

# Goat Producer's Newsletter

Terry Hutchens, MS, Animal and Food Sciences, UK  
Robert Harmon, PhD, Animal and Food Sciences, UK

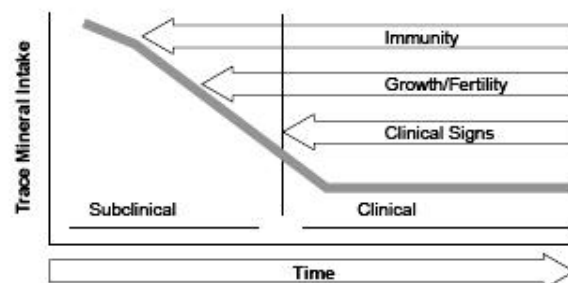
## Mineral Supplementation for Kentucky Meat Goats

Terry Hutchens, Extension Associate,  
University of Kentucky

Now that kidding season is over for most Kentucky goat producers, take time to review the past kidding season's experiences. First of all, what were some of the signs and symptoms of does and kids having problems before, during and after kidding. A number of these signs and symptoms can be directly related to inadequate mineral supplementation.

It is important to note that minerals perform many functions within the body. Minerals may function as structural components of bones and teeth, as electrolytes in body fluids, in metabolism of nutrients, transmission of nerve impulses, catalyze enzymatic process during reproduction and in immune response, among other functions. Factors influencing the amount of specific minerals that goats need are *age of the animal, rate of growth, stage of pregnancy, and stage and level of lactation. Different body functions require different amounts of minerals, as shown in Figure 1.*

Figure 1. Trace Mineral Functions



Source: Wilke, 1992 Texas A&M Veterinary Beef Cattle Short Course.

Kentucky, Cooperative Extension, ASC-155

Figure 1 illustrates that for some trace minerals the intake required for maximum immune response is greater than that required for growth or reproduction.

In short, even though goats appear to be growing and reproducing adequately, their ability to produce antibodies, pass antibodies on through colostrum, and defend themselves from common diseases such as pneumonia requires adequate mineral levels.

Mineral intake may be hindered by low intake. Perhaps most importantly, mineral deficiencies can be caused by low levels of mineral absorption as well as poor availability of minerals through chemical tie-up of the mineral.

**Table 1**

**Essential Minerals Needed by Goats**

<ul style="list-style-type: none"> <li>● <b>Macrominerals</b></li> <li>— <b>Calcium*</b></li> <li>— <b>Chlorine</b></li> <li>— <b>Magnesium</b></li> <li>— <b>Phosphorus*</b></li> <li>— <b>Potassium</b></li> </ul>	<ul style="list-style-type: none"> <li>● <b>Microminerals (Trace minerals)</b></li> <li>— <b>Chromium</b></li> <li>— <b>Cobalt</b></li> <li>— <b>Copper**</b></li> <li>— <b>Iodine</b></li> <li>— <b>Iron*</b></li> <li>— <b>Manganese</b></li> </ul>
<ul style="list-style-type: none"> <li>●* FeO Iron oxide problems</li> <li>●** Minerals most often deficient</li> <li>● Kentucky, Trace mineral supplementation for Kentucky beef cows, Cooperative Extension, ASC-155</li> </ul>	

**Poor Absorption**

Good mineral nutrition is important for goats of all ages and stages of reproduction. Table 1 list the minerals essential for goats. The list is divided into macrominerals (those needed in larger amounts and micro-minerals (trace minerals), those needed in very small amounts. The result of a 1993 survey conducted by the USDA National Animal Health Monitoring System determined that the micronutrient status of various forages from across the United States (252 forage samples, 18 states) were deficient in cobalt; Co, copper; Cu, manganese; Mn, zinc; Sn, and selenium; Se. The primary reason for these deficiencies was from chemical tie-up of these minerals due to high levels of iron, molybdenum (products of environmental pollutants), and sulfur from water sources. Once the minerals are bound in chemical compounds with iron, molybdenum, or sulfur, poor absorption of the needed minerals often results in deficiency.

