Genetically Modified Organisms (GMOs) Explained

Misinformation about the safety of GMOs is widespread today, especially on the Internet. Dr. Ruth MacDonald, professor and chair of the department of food science and human nutrition at Iowa State University, answers some common questions about GMOs.

Why do we use GMO technology?

GMO technology allows farmers to use fewer pesticides and fertilizers on their fields and produce higher quality and greater yields of crops. This has the potential to result in less damage to the environment and in lower food prices.

How are GMO crops made?

To make a GMO crop like corn, scientists insert a very carefully selected section of DNA into the corn plant. The DNA is converted by the plant, as part of the corn’s own DNA, into a protein. That protein gives the corn plant the ability to resist a herbicide or prevent a pest from damaging the plant. The added DNA and protein affect only the pests and herbicides, not people or animals. The added DNA and protein are broken down when we eat them, just like all the other DNA and protein already in the plant.

Are foods made with GMO plants safe to eat?

We eat DNA and proteins all the time! Every living thing, including plants, animals, and bacteria contain DNA and protein. The added versions, such as those found in GMO foods, are not different. Since the beginning of agriculture, farmers have been combining and selecting varieties to improve crops. Using modern tools, scientists speed up this process and make it much more specific.

Most of the major health organizations including the American Medical Association and the American Academy of Pediatrics have declared that foods from GMO plants are safe. Farm animals have been consuming GMO grain for many years and the meat, milk, and eggs they produce are safe and healthy for people to eat. Farmers in the United States have been growing GMO corn and soybeans for almost 20 years and these foods and ingredients have been part of our food system all along. To date, there have been no reported cases of sickness from or allergic reactions to foods grown using GMO technology.

Is the use of GMO technology monitored?

Before farmers can grow foods that contain GMO technology, rigorous testing is done to make sure the plants are safe for the environment, animals, and humans. Government agencies, including the Food and Drug Administration (FDA), carefully examine the plants for safety and only those that pass are allowed to be grown.

Are GMO foods labeled?

FDA scientists are responsible for food labels, and they agree that foods produced with GMO technology are as safe and nutritious as other foods—and therefore do not need to be labeled. Some food companies have chosen not to use GMO ingredients in their products, like Cheerios®. General Mills, the company that makes Cheerios®, has said that they are not concerned about the safety of GMOs but believe some consumers might want to have a choice.

For more information about GMOs visit: www.GMOAnswers.com and www.foodintegrity.org

Scrambled Egg Muffins

Serves: 6 (Serving size: 1 muffin)

Ingredients
- 2 cups washed vegetables, diced (e.g. broccoli, peppers, onion, mushrooms, tomatoes, or spinach)
- 6 eggs
- 1/4 teaspoon salt
- 1/4 teaspoon black pepper
- 1/4 teaspoon garlic powder
- 1/2 cup low fat cheddar cheese, shredded

Directions
1. Preheat oven to 350°F. Spray muffin tin with nonstick spray.
2. Add chopped veggies to the muffin tin.
3. Beat eggs in a bowl. Stir in salt, pepper, and garlic powder.
4. Pour eggs into the muffin tin and bake 20-25 minutes. To add cheese, remove the tin from the oven during the last 3 minutes of baking. Sprinkle the cheese on top of the muffins and return the tin to the oven.
5. Bake until the internal temperature reaches 160°F or a knife inserted near the center comes out clean.

Meal Idea: Serve extras in tortillas or with a green salad and roll.

Nutritional information per serving
100 calories, 8 g total fat (2 g saturated fat, 0 g trans fat), 215 mg cholesterol, 230 mg sodium, 3 g carbohydrate, 1 g fiber, 1 g sugar, 9 g protein

Source: Spend Smart Eat Smart http://www.extension.iastate.edu/foodsavings/
NEST Parenting Classes

Three Nest Parenting Classes are held each Thursday of the month in order to accommodate your schedule:
11:00 am ~ Noon; 2:00 ~ 3:00 pm; 5:30 ~ 6:30 pm
FREE DIAPERS! FREE BABY/TODDLER ITEMS!
Call Lynne Johnson at 641-472-4166 for more information or to sign up!

