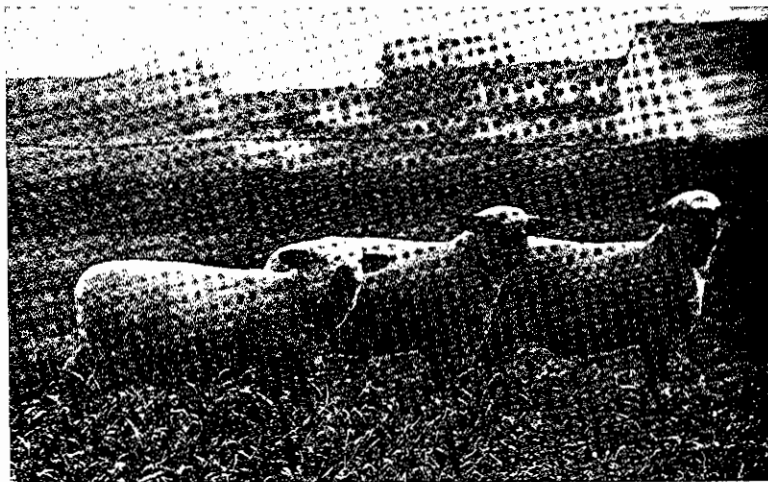


GRAND CHAMPION SOUTHDOWN WETHER LAMB
Bred, fed and exhibited by the College of Agriculture, University of Kentucky



PRIZE-WINNING HAMPSHIRE LAMBS
Bred, fed and exhibited by the College of Agriculture, University of Kentucky

CIRCULAR NO. 88

(Revised)

EWE AND LAMB PROJECT

Junior 4-H Clubs

L. J. HORLACHER

SELECTING THE EWES

The ewes for this project may be selected at any time. Altho ewes of any age may be used, it is best for club members to choose those that have raised one or more lambs and are two to three years of age. Ewes of this age are better mothers than yearlings, will raise more lambs, and generally are more profitable.

Each ewe should be selected only after a careful examination for defects. She should be well-grown, rugged, straight in body lines, the fleece dense and heavy, and a good milk producer. The best weight is between 120 and 150 pounds. A large middle shows capacity for feed. Sound mouths and udders are very essential. A few common defects which should be avoided are a weak back, narrow chest, peaked rump, shallow body, long, crooked legs, "broken" mouth, spoiled udder, and coarse, open wool.

BREEDS

The ewes may be either grade or purebred, but must be bred to purebred rams. The Southdown and the Hampshire are very popular breeds in Kentucky and both are well adapted to the state. Other good mutton breeds raised in Kentucky are the Shropshire, the Cheviot, the Oxford, the Dorset Horn, and the Ryeland. The club member should select the breed which is most popular in his community. As a general rule, it is best to start with good grade ewes and

either continue to produce grades or gradually grow into the purebred business.

BREEDING THE EWE

The best time to have lambs dropt is between February 15 and March 15. This means that the ewes should be bred in September or October. The length of the gestation period is about 147 days. Altho early lambs may require a little extra care at lambing time, they grow rapidly and are ready for market in time to escape the hot summer weather.

The ewes should be in good, thrifty condition and should be gaining in weight when bred. About two weeks before breeding, they should be kept on a fresh, rich pasture. This process of getting ewes into good breeding condition is known as "flushing." Ewes that are "flushed" are more likely to conceive at the first service and produce more twins. A ewe that does not conceive the first time she is bred will come in heat again sixteen to eighteen days later and will stay in heat about twenty-three hours.

WINTER CARE

Some shelter is necessary for sheep during the winter, but this need not be expensive. The fleece affords sufficient warmth when it is dry, and for this reason the main need for a shed or sheep barn is protection from storms. Such a building should have plenty of ventilation, without drafts. For this purpose a tobacco barn is satisfactory. If the quarters are airy and comfortable, the sheep will go to them when necessary. On most dry nights they will prefer to be out of doors, but they should have access to shelter when they desire it. It is usually best to have the feed racks inside, altho some roughage should always be fed out of doors. This makes it necessary for the ewes to get outside and exercise.

EXERCISE

Exercise during the winter is important. Ewes that are kept closely housed all winter come thru in a run-down

condition and produce weak lambs. If it is necessary to feed everything inside, the sheep should be driven out some little distance from the barn daily and back again, because the ewes must have exercise to keep in good condition.

WATER.

