

Environmental Trading Game

Sheep/beef Farm

- Your team manages a sheep/beef farm.
- The profit from your farm depends on how much meat you produce.
- The more you produce, the higher the amount of nutrients entering waterways from your farm.

Profit Schedule

Meat produced	0	1	2	3	4	5	6	7	8	9
Profit from meat production	-\$10	\$0	\$7	\$14	\$19	\$23	\$25	\$26	\$27	\$26
Nutrients	0	1	1	2	3	4	5	6	7	8

Scenario I

How much meat will your farm produce if there is no control on pollution from nutrients?

Based on the production schedule above, decide on how much your property will produce and fill in the table below.

Under no nutrient regulation	Meat produced	Profit	Nutrients



Scenario 2

The Government has decided to reduce the amount of nutrients entering waterways from farms. You cannot emit more than 6 units of pollution. Given this limit, how much meat will you produce?

Based on the production schedule above and this new regulation, decide on how much your property will produce.

With regulation limiting nutrients	Meat produced	Profit	Nutrients

Scenario 3

Now suppose that the Government implements a more flexible system where all farmers must cover the nutrients entering waterways with tradable allowances. One allowance covers one unit of nutrients. You will receive 6 allowances. Now how much meat will your farm produce?

This time you may trade your allowances with the dairy farmer you are paired with. Negotiate to see whether you can achieve a higher level of profit by buying or selling allowances. Remember to note appropriate changes in your production and nutrient levels.

Your total profit is the revenue from your meat plus the revenue from selling allowances (or minus the price you paid).

Under a nutrient trading system	Meat produced	Allowances bought/sold	Allowance cost/revenue	Profit	Nutrients

Scenario 3a

Do you think that you can do better? Try trading with a different group.

Under a nutrient trading system	Meat produced	Allowances bought/sold	Allowance cost/revenue	Profit	Nutrients

Environmental Trading Game

Dairy Farm

- Your team manages a dairy farm.
- The profit from your farm depends on how much milk you produce.
- The more you produce, the higher the amount of nutrients entering waterways from your farm.

Profit Schedule

Milk produced	0	1	2	3	4	5	6	7	8	9
Profit from milk production	-\$10	\$0	\$7	\$14	\$19	\$23	\$25	\$26	\$27	\$26
Nutrients	0	3	5	6	7	8	9	10	11	12

Scenario I

How much milk will your farm produce if there is no control on pollution from nutrients?

Based on the production schedule above, decide how much your property will produce and fill in the table below.

Under no nutrient regulation	Milk produced	Profit	Nutrients



Scenario 2

The Government has decided to reduce the amount of nutrients entering waterways. You cannot emit more than 6 units of nutrients. Given this limit, how much milk will you produce?

Based on the production schedule above and this new regulation, decide on how much milk to produce.

With regulation limiting nutrient loss	Milk produced	Profit	Nutrients

Scenario 3

Now suppose that the Government implements a more flexible system where all farmers must cover the nutrients entering waterways with tradable allowances. One allowance covers one unit of nutrients. You will receive 6 allowances. Now how much milk will your farm produce?

This time you may trade your allowances with the sheep/beef farm you are paired up with. Negotiate to see whether you can achieve a higher level of profit by buying or selling allowances, allowing changes in your production and pollution levels.

Remember that your total profit is the revenue from your milk plus the revenue from selling allowances (or minus the price you paid).

Under a nutrient trading system	Milk produced	Allowances bought/sold	Allowance cost/revenue	Profit	Nutrients

Scenario 3a

Do you think that you can do better? Try trading with a different group.

Under a nutrient trading system	Milk produced	Allowances bought/sold	Allowance cost/revenue	Profit	Nutrients