Avoid spreading norovirus

About 50% of food-related illnesses are caused by norovirus. Norovirus is highly contagious and can make you sick with diarrhea, vomiting and stomach pain. Norovirus is spread by the fecal-oral route when infected people have not thoroughly washed their hands before touching food that someone else eats. Foods such as fruits and vegetables can become contaminated in the field as well.

Foods commonly involved in outbreaks are leafy greens, fresh fruits and shellfish; but any food served raw or handled after being cooked can become contaminated. It only takes a very small amount of virus particles to make someone sick. When you’re sick, don’t prepare food for others. Wash fruits and vegetables thoroughly before preparing and eating.

Wash, wash, wash your hands!

Food Waste Awareness – Nearly 40% of food produced in the US reportedly goes uneaten. People concerned about food waste are learning what they can do to cut down on waste by learning to shop wisely, understanding expiration dates, serving smaller portions, and repurposing leftovers.

Fresh Juices – “Green juice” is gaining in popularity as a trendy morning refresher with nutrient dense veggies like kale and spinach and added flavors of parsley and garlic. It is part of the consumer interest in more fruits and veggies, farm-fresh produce and better-for-you beverages.

Yogurt as an ingredient – You’ll see Greek-style yogurt used as an ingredient in baked goods, hummus and onion dips, and as a substitute for sour cream or mayonnaise in recipes.

Bolder Burgers – Look for more variety in sandwiches with unique burger patty options like chicken, lamb, elk, brisket, quinoa and bean patties. Globally-influenced sauces, farm-fresh vegetable toppings and artisan buns are topping the burgers. How about a side of Parmesan-dusted zucchini fries or panko fried pickles!

Food trends - 2014

Trend watchers tap a wealth of research from chefs and other professional sources to help identify the most significant emerging trends in food. What you might see this year…

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Wash, wash, wash your hands!
Yard and Garden: Planting Rhubarb
BY RICHARD JAURON, WILLY KLEIN

AMES, Iowa — Rhubarb, classed as a vegetable, is used as a fruit because its high acidity gives it a tart flavor. Iowa State University horticulturists make rhubarb planting recommendations for gardeners planting their first rhubarb patch and those maintaining an established planting. Gardeners with additional questions should contact Hortline at 515-294-3108 or hortline@iastate.edu

What would be a good planting site for rhubarb?
Rhubarb performs best in well-drained, fertile soils that are high in organic matter. Work the soil deeply (12 to 15 inches) and add liberal amounts of organic matter, such as compost or barnyard manure, before planting.

Rhubarb also requires full sun. The planting site should receive at least six hours of direct sun each day. Avoid shady sites near trees and shrubs.

When is the best time to plant rhubarb?
Spring is the best time to plant rhubarb in Iowa. Plants can be purchased at garden centers or from mail-order catalogs. Digging and dividing large existing plants is another source of plants.

Plants growing in pots should be planted at the same depth as they are currently growing in their pots. Bare-root plants should be planted with the buds 1 to 2 inches below the soil surface.

Dig and divide large plants in early spring before growth starts and as soon as the soil can be worked easily. Dig deeply around the rhubarb clump and lift the entire plant out of the ground. Divide the clump into sections by cutting down through the crown between the buds. Each division should contain at least two or three buds and a large portion of the root system. Replant the divisions as soon as possible.

Rhubarb plants should be spaced 3 feet apart.

What are the best rhubarb varieties for home gardens?
The cultivars ‘Canada Red,’ ‘Crimson Red,’ ‘MacDonald,’ and ‘Valentine’ have attractive red stalks and are good choices for Iowa gardens. ‘Victoria’ is a reliable, green-stalked cultivar.

