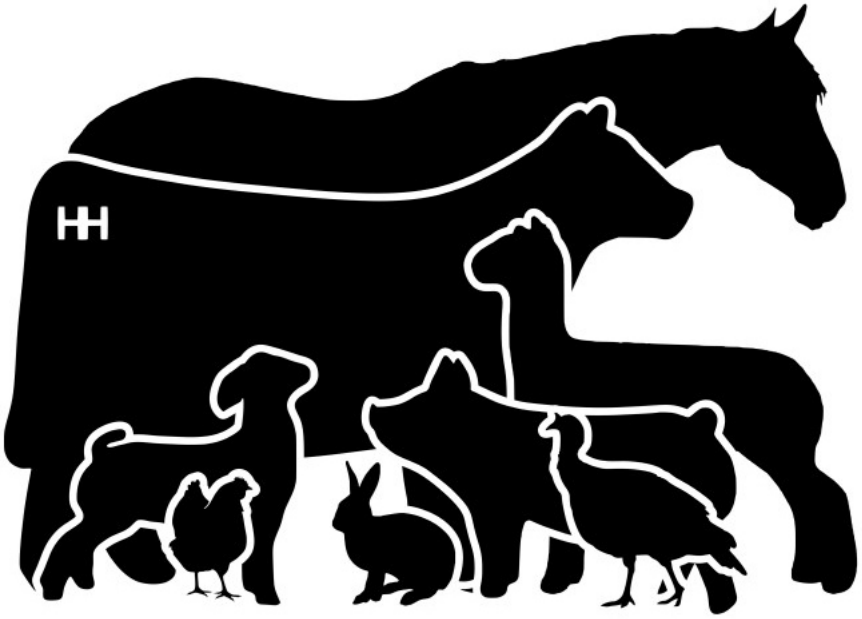
Huffman I.S.D.
Ag Science Department
Handbook



HUFFMAN

FFA

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To Incoming Agricultural Science and Technology Students

We are glad to have each of you in the Agri-science program and hope that you will enjoy your year in our program.

This handbook has been designed to answer many of the questions that you may have for both showing at the Huffman Livestock Show and being active in the Huffman ISD Agri-science department. Keep in mind that the information in this book is our suggestions. We are planning to make this a very exciting year and with your participation, we will. We hope that you will use this handbook as a resource for answers to questions that you or your parents may have throughout the year.

We are here to help and guide you along the way to ensure you have a successful year of showing. We are so glad you have chosen to be a part of our program.

Sincerely,

The Huffman Agriculture Science Teachers

Dear Parents:

We are aware that, for many of you, this may be your first experience having a student in the Agri-science program and you may not be sure what all is involved. Our goal of this handbook is to assist you and your daughter/son by providing both an overview of the program and any information that will be helpful to assure that your student has a successful year. The items in this handbook are suggestions from the advisors. We are here all the time to help and guide you as needed.

We feel, without a doubt, that the Agri-science and the FFA program are the best programs for young people to be involved in. Cooperation, leadership, technology skills, time management and responsibility, will be taught during the year and will prove valuable in the years to come. As stated earlier, this handbook is designed to provide you an overview of the program. Should a question arise that has not been addressed in this handbook, please feel free to contact any of the Ag-science teachers at Hargrave High School at (281) 324-1845 ext. 7212 or at Huffman Middle School (281) 324-2598 ext. 108.

Sincerely,

The Huffman Agriculture Science Teachers

Huffman FFA Chapter Committees

FFA members that want to be on a committee need to sign up at the first or second meeting.

A Committee chairperson is in charge of getting with the FFA Advisors and organizing the committee activities.

Committees (some examples):

- SAE
- Volunteer
- Show — Organize exhibitors what to set up and clean
- Flag
- Fundraisers
- CDE
- LDE
- Recruitment
- Banquet
- Meeting Potluck
- Tag-ins / Draws
- Meeting Sign-in
- Meeting Handouts

FFA Trivia

FFA Colors

- National Blue
- Corn Gold

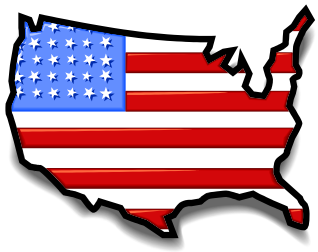
FFA Motto

Learning to Do,
Doing to Learn,
Earning to Live,
Living to Serve.

Emblem

Salute

"I pledge allegiance….."



Official Dress

Female Members

- Black skirt or black slacks
- White-collared shirt
- Blue FFA scarf
- Black pantyhose
- Official FFA jacket
- Black closed-toe shoes

Male Members

- Black slacks
- White-collared shirt
- FFA tie
- Official FFA jacket
- Black shoes

When attending a meeting, the response to "FFA members, why are we here?" …

"To practice brotherhood, honor agricultural opportunities and responsibilities, and develop those qualities of leadership which an FFA member should possess."

Huffman FFA Chapter

FFA Guidelines

1. All students participating in any FFA activity will adhere to the No Pass, No Play rules according to the policy adopted by Huffman I.S.D.
2. Students will dress according to the Huffman I.S.D. handbook or Official FFA Dress when attending FFA activities.
3. Students who participate in the local livestock show are encouraged to sell ten (10) items during fund-raising. This will assist the FFA Chapter in paying for the many FFA related activities during the year.
4. High school students, FFA members, are required to attend four (4) FFA meetings prior to the show.
5. Students in grades 6^{th} – 12^{th} must be enrolled in at least on Agri-Science class during the school year.
6. Middle school students and other students in the Junior FFA, grades 3^{rd} – 5^{th} must attend four (4) FFA Meetings prior to the show and are strongly encouraged to attend the project clinic of their project species.
7. All students must complete an expense record book.

Departmental Policy

1. Tobacco use of any kind will not be allowed.
2. All students raising animals for show are required to keep the animal(s) on their residential premises unless approval to keep it elsewhere is received from the instructor.
3. Students must ask to borrow livestock equipment and supplies, have them checked out by the teacher and check them back in. If an item is returned damaged, or if the item is lost, the student will be responsible for repair or purchase of the item.

First Year Student Information

Explanation of Course Sequence

The Agri-Science program at Hargrave High School and Huffman Middle School are designed to prepare students for more than "farming". The courses taught are designed to provide students the opportunities to prepare for several different career pathways during the middle and high school experience.

The Middle School program offers introductory topics in a general agricultural exploration based curriculum. The Middle School Ag classes are offered to 6th, 7th and 8th grade students.

Freshman or first year Agri-Science students are required to take Principles of Agriculture, Food & Natural Resources; this course provides students a taste of the broad area of agriculture in the world and introduces other courses offered to high school students in the field of agriculture upon completion of the freshman year.

After completing the freshman year, students are provided an opportunity to choose a pathway of courses that are of relevance to their personal career pathway. Yearlong courses are taught in the following areas: Agricultural Mechanics, Animal Science, and Floriculture.