Give the ewes fresh water every day. It will be surprising how much they will drink. Water is essential for proper digestion of the feed, and helps to keep the ewes in good physical condition. If the feed is dry, more water is required.

SALT.

Salt should be kept before the sheep at all times. A small box should be built inside the barn where the salt will be protected from the weather. After the sheep have become accustomed to it they will not eat too much. One ewe will eat about three-fourths of an ounce of salt each day. It may be fed alone or in a mixture. One mixture which has been found to be satisfactory is as follows:

Ground limestone	8 pounds
Steamed bone meal	8 pounds
Salt	3 pounds
Sulphur	1 pound

FEED DURING WINTER

Rye sown in August or September will be ready to be pastured during the winter and spring. One ewe will eat 10 to 20 pounds of grass or rye each day, but frequently this grass contains as much as 80 to 85 percent of water, and its food value is not sufficient to meet her needs. If the fall grass is wet and washy, some dry feed should be fed before the ewes are taken from pasture. Well-cured clover or soy-bean hay is excellent for this purpose.

Sheep that enter the winter in good health and flesh may be carried nearly to lambing time without grain. This

necessitates an abundant supply of good legume hay, such as alfalfa, clover, lespedeza, cowpea or soybean hay. The best roughage to feed is alfalfa hay. If soybean hay is fed, it should not be too mature, or much of the hay may be wasted and the large proportion of beans will cause irritation in the digestive tract. Corn fodder and straw, if fed at all, should be fed only in small amounts. Timothy hay that is cut when not more than one third of the plants are in bloom is much superior to that cut after all the plants are in bloom. Silage is an excellent succulent feed to be given with the legume hays, but care should be taken that no spoiled silage is fed. Spoiled silage may cause losses. The chief value of silage is in preventing constipation. This is one of the most common ailments of sheep when they are first removed from pasture or when the grass is covered with snow. To prevent constipation silage should be fed at the rate of 1 to 2 pounds per head daily. Mangel beets serve the same purpose. If neither of these succulent feeds is available, some linseed oil meal (old process) should be fed—from one-eighth to one-fourth of a pound per head daily. Linseed oil meal is laxative.

The best grain to feed is oats. Bran is desirable as a part of the grain mixture. Oats and bran supply the elements required by the unborn lamb near lambing time. They are also milk-producing feeds. In addition, bran is a laxative feed. Barley may be substituted for a part or all of the oats. Like oats and bran, barley stimulates the flow of milk. If corn is fed, it should make up only a small part of the grain mixture. Both corn and barley are starchy or fattening feeds and should be supplemented with a protein concentrate or a legume hay. Good protein concentrates are linseed oil meal and cottonseed meal. Linseed oil meal is preferable because of its laxative effect. The pea-size meal should be fed. It is usually best to begin feeding grain about four or six weeks before lambing time.

Sheep are regular in their habits and they do much better if they are fed at the same time each day. Set a definite hour for feeding.

WINTER RATIONS.

A ration is the total amount of feed consumed by one sheep in one day. The following are practical winter rations for ewes weighing from 120 to 150 pounds.

- (1) $\frac{1}{2}$ to $\frac{3}{4}$ lb. grain obtained from the following mixture: 6 lbs. rolled oats, 2 lbs. wheat bran, 1 lb. pea-size linseed oil meal or cottonseed meal; 2 lbs. alfalfa hay.
- (2) Grain mixture same as in (1).
1 to 2 lbs. corn silage.
2 lbs. clover or soybean hay.
- (3) $\frac{1}{2}$ to $\frac{3}{4}$ lb. grain (3 lbs. rolled oats, 2 lbs. bran, 1 lb. linseed oil meal); 2 lbs. legume hay.
- (4) $\frac{1}{2}$ to $\frac{3}{4}$ lb. grain (3 lbs. barley, 2 lbs. oats, 3 lbs. bran, 1 lb. linseed oil meal); 2 lbs. legume hay.
- (5) $\frac{1}{2}$ to $\frac{3}{4}$ lb. grain (3 lbs. oats, 3 lbs. bran, 1 lb. linseed oil meal); 2 lbs. early-cut timothy or mixed hay.
- (6) $\frac{1}{2}$ to $\frac{3}{4}$ lb. grain (1 lb. oats, 1 lb. shelled corn); 2 to 3 lbs. legume hay, 2 to 3 lbs. corn silage.
- (7) $\frac{1}{2}$ to $\frac{3}{4}$ lb. oats or shelled corn; 2 lbs. legume hay.

