STAFF PAPER

THINKING CRITICALLY ABOUT AGRICULTURAL ISSUES

ANDREW P. BARKLEY

JUNE 1994
No. 94-10

Department of Agricultural Economics
Kansas State University

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Contribution No. 94-573-D from the Kansas Agricultural Experiment Station, Kansas State University, Manhattan, KS 66506-4008.

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THINKING CRITICALLY ABOUT AGRICULTURAL ISSUES.

Abstract.

The agricultural sector of the United States provides an enormous number of issues that require critical thought and evaluation, such as low farm prices, soil depletion, free trade agreements, food safety, rural depopulation, water quality, and farm subsidies. Individuals addressing these issues bring with them different backgrounds, experiences, and perspectives. Often, these differences result in divergent and conflicting opinions on agricultural issues. The objective of this paper is to describe how critical evaluation of agricultural issues in the classroom can lead to greater comprehension, refinement of opinions and ideas, and a passion for lifelong learning.

Class discussions and weekly writing assignments on agricultural issues can be used effectively to increase awareness and knowledge of the many perspectives that exist on agricultural issues. Challenging students to write an essay from a perspective different than their own, reading and evaluating a book that provides an "urban" perspective on agriculture, or interacting with an expert on sustainable agriculture can provide an exhilarating experience for many students. Knowledge concerning opposing sides of an issue provides a solid foundation for the development, reevaluation, and refinement of their own values and beliefs.

The process of critical thinking about agricultural issues challenges students to become actively involved in lifelong learning. The challenge of understanding why individuals and groups have such widely divergent opinions on the same issue can provide a stimulating intellectual environment that students carry into their career and life. Ideas from and past experiences with a senior-level discussion course on critical thinking about agricultural issues are summarized and evaluated in this paper.

THINKING CRITICALLY ABOUT AGRICULTURAL ISSUES.

ag·ri·cul·tur·al (ag·ri-kul'cher·el) *adjective.* Pertaining to the science, art, and business of cultivating the soil, producing crops, and raising livestock useful to man; farming.

is·sue (ish'oo) *noun.* **1.a.** A point of discussion, debate, or dispute. **b.** A matter of wide public concern. **c.** The essential point; crux. **d.** A culminating point leading to a decision.

--The American Heritage Dictionary

I. INTRODUCTION.

The agricultural sector of the United States provides abundant food and fiber to consumers throughout the globe. As with any successful endeavor, the agricultural economy is surrounded by an enormous number of issues that require critical thought and evaluation. A short list of important and interesting issues includes: persistently low farm incomes, soil depletion, free trade agreements, food safety, rural depopulation, water quality, and the subsidization of farm family incomes. Individuals addressing these issues bring with them different backgrounds, experiences, and perspectives. Often, these differences result in divergent and conflicting opinions on agricultural issues. Bringing together persons with different perspectives to discuss timely agricultural issues often results in an exhilarating and fruitful learning experience. Sharing ideas and convictions with others fosters critical evaluation and enhances understanding of the numerous scientific, economic, and social issues that face American agriculturists in today's increasingly dynamic and international environment.

The objective of this paper is to describe how critical evaluation of agricultural issues in the classroom can lead to greater comprehension, refinement of opinions and ideas, and a passion for lifelong learning. In what follows, I use the dictionary definitions above to organize my thoughts and experiences gleaned from teaching critical thinking and problem-solving skills to seniors enrolled in the College of Agriculture at Kansas State University.

My interest in critical thinking in the classroom was originally sparked by attending a teaching symposium entitled, "Strategies for Teaching and Learning" (Buelow). This interest turned to enthusiasm during the development of a senior-level discussion class in agricultural and natural-resource policy issues. I am hopeful that my excitement for the incorporation of critical analysis and problem solving into the classroom will be obvious in what follows.

II. THINKING CRITICALLY ABOUT AGRICULTURE.

The definition of the word "agricultural" emphasizes that food and fiber production is a combination of science, art, and business. Integration of these apparently disparate aspects of agriculture provides a foundation upon which carefully reasoned and articulated opinions and conclusions can be formulated. Below, I provide anecdotes about classroom techniques and experiences that characterize my attempts to provide an integrated approach to learning more about agricultural and rural matters.

A. Critical Thinking and the Science of Agriculture.

The usefulness of science is, in my opinion, the application of scientific methodology to real-world issues. Course work and examinations often require the acquisition of facts or scientific skills. After graduation, students will find the need to apply techniques and tools to complex and challenging situations. Homework assignments that reflect the uncertain nature of agricultural production and agribusiness can better prepare students for career and life experiences that do not have clear-cut solutions.

