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Down to Earth: Reports from the Field

# Innovative Small Farmers' Outreach Program (ISFOP): WEST CENTRAL REGION

## Raising Meat Rabbits: A Potential Moneymaker for the Small Farmer *By Janet Hurst, Farm Outreach Worker*


***Rabbit production at R & K Rabbitry.***

Rabbits were once very popular as backyard meat producers. Most people seem to forget about this animal when laying out their small farm plans. Starting and managing a rabbit operation is relatively inexpensive. Pound for pound, rabbit provides more meat for less feed than any other meat source. Rabbit meat is very lean; it is a rich source of protein and can be adapted to many recipes. This versatile animal can be a good addition to any diversified small farm.

To begin a small rabbit operation, it is best to begin with two does (females) and one buck (male). There are two breeds used specifically for meat production. They are the California and the New Zealand White. These rabbits have the best bone-to-meat ratio, good pelts and are known for fast, efficient growth. *(continued on page 3)*

## In the Spotlight: R & K Rabbitry

***By Jim Pierce, Farm Outreach Worker***

Keith "Grumpy" Felts has been raising rabbits since 1972. His rabbit meat is a lean tender meat that is low in fat and cholesterol while high in protein. It is also easy to digest. Rabbit meat is tasty and versatile in the kitchen. Today, Keith operates as R & K Rabbitry (rabbitry means "housing for rabbits"). The name "R & K" comes from the initials of Keith and his youngest son, Reggie. Reggie was an integral part when they first built this rabbitry. He is now working his way through college.

Keith starts by consistently selecting his breeding stock for some important characteristics. This is where keeping good records provides Keith with the information he needs to make the selection. He looks first for a doe (female) with good mothering instincts that will take care for her kits (young rabbits). Second, it is necessary to select for good milking ability. To measure this, Keith weighs the litter at 21 days for pounds of live weight per doe. A high number (in pounds) indicates that the doe is a good milk producer. And, finally Grumpy looks for consistent and high numbers of fryers (meat rabbits ready for processing) for market per doe. He also looks for temperament; rabbits can be aggressive, making the producer's job more difficult. So, aggressive animals are culled (removed or killed) in preference for gentler animals with a better disposition.

R & K Rabbitry mainly crossbreeds a California buck to a New Zealand White doe. The doe kindles (gives birth) in about 30 to 31 days. The average number of kits per doe at Keith's operation is around eight, although he has seen much larger litters. The kits are weaned at about 42-49 days. They will finish in 10-12 weeks at 5 to 5.5 pounds live weight. Feed conversion for Keith is nearly 4.5 pounds of feed for every pound of live rabbit. His target for a good doe is that she should produce 50 fryers per year. As for how long to keep the does in production, Keith says, "I'll keep a productive doe until she begins to slow down. Depending on her milking abilities, I'll use her as a foster mother by breeding her, along with another more productive doe, at the same time. I've got does that have been in production for nearly four years. I do allow a slack time during the hottest parts of the year for these older does."

Next, R & K Rabbitry pro- *(continued on page 2)*

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***Packaged rabbit sold by R & K Rabbitry.***

vides the best environment for raising their rabbits, which results in making a profit. A healthy environment gives his rabbits a humane existence. It aids in the rapid and good growth of the fryers. Maintaining a good quality environment helps protect his net profits by keeping disease to a minimum. And, it makes his job as a producer easier and more enjoyable.

At R & K Rabbitry, rabbits are raised in a simple and inexpensive pole barn in hanging cages. This allows Grumpy to control the temperature. Although some stress is inevitable, keeping the temperature near 62°F is ideal. Cold temperatures are much less of a problem than the hot summer temperatures. In winter, having the pole barn is enough. To manage the ammonia build-up in the barn from the manure, timers are set for the exhaust fans to go on and off at intervals. For the hot and humid Missouri summers, Grumpy uses a combination of appliances, consisting of exhaust fans, a window air conditioner and an evaporative cooler.

Water and feed are very important and are available 24 hours a day, seven days a week. For fresh water, Keith designed and built his own water system. Fresh water is delivered via a simple sump pump that recirculates the water through a PVC pipe delivery system. The reservoir and the pump are housed in an insulated cabinet. In the winter, a milk barn electric heater is all that is needed to keep the water warm, fresh and recirculating through the plumbing. Keith has modified many of his production components. He improved his feeders by adding larger hoppers so that it takes less labor to keep feed in front of his fast growing rabbits. He also custom built hay mangers that allow much less waste by the rabbits compared to throwing a flake of hay into the cage. Keith states, "Contrary to popular belief, rabbits require a great deal of attention for them to be successful and multiply…'like rabbits.' They must have the right environment and the correct number of lighted hours per day. They need a proper diet and the amount of food required for each of the different stages in a rabbit's life. They put on weight easily, too easily at times. An overweight doe will not be successful. They are difficult to get back into production once this occurs. Most failures happen because of obesity within the breeding stock."

Keith sells several products from his rabbitry. Consumers can buy directly from his farm-fresh frozen rabbit meat. He has also marketed pelts. Currently, he has demand from local artists for the skulls and feet. This year he is drying the rabbit pellets (dung) in the greenhouse to package and sell as a garden amendment for enriching the soil. Keith also sells good breeding stock.

