

Agricultural Economics 4113

AGRICULTURAL PRICE ANALYSIS AND FORECASTING

Spring 2016

Lecture: AGRI 301A; Tuesday and Thursday 8:25-9:15 a.m.

Laboratory: HOEC 28; Tuesday 3:30-4:45 p.m.

Instructor

Professor Bruce L. Dixon

Department of Agricultural Economics and
Agribusiness

Office: Room 215, Agriculture Building

Phone: 575-4408

e-mail: BDIXON@uark.edu

COMPUTER SOFTWARE: (Recommended) EViews® 8 Student Version Software. This software is available at: <http://www.eviews.com/EViews8/EViews8Student/evstud8.html> Earlier versions will work as well but Versions 7 and 8 are for Windows and Macs. The campus bookstore also has versions of EViews® 7 for sale. The version from the website above can only be installed on one computer and that cannot be a public access computer. EViews® 8 is on computers in HOEC 28 and two AGRI 218A computers have EViews® 7 (which will work seamlessly with version 8 programs) so purchasing it is not required. But purchasing the Student Version would allow access away from the campus.

TEXTBOOKS (Recommended): W. G. Tomek and H. M. Kaiser (T & K) . *Agricultural Product Prices*. Fifth ed. Cornell University Press. Ithaca and London. 2014.

ARTICLES AND CHAPTER (Accessible via URL or eReserves in Blackboard)

Alviola, P., R. M. Nayga, Jr., M. Thomsen, D. M. Danforth and J. Smartt. 2014. "The effect of fast-food restaurants on childhood obesity: A school level analysis". *Economics and Human Biology*. 12:110-119.

Goodwin, J. W. Chapter 3, pp. 23-40 in J. W. Goodwin, *Agricultural Price Analysis and Forecasting*. Jon Wiley & Sons, Inc. New York 1994.

Liang, Y., J. C. Miller, A. Harri, and K. H. Coble. 2011. "Crop Supply Response under Risk: Impacts of Emerging Issues on Southeastern U. S. Agriculture." *Journal of Agricultural & Applied Economics*. 43(2):181-184. Accessible at: <http://ageconsearch.umn.edu/handle/104615> (You must hit the View/Open tab at the lower right of the screen.)

McKenzie, A. and N. Singh. 2011. "Hedging Effectiveness Around U.S. Department of Agriculture Crop Reports." *Journal of Agricultural & Applied Economics*. 43(1):77-94. Accessible at: <http://ageconsearch.umn.edu/handle/100635>.

USDA. World Agricultural Supply and Demand Estimates Report (WASDE) available at: <http://www.usda.gov/oce/commodity/wasde/> Students will be notified when to access these reports and the month to read.

ALTERNATIVE TEXTBOOK:

Goodwin, J. W. *Agricultural Price Analysis and Forecasting*. Jon Wiley & Sons, Inc. New York 1994.

REQUIRED NOTES:

Much of the reading materials for this course are lecture notes created by Prof Dixon. These will be made available to you via .pdf files sent to you periodically. The instructor reserves the right to change the order and pace of material presentation in response to the rate at which material is covered in the class.

Calendar Dates for AGEC 4113:

EXERCISES

Exercise	Subject Matter	Date Assigned	Date Due
#1	Working with Index Numbers	Jan 19	Jan 29
#2	Trend-Regression Analysis	Feb 2	Feb 12
#3	Modeling Cycles	Feb 16	Feb 26
#4	Modeling Seasonality	Mar 8	Mar 11
#5	Estimating Supply and Demand: Multiple Linear Regression	Mar 15	Apr 8

TERM PAPER

Element	Date Due
Price and Production Information for the Selected Commodity (Conference during Week)	Feb 8 - Feb 12
Trend Analysis (Analysis <u>and</u> First Draft of Narrative)	Feb 23
Cyclical Analysis (Analysis <u>and</u> First Draft of Narrative)	Mar 18
Data for Variables Selected for Supply-Demand Analysis (Conference During Week)	Apr 4 - Apr 8
Completed Term Paper	May 5

EXAMINATIONS

FIRST HOUR EXAMINATION	Mar 1
SECOND HOUR EXAMINATION	Apr 12
FINAL EXAMINATION	May 10 (8:00-10:00 a.m.)