When can I start harvesting newly planted rhubarb?
After planting rhubarb, it’s best to wait two years (growing seasons) before harvesting any stalks. The two year establishment period allows the plants to become strong and productive.

Rhubarb can be harvested over a four-week period in the third year. In the fourth and succeeding years, stalks can be harvested for 8 to 10 weeks.
Certain crops can yield a significant amount of plant matter at the time of harvest. This plant matter includes almost all of the plant above ground level except grain. Grain is typically harvested and moved from the fields in the case of crops like wheat, corn, soybeans, etc. The remaining plant matter, called crop residue, is left on the farm ground for erosion control, nutrient recycling, and organic matter build-up purposes. Residue removal practices for stover used as bedding for livestock or as silage for feed purposes have been practiced for decades. Spent bedding is typically recycled back on farm ground by land application. Industrial use of crop residue is a new and emerging trend, in addition to its on-going use for Livestock production.

Agri-fiber board manufacturing involves using crop residue along with certain adhesives. Wheat straw and corn stover have been used to make agri-fiber board, which can be used as replacement for wood for furniture and doors. Such crop residues present opportunities as they can be grown and used locally.

Crop residue consists of cellulose, hemi-cellulose, and lignin (complex sugar polymers) which can be synthesized into ethanol with the exception of lignin. Use of plant matter as a source of complex sugars for ethanol production is turning corn stover, wheat straw, switch grass, etc. into cellulosic feedstocks. Such crop residues are of interest as they can be re-grown and directly used as fuel or converted into solid (compressed pallets), liquid (pyrolysis to bio-crude or char, or hydrolysis of sugars with processing to ethanol, bio-butanol), or gaseous (pyrolysis to gas or gasification to syngas, or biogas from anaerobic co-digestion) forms of energy.

Corn stover is gaining specific attention for industrial uses in Iowa as corn is a major crop grown locally. Use of corn stover for industrial uses (cellulosic ethanol and fiberboard), presents both opportunities and constraints, which must be considered as this supply chain develops. The amount of stover that can be safely harvested, stover harvest quality and storage, soil carbon and quality, erosion potential, nutrient removal and recycling, costs, and land lease issues should be considered when deciding to participate in the corn stover supply chain.

Examples of industrial users of corn stover include Cellulosic Biofuel Solutions in Nevada and Project Liberty in Emmetsburg. These are currently the two industrial plants in Iowa leading the production of cellulosic ethanol from corn stover. Use of corn stover for manufacturing of agri-fiber board has been done at a commercial scale in Dubuque, Iowa.

Producers deciding to participate in this industrial supply chain must evaluate the benefits and constraints of corn stover harvest on a field by field basis. PM 3050 - Industrial Corn Stover Harvest provides a comprehensive overview of the engineering, agronomic, and economics issues related to corn stover harvest. This publication is available on the ISUEO website, or at the Extension Office.
## Top 10 Fruits

