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Module:

Microeconomics

Lecturer:

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Microeconomics

Tutorial 1 -
Supply & Demand Exercises
The Market for Food

Tutorial Questions

1. Derive the market equilibrium for food
2. Consider the impact of;
   a. A price floor
   b. Production subsidies
   c. Consumer subsidies
   d. Tax on farming

Derive the market equilibrium for food

- A market is where a group of buyers & sellers of a particular good interact to trade
- Buyers demand the good
- Sellers supply the good
- We can represent a market by using a demand/supply diagram

Supply & Demand Curves

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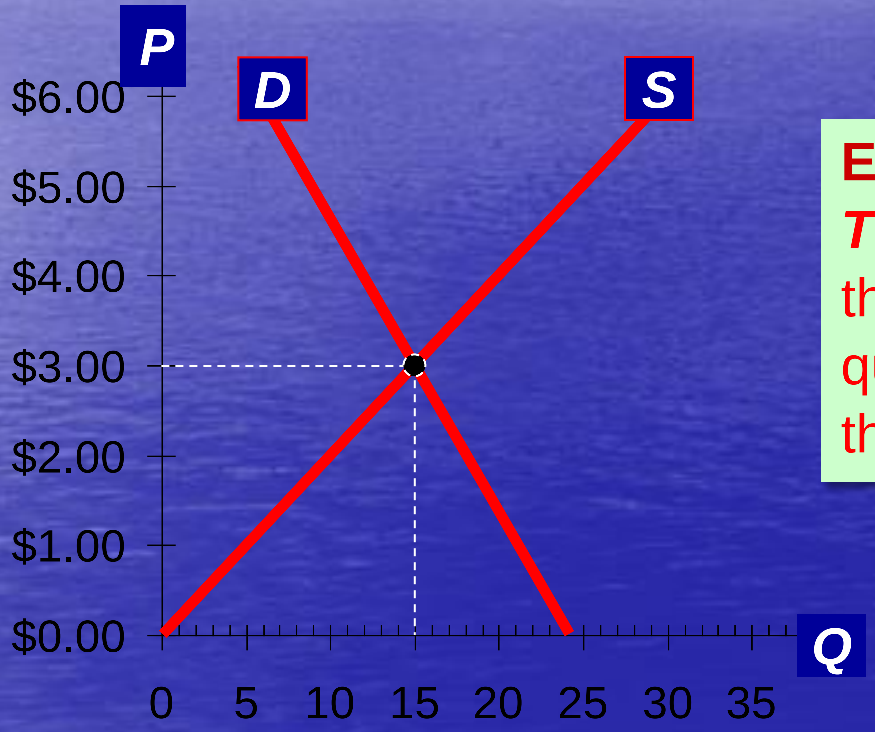

Equilibrium:
The Price has reached the level where the quantity supplied equals the quantity demanded

Excess Supply

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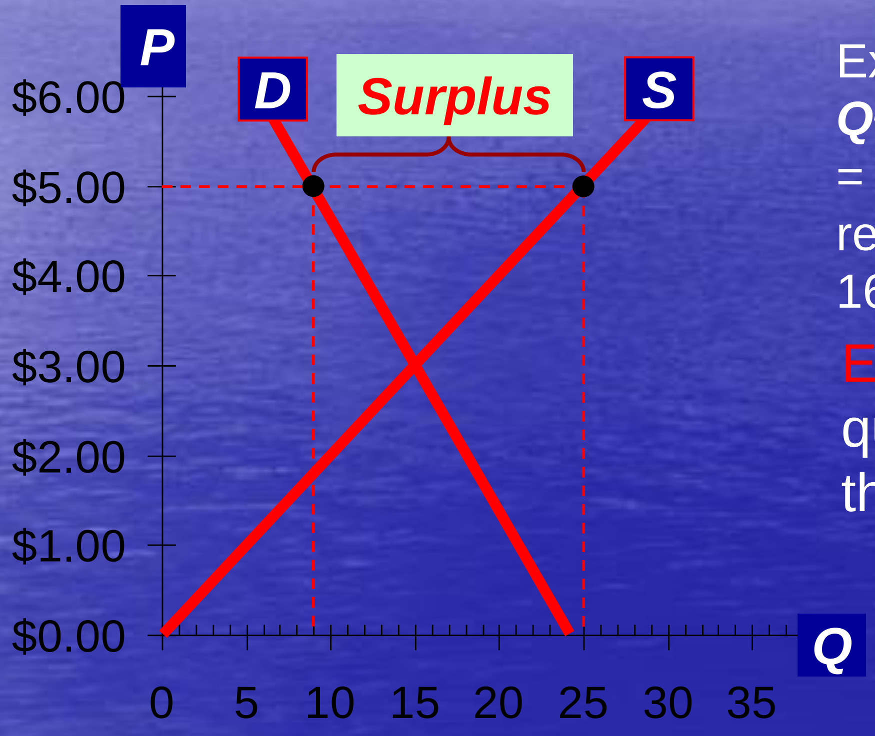