As you can see, the Agri-Science courses are more than "cows, plows and sows". The amount of knowledge, personal skills, leadership and mechanical skills a student may gain is immeasurable. The degree of involvement of students and parents provides opportunities for a very meaningful and rewarding experience in the Agri-Science program. The key element that must be remembered to receive benefits from Agri-Science and the FFA is **involvement**.

Huffman Agri-Science Career Pathways

Animal Science

- Principals of Agriculture Food and Natural Resources (AFNR)
- Small Animal Management/Equine Science
- Veterinary Medical Applications
- Advanced Animal Science (Science Credit)
- Practicum in Agriculture, Food, and Natural Resources (AFNR)

Agricultural Mechanics

- Principals of Agriculture Food and Natural Resources (AFNR)
- Agricultural Mechanics and Metal Technology
- Agricultural Structures Design and Fabrication
- Practicum in Agriculture, Food, and Natural Resources (AFNR)

Other Ag Classes

- Wildlife, Fisheries, and Ecology Management
- Floral Design (Fine Art Credit)
- Mathematical Applications in AFNR (Math Credit)

What is in it for you?

Participation in Leadership Development Events

- Agvocacy
- Ag Issues
- FFA Radio
- Job Interview
- Jr. and Sr. Chapter Conducting
- Jr. and Sr. FFA Quiz
- Jr. and Sr. Skills Demonstration
- Jr. and Sr. FFA Creed Speaking
- Public Relations

Career Development Events – Judging Teams

- Ag Communications
- Agronomy
- Ag Sales
- Agricultural Mechanics
- Cotton
- Dairy Cattle
- Dairy Foods*
- Entomology
- Farm Business Mgmt.
- Floriculture
- Food Science
- Forage
- Forestry
- Horse*
- Land
- Livestock*
- Marketing Plan
- Meat
- Nursery/Landscape
- Poultry*
- Range
- Range Plant ID
- Tractor Technician
- Wildlife
- Wool
- Vet Med*

**Denotes annual CDE Teams*

Speaking Events

- Extemporaneous Public Speaking
- Senior Prepared Public Speaking
    - Agribusiness
    - Animal Science
    - Agriculture Policy
    - Agriculture Technology and Communications
    - Natural Resources
    - Plant Science
- Junior Prepared Public Speaking
- Soil Stewardship Prepared Public Speaking

Showing of Livestock

- Beef Cattle
    - Market Steers
    - Breeding Beef Cattle
- Swine
    - Market Pigs
    - Breeding Gilts
- Sheep
- Goats
- Broilers
- Rabbits
- Turkeys

The Huffman FFA Chapter has members that participate in the Houston Livestock Show, San Antonio Livestock Show, Rodeo Austin, and the Huffman FFA Show. Members also participate in jackpot/prospect shows throughout the summer months and school year.

Individual Awards

FFA members can compete for many individual awards at the local, district, area, state, and national levels. These include awards in proficiency in the various project areas; star awards for outstanding first, second, third, and forth year students, as well as five degrees of membership in the FFA. These degrees are Discovery, Greenhand, Chapter, State, and American Degrees. As a student becomes a senior, he/she is eligible to apply for several scholarships through the FFA. Scholarship opportunities are available through the Huffman FFA Booster Club, The Punk Currie family, State FFA Scholarships and National FFA Foundation Scholarships.

Community Service

The Huffman FFA participates in several community service projects throughout the school year. Some of these projects include:

- Food Drives
- Christmas Toys for Tots and Adopt-A-Family
- Parades
- Coleen Walker Relays
- Gifts for Soldiers

Conventions

FFA members are provided opportunities to attend and participate in area, state and national FFA conventions. In order to participate, the FFA members need to be officers or award recipients. This means to be active and work to be award recipients.

Note: *Throughout the year, other activities take place that are too numerous to mention. Each FFA member is encouraged to take part in as many of the activities as possible in order to feel a part of the total FFA experience.*

FFA MEMBERSHIP IS REQUIRED FOR ALL THE ABOVE LISTED ACTIVITIES*

FFA Membership

All students enrolled in any Agri-Science class will become a member of the Huffman FFA. All students must be a member of the FFA in order to take advantage of the many activities that coincide with the courses. Such activities include, but not limited to leadership teams, judging teams, showing of livestock, entering in the Ag Mechanics contest and application for awards and scholarships. **It is crucial to participate in FFA fundraising activities so that no student will be left out of any FFA school activity. The FFA fundraiser activities allow all Agri-science students to be FFA members and not have to pay FFA dues.**

Official FFA Dress

The students while competing in contests, attending meeting, while selling FFA products in our livestock show, or attending our end of the year banquet, will wear official dress. We strongly urge all members who are interested in attending in any of the above activities to purchase a jacket, and a tie/scarf at the beginning of the year.

FFA Expenses

- Membership dues - $25.00
- FFA Jacket - $60.00-$80.00 *(add $ 3.50 for jackets over size 50)*
- FFA Tie - $15.50
- FFA Scarf - $12.50
- Entry Fees per tag (per species) - $20.00

Students are responsible for ordering their own official jackets.

- Website: www.ffaunlimited.org
- Blue Catalog
- Official FFA Dress
- Men's/Ladies Official FFA Jacket
- Chapter Number: **TX1048**
- Advisor Name: **Your Ag Teacher**
- Front Line 1 (Name): **Student's Name**
- Back State Line 1: **Texas**
- Back Chapter Name Line 2: **Huffman**

Eligibility Policy

Huffman I.S.D., by state law, must adhere to the eligibility policy of the Texas Education Agency. This policy states that all students will be permitted to participate in extracurricular activities subject to the following restrictions. The student must be passing all courses. Students who fail any subject for the nine weeks will be ineligible for a period of three (3) weeks. Students may not participate in competition during the three-week period following the failing grade, but they are allowed to continue to practice and be a part of other activities. At the end of the three-week restricted period, a grade check will be done in order to determine if the ineligible student is passing. If the student is passing, and is verified by the teacher in writing, then the student becomes eligible for participation in competition. If the student is still failing at the end of the three-week period, then the student will remain ineligible until the end of the next grading period. At that time, student's eligibility will be determined once again.

It is important to note that the semester grade has no bearing on eligibility.

One other important thing to note is that a grade of "incomplete" rends a student ineligible until it is changed to a passing grade. Students must clear incomplete grades before the end of the five (5) school day grace period following the end of each nine-week period.

Students are encouraged to notify the Agri-Science teacher as soon as possible if they suspect that a grade is below an acceptable level. It is sometimes possible to offer suggestions and/or locate appropriate tutors from within the agricultural program. Remember, the Agri-Science teacher cannot help once grades are posted.

To be eligible to show at the Huffman FFA Livestock Show, a student must pass all classes for the second nine weeks.

Things to Know

1. The end of August is order and entry time for livestock projects
    a. All Entry forms will be filled out on Fairwire.
    b. All Entries and Animal Orders must be paid on Fairwire.
    c. Membership Fees must be paid on MySchoolBucks.

2. Read Show Rules and Auction Rules
    a. Read and understand all rules. The Rule book is different from this Handbook.
    b. If there is a question, please contact the Ag Teachers.

