

Spider-Goat vs. Frankencorn: a guest opinion by Michelle Smith

In 2001, I worked as a wild-life biologist supervising a research project in Montana. On the field crew was a young veterinarian. One night, while sharing anecdotes about unusual research projects, the vet asked, "Have you ever heard of spider-goats?" "Okay," I said, "You've got me. What the heck is a spider-goat?" I expected a punch line, but it was no joke.

During college, this young woman had learned of experiments where genetic material from spiders was inserted into the genetic material (DNA) of dairy goats. The resulting "goats" looked outwardly normal but produced a protein in their milk previously produced by web weaving spiders. The plan was to extract this material and use it to make a kevlar-like substance.

The spider-goat story has since been verified elsewhere, including a documentary. Not only were there spider-goats, but there were also leathery skinned cow-pigs. Obviously, these crosses would never occur in nature.

No one is suggesting breeding spider-goats in Josephine County, but what about plants? There are two basic forms of genetically modified plants: herbicide resistant plants and pesticide producing plants. Some of the most commonly grown GMO crops are soybeans, corn, cotton, canola (for oil), sugar beets (for sugar), papaya, zucchini, yellow crook neck squash and alfalfa. Only corn,

squash and some alfalfa are commonly grown in Josephine County. Currently, all are still available in non-GMO varieties.

Genetic modification occurs by numerous techniques including: gene deletion, gene doubling, inserting genes from one species into another or changing the position of genes within a selected organism's DNA. The newly created gene sequences do not exist in nature. Following genetic manipulation, modified cells are cloned to produce the new organism.

As GMOs do not result from selective breeding of normally compatible species, they are not traditional hybrids. They are laboratory creations, intentionally altered at a cellular level.

Unintentional and unforeseen changes can occur during any of these processes. For example, during gene insertion and cloning, thousands of additional unintended genetic mutations may occur. These unplanned mutations may lead to alterations in gene expression in the newly created plant or animal.

Corn is one of the highest profile GMO crops. GM corn was introduced in 1996 and is widespread today. The corn is crossed with bacteria known as *Bacillus thuringiensis* (Bt for short). Bt is a soil bacteria with a gene allowing it to produce an insect killing toxin. This particular gene was inserted into the DNA of corn and cotton. Every cell in a modified corn or cotton plant produces a toxic

insecticidal protein. This particular toxin kills insects by breaking down their digestive organs. Although intended for consumption by people, no human feeding studies were conducted on this bacteria-corn. Additionally, GM corn can cross pollinate with non-GM corn.

In 1992, the Food and Drug Administration (FDA) issued its current policy, that GMOs are not significantly different than other foods and require no additional safety testing. The agency claimed no knowledge of any information regarding GMOs posing significant public health dangers. During the early 1990's, Michael Taylor was in charge of FDA policy. He was a former Monsanto attorney who went on to become a Monsanto vice president and, eventually the Deputy Commissioner of Foods for the FDA. Monsanto is one of the largest producers of GMO products.

Currently, the FDA has a voluntary process whereby GMO manufacturing corporations produce documents of their choice to represent their safety claims. The FDA can request additional information, but corporations have no legal obligation to comply. At best, the FDA can issue an official written "reminder" to the corporations of their responsibility to support their safety claims. The FDA conducts no testing of GMO products.

In 1998, public interest attorney Steven Druker filed suit against

the FDA, resulting in the release of 44,000 GMO related internal documents and memoranda. Although the FDA claimed the majority of scientists considered GMOs safe, the documents showed a different story. The general consensus among FDA staff scientists, represented in the documents, was that GMOs were different from traditional foods and could possibly result in health threats. These potential threats included allergies, toxins, new diseases and nutritional problems. They repeatedly called for additional long-term research. Their calls were ignored and the documents remained internal.

The public was assured that Bt gene toxin was only dangerous to insects. However, in 2012, independent research indicated Bt toxin may break pores open in human cells and kill human kidney cells. There is rising concern that the immune system may identify genetically modified items as foreign invaders, launching inflammatory and /or allergic reactions.

Since 1996, data indicates rises in digestive disorders, inflammatory conditions and allergies. Many health care professionals are becoming increasingly suspicious that GM foods have contributed to this rise. Michelle Perro MD, a leading U.S. pediatrician, is adamant in her opposition to GMO foods. She, among others, has successfully used non-GMO diets to treat allergies and inflammatory digestive disorders.

The American Association of Environmental Medicine took a strong position against GMOs. They cited independent animals exposure studies indicating immunological problems as well as changes in the liver, kidney, spleen and gastrointestinal systems. These studies also associated animal consumption of GMO products with infertility, accelerated aging and complications with insulin and cholesterol.

You cannot taste, smell or see genetic modifications. They cannot be washed, peeled or cooked away. Genetic modifications are encoded in an organism's DNA. Consumers cannot change this any more than they can change their own race, skin or eye color. GMO products do not require labeling in the U.S.. There is fierce corporate opposition to labeling.

International markets for GMOs are somewhat questionable. Since GMO introduction, the U.S. has lost over 90 percent of its European corn export business. In 2013, Mexican courts blocked the issuance of permits for field trials of GM corn, citing "imminent harm to the environment". When a small amount of GM wheat was recently discovered in an Oregon field, imports of American wheat were halted in Europe and Japan.

While many wonderful things have been wrought by responsible research, innovation and development, the key word should always remain "responsible".

