

Name: _____

Date: _____

Block: _____

Genetics:

Lesson 10 – Artificial Selection

Artificial Selection: is the intentional reproduction of organisms with desirable traits. (humans choose)

Plants

Farmers will pick the plants/feeds with the best traits.

Planting different parts of a plant will cause different variations.



Monoculture: the agricultural practice of growing genetically similar or essentially identical plants.

Polyculture: the agricultural practice of growing genetically diverse crops.

Monoculture:

Pros

- Great yields since not competing with other plants
- Good growth under consistent conditions

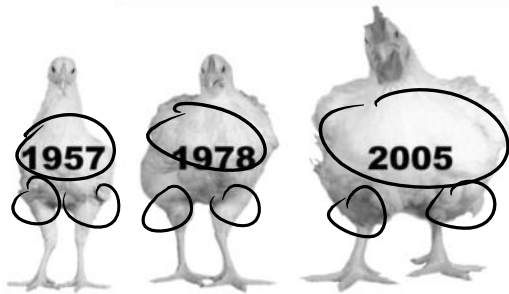
Cons

- Easier for disease to spread,
- Need more pesticides (bad for consumption)
- Can't handle changes to the environment.
- Could lose beneficial traits not "seen". (Ex resistance to disease/cold climate)

Animals

Ex. Farmers

Farmers may pick animals that are bigger or produce more milk to breed so that their offspring will be more likely to carry these traits



Ex. Dogs

Dogs descended from wolves but instead of adapting to their environment, humans played the main role in their evolution. We selected for cuteness or well-mannered. We now have "pure bred" dogs. But we often in-breed (breed within family) to keep genes "pure" which leads to health defects.



Early 1900s

modern day pug

Selective breeding can be good to increase chance of better traits but it is important to keep diversifying and allow for some natural selection