



Eatology

**FARM
BUREAU**
ARKANSAS

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Confused about what kinds of foods to buy?

You aren't alone.

A wide variety of options make choosing the right food for your family a tougher decision than it has been in the past. Varying farming practices, marketing promotions, and product labels make the decision of what is best to buy very challenging. Organic, all-natural, non-GMO, locally grown, and gluten-free options complicate grocery shopping more than ever before.

When it comes to what is best to buy, one factor drives the decision more than any other — safety. This publication focuses on understanding the choices consumers face when choosing how to spend their food dollar. Its main goal is to educate the reader on the differences among food options faced by today's consumers.



Animal Food Trends

Red meat and milk are both excellent sources of many key nutrients our bodies need.



Trends come and go with our food, much like they do with the clothes we wear, the vehicles we drive, or the way we style our hair. It can be hard to separate the truth about what we consume from all of the information thrown our way.

Red Meat

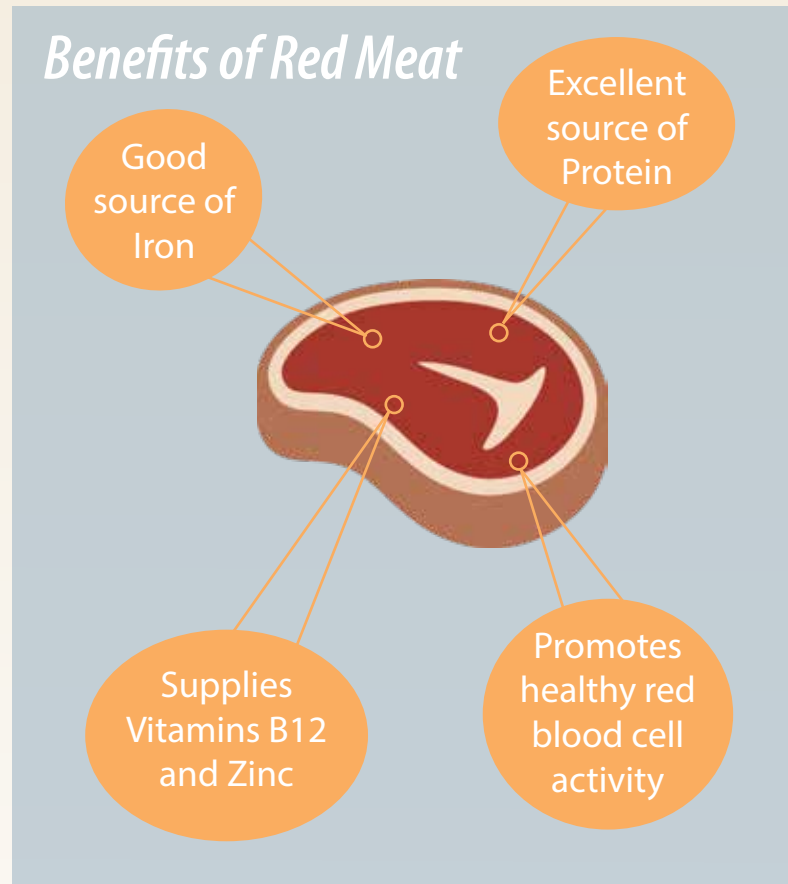
A common trend in America involves the consumption of red meats. Red meat is a great source of essential nutrients that our bodies need, and it is put through rigorous safety testing before it reaches consumers.

Checklist

Red Meat Inspections

- ✓ Facility sanitation inspection
- ✓ Ante mortem inspection
- ✓ Postmortem inspection
- ✓ Random sampling
- ✓ Product inspection

Benefits of Red Meat



Dairy

Another trend affecting the market for food is milk consumption. Milk provides essential nutrients to the body, without excess fat or calories. However, milk consumption in America has fallen substantially over the past 40 years.

Whole milk has about 3.5 percent body fat with only 30 more calories per eight ounce cup than two percent milk. There are no antibiotics in milk, and high-fat dairy is associated with a lower risk of obesity. Milk alone is a source of nine key nutrient that each aid important functions in the body.

Calcium for healthy bones & teeth

Phosphorus to generate energy & strengthen bones

Vitamin D to aid in the absorption of calcium

Protein to repair muscle tissue

Potassium for blood pressure health & muscle activity

Vitamin A to help vision & bone growth

Vitamin B12 to maintain red blood cells

Riboflavin for skin & eyesight health

Niacin to help the body digest sugars

An 8 oz glass of milk contains more protein than an egg!