Weekly homework assignments that require critical thinking form a solid underpinning for problem-solving skills. One method of integrating problem solving into course work is to assign short statements that require an answer of true, false, or uncertain, with a brief explanation (See Appendix A). Statements about real-world events, such as the impact of the dissolution of the Soviet Union on American wheat producers, the effectiveness of food aid to Somalia, or the economic consequences of the BTU tax proposal (rejected in 1993), require students to evaluate both benefits and costs, rather than memorize textbook answers to hypothetical problems.

I believe that the key to learning is the introduction of uncertainty into the classroom. Restated, there is an optimal level of confusion in the learning process. Many scientific, economic, and social issues do not have definitive solutions. When asked to compose clear answers to uncertain situations, students

(and instructors) are forced to clarify their views and approach problems using an organized, consistent methodology. Essay questions that have no single "correct" answer can be intimidating and sometimes frustrating to students, particularly at the beginning of a course. This is the point of the exercise. My firm belief is that students will "rise to the occasion" when encouraged in an enthusiastic fashion. There is no higher satisfaction than that which comes from resolving a difficult problem.

Encouragement can be given in the form of instructor comments on each short essay, providing feedback to students as they struggle with the challenge of higher-order learning. Questions that economists and scientists do not know the answers to often provide the base for higher-order learning. One such question is, "Why does the federal government subsidize agriculture?" Many students become excited when told that there is no solid answer to this seemingly simple question. Economists have many theories about the causes of government regulation, but no concrete answers.

Students gain an enormous amount by working through ideas and possible solutions to weekly homework assignments as a group. Students often are excited when two very different solutions (true, false, or uncertain) to a question both receive full credit. As long as careful thought and scientific principles are applied in a coherent fashion, multiple solutions to real-world problems can be "correct." After two or three assignments, enthusiasm for problem solving and learning overtakes any initial frustration associated with the challenging homework format.

Graduating seniors are particularly inquisitive about learning the limitations of science. Scientific reductionism often can overshadow the usefulness and applicability of science to societal problems, as emphasized by Herrett:

> Science has become big business, which seems to place increasing demands on discipline-based training. This is brought about by demands that include the cultural, ethical, and economic implications of the impact of the science. Society no longer merely accepts the notion that all new technology is good and therefore good for people. Scientists must be trained to integrate their discoveries into the big picture. This clearly implies that there must be an integration of information from a variety of sources, and one trained in a disciplinary style simply cannot respond to this challenge.

Instructors can provide a classroom environment that is conducive to critical thinking by asking difficult questions and remaining flexible enough to interpret and assign grades to a diversity of responses. Higher-order learning is difficult and challenging for both students and instructors, but the benefits of addressing what Herrett identified as the "big picture" can be very rewarding.

B. Critical Thinking and the Art of Agriculture.

One aspect of learning and personal growth that is often lacking in formal education is the creative component, or "art" of living and working with a myriad of ideas and opinions. Critical thinking is not an activity that can be practiced in isolation. Incorporating diverse viewpoints requires exposure to other views. During a class discussion on government spending, I asked for a show of hands of individuals who favored the continuation of government subsidies to family farmers. This question is

particularly contentious in Kansas, where agriculture is divided in roughly equal proportions between livestock and crop production. Cattle producers are typically against government regulation of any sort, whereas many crop producers have come to rely on government subsidies to maintain their way of life. As was expected, the class was divided: one-third took an antisubsidy stance, one-third favored continuation of farm subsidies, and one-third were neutral (or averse to conflict!). At the spur of the moment, I asked if a formal debate between the two sides would be worthwhile. The class determined that this would be an interesting experiment, and we held the debate during the next class period, after each side had studied the arguments for and against farm subsidies (incidentally, all of the individuals on the antisubsidy side wore cowboy boots).

The next class period was devoted to the presentation of opening arguments, questions to both sides, and closing arguments (See Appendix B). The "neutral" students served as judges, who cross-examined both sides and were required to "vote" on which side presented a more convincing case. The judges found that the federal government should continue the subsidization of agriculture. The result of the debate gives much insight into the answer to the question posed in the previous section, "Why does the federal government subsidize agriculture?"

One student's response to the debate was, "I did not realize that many of the arguments on both sides were based on emotion rather than facts." Sorting out both sides to a delicate issue causes participants to reflect upon and reevaluate their own

opinions and filter out sound arguments from both sides of the issue. Higher-order thinking requires the development of the "art" of sifting out good arguments from rhetoric. Formal debate is an excellent and exciting format for practicing the art and skill of working with persons who have divergent persuasions and perspectives.

