \leq 100$; $93 \leq A < 97$; $90 \leq A- < 93$

$87 \leq B+ < 90$; $83 \leq B < 87$; $80 \leq B- < 83$

$77 \leq C+ < 80$; $73 \leq C < 77$; $70 \leq C- < 73$

$67 \leq D+ < 70$; $63 \leq D < 67$; $60 \leq D- < 63$

$0 \leq F < 60$.

Note: I do not curve grades in this course. It is theoretically possible for everyone in the class to get an A (or an F). Your performance depends only on how you do, not on how everyone else does. It is therefore in your best interest to help your classmates within the limits of the academic integrity policy.

3. **Electronic devices.** The electronic devices such as cell phones and laptops cannot be used during lectures. Texting, twitting, checking emails or any other online use of such devices, if detected by the instructor, will be treated as an unexcused absence. There could be rare exceptions to this general rule expressly granted by the instructor for the purposes of instruction.

Exams. There will be two exams in the course: a midterm and a final. The exams will be based on understanding the basic theoretical concepts developed in the course and will consist of a combination of short essays and problem solving questions.

Class project (term paper). The term paper format will be finalized based on students' backgrounds and interests. The detailed outline and instructions related to class project will be provided at a later date.

Tentative Course Outline and Reading Assignments:

Week 1: Introduction: Organizing agricultural production and marketing

- MacDonald, J. et al. Contracts, Markets and Prices: Organizing the Production of Agricultural Commodities. USDA-ERS, Agricultural Economic Report Number 837, Washington D.C. November 2004. (CMP), Chapter 1.

Week 2: The use of contracts in agriculture: and overview

- MacDonald, J. and P. Korb (2011), *Agricultural Contracting Update: Contracts in 2008*. USDA Economic Research Service. Economic Information Bulletin No. 72. Feb. 2011.

Week 3: Introduction to Theories of the Firm

- 3.1. Relationship between ownership and control
- 3.2. Make vs. buy problem
- 3.3. Models of organization
- Eaton, B.C., D.F. Eaton and D.W. Allen (2002), *Microeconomics*, 5th edition, Prentice Hall, Chapter 19: 596-623.

Week 4: Transactions cost approach to contracting and organization

- Coase, R. (1937), The Nature of the Firm, *Economica*, Vol. 4 (Nov. 1937): 386-405
- Coase, R. (1960), The Problem of Social Cost, *The Journal of Law and Economics*, Vol. 3 (Oct. 1960): 1-44.
- Vavra, P. (2009), "Role, Usage and Motivation for Contracting in Agriculture", *OECD Food, Agriculture and Fisheries Working Papers*, No. 16, OECD Publishing. doi: 10.1787/225036745705

Week 5-6: Agency theory approach to contracting

- 5.1. Decision making under uncertainty

- 5.2. Principal-agent model
- 5.3. Problem of moral hazard
- 5.4. Problem of adverse selection

- Perloff, J.M. Microeconomics. Addison, Wesley, Longman, Inc. 1999, Chap.17: 620-633.
- Perloff, J.M. Microeconomics. Addison, Wesley, Longman, Inc. 1999, Chap.20: 726-754.
- Akerlof, G.A. “The Market for “Lemons”: Quality Uncertainty and the Market Mechanism.” *The Quarterly Journal of Economics*, Vol. 84 (August 1970): 488-500.

Week 7: Agrarian contracts

- 6.1. Land contracts
- 6.2. Equipment and custom contracts
- 6.3. Labor contracts

- Allen, D. and D. Lueck. Agricultural Contracts. In C. Menard and M. Shirley (eds.) Handbook of New Institutional Economics, Chapter 18, pp. 465-490.
- Akerberg, D. and M. Botticini. The Choice of Agrarian Contracts in Early Renaissance Tuscany: Risk Sharing, Moral Hazard or Capital Market Imperfections. *Explorations in Economic History*, Vol. 37 (2000): 241-257.

Week 8: Production and marketing contracts

- 8.1. History and explanation of swine industry contracting in North Carolina
- 8.2. The comparison of production and marketing contracts

Week 9: Agricultural Cooperatives

- Royer, J.S. The Theory of Agricultural Cooperatives: A Neoclassical Primer. DigitalCommons@University of Nebraska – Lincoln, November 2014.

Week 10: Relative performance based production contracts

- 7.1. Why production contracts?
- 7.2. Why tournaments?

- Knoeber, C.R. A Real Game of Chicken: Contract, Tournaments, and the Production of Broilers. *Journal of Law, Economics and Organization*, Vol. 5 (1989): 271-292.
- Levy, A. and T. Vukina. The League Composition Effect in Tournaments with Heterogeneous Players: An Empirical Analysis of Broiler Contracts. *Journal of Labor Economics*, Vol. 22 (2), 2004: 353-377.

- Vukina, T. and X. Zheng. Bargaining, Search, and Price Dispersion: Evidence from the Live Hogs Market. *Agricultural and Resource Economics Review*, Vol. 39 (October 2010): 534-546.
- Vukina, T. Quality Differences and Risk Shifting Associated with Alternative Marketing Arrangements in the Swine Industry. *Journal of Food Distribution Research*, Vol. 39 (2), (July 2008): 77-91.

Week 11: Market Power and Hold-up

- Vukina, T. and P. Leegomonchai. Oligopsony Power, Asset Specificity and Hold-Up: Evidence from the Broiler Industry. *American Journal of Agricultural Economics*, Vol. 88 (3), (August 2006): 589-605.
- MacDonald, J.M. and N. Key. Market Power in Poultry Production Contracting? Evidence from a Farm Survey. *Journal of Agricultural and Applied Economics*, Vol. 44 (November 2012): 477-490.

Week 12: Livestock contracts and environmental externalities

- Vukina, T. The Relationship between Contracting and Livestock Waste Pollution. *Review of Agricultural Economics*, Vol. 25 (1), 2003: 66-88.
- Palmquist, R. B., F. M. Roka, and T. Vukina. Hog Operations, Environmental Effects, and Residential Property Values. *Land Economics*, Vol. 73 (1), 1997: 114-124.

Week 13: Franchising Contracts

- Lafontaine, F. Agency Theory and Franchising: Some Empirical Results. *Rand Journal of Economics*, Vol. 23 (No. 2): 1992: 263-283.

Week 14 - 15: Guest Lectures – case studies (TBA)