

Down To Earth: Reports from the Field

Innovative Small Farmers' Outreach Program (ISFOP)



Raising Chicks on Your Farm Requires Special Attention

By David Middleton, Farm Outreach Worker

As spring approaches, it is easy to get busy taking care of the many chores that have mounted up over the winter months. But, it is a good idea to take the time now to order spring chicks. Whether you want to grow broilers for meat or laying hens for eggs, the process of successfully growing chicks is the same.



Poultry could be an attractive new option to add to your farm. The demand for pasture-raised broilers and free-range eggs continues to grow. Broilers might be added at the request of customers who already purchase other meats from your farm; the laying hens can be a natural way to meet the needs of customers.

One important choice to make is where to purchase the chicks. There are commercial hatcheries across the country specializing in all classes of chicks and poultry. Farm stores and local poultry fanciers also have chicks available. Chicks can be successfully sent by mail as they do not need food or water during the first two days of life. But, before you buy, talk to other poultry producers in your local area. Find out the source they use to secure healthy chicks that are uniform in size and weight.

You will need to prepare before your chicks arrive. A clean, dry, draft-free place must be selected as a brooder area. Heat lamps and other supplemental heat will be

needed because new chicks must be kept at 90°F upon arrival. The temperature can be reduced 5°F per week by simply by slightly raising the heat lamp from the beginning height of 20 inches. Bedding is very important to prevent spraddling—a separation of the legs that chicks never recover from. Wood chips, ground corncobs or rice hulls make excellent bedding. Do not use newspaper

or shredded paper for bedding. There should be enough area that the chicks can move away from the heat as needed but also stay close enough to prevent chilling. Young chicks should have a maximum of one square foot, with no more than 75 chicks per heat lamp.

Feeders and waterers must be cleaned and disinfected before use. Egg cartons cut in half make great beginning feeders. Feeders and waterers need to be washed and refilled once each day. It is best to offer only water the first day to rehydrate new chicks—not food; then offer food on day two. A commercial chick starter is the most effective way to give the new chicks the protein and minerals they need. There are many to choose from. Several contain no medication, and non-GMO (genetically modified organism) starters are also readily available.



Make the brooder area safe from predators. For example, the family cat would love a snack of young chicks. This is also true of rats, raccoons, opossums and dogs.

Your hard work will be rewarded by home-raised chickens and fresh eggs. So, add a new enterprise to your small farm and enjoy the experience. ■

Inside This Issue:

Raising Chicks on Your Farm Requires Special Attention	1
Do Not Let a Disability Keep You from Farming Successfully	2-3
Summer Crops for Pest Management.....	3 & 7
Stockpile for Your Cattle Now and Get Dividends Later.....	4-5
Missouri State Sales and Tax Changes for Farmers' Market Vendors.....	6
ISFOP Contact Information.....	8

Do Not Let A Disability Keep You from Farming Successfully

By Reneesha Auboug, Farm Outreach Worker

Farming is a physically demanding job that requires carrying heavy loads. It includes much lifting, pulling and pushing. Most days start early and end late. And each day presents a new challenge. Even so, you can't imagine doing anything else. The love of farming is rooted deep in your heart. But what happens if you become ill or injured? This can mean early retirement, medical disability or a career change. It is better to think about what you can do and not of what you used to be able to do. You can advance in a new direction with help from Missouri AgrAbility Project (MAP).

AgrAbility offers a free service to farmers and ranchers who are faced with a disability focuses on promoting success. AgrAbility provides information, resources and services that make it possible for you to return to farming or ranching and continue living independently. The program is funded by the United States Department of Agriculture (USDA) - National Institute of Food and Agriculture (NIFA). MAP is managed by the University of Missouri (MU) Extension through their College of Agriculture, Food and Natural Resources, partnering with a number of other groups. These include Lincoln University Cooperative Extension (LUCE) and the Brain Injury Association of Missouri.



Farming has one of the highest disabling injury rates of any type of work. Of all Missouri farmers, 15-20 percent live with some form of disability. Farmers also face off-farm injuries, health problems and/or advanced age, as does the general public. AgrAbility realizes that these challenges exist. Regardless of age, it serves owners, operators and employees in an agricultural setting, who have any type of disease, disability or disorder.

AgrAbility defines a disability as “a physical or mental impairment that substantially limits one or more major life activities” (<http://agrability.missouri.edu/FAQ.asp>). A person might have difficulty in their work, daily life or education. Some examples of recognized disabilities are “amputation, arthritis, back injury, blindness, chronic pain, deafness, health conditions, hearing impairments, heart conditions, respiratory diseases, spinal cord injury, traumatic brain injury, and visual impairments” (<http://agrability.missouri.edu/FAQ.asp>).