Example: If ***P*** = $5, then Q^D = 9 units of food & Q^S = 25 units of food resulting in a surplus of 16 units of food

Excess Supply: when quantity supplied is greater than quantity demanded

Excess Supply

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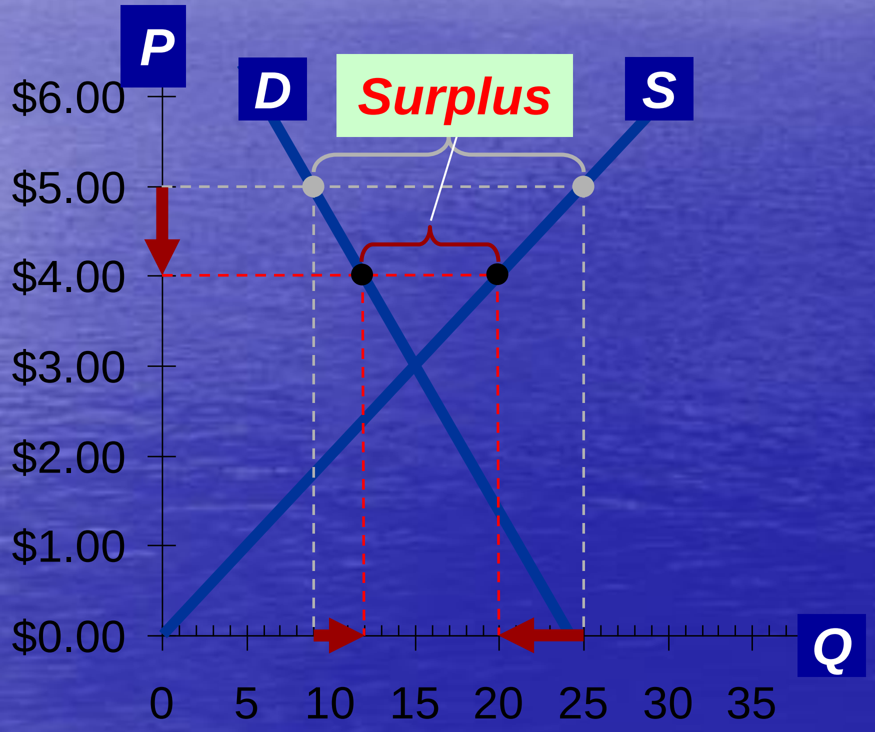

Facing a surplus, sellers try to increase sales by cutting price. This causes Q^D to rise and Q^S to fall……which reduces the surplus.