C. Critical Thinking and the Business of Agriculture.

All careers dictate at least a degree of entrepreneurship. The ability to interpret market signals and opportunities is an important aspect of success in today's evolving economic environment. A recent survey of graduates of the College of Agriculture at Kansas State University revealed that over 95 percent of the respondents agreed or strongly agreed that communication, people skills, and problem solving were "important to me in my current position" (Barkley). This strong result implies that courses emphasizing these skills will enhance the ability of agricultural college graduates to succeed in the business world, whether it be on a family farm or in a multinational corporation.

Communication and problem-solving skills demand hard work and practice. Weekly essays can provide the opportunity for students to hone communication skills Requiring students to critically evaluate important issues in short essays can build the confidence that is a prerequisite for successful career performance. Some essay topics are presented in Appendix C. Weekly writing

assignments allow for a flow of communication between students and the instructor. This feedback results in weekly improvement that is obvious to students. Practice at writing, speaking, and discussion result in the achievement of higher levels of self-confidence in business and career skills such as oral and written communication.

III. THINKING CRITICALLY ABOUT ISSUES.

An issue is, by definition, a source of disagreement and conflict. An issue that everyone agreed upon would immediately lose status as an issue. Thus, critical thinking and the evaluation of agricultural issues must be antagonistic. Thomas Stout reports that "I jar students with the cost of their own convictions." Perplexing and emotional issues can be discussed in a productive and mature manner, particularly when class members know each other after spending time in discussions.

A. Issue: A Point of Discussion, Debate, or Dispute.

In my senior-level discussion class, we have spent time on racism, affirmative action, sexism, the decline of family farms, and homosexuality in the military (I should note that we have not touched abortion rights, because a productive discussion might not be forthcoming from such an issue!). Each time an emotion-laden issue surfaces, I worry that some students may become offended at views expressed in the classroom. I have found that I am overly sensitive to this possibility. My conclusion: never fear the

capacity of students to deal with subjects dear to their hearts. The benefits of including ethical issues in the classroom are enormous. Tolerance and listening skills are among the major advantages of providing an atmosphere capable of handling issues considered to be "too personal" for inclusion in formal course work.

B. Issue: A Matter of Wide Public Concern.

Essay topics that seem vague or difficult often result in excellent essays and deep thought (See Appendix C). An example of such an assignment: "Is there a relationship between religion and agriculture?" After reading this assignment, Mark, a junior in agribusiness, came to me perplexed and confused. Mark stated that he had been taught in his agribusiness courses that "agriculture is a business." There was no room for religion in this economic view of food and fiber production. My response to Mark was that he could write an essay that clearly articulated this opinion and provide convincing evidence of the separation of church and farm. Mark left my office feeling a little better, but realizing that he was struggling with a highly complex issue.

I did not see Mark again until the day the essays were due. I eagerly look forward to reading the thought-provoking and highly personal essays that students write. That particular day, I was especially interested in Mark's essay. I quickly read the essay, a very carefully organized composition explaining why production agriculture was inseparable from religion! I checked to make sure

that this was indeed Mark's paper. It was. The paper's clear, forceful style; organization; and content were all excellent, and Mark received a high grade. I remained baffled, however, about why Mark had made a complete turnaround in his views.

When the class met again, I asked Mark why he had changed his mind about the relationship between agriculture and religion. Mark related to me a series of events that I found very intriguing. It seems that Mark had spoken to his parents, his friends, and his high school agricultural teacher. After receiving input from these important sources, Mark came to the conclusion that he disagreed with the "agriculture is a business" point of view. I was thrilled. Mark provided an example of critical thinking that I will cherish forever... a student who took his assignment seriously, challenged his own beliefs, and presented his ideas in a well-crafted essay. To me, Mark's inner struggle is an example of the great rewards of teaching critical thinking.

C. Issue: The Essential Point; Crux.

Graduating seniors are in a period of their lives characterized by major change. Many students look forward to commencement with excitement conditioned by a degree of fear and trepidation. This apprehension results in classroom discussions that deal with the attempt to put past college experiences and future career events into perspective, by getting to the essential points of students' values, expectations, and ambitions.