Before feeding any other ration or grain mixture consult the county agent or club leader or some successful sheep breeder.

LAMBING TIME.

When the ewe is ready to lamb, her feed should be cut in half and she should be placed by herself in a small pen about four feet square. This pen may be made out of light material and should be at least thirty inches high, with the slats close enough together to prevent the young lamb from crawling thru and straying from its mother. The ewe and lamb should remain in this pen for two or three days or until the lamb is strong enough to follow the ewe.

During lambing time the ewes should be housed at night and watched carefully during the day in order to save the lambs. A warm place in which to have the lambs dropt is essential. For this purpose a room that is entirely enclosed should be used. This prevents loss of lambs from cold. If it is thought necessary, one side may be either partially or entirely opened in favorable weather. During the first few days the lambs are tender and easily hurt by cold weather and during that time no efforts should be spared to give them all protection possible.

If a lamb gets chilled, it should be taken to the fire and put into water as warm as the elbow can bear, after which it should be rubbed dry and placed by the fire. Many a lamb which was thought dead from cold has been revived by this method. If the lamb is not extremely weak, it may be necessary only to give it a little of its mother's milk with a teaspoon.

At lambing time the club member should go to the barn and examine the sheep just before going to bed and again the first thing in the morning. If a lamb is weak, it may be necessary to milk some of its mother's milk into its mouth. Every newborn lamb should have some of its mother's milk as soon as possible. If the ewe does not have any milk for the first day or two, catch another ewe and hold her while the lamb nurses. If this is not possible, give the lamb some milk from a cow which has recently freshened. Be sure to give only a little milk at a time. One ounce every two hours is sufficient. Feed immediately after milking so that the milk will be of the right temperature.

During the first few days after lambing the ewe should be fed lightly. A good grain ration for the first week consists of one-fourth to one-half pound a day of a mixture made of one pound oats, two pounds bran and one pound pea-size linseed oil meal. At the end of a week the amount fed may be increased and the grain mixture may be gradually changed back to the one which was fed before lambing.

DOCKING.

When the lambs are two to three weeks old, choose a bright, sunny day and cut off their tails. The proper length for the stub is about one inch. This operation may be performed with a knife, pruning shears, or hot chisel. The hot chisel is one of the best tools to use because it prevents bleeding and the wound heals quickly. At the same time all grade and purebred ram lambs that are not to be kept for breeding should be castrated. There should be no loss from these operations if they are performed properly and

the lambs are kept out of dirty barns. It is best to keep them on a good bluegrass sod. Ewe and wether lambs sell for an average of one cent per pound more than the price paid for buck lambs. During the latter part of the marketing season the spread is still greater, sometimes being as much as two cents per pound. The reason for this difference in price is that buck lambs lack quality, do not fatten satisfactorily, and dress out about two percent less than ewe and wether lambs when slaughtered.

FEEDING THE LAMBS

Milk is the best food for the young lamb; the lamb that gets the most milk gains the fastest. Frequently, however, grain and hay feeding are advisable. When the lambs are two or three weeks old they begin to nibble at hay and grain. With only one ewe and her lamb it is hardly necessary to have a lamb creep, but if there are several ewes, a separate pen where the lambs can go and eat by themselves is advisable. Inside this creep should be a trough for grain feeding. The trough should be provided with an elevated railing down the middle, otherwise the lambs crawl into it and thus waste some feed. In this trough should be placed a grain mixture of 3 pounds coarsely ground corn, 3 pounds rolled oats, 3 pounds wheat bran, and 1 pound linseed oil meal. Cheaper feeds which give good results are corn alone and a mixture of corn and oats.

At first the lambs eat only a small quantity of the grain. The best guides as to the quantity to feed are the appetite of the lambs and the judgment of the feeder. There is little danger of over-feeding. It is important that the trough be kept clean. Any feed that the lambs do not eat should be removed before the next feeding. When the lambs have reached the age of one month they will eat and use to advantage one-fourth pound of the grain mixture per head daily. As the pasture improves the lambs eat less grain. This point should be kept in mind, that if the pasture is sparse more grain will be required than if the pasture is plentiful.

In addition to grain the lambs should be fed a good legume hay. The best hay is alfalfa. Other good hays are clean, bright clover, soybean, cowpea, and lespedeza hay.

MARKETING THE LAMBS.

Lambs that are well fed and are kept gaining should reach market weight, 80 pounds, in about one hundred days. Lambs that have Hampshire blood gain the most rapidly, sometimes gaining as much as one pound per lamb per day. The average daily gain should be about two-thirds of a pound. Single lambs gain faster than twins.