***"I got into rabbits because of my interests tracing back to my childhood. My first "true" rabbitry, (25 does) was started in 1972. I realized the need for a quality, healthy meat and rabbits offered that avenue. I could produce an enormous amount of meat in a relatively small area. I never had any trouble selling my product. A lot of my customers are folks who have special needs in their diet." - Keith 'Grumpy' Felts.***

Keith ended our discussion with a bit of advice: "I raise rabbits because there is a potential for profit from my endeavors. They are easy to maintain if you know what you are doing. Although I've got the space for larger animals today, I still feel that rabbits produce more in less space. My health precludes me from attempting to handle the larger animals within the food chain. Plus, rabbits are much quieter. AND...they won't break your foot if they step on it." ■

For more information about rabbit breeding or breeding stock, contact Keith 'Grumpy' Felts at: grumpysbait@aol.com or call (816) 539-2444.

## IPM Corner: Cover Crops and Soil Health

***By Jacob Wilson, Integrated Pest Management Technician***

Thanks to university researchers, seed companies and satisfied farmers, most vegetable growers in Missouri now know about cover crops. A cover crop is grown to protect and enrich the soil as well as to manage other agricultural issues. In this article, we won't focus on the all the benefits or varieties of cover crops. Instead, we will zoom in on just a few types that are easy to use. They are also very versatile and effective at increasing soil health during the growing season and beyond. Among other vital roles, cover crops increase soil health by preventing erosion, scavenging nutrients and adding organic matter. They also relieve compaction (where soil becomes more dense and has less air within) and control harmful nematodes (roundworms).

**Spring** is one of the most challenging seasons in which to establish plants. This is especially true when the soil is heavy and drains poorly. However, options do exist. Frost seeding is broadcasting small seeds *(continued on page 4)*

***Sorghum x Sudangrass between rows of tomatoes at Lincoln University.***

## Raising Meat Rabbits...*(continued from page 1)*

Before bringing home any stock, first consider housing. Rabbits need shelter for the cold winter months and shade for the hot summer days. Hutches are common types of housing that consist of a cage on legs with a roof overhead. This is very basic shelter. In the winter months, the hutches should be moved inside a barn or into an area with protection from the cold winds. Hutches need to have one square foot of floor space per pound of rabbit being housed. The minimum size for a hutch is 2 by 2.5 feet. A good hutch is large enough to allow for air circulation and prevents overcrowding of the animals. Hutches are usually covered with hardware cloth. Another type of housing is an all wire cage. These are intended to be hung inside a shelter. They are easy to clean, and the wire can be kept in a more sanitary condition than a wooden hutch. Housing is basically up to you, depending upon the resources and space available.

After your rabbitry (housing for rabbits) is built, seek out a reputable rabbit breeder. You may buy kittens (young rabbits) or adults. Of course, the adults will be ready for breeding sooner. It is possible to buy pregnant females as well. The females should each have their own hutch, and the male should be separated from them.

You must find out what the rabbits have been eating. Do not make drastic changes to their diet. Pelleted feed is a good choice and is readily available. Hay is also recommended. If you have excess vegetables, feed in moderation; rabbits can get diarrhea when too much fresh produce is introduced into their diet. Monitor the amount of feed for each rabbit. An adult female rabbit that is not pregnant and is not lactating (nursing young) will eat about 3.8 percent of her body weight each day. For a 10-pound non-breeding rabbit, that means 6 ounces of pellets plus 3.5 ounces of hay. During breeding season, do not allow the does to become overweight or breeding will become more difficult.

Provide plenty of fresh, clean water. This is very important in the summer months. In winter, replace frozen water with fresh water twice daily so that the rabbits have water at all times. Water may be offered in open crocks or in plastic bottles with a ball bearing. When the rabbit nudges the ball, water trickles out, and the rabbit can drink. Rabbits also enjoy a salt and mineral block in the hutch.

When you are ready to breed rabbits, put the doe into the buck's cage. Do not put the buck into the doe's cage, or she may harm him. The doe will allow the buck to mount. The buck may attempt to mount the doe a second time. Allow this, and then remove the doe from the cage. Some breeders will bring the doe back to the buck's cage six hours after the first mating to make sure that the doe's eggs have been fertilized. Gestation (the time in the womb) for a rabbit is 30 to 31 days.

A pregnant doe needs her own cage and a nesting box. A nesting box is about the size of a standard shoebox with half of the top cut off at an angle. This box will be where the rabbit gives birth. Put the box into the hutch about five days before the rabbit is due to give birth. Add some straw or hay to the box so that the mother can make a nest. She will also add her own hair to the nest.