Anticipation of working for a living, whether it be on a wheat

farm or in a corporate office, results in self-examination and introspection. This line of thought can be encouraged through the requirement of a term paper and class presentation on a topic that is the most important issue, or the crux, of each student's career or life. Topic selection for such an exercise often necessitates deep thinking about the future (See Appendix D). One student, grappling with a job offer from a large multinational agribusiness firm, wrote on the tradeoff between high salaries and perceived quality of life. A recent student body president discussed how personality traits affect career paths. A religious student who was interested in secondary education wrote an excellent paper on religion in the classroom. More conventional topics have included NAFTA, GATT, agricultural trade with Japan, crop insurance, the federal budget deficit, world hunger, and nutritional issues.

An additional requirement is that each student present his/her term paper to the class in a 50-minute exposition. Creativity is encouraged. Discussions, debates, and quizzes have exhibited student competence at leading the class in highly consequential matters. The requirement of importance to the students' lives results in the devotion of much time and energy to the pursuit of excellence in the papers and presentations. What a marvelous reward it is to observe students engage in high-level discussions on issues that capture the most important aspect of their lives and careers.

Cathy, a shy farm wife and mother of two teenagers, came to my office concerned about two things. First, she did not know what

topic to choose for her term paper. Second, she was scared to death of public speaking. She had told the class about a recent farm accident that resulted in a broken back for her 17-year-old son. I asked Cathy what she spent most of her time thinking about when she was not in school. Her concern was farm safety and the possibility of another accident that could occur on her husband's wheat farm. After a serious discussion, she decided to write a term paper on farm safety.

The paper that Cathy produced was both informative and personal. In spite of the success of a well-written paper, Cathy needed encouragement to speak in front of the class for one hour. After much preparation, encouragement, and lack of sleep, Cathy presented a very good talk on farm safety, followed by a meaningful discussion of how farm accidents can be prevented. What a great achievement! Cathy will be able to speak publicly with the confidence that comes from knowing that she held the attention of her peers for an entire hour on the essential points of a subject that is important to her.

D. Issue: A culminating point leading to a decision.

After four years of college, students have mastered the art of learning course material for quizzes and examinations. Many, if not most, seniors have developed the skill of achieving good grades by reporting lecture material and textbook information back to professors. Challenging students to push themselves to higher levels of critical analysis and decision making can result in an

excellent conclusion to a college education. Encouraging the investigation of alternative viewpoints allows students to make informed decisions.

Recently, the livestock industry has come under fire from Jeremy Rifkin, the author of Beyond Beef. Beef is big business in Kansas: more steers are slaughtered in Kansas than in any other state. Rifkin's book is not on the best-seller list in western Kansas. It has the potential to affect agriculture in Kansas through his call for a national boycott of beef.

Many students were shocked to find that Beyond Beef was on the reading list for AGEC 610, Agricultural and Natural Resource Issues. One student informed me that she would enroll in the class only if she were not required to read Beyond Beef. I encouraged her to enroll and asked why she did not want to read the book. She replied that Rifkin was "crazy" and that "everyone knows that the book is full of lies and misinformation." I asked her what was in the book that was incorrect. She did not know. After asking many of her friends about the book, she returned to my office a few days later and concluded that no one who she had asked knew what the book contained and that no one had read the book to find out.

Rifkin does use statistics and previous research to misrepresent the cattle industry. I do not reveal this to students at the beginning of the course, but rather challenge them to tell me what is incorrect about the book. When no answer is forthcoming, students realize that they need to read the book before they can disagree with it.

The student who refused to read Beyond Beef ended up writing her term paper on the subject. She interviewed vegetarians and spoke with experts on food safety. She read Rifkin and received information from the National Cattleman's Association concerning the animal rights movement. She became an expert on what was correct and what was incorrect about the book and what the consequences might be for her future husband's cow-calf operation. In her oral presentation, the student concluded that it is best to "know thy enemy" rather than make a misinformed judgement. Many students reported that they were glad to have the opportunity to learn how to identify illogical conclusions and bad statistics in a purportedly "scientific" study of great importance to the Kansas beef industry. Critical evaluation of this agricultural issue resulted in superior decision making.

IV. CONCLUSIONS.

Challenging students to critically examine the science, art, and business of agriculture results in an intellectual climate that is at times enjoyable and at other times demanding: critical thinking is hard work for both students and instructors. Listening, interpreting, and evaluating other's opinions becomes instinctual for students who have discussed true, false, or uncertain statements about real-world issues; worked together in groups to solve problems; participated in classroom debates; written weekly essays on complex issues; participated in classroom discussions; and devoted much effort to identification of a subject

and development of a meaningful term paper and oral presentation.

