10th Annual
Small Farms
Field Day

June 30, 2011
University Farm
School of Agriculture
and Environmental Sciences
10th Annual Small Farms Field Day
Thursday, June 30, 2011

NORTH CAROLINA A&T STATE UNIVERSITY
University Farm
School of Agriculture and Environmental Sciences

8 - 8:30 a.m. Registration

8:30 a.m. Opening remarks/greetings
Dr. Linda T. Adams, Provost
Dr. Donald McDowell, Interim Dean
Dr. M. Ray McKinnie, Administrator,
Cooperative Extension Program
Dr. Shirley Hymon-Parker, Associate
Dean, Research

8:50 a.m. Load Trolleys

9 - 11 a.m. Tours Begin - Tours will rotate

Tour 1—Livestock (Goats and Cattle)
9-10 a.m. - Goats
10-11 a.m. - Cattle

Tour 2—Horticulture/Crops (HC)
9-10 a.m. - HC 1 - Cover Crops, IPM,
Sweet Sorghum
HC 2 - High Tunnel, Agroforestry,
Rice/Crawfish
10-11 a.m. - HC1 and HC 2 tours switch

11 a.m. - Noon Livestock Group moves to HC 2
Horticulture Group moves to Livestock area

Noon Evaluation

12:30 p.m. Lunch
Winter Cover Crops for Improving Soil Quality

Researchers: Dr. Charles W. Raczkowski and Marsha McGraw

Objective(s): To evaluate the effects of winter cover cropping on the physical, chemical and biological properties of soil.

Opportunity: Soil organic matter content continues to decline in farm fields in North Carolina, and that decline is reflected in degradation of soil quality. Intensive tillage and low organic matter inputs are major factors that have contributed to this degradation. The adoption of best management practices and the use of soil amendments will restore these soils back to acceptable productivity levels. The use of winter cover crops is an excellent management practice to incorporate into a rotation with summer crop. Cover crops are beneficial in the following ways: controlling erosion, improving soil organic matter and soil structure, increasing soil moisture, suppressing weeds and providing a good soil environment for beneficial organisms. Some examples of non-legume winter cover crops include: Abruzzi rye, cereal rye, oats, wheat and barley. Common legume winter cover crops include: hairy vetch, crimson clover, red clover, sweet clover, white clover and Austrian winter pea.

Method: The experimental treatments are structured as combinations of tillage levels (disk tillage or no tillage), cover crop levels (planting of a winter cover crop or no cover crop planted), and compost levels (compost added or no compost added). Compost is applied at a 5-tons-per-acre rate in the fall. Following this application, a crimson clover and Abruzzi rye bi-culture is planted at rates of 15 pounds-per-acre and 50 pounds-per-acre, respectively. The cover crop is mechanically killed each spring using a spindle type cover crop roller/crimper (Rodale Institute) prior to tillage and planting of the summer crops of pumpkins or butternut squash.

Discussion: Cover crop residue increased rain's ability to penetrate soil and the soil’s ability to retain water. The mulching residue also reduced the amount of evaporation of water at the soil surface and suppressed weeds. These conditions improved yields and produced fruits of superior quality. In addition, cover cropping increased the activity of beneficial organisms living in the soil and also improved the structure of soil.

Winter cover cropping is a practice that should be considered in developing management plans for improving the quality of North Carolina soils. Bi-culture cover crops have improved both physical and biological properties in soils as well as increased soil moisture, suppressed weeds and provided nitrogen to be used by the following summer’s crop. This study will continue to determine the long-term effects of cover crop practices on soil quality.
INTEGRATED CRAWFISH AND RICE FARMING
AS AN ALTERNATIVE ENTERPRISE

RESEARCHERS: Rickie Holness, Dr. Jimo Ibrahim and Kurt Taylor

OBJECTIVE(s): To educate small-scale and limited-resource farmers on alternative agriculture production that can help them earn extra income and make use of marginal land not useful for general production. The research will also examine the economic value of producing crawfish and rice in an intercropping system.

