

Organic vs. Conventional Farming Practices

This lesson contains a few keywords that your class may not be familiar with and may require a more in depth explanation. This also offers a source for further research on topics related to the lesson, but maybe not mentioned in full detail. These terms could be a great opportunity for an additional project or homework options to elaborate on the lesson and gain a stronger understanding of the current food system. Here is a glossary of the key terms to act as an additional resource to fully understanding the lesson plan.

Glossary:

Biological Diversity (Biodiversity): the degree of variation of life. This can encompass genetic variation, species variation, or ecosystem variation within an area, biome, or planet. Biological diversity is important because species diversity leads to a sustainable environment for all life on earth. Healthy and diverse ecosystems are also more resilient to disasters and are more able to recover.

Genetically Modified Organisms (GMO): An organism whose genetic material has been modified using genetic engineering techniques. Generally, they are engineered to withstand direct applications of herbicides or to produce an insecticide. Despite reassurances that GMO's are not harmful, studies suggest GMO's are a growing threat to our health, the environment, and farmer's and consumer's rights.

Humus: A dark brown or black material created in soil as a result of plant and animal decay. Humus can help prevent erosion through diffusing the force of raindrops, increases water retention, increases plant yields, promotes healthier plants, and so much more.

Monoculture: the cultivation or growth of a single crop or organism on agricultural or forest lands. Monoculture can make it easier for disease and pests to spread through crops. Another problem with monoculture is planting a single crop in the same area of land for an extended period greatly diminishes soil fertility for future usage.

Pesticide: A substance used for eliminating insects and other organisms considered harmful to cultivated plants or to animals. Pesticides, while used to protect crops, often affect unintended targets as well. Runoff containing pesticides from agricultural sites pollute surrounding aquatic environments and repeated application of pesticides can lead to pest resistance.

Runoff: The draining away of water and the substances carried with it from the surface of a particular area.

-Point source: The term "point source" means any discernible, confined and discrete conveyance, including but not limited to any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, concentrated animal feeding operation, or vessel or other floating craft, from which pollutants are or may be discharged. This term does not include agricultural storm water discharges and return flows from irrigated agriculture (Clean Water Act section 502(14)).

-Nonpoint source (NPS): Defined to encompass any source of water pollution that does not meet the legal definition of “point source” of the Clean Water Act. This can include:

- Excess herbicides, fertilizers, and insecticides from agricultural lands and residential areas
- Bacteria and nutrients from livestock and pet waste
- Sediment from construction sites, crop and forest lands, stream banks