GRADING

First Hour Examination -	15 percent
Second Hour Examination -	20 percent
Final Examination -	25 percent
Term Paper -	25 percent
Exercises and Attendance -	15 percent
Total	100 percent

Undergraduate students may work in teams of two people on the exercises and the term paper. The teams should be the same for both homework and the term papers. Exams will be taken individually by each student in the class. Because computer literacy is one of the skills obtained in this class, the second hourly exam will be given in the computer laboratory and will require computations on the computer. Thus both people on the team must learn Excel spreadsheet and EViews skills. Also, there is no “extra credit” work that can be performed after the final exam is taken to improve a class grade. When the final exam is handed in, the student has completed the course.

Graduate students are held to a higher standard than undergraduate students. Graduate students may do the homework in teams of two but each graduate student must write their own term paper. Students will present their term papers orally to the class the week of May 3-5.

Note: Homework exercises are graded on a full credit, half-credit or no credit basis. Points are assigned for each exam and the term paper and then the points for each test, the term paper and the exercises are averaged. The letter grades are distributed on the basis of the instructor's evaluation of the performance of the class.

Other Information

Escape Clause: The instructor reserves the right to alter the order and topics covered in the event of having to respond to unexpected events or opportunities. Only minor adjustments are likely.

Office Hours: Formally my office hours are Tuesday, 1:30-2:30 p.m. and Wednesday, 10:00-11:00 a.m. However, feel free to stop in and ask questions anytime the light is on in my office. If I am busy when you stop by, we will arrange for a mutually convenient time to meet. If you set an appointment and subsequently find out you cannot make it, please call my office and leave a message to that effect or e-mail me.

Homework: Exercises will involve the computer. Students may work in teams of two and with other students in the class on homework exercises since group interaction often leads to greater learning for all involved. It should be emphasized that the homework exercises are long and, unless you are exceptionally computer literate, you should not expect to be able to complete an exercise in one 75 minute laboratory session.

Examinations: There will be two midterm examinations and one final examination. All exams will be written and they will be closed book. The second midterm requires use of the computers in the computer laboratory. Any make-ups of the midterms, due to not taking the exam on the day given, will be oral at a mutually convenient time for student and instructor. A make-up will only be given if a student does not take it for medical emergency (personal or close family), religious reasons or approved (in advance) absence.

Term Paper: Each student or student team will be required to write a term paper on an agricultural commodity of their choice. But producer pork prices cannot be used since they form the backbone of class homework. There will be two conferences with the instructor to discuss the topic and appraise progress. A handout gives more detail about how to write this paper. A very precise schedule is being given in which various phases of the term paper are due. It is strongly preferred that narrative sections be typed although equations can be written in free-hand or copied in from computer printouts. **Students are urged to complete the various parts of the term paper on time. Points will be deducted for being late. In addition, the instructor has a pathological aversion to course incompletes and will only grant an incomplete for compelling reasons such as medical problems of self or immediate family members**

(parents, spouse, children or other dependents). Being "busy" with other classes or a job are not legitimate excuses.

Attendance Policy: Attendance is compulsory when: a guest speaker is making a presentation, fellow students have been assigned to discuss certain material, and fellow-students are presenting their term papers. There will be three days of student presentations and two days for a guest speaker. Graduate students will also be asked, in advance, to discuss some part of a reading. Tentatively, we are scheduled to have our guest speaker on February 23. For each unexcused absence, 1.25 percentage points will be deducted from the Exercise and Attendance score which has a maximum of 15 percentage points. Missing more than 10 minutes of any of these periods means you have missed the whole class in terms of point deductions. Despite the lack of a “forced” attendance policy, the instructor takes a dim view of students missing class and the instructor will not make his notes available nor give private tutorials for students who missed class. In particular, students who miss labs do so at their peril.