OPPORTUNITY: Crawfish are a delicacy in many parts of the world. Outside Louisiana and a few other southeastern states, though, crawfish are generally hard to find in the marketplace. Many markets exist for crawfish that are not being met by the current supply. The European crawfish demand is increasingly being met by United States suppliers, with continuing demand and opportunity for United States exports. Integrating rice with local crawfish production offers an alternative enterprise that has the potential to increase income on some North Carolina farms. Rice, because of its semi-aquatic nature, causes less water quality deterioration than other forages such as sorghum, and is the most commonly used forage for crawfish production. An excellent average crawfish production would be 1,200 to 1,500 pounds, per acre. Fresh crawfish can be sold for as little as $1.50 to $3 per pound to as much as $8 per pound retail, for bait.

The United States produces more than 100 million pounds of crawfish a year, with most of it coming from Louisiana. Crawfish production for food will probably double in the U.S. in the next 10 years. In rice-crawfish double cropping, rice stubble supplies the needed forage to feed the crawfish and the harvest of rice provides a second income source for farmers each year.

METHOD: Crawfish ponds should be built in soil with sufficient amounts of clay, which holds water and maintains the integrity of crawfish burrows. Crawfish will die in sandy soil where burrows collapse or dry out easily. With that in mind, two 12 by 40 foot rice paddies/ponds were built to a depth of 18-24 inches. The pond bottoms were sloped less than 6 inches from the shallowest to the deepest part of the pond. Drains were installed at the deepest part of the ponds. The drains were designed to allow the water level to be regulated and were of sufficient size to allow for complete drainage over a short period. A soil test was done to determine the proper fertilizer grade and application rate. Nitrogen was applied at a rate of 70 pounds per acre and 30 pounds of both phosphorous (P) and potassium (K) at the same rate to ensure optimum rice production. Rice was seeded at rates of 90 pounds per acre. The dry broadcast method was used, with seeds covered using a rake. Rice seed needs moisture within three to four days to germinate. If rain does
not closely follow planting, it will be necessary to irrigate or flood the pond (then immediately drain it to avoid "scalding" the germinating rice seed). Periodic irrigation will be necessary if rain is not timely. Crawfish were stocked June 27, 2011 at a rate of 75 pounds per acre at permanent flood stage when rice was at 8–10 inches high. This rate is ideal for new or recently established crawfish production.

**RESULTS:** Research on this project is ongoing, with conclusions expected in November when yield and quality will be assessed. Based on a 2008 survey there are about five North Carolina growers producing on about 39 acres with total farm gate value of approximately $31,000.

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**Grafting & High Tunnel/Greenhouse Heirloom Tomato Production**

**RESEARCHERS:** Rickie L. Holness, Kurt Taylor and Patricia Perez

**OBJECTIVE(s):** To evaluate yield performance of grafted heirloom tomatoes grown in an organic high-tunnel production system.

**OPPORTUNITY:** The demand for locally grown, organic heirloom tomatoes always exceeds supply. The economic opportunity for small growers is enormous since consumers are willing to pay high prices for heirloom tomatoes; in some cases up to $3 per pound. However, growing heirloom tomatoes organically in an open-field production system can be difficult as there are many disease and quality issues that make production unattractive to many limited-resource farmers. As a solution to the damage caused by soil-borne diseases such as Fusarium wilt, bacterial wilt and nematodes, grafting of heirloom tomatoes and other fruit-bearing vegetables is recommended. Because grafting promotes increased disease tolerance and vigor to crops, it is useful in low-input sustainable horticulture systems. Grafted heirloom tomatoes grown under high tunnel conditions have also been proven to produce higher yields and better quality fruits.

**METHOD:** A study was conducted at N.C. A&T’s University Farm comparing grafted Maxifort rootstock to non-grafted heirloom tomatoes. Cultivars tested in 2010 included Red Brandywine, Cherokee Purple and German Johnson, with Red Brandywine being replaced by Paul Robeson in 2011. Seeds were started Jan. 12, 2010 in 50-cell flats and grafted at the emergence of two true leaves, 21 days after planting. After the grafting procedure, plants were immediately placed in a healing chamber for five days, and then reintroduced to normal greenhouse conditions. Pre-plant compost was applied at a rate of 10 tons per acre and fertilizer N:P:K was applied at 100, 80 and 125 pounds per acre, respectively, and incorporated before planting. Additional fertilizers
were supplied through the drip irrigation system at N and K rates of 25 pounds per acre using liquid fish meal (5 percent N) and seaweed extract (6 percent K). Drip irrigation was installed and ran for 45 – 90 minutes daily, depending on the stage of growth, to supply the crop with water and fertilizer. The study was designed as an early season extended production system, planted March 7, 2010 and March 29, 2011. Cultivars were planted in a 30' x 96' Jaderloom designed high-tunnel structure and grown under organic production practices. Main plots were subdivided into mulch made of landscape fabric and bare soil subplots.

