



Preventing GMO Contamination in Organic Crop Production

Guidance

GMOs are prohibited in organic production! GMO's (Genetically Modified Organisms) are organisms whose genome has been altered by genetic engineering techniques not possible under natural conditions. Genetic modification is an "excluded method" that is explicitly prohibited in the USDA National Organic Program regulations at §205.105(e). Crops at risk of GMO contamination are those that are commercially available in GMO form, which currently include: Alfalfa, Canola, Corn, Cotton, Papaya, Soybean, Squash, and Sugarbeet. Here are some key requirements for operators to ensure the integrity of organic products and prevent GMO contamination.



ADDITIONAL INFORMATION

NEVER USE GMO SEED

Certified organic seed is required. If the desired seed variety is not commercially available in organic form, there is an exception for non-organic non-GMO untreated seed to be used. It is important to source seed from a trusted source that can provide documentation of non-GMO status. Any treatments applied to the seed must be reviewed by PCO and must not contain any GMO ingredients or other prohibited materials.

PREVENT CROSS-POLLINATION WITH NEARBY GMO CROPS

Operators must implement preventative practices based on site-specific risk factors to prevent cross-pollination with GMO crops grown adjacent to organic fields. Effective prevention depends on an understanding of the at-risk crop, such as the crop's life cycle and pollination method. Wind-pollinated crops (e.g. corn) have different considerations for risk prevention than insect-pollinated crops (e.g. alfalfa) or self-pollinating (e.g. soybean). General risk prevention practices include:

- **Stagger plantings**

Planting your organic crop earlier or later than nearby GMO crops of the same species will avoid flowering at the same time, which can lead to cross-pollination. Staggered planting is an effective practice for wind and insect pollinated plants. Operators must be aware of the planting dates, flowering dates, prevailing wind directions, and relevant other factors.

- **Establish buffer zones**

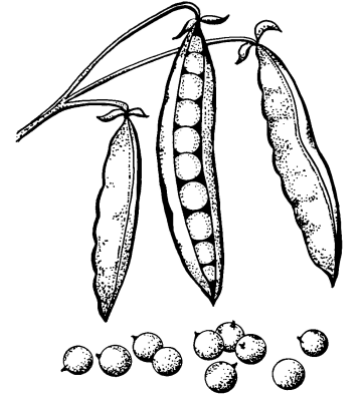
Buffers zones are the areas surrounding organic production areas that provide a physical barrier to prevent the unintended application of prohibited materials, including GMO pollen drift. Buffers must be large enough to prevent measurable drift.

Plant your buffers! Planted buffers will trap incoming pollen, whereas a mown grass buffer would allow pollen to reach your certified organic crop. Windbreak or hedgerow plantings can reduce the amount of pollen drifting onto your fields. Alternatively, you can plant your organic crop to the field edge and sacrifice several rows as the your buffer. Crops in the buffer rows must be managed organically but must not be sold as organic.

- **Agreements with neighbors**

By agreeing with your neighbor to keep GMO crops in fields as far removed from your organic fields as possible, much of the risk of contamination can be reduced. Conventional farmers growing Bt crops are required to plant 20% of their acreage in non-Bt crops, to reduce the build-up of Bt-resistant insects. If your neighbor grows Bt crops, ask if they will plant their “20% non-Bt refuges” in areas that adjoin your organic fields.

Ask PCO for a “Verification of Adjoining Land Use” form that you and your neighbor can fill out and document that the neighbor will not use any prohibited materials on their premises, or will inform the organic grower prior to any applications of prohibited materials so the organic grower can implement appropriate contamination prevention practices.



- **Ongoing monitoring**

Operators must implement monitoring practices and procedures to be performed and maintained, including the frequency with which they will be performed, to verify that their plan for GMO avoidance is effectively implemented.

PREVENT CONTAMINATION RISK THROUGHOUT PRODUCTION AND PROCESSING

Operators must implement measures to prevent contact between organic products and GMO products.

- **Shared Planting and Harvesting Equipment**

Before using shared equipment to plant, harvest, or handle organic crops, the equipment must be thoroughly cleaned to remove any residue of previous conventional/ GMO plant material. This includes augers, bins, grain dryers, rotary screen cleaners, etc. Alternatively, organic crop can be used to purge combines and similar equipment, provided that the purged product is not sold or represented as organic. Records must be kept of the cleanout procedures.

- **Storage and Transportation**

Make sure you have separate storage areas for organic and conventional/GMO crops, and that these are well marked.

RESOURCES

- OSGATA “Protecting Organic Seed Integrity”: www.osgata.org/organic-seed-integrity
- ATTRA “Transgenic Crops”: www.attra.ncat.org