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Course

Date

Organic Versus Inorganic Agriculture

Organic farming refers to the way farmers produce and process their agricultural products. It encourages reduced level of pollution, water and soil conservation. Farmers avoid using conventional methods to control weeds and insects or to fertilize (USDA). On the other hand, a farming system where pesticides, chemical fertilizers, herbicides, genetically modified organisms, intensive tillage and heavy irrigation methods are used is known as inorganic farming (FAO). The differences between the two methods of farming lie in yield, human health, size and shape of products, quality, food additives, and division in the market among other issues. Here are several differences.

Natural fertilizers like composites and manure are applied in organic farming to feed soil and plants. The goal of using such methods is to bring about an enterprise that is harmonious and sustainable regarding the environment. On the other hand, conventional or inorganic farming method applies synthetic chemical fertilizers to promote the growth of plants (Carrington and Arnett).

Another difference between organic and inorganic agricultural methods is in how pests and diseases are controlled in crops and animals. In organic farming pests and diseases are reduced using insects and birds, traps, and mating disruption. Animals are allowed to go outdoors, given organic feeds, and rotationally grazed to reduce diseases. In conventional

farming, crops are sprayed with insecticides. Also, medication, growth hormones and antibiotics are given to animals to prevent illness.

Conventional agricultural methods utilize herbicides to eliminate weeds. On the other hand, organic agriculture uses various weed elimination methods which include tilling, crop rotation, mulch, and hand weed (Stony Brook University).

The yield is another factor that brings about the differences between the two. The inorganic farming method produces more food as compared to organic farming. A meta-study conducted found that organic yields are 80% of conventional yield, though the percentage differed across regions and crop groups. A second meta-study concluded that the differences in yield are highly contextual and depend on site characteristics and the system (Seufert, Ramankutty and Foley 230).

Organic and inorganic products have a noticeable physical difference. Organic agriculture produce has varying sizes and shapes which appear physically imperfect, unlike conventional agricultural produce, which seems relatively similar in shapes and sizes within the type. The reason for this difference in size is that non-organic products are treated with growth enhancing products (Lester 297). Organic meat that is beef, poultry, pork and other cuts of meat are most times physically different from the non-organic meat.

Conventional agricultural production often makes use of GMOs. Plants and animals that have been selectively bred vary from this. The use of GMOs have been associated with environmental drawbacks. When plants are grown in an open environment, it is hard to control their reproduction. A crossbreeding problem can result when a farm with GMOs exists in proximity to another farm (Carrington and Arnett). A genetic drift may occur, and farms that produce heirloom varieties can be negatively impacted. When the terminator gene couples this

effect (companies producing GMOs insert this gene in plants to curb their seeds from producing offspring that are viable), a devastating outcome may occur for farmers who keep their various generations and on the heirloom varieties.

In conclusion, it is evident that conventional or inorganic agriculture is highly energetic and resource intensive. The organic method of farming, on the other hand, tries to optimize the fitness and productivity of agroecosystem diverse communities which are people, plants, livestock and soil organisms among others.

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