

PLAYERS' INFORMATION

General background

You are a tenant farmer on a hypothetical estate. To use land on this estate for agricultural purposes, you must pay rent to the landlord who only rents his land to farmers willing to pay the highest amount. Therefore, you must outbid other tenant farmers if you wish to farm part of the estate. As a tenant farmer, your objective is to maximize your income each year. Initially, you will be assigned a certain bank account. The winner of the game is the farmer with the most money by the end of the game.

The amount of money that you bid for farming a hectare of land should be based on the expected return from harvesting your crops. The expected returns per hectare for each crop on different sections of the farm are listed in Table 1. The annual rainfall on the farm will vary from year to year. A farmer can expect either a wet year or a dry year. Because rainfall affects yields, expected returns differ for wet years and dry years (Table 1). Soybeans and corn have higher returns during a wet year while wheat and peanuts have a higher return during a dry year.

You can plant any single crop or a combination of crops on the hectare that you farm. If you grow just one crop, your income for the year is determined by the section of land that you are farming and the amount of rainfall. If you decide to grow a combination of crops, then your total return is determined by the proportion devoted to each crop multiplied by the return for that crop. For example, if you grew peanuts on section 1 during a dry year, your farm income would be \$200. If you planted peanuts on one-half of your hectare and soybeans on the other half during a dry year, however, your return would be $1/2(80) + 1/2(200) = \$140$.

Before deciding how much money to bid for a hectare of land and what crops to plant, you must consider the variable climatic conditions. Although it is impossible to know what the weather will be before you plant your crops, the likelihood of either a wet or dry year is 50 percent for the entire estate.

Basic rules of play

The following sequence of events summarizes one year of farming.

1. Each farmer will bid for the use of a certain portion of the farm. No one can bid in excess of his current bank account. Each player can farm only one hectare in one of the eight sections. Only the highest bidders will be allowed to farm each section of land.
2. After the tenant farmers have been assigned to the different sections, each farmer must decide what crop or combination of crops will be planted for the current year.
3. Once the crops have been planted and rent has been paid to the landlord, Mother Nature (the instructor) will roll a die to determine if the current season will be wet or dry. A roll of one, two, or three signifies a wet year; a roll of four, five, or six means a dry year.
4. Tenants will calculate their net incomes for the year and subtract \$10 for living expenses incurred during the year. Players who did not farm during the year must also pay this amount. The amount of money that each tenant farmer will have at the end of the year is

Initial sum - Rent * Farm income - living costs.

This value will become the farmer's initial sum for the next year. Play will continue through successive years until the instructor ends the game.

Table 1: Expected crop income per hectare								
Section	Soybeans		Peanuts		Corn		Wheat	
	Wet	Dry	Wet	Dry	Wet	Dry	Wet	Dry
1	\$240	\$80	\$180	\$200	\$90	\$72	\$45	\$135
2	180	60	140	160	80	64	40	120
3	120	40	100	120	70	56	35	105
4	60	20	70	80	60	48	30	90
5	0	0	40	55	50	40	25	75
6	0	0	25	30	40	32	22	50
7	0	0	12	10	30	24	15	45
8	0	0	0	0	20	16	10	30

	Available Funds	-Amt Bid*	Section	Wet/Dry	Crop	Income	- Living Expenses	Funds to Carry Forward
Round 1	\$250							
Round 2								
Round 3								
Round 4								
Round 5								
Round 6								

* Enter the amount of your bid if you were the highest bidder for a section, enter 0 if you didn't have the highest bid for any section