

In Indiana, farming varies from small family farms to large operations using different practices like planting GMOs, farming organically, and implementing conservation techniques.

#### **Seed Selection**

## Are farmers forced to grow GM crops?

Farmers can choose the best production system for their farms and markets. These choices include conventional crops, biotech crops, organic crops, or any combination thereof. These choices reflect what is best for each farmer, geographic location, and market demand. Many farmers plant biotech (GM) seeds to protect their crops from pests. Some of our farmers choose organic production.

All of these production methods contribute to meeting consumer demands for food products and producing safe choices for everyone.

#### I heard GMOs are harming the environment. Is this true?

As the world's population grows, possibly adding 2 billion more people by 2050, and agricultural land resources stay the same or shrink, GMOs – or biotech seeds – can be a critical tool in feeding the world without depleting resources or harming the environment. Biotech seeds can contribute to a

reduction in the amount of land, water, and chemicals that are needed to produce more food. This can contribute significantly to conservation and environmental stewardship, helping save protected land and keeping soil healthy.

Growing genetically modified crops allows farmers to make fewer passes through fields on tractors to control weeds and insects, resulting in significant reductions in fuel usage and greenhouse gas emissions.

### Are GMOs only allowed in the U.S?

No. Many countries grow GMO crops, including Canada, Brazil, Argentina, India, and the Philippines.

# What are the current GMO crops available?

Eleven crops – corn, soybeans, cotton, canola, alfalfa, apples (the arctic apple), potatoes, sugar beets, papaya, pineapple, and squash – all have Genetically Modified variety available to grow in the U.S. These crops have been developed primarily for herbicide tolerance and insect and disease resistance. They often maintain yield while reducing farmers' input investments and protecting the environment. GM Papaya is credited with saving the entire papaya crop from disease.

## Are foods from GMO crops safe to eat?

All seeds and plants should be evaluated for safety and health if created through natural selection, selective breeding, or GM technology. Thousands of new non-GMO seeds have come to the market through different technologies in the last century, including new organic and conventional seeds. Yet, only GM plants require extensive testing and regulatory approval.

Currently, there is no scientific data to support claims that GMOs cause new allergies, gluten intolerance, cancers, infertility, ADHD, or any other diseases. They are digested in the body the same as non-GMO crops.

| Pesticide Use                                                               |                                                                                                                                                                                     |
|-----------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Who approves herbicides and insecticides in the United States?              | The Environmental Protection Agency (EPA) determines whether herbicides and insecticides can be approved in the U.S.                                                                |
| What does the EPA consider when approving herbicides and insecticides?      | The EPA ensures that herbicides and insecticides, when used according to label directions, can be used safely without harm to human health or the environment.                      |
| Is there a link between herbicides or insecticides and human health issues? | According to the American Medical Association (AMA), no scientific evidence supports a link between the proper use of herbicides and insecticides and adverse human health effects. |
| Can the use of pesticides on food lead to cancer or other human illnesses?  | Public health research, supported by the AMA, indicates no link between pesticide use on food and illnesses such as cancer or other health problems when applied correctly.         |

#### **Conservation-Minded Production Practices**

What are some common production practices farmers use to reduce runoff and keep the soil healthy?

**No-Till/Reduced-Till:** Reduces soil disturbance to prevent erosion and improve water absorption.

**Cover Crops:** Plants like rye or clover are grown in the off-season to protect soil, prevent erosion, and improve fertility.

**Buffer Strips:** Strips of plants between fields and water capture runoff, protecting streams and rivers.

**Nutrient Management:** Farmers use precise methods to apply the right amount of fertilizer, reducing runoff and waste.

**Rotational Cropping:** Switching crops helps reduce pests and improve soil health.

**Precision Agriculture:** Technology helps apply water and nutrients efficiently, protecting the soil long-term.