



## USDA Coexistence Fact Sheets Organic Farming

Coexistence, as defined in a report of the USDA Advisory Committee on Biotechnology and 21<sup>st</sup> Century Agriculture (AC21), is the concurrent cultivation of conventional, organic, identity preserved (IP), and genetically engineered crops consistent with underlying consumer preferences and farmer choices. In other words, it is the existence of different types of production at the same time and in the same area. Market demands on U.S.-grown crops are increasing, and it will take products from the organic, conventional and biotechnology sectors to meet those demands. Understanding the differences and challenges of each sector, recognizing opportunities for growth in each sector, and understanding how one sector impacts the other two, will be critical as the agriculture industry continues to expand.

### Organic Farming Defined

Organic farming is a production method having a specific set of requirements which must be verified, before a farmer can receive USDA certification. Certified organic farming practices exclude the use of irradiation, sewage sludge, synthetic fertilizers, synthetic pesticides, and biotechnology (also known as genetic engineering). Because of these strict requirements and the demand for certified organic food, organic farmers receive premium prices for their products. As with other types of farming systems, organic farmers are committed to promoting ecological balance and efficient use of resources to limit their impact on the environment.

### Standards for Growing Organic Crops

To obtain certification for organic crop production, organic farmers must abide by certain regulations. Certification allows farmers to use the “USDA Organic” seal on their products. For crop farmers, the certification requires them to:

- Develop an organic system plan,
- Grow crops on land that has not had a prohibited substance applied for 3 years prior,
- Use tillage and cultivation methods that maintain or improve the soil structure,
- Manage crop nutrients through crop rotation, cover crops, or plant/animal materials,
- Maintain or improve the soil organic matter,
- Prohibit the use of synthetic fertilizers or sewage sludge on their fields,
- Use organically grown seeds when available,
- Control pests and weeds using approved methods and products, and without the use of synthetic materials (unless specifically authorized),
- And be verified by a third-party to ensure all of the above regulations have been followed.

The National Organic Program (NOP) is responsible for regulating the creation, production, handling, labeling, trade and enforcement of all certified organic products.

## **The Markets for Organic Food**

The number of organic farms has risen 240 percent between 2002 and 2011. The 2008 Organic Production Survey found that organic production took place on 4.1 million acres in the United States. Of that, 1.6 million acres were intended for organic crops, while the remaining acres were used for grazing or pastureland.

Some consumers choose to buy certified organic crops and many food manufacturers are seeking organic ingredients and products because they wish to support the farmers and the production methods they employ. For food manufacturers, in particular, who wish to use the “Certified Organic” seal on their products, they must verify that 95 percent or more of the content of that food item has been certified organically grown. Organic field crops are often grown for this reason – as a certified organic ingredient in a manufactured product that will bear the “Certified Organic” seal.

In 2012, sales of organic food products totaled \$28.4 billion, which is more than 4 percent of total food sales. However, more than half of the organic food products sold are categorized as produce (43 percent) and dairy (15 percent). Consumer demands for organic food continue to rise and organic food sales totaled more than \$35 billion in 2013.

Some organic products are sold for very specific end markets, requiring farmers to preserve the identity of the seed from planting to end market. This type of system is called identity preservation (IP) and is a useful tool to ensure market requirements are met in the field. While a majority of IP products are conventionally grown seed, some organic products fall within this category.

## **Coexistence: What it Means for Organic Farmers**

Organic farmers often enter into marketing contracts that require them to meet specific market demands for their product. This means that any non-organic seed or grain that has commingled with the organic shipment is unacceptable. If shipments of organic seed or grain are determined to be contaminated by the buyer, the buyer can reject the shipment and the organic farmer suffers an economic loss even though the crop produced by the farmer meets the USDA standard of organic.

Since biotech crops have been adopted so broadly by farmers around the country, an organic farmer may often find him or herself planting next to a neighboring field of biotech seeds. Pesticide and herbicide drift can make it difficult for a farmer to follow the standards required for certified organic crops, as can gene flow or commingling of non-organic seeds. Best practices should be used to minimize the risk of drift and commingling between organic and biotech crops.

Organic farmers aim to improve the soil and environment surrounding their farm as they grow crops. One of the ways they do this is to add organic matter to the soil, which adds nutrients, improves the aeration, and improves water retention. This helps to promote root growth. Organic production practices also help to promote beneficial microorganisms in the soil such as root-associated fungi that may increase the plant’s absorptive capacity for water and nutrients. There is also some evidence that show organic crops may be able to better withstand drought.

Additionally, some practices required by the Certified Organic program are being adopted by biotech and conventional farmers, as well. For instance, all types of crop farmers may choose to plant cover crops in the fall in an effort to reduce soil erosion and supplement nutrients in the soil. Many biotech and

conventional farmers are also seeing the benefits of reduced tillage practices, as it helps build up organic matter in the soil. The production techniques used by organic farmers can be a learning opportunity for other farmers.

### **Future Opportunities for Organic Farming**

Consumer demand is continuing to drive the demand for certified organic foods. It is predicted that the organic industry will continue to grow over the next several years, increasing by 14% by the end of 2018. The organic industry is meeting the needs of a segment of consumers who have particular preferences about how their food is grown, wish to consume food that has less synthetic pesticides and biotech content, and promote farming practices that foster cycling of resources, promote ecological balance, and conserve biodiversity. Connecting non-farming consumers to the farming community is good for everyone in agriculture.

Organic farming has a bright future, and will continue to increase in size over the next several years. Its ability to lessen the gap between the farming industry and the non-farming public is essential for continued growth in U.S. agriculture. With global population expected to reach 9 billion in 2050, other segments of agriculture are focused on growing more on the same amount of land; however, the organic sector offers an additional spectrum of food choices for consumers around the globe.