

# Genetically Modified Organisms

## How They Affect Organic Agriculture in North Dakota

Brad Brummond, Extension Agent/Walsh County  
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### **SITUATION STATEMENT**

North Dakota is the number one state in organic grain production, with over 50,000 acres under certified production. Certified organic crop land has more than doubled from 1992 to 1997, making it one of the fastest growing segments of United States agriculture. Medium-term growth rate forecasts range from 20 to 30% in the United States. The organic industry is a viable and fast growing segment of agriculture in North Dakota, The United States and the world.

Organic standards have adopted a zero tolerance to transgenic organisms in the production of organic products and in the organic products themselves. Growing acreage of transgenic crops in North Dakota has brought concerns from within the organic community about the possibility of contamination of organic products and what this might mean to the future marketability of their products.

### **CHALLENGES FACING THE ORGANIC INDUSTRY IN NORTH AKOTA**

Acquiring seed free of transgenic organisms from private companies and state foundation seedstock programs is becoming more of a problem. Wide spread adaptation of transgenic soybeans, corn and canola have made it difficult for seed producers to guarantee their seed is free of contamination. It is also a concern within the North Dakota Foundation Seedstock program. Dialogue between the seedstock program and organic producers continues on how to best safe guard this future supply of seed. There has also been concern by organic producers in North Dakota that transgenic research is being done in close proximity to seedstock fields.

Contamination from pollen drift via wind or insects is seen as one of the biggest threats to organic production in North Dakota. Organic producers are concerned that even if they purchase or grow non transgenic seed it may become contaminated in their fields beyond their required buffer strips and lead to decertification of their crops. This has led to an abandonment of organic canola production by many certified organic growers in North Dakota. It has also led to much discussion as to how far away organic fields may need to be from transgenic fields to guarantee that organic fields will remain free of contamination from pollen drift.

Contamination within the food distribution and seed cleaning system is also a cause for concern by organic growers. There is no tolerance for any contamination, no matter how small, in organic crops.

### **STEPS FOR OVERCOMING**

Organic producers are beginning to take steps to avoid contamination of their products. It is a complicated and frustrating task to develop procedures to minimize the risk of contamination to pollen drift and the inherent inability to guarantee a transgenic free food distribution system. It is almost impossible, or at the very least extremely expensive, to clean the last seed out of cleaning equipment, trucks, bins, ships and other distribution items.

The following are some of the steps currently being taken by organic producers in North Dakota to minimize the risk of contamination.

- < Organic producers have opened a dialogue with North Dakota State University and the North Dakota Seedstock Program to educate them on the special requirements organic producers have when faced with the transgenic issue. Meetings were held in March and July of 2001 with organic producers, organic seed producers, members of organic certification boards, Northern Plains Sustainable Agriculture Society, researchers, breeders, North Dakota Seedstock Program and Extension in attendance. The discussion revolved around how all involved can work together to address this issue.
- < Northern Plains Sustainable Agriculture Society has started working on the Farmer Breeding Club Project and educating producers on how to make seed selections on their own farm and grow quality seed. The goal of this project has been to empower farmers to develop and trade seed varieties that are suited to low input agriculture in the Northern Plains, thus giving them an “out” from dependence upon corporate controlled seed. This project needs further funding if their goals are to be realized.
- < Northern Plains Sustainable Agriculture Society has provided educational sessions on transgenic crops and their relationship to the organic industry at their annual meetings. Resolutions have also been drafted against transgenic crops.
- < Organic producers are being encouraged to use only certified organic seed cleaning plants to clean their seed and to avoid some of the conventional seed cleaning plants traditionally used.
- < Organic producers are using clean out affidavits on trucks, bins and harvest equipment. They are also using field activity logs to document this effort.
- < Organic producers are asking seed growers to sign a letter stating that to the best of their knowledge there is no transgenic contamination in their seed. This was done as seed suppliers refused to sign documents that guaranteed 100% non transgenic purity.
- < Organic producers are testing potential seed lots for transgenic seeds and contamination.
- < Organic producers are becoming much more cautious on where they buy their seed and are increasingly turning towards organically produced seed, which should accelerate the growth of the organic seed industry.

- < Certification organizations are developing protocols to deal with this problem. Organic producers, at the minimum, need to follow these or risk decertification.
  
- < Organic producers are advised to talk to their conventional farming neighbors and find locations of planned transgenic crops. This will allow organic producers and producers of transgenic crops the widest separation possible between crops that will cross pollinate. Separation by distance becomes a tool to reduce pollen drift in some areas.

## **KEYS TO FUTURE PROGRESS**

The biggest key to future progress on this issue is continued dialogue by all parties involved. Joint problem solving and education needs to take place to move towards workable solutions.

Research based information needs to be gathered on pollen drift, identity preserved products, and minimizing the risk of contamination to organic products. This historically has been the mission of University researchers and the Extension Service. This information and education needs to be provided.

We need to secure our seedstock program and maintain it's purity.

## **SUMMARY**

Ultimately the governments or people of the world will decide the fate of transgenic crops. Currently there exists in the United States conventional, transgenic, and organic crops. It is wise under these circumstances to find a way for these systems to coexist. Communication and cooperation remains the key to solving this problem. This is not a problem that can be solved by any one party, barring drastic changes within their industry. It can not be stressed enough ... we need to work together to find workable solutions to this challenge.