

Rabbit Project Leader Guide

Level 4



4-H 

WASHINGTON STATE UNIVERSITY
EXTENSION

EM079E



Rabbit Project

Level 4 Activities

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Recording Judges' Comments at a Rabbit Show

Rabbits, Level 4, Activity 1

What Members Will Learn . . .

ABOUT THE PROJECT:

- How to interpret and react to the judge's comments during a rabbit show

ABOUT THEMSELVES:

- To develop self-control and clear thinking
- Practice decision-making skills and choosing the best course of action

Materials Needed:

- ARBA comment cards
- Pencils

ACTIVITY TIME NEEDED: 30 MINUTES

ACTIVITY

Leader Notes

Sometimes you cannot be at the judging table when your rabbits are being judged. The comment card is the only way for you to know what the judge did and didn't like about your rabbits.

Pass out the comment cards and pencils.

When you are taking comments at a judging table, remember that the most important items to note on the comment card are the number in class and placing (award). The show secretary most have these two pieces of information to complete all the paper work after the show.

The comment cards have areas you can put a checkmark in as the judges give their comments. If the judge says that the rabbit has good head, bone, and ears, just put a check under "good" next to these items. If the judge says that the rabbit is flat over the shoulders, write *flat* next to shoulders. If the loin is narrow, write *narrow* next to loin. If the hips are full, well-rounded, just check *very good*. However, if the hips are pinched, write *pinched* next to hips. If the rabbit is disqualified or eliminated, be sure to note why in the remarks section.

The right-hand side of the comment card has some specific remarks relating to various breeds. When taking comments while a marked breed is being judged, use the right side as well as the left side of the card.

Now have the members take down comments you give them on a New Zealand White Senior Doe, ear # 45B.

Leader Notes

Now check to see what the 4-H'ers have taken down. They should have put third in the blank for award and 5 for the number in class. They should have checked *good* for head, ears and bone, written *flat* next to shoulder and *pinched* by hips, checked *good* for loin, type, fur, texture, and density.

Now try to take comments on a black Dutch senior buck, ear # 5V.

The 4-H'ers should have put sixth in the award blank and 12 in the number in class. They should have written *ragged* next to the saddle and undercut, written *long* next to cheeks, written *wide* next to blaze, written *uneven* next to stops. They should have checked *good* for type, texture and density.

Point out that the two most important items to get on the comment card are the number in the class and the award (placing). Most people feel that any other information on the card is a bonus.

There are 5 New Zealand White senior does in the class. 45B will be third. She has good head, ears, and bone. I fault her for having flat shoulders and pinched hips. She has a wide loin and good type. She is losing on overall balance and condition. Fur is in good condition having good texture and density.

There are 12 black Dutch senior bucks. 5V will be sixth. The saddle and the undercut are ragged. The left cheek is long and the right cheek has a drag off of it. The blaze is very wide and the stops are uneven. He has good type, good texture, and density of coat.

The group may wish to continue practicing taking comments. You might have a class of rabbits which you judge and give comments on for each placing.

DIALOG FOR CRITICAL THINKING:

Q: Sometimes when you are recording judges' comments you may not agree with the comments and placings. What options do you have? Discuss the best way to handle a situation like this.

Q: There are other times when you are in positions where speaking out can cause problems, i.e., the policeman stops you for speeding and you weren't. How do you handle situations like this? What options do you have? Is it always best to stay silent in these situations? Why or why not?

GOING FURTHER:

1. Take comments at a rabbit show. Compare your comment card to the recording judge's card.
2. Compare the skills you learned in this lesson to those of a court reporter, secretarial transcriber, or any similar job.



Rabbit Fitting and Showmanship

Rabbits, Level 4, Activity 2

What Members Will Learn . . .

ABOUT THE PROJECT:

- Rabbit show procedures and requirements

ABOUT THEMSELVES:

- How to be objective
- How to see the same event from different perspectives

Materials Needed:

- Tables
- Participants and their rabbits
- Scoresheets and pencils
- Award certificates and ribbons

ACTIVITY TIME NEEDED: 60 MINUTES

ACTIVITY

Leader Notes

As youth become older and experienced, they can assume leadership roles. One such role is to judge showmanship. Help them practice judging skills by holding a rabbit show. Your members can act either as participants or as judges. Consider the following recommendations when judging a showmanship class.

JUDGE'S DUTIES

1. Call the class to the table.
2. Tell youth what they are expected to do.
3. Have the youth pose their rabbits for side, rear, and front views. Feel the rabbits.
4. Work with the group individually and collectively. You may move members and their rabbits to different table locations to arrive at preliminary placings.
5. Ask youth questions concerning breeds, disqualifications, names of parts, and desirable conformation characteristics.
6. At the end of the contest, tell the contestants how you arrived at your decisions.