**“If it’s Red, it’s Dead!”**

A common problem with some products sold in Kentucky is the use of copper oxide as the sole source of copper. Bioavailability for copper from copper oxide is low. In addition, some supplements use high levels of iron oxide as coloring agents. Iron; Fe, is not available from iron oxide (FeO). FeO also has been shown to interfere with copper’s bioavailability. Therefore the statement, “*If it’s Red , it’s Dead!*” means that if the mineral is red in color, the absorption of copper as well as other micro-minerals is drastically reduced. A good mineral should not be red. A good mineral is usually brown to gray in color.

When determining if a mineral is a good one or not, producers must consider more than the information provided in Table 1. See Table 2 for a summary of the bio availability of mineral sources. Check the label and make sure that all sources are at least intermediate in availability.

**Table 2**

<b>Element</b>	<b>Source</b>	<b>Bioavailability</b>
<b>Calcium</b>	<b>Monocalcium phosphate</b>	<b>High</b>
	<b>Dicalcium phosphate</b>	<b>High</b>
	<b>Ground Limestone</b>	<b>Intermediate</b>
<b>Phosphorus</b>	<b>Monocalcium phosphate</b>	<b>High</b>
	<b>Dicalcium phosphate</b>	<b>Intermediate</b>
	<b>Defluorinated phosphate</b>	<b>Intermediate</b>
<b>Magnesium</b>	<b>Magnesium oxide</b>	<b>High</b>
	<b>Magnesium sulfate</b>	<b>High</b>
<b>Copper</b>	<b>Copper oxide</b>	<b>Low</b>
	<b>Copper sulfate</b>	<b>High</b>
	<b>Copper carbonate</b>	<b>Intermediate</b>
<b>Iron</b>	<b>Iron Oxide</b>	<b>Unavailable</b>
	<b>Ferrous carbonate</b>	<b>Generally high</b>
	<b>Ferrous sulfate</b>	<b>High</b>
<b>Selenium</b>	<b>Sodium selenite</b>	<b>High</b>
	<b>Selenium Yeast Products (Sel-Plex)</b>	<b>High</b>
<b>Zinc</b>	<b>Zinc oxide</b>	<b>High</b>
	<b>Zinc sulfate</b>	<b>High</b>

\*Kentucky Trace mineral supplementation for Kentucky beef cows, Cooperative Extension, ASC-155  
UNIVERSITY OF KENTUCKY, KENTUCKY STATE UNIVERSITY, U.S. DEPARTMENT OF AGRICULTURE, AND KENTUCKY COUNTIES, COOPERATING

## Factors Influencing Mineral Availability

Factors influencing mineral availability include:

- ?? Age of the animal (critical in the very young and older animals)
- ?? Previous mineral intake (the greater the demand, the greater the absorption rate)
- ?? Animal's current mineral status
- ?? Mineral's chemical form and bioavailability
- ?? Potential interaction from other dietary forms (Fe, Mo, S, commonly found in some minerals and forages).

Absorption of some minerals from forages (Mn, Fe, Se, Cu) is generally low. Apparent absorption from fescue may range from 5-15 % for copper, 28 to 32 % for selenium, 30 to 70 % for iron, and only 3 to 4% for manganese. When specific information about trace mineral content of forage is lacking, assume that the content is no greater than 50% availability.

Table 3 shows an the mineral dietary requirements for a meat goat female for gestation and lactation. Table 4 shows the same requirements for a mature meat goat. Since goats consume less mineral, (goat 1/2-1 oz/ day) than do cattle (2-4 oz/day). A trace mineral formulation commonly found in a high-quality beef cattle mineral (Column 1 & 2) shows the trace mineral intake at the 2 and 4 oz consumption rate. Column 3 shows the same formulation consumed at 1 oz/day. This indicates that goats, consuming a good beef mineral formulated for Kentucky would have an adequate mineral intake. Goat minerals or cattle minerals should be high in quality and must have minerals supplied from available sources (see Table 2). **Note:** White salt should never be considered adequate mineral supplementation by itself. Trace minerals must be adequately supplied by another

source. Goats should be provided a complete product containing both macro and microminerals in proper ration, having good bioavailability. Make sure that goats consume enough minerals, especially during critical times of growth, breeding, gestation and lactation.