Excess Supply

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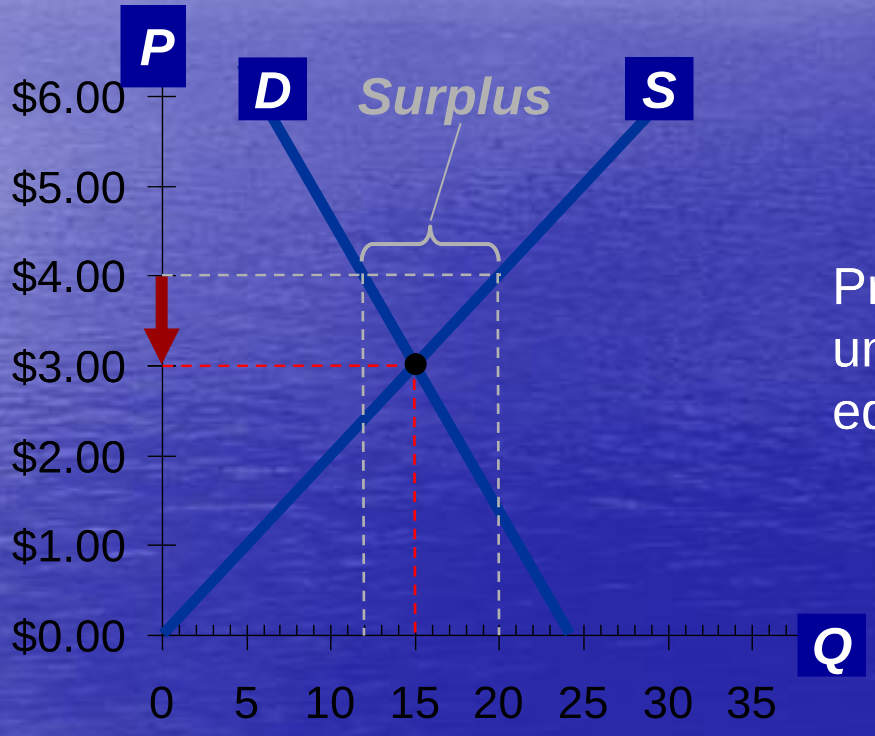
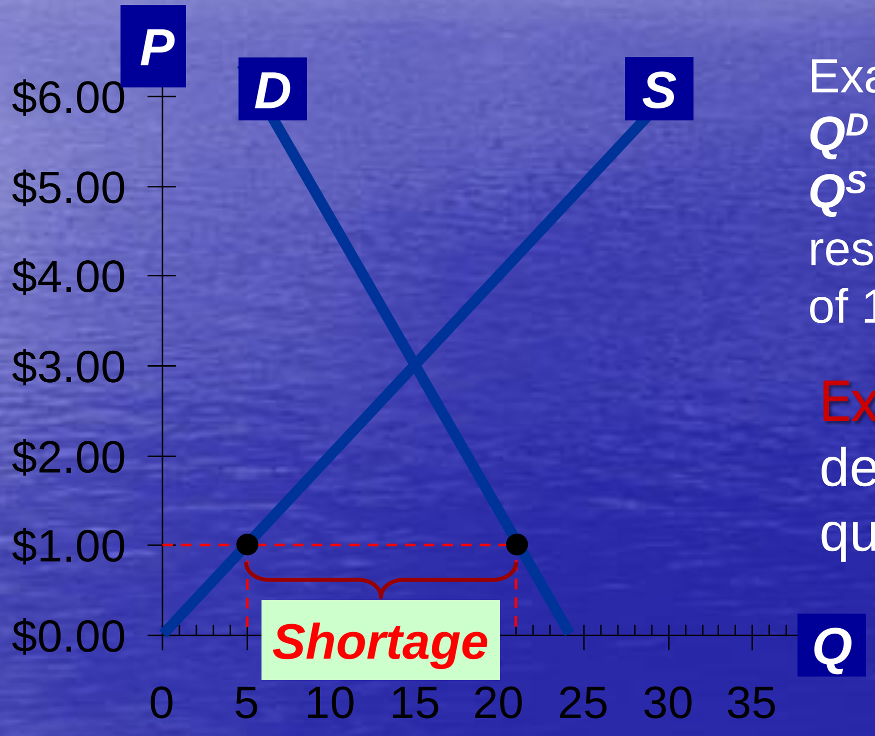


Prices continue to fall until market reaches equilibrium.

Excess Demand



Example: If ***P*** = $1, then
Q^D = 21 units of food &
Q^S = 5 units of food
resulting in a shortage
of 16 units of food