3. Auction Buyer Gift
    a. If animal makes it to the auction bring a gift basket or gift for the buyer.
    b. Thank You cards must be written for the buyer but turned in to an Ag Teacher after the show and auction are over.

4. Tuesday of the Huffman Livestock Show at 4:00 pm
    a. Check and weigh your animal in.
    b. Find your assigned pen to place the animal in.
    c. Lamb, Goat, and Pig might have to share a pen.

If there are any concerns or questions,
ALWAYS CONTACT THE AG ADVSIORS!

Check the Huffman FFA webpage for continued updates as well.

- Go to www.huffmanisd.net
    - Click on **Extra Curricular**
        - Click on **FFA**

SAE's

What are SAE's?

SAE's or Supervised Agricultural Experience Programs are hands-on, real-life agricultural career preparation experiences tied to agricultural science classroom. Students can participate in numerous types of SAE's that are geared to their individual interests. Having a project for the Huffman Livestock Show would be considered an SAE.

Supervised Agricultural Experience Program (Animal Projects)

The SAEP seems to be an area in which both students and parents have the most questions. Hopefully, some of the basic questions will be answered here.

One of the first questions to be asked is, "Do I have to raise an animal to be in Ag. and/or FFA?". The answer is, "**No**, you do not." We realize that not all students are able to raise an animal project for various reasons. There are many other activities available to students who are unable to participate in an animal project program. We do however strongly encourage students who are able to participate in the animal project area to do so. This area of the agriculture program is important and will enable students to receive a more complete concept of the total program.

Other frequently asked questions include:

1. **What kind of animal can I raise?**
   Students are able to exhibit the following animals at the Huffman FFA Livestock Show:

   - Market Steers
   - Swine (pig - barrow or gilt)
   - Lambs (ewe or wether)
   - Goats (doe or wether)
   - Broilers (chickens)
   - Turkeys
   - Fryers (rabbits)

2. **What kind of facility/pen do I need for my animal?**
   This will depend on the type of animal you raise. Once you have made this decision, contact one of the Agri-Science teachers and we will be glad to assist you.

3. **Where is a good place to buy my animal?**
   There is a definite need to understand that we are dealing with **SHOW ANIMALS**, not commercial grade animals. Animals that are exhibited in livestock shows that are not ordinary "farm animals". They are bred to be of a higher quality, specifically for shows. We will be happy to assist you in locating quality show stock if you ask. The poultry projects (broilers) are purchased through the chapter from one hatchery.

4. **What do I need to know at Show time?**
   - Eligibility to show is based on student grades, meeting attendance, fundraiser, and animal weights.
   - Care of projects at show includes the appropriate tack, supplies and feed.
   - Proper show attire; collared shirt, jeans without holes, and closed toe shoes

Supervised Agricultural Experience Program (Non-Animal Projects)

Non-animal SAEP areas include Agriculture mechanic shop projects, horticulture projects and agriculture research projects**.**

Agriculture mechanic projects can be built at home or as part of the agriculture mechanics class. These projects require planning as do all projects as well as drawings of the project, list of materials for the project and photographs of the project as it is being built.

Horticulture projects should follow the Huffman FFA Show rules as to size requirements but may also be part of the Floral Design class and Principals of Agriculture classes. They may include a list of materials, photographs of the project in different stages of development and costs for the project.

Agriculture research projects should include a plan showing the agriculture topic to be researched as well as a timeline showing the scientific steps of research.

Show Cattle

Selection

The first thing to realize is that these projects are just what their name says, **SHOW CATTLE**. Steers exhibited in livestock shows are usually bred specifically for show purposes. Commercial grade cattle cannot compete well with them in the show rings

Age: Age is an important factor that must be considered in the selection of your calf. Steers should be from 14-18 months old at the time of show. This range allows for different frame sizes in calves. Large-framed calves will need to be older at show time than small frame calves in order to be properly finished.

Breed: The key point to remember is regards to breed selection is that unless you are showing in a show with breed divisions, Brahman-influenced steers should be avoided. The ideal breeds for market steer shows without breed divisions are British breeds, Exotic breeds or a cross of the two breeds.

Size and Scale: Extremely tall cattle are out. Show steers today should be 50” to 52” at the hip when fully grown. A good indicator of growth on young calves in the cannon bone, the longer the cannon bone, generally the taller the calf will be.

Know Your Show: It is extremely important that you are aware of **all** the show rules of the show that you plan to participate in. Some shows require slick shearing which will make a big difference in the type of steer you select. Be aware of any weight limits involved in the show. The Huffman show steers should weigh more than 950 pounds at the time of show.

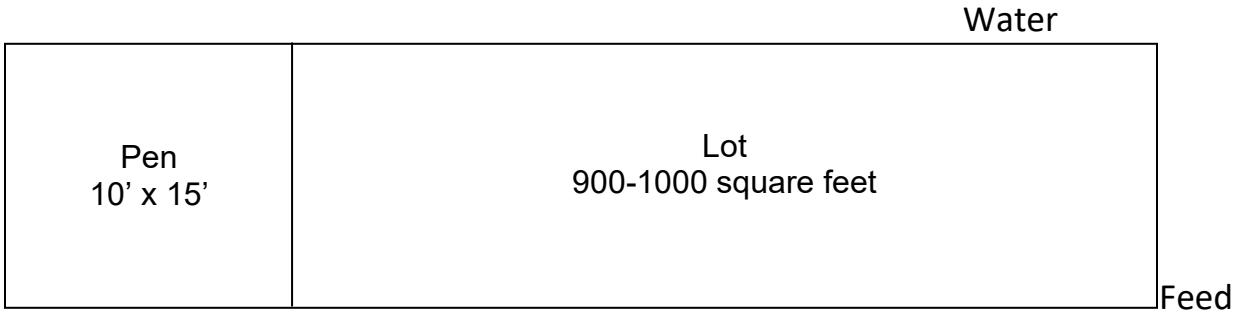
Facilities

There are three basic things to remember when constructing facilities for show cattle.

The three C's:

1. Calves must be kept **COOL.**
2. Calves must be kept **CLEAN.**
3. Calves must be kept **COMFORTABLE.**

The ideal cattle pen set up would be as follows:



- Calves should be kept in the pen during the day and should be allowed access to the lot in the evening and at night. Pens should keep the calf out of direct sun all day, but should be designed for good air circulation.
- Fans are a must for long hair cattle in this part of the state. Fans should be of the livestock type. Squirrel cage and box fans do not provide enough air. The fans should be kept on 24 hours a day during the hot months of the year. They can be turned off at night during the winter.
- Misters are helpful in keeping cattle cool during the summer months. There are several types of misting systems that can be set up, from elaborate to manually operate. When using misters, remember that the pen needs to stay as dry as possible. The misters should be adjusted to prevent the pen from becoming muddy.
- Pens should always have 4"-5' of clean bedding in them. There are several types of bedding available. Pine or cedar shavings tend to work the best. Avoid the use of sand in the pens because it will rub off leg hair when the calf gets up and down.

