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# Acreage Living

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## Foodborne Bacteria Don't Take Summer Vacations!

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Every year the reports of foodborne illness are higher during June through August. There are basically two causes for these higher rates — first, the natural summer environment supports rapid bacterial growth, and people make mistakes when handling food in the different and challenging environments of picnics, campouts, road trips, etc.

Bacteria are always present in the soil, air, water, and in the bodies of people and animals. Summer weather provides the perfect temperatures and humidity levels to support the multiplication of foodborne bacteria to the large numbers that can make someone ill. Bacteria grow very rapidly by doubling, so feature 20 bacterial becoming 40, then 80, 160, 320, and so on.

The mistakes people commonly make in handling foods are in one of the following four areas:

**Problem 1:** Hands are not washed before food is handled.

**Solutions:** Pack clean, wet, disposable washcloths and paper towels for cleaning hands and surfaces. Hand sanitizers will destroy bacteria on hands, but with heavy soil, some washing may be needed first.

**Problem 2:** Cross-contamination occurs between raw meats or poultry and foods that will not be cooked.

**Solutions:** Consider using a small cooler just for raw meats or poultry to avoid contamination of other foods with meat juices. Never place cooked foods from the grill onto plates that held raw meats, or use utensils with cooked meat that were used on raw meats (wash any cutting board or utensil with hot soapy water after contact with raw meat before it touches cooked foods.) Never let the person packing your groceries at the store place raw meat in a bag with other foods. Contamination can happen before you even pack foods for your picnic.

**Problem 3:** Foods are not cooked to proper temperatures.

**Solutions:** Take your meat thermometer along to the grill. Grilled meat and poultry often brown rapidly on the outside giving the impression of doneness before a safe temperature is reached. Either cook meat completely before transporting to a picnic or cook it completely at the picnic. Never partially cook meat ahead of time. This allows some bacteria to survive and develop a resistance that subsequent cooking cannot destroy.

**Problem 4:** Foods are not kept hot or cold and are not chilled quickly enough after cooking.

**Solutions:** Place several ice packs or containers of frozen water on top of perishable foods in a cooler. Cold air drops, so ice under foods doesn't do an adequate job of keeping them chilled. Keep the cooler out of the trunk or out of the sun whenever possible.

Put canned beverages in a separate cooler from perishable foods since a cooler gets opened fre-

quently for beverages.

Throw leftover foods that have been out of refrigeration for more than an hour after cooking. The indoor rule is after two hours, but bacteria grow much more rapidly at temperatures of 90 degrees or higher so the safe time for foods to be out of refrigeration is shorter. If possible, keep perishable foods, like potato salad, nested in ice while the outdoor meal is being served.



## Small Farm Program

by Shawn Shouse, ISU Extension Field Specialist/Ag Engineering  
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The Small Farm Program at the Cooperative State Research, Education, and Extension Service (CSREES), an agency within the U.S. Department of Agriculture (USDA), is committed to meeting the needs of the small farm community. The goal of the CSREES Small Farm Program is to improve income levels and economic viability of the small farm enterprises through partnerships with the Land Grant System, public and private sectors, by encouraging research, extension, and education programs to meet the specific needs of small farmers.

The Small Farm toll-free number (1-800-583-3071) has been established by the Plant and Animal Systems Division of USDA-CSREES to give small farmers a much easier access and quicker response time to their questions and/or information inquiries on small farm issues.

The Small Farm electronic mailing group ([smallfarm@reusda.gov](mailto:smallfarm@reusda.gov)) was established in 1995 under USDA-CSREES-Plant and Animal Systems. This medium is used in exchanging small farm related information, requesting ideas, sharing success stories, submitting activities for the calendar of events, publications, and more. Anyone with interests in small farm activities is welcome to subscribe.

To subscribe to the small farm mailing group, send a

message to [Majordomo@reusda.gov](mailto:Majordomo@reusda.gov) and in the body, type `subscribe smallfarm`.

To subscribe to the Small Farm Digest Newsletter, call toll free: 1-800-583-3071, or write to: Small Farm Digest, Stop 2220, USDA-CSREES, 868 Aerospace Center, 901 D Street SW, Washington, DC 20250; Fax: 202-401-5179

Small Farm Program publications cover numerous topics for small and parttime farms. Fact sheets cover topics like Aquaculture, Asparagus, Beekeeping, Blueberries, Brambles, American Ginseng, Specialty Corn, Angora Goats, Cashmere Goats, Dairy and Meat Goats, Dessert Vines, Specialty Flowers, Foliage Plants, Earthworm Production, Exotic Fruits, Herbs, Exotic Livestock, Mushrooms, Shiitake Mushrooms, Specialty Mushrooms, Northern Nuts, Organic Farming, Peppers, Specialty Potatoes, Poultry, Pumpkins, Sheep, Strawberries, Specialty Vegetables, Wildflowers, and Woodlots.

Publications can be ordered by writing to: Small Farm Program, USDA-CSREES, Plant and Animal Systems, Stop 2220, 1400 Independence Avenue, S.W., Washington, DC 20250; Toll free: 1-800-583-3071; Fax: 202-401-5179, or by visiting the Small Farm Program website at <http://www.reusda.gov/smallfarm/>



# Sweet Corn and Raccoons

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Growing up on a central Iowa farm, we always had a large garden. As the heat of July set in, I remember waiting with great anticipation for the first ears of tender, juicy, fresh sweet corn. Picking those ears of golden delight at just the right time requires careful timing and keen observation. My Dad had what he claimed was a fail-safe method for determining the right day to pick sweet corn. He'd say that sweet corn was perfect for picking ... the day AFTER the raccoons had eaten it.

