



Down to Earth: Reports from the field

Innovative Small Farmers' Outreach Program (ISFOP): East Central Region

Spring is Here!

by Miranda Duschack

After the long, snowy winter the fields are drying up, the planning is done and farmers are now ready for another growing season. Along with the longer, warmer days come a slew of farm activities: from pruning fruit trees to planting, animal freshening and hatching, planning for the market to taking customer orders; the farm enters its busy season.

If you encounter a problem on your farm during this hectic time, please do not hesitate to contact one of our ISFOP Farm Outreach Workers (FOW). Chances are she or he will find a good solution for your problem. Whether you are trying a new agricultural technique or perfecting a tried and true method, ask the FOW in your county for the latest information on your topics of interest. Do you need helpful hints on direct marketing of beef? How about woodland stewardship or small scale timber business? Are codling moths damaging your apple crop? Would you like information on the Good Agriculture Practices (GAP) certification program? The ISFOP FOWs have been busy broadening their knowledge base and sharpening technical skills by attending many in-state and out-of-state conferences and workshops during the winter months. Now they stand ready to share their newly-found knowledge with you.

One good risk aversion tactic for small farmers is to diversify the farming operation. Have you ever considered adding a pastured poultry component to your farm? Because of interest expressed by many on this particular topic, ISFOP East Central Region (ECR) has decided to offer a **Pastured Poultry Workshop** on Saturday, May 28, 2011, in Troy, Missouri (*see page 3 for more information*). Pike County Amish farmer Jacob Mitts, along with St. Charles County diversified Community Supported Agriculture (CSA) farmer Chris Wimmer and Desiree Rutherford, will present production techniques including a hands-on chicken slaughter, evisceration and equipment demonstration. Legal issues surrounding pasture poultry processing and sales will also be discussed.

Grow Your Farm: An Update

by Janet Hurst

The popular series *Grow Your Farm* (GYF) is underway in St. Louis and Warren Counties. This year, a new component has been added to the Warren County session. One of the lessons in the series focuses on 'walking the farm'. Since this class is held during winter months, it is not always feasible to hold this farm walk! David Price, ISFOP FOW, and Charlie Ellis, University of Missouri Extension (UME) have addressed this challenge. In fact,

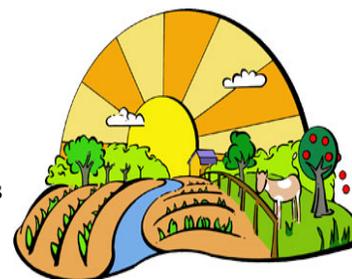


the two have come up with an innovative way to do the farm visit: A virtual tour! Price and Ellis began preparations last Fall in anticipation of the 2011 GYF class.

"This opens up a whole new world for class participants to view the farm as a whole, see the lay of the land and special features in several stages as the seasons change, all while providing viewers with the comfort of a heated meeting room!" says Price. Accessibility concerns are abated with this adaptation. The

video can be shared via email and internet as well. Class participants are progressing with the development of their business structure. Beginnings come from dreams and ideas, then practical instruction assists participants in turning those into real goals and plans. Area experts on finance, food safety, experienced farmers and Extension Staff serve as facilitators for the group. "The camaraderie of the group certainly adds to the overall experience," states Price.

For more information on the **Grow Your Farm** series visit: <http://extension.missouri.edu/growyourfarm/>.



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Mamma's Edamame: A fun-to-eat healthy snack by Janet Hurst

Call it a bean, call it a snack or just call it delicious. Edamame is all that and more. If you are not familiar with this innovative snack, you may be surprised to know edamame is an edible soybean. Whole pods are blanched, salted and then popped out of the pod right in your mouth. According to Monica Goodin of Charleston, Missouri, edamame is a favorite with children and adults. To promote healthy snacking, Goodin has led an effort to make this a popular food in Missouri. Edamame is well-known in Japan and could be considered that country's national snack food.