<table>
<thead>
<tr>
<th>Fruit</th>
<th>Vitamin A (IU)</th>
<th>Vitamin C (mg)</th>
<th>Fiber (g)</th>
<th>Folicin (mcg-RAE)</th>
<th>Potassium (mg)</th>
<th>ORAC&lt;sup&gt;1&lt;/sup&gt; units/100 grams&lt;sup&gt;2&lt;/sup&gt;</th>
</tr>
</thead>
<tbody>
<tr>
<td>Avocado (1 cup cubed)</td>
<td>219</td>
<td>15</td>
<td>10.1</td>
<td>122</td>
<td>728</td>
<td>1933</td>
</tr>
<tr>
<td>Cantaloupe (1 cup cubed)</td>
<td>5411</td>
<td>58.7</td>
<td>1.4</td>
<td>34</td>
<td>427</td>
<td>315</td>
</tr>
<tr>
<td>Cranberries (1 cup)</td>
<td>13.3</td>
<td>60</td>
<td>4.6</td>
<td>1</td>
<td>85</td>
<td>9584</td>
</tr>
<tr>
<td>Grapefruit (½ fruit)</td>
<td>1414</td>
<td>38.4</td>
<td>2</td>
<td>16</td>
<td>166</td>
<td>1548</td>
</tr>
<tr>
<td>Guava, red (1 cup)</td>
<td>1030</td>
<td>376.7</td>
<td>8.9</td>
<td>81</td>
<td>688</td>
<td>1990</td>
</tr>
<tr>
<td>Kiwi (2 kiwi)</td>
<td>120</td>
<td>127.9</td>
<td>4.1</td>
<td>34</td>
<td>431</td>
<td>882</td>
</tr>
<tr>
<td>Mango (1 cup sliced)</td>
<td>1262</td>
<td>45.7</td>
<td>3</td>
<td>23</td>
<td>257</td>
<td>1002</td>
</tr>
<tr>
<td>Orange (1 fresh)</td>
<td>346</td>
<td>82.7</td>
<td>3.1</td>
<td>48</td>
<td>232</td>
<td>1819</td>
</tr>
<tr>
<td>Papaya (1 cup cubed)</td>
<td>1532</td>
<td>86.5</td>
<td>2.5</td>
<td>53</td>
<td>360</td>
<td>560</td>
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<tr>
<td>Strawberries (1 cup fresh sliced)</td>
<td>20</td>
<td>97.6</td>
<td>3.3</td>
<td>40</td>
<td>254</td>
<td>3577</td>
</tr>
<tr>
<td><strong>Recommended Dietary Intake</strong></td>
<td><strong>2500</strong></td>
<td><strong>60</strong></td>
<td><strong>25</strong></td>
<td><strong>200</strong></td>
<td><strong>4700</strong></td>
<td></td>
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<tr>
<td>3.5 ounces</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<td></td>
</tr>
</tbody>
</table>

<sup>1</sup>Oxygen Radical Absorbance Capacity, which measures the total antioxidant power of foods and other chemical substances. Consuming high-ORAC foods may help protect cells from damage by oxygen radicals, which in turn may slow down the processes associated with aging in both the body and brain.

<sup>2</sup>About 3.5 ounces

*Fruits earned their ratings by providing at least 10 percent of the recommended dietary intake for at least 2 of the nutrients

For more information
Visit the ISU Extension Nutrition Website — [www.extension.iastate.edu/healthnutrition/nutrition](http://www.extension.iastate.edu/healthnutrition/nutrition)

Reviewed by Ruth Litchfield, Ph D, R.D., L.D., extension nutritionist
# Top 10 Vegetables

