ECO 401-001
Fall 2004
Problem Set #6

Due: Friday, November 19. [Note: Question #5 is not required, but is a bonus question for the ambitious.]

1. From the WSJ 10/19/04, "Latest Diet Fad Helps Put Hog Farmers in Fat City." Beef prices have been at record highs due to the trend among consumers towards low-carbohydrate high-protein diets. Many shoppers are turning to pork in response. Ryan's Restaurants and Golden Corral have both recently added pork items to their buffet menus. Unsurprisingly, pork prices have risen sharply, from around $.50 to $.65 per pound (slaughter weight of the hog) since the beginning of 2004. Now for the question: Assume that the pork industry was in long-run equilibrium prior to the Atkins Diet craze. Discuss and explain the adjustments that have occurred, are occurring, and will occur, taking care to mention the price of hogs, the short-run and long-run output decisions of hog farmers, short-run and long-run profits from supplying hogs, the number of hog farmers. Assume that the dietary change represents a permanent shift in consumer preferences. (An alternative question might ask you to perform the same analysis assuming that the dietary change is just a fad.)

2. Which of the following best fits the definition of a perfectly competitive market? Briefly explain.
   a) personal computers.
   b) lettuce.
   c) cable TV.
   d) retail clothing stores.

3. In raising alligators, you find that in the short run your revenues and costs vary with output in the following manner:

Quantity	48	49	50	51	52	53	54	55	56
Total Revenue	$9600	$9800	$10000	$10200	$10400	$10600	$10800	$11000	$11200
Marginal Cost	$150	$160	$170	$185	$200	$220	$245	$275	$310

   What output should you produce if your goal is to maximize short-run profits? What are your profits?

4. Why can we be confident that the short-run market supply curve in a perfectly competitive industry slopes upward to the right?

5. In the 1930's a program was set up whereby tobacco farmers were given an allotment based on the amount of tobacco they were currently growing. They were allowed to produce that amount each year. They could also sell or lease their allotment to other farmers. No one is allowed to grow and sell tobacco without an allotment, and no new allotments have been issued. This program has limited the total amount of tobacco that is sold in the United States. As a result, the current selling price is around $1.70 per pound. Tobacco farms tend to be much smaller than they would be if there were no allotment program.
   a) Illustrate the current situation using two separate diagrams. The first should illustrate the supply and demand conditions in the market for tobacco. The second should illustrate the costs and revenues of a typical tobacco farmer.
   b) The tobacco allotment program is being disbanded. Industry experts predict that the number of tobacco growers will change and that the typical tobacco farm will look very different five years from now. They also predict that the market price of tobacco will be in the $1.40 range if the current program is disbanded and competition in the tobacco market is unfettered. Illustrate and explain what long-run equilibrium will look like in tobacco after the allotment program goes away.
   c) For an interesting perspective on how it has been politically possible to end this program, visit the website: http://www.ewg.org/reports/farm/tobaccobuyout.php