Hormones & Antibiotics

The FDA does not allow meat or milk to be sold with any traces of antibiotics above very strict safety limits.

Hormones

Just like in humans, hormones occur naturally in all animals. Cattle are sometimes given additional hormones such as estrogen to help increase meat production and growth efficiency. These supplements are simply synthetic versions of the naturally occurring hormones produced by the cow. These supplemental hormones have been scientifically proven to be safe for consumers and are approved by the Food and Drug Administration (FDA). Producers also must adhere to the FDA's specified waiting period before selling products harvested from any animal treated with hormones.

Since the 1950s, the use of growth enhancing hormones has been prohibited in the poultry and swine industries. As a result, chicken and pork products in stores will frequently carry a label stating "no hormones added." Advances in nutrition, breeding, housing control, and disease control allow chickens to grow naturally to market weight faster than ever before.



**IT'S
ABOUT BREEDING**

Poultry Production: Then & Now

1925

112 days to grow a 2.5-pound chicken
4.7 pounds of feed per 1 pound of live weight
18% mortality rate

2014

47 days to grow a 6.12-pound chicken
1.89 pounds of feed per 1 pound of live weight
3.9% mortality rate

Antibiotics

Antibiotics are given to animals to prevent and manage diseases. Sometimes, antibiotics are the only way to keep animals alive. When antibiotics are used on animals, there is a waiting period before the animal can be harvested for meat or before milk from that animal can be sold. This waiting period allows time for the antibiotics to clear the animal's system before it is sold for consumption.

Antibiotics are approved for animal, environmental and human health by the Food & Drug Administration.

The FDA also requires that antibiotics be reapproved every year by organization officials.



Confinement & Animal Care

Farmers take ample precautions to ensure their animals are kept safe and comfortable.



The method in which an animal was raised has no impact on the nutritional outcome.

Buying “cage-free” or “free range” eggs does not mean you are buying a healthier product. Guidelines state that for products to be labeled as cage free or free range, the animals in question must have access to the outside. This does not mean that the animals are kept outside all the time. In fact, many will remain inside where they are fed and watered.

QUALITY OF LIFE

Living conditions for many animals are better today than they have ever been in the past. Modern technology has improved the lives of these animals in many ways including:

- Advances in **nutrition**
- Protection from predators & disease
- Adequate **room to grow** & move around
- 24-hour access to clean **water & food**
- Professional **veterinary care**

In an effort to prevent the spread of disease among animals, strict biosecurity measures are taken by livestock operations. Biosecurity refers to the various practices used to reduce the risk of introducing diseases to a farm. Common biosecurity measures include securing food sources, keeping clean water, proper disposal of dead animals, and many others.

Free-range and cage-free chickens also face additional risks when compared with conventionally raised chickens. Diseases carried by wild birds and waterfowl can be transferred to domestic birds. Free-range animals also often carry more bacteria than house-raised animals. These bacteria lead to an increase in pathogens that have the potential to cause foodborne illness in consumers.

FARMERS USE
BIOSECURITY TO
REDUCE RISK OF DISEASE
ON THE FARM



COST MATTERS
Buying “cage-free” or “free-range”
eggs can be about 60 percent
more expensive.



Plant Food Trends

Technological advances, health consciousness of consumers and economic fluctuations all play a role in the changing plant food trends seen in America.

High-Fructose Corn Syrup

Trends affect not only animal food products, but plant food products as well. One of the growing trends in America right now is the tendency of people to avoid buying items that contain high-fructose corn syrup.



High-fructose corn syrup is a natural product. It is made from corn and contains no artificial or synthetic ingredients, nor does it contain any color additives. In fact, high-fructose corn syrup has nearly the same composition and calories as regular sugar. Typically, high-fructose corn syrup is 42 or 55 percent fructose. Regular sugar is 50 percent fructose

Too much added sugar in your diet, not just high-fructose corn syrup, can contribute to health issues such as:

Weight gain | Type 2 diabetes
Metabolic syndrome | High triglyceride levels

Gluten

Another trend increasing in popularity across the country is gluten free diets. Gluten is a protein found in wheat that helps food maintain its shape, such as the sponginess of bread. Some people are allergic or have sensitivity to gluten. If this is the case, you should avoid eating gluten. However, many people believe cutting gluten out of their diet is an effective way to lose weight, which isn't true. Many gluten-free foods contain more sugar and fat than their traditional counterparts.