As an agricultural worker with a disability, you and your family members can benefit from AgrAbility. It offers statewide services, support and education for its clients. Assistive technology is provided. This might be a chairlift added to your tractor. It could also be a magnification device to help you read small print. Or, motion lights might be added to your barn. The worksite can be modified by adding automatic watering devices

for your small-acre garden. Independent living modifications might include an entrance ramp or handicap accessible shower. Information is shared through individual contacts and public education. The program also distributes resources and makes agency referrals. Peer-to-peer support is given by the Missouri AgrAbility Volunteer Barn Builders. Professional training opportunities about available resources, services and assistive technologies are provided to consumers, professionals organizations and groups.

MAP coordinates direct services to nearly 50 farmers or ranchers each year. It consults with hundreds of others by telephone. Services are confidential and provided at the home or on the farm.

If you feel that this program could help you, please contact anyone at the Missouri AgrAbility Project or a Lincoln University Cooperative Extension (LUCE) Farm Outreach Worker (FOW).

**Disability (continued
from page 2)**

The website www.agrability.missouri.edu provides information about the Missouri AgrAbility Project. You can watch the video “AgrAbility: It’s About Hope” (<http://agrability.org/Resources/disability/>), or look for resources at the National AgrAbility Project (<http://www.agrability.org/>).

How can I request an on-the-farm technical assessment?

- Call the toll-free number offered through MU Agricultural Engineering Extension, 1-800-995-8503.
- Find the LUCE Farm Outreach Worker (FOW) in your county. Contact information is provided on page 8 of this newsletter.

Tips for Farmers/Ranchers with Disabilities:

1. Learn about your disability.
2. Remain positive.
3. Accept your disability by advancing in a new direction.
4. Regain control of your emotional balance by setting specific, reasonable and reachable goals. No matter how small a goal might seem, reaching it motivates you to do more. You will often discover that you could do more than you thought was possible.
5. Find ways to reduce stress.
6. Never give up. ■

Summer Cover Crops for Pest Management

By Jacob Wilson, Integrated Pest Management (IPM) Extension Technician I

Due to recent efforts by Cooperative Extension, the Natural Resources Conservation Service (NRCS) and many private groups, the phrase “cover crop” has become familiar to most vegetable farmers. It is now generally accepted that cover crops should be a part of any sustainable agriculture operation. For example, there is much information about how cover crops improve soil health and reduce the need for costly fertilizers. However, the focus here is on a lesser known role that cover crops play in the agro/ecosystem: pest management. Careful selection of cover crop species can help to fight pesky insects, diseases and weeds.

Following is a simple breakdown of which crops can be used in the spring and summer to battle unwanted guests. These include pigweeds (weeds often fed to pigs), nematodes (roundworms) and cabbage worms (a type of worm whose larvae eat cabbage and similar plants).

vae eat cabbage and similar plants).

Weed Snuffers: Getting rid of weeds calls for a fast growing cover crop. It will quickly shade the soil and out-compete weeds. If a field is left fallow during the summer, a heat-loving grass, such as sorghum-Sudan grass or pearl millet, will choke out all but the toughest perennial (a plant with a life cycle of two or more years) weeds. The same crops can be seeded between plastic-covered raised beds. The cover crop should be mowed every so often to create a turf that feeds the soil while curbing weeds; it also creates a mud-free work area between rows. Sorghum-Sudan grass releases a chemical from its roots that acts like a pre-emergent herbicide; it prevents weeds from growing near it. A low-growing cover crop, such as buckwheat, can be used in the same manner along-

(continued on page 7)



Top left: Pearl millet. Top right: Tillage® radish. Bottom left: Buckwheat and sorghum-Sudan grass intercropped with summer squash. Bottom right: Sorghum-Sudan grass

Stockpile Pasture for Your Cattle Now and Get Dividends Later

By Stephen "Randy" Garrett, Farm Outreach Worker

Stockpiling can mean growing forages to be used later for hay or silage (fermented stored fodder). Specifically, farmers can stockpile tall fescue pastures in the fall and winter months for grazing or use during droughts.

Stockpiling can reduce your cattle's hay intake. Feeding cattle is the leading expense in a beef cattle operation. Reducing costs in hay production and consumption helps create a profit. A buildup of forage mass allows grazing to extend into the winter months. This decreases winter feed costs by as much as one-fourth compared to traditional systems. Mr. C. Tim Schnakenberg, University of Missouri (MU) Associate Extension Professional-Agronomy Specialist in Stone County, Missouri states, "Seventy percent of the cost of owning a cow is in the feed costs." He adds that for a beef producer, feed costs are usually controlled by managing pasture. Also, the forage quality of standing grass in the winter is much greater than most hay sources fed to beef cows. Schnakenberg explains, "One acre of stockpiled fescue can meet the nutritional needs of a cow for 75 or more days if the weather is not so bad that it deteriorates too soon. The key is to ration it."

