



USDA Coexistence Fact Sheets Crop Production Methods

Growing Crops with Diverse Production Methods

U.S. farmers produce 25 percent of the world's food supply. With world population expanding at rapid rates, U.S. farmers will have to continue to grow more food each year. There are currently different types of crop farming practiced in the U.S. – organic production, conventional farming, and growing biotech crops. Additionally, these three different types of crops may require farmers to closely track the seed through Identity Preservation, and both commodity and specialty crops may be grown using these different production methods.

All types of production methods are safe for animal and human food use despite the differences in the ways these types of crops are grown. While the USDA supports and encourages coexistence within agriculture, there are natural pressure points that can occur between the different types of production, particularly when multiple methods are utilized in close proximity to one another. Coexistence is defined as the concurrent cultivation of conventional, organic, Identity Preserved and genetically engineered crops consistent with underlying consumer preferences and farmer choices. Regardless of the type of production method, farmers growing organic, conventional and biotech seeds, or specialty products, are growing safe, nutritious food for people everywhere.

The Difference is in the Details

Numerous studies have been conducted on the nutritional differences between organic and biotech food, and a recent meta-analysis concluded that none existed. Because they are grown with a specific characteristic in mind, however, conventional foods can be different in nutritional make-up. The biggest difference in food grown with organic, conventional and biotech methods is, generally speaking, the way they are produced.

Certified Organic

Certified organic farmers commit to growing crops without the use of synthetic pesticides or fertilizers, without the use of biotechnology seeds, or without the use of ionizing radiation (most often used for food preservation). Organic farmers are also required to meet product specifications, which requires taking steps to minimize the risk of commingling of their organic products with any product deemed non-organic. Farmers growing certified organic crops are also subject to third-party verification to ensure they abided by the standards set forth by the US Department of Agriculture (USDA) before they can be labeled as such.

Conventional

Conventional crops are those varieties that have been bred using different techniques, except for biotechnology, and are not grown using organic practices. Conventional plant breeding has been

happening for thousands of years, as farmers would breed plants, selecting for desirable traits such as juicier fruits or increase resistance to pests. While production of some commodity crops, like corn and soybean, is largely biotech in the U.S., production of other major commodities, like wheat and rice, is mostly conventional, since there are no biotechnology varieties of these crops commercially available.

Biotechnology

Farmers who choose to grow biotech seeds have a variety of seed characteristics to choose from, and they can choose which characteristics offer them the best results in their given growing conditions. Universities, independent scientists and agriculture companies have invested millions in the testing the safety of biotech crops prior to their commercialization. Biotech seeds undergo years of testing and approvals to ensure they are safe for both the environment and the animals and humans who consume them. Once a biotech seed variety is developed, the developer can request a review by the Food and Drug Administration (FDA) for food and feed safety. If the variety is intended to be used for pest control, it is also reviewed by the Environmental Protection Agency (EPA) to ensure the variety is safe for the environment. Finally, the seed variety is also reviewed by USDA to ensure it does not pose a plant pest risk to agricultural crops or other plants or plant products in the United States. This entire development and review process can take many years. USDA, EPA, and FDA stand by the safety of the genetically engineered (GE) products that have completed the Federal Government's stringent review process.

Farmers planting biotech seeds can use natural or synthetic fertilizers and pesticides, and use a variety of tillage methods depending on what works best for their soil conditions while protecting the environment.

Identity Preservation

Identity Preservation (IP) is the process of differentiating commodities, requiring that strict separation, which typically involves containerized shipping, be maintained at all times. IP is often used to market commodities like food-grade corn and soybeans, but it may be used for any differentiated product that has special characteristics that purchasers wish to protect, and are willing to pay for the increased handling costs. There are IP contracts for conventional, organic and biotech crops. The vast majority of IP crops are grown using conventional seed.

Specialty Crops

Specialty crops are defined as fruits and vegetables, tree nuts, dried fruits, horticulture and nursery crops. They are cultivated or managed for use by people for food, medicinal purposes, and/or aesthetic gratification. Specialty crops can be either organic, conventional or biotech crops. For example, some biotech crops that are classified as specialty crops are sweet corn, papaya and squash.

Growing the Market for U.S. Food

With the expected global population to reach 9 billion people by 2050, U.S. farmers will need to use all types of production methods to meet the increased demand for food. Growing demand for U.S. grown crops is good for all farmers – with different markets for each type of crop grown, the growth of one sector also strengthens the market for the other two. Supporting all types of food production and working to achieve coexistence is essential in building an industry that can withstand the demand spike that is sure to come with a growing global population.