CONTESTANTS' DUTIES

1. Be clean and neat in appearance.
2. Be observant and ready when your class is called.
3. When your class is called, place your rabbit on the table in front of you. Watch and listen to the judge at all times. Follow the judge's instructions.

TIPS FOR PARTICIPANTS

Selection. Choose healthy rabbits of desirable type and correct age. Prejuniors and market rabbits may be harmed by excessive handling. Showing a doe more than two weeks pregnant may cause her to lose her litter. Any clean, healthy junior, intermediate, or senior buck or doe is permitted in the fitting and showmanship contest. However, only pure-bred rabbits (including nonregistered) may be entered in breed exhibits. A separate class may be designated to allow the showing of crossbreeds.

Feed. Rabbits require a balanced ration. They should be in good flesh, but not fat.

Cleanliness. Keep your rabbit in a clean hutch by itself. Bring only clean, well-groomed rabbits with firm fur. During the summer, all rabbits molt. Pick your best rabbit. Start to prepare weeks in advance of the show. Soil and some stains can be removed with soap and water. Rinse thoroughly; repeat if necessary. Trim toenails regularly. Long, sharp nails are dangerous.

Tattooing. Rabbits must be tattooed for identification. Numbers are placed in the ear to read from left to right. Check tattoo pliers on cardboard first to be sure numbers are not reversed or upside down. The left ear may carry a cage number. The right ear is reserved for official registration by the American Rabbit Breeder's Association.

Training. Handle your rabbits carefully so you will not hurt or scare them. Work with your rabbits a few minutes each day. Practice posing them for show. Have a second person handle your rabbit so that it will get used to other people.

Care at the Fair. Do not allow your rabbit to get wet, windblown, or overheated while taking it to the fair. Use a rabbit carrying box. Be sure it is in a well-ventilated place. If you are responsible for your rabbit's care at the fair, feed it as you do at home, and see that it has clean, fresh water at all times.

Be Neat and Clean. Have your hands and face clean, your hair combed, and your shoes and clothes clean. Slacks, jeans, or skirts are acceptable with a shirt, blouse, or T-shirt. Long sleeves are desirable to protect your arms from accidental scratches. Wear a jacket if it is cool. Some clubs require exhibitors to wear a white shirt or blouse for showmanship contests. Be friendly and courteous. Smile!

BASIC SHOWMANSHIP POSITIONS

Use the following five basic positions to display your animals: the carry, Position 1, Position 2, pose, and pivot.

Carry. This is the normal, underarm carry used when moving your animals to the table. Grasp the loose skin over the shoulder enclosing the ears with one hand and place the other under the animal's rump. Lift

the animal and pull it toward you so that the body rests on your forearm against your body. Tuck the head under your arm while still grasping the neck skin for security.

Position 1. The rabbit is set upon its rump on the table facing the judge as if in a reclining chair. Grasp the rabbit by the loose skin over the shoulders and raise from the table at the same time, using the other hand to guide the rump and rear feet forward. The rabbit slides into a sitting position. This general position is used to check straightness of rear legs, sex, vent disease, and hock condition.

Position 2. The normal, crouched position: all four feet and tummy on the table. This position is used as a starting point for posing your rabbit or for relaxing after posing. It is also used when checking the rabbit's ear tattoo or for the presence of ear mites or canker.

Posed. A posed rabbit is an eager-to-please, alert rabbit with ears up, head in, paws firmly placed under the body, and tail straight. Pose each breed to its best show ability. Animals may be posed in either front, rear, or side views.

Pivot. A method of lifting and aligning the rabbit for carrying or during showmanship. Grasp the animal over the shoulders. Lift it straight up. Place your palm under the rabbit's hindquarters and support its body. You may then turn it to face you, or to either side. Using the pivot as a beginning point, the rabbit's body may then be tucked under the arm, rear feet first, as with a football. This leaves the head and forequarters exposed for checking the teeth. If your rabbit becomes restless, pick it up, pivot it, and then replace it on the table again. This often serves to relieve the tension and allows the animal to pose properly.

SHOWING

Be Ready. Hop to it when your class is called. Take your place at the judging table, sharing available space. Pose your rabbit with its head forward. This takes less space and prevents accidents. Watch the Judge. He or she may request contestants to lift, carry, pose, or check their rabbits together or individually.