<table>
<thead>
<tr>
<th>Vegetables</th>
<th>Vitamin A (IU)</th>
<th>Vitamin C (mg)</th>
<th>Fiber (g)</th>
<th>Folacin (mcg-RAE)</th>
<th>Potassium (mg)</th>
<th>ORAC$^1$ units/100 grams$^2$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Broccoli (½ cup raw)</td>
<td>274</td>
<td>39.2</td>
<td>1.1</td>
<td>28</td>
<td>139</td>
<td>1362</td>
</tr>
<tr>
<td>Brussels sprouts (½ cup cooked)</td>
<td>604</td>
<td>48.4</td>
<td>2</td>
<td>47</td>
<td>247</td>
<td>942</td>
</tr>
<tr>
<td>Carrot (½ cup raw)</td>
<td>10692</td>
<td>3.8</td>
<td>1.8</td>
<td>12</td>
<td>205</td>
<td>666</td>
</tr>
<tr>
<td>Kale (½ cup cooked)</td>
<td>8854</td>
<td>26.6</td>
<td>1.3</td>
<td>8</td>
<td>148</td>
<td>2680</td>
</tr>
<tr>
<td>Pumpkin (½ cup canned)</td>
<td>19065</td>
<td>5.1</td>
<td>3.6</td>
<td>15</td>
<td>252</td>
<td>483</td>
</tr>
<tr>
<td>Red bell pepper (½ cup raw)</td>
<td>2333</td>
<td>95.1</td>
<td>1.6</td>
<td>34</td>
<td>157</td>
<td>791</td>
</tr>
<tr>
<td>Spinach (1 cup raw)</td>
<td>2813</td>
<td>8.4</td>
<td>0.7</td>
<td>58</td>
<td>167</td>
<td>1515</td>
</tr>
<tr>
<td>Sweet potato (½ cup canned)</td>
<td>11091</td>
<td>6.6</td>
<td>2.2</td>
<td>14</td>
<td>268</td>
<td>766</td>
</tr>
<tr>
<td>Tomato (1 raw)</td>
<td>1025</td>
<td>15.6</td>
<td>1.5</td>
<td>18</td>
<td>292</td>
<td>367</td>
</tr>
<tr>
<td>Winter squash (½ cup cooked)</td>
<td>5354</td>
<td>9.8</td>
<td>2.9</td>
<td>20</td>
<td>247</td>
<td>396</td>
</tr>
<tr>
<td><strong>Recommended Dietary Intake</strong></td>
<td><strong>2500</strong></td>
<td><strong>(500)$^*$</strong></td>
<td><strong>60</strong></td>
<td><strong>(12)$^*$</strong></td>
<td><strong>200</strong></td>
<td><strong>(40)$^*$</strong></td>
</tr>
</tbody>
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$^2$About 3.5 ounces

*Vegetables earned their ratings by providing at least 20 percent of the recommended dietary intake for 1 or more of the nutrients.
Choosing an Arborist

Trees are one of the most valuable assets in a landscape. All properties, whether residential, commercial, municipal, or college campuses, enjoy the benefits of having healthy and beautiful trees. In addition to the aesthetic appeal, a well maintained tree can add value to a property, whereas a poorly maintained tree can cause a significant liability. Keeping trees maintained as they age may require the services of an arborist, who can prune, fertilize, assess weather-related damage, or diagnose other tree-related problems.

Professional arborists are trained in the management and care of trees. Removing or pruning trees, especially large trees, can be very dangerous work. Untrained individuals attempting to work on trees can easily cause damage to property, threaten their own lives, or threaten the lives of others. This is why tree work should be performed only by a properly trained and equipped arborist.

Considerations in choosing an arborist

Check with City Hall
Some communities require arborists to be licensed. If so, this will simplify the process of finding a qualified company to work on your trees.

Look for professional affiliation
Companies with memberships in professional organizations demonstrate their willingness to be current on the latest pruning techniques, safety strategies, and tree management information.

American Society of Consulting Arborists (ASCA)
www.asca-consultants.org

International Society for Arboriculture (ISA)
www.isa-arbor.com

Tree Care Industry Association (TCIA)
www.natlarb.com

Check the yellow pages
Look for “tree service” in either the printed or online versions. Listings often mention membership in professional organizations.

Look for ISA certification
The International Society for Arboriculture (ISA) is the most common organization for arborists to join. Companies and individuals can earn the following specific certifications within ISA:

ISA Certified Arborist
ISA Certified Arborist / Utility Specialist
(additional experience in the specialty area of tree care around power lines)

ISA Certified Arborist / Municipal Specialist
(additional experience in the specialty area of urban trees)

ISA Certified Tree Worker / Climber Specialist
(18 months experience professionally climbing trees in a safe/efficient manner)

ISA Board-Certified Master Arborist
(arborists who have reached the pinnacle of their profession)

Be cautious of individuals who go door-to-door seeking business
Most professional tree care companies are busy and seldom, if ever, solicit work this way. Even if the low price and convenience of individuals selling tree work door-to-door might seem appealing, do not take the risk before speaking to a professional arborist.