- Feed and water troughs should be cleaned daily. Feed troughs should be off the ground so the calf does not have to bend down to eat, as this disrupts the digestion process. Calves should always have access to fresh, clean water.
- Tie racks: This is very useful and easy to install to your pen set up. It should be slightly higher than the calf's head so it will stand with its head up. This is the position you want your calf to be in the show ring. The tie rack also gives you a place to work your calf, brush it, etc.

Nutrition

Many shows are won and lost in the feed trough. A good feeding program is a must. A common asked question is, "What kind of feed is best?" If you go to five different feed stores, you will probably get five different answers depending on the feed they sell. The thing to remember is that you should **use a feed designed for show cattle. Every feed company has different varieties of show feeds, which are designed to meet the needs of the animal at the different stages of growth.** This is where you need to look at your calf and decide which variety is best. Your Ag teacher can offer advice on this.
Another important consideration to keep in mind is that you want a feed supplier that will always have feed and the feed will be fresh.

Another question often asked is, "How much should I be feeding my calf?'. This will vary from calf to calf. As a general rule, the following guidelines should be followed:

- Starter calves (500-750 lbs.) 0.5 to 1.0% of their body weight
- Grower calves (750-1000 lbs.) 2.0 to 2.5% of their body weight
- Finishing calves (1000 lbs. and up) 2.5 to 2.7% of their body weight

Calves that are being fed more than 2.7% of their body weight should be watched closely. Many people believe that the maximum amount of feed that can be fed to calves without caution is 3.0% of their body weight. An excessive amount of feed can result in the calf bloating or going off feed of which can be detrimental at the end of a feeding period.

Some other things that you want to watch for in regards to feed are:

- Try to avoid feeds with urea- it tends to burn off hair.
- Look at the ingredients closely- many feed companies rather than specifying specific grain will list simply “grain” or “grain by-products”. This leaves it open to switch ingredients at any time, which feed companies will do as the grain market fluctuates. Switches like this can affect the animal’s eating habits.

Feeding Procedures: A common mistake that many calf feeders make is leaving feed in the trough at all times. Feed should be left in the trough for about 30-45 minutes and then taken out. This will help the animal develop proper eating habits and they will tend to gain more consistently. Also, you should have a feeding schedule and stick to it. If you decide to feed at 7:00 A.M. and 6:00 P.M., then feed at the same time every day including weekends. Animals get use to routines just as you do.

****NOTE:** If you need to switch feeds or types of feed, (i.e. grower to finisher) change gradually. Cattle do not adjust will to sudden changes in their diet. Many times, they will refuse to eat.

Feed Supplements and Additives

There are no real “secrets” to feeding cattle. There are no ‘Magic” ingredients that build muscle, etc. There are some things added to feeds that do aid in the conditioning of your cattle for show. Mineral additives such as Showbloom, Golddust, Winner’s Edge, etc. may be added to the feeding program. They are available at most feed stores. Supplements like these mentioned are used for many reasons including bone growth and hair growth. Around 3-5 months before show, the finishing process should begin. There are different methods to accomplish this. Some of the methods are 1. Steam, rolled or flaked corn can be added to the ration. 2. Liquid additives, such as GoldenFlo or corn oil, can be added to the ration. (If using corn oil, use 1-2 cups maximum) Other ingredients that might be useful during the feeding period are Vitamin B-12 and B complex vitamins. These supplements, along with others, are available at most feed stores. The use of probias products can be added to the calf’s rations periodically to help keep the microbial level in the digestive system up. In addition, adding a handful of baking soda or 1 tablespoon of Tide to the feed each day will help prevent bloating.

Daily Care and Management

Proper management is very important with any animal project. As with feeding, you should have a set routine for your calf. The pen area and troughs should be cleaned daily. It is a good practice to tie your calf daily and train the hair by brushing it. Well-trained, good hair is important at show time and good hair requires work from the owner. The hair should be brushed or combed forward daily. Show cattle should be clean from top to bottom, mud filled leg hair is very difficult to work with at show time. The amount of time and effort put into training the hair will pay off at show time.

Equipment and Supplies

There are various types of supplies and equipment needed by cattle exhibitors.

- Rice root brush
- Scotch comb
- Rope halter
- Leather show halter
- Neck rope
- Fan
- Spray bottle
- Feed and water pans (to be taken to shows)
- Blow dryer
- Trim Rack
- Clippers
- Show stick
- Tack box
- Pooper-scooper

Show Pigs

Selection

Selection is the first step in starting your swine project A few key points to remember:

Age: It is extremely important that you purchase the pig at the right age. The pigs should be between six and seven months of age at the time of show.

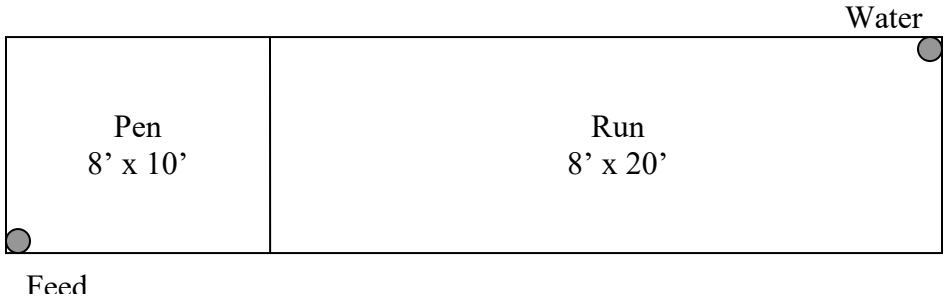
Breed: Unless you are showing at a show with breed classes, you should use one of the following breeds- Yorkshire, Duroc, Hampshire or a Crossbred pig.

Weight Limits: The weight limit for the Huffman show in 220-270 lbs.

Know the Show: You are participating in. At the Huffman show, you may show barrows or gilts. However, the major shows may be barrows only.

Facilities

Good, functional facilities are essential to a successful swine project. The ideal pen set up would be as follows:



Pens should have a covered area that is open to the south side. The pens should not have any obstructions such as exposed sharp edges on which the pig may hurt itself. The pen needs to stay as clean and dry as possible. Pens should have some type of bedding material in them. Sand and shavings work the best. Hay should be avoided as it provides an environment for parasites.

Feeders and waterers: Feeders may be as simple as a common feed pan or automatic feeders. An important thing to remember is that the feeder should not

be on the ground; it should be slightly elevated so the pig does not eat "bent over." The feeder may be set up on a concrete block or built on a stand. The best type of waterer to use is an automatic waterer. If an automatic waterer is used, the area directly around it should be filled in with concrete or some type of concrete blocks to prevent mud holes. If buckets are used, they should be firmly secured to prevent the pig from tipping them over and making a mud hole.

Feeds and Feeding

Many pig shows are won and lost in the feed pen. Many students have started out with very high-quality animals and have ended up with an inferior animal at show time due to improper management. There are no real "secrets" to feeding animals. Consistency is the best advice that can be given. A common question asked is, "What kind of feed is best?" If you go to three different feed stores, you are going to get three different answers. The best thing to do is to talk to other people who have fed pigs or ask your Ag teacher. A couple of general guidelines to follow are:

- Make sure the feed is designed for SHOW PIGS.
- The feed should contain at least 18% protein.
- The feed should be low in crude fat.