**DISCUSSION:** In 2010, yield and quality attributes of grated tomatoes were generally higher and greater than non-grafted. The first harvest took place on April 18, 2010. Grafted German Johnsons had the highest total (18.5 pounds per plant) and marketable (14 pounds per plant) yields, followed by Cherokee Purple (with total 16 pounds per plant) and marketable (10 pounds per plant) yields. Brandywine showed the lowest quality characteristics (15.6 pounds per plant and marketable 8.6 pounds per plant) yields. Plant yields on landscape fabric were greater in the first four weeks when compared to bare soil; however, there were no significant differences in yields at final harvest. Based on 2010 recorded yield levels, with 300 plants in a high tunnel, a grower is expected to produce approximately 5,400 pounds of heirloom tomatoes. Data collection for 2011 is ongoing and will be analyzed later.

**Sweet Sorghum for Bio-Ethanol Production in Piedmont North Carolina**

**Researchers:** Dr. M. R. Reddy and Dr. R. Ravella

**Objective(s):** To evaluate the yield of sweet sorghum with different N fertilizer doses and to extract and convert the juice extracted from the canes into ethanol.

**Opportunity:** The Fueling North Carolina Future committee envisioned that by 2017, 10 percent of liquid fuels sold in North Carolina will come from biofuels locally grown and produced. To achieve a goal of this magnitude, focus should be on improving our biomass production by adopting improved management practices. Biofuels burn clean and emit less greenhouse gases than gasoline, according to reports from the U.S. Department of Energy. Biofuel production and consumption has been established as an environmentally friendly and economically viable option for supporting the energy and fuel demands of the world. To date in the United States, the production of such biofuels as ethanol has only been economically feasible from food crops that are high in sugar and starch, such as corn. Sweet sorghum is a drought tolerant crop that can be grown in temperate climates. It requires only 14 percent
of the average water requirement of sugarcane. Sweet sorghum puts out eight units of fuel energy for every unit of fossil fuel consumed. It is also considered carbon neutral because it takes in as much carbon dioxide as it puts out when burnt. Sweet sorghum silage after juice extraction is also a nutrient rich animal feed. Although North Carolina is the nation’s top producer of sweet potatoes – another biofuels option their cost-prohibitive production practices (hand planting) restricts their large scale production for ethanol extraction. Hence, sweet sorghum with its high sugar content is a preferred crop for ethanol production.

**METHOD:** Soil and climatic conditions in the North Carolina Piedmont support sweet sorghum production. Ethanol produced from sweet sorghum biomass from 1 acre can be twice the quantity of ethanol produced from 1 acre of corn, but there is limited knowledge about production practices for higher yields in both these crops under Piedmont climate conditions. The urgent need for recommending how to produce sweet sorghum for biofuel will be addressed in this project with the following objectives: growing sweet sorghum in the summer followed by cover crop in the winter; and planting sweet sorghum in late May, for maturity between late August and early September. This study is planned for three consecutive years – ending in 2012. Sweet sorghum will be grown in rotation with a winter cover crop of crimson clover and rye grass mixture. Data collected over the study period will establish a knowledge base for growing sweet sorghum successfully in the Piedmont.

**DISCUSSION:** With this project A&T aims to:

- Establish suitable sweet sorghum biofuel crop varieties in the Piedmont.
- Increase yield of biomass and sugar content of the biofuel crops.
- Increase awareness of biofuel crops in the local farming communities.
- Introduce limited-resource farmers to new crops to improve their farm income.
- Increase the local production of biofuel feed stock for fuel production.
- Diversify the biofuels-crop knowledge base for students graduating with advanced degrees.
- Create employment opportunities through biofuel processing units.
INTEGRATED PEST MANAGEMENT (IPM)
ON SPECIALTY CROPS

RESEARCHERS: Dr. Louis Jackai, Dr. Henry Sintim and Dr. Beatrice Dingha

OBJECTIVE(s): Integrated Pest Management employs several techniques in pest control with the objective to reduce or avoid the use of high-risk synthetic pesticides. Another goal of IPM is to increase ecosystem services such as enhancing the activities of natural enemies of pests.