If the lambs are to be shown, they probably will be sold or shipped immediately after the show. If they are not to be shown, they may be sold thru any of the recognized channels of marketing. Prices are higher before the middle of June than they are after that date.

PASTURE

While the lambs are growing, pasture is necessary for both the ewes and the lambs. The rye which was seeded the preceding fall may be used until it is exhausted, after which a pasture of crimson clover or red clover is excellent. Red clover, when in bloom, is an ideal sheep pasture. Alfalfa, in the spring of the year, is a dangerous pasture because it causes bloat. A mixture of rape and oats, seeded as early in the spring as it is possible to work the ground, makes an excellent pasture for the lambs just before they are sent to market. Ten pounds of rape and 6 pecks of oats should be sown on each acre. If the season happens to be dry, lambs on rape and oats or clover gain more rapidly than lambs on bluegrass pasture.

COMMON AILMENTS OF LAMBS

Pinning. This is a collection of feces on the anus, plugging it. Scrape away the feces and wash with warm water and soap.

Indigestion and Constipation. Give a teaspoonful to a tablespoonful of castor oil.

Scours. This usually is due to mistakes in feeding the ewes. This disease does not occur if the ewes are given good feed and the feed is not changed too abruptly. A tablespoon of milk of magnesia will help.

Sore Eyes. Use a saturated solution of boric acid. Treat two or three times by washing the eyes with a piece of cotton.

Sore mouths. Rub off the scabs and open the sores. Apply tincture of iodine or zinc ointment.

STOMACH WORMS

Stomach worms cause serious losses among sheep. These small worms, which are found in the fourth stomach, attach themselves to the walls of the stomach and suck the blood. The result is that the sheep gets weak, the skin becomes pale, the eyes also become pale, the sheep has a droopy appearance, and in advanced cases there may be diarrhea and a watery swelling under the jaw. The sheep becomes weaker and dies.

The life cycle of the worms is interesting. The worms that are in the stomach lay eggs. These eggs are passed out with the feces. In warm, wet weather these eggs hatch in a few days and the young larvae crawl up the stems of grass. The sheep, in grazing, takes these larvae into its mouth and they go to the stomach where they develop into worms. If these worms are to live, they must have something to eat so they attach themselves to the walls of the stomach and start to sucking blood.

A pasture that is infested with stomach worms may remain infested for a year or probably longer. Changing the sheep to fresh pastures at frequent intervals helps to keep down infestation, but often this is not practicable. Pools of stagnant water are sources of infestations and should be eliminated from the sheep pastures. Plenty of good feed helps the sheep to resist the attacks of the worms.

After a sheep gets stomach worms the only way to get rid of the worms is to drench. So far no mineral nor feed has been discovered which will get rid of the worms. The most satisfactory drenches are the bluestone drench, the combination of bluestone and nicotine sulfate, and certain commercial preparations of tetrachlorethylene. In preparing the sheep for drenching it is advisable to keep them off feed and water over night and not to let them go to pasture for four or five hours after drenching. For drenching, a 6-ounce, long-necked bottle is satisfactory, tho some prefer to use a syringe. To drench the sheep, back it into a corner, stand astride the neck, hold the head with the left hand under the jaw, insert the bottle into the sheep's mouth, and permit the sheep to swallow the solution slowly. Be certain that the sheep is standing squarely on all four feet and do not raise the nose above the level of the eyes. Most important of all, no matter what solution is used, always use it according to directions.

The formula for preparing the one-per-cent solution of copper sulfate or bluestone is as follows:

Pulverize one ounce (weigh accurately) of clear crystals of bluestone in a wooden or earthenware vessel. Heat three quarts of water in a granite vessel and dissolve the bluestone. Never put the bluestone nor the solution in a metal container, as the bluestone corrodes metal. This amount of the solution is sufficient to drench 25 sheep or 50 lambs. The doses are as follows:

Lambs weighing 40 to 60 lbs.	1 to 1½ ounces (measure accurately)
Lambs weighing 60 to 80 lbs.	1½ to 2 ounces
Lambs weighing 80 to 100 lbs.	2 to 3 ounces
Mature sheep	3 to 4 ounces

The combination bluestone-nicotine drench is sometimes a little more effective than bluestone alone. It is made by first preparing the bluestone solution and then adding three-fourths of one measured ounce of 40 percent nicotine sulfate to each three quarts of bluestone solution. The doses are the same as for bluestone.

