

# Monsanto's Leaders Engaged in Advancing the Dialogue



January- March

## Story Idea:

One Planet, Nine Billion Bellies

## Description:

With one planet to grow food and a projected 9.7 billion people\* to feed by 2050, sustainability has to be more than just a buzzword (\*United Nations projected population). Using National Ag Day on March 15, 2016 as a timely hook, explore the progress of agricultural sustainability and how farmers are using sustainable practices to have better harvests and meet growing demand.

Note: The theme of the 2016 National Ag Day is Agriculture: Stewards of a Healthy Planet. National Ag Day takes place each March. Visit the National Ag Day website for the latest dates and themes beyond 2016. Did you miss National Ag Day? This story idea would also be ideal for Earth Day timing in April!

## Key Points:

- Agricultural production has become more sustainable over the years. A recent Field to Market survey compared the use of resources by corn farmers in 2011 with their use of those same resources in 1980. The study found that farmers used:
  - 30-percent less land
  - 53-percent less irrigation water
  - 44-percent less energy
- At the same time, farming in 2011 led to 67-percent less soil erosion and 36-percent less greenhouse gas emissions
- Farmers accomplished these improvements through a combination of improved agronomic practices and improved technology. They increasingly adopted no-till or conservation tillage farming, which reduces soil erosion, preserves soil moisture and reduces greenhouse gas emissions. And farmers adopted better technology – including better hybrid seeds and GMO seeds with traits like insect resistance.

## Background Resources:

National Ag Day and Beyond the Rows blog by Robb Fraley, Ph.D., Corn Farming and 45 Years of Progress

## Story Idea:

So, What Is a GMO?

## Description:

Many consumers have heard the word GMO. But, really, what is a GMO, and why do farmers grow GMO crops? Share the basics of GMOs to help demystify this important and beneficial agricultural tool.

## Key Points:

- There are many tools that farmers use to successfully grow crops, such as seeds that have been bred to grow well in their particular region or crop protection products that guard against insects and plant disease. GMO seeds are simply another tool available to farmers.
- The GMO process involves isolating a beneficial trait that helps a plant thrive in nature and adapting that trait to a new plant so that it can better survive in its environment. These improved characteristics can include greater resistance to insects or more efficient use of water.
- Farmers use GMOs as a way to have better harvests while using land more sustainably. GM crops can result in less fuel use because of less tractor trips over the field, more efficient use of water and reduced use of pesticides. Better harvests, in turn, help make a balanced meal more accessible to everyone.

## Background Resources:

What is a GMO? video, Discover Monsanto and GMO Answers

# Monsanto's Leaders Engaged in Advancing the Dialogue



April - June

**Story Idea:**

Increasing Vegetable Consumption with Tasty Tomatoes and Palate-Pleasing Peppers

**Description:**

What goes into great-tasting produce? Ideal flavor is a good place to start when looking for a solution to eating more vegetables, but it's more complicated than that. If the vegetable doesn't look, feel or smell right, consumers are probably not going to take that first bite. Using farmers' market season or Fresh Fruit and Vegetable Month in June as a timely hook, explore the path that vegetables take from seed to supermarket to sauté pan and how flavor, freshness and convenience play a role in consumption.

**Key Points:**

- For thousands of years, humans have used traditional breeding methods to grow more of the foods needed to maintain a balanced diet.
- Today's plant breeding allows farmers to grow vegetables with characteristics that consumers want, while helping produce to stay fresh between farm and fork.
- Vegetable breeders intentionally focus on developing fruit and vegetable varieties that have the best flavor, appearance and size, so that farmers, and families, will enjoy them.

Background Resources: [Beyond the Rows blog by Wendy Reinhardt Kapsak, M.S., R.D.N., Crop Pops – A Fun Way to Enjoy Fruits and Vegetables \(includes recipes\)](#) , [Beyond the Rows blog by Marlin Edwards, Ph.D., Resolving to Make Vegetables Better](#), [Beyond the Rows blog, Are Monsanto Vegetable Seeds GMO?](#) and the [Produce for Better Health Foundation](#)

# Monsanto's Leaders Engaged in Advancing the Dialogue



July - September

## Story Idea:

Tips to Pick and Preserve Your Produce

## Description:

In the heart of the growing season, offer tips for choosing and preserving ripe and flavorful produce

## Key Points:

- For a wonderfully ripe watermelon, just look for a yellow belly! The large yellow spot indicates the fruit is ripe and ready to eat.
- When selecting a cantaloupe in the summer months, look for a golden-colored melon with a clean, round hole where the stem once was and you can be sure it will be sweet and delicious.
- Don't store tomatoes in the fridge! The chill causes the fruit to undergo changes that weaken flavor and texture.
- When choosing tomatoes at the grocery store or farmer's market, pick fruits that are bright red for immediate use and pale pink/orange for future use.
- Refrigerate peppers unwashed in a plastic bag in the vegetable drawer. Red, yellow and orange peppers will last four to five days; green peppers, about a week.