Excess Demand: when quantity demanded is greater than quantity supplied

Excess Demand

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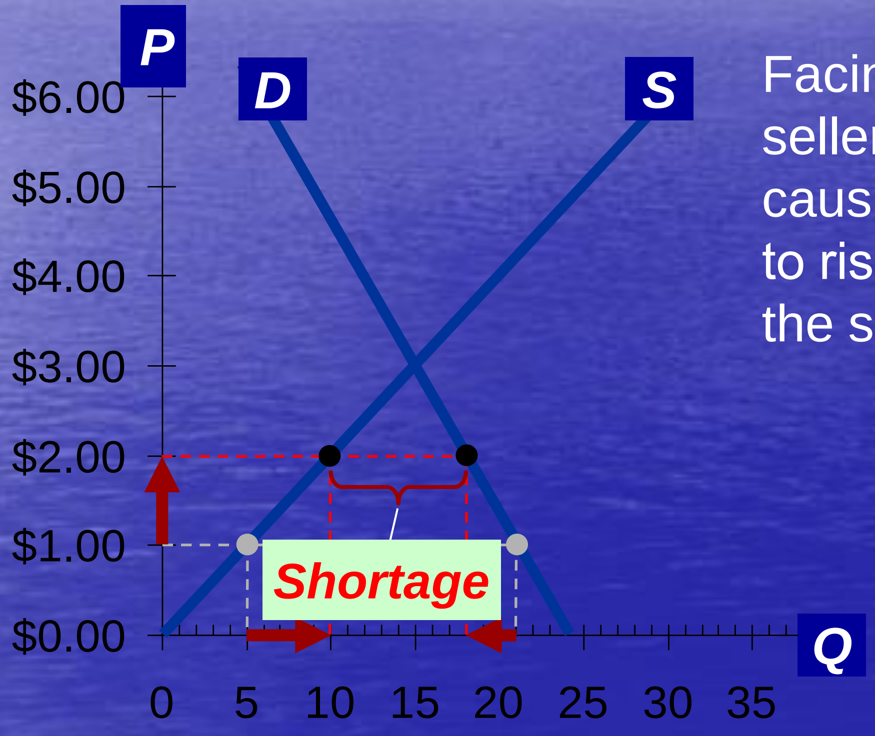
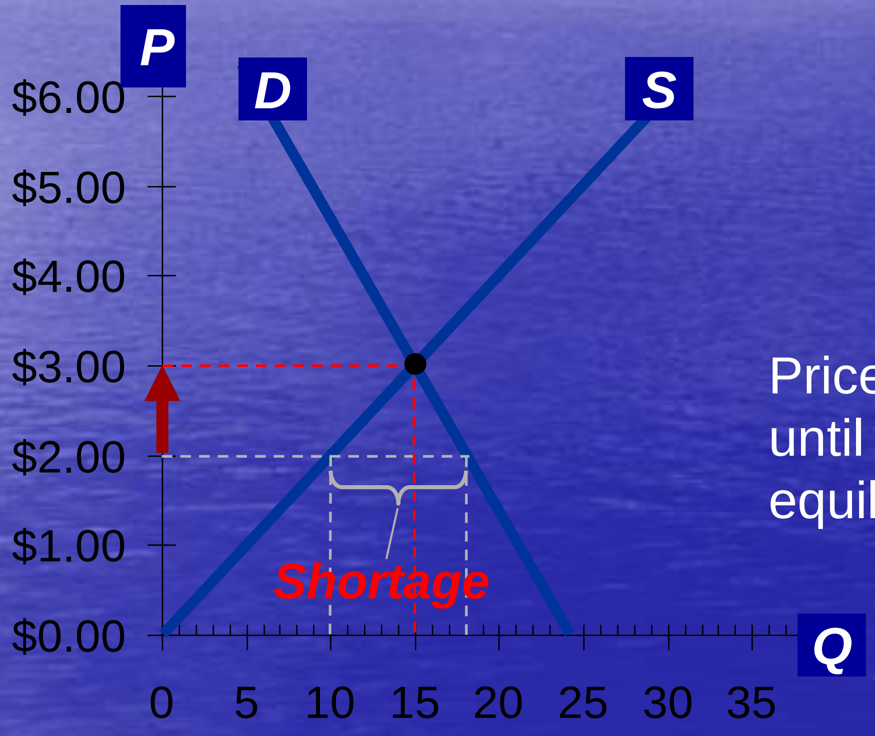


Facing a shortage, sellers raise the price, causing Q^D to fall and Q^S to rise, …which reduces the shortage.

Excess Demand



Prices continue to rise until market reaches equilibrium.

Question 2

2. **Consider the impact of;**
   - a. **A price floor**
   - b. **Production subsidies**
   - c. **Consumer subsidies**
   - d. **Tax on farming**

- **Question** 2 requires us to consider when there is a movement along the demand/supply curve & a shift in the demand/supply curve

What determines demand/supply?

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- The quantity demanded of a good (Q_A^D) is determined by;
  - The (own) price of the good (P_A) (Movement)
  - The price of other goods ($P_{A\text{-}Z}$) (Shift)
  - Income (Y) (Shift)
  - Tastes (T) (Shift)
  - Expectations (E) (Shift)

What determines demand/supply?

