

Discussion Questions/Exercises

1. In the state of California, rice growers burn their field stubble to sanitize their fields. The field burning causes serious air pollution, and thus farmers have been under increasing pressure to reduce this practice. Assume the alternative sanitizing method costs \$150 per acre. Consider a county where rice farmers are currently willing to pay \$500 per acre for land, and corn farmers (who do not sanitize their fields) are willing to pay \$300 per acre. The total output of the county is small enough that the prices of rice and corn are unaffected by events in the county. Suppose that field burning is outlawed in the county, forcing rice farmers to switch to the alternative sanitizing method.
  - a. How does the field-burning law affect rice consumers, corn consumers, farmers, and landowners? In other words, who bears the cost of the pollution control program?
  - b. How would your answer to **a** change if the cost of the alternative method were \$250 per acre?
  - c. How would your answer to **b** change if field burning were outlawed in the entire state of California?
2. Suppose that Mr. Greengenes, a farmer and genetic engineer, develops a new method for growing corn that decreases the cost of growing corn by \$300 per acre. Greengenes's landlord rejoices, saying, "According to the leftover principle, you will pay me \$300 more in rent." Is the landlord correct?
3. Consider Euphoric County, where a large share of the arable land is used to grow M. The production of M is illegal; there are severe penalties imposed on M growers, but no penalties imposed on M consumers. Suppose that M is a competitive industry, with equilibrium profits equal to zero; total revenue equals total costs. Included in the costs are the costs associated with engaging in illegal activities (the opportunity cost of time spent in jail, legal costs, concealment costs). Suppose that Euphoric County legalizes the production of M.
  - a. Depict graphically the effects of legalization on the equilibrium price and quantity of M.
  - b. Depict graphically the effects of legalization on the price of land in Euphoric County.
4. The residents of mobile home parks own their dwellings and rent land from absentee landowners. Consider a city in which mobile home parks currently occupy all the land. Suppose the city imposes a 50 percent tax on land, to be paid (in legal terms) by the person who occupies the land (the tenant, either a mobile home owner or some other user). Who actually pays the tax?
5. As the flexible farmer approaches the marketplace, the farmer substitutes nonland inputs for land. As a result, the land-rent function of the flexible farmer is steeper than the land-rent function of the inflexible farmer. What happens as the flexible farmer moves *away* from the marketplace? Is the flexible land-rent function steeper or flatter than the inflexible function?