OPPORTUNITY: IPM enhances environmental quality, as well as the safety of the grower or consumer, and increases farm revenue in the longer term. Specialty crops are growing in popularity throughout the United States due to increasing population diversity. In North Carolina, this population diversity can benefit small farmers who produce such summer crops such as tomato, eggplant, cowpea, pigeon pea or amaranth; and who also produce fall crops that include such crucifers as collards, cabbages and broccoli – all grown with the minimal use of pesticides. These crops are often attacked by insects and diseases during the growing season, and appropriate tactics have to be employed to manage the pests.

METHOD: The approaches for managing pests that have been targeted in our studies consist of the use of bio-rational pesticides in combination with reduced-risk synthetic pesticides. Our previous studies in 2010, which featured neem-based and microbial pesticides containing pesticidal fungi or bacteria, have been screened against field insects on different varieties of the listed specialty crops. In the current study, the screened pesticides are used either on a calendar cycle – which is not recommended or are threshold-driven. The neem-based insecticides are: Agroneem®, Neemix® and Azatin®; the microbial insecticide is Spinosad®. Actara®, a low-risk synthetic pesticide is also used. Agronomic practices were also used in an effort to increase plant vigor, increase soil fertility or enhance natural enemy populations. The practices included: using such nitrogen-fixing legumes as cowpea and pigeon pea, using healthy planting material (insect free seedlings); and maintaining strict weed control through the use of pre-plant herbicides and using organic mulch.

DISCUSSION: Low-risk pesticides fit well into a strategy for managing pests in an integrated way. The strategy relies on early monitoring to detect pests and in using select products to control and preserve the farm’s ecological health, and in minimizing negative effects on beneficial insects that suppress pests. Using damage-free seedlings enabled our plants to survive early sporadic feeding of insects. By controlling weeds, the plants are expected to maintain enough vigor to compensate for whatever insect damage may occur; thereby reducing the number of pesticide applications in a season.
INTERCROPPING OF PECAN AND MORINGA OLEIFERA USING AN ALLEY CROPPING SYSTEM

RESEARCHER: Dr. Joshua Idassi

OBJECTIVE(s): To quantify the growth potential of pecan trees and assess the performance of moringa oleifera as a seasonal crop

OPPORTUNITY: North Carolina small farmers and woodland owners with fewer than 20 acres are seeking alternative land use systems for new market opportunities and also to enhance sustainable agriculture and land stewardship. Agroforestry – producing agricultural products – offers increased advantages to generate income throughout the life of the tree. To help farmers move to agroforestry and provide intermediate income, alley cropping was evaluated at the University Farm.

Moringa oleifera has many valuable properties including: the high protein content of leaves, twigs and stems, the high protein and oil contents of the seeds, the large number of unique polypeptides in seeds that bind to many moieties, growth factors in the leaves, and the high sugar and starch content of the entire plant. The A&T research faculty and outreach specialists are assessing the growth and yield potential of this tree as a specialty crop. Using the available information from various resources, A&T researchers and outreach specialists will modify the growing practices to suit local soil, weather, pest and disease conditions. Introduction of this plant into a farm which has a biodiverse environment can be beneficial for both the owner of the farm and the surrounding ecosystem.

METHOD: Using the alley cropping system, pecan trees were planted in rows at wide spacing - 24- feet to 30- feet - while moringa was grown in the alleyways between the tree rows. The moringa plants were planted in three rows of 6-feet by 6-feet in the alleyways. The rows will be covered with fabric to control weeds. Both the pecan and moringa will be watered using drip irrigation.

DISCUSSION: At the demonstration site, four pecan cultivars were planted – Jackson, Forkert, Elliot and Choctaw. These varieties thrive well in full sun with fertile, drained soils. They do not thrive well in light, compacted and heavy soils. Pecan thrives well in the soil with pH of 6.0 to 6.5 with a high range of elements (NPK). Nitrogen is the best for pecan, because it enhances rapid growth and development, but it should be applied moderately. If well maintained, pecan would mature within 12 months.

For moringa: Potential moringa growers should first have their land analyzed for soil quality, and have a water source. The plant’s leaves, which grow to at least 3-to-5 feet, are harvested by snapping leaf stems from branches. Harvesting young shoot tips promotes the growth of side branches.
Plants should be allowed to develop new shoots and branches before subsequent harvests. These leaves are dried and are more suited to making dried leaf powder, since stems can be removed during the sifting process. For vegetable use, harvest moringa in the morning, tying harvested leaves in bundles and maintaining them at a 40-degree Fahrenheit temperature.