If you lower your gluten intake, you may also lower your intake of several important nutrients that your body depends on.

A gluten-free diet may lead to deficiencies in:

**B Vitamins | Iron | Calcium
Fiber | Magnesium | Zinc**

COST MATTERS

Buying gluten free can be about 240 percent more expensive.

Genetically Modified Organisms

Food derived from genetically engineered ingredients is just as safe and nutritious as food derived from other methods.



Genetically modified organisms aren't a new scientific discovery...

GMOs have been in the American marketplace since the 1990s. To ensure the safety and well-being of consumers, agencies of all different types perform extensive testing on GMOs before they ever reach the store. Testing can take as long as 13 years and cost as much as \$136 million for one product.

ORGANIZATIONS THAT TEST GMOS



American Medical Association

United Nations Food and Agriculture Organization

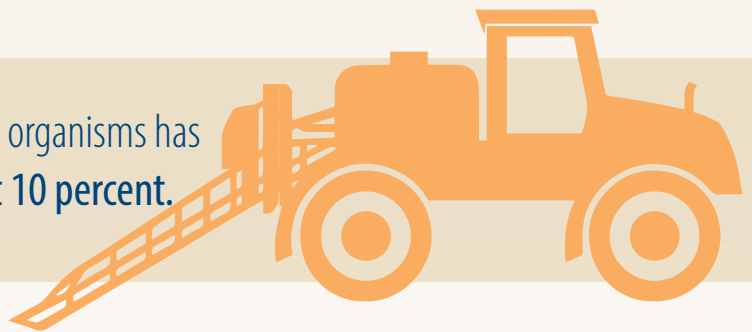


Food and Drug Administration

World Health Organization



Since 1996, the use of genetically modified organisms has reduced pesticide application by almost 10 percent.



Genetic modification involves the transplanting of desirable genes from one organism into the genome of another. Most often, these desirable genes are herbicide tolerance and insect resistance. Genetic modification is NOT simply injecting pesticides into organisms. In a study conducted by the National Academies of sciences, engineering, and medicine, it was found that GMO crops posed no greater threat to human health or the environment than conventionally grown crops.

COST MATTERS

Not only have GMOs reduced pesticide requirements, but they have also reduced prices on many commodities.

Corn prices would be **5.8 percent higher** without GMOs. Everyday products like **cereal, fuel ethanol, and corn syrup** would be more expensive.

Soybean prices would be **9.6 percent higher**, resulting in more expensive **cooking oils, biodiesel, and printing ink**.

Canola prices would be **3.8 percent higher**, increasing the prices of **cooking oil and animal feed**.

Without GMO crops,
Corn, Cereals, Alcohol would cost 5.8% more
Soybeans, Margarine would cost 9.6% more
Canola Oil would cost 3.8% more





161 bushels/acre

YIELD

118 bushels/acre

\$85 per acre

SEED COSTS

\$60 per acre

\$26 per acre

LABOR COSTS

\$71 per acre

\$143 per acre

FERTILIZER & CHEMICAL COSTS

\$58 per acre

\$25 per acre

FUEL COSTS

\$37 per acre

\$1.73 per bushel

OVERALL PRODUCTION COSTS

\$1.92 per bushel

Just like the consumer in the aisle of a grocery store, farmers face numerous decisions when it comes to production on their farm. The GMO vs Organic debate is a matter of farmer choice, with consumer safety remaining a top priority.

Thanks to rigorous scientific studies, GMO and organic products have continually been proven to be nutritionally equal and safe to eat.



Locally Grown

Locally grown food provides farmers the opportunity to feed their community.



Choosing to buy foods that are locally grown can be an excellent way to support your local economy.

It also allows you to better track where your food is coming from. The term “locally grown” is rather ambiguous, however and means different things among various entities.

There is no absolute definition of local. Different geographic regions, companies, consumers, and producers all may define it differently. Walmart, for example, considers an item local if it is grown in the same state in which it is sold. Whole Foods, on the other hand, considers local to be anything grown within seven hours of the store by truck in which it is sold.

According to the definition adopted by Congress in 2008, anything labeled locally or regionally produced must be within 400 miles of its origin, or located within the state it was produced.



FARMERS MARKETS

A majority of locally grown food that is purchased by Americans comes from farmers markets.

Farmers Markets allow consumers to:

- Support local economies by investing in small businesses
- Provide consumers with produce that is at the peak of freshness
- Talk with local farmers and become educated on their farming practices
- Save money by avoiding or reducing freight costs



There are a variety of farmers markets located across the state of Arkansas. To find one near you, you can visit www.arkansasgrown.org



Organic

Despite popular belief, organic foods offer no additional health benefits.