Since the life cycle of the stomach worm averages about four weeks, it is necessary to drench lambs at least once a month during the summer and early fall. The first drench should be given in May or by the first of June. It is seldom necessary to drench during the winter or to drench lambs before they weigh 40 pounds.

FOOT TROUBLE.

This is common during wet weather. With a sharp knife cut away the excess growth of hoof and clean out all dirt. If there is any soreness or pus, treat with tincture of iodine or use a solution of copper sulfate (bluestone) made by dissolving one pound of bluestone in a gallon of warm water. Treat by holding the foot in the solution two or three minutes. Repeat every day until cured. It is also a good plan to sprinkle lime on the barn floor.

SHEARING.

Sheep usually are shorn in April or May, after there has been enough warm weather to start a good flow of wool grease. It makes little difference whether the hand shears or machine shears are used. The important thing is to get the fleece off in as good condition as possible without injury to the sheep. If it is worth while to spend twelve months to produce a fleece, it certainly is worth while to take some extra pains at shearing time to see that the wool is handled properly. A good clean place for shearing is essential.

The fleece should be tied with the clean side out. Spread it on the ground with the clean side down. Fold in the two sides so that the folded fleece is about one third the width of the unfolded fleece. Turn back about a foot of the neck wool. Then start at the breech and roll toward the neck. Tie the fleece with paper twine, using no more than is necessary. Usually once around each way is sufficient. This makes an attractive package for the buyer to see and is a big help to the grader.

DIPPING

Do not allow sheep to become affected with ticks, lice or scab. These so annoy the sheep as to make them unthrifty and may result in the loss of wool. Ticks, lice, and scab are prevented and eradicated by dipping. Soon after shearing, in May or June, is the best time to dip. Some sheep men dip again in August or September. It is best to dip twice, at ten-day intervals, to destroy those parasites that were in the egg stage at the time of the first dipping. Any nicotine or standard coal tar dip is effective in controlling ticks and lice. For scab it is best to use a nicotine dip. Directions for use are given on the container. Lambs may easily be dipped in a tub or barrel. At least two minutes in the dip is necessary so that it may reach all parts of the body, with the head pushed under for only an instant.

PREPARING FOR THE SHOW

The first thing to do is to train the lambs and ewes to stand properly. This means they must be handled a great deal. The proper way to hold a sheep is to stand or kneel on the left side of the sheep, with the left hand under the jaw and the right hand either on top of the head or left free to keep the sheep in position. The sheep should stand squarely on all four legs and keep its back and head up. Never attempt to hold a sheep by the wool. No sheep can make a good record in the show ring unless it has been well fed. During the last month before the show the ewes should be fed heavily so that they will produce an abundance of milk for the lambs. In addition each lamb should be fed about a half pound of grain daily. A good grain mixture consists of 3 pounds cracked corn, 1 pound crushed or rolled oats, 1 pound wheat bran and 1 pound linseed oil meal (old process). If the lambs have been weaned, they should be fed three-fourth of a pound of grain or more daily. At any sign of digestive trouble drench the ewes with two to four ounces of epsom salt and the lambs with one or two table-

spoonfuls of castor oil. The fat lamb is usually the one that wins in the show ring.

Some attention should be given to the appearance of the fleece. All tags or dirty wool around the dock should be either cut away or washed. If possible, the lambs that are to be exhibited at the county or state fair should be blocked out. This means that the wool should be trimmed in such a way that the lamb will have a square, blocky appearance. Blocking is work for an expert and should be attempted only after seeing a demonstration by some one who knows how to block correctly. The tools necessary are a wool card and a pair of sheep shears. The appearance of a lamb can be helped considerably, however, by moistening the fleece, brushing it vigorously with a stiff brush, and clipping off the loose ends with the shears. This should be repeated two or three times before the show. All burs should be picked out by hand.

GROWING INTO THE BUSINESS.

At the close of this project each club member should have one ewe and one or more lambs. If he wishes to go into the sheep business, he should keep all good ewe lambs and breed them when they are yearlings. Any boy or girl who wishes to build up a flock, however, should start with three to five ewes rather than one. All ram and wether lambs may be sold to pay the expenses of getting started. In this way a small flock of good quality can soon be developed.