Perhaps the most rewarding experience for a teacher is meeting with former students who can't wait to tell you about an issue that was discussed in a college course and has become important in their life or career. This is evidence of a true love of lifelong learning, the ultimate goal of critical thinking. In order to achieve this lofty goal and to provide a stimulating intellectual environment to students enrolled in my classes, I spend a great deal of my time thinking critically about the science, art, and business of thinking critically about agricultural issues.

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APPENDIX A

I. **True, False, or Uncertain.** [10 points; 1 point each]. Indicate whether each of the following is TRUE (T), FALSE (F), or UNCERTAIN (U). Explain your answer briefly. No credit is given without explanation. Late problem sets are marked 50% off.

1. Economic theory predicts that, as the 1996 presidential election approaches, President Clinton will move toward the center of the ideological spectrum.

2. In recent years, many universities have developed videotaped college courses that are transmitted via satellite to students who live and work away from the campuses. Economic theory indicates that this technology will result in fewer students attending classes at the university campuses and a decrease in the demand for professors at these campuses.

3. The development and adoption of high-yielding varieties of wheat result in higher prices received by wheat producers.

4. The agricultural sector of the United States produces a greater supply of food than can be sold at prevailing market prices. The U.S. government donates much of the surplus to low-income nations. The impact of this foreign aid is always beneficial to recipient nations.

5. In the past 20 years, the per capita demand for beef has declined relative to the per capita demand for poultry products because of health concerns about red meat.

6. Subsidizing agricultural incomes through price supports and deficiency payments is beneficial to our society as a whole.

7. The use of ethanol as an alternative fuel source should be legislated by congress.

8. During congressional debate over the 1990 Farm Bill, the current sugar subsidy of 18 cents per pound was contested. Corn producer groups in Iowa and Illinois were strongly opposed to reducing the sugar subsidy by 2 cents per pound.

9. The North American Free Trade Agreement (NAFTA) will benefit all individuals in the agricultural sector of the United States.

10. Suppose that a recent Ph.D. recipient in agronomy is offered a position at the University of Nebraska at $32,000/year. A second opportunity at the University of Minnesota becomes available at $38,000/year. According to economic theory, because the agronomist is rational, she will take the job at St. Paul.

ANSWER KEY

THESE ARE BARKLEY'S ANSWERS... MANY OTHER ANSWERS WILL RECEIVE FULL CREDIT, IF THEY ARE WELL THOUGHT-OUT, CLEAR, AND IN ACCORDANCE WITH ECONOMIC THEORY.

1. TRUE In a simple model, if the objective of the candidates is to maximize the number of popular votes they receive, they will try to locate as close to the center of the political spectrum as they can. Note that this often is criticized as making decisions based on the polls. This strategy becomes much more complicated if we include electoral colleges, H. Ross Perot, and other real-world complexities.

2. TRUE Although it is true that many of the students who take these courses would not enroll at the main campuses, some students will choose to take satellite courses rather than enroll at the main campuses. Assuming constant student/teacher ratios and availability of this technology to many students, then the demand for professors at university campuses will decrease. In the extreme case, we would televise the very best instructor in each subject to all students nationwide!

3. FALSE Higher yields per acre increase the supply of wheat, resulting in lower equilibrium prices for wheat.

4. UNCERTAIN Although the benefits to hungry consumers and low-income families are obvious, food aid results in an increase in the supply of food, which lowers producer prices. This results in a decreased supply of food by producers in the receiving nation.

5. UNCERTAIN This topic is debated hotly within the agricultural economics profession. Some economists argue that the decline in beef demand is due to health concerns. Others argue that it is due to a decrease in the price of chicken relative to beef. In either case, this issue is extremely important to the Kansas economy and deserves further attention.

6. UNCERTAIN Subsidies do benefit agricultural producers, but at the expense of consumers and taxpayers, who pay for the programs. To think about: why is society so willing to subsidize agriculture, when the benefits are concentrated among the largest, wealthiest farmers?

7. UNCERTAIN Corn producers and environmentalists argue that ethanol is an appropriate substitute for gasoline, because ethanol is made from corn and burns cleaner than gasoline. However, the price per gallon is higher for ethanol than for gas. If consumers desire cheap fuel and pollution, gas is the answer. If they prefer cleaner air at the expense of higher fuel costs, ethanol is attractive.

8. TRUE Note that you don't really need any previous knowledge of agricultural policy to answer this question. Corn sweetener is a substitute for sugar: if the price of sugar increases, then Coca-Cola and other users of sugar buy less sugar and more corn sweetener. Corn producers receive a higher price for corn when the price of sugar is held artificially high by the price support.