Students with Learning Disabilities. Students who have learning disabilities will be accommodated as indicated by the campus policy on disabilities. Students with learning disabilities are urged to confer with the instructor as early in the semester as possible to arrange appropriate accommodation. It is the student’s responsibility to initiate this contact.

Inclement Weather Policy: If the University is open, lecture or lab will be given. However, each student must assess their own personal risk of coming to campus and moving around on campus. If there is inclement weather and the student believes it is unsafe for them to come to campus, then they should not come to campus. No assignment would be graded down in such a case and an exam would be re-scheduled. During inclement weather the instructor will try to communicate with students via e-mail.

Plagiarism:

“The [provost’s website](#) encourages all faculty members to include the following language in their course syllabi:

As a core part of its mission, the University of Arkansas provides students with the opportunity to further their educational goals through programs of study and research in an environment that promotes freedom of inquiry and academic responsibility. Accomplishing this mission is only possible when intellectual honesty and individual integrity prevail.

To avoid plagiarism, students must clearly understand their professors’ expectations for academic integrity. Students also must understand the rules and regulations in the university code. We encourage students to read the *Catalog’s* entire section on Academic Integrity, pages 401-04. In this part of the handout, we highlight a few important areas of the code related to plagiarism.

As defined under Level One Violations, plagiarism includes the submission of a paper without proper attribution for sources used in the paper. So, if your paper on global warming incorporates ideas from Al Gore's book, but you don't provide citations in the text for Mr. Gore's ideas, and you fail to document the use of his book in your bibliography, then your lack of attribution is a

Level One Violation. Students should also take care to read the final sentence in the “plagiarizing” passage of the Academic Integrity Policy: students are warned that it is *their* responsibility to "understand the methods of proper attribution" and to provide attribution in all papers submitted. Ignorance of proper methods of attribution is not an acceptable defense against a plagiarism allegation.”

From: <http://elc.uark.edu/qwc/wp-content/uploads/2009/09/08-Avoiding-Plagiarism.pdf> (page 1)

EMERGENCY PROCEDURES

Many types of emergencies can occur on campus; instructions for specific emergencies such as severe weather, active shooter, or fire can be found at emergency.uark.edu.

Severe Weather (Tornado Warning):

- Follow the directions of the instructor or emergency personnel
- Seek shelter in the basement or interior room or hallway on the lowest floor, putting as many walls as possible between you and the outside
- If you are in a multi-story building, and you cannot get to the lowest floor, pick a hallway in the center of the building
- Stay in the center of the room, away from exterior walls, windows, and doors

Violence / Active Shooter (CADD):

- **CALL-** 9-1-1
- **AVOID-** If possible, self-evacuate to a safe area outside the building. Follow directions of police officers.
- **DENY-** Barricade the door with desk, chairs, bookcases or any items. Move to a place inside the room where you are not visible. Turn off the lights and remain quiet. Remain there until told by police it's safe.
- **DEFEND-** Use chairs, desks, cell phones or whatever is immediately available to distract and/or defend yourself and others from attack.

COURSE SYLLABUS--CALENDAR

<u>Date</u>	<u>Lecture Topic</u>	<u>Reading Assigned</u>	<u>Remarks</u>
Jan 19	Introduction to Course, Role of Prices LABORATORY: How to Use Spreadsheets and Electronic Data Bases	(T & K) Chapter 1	Assign Exercise 1: Working with Index Numbers and Data Collection
Jan 21	Price Determination and Price Discovery	(T & K) pp.75-85; 223-234.	
Jan 26	Using Index Numbers to Correct for Inflation LABORATORY: Index Numbers	(Goodwin) pp. 24-40.	
Jan 28	Movement of Prices Over Time - Analysis of Trends	(T & K) pp. 168-169; 174-177.	
Jan 29			Exercise 1 Due
Feb 2	Least Squares Regression Analysis for Defining Trends and Relationships Between Data Series LABORATORY: Least Squares Regression Analysis for Estimating Trends and Relationships Between Data Series - Introduce EViews®	Class notes (Regression)	Assign Exercise 2: Trends
Feb 4	Methods of Statistical Hypothesis Testing	(T & K) pp. 350-353; class notes	
Feb 9	Least Squares Regression Analysis for Defining Trends and Relationships Between Data Series LABORATORY: Least Squares Regression Analysis for Defining Trends and Relationships Between Data Series	Class notes (Regression)	Conference during week regarding Price Data for Selected Commodity 2/8-2/12
Feb 11	Autocorrelation	Class notes (Autocor.)	