This project has great potential for farmers interested in adopting the alley cropping practice to their land. Pecan nuts are a valuable food product that have such significant health benefits. Pecans are an excellent source of protein and an antioxidant.

**AN INTEGRATED APPROACH TO INTERCROPPING AND COMPANION FARMING FOR SMALL-SCALE FARMERS**

**RESEARCHERS:** Kurt Taylor, Rickie L. Holness and Patricia Perez

**OBJECTIVE(S):** To demonstrate the effectiveness of intercropping and companion planting on small farms.

**OPPORTUNITY:** With unpredictable weather and consumers’ need for a variety of fresh vegetables throughout the year, farmers have to use creative farming practices to supply the market with fresh fruits and vegetables. In addition to meeting consumers’ demands for sustainably-grown produce, farmers are becoming more conscious of their impact on the environment. The practices of intercropping—growing at least two crops close together—and companion planting, address many field-crop factors which achieves sustainable and environmentally-friendly results. The benefits of intercropping include naturally controlling pests, increasing plant and insect diversity, fostering a favorable micro-climate and increasing pollinators in the farm area while enhancing soil-borne microorganisms to improve soil quality. Since farmers are using more sustainable practices, their farms are becoming more diversified, thus reducing total or significant loss of produce due to damage from weather, predators, insects and disease. More efficient farming through intercropping and companion planting can result in greater production and farm profitability than when the same crops are grown separately. By implementing intercropping, companion planting and other variations of these methods, farmers can reduce their economic losses related to damaged produce while potentially increasing the variety and volume of crop yield from the same land acreage.

**METHOD:** Demonstration of intercropping and/or companion cropping was executed with bell peppers, cut flowers, okra, sorrel, Asian vegetables, cucumbers, bush beans and squash. Vegetables were planted in May and a trellis system erected for the cucumbers. The demonstration area was divided into five plots. The bell pepper and cut flowers grown in this demonstration provided beneficial, pollinating insects, and also provided crop diversification on
the farm and additional crops for market. Sorrel, an alternative crop grown throughout South America and the Caribbean, will be planted alongside okra which is popular in North Carolina. Sorrel is harvested in the fall while okra is a summer production crop. Cucumbers grown on the trellis system were paired with Asian vegetables to provide a micro-climate environment in which the vegetables will produce at their optimum potential. Squash and bush beans are companion crops in which the beans provide nitrogen due to the ability of their roots to fix free atmospheric nitrogen and thus supplement the fertilizer needed by the squash. Corn and beans, a truly perfect match, are also married so that the corn benefits from the nitrogen fixing ability of the beans.

**DISCUSSION:** Farmers must implement more creative, efficient and sustainable planting methods to increase their farm’s productivity, and these production practices are a few that can be implemented quite simply. However these practices do take a trial and error approach for each farmer’s specific climate, crop and market. The Asian greens, cucumber project at the University Farm will finish up in early July, while the others will extend further into the growing season.

**BULL SELECTION FOR SMALL BEEF CATTLE PRODUCERS**

**RESEARCHERS:** Dr. Ralph Noble and Pete Burnette

**OBJECTIVE(S):** To evaluate the impact sire selection traits have on the calf crop

**OPPORTUNITY:** Feeder calf prices are currently more than $1 per pound. To best take advantage of these high dollars, a producer should have fertile, milk-producing cows that are bred with a fertile bull whose traits are passed on to his calves – resulting in premium prices in the marketplace. Selecting a herd bull is one of the most significant single factors that beef-cattle producers have to decide; a decision that will impact their herd for many years to come.

**METHOD:** A purebred Angus bull was selected for moderate calving ease, moderate frame score (FS = 5-6), for heavy weaning weight of greater than 600 pounds, and for moderate milk production. The bull is rotated out after three calf crops. Cows are culled if not pregnant after a 90-day breeding season. The top 20 percent of the heifer calf crop (~ five head) are retained every year to replace cull cows while maintaining a stable herd size for our one-bull herd, whose ratio is one bull to 35-to-40 cows.