Check if the company is properly insured
Ask for proof of insurance and call the insurance company directly if necessary. Homeowners could be held responsible for damages or injuries caused by uninsured tree companies. Check if the company has personal and property damage insurance as well as workers' compensation insurance.
Ask for available references
When asking, make sure to ask about both recent jobs and older jobs to ensure the company has been reputable over time. Feel free to call references or if possible, visit past jobs to confirm the company's quality of work.

Get more than one estimate
Try to get at least two or three estimates of the tree work you need done. Some companies may charge for estimates, but the small fee will be worth it when you have carefully chosen the best company to do the work. If you do receive more than one bid, do not automatically accept the lowest bid. Carefully check the specification of each bid to compare details of how the work will be accomplished, the insurance of each company, and the professionalism you received during the bid process.

Check the contract, twice
Professional arborists typically give clients a contract to sign before any work is done. Read it carefully and clarify any questions before signing. If any changes are made verbally, ask for an updated contract. Here are a few questions to consider when reading a contract:

- Are additional charges possible?
- Is this price a guarantee or an estimate?
- If this is an estimate, how much is the hourly rate if the job takes longer?
- How will clean-up of the property be handled?
- What time will the work start and end?
- What happens if there is damage to the property?

Professional arborists only perform accepted practices
A good arborist will only recommend topping a tree in rare circumstances, such as to save a tree after severe physical damage to the crown. Arborists should never remove excessive amounts of live wood, use climbing spikes on trees not being removed, or remove living trees without just cause. A good arborist will not perform such practices and will explain why.

Consider what your money buys
After doing the necessary homework in selecting an arborist, remember that these professionals require much more than a chainsaw and pickup truck. Arborists make large investments in equipment, training, labor, and high insurance rates (the highest in the green industry). The combination of high overhead prices, costs to maintain the equipment, and a reasonable profit can give many new customers sticker-shock. Remember that the cost of maintaining trees properly far outweighs the cost of losing some of the most valuable assets of a property. Pruning trees safely and professionally is a unique skill. Take your time selecting the right arborist for your situation and reap the benefits of maintaining healthy, beautiful trees.

For more information
To learn more about selection, planting, cultural practices, and environmental quality, contact your local Iowa State University Extension office or visit these websites:

www.extension.iastate.edu/store
www.extension.iastate.edu/forestry
www.reimangardens.iastate.edu

Call Iowa State's Hortline at 515-294-3108, (Monday-Friday, 10 a.m.-noon and 1-4:30 p.m.)

If you want to learn more about horticulture through training and volunteer work, ask your ISU Extension county office for information about the Iowa Master Gardener program.

Prepared by Kory Beidler, former horticulture graduate student and Ann Marie VanDerZanden, extension horticulturist.

... and justice for all
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Farm Poll:  
**Soil Compaction Concerns Increase**  
| BY J. GORDON ARBUCKLE JR., MARK HANNA, LAURA STERNWEIS |

AMES, Iowa -- As tractors, combines and other farm equipment have become larger and heavier, Iowa farmers’ concerns about soil compaction and its impacts on crop yields have increased as well, according to the 2013 Iowa Farm and Rural Life Poll.

Combine and grain cart axle loads are some of the heaviest on row crop land, with axle loads for larger grain carts easily exceeding 75,000 pounds, said Mark Hanna, an extension agricultural engineer with Iowa State University.

“The 2013 Iowa Farm and Rural Life Poll results show that many farmers are concerned about soil compaction impacts of heavy equipment traffic. As farmers start to plan fieldwork, they should consider strategies such as controlled traffic lanes to mitigate potential compaction," Hanna said.

ISU Extension and Outreach sociologists J. Gordon Arbuckle Jr. and Paul Lasley co-direct the annual poll. The 2013 poll included a series of questions examining farmers’ experience with soil compaction, their concerns about the issue and their perspectives on common compaction management techniques. The questions were developed in partnership with the ISU Department of Agricultural and Biosystems Engineering. These questions were asked only of farmers who had planted corn, soybeans or other row crops in 2012, Arbuckle said.