**Conclusions:** There are many good goat mineral products. However, some are not so good due to the mineral source. Secondly, good beef cow minerals may also work well. Elements that may be limiting in some cases are Cu and Se. Cow minerals formulated for a 2 oz / day intake would be the best choice however, the 4 oz intake may work well if Cu and Se intake is adequate or provided by an additional source such as feeds. *Refer to the labeled product information and compare the sources to those provided.*

### Moderate Hydrologic Drought—Can

#### Mean: Severe Parasite Problems

**With the exception of East KY, we need 3.5 to 5.0 inches of rain fall to end this season's drought. Be aware that during long periods of dry weather, parasites larvae on the pasture as well as those in the L4 stage, (immature larvae within the goat) conveniently wait out the dry period in a dormant state. Once rain returns and the grass is green a tremendous surge of infective larvae will appear on pasture and internal larvae will be begin blood feeding in the small intestines of the goat. It is advisable to deworm the herd one time during the dry period to eliminate immature larvae (L4) and again 20 days after the onset of rain. Goats on pasture can be assessed for parasite loads by the FAMACHA anemia assessment method and/or fecal egg counts. See the Animal Science Web site for dewormer recommendations.**

Tables 3

<b>Mineral Requirements for Mature Meat Goat</b>		
<b>Elements</b>	<b>Gestation</b>	<b>Lactation</b>
<b>Calcium, % DM*</b>	<b>.25</b>	<b>.30</b>
<b>Phosphorus , % DM</b>	<b>.12</b>	<b>.18</b>
<b>Magnesium , % DM</b>	<b>.12</b>	<b>.20</b>
<b>Potassium , % DM</b>	<b>.60</b>	<b>.70</b>
<b>Sodium , % DM</b>	<b>.06 - .08</b>	<b>.10</b>
<b>Sulfur , % DM</b>	<b>.15</b>	<b>.15</b>
<b>Nutrient Requirements of Goats NRC, 1981, 1986 Beef NRC, Goat Medicine, Smith, M. C., Sherman, D.M. 1994</b>		
<b>Trace Mineral Requirements for Mature Meat Goat</b>		
<b>Elements</b>	<b>Gestation</b>	<b>Lactation</b>
<b>Cobalt, ppm</b>	<b>.10</b>	<b>.10</b>
<b>Copper, ppm</b>	<b>10</b>	<b>10</b>
<b>Iodine, ppm</b>	<b>0.50</b>	<b>0.50</b>
<b>Iron, ppm</b>	<b>50</b>	<b>50</b>
<b>Manganese, ppm</b>	<b>40</b>	<b>40</b>
<b>Selenium, ppm</b>	<b>0.30</b>	<b>0.30</b>
<b>Zinc, ppm</b>	<b>30</b>	<b>30</b>
<b>Based on Nutrient Requirements of Goats NRC, 1981, 1986 Beef NRC, Goat Medicine, Smith, M. C., Sherman, D.M. 1994</b>		

**Table 4**

**Trace mineral Needs for Mature Meat Goat  
Grazing Tall Fescue**

	<b>Consumption Rate</b>			
<b>Minerals</b>	<b>4 oz</b>	<b>2 oz</b>	<b>1 oz</b>	<b>Goat Needs</b>
	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>
<b>Calcium %</b>	<b>13</b>	<b>6.5</b>	<b>3.25</b>	<b>0.25</b>
<b>Phosphorus %</b>	<b>7</b>	<b>3.5</b>	<b>1.75</b>	<b>0.16</b>
<b>Magnesium %</b>	<b>1</b>	<b>0.5</b>	<b>0.25</b>	<b>0.12</b>
<b>Zinc ppm</b>	<b>2500</b>	<b>1250</b>	<b>625</b>	<b>30</b>
<b>Manganese ppm</b>	<b>2500</b>	<b>1250</b>	<b>625</b>	<b>40</b>
<b>Copper ppm</b>	<b>1200</b>	<b>600</b>	<b>300</b>	<b>10</b>
<b>Iodine ppm</b>	<b>50</b>	<b>25</b>	<b>12.5</b>	<b>0.5</b>
<b>Cobalt ppm</b>	<b>20</b>	<b>10</b>	<b>5</b>	<b>0.1</b>
<b>Selenium ppm</b>	<b>26</b>	<b>13</b>	<b>6.5</b>	<b>0.3</b>

**Based on Nutrient Requirements of Goats NRC, 1981, 1986 Beef NRC, Goat Medicine, Smith, M. C., Sherman, D.M. 1994**

## Selection to Meet Production Goals

By: Ken Andries

Animal Science Specialist Kentucky State University

When selecting replacements you need to start by looking at your current situation and goals, both long and short term. Start by taking a long hard look at where you are today. This means looking at both production and economic information. Study this information and decide how to progress toward existing goals as well as setting new ones.

