

Jody Holthaus, Agent
Meadowlark Extension District
Livestock and Natural Resources

Ag Days 2017 Wrapped

David Hallauer and I have just finished the Ag Day circuit for our District. We've seen 650 kids in the last 6 days! It's great to interact with them, they are always so positive. I have learned they seem to have a problem when you ask "are there any questions?" You can either get a story about something that may or may not have anything to do with the current subject or you can get a question like "where do you find platypuses? One thing this week does every year, is to reinforce that I'm extremely grateful for the people that have made educating our youth their fulltime careers! Thank you to all the teachers and their paras.

My topic at the Ag day was Water. It's great that the kids are so aware of where their water comes from. Water is a precious resource and maybe even more so in their lifetimes. We also talk about all the stuff that's in the lake, algae. Just so happens there is a television ad right now that talks about growing algae as a renewable energy source. Wouldn't that be great if we could all become "algae farmers" and grow our own fuel!

Algal fuel, algal biofuel or algal oil is an alternative to liquid fossil fuels. It is estimated that this type of biofuel is probably at least 25 years away from commercial availability. Algae were first explored as a fuel alternative in 1978 under President Jimmy Carter. Gas prices had skyrocketed, lines at the pump were endless, and the government was looking to help ease the crisis. The Aquatic Species Program run by the National Renewable Energy Laboratory, researched high oil-output algae for biofuel. After testing more than 3,000 types of algae, the program concluded that the high-yielding plant, if produced in large enough amounts, could replace fossil fuels for home heating and transportation purposes.

More than 100,000 different species of plantlike organisms belong the algae family. They come in various forms and colors, from tiny protozoa floating in ponds to huge bunches of seaweed inhabiting the ocean. Leafy kelp, grassy moss and fungus growing on rocks are all forms of algae. You may even see algae in different colors such as red, green and brown. Algae are easy to grow and can be manipulated to produce huge amounts without disturbing any natural habitats or food sources. Algae are easy to please -- all they need are water, sunlight and carbon dioxide. So, are algae all the same? Various algae contain different levels of oil. Of all the algae out there, pond scum -- algae that sit on top of ponds -- is best suited for biodiesel.

Algae production has the potential to outperform other potential biodiesel products such as palm or corn. For example, a 100-acre algae biodiesel plant could potentially produce 10 million gallons of biodiesel in a single year. Experts estimate it will take 140 billion gallons of algae biodiesel to replace petroleum-based products each year. To reach this goal, algae biodiesel companies will only need about 95 million acres of land to build biodiesel plants, compared to billions of acres for other biodiesel products. Since algae can be grown anywhere indoors, it's a promising element in the race to produce a new fuel.

Extracting oil from algae may seem like a grimy job, who knows what exciting careers these kids could have!

David Hallauer, Agent
Meadowlark Extension District
Crop and Soils, Horticulture

Thinning Excess Fruit

With any luck, you're going to have a good fruit crop this year! It might be hard to believe, but fruit trees can actually have enough fruit in some cases that thinning might be required. Why?

For starters, heavy fruit crops can interfere with fruit bud development that will occur this summer that can result in reductions in the crop next year (most often in apples). Thinning helps ensure that good crops are produced each year.

A second benefit of thinning is to promote larger fruit on the current year's crop. Fruit trees can only produce so many fruit. Too many fruit equals a reduction in fruit size and quality.

Limb damage is also an issue. The weight of a maturing fruit crop can break branches that some thinning might help preserve.

Thinning recommendations vary with the type of tree. Apples and pears should be thinned to four to six inches apart, while peaches should be spaced six to eight inches apart. Apricot spacing is two to four inches and plums/prunes should be spaced four to five inches apart. Cherries do not need to be thinned. Shoot for an average of these spacings to help with fruit size and tree health!

Peach Leaf Curl

It's been a good year for peach leaf curl!

Peach leaf curl is a fungal disease that causes developing peach leaves to become puckered and distorted with a reddish-green hue. Severely infected trees may lose leaves. Fortunately, healthy trees will put out new leaves and the disease won't be a long-term issue. Fungicide applications won't do any good at this point this year.

If the tree is less than healthy – small pale leaves and less than ideal growth from last year, a fertilizer application might be in order! Spread fertilizer on the soil surface under the branch area, using one and a third to two cups of a 13-13-13 fertilizer. Do so as soon as possible to promote new leaf growth.

Plan ahead for next year as well! Peach leaf curl can be controlled with a single fungicide application with products containing Bordeaux mixture or chlorothalonil applied this fall after leaf drop or early next spring before bud swell.