Feed Additives: It is a good practice to provide a mineral supplement to show pigs as they are pushed to grow and gain at very fast rates. There are various kinds available at the feed stores.

Feeding Procedures: There are two methods of feeding show pigs. Self-feeding allows the pig to eat as much as it wants, when it wants. This method works well until the pig reaches 100-150 pounds, depending on the individual pig. The second method is hand feeding. This is where the amount of feed is limited to a certain amount at set times during the day. This type of feeding is used to groom your pig for the show. Hand feeding can also help regulate the pig to enter the show at a weight you desire. There are some rules of thumb to follow for hand feeding. Pigs should be fed twice a day at the same time every day including weekends and holidays. Remember that animals get used to routines just like you. The question of holding or drawing a pig for a show should be done with the advice of an Ag teacher depending on the appearance and weight of your pig. Remember that not all pigs are help back for a show.

Equipment and Supplies

You will need various types of equipment and supplies for your pig throughout the year and at the show. The following is a list of needed items:

- Pig stick/whip
- Brush
- Show Sheen
- Short water hose
- Small kitchen scale
- Feed and water pans
- Soap/shampoo
- Towels
- 1 lb. coffee can
- Heat lamp
- Box fan
- Pooper-scooper

Most of these supplies will be needed at the time of show. The coffee can and kitchen scale will be useful when measuring out feed.

Wormer

Do not rely on feeds that are mixed with wormer medication. Worm your pig every 21 days with a recommended wormer from your local veterinarian or feed store.

Antibiotics

These are types of medicines that are available at local vet clinics and feed stores that will assist you in treating minor health problems that may occur.

  - Lincomix 300
  - Tylan 200

At the first sign of any changes in eating habits, runny nose, coughing, etc., begin treating your pig under the advice of your vet or teacher. Please notify the Ag teachers **ASAP** as to any major signs of a problem that you are not sure how to treat. We will gladly assist you in any way we can in keeping your pig healthy.

Show Goats

Selection

The selection of a goat for a project is one of the most important decisions made by a feeder. The type of goat you select at the beginning of the project will have a major influence on the results of the project. However, one must remember that a winning goat is a combination of good selection, good nutritional management, proper grooming and outside showmanship.

People differ in their ability to select prospective animals. Some have a natural eye for selecting young animals, while others never develop this ability. Do not hesitate to take advantage of a person with these skills. It may be your county agent, Ag teacher or breeders.

When selecting young goats, one must be conscious of age and fat thickness. Young goats that are bloomy and fat always look good, while young goats that are thin do not look as good. Learn to look past fat and recognize muscle so that you can pick goats that are genetically superior. Anytime you purchase goats, it is important to know a little about the producer you are buying form. Do not hesitate to ask questions about their goat's bloodlines and the age of the goats in question.

When selecting goats, there are five major areas of emphasis that need to be considered. They are structural correctness, muscle, volume and capacity, style and balance and growth potential.

> **Structural Correctness:** Structural correctness refers to the skeletal system or bone structure of an animal. Goats should be up-headed, with the neck extending out of the top of the shoulders. Goats should travel and stand wide and straight on both their front and rear legs, and their legs should be placed squarely under the body. They should have a strong, level top, and a long rump with a slight slope from their hooks to their pins. Goats should be heavy boned and be strong on their pasterns. Open shouldered, weak topped, weak-pasterned, steep rumped goats should be avoided.

Muscle: Generally, goats that walk and stand wide are going to be heavier muscled. Goats should have a deep, heavily muscled leg and rump, with the widest part of the leg being the stifle area, when viewed from behind. They should have a broad, thick back and loin that is naturally firm and hard handling. Goats should be wide through their chest floor, with bold shoulders and a prominent forearm muscle. The chest and the forearm of a goat are the best indicators of muscling in thin goats.

Volume and Capacity: Volume and capacity refers to the relationship of length of body with depth and width of body. Goats should be long bodied, with adequate depth and spring of rib. Try to avoid selecting goats that are short bodied, narrow based, and flat ribbed.

Style and Balance: Style and balance refers to the way all body parts blend together, how the shoulder blends into the rib cage, the rib cage to the loin, the loin to the rump, and how eye-appealing the goat is. When viewed from the side, a goat should b smooth shouldered, level topped, trim middle and straight legged. A goat that is balanced, pretty, and holds his head up, if the first one you notice when you walk in the pen.

Growth Potential: The ability of an animal to grow rapidly is very important. Generally, the larger framed goats, as indicated by a long head, neck, cannon bone and body, will grow faster, be larger and more competitive in the show ring.

Facilities

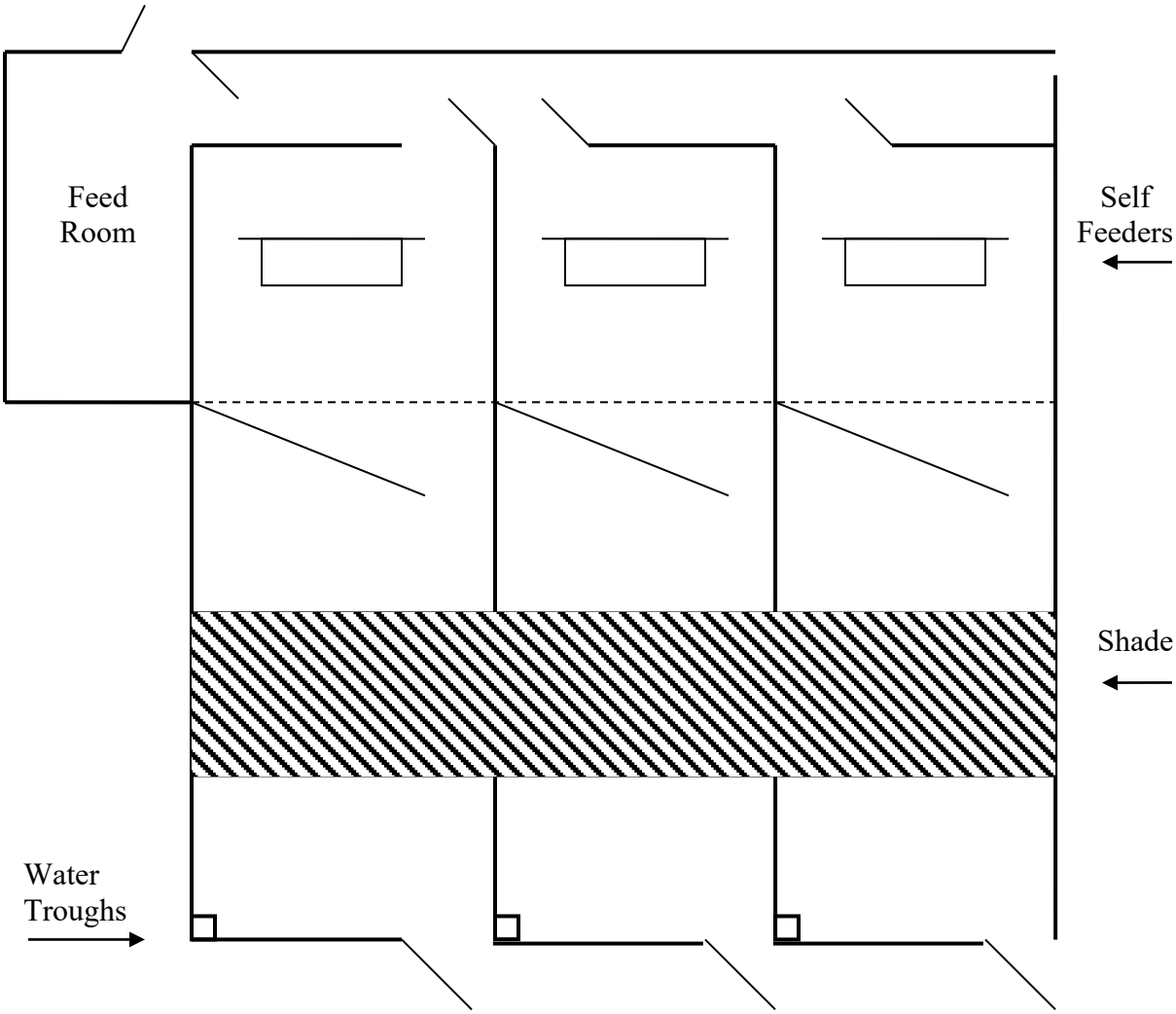
One of the major advantages of a goat project is that young people can feed goats without having expensive facilities. A barn or shed where goats can retreat from cold, wet conditions and a pen with outside exposure is all that is necessary. The following outline will discuss the facilities and equipment needed for a show goat.