The first step is to have good records. You should be recording birth information including birth type, parentage, and weight. You also should take kid weights at 60d and 90 days to weaning and to measure progress to weaning. Collect yearling weights on all animals that are kept to a year of age and market weight on those kids sold between weaning and yearling weight. You should also record weights and body condition on your breeding animals at least once a year. This information will give you the necessary tools to make informed selection decisions and meet performance goals for your flock.

When we start to select for specific traits, we need to consider its heritability, correlations with other traits, and economic value. Heritability is important because it represents the amount of what we see in a trait that is controlled by genetics rather than environment. Traits with high heritability, will see greater improvement through selection. Reproductive traits tend to have low heritability while growth traits tend to be moderate to high heritability. Carcass traits generally have

heritability.

Correlations tell us how selection for one trait may affect other traits. Unfortunately, not all correlations are beneficial. A correlation can be positive or negative, and both can be beneficial. Positive correlations indicate that as one measured trait increases or decreases, the other also increases or decreases. A negative correlation indicates that as one trait increases the other will decrease. Many of these correlations have not been studied in goats. However, we know that growth traits are positively correlated. Because of this, if we select the heavier kids at weaning, they will generally be heavier at a year of age. Heavier birth weights are positively correlated with kidding difficulty, so we need to make sure we don't go to extremes on growth.

We need to place more emphasis on traits that have a higher economic value to our operation. The economic value of a specific trait will depend on your operation and your market. In general we need to be selecting does that will produce and raise twins over those with singles. We need to look for unassisted births but faster and more efficient growth after weaning. Look at the dam and her past performance to help determine the kidding difficulty and milking potential of the young doe. In billies/bucks we need to select those born as a twin and whose dam raised twins. They need to be thick and heavily muscled as well as having an above-average growth rate from birth through weaning and on to yearling age.

When selecting, we should also consider health traits. There are animals that have better feet and legs than others. This is not only structural correctness but, it seems some goats have less foot scold and have a reduced need for foot trimming. There are also some animals that may not need deworming as often in our program, so we

need to look for these individuals and start selecting for these traits in our flocks.

**MENINGEAL WORM – A NEW RISK  
FOR REGIONAL PRODUCERS  
GIL MYERS, PhD  
MYERS PARASITOLOGY SERVICES  
MAGNOLIA, KY 42757**

Reports of Meningeal worm known also as “deer worm”, are becoming more common as goat flocks become more numerous. Meningeal worm is a parasite of white tailed deer. When goat and sheep graze pastures regularly visited by deer they can become infected. Posterior paralysis leading to death can occur as a result of this infection. Additional financial losses can include extensive supportive care, veterinary visits, and repeated dewormings in an attempt to kill the larvae after they enter the spinal canal of infected goats and sheep. A assortment of land slugs serve as the intermediate host in the life-cycle of the Meningeal worm. Wet weather favors slug populations. Black slugs up to 1 inch long were commonly observed last year on Kentucky pastures. It is estimated that less than 10% of Kentucky farms have experienced this problem. While not as common as other parasites such as *Haemonchus spp.* and coccidia, Meningeal worm is a potential problem for small ruminants on pasture in our region.

### WHAT TO WATCH FOR

Posterior paralysis of a few animals in the flock can be an indication of Meningeal worm infection. This is usually the first evidence of a Meningeal worm problem. Visible migratory tracks under

reported. The migrating worm larvae appear to cause goats to scratch and lick themselves.

Farms with wet areas provide favorable habituate for slugs. However, slugs can also be found in well drained pastures surrounded by woods. Producers with such areas are reporting Meningeal worm problems. Be alert for Meningeal worm problems, especially if deer frequent your pastures.

### TIMING OF INFECTIONS

Infections can develop following late spring / summer grazing. A swaying uncoordinated walk can be observed within several months after infection. Producers typically observe this problem in animals during late summer and fall.

Diagnosis by a veterinarian or diagnostic lab is important. Diagnosis provides knowledge that Meningeal worm is a problem on your farm. This information is then useful in the design of prevention measures and treatment programs.