Schnakenberg asserts that tall fescue by itself is enough. However, the added presence of clover is beneficial. The drawback of clover is that it will not last as long as fescue when winter approaches. Because tall fescue has a waxy cuticle, it can hold up well in cold weather; this is true



Proper fertilization and rotating cattle efficiently on stockpiled pastures will lead to forage being available for cattle during the winter.

even with snow cover. But too much ice coming early in the winter and too much foot traffic will weaken it faster than is desirable. Schnakenberg recommends that if tall fescue is the only forage used, producers should close the gates on select fescue paddocks in mid-August. At that time, they should apply between 40 and 60 pounds of nitrogen per acre. Then, they should try not to open the gates until after Thanksgiving. When the gates are opened, it is best to ration the grass using strip grazing methods. This means that every few days, the fence should be moved a few feet farther; this will ration the grass over the winter. If this is not done, cattle will overgraze the field. They will destroy some of the grass that could be offered later in the winter. According to Schnakenberg,

a producer can save, on average, about \$100 per cow each winter using this method. Stockpiling saves time, fertilizer, fuel and equipment costs.

Dr. James Caldwell, NEED NEW JOB TITLE Professor of Animal Science, cautions that when stockpiling tall fescue, one must know how much pasture area to set aside for winter grazing. This is especially true when grazing fall-calving cows. Caldwell cites research finding that stockpiling tall fescue is a viable but variable management practice that can be used for wintering cattle. Caldwell believes that with proper management, tall fescue can be stockpiled to provide quality forage for grazing through the winter, with minimal hay use and reduced feed costs.

Dr. Rob Kallenbach, MU Extension Specialist–Forages, states that there are three areas of concern for beef producers when stockpiling. One is to be sure that pastures are in the proper condition for fall growth. Kallenbach says that 80 percent of tall fescue autumn growth takes place in September and October. Therefore, dead vegetation or annual weeds in pasture might compete with the tall fescue for moisture or sunlight. This would limit the amount of forage that can be stockpiled. Kallenbach suggests that grazing, baling for hay or brush hogging in August is a great practice; it promotes quality growth in pastures that have dead vegetation or annual weed problems.

Kallenbach also stresses the importance of applying fertilizer at the proper time. If applied too early, it can cause rapid annual

weed growth in the pasture to be stockpiled. In southern Missouri, beef producers should apply fertilizer in the last week of August or the first week in September. Beef producers in northern Missouri should apply their fertilizer between August 10 and 20.

Kallenbach's third concern is that some beef producers graze their stockpiled pastures too short. He suggests that farmers monitor their stockpiled pastures while cattle are grazing on them. If the beef producer sees that the height of the pasture is 2 to 2.5 inches, the cattle should be rotated to another paddock, or other feeding sources should be provided; however, these will cost the producer more.

By stockpiling, it is possible to decrease hay consumption for one month by three 1,000 pound round hay bales, even with a higher

numbers of cows. If you care and manage your pastures well and you incorporate stockpiling, your work could pay you dividends later.

Stockpiling pastures properly allows for grass to extend above mild snows for cows to get the available forage needed that will hopefully save on feed and hay costs.

Proper fertilization and rotating cattle efficiently on stockpiled pastures will lead to forage being available for cattle during the winter. ■



Stockpiling pastures properly allows for grass to extend above mild snows for cows to get the available forage needed that will hopefully save on feed and hay costs.

Missouri State Sales and Tax Changes for Farmers' Market Vendors

By Miranda Duschack, Small Farm Specialist

On September 10, 2014, the Missouri Legislature overrode Governor Jay Nixon's veto of the farmers' market sales tax exemption bill. This bill changed the tax code to include a sales tax exemption for producers with estimated yearly sales below \$25,000. This only applies when growers sell their own farm products at Missouri farmers' markets. Farm products include crops and livestock grown on the farm; baked goods, jams and jellies made on the farm also fall under this law.

If farmers have less than \$25,000 in farmers' market sales during a calendar year and no other sales, they do not need a Tax ID number (TIN); they are not required to file taxes. However, if they have any other sales, they must have a Tax ID Number; in this case, they must file taxes.

Even if a grower is not required to have a TIN to report sales tax, there are other benefits to having one. A TIN allows a grower to sell surplus products to wholesale markets. A TIN also makes it possible to purchase farm inputs without paying sales tax (tax exempt).