Goodin says, "I'm a stay at home mom with four children. One night, my husband and I went out to a restaurant we like in Cape Girardeau. We met the chef there and started talking. We told him about our farm and mentioned we raised [traditional] soybeans. He immediately responded that we should grow edamame. We enjoyed the conversation but passed it off as an offhand comment and didn't give it much thought. However, about a year later, I was having lunch with my husband at a sushi bar and we started eating those green pea-like vegetables. They were delicious. It dawned on me that this is what the chef had been talking to us about. I came home and did some research and that was the beginning of Mamma's Edamame!"

Monica's husband is a sixth generation farmer so growing soybeans is not a new venture to this family. However, his equipment is sized for large-scale production, so there has been a huge learning curve for the couple. Scaling down equipment, figuring out how to harvest the pods, and learning what types of soybeans would grow best in

Missouri's climate have all been a part of their education. Growing the edamame without chemicals or weeding, and harvesting by hand has brought a whole new meaning to the word 'homegrown'. "We are one of the few farms in the United States attempting to grow these types of beans. There isn't a lot of information available and, in fact, universities are now coming to us to learn," Goodin explains.

After learning how to grow the beans, the next step was to introduce them to people and get them to taste edamame for the first time.

Goodin says, "I've done tastings and parties by taking huge bowls of edamame and showing people how to prepare it and pop it out of the pod. These party settings made the connection and were the beginning of our market. Edamame is great with beer and is often served in place of peanuts at high-end bars. Japanese people also enjoy it at ballgames."

The next step was to hit the farmers' markets. Monica began participating in the weekly farmers' markets and would sell out every time. She also worked through Sappington Farmers Market and other St. Louis venues, providing samples and educating consumers about the nutrient

value of this vegetable. The beans are low in fat and sodium, high in protein and cholesterol-free. Best of all, they taste great and children love them. Monica is very popular with her children's friends. The

Goodins didn't name the business 'Mamma's Edamame' for no reason. Goodin went to area schools and provided taste tests for children at lunchtime. The children love edamame! "My children help me in the business, pulling weeds, picking and sorting. I could not do it without them. They are learning how to run a business, through first-hand experience."

Goodin received a Sustainable Agriculture Research and Education

(SARE) Farmer/Rancher grant last year to assist with her research efforts. She states that she still has a lot to learn. Last year, after planting two acres, she is slowing down a bit in order to research and learn more. The plants yield roughly 3-4 pounds per plant, so the labor involved in picking is monumental. "There is specialized equipment available but we have to look and see where we want to go with this. We are happy to share information with others who are interested in attempting to grow this unusual crop."

Look for Mamma's Edamame, LLC on Facebook.



Monica Goodin, Charleston, Missouri

Meet ISFOP Staff member: Joyce Rainwater

Joyce Rainwater joined the ISFOP team in November 2010. She was born in Washington, Missouri and grew up on a small, diversified dairy farm just south of Beaufort, Missouri. The farm was operated by her parents, four brothers, two sisters and her. She grew up to have a very strong love of her family, the outdoors and animals. After graduating from Union High School in 2006, she decided to combine her love of teaching and passion for agriculture by continuing her education and majoring in Agricultural Education. In 2010 she earned a Bachelor's degree in Agricultural Education with a minor in Agricultural Economics

from MU. All the while she continued to help out with the family farm operation as much as possible.

Rainwater married in 2009. She and her husband, a full-time firefighter in Pacific, are now building their dream home in Robertsville, Missouri. Despite their busy life, both of them still make time to help her mom, who is now widowed, run the family farm.

Joyce joined the ISFOP team to assist small farmers in finding the resources that are available to them. She loved growing up and working on the family farm and wants others to be able to continue with their way of life as well.



Joyce Rainwater

The Rewards of a Managed Grazing System

By David Price

When I starting writing this article in mid-January, Donald Kops of New Melle, Missouri, a third generation farmer, had yet to feed a bale of hay to his small herd of grass-fed beeves. This may be difficult to fathom for a good majority of Missouri cattlemen, especially since the Kops' 75-acre grass farm had already seen over 25 inches of snowfall in the past few weeks.