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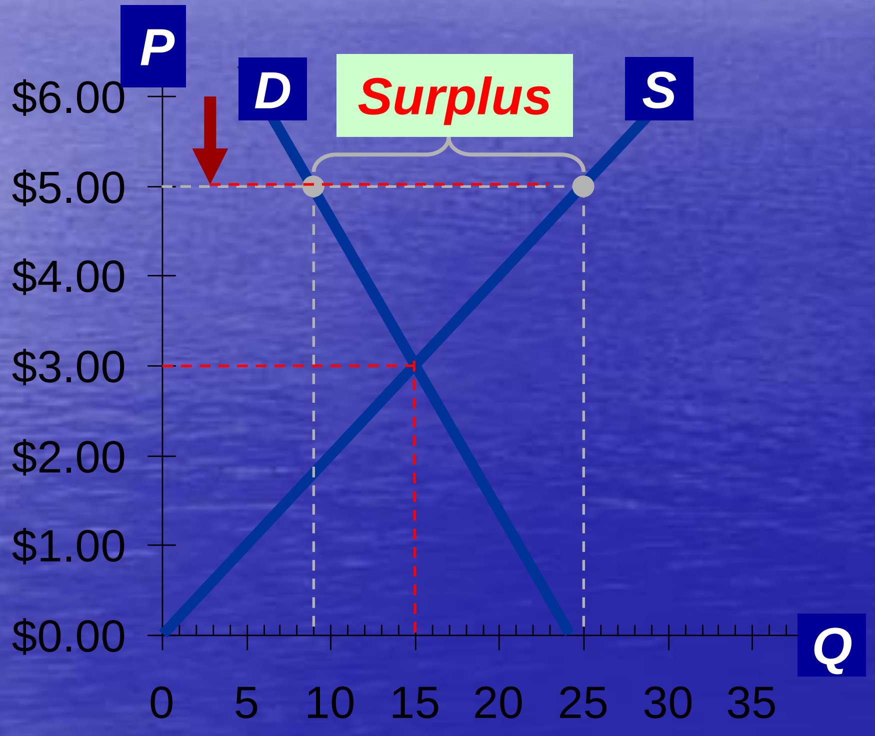
- The quantity supplied of a good (Q_A^S) is determined by;
  - The (own) price of the good (P_A) (Movement)
  - The price of other goods (P_{A-Z}) (Shift)
  - Costs (C) (Shift)
  - Technology (T) (Shift)
  - Expectations (E) (Shift)

Using Demand/Supply Model: Procedure

- Does the change involve Supply or Demand (or both)
- Which of the variables does it affect?
- If it affects (own) price then it is a movement along the curve)
- If it affects any other variable then it is a shift in the curve
- Finally, does the curve shift in or out

Consider the impact of a price floor



A price floor is a legal minimum price at which the good can be sold.

This affects the price of the good. This means a movement along the curves

A price floor will lead to excess supply (in this case of 16)

Consider the impact of production subsidies

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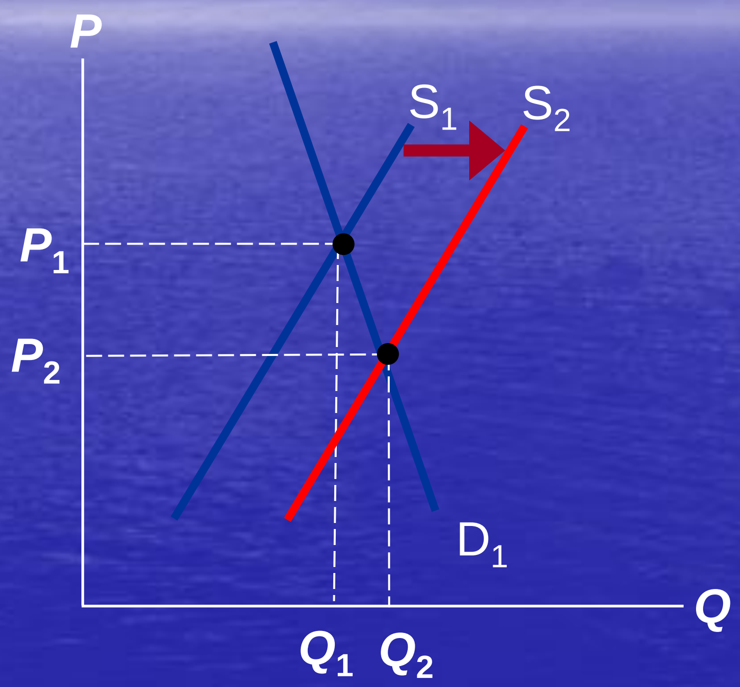
EVENT: The government provides subsidies for fertilizer

STEP 1:

Does this effect supply or demand? Answer: ***Supply***

Which variable does it affect? Answer: ***Costs (C)***

Is it a shift or movement? Answer: ***Shift***



STEP 2:

Does the supply curve shift left/right? Answer: ***Supply curve*** shifts right (Because the event reduces cost, making production more profitable at any given price.