THINGS WHICH THE BEST SHEEPMEN DO:

1. Use only good purebred rams—never use scrubs.
2. Do not buy rams or ewes that are too fat.
3. Feed the rams and the ewes for ten days to two weeks before and during the breeding season.
4. Turn the rams with the ewes only at night during the breeding season.
5. Keep the rams away from the ewes except during the breeding season.
6. Take good care of the ewes from breeding to lambing time and during the lambing period.
7. Provide plenty of feed for winter use.
8. Provide temporary pastures for fall and early spring, including clover pasture for young lambs.
9. Market only ewe and wether lambs.
10. Feed market lambs from at least one month of age to market time.
11. Have lambs in top condition for market in not more than three and one-half months.
12. Keep the flock free from internal and external parasites.
13. Talk to a successful sheepman at every opportunity.
14. Keep an accurate livestock record book.

RECORD

The following seven questions should be answered when the project is started.

1. Date record began Age or animals at that time.....
2. Number of animals..... Breed.....
3. Grade or purebred
4. If registered give registry number
5. Are you growing your animal or animals for breeding or to be fattened for meat
6. Cost or value of animal or animals when record began.....
7. Weight of animal or animals when record began.....

The following questions should be answered when project is completed.

1. Date record closed Age of animals
2. Weight of animals Value
3. Number days fed and/or pastured
4. Total gain Average daily gain
5. Total cost of feed and pasture
6. Total value of animal or animals
7. Did you exhibit your animal at any fairs or shows
8. What premiums did you win?
9. Net income on project

CONCENTRATES FED

DIRECTIONS. Weigh a supply of the different kinds of grain feeds to be used, mix them together and keep in a tight box. Enter below the date, and weights of feeds used in the mixture. When this supply has been used, mix another supply keeping careful records of kinds of feed and weights, filling the record as before. Continue in this manner. At the end of the project weigh all unused feed and subtract from the total. Use prices given on page 23 in computing costs. Write the name of each feed at the top of a column and the weights and values below.

Date Feed Was Weighed	Amount of Different Concentrates Fed					
	Value	Value	Value	Value	Value	Value
Totals						

Total value of concentrates consumed

ROUGHAGES FED (Hay, etc.)

NOTE. Weigh a supply of the different kinds of feed, except such feeds as silage, sufficient for one month. The kinds and amounts of these feeds, together with the date, should be entered in the columns provided below. When this supply is exhausted a new supply should be weighed and the date and weights entered. At the end of the project, subtract amount of roughage left over. Use prices given on page 23 in computing costs. Write the name of each feed at the top of a column and the weights and values below.

Date Feed Was Weighed	Amount of Different Roughages Fed					
	Value	Value	Value	Value	Value	Value
Totals						

Total value of roughages consumed

EXPENSES

- 1. Value of animal or animals at beginning of project
 - 2. Value or cost of concentrates (grain feeds) - - -
 - 3. Value or cost of roughage (hay, etc.) - - -
 - 4. Value or cost of pasture - - -
 - 5. Value or cost of miscellaneous feeds - - -
 - 6. Other expenses (veterinary, registration, etc.) -
- Total expenses - - -

RECEIPTS

- 1. Value of original animal or animals at close of project
 - 2. Value of young animals produced during project,
on hand at close of project - - -
 - 3. Value of animals produced and sold during project
 - 4. Value of products sold (wool, meat, etc.) - - -
 - 5. Receipts from other sources - - -
- Total receipts - - -
- Total receipts
- Total expenses
- Net income

NOTE. No charge is made for labor or credit given for manure produced. It is assumed that one will offset the other.

This is to certify that this project has been carried on to the best of our ability.

..... Club Member
 Local Club Leader

PRICE LIST FOR COMPUTING COST OF FEEDS

Every club member will use these prices regardless of the cost of his feeds:

- Cracked corn\$.....per cwt.
- Cornper bushel
- Oatsper bushel
- Barleyper bushel
- Wheat branper cwt.
- Shipstuff (mixed wheat feed)per cwt.
- Shortsper cwt.
- Middlingsper cwt.
- Linseed oil mealper cwt.
- Hominy mealper cwt.
- Whole milk (12c...per gallon)
- Soybean hayper cwt.
- Alfalfaper cwt.
- Sweet cloverper cwt.
- Red or alsike cloverper cwt.
- Cowpea hayper cwt.
- Mixed hay, part legumesper cwt.
- Mixed hay, all grassesper cwt.
- Corn fodderper cwt.
- Sorghum fodderper cwt.
- Silageper cwt.

Prices to be inserted
by County Agent

Prices to be inserted
by County Agent