The day I interviewed Kops for this story there was eight inches of snow on the ground. He and I watched from a hillside as his cattle moved across a pasture with their faces buried deep below the blanket of snow while grazing the forages beneath.



Kops was just about out of grazable pasture from the 2010 growing season and he was prepared to start haying his beeves around the latter part of January. This was indeed a remarkable feat for a cattleman, as the vast majority of Kops' contemporaries had to begin delivering hay to their animals mid-way through the month of November. In order to be in this position, he spent the previous growing season leading his herd of beef cattle through a rotational grazing system, which, as we will see, has many economic and environmental benefits.

The Kops' farm is subdivided into approximately 30 small pastures (or paddocks), each consisting of about three acres. The paddocks, which are divided by both permanent and temporary fencing, are made up of a diverse mix of cool-season grasses and legumes for the cattle to graze upon. Each paddock in the grazing system has an accessible water source for the livestock. The water sources are varied throughout the system. Some stock tanks receive pond water via underground gravity fed waterlines. Others are served by one of the farm's deep wells. Kops' herd of approximately 12 beeves remained in one paddock for 2-3 days before being moved to the next one in the rotation. After the herd is moved off of the original paddock and onto the next paddock in the rotation, the original paddock will have a period of 60 to 90 days to restore itself to its pre-grazed level before the rotating herd makes its way back to graze upon it once again.

The reason that Kops has grazable pasture 60 days after the final day of the forage growing season (mid-November in 2010), is that it took approximately that long for the herd to make one full rotation through the system after the grass growing season was complete. Because the farmer does not have to feed hay for the first two months of winter proves to be a major economic incentive for establishing a managed grazing system.

There are other economic benefits beyond that for extending the grazing season. For one, a 10-month supply of fresh, high-energy forages promotes strong herd health which limits veterinarian calls and potential death loss. There is also the increased likelihood that the farm will be able to sustain itself during a prolonged period of drought without the need for any off-the-farm purchases of hay or feed supplements. Furthermore, a managed grazing system has the economic benefit of not needing a hefty slug of nitrogen fertilizer to stimulate a period of rapid forage growth because with a grazing system like Kops', there is nearly always a ready supply of mature forages available for the livestock to graze, with the exception of approximately two months during the latter half of the winter season.

Kops believes that his greatest rewards for the establishment and implementation of the farm's managed grazing system are the multitude of long-term environmental benefits it has created. With the rotation of the animals, the pastures on the Kops' farm are never allowed to be overgrazed. As a result, there is never damage to the plants or their root structures. This maintains and promotes a dense population of plant life within each pasture, which results in very little, if any, erosion of topsoil. With the topsoil steadily in place, organic matter is added by the day-to-day activities of the rotating herd. These daily activities performed by the beeves include the even distribution of their manure and urine throughout each field; as well as the trampling of the grass litter below by the action of their hooves. The resulting organically rich topsoil on the

Kops' farm has produced a thick canopy of plant life and encouraged the establishment of a diverse community of insects. These two living enhancements of the Kops' pastures have created an abundantly rich habitat for many species of native wildlife. Kops and his sons thoroughly enjoy seeing colorful native birds, as well as increased populations of deer, turkey and rabbit on the farm.

Kops has been greatly rewarded for his efforts in the establishment of a managed grazing system on his western St. Charles County farm. The system he created has made his beef cattle operation economically and environmentally sustainable. Kops farm is a model from which other beef producers in east central Missouri can learn. For that reason, among others, the ISFOP is proud to have Kops as a client. We are thankful that we were able to use him as a resource for this article, which we hope will inspire other small farmers to develop managed grazing systems on their farms.

Pastured Poultry Workshop

Learn more about pastured poultry production for layers and meat birds including information on:

- production considerations
- equipment needs
- legal considerations
- slaughtering and butchering procedures



You will have the opportunity to meet local producers and learn from their firsthand knowledge and experience!

WHEN: Saturday, May 28, 2011

9:00 a.m. – 2:00 p.m.

