

Conventional Agriculture Farming For The Future

Maine Learning Results: Science:F2, F4, M4, M6 Social Studies:A1, A2, H1

Purpose: To understand the difference between sustainable and conventional agriculture. To identify some of the qualifying practices of sustainable ag and resources used for those practices.

Key Concepts:

- sustainable agriculture is our agricultural heritage
- sustainable agriculture is concerned with the long term health of the land and it's inherent ecosystems
- we will identify some of the practices that we already use as sustainable practices

Activity: Begin by writing 'sustainable' and 'conventional' in two columns on the board. By taking information from the group, define the terms, focusing on the words sustainable and conventional in a broad sense.

Once the class has brainstormed definitions for sustainable and conventional, lead them in applying those definitions to what we know of agricultural practices.

Finish by making a list of what practices we use to maintain soil and feed the plants in our own garden (the addition of compost, manure or cover crop etc.), and decide if these practices are sustainable or not. If not, is there another practice that we could use that would be more sustainable to our local ecosystem.

Background information: Agriculture has been going on for at least 12,000 years. Most of those years the predominant practice was sustainable agriculture. It wasn't until after WWII that chemicals began to be used in agriculture. The growth of the application of chemical pesticides and fertilizers into a widespread, global practice was called the Green Revolution.

Basically, the purpose of conventional agriculture is to feed the plant for production with high powered, synthetic fertilizers and pesticides. The high powered, synthetic fertilizers and pesticides do feed the plant, but they don't feed the soil, thus leaving it depleted as the years go on, and they leach out into the groundwater, lakes and rivers causing a multitude of environmental problems.

In contrast, the purpose of sustainable agriculture is to feed the soil for many years of future production, and to use fertilizers and pest solutions that are not as harmful to the environment and the natural equilibrium.

Follow up Activities: This is a great lesson to use to fuel further research on sustainable agriculture and conventional agriculture and to look at food and environmental issues in our country today. Out of this research the class can create a thoughtful definition, as a class, of the agricultural practices that we will use in our own garden and what criteria we decide that by. Aldo Leopold's idea of a land ethic could be a great discussion topic on this issue.

There are many fine documentaries, magazine articles and other resources available on these subjects, including resources available from the Maine Organic Farmers and Gardeners Association, www.mofga.org, and the Northeast Organic Farmers and Gardeners Association, www.nofa.org.