“About 71 percent of farmers indicated they were concerned about soil compaction on the land that they farm,” Arbuckle said. “About 75 percent agreed that they were concerned about the impact of heavy machinery on soil health. Half of the farmers agreed or strongly agreed that they consider the weight of equipment when making purchasing decisions.”

**Impact of Soil Compaction**

“Compaction is variable depending on soil conditions and wheel loads,” said Hanna. “Some research suggests that yields may be depressed 2 to 5 bushels per acre or more in seasons with wetter soil, and we wanted to know if farmers are noticing yield losses.”

Respondents were asked to consider all of the land that they farm and estimate the average annual impact of soil compaction on corn yield over the past five years, Arbuckle said. Sixteen percent reported that they do not have soil compaction, while another 33 percent indicated that they have soil compaction issues, but with negligible effect on yields. However, more than half of farmers estimated that soil compaction has had an impact on yields: 25 percent estimated that those losses were 2 bushels or less per year; 20 percent reported yield losses of between 2 and 5 bushels an acre; 6 percent estimated loss of five to 10 bushels; and, 2 percent reported annual losses greater than 10 bushels per acre.

**Managing Soil Compaction**

Arbuckle said 91 percent of farmers indicated that they attempt to avoid compaction by taking soil moisture content, a major mediating factor, into account as they plan fieldwork. Sixty-five percent agreed that wheel traffic pattern control, a best management practice, is an effective means of reducing soil compaction.

“Compaction can be significantly reduced by aligning combine, grain cart, tractor and other wheel tracks into a controlled traffic pattern,” said Hanna. “Using the same wheel tracks helps minimize the amount of land damaged. Farmers also should carefully evaluate wheel tread patterns when acquiring machinery.”

Other practices were also seen as effective. Sixty percent of farmers agreed that removing crop residue can lead to increased soil compaction, and 57 percent agreed that no-till is an effective way to reduce compaction. Fifty-five percent indicated that fall tillage is an important compaction management strategy for their operation. Forty-seven percent indicated that winter freeze and thaw and summer shrink and swell are sufficient to address soil compaction on the land they farm.

Seventy-five percent of farmers reported they use “simple observation” to determine whether soil compaction is an issue. Fifty-nine percent use evaluation of plant growth, 24 percent dig the root system, and 21 percent use a penetrometer or other metal rod to measure soil resistance, Arbuckle said.

“Digging and inspecting old root masses to look for compaction is a good practice before investing in deep tillage operations,” added Hanna. “Excessive tillage can destroy natural soil structure that helps prevent compaction.”

More information about soil compaction can be found in the publication “Understanding and Managing Soil Compaction” (PM 1901B), available from the ISU Extension and Outreach Online Store, or again, at the Jefferson County Extension Office.
Farm Bill meetings are being planned at this time. There is one scheduled on June 17th in Oskaloosa. We are trying to get a meeting scheduled in Jefferson County. Keep your eyes open for notice on the LED sign at the Fairgrounds, the Fairfield Ledger, next month’s newsletter and the Spotlight Program; give us a call at 641.472.4166...or check the website calendar at www.extension.iastate.edu/jefferson

Upcoming Events:
- ServSafe food safety courses:
  - May 22nd in Oskaloosa
  - June 4th in Burlington
  - August 6th in Burlington
- Food Preservation 101 on April 29th in Fairfield and on May 27th in West Point
- Nutrition for Children on May 19th in Burlington

Contact Patty Steiner, Nutrition/Health Specialist for more details at 319-394-9433 or email at psteiner@iastate.edu

Bring Your ‘A’ Game to Work! Friday, April 29th, 9:30 ~ 3:30. Workshop to improve soft skills for employment! Topics include Attitude; Attendance; Appearance and more! Cost is only $5.00 (Lunch) Call the Extension Office to register for food count!