- Goats need a combination arrangement: access to a shed and an area where they can get outside in the sun. The shed area should have at least 15 square feet of space for each goat. The outside pen needs to be as big as possible to allow the goat to exercise himself. The shed should be well-drained so water does not accumulate under the barn. Sheds or barns should be open to the east or south. Barn temperature is critical. Structures

should be well ventilated so goats will remain cool and continue to grow during the summer months.

- Fence height should be at least 42” tall to keep goats from attempting to jump and should be predator proof. If you are using net wire fences, 12” mesh should be used rather than 6” mesh to keep goats from getting their heads hung. However, the most desirable pens are constructed from galvanized livestock panels that are 5’ tall with 4” squares.
- Self-feeders are often used in the feeding of goats. Self-feeders should be blocked up at least 6” off the ground. Hand feeding goats should be done with moveable troughs, which hang on the fence at the appropriate height. Troughs should be hung at the same height as the top of the shoulder of the goat being fed. These moveable troughs need to be taken down and cleaned regularly. Likewise, hay and mineral feeders need to be raised off the ground. This will help reduce the spread of disease. It is also important to make sure that goats are unable to stand in their feed troughs as they will urinate or defecate on the feed.
- Clean water is the most important ingredient in feeding show goats. Water troughs should be small so they can be drained and cleaned on a regular basis. Remember that water troughs should be checked on a **daily** basis. Water troughs should be kept in the shade to keep water cool. However, in the hot summer months, some goats tend to drink too much water and appear “full.” Water should never be totally removed from the goat, but rationing water prior to the show will help remove the belly from the goat and increase one’s chances in the show ring. Remember, do not dehydrate your goat. The proper amount of fluids is vital to the feel and condition of your goat.

The following is an example of an excellent goat feeding facility:



Shed: 18’ x 46’
Feeding Alley: 3’
Feed Room: 10’ x 18’
Pens Under Shed: 12’ x 15’
Pens: 12’ x 27’

Nutrition

The feeding program for show goats varies from area to area across Texas. There is no such thing as a "magic" ration to make your goat a champion. A good feeding program is one, which studies the goats and uses all available information to make judgments on when changes should be made. Since most goats do not deposit external fat as quick as other species of livestock, a self-feeding program can be used effectively. However, some goats will become too fat during the feeding period. These goats need to be hand fed twice a day to control the amount of feed they consume.

Feed Supplements and Additives

Another key to feeding show goats in confinement is meeting their additional mineral and vitamin needs. The minerals of major concern in goat rations are salt, calcium and phosphorus. Calcium and phosphorus are necessary for proper growth and development. They are of concern in the ratio or proportion of these two minerals in the ration become out of balance. The ratio in the ration should be at least two parts calcium to one part phosphorous. Rations, which contain high levels of phosphorus in relation to calcium, may cause urinary calculi. The addition of ammonium chloride at the rate of 10-15 pounds per ton of feed will help prevent urinary calculi.

Roughages are generally high in calcium and low in phosphorous. Grains are generally low in calcium and intermediate in phosphorus. Most protein supplements are high in phosphorous and intermediate in calcium. A mineral with a 25-30% protein content can be a great help in a feeding program when used to top dress the ration, however, this will not work with a pelleted ration. Nonetheless, if used, it must be used correctly (proper amount), as too much will deplete the muscle mass of the goat.

Vitamins are essential for proper body function and are required by goats in very small amounts. Of all vitamins, only vitamin A is likely to ever be deficient. If goats are receiving dehydrated alfalfa pellets in the ration, then vitamin A should not be a problem. It is a good practice to vaccinate your goats with B complex from time to time to keep them feeling and eating good.

Equipment and Supplies

The following is a list of equipment considered necessary for feeding and exhibiting show goats:

- Goat collar
- Stiff brush to clean water bucket(s)
- Clippers
- Hoof trimmers
- Syringes and needles
- Small, portable feed troughs
- Goat blanket and/or sock
- Shovel to clean pens
- Water bucket
- Blower
- Shearing stand/table
- Drench gun
- Soft brush for grooming
- Heat lamp
- Box fan

Market Lambs

Selection

The selection of a market lamb for a project is one of the most important decisions made by an exhibitor. There are four major things one should look for when examining a young lamb for a future project.

Muscling is the first criterion to evaluate in a lamb because this is the reason for which they are being raised. Shape of the top or rack in the best indicator of muscle and the lamb should handle three dimensional in its loin, with a big, square, level hip. Level is a good word to use when selecting a lamb for show. The lamb should be long in body length and still carry a large amount of volume (meat) in proportion with its body frame. As a lamb walks, you would like it to be level over the top as well as over the hip.

Appearance is concerned with balance, soundness and correctness. These are very important characteristics and should be considered. Some judges will place lambs as they walk into the ring purely on appearance (i.e. how pretty the lamb looks). This does not mean that you still do not have to select the animal for its amount of muscle, but it does mean that you can get too much meat in the lamb and loose all eye appeal or style. The lamb should also have a feminine front: a long neck, smooth shoulders, and no brisket; however, they should still carry the amount of meat needed for their frame to remain balanced. When selecting for correctness, you can manually measure the lamb with your hands: length of the loin and hind saddle. Measure the length of the loin by measuring from the last rib to the pin bone and hind saddle from the pin bone to the end of the tail.

