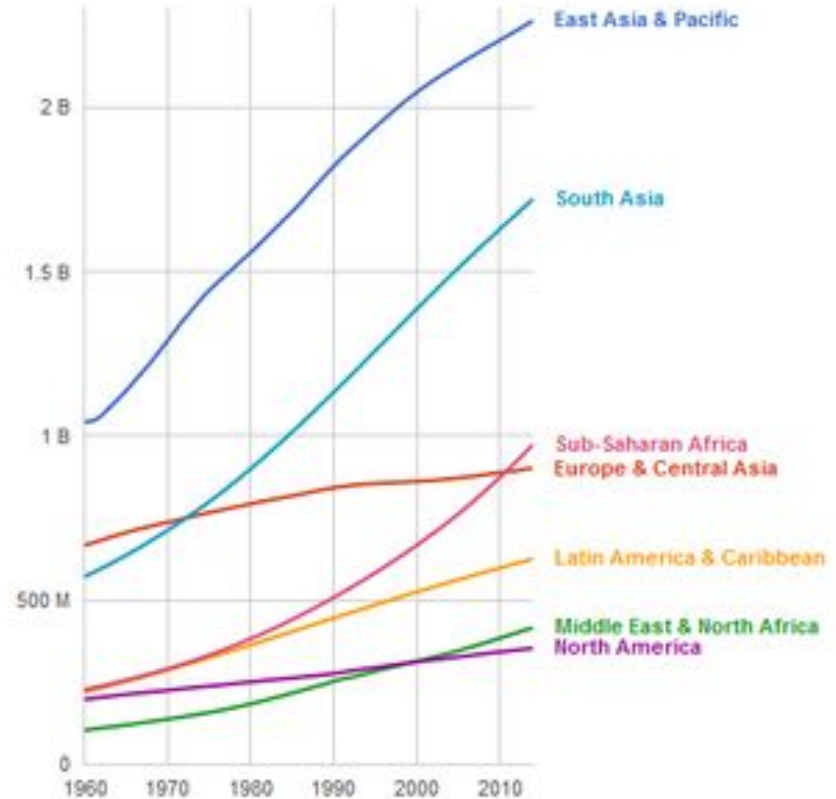


GREEN REVOLUTION

How one man saved over a million lives.

THE PROBLEM. WHY WAS THERE A NEED FOR A GREEN REVOLUTION?

- Growing world population and poverty/hunger.



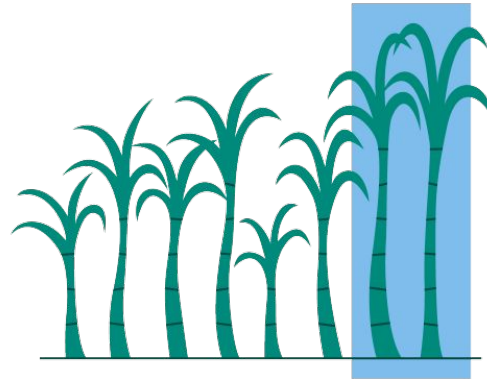
SELECTIVE BREEDING

Characteristics wanted:

- Disease resistant
- High-yielding
 - Short sturdy stock to prevent lodging

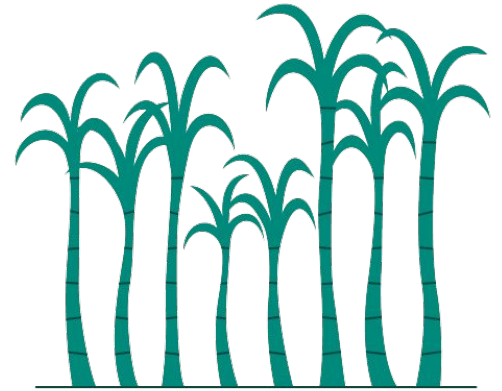


Population 1



selected
parents

Population 2



SHUTTLE BREEDING

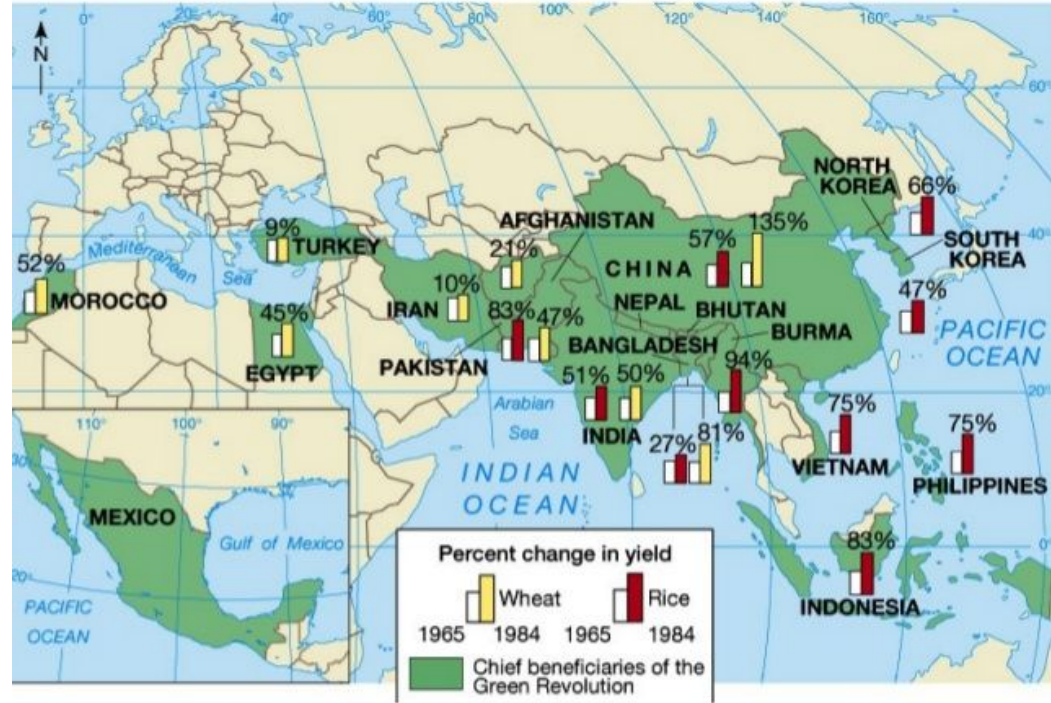
Benefits:

- Produce 2 generations in half the time.
- Adaptable wheat variety.



RESULTS:

- Mexico becomes self-sufficient in wheat production
- The wheat variety spreads to India
- A new rice variety was developed that spread through Asia.
- Over 1 million lives were saved.



RESULTS:

- Higher income and improved economy
 - Allowed for diversified diets
- Increased use of fertilizer/irrigation
 - Can cause pollution if not managed correctly
 - Expensive - many subsistence farmers can not pay for inputs
- Bypassed Africa
 - Wheat and rice are not staple crops in Africa

A FUTURE GREEN REVOLUTION?

- This is a global challenge.
- The world is safer when people are fed.
- US currently has \$12b in foreign aid to Africa this year alone.
- Improved markets in developing nations often means improved economy for America - stronger foreign markets for American goods.
- **Biotechnology - using living organisms to improve human life and our environment**