Results were compared from a formula of selecting three bulls used over eight to 10 years. Their impact on length of calving season, weaning weight, market price and quality of replacement heifers were evaluated and
will be presented. Information on what traits to select, how to assess what to pay for a bull, and what market options and outlets are available for beef producers will also be presented. The herd bull, its selection traits and replacement heifers will be observed and farmers will be allowed to participate in measuring their physical traits.

**DISCUSSION:** Selection of a quality bull has a measurable impact on the quality and income from the calf crop. The process may be slow, but sure. In anticipation of rising costs for feed and labor, it is important to have cattle that will continue to increase production, reproductive efficiency and profit. Choosing the right bull for the right reason is one way to ensure a profitable future.

**STEPS TO IDENTIFY AND CONTROL INTERNAL PARASITES IN GOATS TO IMPROVE ANIMAL HEALTH**

**RESEARCHERS:** Dr. Millie Worku, Dr. Ralph Noble, Gary Summers, Randall Meriott and Hamid Mukhtar

**OBJECTIVE(S):** To evaluate the efficacy of Cydectin® (moxidectin) oral sheep drench as a de-wormer against the internal parasite *Haemonchus contortus* in goats (Recommendations for extra-label usage of drugs is permitted only by, or on the order of, a veterinarian, and only within a valid veterinary-client-patient relationship. Producers are advised to consult their veterinarian prior to its use.)

**OPPORTUNITY:** Specialty markets continue to demand goat meat and lamb. However, infections with parasites represent a major threat to pasture production of sheep and goats. The most significant health problems affecting sheep and goats are caused by the barber pole worm (*Haemonchus contortus*). Coccidia, a protozoa parasite, also causes significant losses in weaned kids and lambs. Proper management can prevent internal parasites from stealing nutrition and energy from sheep and goats that can result in production losses, including death. Sheep are usually described as grazers or intermediate browsers, whereas goats are classified as browsers. De-wormers and other medicines act differently in sheep and goats. Producers should be aware that all medicines that work in sheep may not work for controlling parasites in goats. Parasite drug resistance is one of the greatest health threats to grazing animals. The fecal egg count reduction test (FECRT) is one way to test for drug-resistance. Cydectin® (moxidectin) oral sheep drench may aid producers as a de-wormer against *Haemonchus contortus* in goats.
**METHOD:** Cydectin Oral Sheep Drench is approved for use in sheep to control 13 types of adult and larval stages of internal parasites. The objectives of this study were to evaluate the efficacy of Cydectin® (moxidectin) oral sheep drench as a de-wormer against Haemonchus contortus in six goats with fecal egg counts more than 500 eggs per gram of feces (FEC) on the day of treatment. The goats were maintained at the University Farm Small Ruminant Research Unit (SRRU). Cydectin® was administered to the goats via oral drench at a dose of 0.02mg/kg. On the first and 14th days after treatment, fecal samples were taken from the goats and fecal egg counts (FEC) were conducted using a modified version of the microscopic evaluation of parasitic eggs commonly called the McMaster’s method. The numbers of Coccidia and Haemonchus eggs per gram of feces were recorded. Cydectin® efficacy was calculated using the FECRT as recommended by the World Association for the Advancement of Veterinary Parasitology.

When administered at the recommended dose, Cydectin® proved to have a 100 percent anthelmintic efficacy in five of the six animals tested. One animal exhibited only 47% efficacy. Further, in this study, treatment with Cydectin-decreased Heamonchus egg counts were also associated with up to 100 percent reduction in the levels of coccidia eggs. Cydectin Oral sheep drench is effective for controlling Haemonchus in goats. Further studies are needed to evaluate its effectiveness for controlling coccidia in goats.

**DISCUSSION:** Regular de-worming, using a veterinarian-recommended strategy, will aid producers in ensuring good animal health. The FECRT helps producers use parasite control programs by providing information on whether the drugs they use to get rid of parasitic worms are working effectively on their farm. The FECRT test needs to be repeated for each drug used and compared to levels without treatment (control). Cydectin Oral sheep drench is effective for controlling Haemonchus in goats. However, factors such as levels of infection, genetic variability in the susceptibility of goats to parasites and other considerations may also influence the efficacy of this de-wormer.

Farmers will get the chance to observe and participate in conducting FEC samples taken on site, as well as participate in other measures of determining practical animal health, during the Field Day. Information will be provided on where to purchase supplies needed for conducting your own FEC.
For more information about these projects, contact:

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