WHERE: Troy First Baptist Church
1000 Elm Tree Road
Troy, MO 63379

COST: \$20.00 per person.

Lunch provided.
Information packet included.

For more information call David Price at
(636) 358-7097 or email
PriceD@LincolnU.edu

ISFOP

If you are a small farmer and need information, please contact an ISFOP Farm Outreach Worker (FOW). FOWs live and work in your community. They can provide information on ways to better manage your resources, reduce expense and increase income. They can also provide information on other programs and resources that may increase your income and the overall quality of life for your family.

You are eligible to participate if:

- Your family lives on a farm, rural or urban.
- Farm products or income from the farm are necessary for you to live where you do.
- Your family provides the management and most of the labor for your farm.
- Your total annual family income is less than \$50,000.

**How to Contact
East Central Regional ISFOP Farm Outreach Workers:**

- **David Price**, Lincoln and St. Charles Counties
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 - **Miranda Duschack**, St. Louis County and City
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- For general information
call the LUCE ISFOP office at (573) 681-5312.**



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THE IPM CORNER

by Dr. Jaime Pinero
Integrated Pest Management specialist

IPM Tips for Tomato Disease Prevention and Management

The following tips can help minimize disease development in tomatoes grown in your garden, field or in high tunnels:

1. Use disease-resistant varieties. Mountain Magic and Plum Regal (plum tomato), available at <http://www.johnnyseeds.com>, are the first varieties released with resistance to **late blight**. They also have resistance to **early blight** and **Septoria leaf spot (Septoria blight)**.
2. Maintain optimum crop growth by providing adequate nutrients and soil moisture. Plants will grow healthy and are less prone to suffer from disease and insects. Avoid periods of little or too much water. One technique to monitor soil moisture is to use a tensiometer. A tensiometer measures soil moisture tension in centibars (cb). The drier the soil becomes the higher the centibar reading from the tensiometer. Generally, for tomatoes, the soil moisture tension should be maintained between 10-20 centibars. When soil moisture tension exceeds 20 centibars, irrigation should occur.
3. Use raised beds covered with plastic mulch and drip irrigation tape buried beneath each bed. This increases soil temperature providing earlier crop maturity, higher yields, increased quality, improved disease and insect resistance, and more efficient water and fertilizer use.
4. If possible, use wider plant spacing and remove suckers to increase air circulation. **All of the foliar fungal diseases are favored by high relative humidity (> 85%) in the tomato canopy.** Thus, the length of time above 90 percent relative humidity should be limited.
5. Choose a sunny location for your tomatoes. Leaf disease problems are less likely in a sunny location rather than in a semi-shady one.
6. Control weeds, particularly horse nettle and other species in the *Solanum* genus, in and around the edge of the garden, field or high tunnel.
7. **Do not over fertilize.** Vegetative growth can occur at the expense of fruit production or quality. Over-fertilization may result in higher incidence of certain diseases (e.g., early blight), increases in pests (e.g., two-spotted spider mites, aphids, thrips), pressure and with excessive salt buildup in the soil, over time.
8. Practicing good sanitation is critical. Always remove diseased tomato plants or plant parts, sterilize plant stakes prior to re-use, and clean tools and implements frequently to prevent transporting problems between fields.

Keep in mind that some diseases are difficult to manage once they become established. However, if diseases are identified early in the epidemic and all of the appropriate cultural tactics have been employed, fungicides or bactericides can be applied to reduce disease spread. Always apply a product according to label directions at the first sign of disease. For bacterial spot/speck, fixed copper sprays can be used. For early blight and Septoria leaf spot (Septoria blight) several chlorothalonil (e.g., Bravo, Echo, Equus), mancozeb (e.g., Dithane, Mancozeb, Penncozeb) and maneb (e.g., Maneb, Manex) formulations are labeled for use at various rates. Quadris, a reduced-risk fungicide, is another option. For organic producers, fixed copper formulations (e.g., Cueva, Champ WG) can be used to suppress both fungal and bacterial infections.



Septoria leaf blight (*Septoria lycopersici*), a common fungal disease of field-grown tomatoes.