Agricultural policies generally achieve their objectives by changing how consumers and producer behave – that is, by changing how much consumers consume and producers produce.

We represent **CONSUMER BEHAVIOR** with a ___________ curve and **PRODUCER BEHAVIOR** with a ________________ curve.
What Determines How Much Consumers Consume?

Market Demand Determinants:

- Price of the good itself ($P_X$) - Called the “_________

- Price of related goods ($P_0$)
  - Substitutes
  - Complements

- Consumers’ incomes ($Y$)

- The number of consumers (population) ($N$)

- Consumer tastes and preferences ($T$)

- The range of goods available to consumers ($R$)
What Determines How Much Consumers Consume?

Changes in the price of any good result in …

The demand curve is downward sloping …

which means that Price and Quantity Demanded are NEGATIVELY related …

or, in other words, a DECREASE in price results in an INCREASE in Quantity Demanded and vice versa.
What Determines How Much Consumers Consume?

A change in **ANY OTHER** demand determinant results in ...

- **SHIFT** of the demand curve ...
  - ... to the Right at a given price ...
  - ... or to the Left at a given price.
What Determines How Much Producers Produce?

Market Supply Determinants:

- Price of the good itself \( (P_X) \) - Again, the “__________”

- Price of related goods \( (P_G) \)
  - Substitutes
  - Complements

- Technology (State of) \( (T) \)

- Price of Resources or Inputs \( (P_I) \)

- Number of Sellers or Producers \( (N) \)

- Sellers’ Price Expectations \( (E) \)
Changes in the price of any good result in …

or, in other words, an **INCREASE** in price results in an **INCREASE** in Quantity Supplied and vice versa.

which means that Price and Quantity Supplied are **POSITIVELY** related …

The supply curve is upward sloping …

What Determines How Much Producers Produce?
What Determines How Much Producers Produce?

A change in ANY OTHER supply determinant results in …

A SHIFT in the supply curve to the Right at a given price…

… or to the LEFT at a given price.
Supply and Demand Interact to Determine Equilibrium Market Price and Quantity

![Graph showing supply and demand curves with equilibrium price $P_e$ and quantity $Q_e$.]
Let’s say a policy mandates a minimum market price above the current market equilibrium.

What happens when the price increases?

And a market surplus results!

The quantity demanded **DECREASES**

The quantity supplied **INCREASES**
How Does Policy Change Market Supply and Demand?

Let’s say a policy mandates a minimum market price above the current market equilibrium.

What happens when the price increases?

What will happen to the market price?

What could the government do to keep that from happening?

Government Surplus Purchase

The quantity demanded DECREASES

The quantity supplied INCREASES
Consumer Surplus: The difference between what consumers are willing to pay and what they actually pay for a good.
Consumer Surplus: The difference between what consumers are willing to pay and what they actually pay for a good.

The Surplus – what consumers DON’T pay that they would be WILLING to pay

What consumers ACTUALLY pay
Producer Surplus: The difference between the actual revenue that producers receive for a good and the revenue they would be willing to accept for that good.

Supply

Revenue producers ACTUALLY receive
Producer Surplus: The difference between the actual revenue that producers receive for a good and the revenue they would be willing to accept for that good.

The Surplus – revenue producers receive in excess of what they would be WILLING to take.
Again, let’s say a policy mandates a minimum market price above the current market equilibrium.
How Does Policy Change Producer And Consumer Welfare?

What happens to producer and consumer surplus?
How Does Policy Change Producer And Consumer Welfare?

What happens to producer and consumer surplus?

What happens to Total Welfare?

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Producer Surplus

Consumer Surplus

Net in Total Welfare
1. If price increases from $P_0$ to $P_1$, in the graph below, what is the change in consumer surplus?

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<table>
<thead>
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<th>At $P_1$</th>
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<td>At $P_0$</td>
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2. If price decreases from \( P_1 \) to \( P_0 \), in the graph below, what is the CHANGE in producer surplus?
3. At $P_1$, what is (are) the area(s) representing: (1) producer revenue? (2) production cost? (3) producer surplus? (4) consumer willingness to pay? (5) consumer expenditures? (6) consumer surplus?

**Producer revenue** = $P_1 \times Q_2$

**Production cost** = 

**Producer surplus** = producer revenue - cost = 

**Consumer WTP** = 

**Consumer expenditure** = 

**Consumer surplus** = Consumer WTP - expenditure =
4. If the demand curve shifts out to the right so that the new market price is $P_1$, by how much does **producer surplus** change?
5. If the supply curve shifts out to the left so that the new market price is $P_1$, by how much does consumer surplus **CHANGE**?