Organic farming has grown steadily over the past few decades. Many people believe that organic foods are healthier than traditionally grown foods. However, this is not true, as organic only refers to the standard practices used to grow the food, not the quality or safety of the food itself. Organic farmers do not use conventional methods, but they still have access to certain USDA-approved pesticides, herbicides, and fertilizers—including some synthetic products.



A comprehensive review conducted by the USDA found **no differences between the health benefits of organic and conventional foods.**

Currently 35 percent of the earth's ice-free land is used for agriculture; if the entire industry were to switch to organic practices, it would take **20 percent more land** to produce the same amount of food.



A major downside to buying organic foods is the cost. On average, organic items are more expensive than those grown conventionally.

Consumers also might not be able to avoid chemical residues simply by choosing organic options. Organic farmers can use pesticides, so long as they are certified by the USDA. Currently, there are more than 50 pesticides that have been approved for use on organic produce.

Instead of using synthetic fertilizers, organic farmers use compost or manure. Manure has to compost for months, and if it doesn't reach a certain temperature, it could be unsafe to use. Improper compost management can result in harmful bacteria such as E. coli.

COST MATTERS

Milk: 94% more
 Bread: 21% more
 Eggs: 21% more
 Cheese: 104% more
 Tomatoes: 44% more
 Beef Burgers: 134% more




Personal Food Safety

The first step to ensuring food safety is to maintain good personal practices.


This year, one in six Americans will get sick from food poisoning.

Those most susceptible to food poisoning are children five years old and younger, seniors who are over 65, pregnant women, and those with immune deficiencies. The best way to prevent this problem isn't to buy a certain kind of food or avoid particular items, but to take personal precautions with the food you buy.


Safe Food Temperatures




Steaks & Roasts 145°F
Ground Beef 160°F




Pork 160°F



Whole Poultry 165°F



Fish 145°F



Egg Dishes 160°F

Tips for Purchasing

- Don't purchase bruised or damaged produce;
- Don't buy or use canned goods that are damaged, swollen, rusted or dented;
- When buying fresh-cut produce, choose items that have been refrigerated or put on ice;
- Frozen or refrigerated groceries should be the last ones you pick up before leaving the store.

TIPS FOR FOOD PREPARATION & COOKING

CLEAN

Wash fruits & vegetables, but not meat or eggs;
Wash hands with soap & warm water for at least 20 seconds;
Wash kitchen surfaces & utensils after each use.

CHILL

Refrigerate perishable foods within two hours of purchase;
Never thaw or marinate foods on the counter, do it in the refrigerator instead;
Keep your freezer at zero degrees Fahrenheit or below.

SEPARATE

Use separate cutting boards, knives and plates for produce and for meat and seafood;
Keep meats and produce separate while shopping & when stored in the refrigerator.

COOK

Use a food thermometer to ensure temperatures are at safe levels;
Keep food hot after cooking.



for more information

animal food trends

U.S. food and drug administration

www.fda.gov/Food/ResourcesForYou/Consumers

milk processors education program

<http://milktruth.com/>

dairy Carrie

<http://www.dairyCarrie.com/>

hormones & antibiotics

meat mythcrushers

<http://meatisneat.wordpress.com>

drover's cattlenetwork

<http://www.cattlenetwork.com>

modern day farm chick

<http://www.moderndayfarmchick.com/>

national chicken council

<http://www.nationalchickencouncil.org>

facts about beef

<http://factsaboutbeef.com>

university of arkansas extension

<http://www.uaex.edu>

GMOs

GMO answers

<http://gmoanswers.com>

plant food trends

corn refiners association

<http://sweetsurprise.com>

locally grown

U.S. department of agriculture:

economic research service

<http://www.ers.usda.gov/topics/food-markets-prices/local-foods>

confinement & animal care

national chicken council

<http://www.nationalchickencouncil.org>

U.S. department of agriculture:

agricultural marketing service

<http://www.ams.usda.gov>

organic

U.S. environmental protection agency

<http://www.epa.gov/agriculture>

personal food safety

foodsafety.gov

www.foodsafety.gov



Farm Bureau is an independent, voluntary organization of farm and ranch families united for the purpose of analyzing their problems and formulating action to achieve educational improvement, economic opportunity, social advancement and promote the national well-being.

www.arfb.com

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