To record the exemptions from other sales items, farmers should report their farmers' market gross sales on Missouri State Tax Form 53-1. Under "Gross Receipts," exclude the sales figure in the "Taxable Sales" column. Enter "0" for the taxable rate and for the amounts due. Keep track of your farmers' market sales figures closely. This is important because after a vendor has exceeded \$25,000 in gross sales, then all sales are taxed at the standard rate. In that case, there is not a tax break for the first \$25,000 of all direct sales; once this threshold is crossed, the next year's sales will be estimated at over \$25,000. Therefore, all sales will be taxed. This exemption went into effect on August 28, 2014.

The definition of "farmers' market" recently changed under revised Missouri Revised Statutes Chapter 144 Section 144.527.1 (<http://www.moga.mo.gov/mostatutes/stathtml/14400005271.html>.) The 2015

AgriMissouri Farmers' Market Handbook from the Missouri Department of Agriculture now defines farmers' markets by citing the new law:

"Individual farmers or a cooperative or nonprofit enterprise or association that consistently occupies a given site throughout the season, which operates principally as a common marketplace for an individual farmer or a group of farmers to sell farm products directly to consumers, and where the products sold are produced by the participating farmers with the sole intent and purpose of generating a portion of household income" (<http://agrimissouri.com/pdf/fmhandbook.pdf>).

Farmers' markets can include the following:

- one or more growers at any site
- roadside farm stands or a producer selling from home
- Community Supported Agriculture (CSA)
- agritourism ventures
- an undertaking where farmers sell their farm products directly to customers, "with a logical pattern" (<http://agrimissouri.com/pdf/fmhandbook.pdf>).
- an organized group or individual participants

There is a difference in the definition of a market as a common place where people buy goods compared to a market composed of individuals. The laws that govern a farmers' market as a common marketplace look at how the market is organized and what actions its leadership performs under relevant state and local laws. There are different laws that pertain to vendors; these laws relate to their legal incorporation and the services and merchandise they offer. This is true whether they are a farmers' market on their own or not.

You can get more information about the sales tax exemption, the redefinition of a farmers' market and how this affects your finances. Read the Missouri Revised Statutes Chapter 144 Section 144.527.1 or contact the Missouri Department of Agriculture and/or your accountant for specific advice. ■

Summer Cover Crops for Pest Management (continued from page 3)

side vine crops that will not allow a mower between rows. Buckwheat will suppress weeds and diseases without competing too much with squash or melons.

Disease Eradicators: Cover crops help to fight plant disease in a few ways. First of all, cover crops with deep penetrating root systems help to improve drainage; this makes it hard for many diseases to thrive. Cover crops planted alongside cash crops help to protect plants from the damage caused by sun and wind. Less damage means there are fewer wounds where pathogens (agents capable of causing disease) can enter. Also, cover crops can help to reduce the splashing of soil onto cash crops, which is also a common route for infection. Lastly, some cover crops in the mustard family contain chemicals that are toxic to nematodes, diseases and even to small weed seeds. Some good examples of these bio fumigant (using natural aspects of a plant to reduce the number of weeds) cover crops are daikon (large, long, hard) radishes and mustards like 'Pacific Gold'. With some careful management, these crops can work much

like methyl bromide (a synthetic soil fumigant), with none of the environmental concerns.

Insect Annihilators: The relationship between cover crops and insects is a bit more complex than the relationship between cover crops and other pests. Unfortunately, there is no known cover crop that repels hornworms (certain caterpillars) or is toxic to cucumber beetles. But cover crops can help to kill bugs indirectly by providing resources for the predators that eat them. Many beneficial insects, both predatory and parasitic (feeding off a host), feed on nectar and pollen as adults; however, the less mobile larvae (insects in the juvenile stage of insect development) gorge themselves on aphids and caterpillars. Therefore, the key to attracting good bugs is having floral resources available at all times. Summer annual legumes, such as cowpeas and sunn (an Indian herb with strong fibers such as hemp), produce nectar both in their flowers and at spots along the stems called extrafloral nectaries (a gland that releases nectar). Fast-flowering buckwheat can be planted anytime after the last spring frost; it can

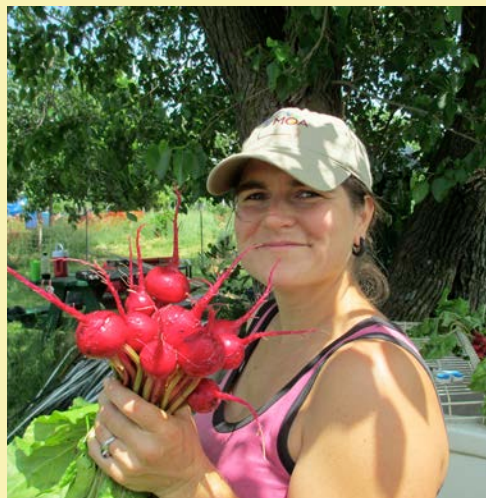
begin producing nectar and pollen in as little as 30 days. Many clovers, such as crimson and red clover, can support large numbers of predatory insects when they are in bloom. Borders and hedgerows are great out-of-the-way areas that can be used to plant flowering cover crops for beneficial insects without giving up field space.