### PREVENTION

Producers that have had Meningeal worm diagnosed by your veterinarian or suspect Meningeal worm should consider management options which can help prevent Meningeal worm problems.

The following steps can help prevent Meningeal worm problems.

- 1) Discourage deer with fencing and/or guard dogs. High tensile 4-5 strand fences will discourage deer especially if the pastures contain a number of livestock.

- 2) Fence off ponds. In central Kentucky, a producer who lost goats to Meningeal worm fenced the goats away from ponds. His losses from Meningeal worm ceased as a result. In Central Kentucky farm ponds are well defined and easily fenced.

3) Aggressive poultry such as geese and guinea fowl eat slugs. Their use can reduce slug populations.

4) This summer one Central Kentucky producer is applying slug bait to an area where his goats developed the problem last year. Slug bait is widely available at most farm stores. These baits are designed to be consumed by slugs which then die.

5) Preventive deworming during the summer can also help prevent the problem of Meningeal worm. If you have had the problem in a previous year, your animals may be at risk of infection again this year. Modern dewormers such as Safe-Guard, also sold through veterinarians as Panacur, kill worms throughout the body. Preventive deworming at a 30-45 day intervals during the summer may kill the migrating larvae of the Meningeal worm and reduce losses. This option should only be considered on farms with a history of Meningeal worm losses.

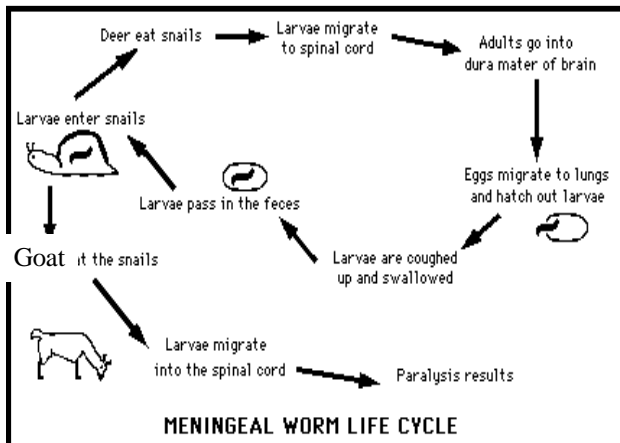
If you suspect Meningeal worm problems contact your veterinarian for assistance on the diagnosis and treatment of this new parasite problem.

## Kentucky's Buck Performance Test

Tess Caudill, Kentucky Department of Agriculture, Division of Marketing

As many of you have probably heard, Kentucky's Buck Performance Test is on tap for this fall. The test will be conducted in a newly renovated facility at Western Kentucky University's research farm under the guidance of WKU, the Mammoth Cave Goat Association, and a steering committee consisting of representatives from the regional universities, Kentucky Department of Agriculture, Kentucky Goat Producers Association (KGPA), and goat producers from across the state.

Bucks must be entered for the test no later than August 5 so it's time to start thinking about bucks you may want to have tested. The test facility has a capacity of 50 head so you may not want to wait until the last minute to enter. The 40 to 100 lb. buck kids will arrive at Western's farm on Saturday, August 20 with the official test period scheduled to begin on September 3 and run 84 days through November 26. Average daily gain will be measured every 28 days in addition to a one time scrotal circumference and loin eye measurement.



Bucks performing at or above average for average daily gain during the test period will be offered for sale on Friday evening, December 2. This sale will be held at the L.D. Brown Agriculture Center in Bowling Green in conjunction with the KGPA annual meeting planned for Saturday, December 3 at the same location. I hope everyone will plan to attend both events for a weekend full of education, networking, fellowship, and maybe to find a new herd sire.

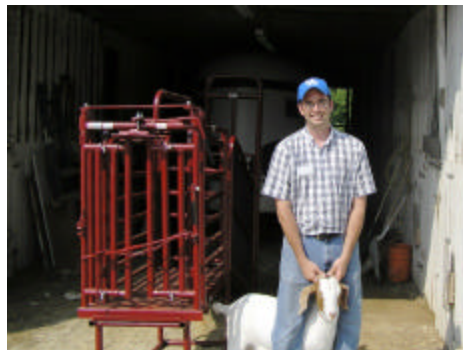
If you have young bucks you are thinking about marketing as breeding stock, I encourage you to participate in the performance test. Remember, we currently have little or no genetic information on which to select breeding stock in the meat goat industry. Performance data gathered from this buck test could prove the superiority of your herd's genetics and improve their marketability.