## Story Idea:

Evolution of the Produce Aisle

## Description:

We know we should fill half of our plates with fruits and vegetables. It's not always easy. But, we do have great variety, thanks to advancements in plant breeding. Explore the evolution of the produce aisle to share how fruits and vegetables that are available to consumers today look a lot different than those from even 20 years ago, not to mention several centuries.

## Key Points:

- Not only is there now a wide variety of fruits and vegetables in the produce aisle year round, today's produce has been bred to appeal to consumers.
- Plant breeding is the act of bringing together two specific parent plants to produce a new offspring. Plant breeders put science and art to work as they select potential new varieties. The new variety will share traits from parent plants.
- With the new tools today's plant breeders have at their fingertips, they are able to develop produce to meet the needs of everyone in the produce chain.
- Virtually every plant we grow for food today has benefitted from breeding. In fact, many foods that are common today were created by breeding.
  - Cauliflower and broccoli are descendants of the mustard plant — as are cabbage, kale, Brussels sprouts and kohlrabi. Over time, breeders built up the mustard plant's ability to store starch in different areas of the plant leading to multiple vegetables we love today.
  - Carrots used to be black, white, red, and purple ... but not orange. And they were bitter. The first orange carrots were bred in the Netherlands in the 17th Century, originally as a tribute to the "House of Orange" that ruled at that time.
  - The tomato was first domesticated and grown by the Aztecs around 500 BC. It spread from South America to Europe in the 1500s when Spanish conquistadors returned to Spain with seeds. During the past few centuries, tomatoes have been bred in a wide range of shapes, sizes and colors.
- With the new tools today's plant breeders have at their fingertips, they are able to develop produce to meet the needs of everyone in the produce chain.

## Background Resources:

Discover Monsanto

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October - December

**Story Idea:**

Plant. Grow. Eat. Repeat.

**Description:**

The global population is expected to climb to 9.7 billion by 2050. How will farmers sustainably produce enough food to meet the demand? Highlighting the annual observance of World Food Day on October 16, share how farmers are adopting advances in modern agriculture, such as biotechnology and precision agriculture, to help produce enough food for the continual cycle of Plant. Grow. Eat. Repeat.

**Key Points:**

- Everyone should have access to a balanced meal. In order to sustainably grow enough for our growing world, farmers must have tools and technologies to help them use land more efficiently.
- This food must be grown on the same amount of land.
- In 1960 there was one acre of farmland per person; in 2050, the amount of farmland per person will be less than 1/3 of an acre. It's clear we need to continue to develop new tools to help farmers use their land as efficiently as possible. (SOURCE: The World Bank, Food and Agriculture Organization of the United Nations (FAO-STAT), Monsanto Internal Calculations).

**Background Resources:**

World Food Day, National Ag Day, The Genetic Literacy Project, Cornell's Alliance for Science, Discover Monsanto or the Beyond the Rows blog

**Story Idea:**

A Grocery Store without Biotechnology

**Description:**

Imagine your local grocery store with no cheese, bread or beer. Without biotechnology, that could be the case as it is used to create each of these popular items. Explore the value and benefits of biotechnology to our food supply today.

**Key Points:**

- There is a lot of discussion around GMO seeds for crops today, but GMOs are used for a wide range of products that many of us use every day.
- Biotechnology, the process by which GMOs are created, is used in production of rennin for making cheese. Prior to biotech solutions, these enzymes were extracted from the stomachs of cows. Naturally occurring rennin often contained impurities that could result in less-than-ideal results. Biotech has enabled production of more predictable rennin that helps cheese-makers deliver the flavors and consistency that they — and consumers — are looking for.
- Biotech also helps in production of yeast used for bread and beer. Biotech helps to provide a more precise product that delivers the flavor profile that a baker or brewer is seeking.
- Understanding the history of GMOs, what they are and how they're used, helps put the technology in perspective.

**Background Resources:**

Discover Monsanto, GMO Answers and/or Monsanto scientists

# Monsanto's Leaders Engaged in Advancing the Dialogue



October - December continued

**Story Idea:**

The Business of Population Growth

**Description:**

As the year comes to a close and we look to the future, the United Nations estimates by 2050, we will add at least 2 billion people to our planet. This is the equivalent of adding the entire population of India, all countries in the European Union and the United States combined — or roughly two more Chinas. During the next 40 years, key sectors such as agriculture will need to identify ways to keep up with the demands of a growing population.

**Key Points:**

- Consider sharing a glimpse into agriculture both today and tomorrow. Work under development includes:
- Advancements in both plant breeding and plant biotechnology that help farmers mitigate climate change and find new solutions to food waste
- Identifying ways to better understand soil composition and solutions to help farmers grow their crops
- Using the applications of data science (i.e., precision farming) to improve on-farm crop yields and better manage natural resources

**Background Resources:**

Discover Monsanto and GMO Answers