<u>Date</u>	<u>Lecture Topic</u>	<u>Reading Assigned</u>	<u>Remarks</u>
Feb 12			Exercise 2 Due
Feb 16	Movement of Prices Over Time - Cycles LABORATORY: Movements of Prices Over Time - Analysis of Cycles	(T & K) pp. 177-185; Class notes (Time Series)	Assign Exercise 3: Cycles
Feb 18	Movement of Prices Over time - Measuring Cycles	Class notes (Time Series)	
Feb 23	Guest Speaker—Ms. Becky Cross the Director, USDA/NASS Delta Regional Office LABORATORY: Movement of Prices Over Time - Analysis of Cycles		Trend Analysis Due for Term Paper -- INCLUDING narrative
Feb 25	Movement of Prices Over Time - Measuring Seasonality	(T & K); pp. 168-174	
Feb 26			Exercise 3 Due
Mar 1	Review for Hourly Exam FIRST HOUR EXAMINATION		AGRI 301A (3:30 p.m.)
Mar 3	Movement of Prices Over time - Conceptual Basis for Seasonality	Class notes (Binary Variables)	
Mar 8	Supply Relationships: Theoretical Basis LABORATORY: REVIEW OF FIRST HOUR EXAMINATION AND SEASONALITY	(T & K) Chapter 2	Assign Exercise 4: Seasonality
Mar 10	Demand Relationships: Theoretical Basis	(T & K) Chapter 4	
Mar 11			Exercise 4 Due
Mar 15	Estimation of Demand and Supply LABORATORY: Exercise 5	Class Notes (Estimating Supply & Demand)	Assign Exercise 5: Estimating Supply and Demand Equations
Mar 17	Estimation of Demand and Supply	Class Notes	

<u>Date</u>	<u>Lecture Topic</u>	<u>Reading Assigned</u>	<u>Remarks</u>
Mar 18			Cyclical Analysis for Term Paper Due INCLUDING narrative.
Mar 29	Estimation of Demand and Supply LABORATORY: Continue Exercise 5	Class Notes	
Mar 31	Estimation of Demand and Supply: Alternative Models	Class Notes	
Apr 5	Estimation of Demand and Supply: Alternative Models LABORATORY: Complete Exercise #5	Class Notes	Conference on Supply-Demand model during this week, 4/4-4/8.
Apr 7	Forecasting Spatial Price Relationships	(T & K); pp. 145-156.	
Apr 8			Exercise 5 Due
Apr 12	Review for Hourly Exam Second Hourly Exam		HOEC 028 (3:30 p.m.)
Apr 14	Hedging Effectiveness USDA Agricultural Projections	McKenzie and Singh	
Apr 19	USDA Agricultural Projections LABORATORY: RETURN SECOND EXAM. WORK ON TERM PAPER.	ERS/USDA	
Apr 21	USDA Agricultural Projections	ERS/USDA	
Apr 26	Crop Supply Response LABORATORY: Work on Term Paper.	Liang et al.	
Apr 28	Crop Supply Response (cont'd.)		
May 3	Student Presentations (lecture and lab)		
May 5	Student Presentations		Term paper due by 4:30 p.m.
May 10	Final Exam (8:00 a.m. - 10:00 a.m.)		AGRI 301A