If you are a meat goat producer, strongly consider purchasing a top performing buck from this test. Your goal is to get pounds of kids to market as quickly as possible. Knowing you have a herd sire with the genetic potential to produce fast growing kids is one step in reaching this goal.

Complete guidelines and the entry form for the test can be found by clicking the link below or should be enclosed if you receive this newsletter via mail. Questions can be directed to Tess Caudill at (502) 564-4983 or [Tess.Caudill@kyagr.com](mailto:Tess.Caudill@kyagr.com). or <http://www.wku.edu/Dept/Academic/Ogden/Agriculture/2005%20Buck%20Test%20Guidelines.pdf>



**FAMACHA Training for County Agents**  
Knott County extension agent, Keith Hackworth; right, conducted the hands-on portion of the FAMACHA training for county agents at the Quicksand Sub-Station. Left is Clay County Agent, Jeff Casada.



**Brandon Sears, new extension associate for forage and goat production Robinson Station, Quicksand KY**

Bullitt County KY native, Brandon Sears is the new extension associate for forage and goat production located at Robinson Station. Brandon is a UK graduate with a BS in plant and soil science in 2002 and an MS in plant and soil sciences in 2005 all from UK. He is presently doing chicory variety testing on low, medium, and high phosphorus soil and examining tannin levels for each P level. His responsibilities also involve forage variety testing for goat grazing preferences, and examining the impact of forage variety on internal parasites (goat performance), goat/cattle co-grazing systems. He is also looking at the effect on internal parasites in goats and pasture species diversity

Brandon says that there will eventually be 30 head of goats at the Robinson Station. He presently working on a grazing program in Greenup County.



**Foot Scald Treatment Prototype Developed**

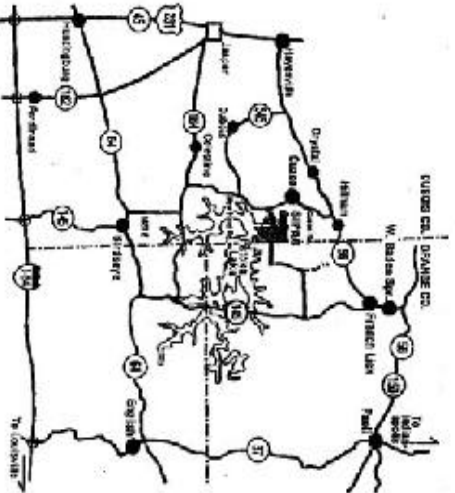
A foot scald treatment equipment prototype was developed by county agent Ed Lanham. Interested inquires should contact Ed at the Marion County Extension office 270-692-2421

## Meat Goat and Sheep Management Workshop

Internal Parasite Control &  
FAMACHA Certification

Saturday, July 30, 2005  
10:00 a.m. — 4:00 p.m. E.S.T.

Southern Indiana Purdue Agriculture Center  
(SIPAC)  
11371 E. Purdue Farm Road  
Dubois, IN 47527



Sponsored by Purdue University and  
the University of Kentucky

Purdue University and the University of Kentucky  
are equal access/equal opportunity institutions.

### Instructors:

Terry Hutchens, Extension Goat Specialist, Univ. of Kentucky  
Mike Neary, Extension Small Ruminant Specialist, Purdue University  
Nicole Ferguson, DVM, School of Veterinary Medicine, Purdue University  
David Trotter, Clark County Extension Educator, Purdue University  
Jim Peter, Dubois County Extension Educator, Purdue University  
Jason Tower, Superintendent, SIPAC, Purdue University

Internal parasitism is the number one health concern for meat goat and sheep producers. Parasite resistance to dewormers is becoming more common on farms with sheep and goats. The FAMACHA system is relatively new technology for small ruminant producers to use to help control internal parasites and to avoid resistance problems. This workshop will teach producers through lectures and hands on activities the following:

- Developing a whole herd parasite control program
- Management practices to reduce parasitism
- Proper methods of deworming
- How to conduct fecal egg counts
- FAMACHA training and certification

### Reservations

Need to be received by July 21, 2005. This workshop is limited to 50 participants.