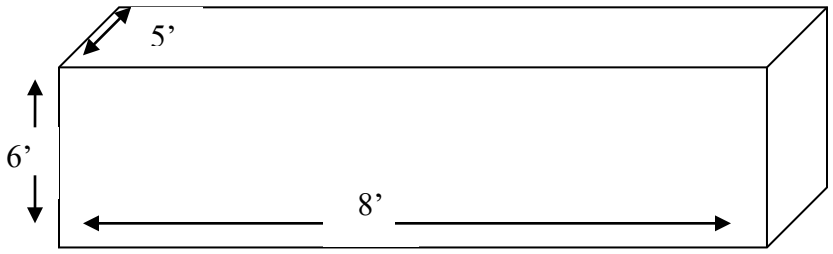
Trimness is the amount of flesh cover over the ribs. The industry will tolerate .10-.20 inches of fat over the ribs. If you make a fist and feel the top of your knuckles, this is how your lamb's ribs should feel. When looking at younger lambs for later shows, you have to be careful and select not only how mature they look at the time of purchase, but also on its potential to grow. Depending on the time of the year in which you purchase your lamb, the amount of fat that should be on the lamb may vary. Lambs that are under 6

months old should not be carrying any fat cover because this is a time of muscular and skeletal growth. A lamb that carries fat at this age may indicate that it will "bloom" at an early age and may not last until the show you plan on attending.

Handling is the last thing to consider when selecting market lambs. This is the way in which the lamb should feel. The lamb should feel firm and hard like a brick when feeling the top and rear. It should be flat and thick in the loin, smooth around the loin edges and level over the hips. The lamb should be trim breasted (lean but proportioned) and have a tubular body shape, but still have adequate body depth from the top of the back to the underline of the rib.

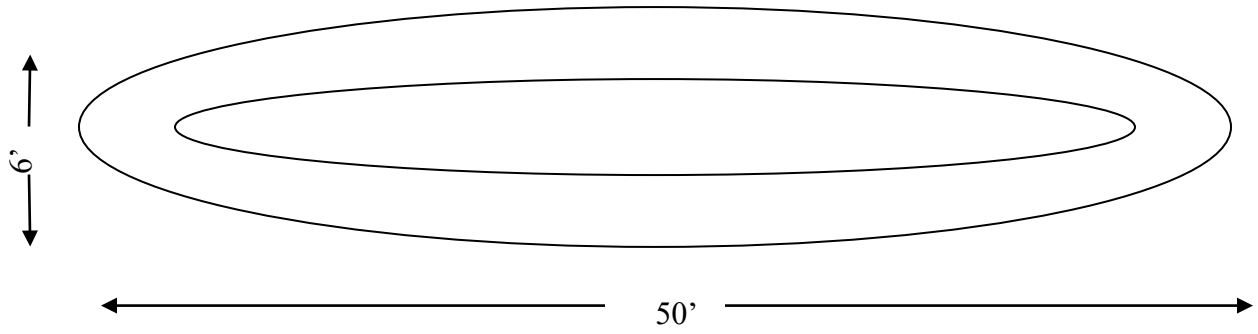
Facilities

Lambs need a combination arrangement: access to a shed or barn and an area where they can get outside to sunshine. The shed or barn space should be at least 40 square feet per lamb; three sided (shown below) so they can choose when they want sunshine. The outside pens do not have to be very big, but they should be large enough for the lambs to exercise themselves. The shed or barn needs to have good drainage so water does not accumulate. They should be well ventilated so the lambs remain cool and continue to grow during the summer.



Fences should be at least 42" tall to keep lambs from attempting to jump and should be predator proof. If you are using wire fences, the 6" mesh should be used because it is small enough to keep predators out. The most desirable pens are constructed from galvanized livestock panels that are 5' tall with 4" squares because they are the easiest to construct.

Show lambs also need some sort of a run pen (diagram shown below). The runs should be at least 50' x 6' with livestock panels as a center divider. The best fence to have is the 16' livestock panel. Taller corners at least 7' tall are recommended so the lambs cannot jump them. If possible, the corners need to be covered with something such as a tarp, carpet, or rubber strips so the lamb cannot see out when exercising. A lamb will try to escape or jump through a fence if they can see beyond it.



Nutrition

When feeding lambs, you can choose to use either a commercial ration (premix) or your own custom ration. The most important thing to keep in mind when feeding any animal is to learn how it will respond to the diet you select. There are many complete commercial rations available, which will do a satisfactory job, such as:

- Purina
- Linder's
- Producer's

When choosing a certain ration, protein is the key. Most lamb rations are between 16-17% crude proteins. Feeding a higher protein level can cause the lamb's stomach to lock up. How much feed to give your lamb is the most often asked question when starting a new project. The rule of thumb is to feed 3% of the lamb's body weight, since that is all the body can utilize at a time. Any more feed becomes a by-product. Other important feeding guidelines:

- Feed your lamb twice a day on a regular routine.
- Worm your lamb once a month to prevent parasites from making your lamb sick.

Feed Supplements and Additives

Another key to feeding show lambs in confinement is meeting their additional mineral needs. Minerals can be fed either free choice (available for the lambs at all times) or just hand fed (added to their feed).

Equipment and Supplies

You will need various types of equipment and supplies for your lamb throughout the year and at the shows. The following are some of the items needed:

- Lamb halter
- Muzzle
- Clippers
- Hoof trimmers
- Feed trough and water bucket for travel
- Lead Rope
- Lamb blanket or sock
- Blower
- Shearing stand/table
- Heat lamp
- Box fan

Broilers

Housing

Expensive housing and equipment are not necessary. However, a clean, dry structure that can be well ventilated, a brooder or heat lamp to warm chicks, and feeding and watering equipment are needed. Provide at least 2 square feet of floor space per broiler. Openings on three sides of the building provide plenty of fresh air for the birds. Plastic sheeting can be used to close the sides during brooding and in cold weather. Make certain the concrete or dirt floor is at least 6" above ground level to prevent flooding. The roof overhang should be sufficient to effectively protect against blowing rain.

Purchasing Chicks

You should purchase 25-75 broilers per a student. This allows you more to choose from and is easier to select good, uniform birds as show entries.

Preparing and Brooding

- Clean and disinfect the broiler house, feeders and waterers at least two weeks before the chicks arrive. Wash the house down with soap and water. Then spray a commercial disinfectant labeled for use in poultry houses.
- Be prepared for the chicks two days in advance. Put at least 4" of litter on the floor of the cleaned, disinfected house. Wood shavings, cane fiber, course dry sawdust or rice hulls make a good litter. Hay makes a very poor litter. Keep all sticks, boards and sharp objects away from the broiler house.
- Construct a cardboard brooder guard (brooder circle) to keep chicks near heat, water and feed. The brooder guard should be 18" high and must be a minimum of 5' in diameter for 50 chicks. When chicks are seven days old, remove the guard and all them full freedom of the pen.
- Electric heat lamps (infrared bulbs) are good heat sources for brooding chicks. Two 125- watt bulbs for 50 chicks are recommended. Make certain lamps are secured so they cannot fall to the litter and create a fire hazard. The lamps should hang 18-24" from the litter. Lamps can be lowered or raised depending on the temperature conditions. Place waterers a good

distance from the lamps to prevent splashing water from cracking the hot bulbs. When chicks are comfortable, they will bed down in a semi-circle around the perimeter of the heat zone. If cold, chicks will crowd under the heat source. After the broilers are 4 weeks old and fully feathered, heat is seldom required.