Cindy Williams, Agent
Meadowlark Extension District
Food and Nutrition, FNP

Is This Food Still Safe to Eat?

I frequently get food safety questions and today I would like to share with you some of the most common ones.

Is it safe to use food from dented cans? If a can containing food has a small dent, but is otherwise in good shape, the food should be safe to eat. Discard deeply dented cans. A deep dent is one that you can lay your finger into. Deep dents often have sharp points. A sharp dent on either the top or side seam can damage the seam and allow bacteria to enter the can. Discard any can with a deep dent on any seam.

Is it safe to use food from rusted cans? Discard heavily rusted cans. Cans that are heavily rusted can have tiny holes in them, allowing bacteria to enter. Surface rust that you can remove by rubbing with your finger or paper towel is not serious. You can keep these canned foods. If you open the cans and there is any rust inside, do not eat the food. Rust (oxidized iron) is not safe to eat.

How can you tell if food is safe after a power outage? Keep the freezer door closed to keep cold air inside. Don't open the door any more than necessary. A full freezer will stay at safe temperatures about 2 days; a half-full freezer about 1 day. If your freezer is not full group packages so they form an "igloo" to protect each other. If you think the power will be out for several days, try to find some dry ice. Keep dry ice wrapped and do not touch it with your bare hands. Use cubed ice or block ice in the refrigerator.

Even if food has started to thaw, foods can be safely kept in the freezer. The foods in your freezer that partially or completely thaw before power is restored may be safely refrozen if they still contain ice crystals or are 40°F or below. You will have to evaluate each item separately. When in doubt, throw it out.

In general, refrigerated items should be safe up to 4 hours. Keep the door closed as much as possible. Discard any perishable foods (such as meat, poultry, fish, eggs, and leftovers) that have been above 40°F for 2 hours or more. Also discard any other food that has a unusual odor, color, or texture, or feels warm to the touch.

Keep an appliance thermometer in the refrigerator and freezer at all times. This will remove the guesswork of just how cold the unit is because it will give you the exact temperature. The key to determining the safety foods in the refrigerator and freezer is knowing how cold they are. The refrigerator temperature should be at 40°F or below; the freezer, 0°F or lower.

Nancy Nelson, Agent
Meadowlark Extension District
Family Life

Hop for Bone Health

Did you play hop scotch or jump rope when you were a child? It turns out these might be even better for your health, as an adult, than they were when you were young.

Bone is living tissue, just like muscle, and key bone-building years for your body are those when your skeleton is growing — typically through your mid-20s. This is a critical period for bone health because what is built during these years will need to last a lifetime. After age 35, you gradually lose bone as a part of the natural aging process.

Regular physical activity will help keep bones strong and slow the rate of bone loss. By leading an active lifestyle, you can significantly decrease your risk of falling and breaking a bone.

What type of exercise is good for your bones? The weight-bearing kind, which is anything that forces you to work against gravity. This type of exercise is effective because as you put more tension on your muscles it also puts more pressure or “stress” on your bones. Your body responds by creating fresh, new bone and greater bone strength.

Weight-bearing exercise is basically anything that involves impacts with the earth and requires your feet and legs to support you, so any activity you do while standing. Some examples include brisk walking, hiking, jogging, climbing stairs, weight training, dancing, yoga, and tennis.

There is another type of weight-bearing activity that could be better for your bones than the exercises mentioned above — jumping and hopping. A recent study, reported in the American Journal of Health Promotion, reveals that jumping 10 times/twice a day provides greater bone building benefits than running or jogging. This is not recommended for anyone who has osteoporosis or a knee, leg or foot injury, but for those who want to be proactive with exercise, this is great news!

Even if you walk briskly or jog most days of the week, you will get greater bone health benefit if you also hop every day to jar your bones a little and send a message that they need to get stronger. If hopping is too difficult, start with marching or doing heel drops. Remember that your goal is to create impact with the ground or floor to jar your bones just a bit.

First, warm up your muscles by walking for a minute or marching in place.

Marching with impact: This movement is basic marching in place where you push, or stomp, your feet on the ground for impact.

Heel Drop: Hold onto something, at the proper height, for stability (back of a chair or countertop, for example). Rise up on your toes, then drop your heels down abruptly.

Power Hop: You can hop on both legs, or for maximum benefit hop on one leg. If necessary, hold onto something for stability.

Bend your knees for cushion when you land. Never land on straight knees. You can do the hops quickly or rest for up to a half-minute between hops.

This is beneficial for people of all ages and the earlier in life you start stressing your bones, the more benefits you will likely see.