



GMO Cotton

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BIO 208 – 01 (1602) Environmental Problems

BT Cotton

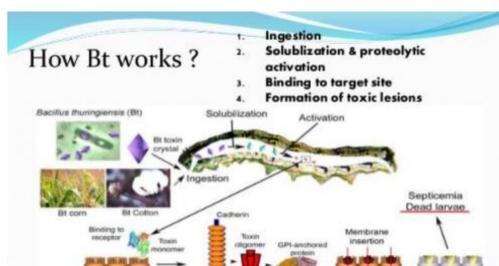
Bacillus thuringiensis is a bacterium that is used to create GMO cotton that is being produced to make things such as wool, polyester, most clothing items, some papers, etc.

The process:

- BT contains proteins that are toxic to pests that go after cotton.
- The genes is extracted then goes into another bacterium (agrobacterium), then goes into the plant.
- Or “gene gun”

The effects:

- No pesticides
- pests are still being taken care of without the same negative affects on the soil and air.



What is a GMO? :

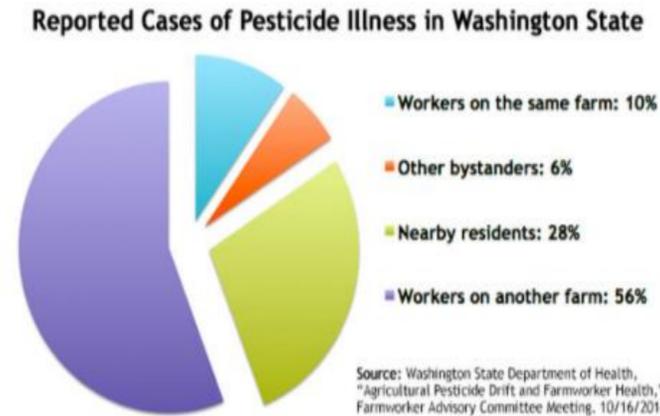
GMO stands for genetically modified organism which means that an animal or plant that has been scientifically changed and engineered to benefit whatever the product is being sold to make production easier and faster. One of these genetically engineered products that is very common in our everyday lives is cotton. According to the FDA, “GMO cotton was created to be resistant to bollworms and helped revived the Alabama cotton industry.”

The problem: Cotton fields were being affected by pests like bollworms.

The solution: Create BT (Bacillus Thuringiensis) cotton to rid of the problem and Roundup Cotton

The downside:

- Can negatively affect the human population
- According to the Canadian Association of Physicians for the Environment, can lead to a rise in rates of children getting leukemia and brain cancer. Pesticides are known to pollute air, water and round around them. And because of the chemicals that are being exposed to the environment, the inhabitants are being killed or end up being malformed.



Roundup Ready Cotton

RR Cotton is a genetically engineered cotton that was created to be able to resist herbicide glyphosate which is found in an herbicide called Roundup.

The Process: A gene that is resistant to glyphosate is inserted into the plant

The effects:

- Can resist the effects of Roundup and glyphosate
- Only kills weed and no cotton
- Glyphosate is considered less harmful, it takes a high amount to cause any harm
- But the constant use of Roundup has caused weeds to grow resistant to the chemical, leave the farmers no choice but to use other toxins that could be more harmful than roundup