### Contact information:

Dr. Michael Neary  
Purdue University  
ANSC, LILY  
915 West State Street  
West Lafayette, IN 47907-2054  
765-494-4849  
mneary@purdue.edu

### Directions to SIPAC:

From Jasper travel east on 164 (approx. 12 miles) to route 545. There will be signs indicating Purdue Diagnostic Lab, and Southern Indiana Purdue Agriculture Center at the intersection of 164 and 545. Turn left or north on 545. You will come to a three way stop at top of a hill. Road 545 turns left, but you should continue north through stop (DO NOT turn left). As you pass the Potlaka Lake Dam and watershed, watch for signs. Turn right on paved road (Purdue Farm Road) and continue for approximately 1 mile to top of a hill. Turn left into the entrance of SIPAC at bottom of hill, turn left into the entrance of SIPAC at bottom of hill, turn left toward main buildings.

### Pre-registration Form

\$35 registration fee enclosed. Make checks payable to **Purdue University**.

I require auxiliary aids and services due to a disability. Please contact Mike Neary at the address below.

Name \_\_\_\_\_

Address \_\_\_\_\_

City, State and Zip Code \_\_\_\_\_

Phone \_\_\_\_\_

Email \_\_\_\_\_

Return to:

Mike Neary  
Purdue University  
ANSC, LILY  
915 West State Street  
West Lafayette, IN 47907-2054  
Phone: 765-494-4849  
Fax: 765-494-9346  
E-mail: mneary@purdue.edu

## July Extension Events

July 7-Letcher Co. Goat Nutrition Workshop, 7 p.m., EST, Floyd Co. Extension Office. Contact Floyd Co. Extension Office 606-633-2362.

July 16-Lawrence Co. FAMACHA Training, 10:30 p.m., EST. Contact Lawrence Co. Extension Office 606-638-9495.

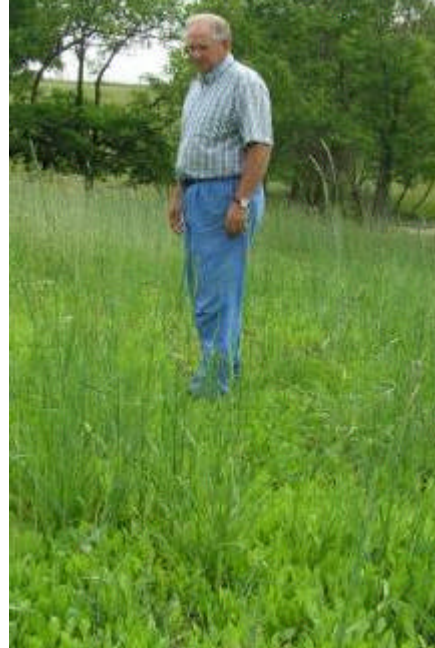
July 29-Muhlenburg Co. , Quality Assurance Workshop for Goats. Contact the Muhlenburg Co Extension Office 270-338-3124.

July 30- Meat Goat and Sheep Management Workshop, 10 a.m.-4 p.m., EST, Dubois IN., see page 11 for details.

August 6-Artificial Insemination Workshop for Goat Producers, Muhlenburg County Extension Office, For information Contact the Muhlenburg Co. Extension office 270-338-3124.

## Goat Forage Field Day-Watts Farm, Set for September 24

**Tony Shirley, Mercer Co. Extension Agents looks over a new field of forage chicory. Chicory is a perennial forb that is high in feed value and drought tolerance.**



## Goat Foot Scald Study Completed

Left to right, Ken Andries; KSU, Patty Scharko; UK, Ed Lanham; UK, and Terry Hutchens just completed a 5 month long foot scald study in goats in Mercer, Marian and Nelson counties. Participants not shown are Toney Shirley; UK and Ron Bowman; UK.



**Terry Hutchens**  
Extension Associate Specialist  
Animal & Food Sciences  
615 W.P. Garrigus Building  
Lexington KY, 40546-1027  
University of Kentucky  
Phone 859-257-2465  
Fax 859-323-1027

[thutchen@uky.edu](mailto:thutchen@uky.edu)  
[http://www.uky.edu/Agriculture/  
AnimalSciences/goat/goats.html](http://www.uky.edu/Agriculture/AnimalSciences/goat/goats.html)

**Mention or display of trademark, proprietary product, or firm in text or figures does not constitute an endorsement and does not imply approval to the exclusion of other suitable products or firms.**