Raccoons, those funny, furry scavengers of summer nights, can be the mortal enemies of every sweet corn grower. Wildlife specialists say that raccoons are omnivorous, eating both plants and animals. Common foods include nuts, fruits, berries, seeds, insects, fish, frogs, eggs, birds, crayfish, and CORN... especially sweet corn. Raccoons seem to have an uncanny ability to select ripe ears and will tear down a stalk and eat the sweet corn kernels right off the ear. At the Shouse farm, they seem to prefer their corn ripened one day less than does my Dad.

Being intelligent animals and excellent climbers, raccoons are difficult to deter. Some gardeners have tried methods ranging from prickly vines (squash or pumpkin) planted around the corn patch to radios playing in the garden to moth balls or blood meal repellents and even tying the dog in the sweet corn patch at night. These methods generally yield limited success. The most effective exclusion method appears to be electrified fence.

Experts recommend a two strand electric fence with the first wire about four inches above the ground and the second wire about 12 inches above the

ground. Trimming grass and weeds from below the fence will help prevent electrical shorts that can render the fence useless. Using a more visible electric "tape" (a flat ribbon of woven plastic and fine stainless steel wire) may increase the effectiveness of the fence.

Materials to build an electric fence can be purchased at most farm and garden supply stores. Expect to pay around five cents per foot of electric tape or two cents per foot for light weight electric wire. Small steel or fiberglass posts with insulators will cost around \$2 each. Plug-in AC fence energizers start at around \$50. Battery operated models for remote areas start at around \$75. Energizers are rated in joules of electrical output. One joule will power roughly one mile of wire. For a two-wire fence, a one-joule energizer would power a fence half a mile long (enough to enclose five to ten acres). Most gardens can get by with the smallest energizers available (1/4 to 1/2 joule). Be sure to include a good grounding rod in your system to get maximum performance. CAUTION: NEVER attempt to avoid the cost of an energizer by connecting an electric fence to ordinary household (120 volt) current. Serious injury or death can occur! (Hopefully, you're all thinking nobody would make that mistake, but I'd better throw in the reminder!)

With a little work and persistence, you can hope to enjoy your sweet corn without competition from the raccoons. For more information, ask for ISU Extension bulletin Pm-1302e "Managing Iowa Wildlife - Raccoons" or check these web sites: <http://www.extension.iastate.edu/Publications/PM1302E.pdf> <http://cf.uwex.edu/ces/pubs/pdf/G3304.PDF>



# Stretching Fuel Dollars

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The high price of gasoline may have you wondering what you can do to save money on vehicle fuel costs. While you may not have a lot of control over gasoline prices, you can take steps to use fuel more efficiently. Here's some ideas offered by the U.S. Department of Energy.

**Properly inflate tires.** Car manufacturers must place a label in the car stating the correct tire pressure. Look for the label on the edge of the door, in the glove box, or inside the gas cap cover. If the label lists a psi (pounds per square inch) range, use the higher number to maximize fuel efficiency. Tires lose about 1 psi per month and 1 psi for every 10-degree drop in temperature. One tire underinflated by 2 psi will result in 1% increase in fuel consumption.

**Maintain the engine.** Change the oil as recommended by the vehicle manufacturer. Use an energy conserving oil indicated by the Energy Conserving API label, a certification of the American Petroleum Institute. Replace the air filter regularly. Clogged filters can cause up to a 10% increase in fuel consumption. Resist the urge to buy premium/high octane gasoline unless your vehicle manufacturer recommends it or your engine is knocking. Most vehicles don't need the higher-octane fuel to perform properly or efficiently. And finally keep your engine tuned. Studies have shown that a poorly tuned engine can increase fuel consumption by as much as 10-20%.

**Observe the speed limit.** At speeds above 55 mph, fuel economy decreases rapidly. Overdrive gears improve the fuel economy of your car during highway driving. Using cruise control on highway trips can help you maintain a constant speed and, in most cases, will reduce your fuel consumption. Anticipate traffic conditions ahead and avoid unnecessary acceleration and braking to improve your fuel economy by 5-10%.

**Plan trips.** Combining errands into one-trip saves you time and fuel costs. If you own more than one vehicle drive the one that gets the best gas mileage whenever possible. If you own a smaller car and use a roof rack or carrier for additional cargo space know that a loaded roof rack increases aerodynamic drag and thus can decrease fuel economy by 5%. Improve fuel economy by placing items inside the car or trunk whenever possible. Also avoid carrying unneeded items. An extra 100 lbs. reduces fuel economy by 1-2%.

If you're in the market for a different vehicle look for a fuel efficient one. The owner of a 40-mpg vehicle will spend \$637 less each year on gasoline than the owner of a 20-mpg vehicle assuming 15,000 miles of driving annually at a fuel cost of \$1.70 per gallon. You can compare the fuel economy of any vehicle on the interactive Fuel Economy website. You'll also find a printable fuel economy guide, a listing of the most and least fuel-efficient vehicles for year 2000 and other gas mileage tips. Visit the site at: <http://www.fueleconomy.gov/>

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**Acreage Living** is published monthly. For more information, contact your local county ISU Extension office.

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