9. FALSE The NAFTA will benefit some producers and hurt others, depending on whether or not the particular producer is a low-cost producer. NAFTA is expected to benefit food grain and cattle producers, whereas fruit and vegetable producers will most likely be hurt if the agreement is legislated.

10. UNCERTAIN Some persons make career decisions based solely on earnings. However, most individuals, and in particular academics, base their decisions on a myriad of other things such as job characteristics, location, working conditions, opportunities for spouse employment, benefits, and opportunity to travel. Economics is quite limited in explaining this form of human decision-making; psychology and sociology may have better explanations.

APPENDIX B

SUBSIDIZATION OF AMERICAN AGRICULTURE? DISCUSSION/CLASSROOM DEBATE

For this exercise, the class will be divided into three groups: (1) a prosubsidies group, (2) an antisubsidies group, and (3) the judges.

I. Group Selection

Each individual is allowed to select the group that they would like to be in. If the group sizes are lopsided, we will remedy this problem through voluntary exchange.

II. Discussion Format

1. Opening arguments.
   10 minutes for each side.

2. Judges' questions.
   10 minutes total.

3. Closing arguments.
   THE ORDER OF CLOSING ARGUMENTS WILL BE OPPOSITE THAT OF THE OPENING ARGUMENTS. 5 minutes for each side.

4. Judge Voting.
   Votes must be written down BEFORE the judges give their evaluations. THEN, each judge must summarize and evaluate the debate and defend his/her vote.

III. Hints

1. Try to include all persons in the debate.
2. Good organization and preparation yield the best results.
3. This issue has the potential to get emotional or personal (take it from me... this is my major area of research!)

APPENDIX C

AGRICULTURAL AND NATURAL RESOURCE POLICY
AGEC 610
SPRING 1993

Write a three- to five-page essay on each of the following topics:

Essay 1. What is a truly educated person?

Essay 2. Is there a relationship between religion and agriculture?

Essay 3. The next several weeks of this course will be devoted to natural resource issues in agriculture. We will begin this part of the course by reading Wes Jackson's book, New Roots for Agriculture. Jackson's views are not mainstream economic views. Read New Roots. Write an essay on ONE topic that you believe is the most important issue in the book. This essay will require effort in both topic selection and how well you explain and defend the topic that you select as being "most important" to you.

Essay 4. In order to thoroughly understand an issue, we must know both sides of an argument. Last week, we studied a conservationist/biologist's views. This week, we swing the pendulum to the opposite end of the spectrum: Neoclassical Economics. Although economics is often referred to as the Dismal Science, Anderson and Leal provide an optimistic, free-market approach to solving natural resource problems. Read Free Market Environmentalism. Write an essay on the topic that you feel is the most important issue in the book. Once again, this essay will require effort in both topic selection and how well you explain and defend the topic that you select as being "most important" to you.

Essay 5. Is economic growth a desirable goal? Economic growth has provided us with cable television, luxury cars, longer lives, and air travel. Along with economic growth has come the exodus of individuals out of production agriculture and rural areas. The Great Plains have been particularly susceptible to changes in technology. Write an essay on the topic of economic growth.

Essay 6. Write a three- to five-page essay on the topic of your choice.

APPENDIX D

TERM PAPER/ORAL PRESENTATION

"The best way to learn a subject is to teach it to others."

Forty percent of your grade is based on the term paper and an oral presentation of it. The paper can be on any topic in agriculture, economics, social science, or current events. Topic selection should be based primarily on the significance of the topic to YOU, YOUR CAREER, SOCIETY. Instructor approval of your topic is required; I would like to discuss your ideas and help you select a topic.

Term Papers

Papers are expected to be in the 10 to 20 page range. Be sure to CITE all quotations correctly. Even if you do not quote a source directly, you need to CITE all paraphrased material.

I will be glad to edit or comment on any first drafts or revisions of your paper. I encourage you to take advantage of this opportunity. A revision with instructor comments could greatly improve the quality of the paper.

TERM PAPERS WILL BE DUE ON THE DAY OF PRESENTATION.
WE WILL BEGIN THE PRESENTATIONS IN APRIL.

Oral Presentations

Each individual will be given one class period (50 minutes) to present his/her term paper to the rest of the class and myself.

Your class participation grade (30 percent of the final grade) does not come to a halt during the student presentations; you will be expected to comment and react to other students' presentations.