VOTE

SELIGMAN

FOR
Commissioner

No New TAXES - YES

ALL REPAIRS DONE ON SITE!

TUES - FRI 9 A.M. - 6 P.M.
SAT 10 A.M. - 4 P.M.
SUN & MON CLOSED

Yanase Jewelers

23772 REDWOOD HIGHWAY
KERBY, OR

541-592-4838

Starting or Growing a Business in Illinois Valley?

Need money?

Micro Business Loan Funding Always Available!

*Start-up, existing, home-based or other business enterprises

*\$200 minimum to \$25,000 maximum

*Apply at the IVCDO office - 201 Caves Hwy.

*Questions? Phone 541-592-4440

Join AMR as we teach the world to

save lives

May 21, 2014

Be part of the AMR World CPR Challenge

Learn compression only CPR

AMR

Your local, free CPR-Training event:

IVFD STATION ONE

679 Caves Hwy • Cave Junction

10 A.M. - 12 P.M.

More information available at www.amr.net/CPR

SUMMER YOUTH CAMPS

at Siskiyou Field Institute in Selma:

July 9-11
Elementary School Wilderness Skills Day Camp - \$25 for Evergreen Elementary students, \$100 for others.

July 21-25
Middle School Wilderness Skills Overnight Camp - \$20 for Lorna Byrne Middle School students, \$195 for others.

July 15-17
Wilderness Backpacking Trip for Teens - \$90. Partial scholarships available.

For more information, call Siskiyou Field Institute at 541-597-8530.

2 WEEK SPECIAL

Gooseberries

Real Food Market

Special Features

Ready-to-Go Breakfast
Hot Case Featuring Breakfast Sandwiches & Burritos.
8-11 AM, Mon-Fri

NEW!

Country Natural Chuck Steak
No hormones or antibiotics. A very flavorful cut of beef. Great steak to BBQ.
\$5.99 lb. (Reg. \$7.09 lb.)

Carrots
2 lb. bag. The ultimate health food. Low fat and ideal for snacks, salads, or baking cakes.
\$2.09 lb. (Reg. 2.39 lb.)

Groceries

Late July
Assorted multigrain chips. Organic, Gluten-free, Non GMO. 6 Flavors to choose from. 6 oz.
\$2.19 ea. (Reg. \$3.19)

Amy & Brian
Coconut Juice. 3 Flavors. Great source of electrolytes. Great for hydration.
\$2.19 ea. (Reg. \$2.99)

Mary's Gone Crackers
Organic, Gluten-free, Non GMO, Vegan. 6 Flavors to choose from. 6.5 oz ea.
\$4.09 ea. (Reg. \$5.59)

Mary's Gone Crackers
Assorted Cookies
4 Delicious flavors to choose from. Organic, Gluten-free, Dairy free
\$3.29 ea. (Reg. \$4.89)

Deli

Breakfast Menu
Breakfast Flatbreads **\$3.99 ea.** (NEW!)
Choice of:
1. Sausage, Bacon, Egg & Cheese.
2. Grilled Veggies, Egg & Cheese.
3. Grilled Veggies, Tempeh & Cheese.
Grab-n-go
Just Desserts **\$2.99 ea.** (NEW!)
Individual Cupcakes. All varieties.

Grill
Organic Turkey Burger..... **\$6.99 ea.** (Reg. \$9.99 ea.)
With Side Salad.

Salad Case
Sundried Tomato & Feta Orzo Salad **\$6.99 lb.** (Reg. \$7.99 lb.)

Meat

Diester Drumsticks..... **\$2.09 lb.** (Reg. \$2.89 lb.)
An all natural turkey. Bake them in the oven.

Niman Ranch St Louis Ribs..... **\$4.79 lb.** (Reg. \$5.79 lb.)
No hormones or antibiotics. Delicious tasting ribs.

Applegate Natural Hot Dogs..... **\$4.49 pkg.** (Reg. \$5.49 pkg.)
No nitrates or nitrites. Makes for a quick lunch!

Beeler's Bacon..... **\$5.29 pkg.** (Reg. \$6.79 pkg.)
All natural Pork. Great for Sunday Morning Breakfast.

Produce

Cantaloupe..... **\$2.99 ea.** (Reg. \$3.29 ea.)
Explosive flavorful fruit, low in Saturated Fat and Sodium, and very low in Cholesterol.

Small Avocados..... **89¢ ea.** (Reg. \$1.09 ea.)
Their creamy texture and rich taste make them a common ingredient in many dishes.

Strawberries **\$4.59 ea.** (Reg. 5.49 lb.)
The tiny strawberry is packed with vitamin C, fiber, antioxidants, and more. Sweet, luscious and shapely.

Bananas..... **89¢ lb.** (Reg. \$1.19 lb.)
Wonderfully sweet with firm & creamy flesh. Perfect for snacking on the go.

Bulk

Organic Rye Berries..... **99¢ lb.** (Reg. \$1.19 lb.)

Organic Pumpkin Seed..... **\$4.59 lb.** (Reg. \$5.69 lb.)

Organic Split Pea Green..... **\$1.49 lb.** (Reg. \$1.89 lb.)

Organic Short Brown Rice..... **\$1.79 lb.** (Reg. \$2.19 lb.)

1201 Redwood Ave. • 541-471-2700 • Open Mon. - Sat. 8 am - 9 pm • Sun. 9 am - 7 pm