Lighting

Provide all night light for broilers. Twenty-four hour lighting (natural or artificial) improves feathering and increases weight, especially during summer months. Hang a 40-watt bulb at least six feet above broilers after removing heat lamps.

Nutrition

It is essential that broilers receive a quality feed containing at least 20% protein. Lower protein feeds will not do the job. If broilers are to be shown at a show without a maximum weight limit, chicks should be started on a high protein (26-30%) turkey starter to stimulate additional growth. Feed the higher protein feed 2-4 weeks. Switch to a broiler feed for the remaining feeding periods.

An adequate level of vitamins in the diet is required to prevent leg weakness. Adequate vitamin intake can be assured and leg problems minimized by adding water-soluble poultry vitamins and electrolytes to drinking water at the manufacturer's recommended level for the first 14 days. Do not add vitamins and electrolytes past this period. Continued high levels can create health problems.

All broilers should be able to eat at once. One pie or cookie pan for feed and one chick waterer for 25 chicks are needed the first seven days. From one through four weeks, one tube type feeder is needed for every 15 broilers. Broilers must have access to fresh water at all times! One 2-gallon waterer per 50 chicks is required from one through four weeks. One 2-gallon waterer per pen is required after broilers are culled at the end of the fourth week. Waterers should be raised daily and scrubbed twice weekly.

Feed must be always available and accessible to broilers if maximum growth is to be obtained. Feeders and waterers should be kept adjusted so that the trough portion is level with the back height of the broilers.

Broilers respond to attention. Walk among broilers and stir the feed three to five times per day. This will provide exercise and increase feed consumption and growth.

Ventilation

If broilers become too hot or cold, growth will be retarded. When the broilers are well feathered, open the house and allow plenty of fresh air to circulate. The ideal growing temperature is 60-70^{o}F after the broilers have past four weeks of age. During the winter months, keep the south side of the house open after the broilers reach four weeks of age unless the temperature falls below 40^{o}F. Supplemental heat may be needed in cold weather. In hot weather, use fans to move air across the broilers.

Supply and Expense List

You will need various types of equipment and supplies for your broilers throughout the year and at the shows. The following are some of the items needed:

- Plastic waterers
- Feeders
- Heat lamps
- Soluble electrolytes and vitamins
- Shavings
- Box fans

Rabbits

Housing

Climate is a major factor in determining the type of housing that your rabbits will need. Protect the rabbits from severe cold weather. The baby rabbits are kindled bald and cannot withstand very low temperatures. You need to provide a well-insulated nest box for the doe and babies. The use of heat lamps in recommended during the winter months until the babies are 10-12 days old. The heat lamp needs to be placed 18" over the nest box. Extreme heat is a danger to your rabbits as well. They need to be in a well-shaded area during the summer. If bucks are subjected to temperatures of 80°F - 85°F for five days in succession, they may become sterile for two to three months. Frozen water bottles and fans can be used to cool the bunny's temperature.

Other things to consider when constructing rabbit housing include the following:

- Ventilation is a must. Rabbits must have good air circulation whether they are inside or outside. Bad air circulation causes build up of humidity and ammonia. This will intensify respiratory disease problems such as snuffles.
- In choosing a location for your rabbits, you should look for a well-shaded and well drained area. Electricity and a water hook up should be considered.
- Rabbits are highly susceptible to stress. This can be caused by excitement provoked by dogs, cars or wild animals making noises or moving beneath the cages. A fence should surround your cages to help prevent stress on the rabbits. If the stress is too bad, it could cause your bunnies to die.
- Cages come in a variety of shapes and sizes, but this is what we would recommend to you: your buck should have 24" x 30" of cage space. The does' cage should be 24" x 30", 30" x 30", or 36" x 36". To provide adequate room for the nest box, you should use ½" x 1" welded wire on the bottom and 3"-4" of side wire to prevent the baby rabbits from falling out of the cages.

Nutrition

Limit the feed on dry does and bucks to maintain a trim and fit condition. Feeding your rabbits is a very important part of the program. Feed rabbits ¾ cup of 18% rabbit feed once daily and free choice of fresh water. This will maintain your bunnies.

Problems

- **Ear Mites:** Signs include shaking of the head, scratching at ears, scabby formation inside the ear due to accumulation of serum and blood. *Treatment* is daily placement of oil in ear for three days, repeated treatment at 10-day intervals. One part Campho phenique with four parts mineral oil in the rabbit's ear for three days. (2-3 drops in each ear)
- **Wormer:** Give Ivomec, 2 drops orally every 90 days. Never give it to does closer than five days before breeding.

Equipment and Supplies

You will need various types of equipment and supplies for your rabbits throughout the year and at the shows. The following are some of the items needed:

- Feed
- Creep feeders
- Fans
- Plastic water bottles
- Hay
- Feeders
- Heat lamps
- Cages
- Nesting box

Terms and Definitions

Balanced Ration – Daily allowance of livestock/poultry feed, mixed to contain suitable nutrients required to promote normal development, maintenance, lactation, gestation, etc.

Barrow – A male pig castrated before reaching sexual maturity.

Boar Pig – A male pig under one year of age.

Broiler – A chicken, 8-12 weeks old, weighing more that 2 ½ pounds.

Buck – Male goat, sheep, rabbit, deer, antelope.

Cull – The act of removing inferior items.

Cockerel – A male chicken less than one year of age.

Day Old Chick – Common age for chicks from a hatchery.

Doe – An adult female goat, rabbit, or deer.

Draw – Process in which the market animals for the Huffman FFA Livestock Show are obtained.

Ear Tag – Tag fastened in an animal's ear for the purpose of identification.

Ewe – A female sheep of any age.

Feeder Pig – A barrow or gilt usually weighing less than 120 lbs.

Fit – To condition livestock for use, sale, or consumption.

Gilt – Young female pig until it produces its first offspring.

Groom – To wash, curry, brush, and generally care for an animal.

Heifer – A female bovine (beef animal) that has not produced an offspring.

Kindle – To give birth to a litter of rabbits.

Major Show – A show where exhibitors come from a broad area to exhibit livestock.

Pullet – An immature female chicken under one year of age.

Rate of Growth – Rate at which a young animal increases weight and height.

Roughage – Any food or feed high in fiber (ex. Hay)

SAEP – Supervised Agricultural Experience Program

Showmanship – Act or skill of showing or displaying projects or animals.

Steer – A male bovine animal castrated before reaching maturity.

Supplement – A feed mixture that is relatively richer in a specific nutrient that the basic feed ingredients in a ration to which it is added.

Tag – A plastic or metal piece attached to an animal for identification.

Tagging – Process of attaching identification tags to an animal.

Weigh-in – To establish a beginning weight, growth rate or ending weight of an animal.

Wether – A male sheep castrated before it reaches maturity.