

## Life Before GMOs

Yesterday I had the honor of being interviewed by Minnesota Public Radio. The subject of the interview is how agriculture has changed over the years, specifically technology changes. I was chosen because my family has been farming for many years. In fact, we are in the midst of planting our 39th crop. So yes, I have seen many changes over the years. One of the most important technological changes is GMOs. Prior to the interview, I spent some time thinking back before we used GMOs--thinking about *Life before GMOs*.

### Life Before GMOs - BT Corn

BT corn is a GMO technology that provides much-needed insect control over the corn borer moth. Prior to using BT corn I vividly remember driving on our gravel roads during warm summer nights and having our windshield splattered with the dreaded corn borer moth remains. Literally, we were driving through a sea of moths. With grimaced faces and teeth clenched, we tried to make ourselves feel better by telling ourselves it wasn't that bad. But in all reality, we knew it was.

The problem with the corn borer moth is the moth lays eggs in the corn plants. Corn borer caterpillars are born and they burrow into the stalk of the corn plant. The corn plant dies prematurely and the corn plant tips over with the ear of corn lying on the ground. The corn combine cannot pick up corn ears off the ground during harvest. Yields are significantly reduced because of the corn borer moth. And there were no viable options to reduce the damage from the moths.

### Life After GMOs - BT Corn

When BT ([Bacillus thuringiensis](#)) corn was introduced, the new GMO technology had the capability to kill the corn borer larvae. Farmers were excited. Finally, we had a defense weapon that would help protect our crops. The corn plant would produce BT, which was lethal to the corn borer but not other insects or humans. BT is a protein found naturally in soils.

Once we started using BT corn, literally overnight, the corn borer moth problem was no more.

### Life Before GMOs - RoundUp Ready Corn and Soybeans

The other big issue we had prior to GMOs were weeds. Lots and lots of weeds. And they were very hard to control. Our weed management toolbox was limited prior to GMOs. A typical crop year would go like this:

During the spring, we plant our crops. Our herbicide options were limited. I remember years where we would apply "Pesticide A" that would target specific types of weeds. Days later we would apply

"Pesticide B" that would target other weeds. And you guessed it, days later we would apply "Pesticide C" to target more types of weeds. And this pattern continued until all pesticide options were exhausted. In between all of this, we would cultivate 2-3 times per growing season. A cultivator is a piece of equipment that attached to the back of a tractor and runs "sweeps" between the rows. Think of it as "a very large hoe." Cultivating is a very slow and tedious process. When the crops were too tall to cultivate, we would walk out the fields and pull weeds by hand.

Unfortunately, by the end of the growing season, we would look at our fields and say, "Well, hopefully, next year will be a better year." Weed control was very hard and "clean" fields were few.

## **Damage Weeds Cause**

The problem with weeds is they multiply and grow very quickly. They take important resources such as water and soil nutrients away from the crops. Again, options were limited and many times, weed infested (along with the crops) areas had to be mowed down.

## **Life After GMOs-RoundUp Ready Crops**

When [RoundUp Ready Corn and Soybeans](#) came to market, it made a very big difference. RoundUp killed every type of weed but left the corn and soybean plants unscathed. No longer did we have to cultivate. No longer did we make multiple trips of applying pesticides. Now, our trips were reduced significantly. On our farm, we apply one pesticide application before planting. Once the corn plants are 12-15 inches high, we make one trip of RoundUp. That's it. In fact, it's another 4-5 weeks before a person sees the beginning of an ear of corn.

## **How Much RoundUp Do We Apply?**

The total amount of RoundUp we apply equals about 2 pop cans over an acre of land. An acre of land is about the size of a football field. As you can see, we don't douse our fields with pesticides despite what others may say.

Farmers will tell you they use less pesticides now and can employ more conservation practices because weeds are under control. Not only that, but our fields look much, much better because there are very few weeds.

I will be honest, when the GMO technology came to fruition, farmers were giddy--including us. Farming is and has always been hard--so many factors that are out of our control. Farmers want to do a good job. GMOs has just made things a bit easier and better.

## Minnesota Farm Living

Connecting consumers with the farmers who grow their food

<http://www.mnfarmliving.com>

---

Keep the conversation going by checking out my [Facebook](#), [Twitter](#), [Instagram](#), [Email Subscription](#)  
!