

Selective breeding is VERY SIMPLE

- ① Selective breeding: ARTIFICIALLY SELECTING the plants/animals that are going to breed so that the genes for particular characteristics REMAIN in the POPULATION.
- ↓ Organisms are selectively bred to develop USEFUL/ATTRACTIVE features.
- For example:

- 1) Animals that produce ↑ meat/↑ milk.
- 2) Crops with DISEASE RESISTANCE.
- 3) Dogs with a GOOD, GENTLE TEMPERAMENT.
- 4) Decorative plants with BIG or UNUSUAL flowers.

THE PROCESS:

- ① From your EXISTING STOCK, select the ones with your DESIRED CHARACTERISTICS.
 - ② BREED THEM with each other.
 - ③ Select the BEST of the offspring, and BREED THEM TOGETHER.
 - ④ Continue this process over SEVERAL GENERATIONS, and the desirable traits get STRONGER and STRONGER.
- ↓ Eventually, ALL the offspring will have the CHARACTERISTIC.

HOW IT'S USED IN AGRICULTURE:

- 1) It can be used to INCREASE YIELDS.
- ↓ breed bulls + cows go with ↑ meat yield
 ↓ eventually, ↑↑↑ meat yield.

- Selective breeding has OCCURRED for THOUSANDS OF YEARS.
- ↓ edible crops from wild flowers.
- ↓ domesticated animals
- ↓ cats and dogs.

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Main →

DRAWBACKS

- ① REDUCES the GENE POOL (number of different alleles in a population).
 ↓ because the farmer keeps breeding from the 'best' animals/plants, which are all CLOSELY RELATED. → INBREEDING.
 - ② Inbreeding → possible health problems.
 ↓ more chance of INHERITING HARMFUL GENETIC DEFECTS with a LIMITED GENE POOL.
 - ③ PROBLEMS OCCUR if a NEW DISEASE APPEARS.
 ↓ X much variation, all population closely related.
 ↓ no resistant alleles → they all die.
- Certain dog breeds ↑ susceptible.
 ↓ PUGS have breathing difficulty.

