To Farm or Not to Farm

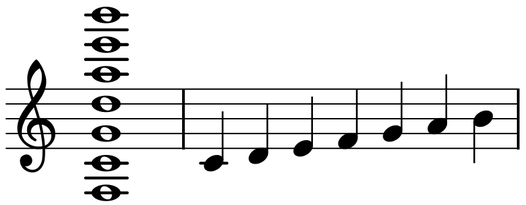
Monetary Version

How can we use climate data to plan(t) for the future?

Climate Variability vs Climate Change

Climate Variability

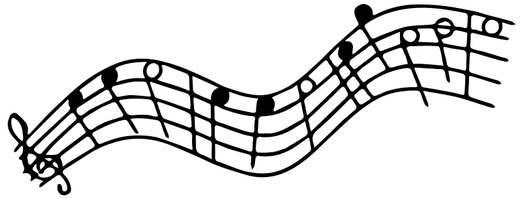
the natural processes that can cause periods of rainfall or drought



ex: the notes in a song

Climate Change

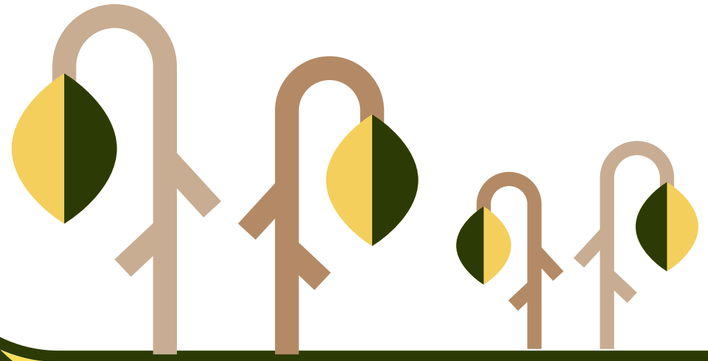
the man-made (anthropogenic) increase in global mean temperature



ex: the key change

What does climate change mean for farmers?

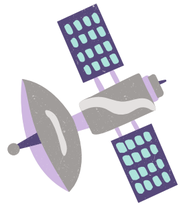
Certain places experience increased periods of drought while others experience extreme precipitation that causes flooding. Some places will experience both!



farmers will experience bad years more frequently as the climate changes

What can farmers do about it?

Index Insurance



shrinks the risk of loss while providing opportunities for the farmers to do well each year, by using rainfall and satellite data around the world.

This helps farmers assess risk, make more money in the good years, and access insurance payouts in the bad years.

Let's Play:

You are going to step into the role of a farmer who is planning for the future!

Your goal is to have the highest yield (amount of sellable crops) at the end of the year.

Drought Years and Ok Years:

For the activity, there will be a hat or some sort of container, and four items. One of the four of the items should be **different** from the rest or be marked to differentiate it from the other three.
For example, three blue markers and one red marker.

The three similar items will represent the **ok** years while the different item represents a **drought** year.

There is a 75% chance of having an **ok** year and a 25% chance of having a **drought** year.

Round 1

Pick an object from the container → The object will show if it is a drought year or an ok year

Round 1

You start with:
$50

Seeds:
$25

Drought year:
$0

If you get this on the first round, you lose the farm

Ok year
$100

You always need at least $25 to keep playing

Which "year" did you get?

Round 2

You start with:
$50

Low-quality seeds:
$25

High-quality seeds:
$50

Drought year low-quality seeds:
$0

Drought year high-quality seeds:
$0

Ok year low-quality seeds
$100

Ok year high-quality seeds
$200

You always need at least $25 to keep playing

Would you like to take the chance with high quality seeds or not take the chance?

Round 3

You start with:
$50

Seeds:
$25

Insurance:
$25

Drought year no insurance:
$0

Drought year with insurance:

$100

Ok year no insurance
$100

Ok year with insurance

$100

You always need at least $25 to keep playing

Do you want to pay the fee and buy insurance?

Round 4

You start with:
$50

Low-quality seeds:
$25

High-quality seeds:
$50

Insurance:
$25

Play Round 4: Ok year

Low quality seeds and insurance	Low quality seeds and no insurance	High quality seeds and insurance	High quality seeds and no insurance
$100	$100	$200	$200

Play Round 4: Drought

Low quality seeds and insurance	Low quality seeds and no insurance	High quality seeds and insurance	High quality seeds and no insurance
$100	$0	$100	$0

Play round 4 at least 3-5 times!

What strategic decisions would you like to make this round?

Wrap Up

If you were a farmer, would you want to buy insurance? Why or why not?

Why may some farmers still be hesitant to buy insurance, even after this lesson?

Thank you!

For more information, please contact
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