STEP 3:

The shift causes price to fall and quantity to rise.

Consider the impact of consumer subsidies

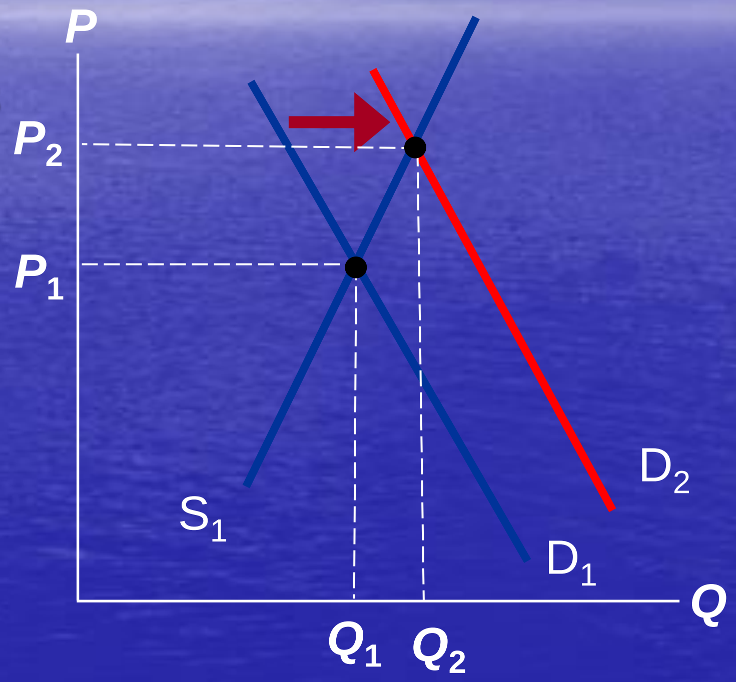
EVENT: The government provides subsidies for consumers

STEP 1:

Does this effect supply or demand? Answer: ***Demand***

Which variable does it affect? Answer: ***Income (Y)***

Is it a shift or movement? Answer: ***Shift***



STEP 2:

Does the demand curve shift left/right? Answer: ***Demand curve*** shifts <u>right</u> (Because the event increases income, making consumers demand at any given price.

STEP 3:

The shift causes price to rise and quantity to rise.

(Producer is better off)

Consider the impact of a tax farming

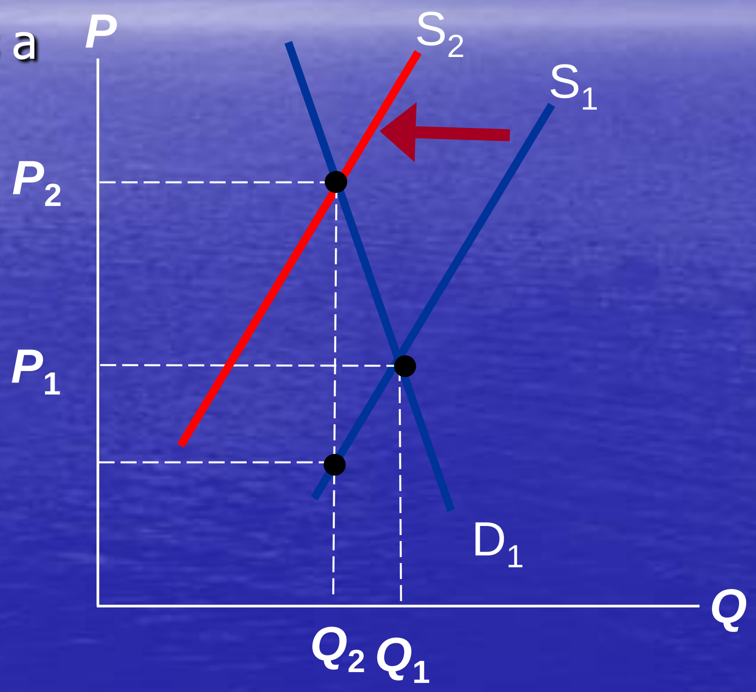
EVENT: The government introduces a tax on farming

STEP 1:

Does this effect supply or demand? Answer: ***Supply***

Which variable does it affect? Answer: ***Costs (C)***

Is it a shift or movement? Answer: ***Shift***



STEP 2:

Does the supply curve shift left/right? Answer: ***Supply curve*** shifts <u>left</u> (Because the event increases cost, making production more profitable at any given price.

STEP 3:

The shift causes price to increase and quantity to fall.