Some rabbits get nervous around birthing time; for this reason, try to keep the rabbitry area quiet. Most rabbits are good mothers and will attend to their young. However, kits (short for kittens) can fall from the nest box, or the mother can ignore them. There are other things that can go wrong. Mothers sometimes reject their young. Some mothers eat their young. If this happens, give the mother one more chance at breeding. If she does it again, she should be culled (removed or killed) and replaced.
The rabbits are born blind, hairless and furless. Check the nest box, and remove any dead babies. Count the number in the litter. A normal litter is from four to six kits. Healthy babies will be moving and have slightly bulging stomachs from nursing. Make sure the mother is well fed and has plenty of water to drink. Leave the babies alone as much as possible, except for checking on them every other day. By day 10, the rabbits will be opening their eyes. The kits will continue to nurse. At about three weeks of age, they will start hopping out of the nest and sampling the pelleted food. Increase the ration slowly so there is enough for all. Remove the nest boxes at about five to six weeks. At six weeks, the doe can be rebreed.

***New Zealand White doe (top) California Buck (bottom) at R & K Rabbitry.***

The kits should be on full feed. They can then be removed from the original hutch and placed in separate housing.

The rabbits should be raised for about two months. It is time to butcher when they reach four to five pounds. ■

**Rabbit Resources**

**Plans to build a rabbit hutch from Penn State Extension:**
http://abe.psu.edu/extension/idea-plans/rabbit/ip-729-31/view

**Information on processing rabbits in Missouri:**
http://mda.mo.gov/animals/health/inspections/. Chapter 3 of the Code of Regulations Rules of Department of Agriculture Division 30—Animal Health, Chapter 10—Food Safety and Meat Inspection concerning the home processing of rabbits).

**Information on rabbit processing:**
www.attra.org – Small Scale Sustainable Rabbit Production.

*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 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.

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

- **Katie Nixon,** West Central Regional Coordinator and Jackson county
  NixonK@LincolnU.edu
  (816) 809-5074
- **Vacant** Cass & Johnson counties
- **Susan Jaster,** Lafayette & Ray counties
  JasterS@LincolnU.edu
  (816) 589-4725
- **Jim Pierce,** Clay & Platte counties
  PierceJ@LincolnU.edu
  (660) 232-1096

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


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USDA United States Department of Agriculture National Institute of Food and Agriculture


## IPM Corner...*(continued from page 2)*

into a field that was tilled in the fall or in which the previous crop was frost-killed. Frost seeding by using small seeded cover crops can be done any time from February until late March. The tiny seeds then work their way into the soil as it contracts and expands. This occurs as the soil thaws and refreezes and as a result of early spring rains. Traditionally, farmers have frost-seeded legumes into existing pastures; however, vegetable growers can also sow an early cover crop before late-planted winter squash or pumpkins. Clovers are the usual choice for frost seeding. You can also use other small-seeded, cool-season crops, such as turnips. An early spring cover crop will prevent those March and April rains from leaching all of your hard-earned nitrogen (N) into the nearest pond, ditch or stream.

**Summer** is a key season for cash crops. It can be hard to find the time or energy to plant a cover crop. Still, it is well worth the effort. Summer cover crop mixtures, such as cowpeas or a sorghum x Sudan grass (a type of sorghum originally from Sudan that grows in dry regions) hybrid can produce several tons per acre of biomass (living or recently living material). At the same time, these crops can relieve compaction, curb weeds and provide forage for livestock. Both cowpeas and sorghum x Sudan grass are easy to establish. They also thrive during the dog days of summer. Cowpeas provide nitrogen to the soil and break down quickly when incorporated. Sorghum x Sudan grass can even be mowed regularly. As such, it can be maintained as a turf between rows of tomatoes. Or, it can be hayed once, then left to grow tall and provide organic matter to the soil. The vast fibrous root system of sorghum x Sudan grass even relieves compaction. Mowing once or twice during the season will help this process and stimulate root growth.

There is even a summer cover crop that will mature in 30 days if you have minimal time in your rotation. Buckwheat is easy to establish. It matures very quickly. When seeded thickly, it will smother out weeds; that is why it is called a "smother crop." Buckwheat residue is also quick to break down, so it is easily incorporated into the soil.

So, as you browse through seed catalogs and long for the warm sunny days of spring, remember that cover crops ***build*** soil health. To be productive, the soil needs to be healthy in all four seasons.

| Name | Season | Seeding Rate lb/A Drilled/Broadcast | Benefits |
|---|---|---|---|
| Medium Red Clover | Spring/summer | 8-10/10-12 | Adds N, conditions soil |
| Sorghum X Sudangrass(sudex, Sorgho, sorghum x Sudanese) | Summer | 35/40-50 | Suppress weeds, lots of biomass, breaks up compaction |
| Cowpeas | Summer | 30-90/70-120 | Adds N, suppress weeds |
| Radish(Oilseed, Tillage®Graza®Groundhog®) | Fall | 8-13/10-20 | Breaks up compaction, scavenges nutrients |
| Winter Rye(cereal rye, rye grain) | Winter | 60-120/90-160 | Suppress weeds, lots of biomass |
| Hairy Vetch | Winter | 15-20/25-40 | Adds N, suppress weeds |
| Buckwheat | Summer | 48-70/50-90 | Smother crop, fast growing, breaks down quickly |

**From the book *Managing Cover Crops Profitably* third edition, Sustainable Agriculture Research Education (SARE) program, 2007.**