So, the next time you are shopping for cover crops, get creative and think beyond the soil. Consider what you can do for the total farm ecology by cutting back on pesticides through the innovative use of cover crops that are compatible with vegetable production.

NOTE: This year, several of the cover crop options described above will be showcased by the Lincoln University Cooperative Extension (LUCE) IPM Program at the university farm field days (approximate dates: early June for the Organic Field Day at the Alan T. Busby Farm and late August for the Vegetable/IPM Festival at the George Washington Carver Farm). ■

Farewell from Katie Nixon

I am leaving my position as the Small Farm Specialist for the West Central region to take a plunge into full-time farming. I believe small farms can be profitable and support a family, so I am going off to prove it. I have appreciated every minute with all the farmers I have had the pleasure of working with. I will miss that part of my job the most. You have inspired me to put my passion for small farming to work in practical terms. Thank you for this and for the opportunity to serve small farmers in the Kansas City region. You may still see me around as I will be staying on at Lincoln in a part-time role helping to get a successful regional food hub running.



About Our Program...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 you and for your family.

You are eligible to participate if you meet the following requirements:

- 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.

East Central Region:

- **Miranda Duschack**
Small Farm Specialist
St. Louis County and City
DuschackM@LincolnU.edu
(314) 604-3403
- **Janet Hurst**
Farm Outreach Worker
Franklin and Warren County
HurstJ@LincolnU.edu
(660) 216-1749
- **Joyce Rainwater**
Farm Outreach Worker
Jefferson and Washington County
RainwaterJ@LincolnU.edu
(314) 800-4076
- **Reneesha Auboug**
Farm Outreach Worker
Lincoln and St. Charles County
AubougR@LincolnU.edu
(314) 838-4088

West Central Region:

- **Position Vacant**
Small Farm Specialist
Jackson County
- **Phillip Boydston**
Farm Outreach Worker
Cass and Johnson County
BoydstonP@LincolnU.edu
(816) 726-7720
- **Susan Jaster**
Farm Outreach Worker
Lafayette and Ray County
JasterS@LincolnU.edu
(816) 589-4725
- **Jim Pierce**
Farm Outreach Worker
Clay and Platte County
PierceJ@LincolnU.edu
(660) 232-1096

Southwest Region:

- **Nahshon Bishop**
Small Farm Specialist
Barry and McDonald County
BishopN@LincolnU.edu
(417) 846-3948
- **Stephen "Randy" Garrett**
Farm Outreach Worker
Newton and Jasper County
GarrettS@LincolnU.edu
(417) 850-9391
- **David Middleton**
Farm Outreach Worker
Lawrence and Greene County
MiddletonD@LincolnU.edu
(417) 466-8056



Cooperative Extension

Box 29, Jefferson City, MO 65102-0029
Lincoln University in Missouri and the U.S.
Department of Agriculture Cooperating. Yvonne
Mathews, Interim Dean, College of Agricultural
and Natural Sciences. Distributed in furtherance
of the Food and Agricultural Act, 1977 PL 95- 98.
Dec. 22, 1981.
Publications are distributed without regard to race,
color, national origin, sex, age, religion or handicap.

*This publication is available upon request and online.
Contact the LUCER Media Center
(573) 681-5554*

*Pamela Donner, Coordinator and Senior Editor
Nancy Browning, Assistant Editor
Cherilyn Williams, Graphic Designer
Yuki Teramoto, Multimedia Technician
Andrew Erb, Video Conference Technician
Bené Williams, Web Designer*

lincolnu.edu/web/extension-and-research/media-center



United States
Department of
Agriculture

National Institute
of Food and
Agriculture

ISFOP Office Staff:

- **Dr. K.B. Paul, ISFOP Director**
PaulK@LincolnU.edu
(573) 681-5584
- **Regina Thompson, Secretary**
ThompsonR@LincolnU.edu
(573) 681-5312

For general information call the LUCE ISFOP office at (573) 681-5312.

ISFOP Regional Map

