



GMO's- What are the Facts?

Craig Pauly, DVM, MS

GMO's or genetically-modified organisms have been popular in the media recently. I was fortunate to listen to a lecture from Margaret Smith, a Plant Breeding and Genetics specialist from Cornell University at the Northeast Dairy Production Medicine meeting.

GMO's are produced from genetic engineering (GE). GMO's are a broad category but we will focus on genetically engineered crops. GE is basically an extension of what plant breeders have been doing for the last 9,000 years. Plant breeding has previously used traditional cross breeding to develop crops with desirable traits. This takes many generations of plants and has led to domestication and new crops/vareties. It is amazing to see the difference of our supermarket produce compared to the original plant!

The basic difference between cross-breeding and GE is that now geneticists have the ability to take genes from one organism and place it in a different organism. This science does not require cross-compatibility of the organisms, meaning that you can place genes from one species to another. An example is Bt corn in which a gene for a natural insecticide in bacteria is placed in the corn plant. An example of this is Pioneer Herculex® amongst many others. When the corn borer eats the leaf of the plant containing the Bt gene then it dies but it will not kill other beetles, flies, bees, or wasps. Bt is also considered safe for mammals, birds, reptiles, fish and the environment. Another popular GMO is Round-Up Ready™ crops. This allows Round-Up™ to be sprayed on soybeans, corn, cotton, canola, sugar beets, and alfalfa to control weeds but the crop remains unharmed. GE has led to less toxic herbicides being used, reduced tillage, increased production, and lower food costs.

There are two questions that you may have or be asked as a farmer pertaining to GMO's.

1) Am I eating foods that contain GMO's or genetically engineered crops. With 60-70% of supermarket foods containing an ingredient from a genetically engineered crop the answer is probably yes.

2) Are they safe? GMO's or genetically engineered crops have been proven safe in over 1,783 studies on food safety and environmental impacts. No credible evidence of safety concerns have been found. There are 9 weeds that have developed resistance to Round-Up; however, this is not linked to GE, this is linked to selective resistance due to use.

In summary, most people in the U.S are eating foods that contain ingredients from a genetically engineered crop which is a GMO and all evidence to date shows that they are safe as food and feed for our animals.



Figure 1 . Top is teosinte which is the ancestor of the corn.
This transition was completed using cross-breeding over thousands of years.

Mark your calendars!

Relay for Life Auction – FRIDAY May 13th

beginning at 6:00 p.m. at the Pavilion at the Lewis County Fairgrounds. Food concessions open at 5:00 p.m. Come out and get some great bargains. All money raised goes to American Cancer Society.



Are your pets up to date on their rabies vaccines?

If not, now is the time to vaccinate them. All pets must be vaccinated, even if indoor pet. If an unvaccinated pet bites- it must be confined for 10 days in an approved kennel/shelter at owners expense. - John Nortz - All animals need 2 shots- one year apart, then every 3 years. Lewis County Public Health along with Countryside Veterinary Clinic are holding several rabies clinics throughout the month of May for Dogs, Cats, and Ferrets 3 months of age or older. The clinics are as follows:



- Monday - May 2nd Constableville Fire Hall 7 - 8 pm**
- Wednesday – May 4th Copenhagen Fire Hall 7 – 8 pm**
- Thursday - May 5th Osceola Town Barn 7 – 8 pm**
- Monday - May 9th Lyons Falls Fire Hall 7 – 8:30 pm**
- Wednesday - May 11th Harrisville Fire Hall 7 – 8 pm**
- Monday - May 16th New Bremen Fire Hall 7 – 8 pm**
- Wednesday - May 18th Lowville Town Barn 7 – 8:30 pm**

Please have all dogs on a leash and cats & ferrets in a carrier or strong pillowcase/sack. Please provide a record of previous vaccination. \$10 donation suggested.

Read our newsletters: Remember that if you spot your name in our newsletter and call us within 5 days of the billing date, we will give you a \$10.00 credit on your bill.