Train Your Rabbit to Sit Still. It must hold pose when placed in proper position. Stroking the face and cheeks will help in posing the head. Keep your hands off your rabbit as much as possible. Be ready to move your rabbit as the judge may direct and to answer questions on its breed history, age, sex, nomenclature, feeding, and management.

Front and Rear View Poses. To turn your rabbit for front and rear views, roll its back on its rump, and pivot on your hand to new position. Then smooth out the fur and pose your rabbit again.

Examination of Teeth. Use your free hand to open the lips which you can do by reaching around the nose with your thumb and fingers. Raise

the rabbit to its natural upright position to avoid hurting the animal's back before returning to the table.

Check for Straightness of Bone. To show the front feet and legs, grasp the skin over the shoulders, raising the forequarters six or more inches. Keep the hind feet securely on the table to support the animal. Extend each front foot with your free hand by sliding your thumb and first finger down the side of the leg bone.

To show rear legs, the preferred procedure is to use Position 1. Place free hand on stifle joints and press down and forward to fully extend the legs. Gently run fingers down each leg to determine the straightness of bone.

Inspection for Tumors or Ruptures. Check from the raised forequarters position. Run your hand, palm down, down the side of the rabbit's body and abdomen. Tumors may be anywhere on the animal's body. Ruptures are only in the lower abdominal area.

Examination of Sex. To show sex organs, roll the rabbit back on its rump, Position 1, and expose the organs with your free hand. Refer to your animals as bucks or does.

Questions by the Judge. The judge may ask you to pose your rabbit facing the judge so that he or she may examine ears, eyes, and head, and facing you to examine the rabbit's body condition. He or she may also ask you to show the fur. To demonstrate fur quality, place the rabbit facing you or to your left. Brush your right hand up the rabbit's back from tail to shoulders and up to its sides from rear to front allowing the fur to fall back in place. Loose fur or soft and irregular patches will be immediately visible as opposed to a continuous even "on end" appearance of excellent fur.

Other sample questions commonly asked contestants in a Rabbit Showmanship Contest are:

1. What sex is your rabbit?
2. What is the breed of your rabbit? How many varieties are there in that breed? Name them.
3. What causes buck teeth and what can be done to correct them?
4. What is the gestation period of a rabbit? When do you put the nest box in?
5. Name a disqualification for your breed of rabbit. Name several for most breeds of rabbits.
6. What is a fault?
7. What do you feed your rabbit? What percent protein is required for young, adult, and mothers with litters?
8. How many teeth does a rabbit have?
9. What is the purpose of a person learning how to fit and show a rabbit?
10. What weight is your animal? What is the standard weight?

LEADER'S AND PEERS' DUTIES AS JUDGES

After you have excused a showmanship participant, check over the scoresheet and give a ribbon placing.

Generally, if the participants did a good job checking the rabbit and they knew the answers to your questions, they will be in the blue ribbon group. Take the participant's age into consideration. A 14-year-old will probably know more than a 9-year-old.

Now have the 4-H'ers judge the showmanship participants one at a time. After the first participant has been excused, have the group discuss how they evaluated the performance. Continue evaluating the showmanship participants until all have participated. The group has now placed the participants into ribbon groups. The judge then makes the final selection of the top individuals.

Out of the blue ribbon group, the top ones are usually called back for a second interview. Sometimes they are asked to bring their rabbits. During the second interview, questions can be asked about any breed of rabbit or rabbit-related topic. If all seem to be equally knowledgeable, the participants are often asked to exchange rabbits and demonstrate how to examine them. Sometimes a participant can do an excellent job at handling a particular rabbit, but cannot handle other rabbits. If your group used the second interview, the group decides on the top individuals.

The following is an example of a scorecard for a fitting and showing contest. Points and criteria may vary slightly.

SCORING

4-H Member	Points Possible
Appearance and attitude—clean, neat, attentive, on time, courteous, and confident	20
Rabbit	
Desirable fleshing for breeding or market, clean, well-trained, free of defects and loose hair, with trimmed nails on intermediates and seniors	20
Showing	
Show rabbit to good advantage at all times, follow instructions, be alert, keep hands off rabbit when not handling or posing	30
Lift, hold, and carry rabbit so it is comfortable and quiet	10

Leader Notes

Presentation and Examination

Knowledge of rabbits, feeding, management, and health; ability to show the parts and handle the rabbit 30

Total

 100



Judging Rabbit Pelts

Rabbits, Level 4, Activity 3

What Members Will Learn . . .

ABOUT THE PROJECT:

- To judge a rabbit pelt
- The point value of each characteristic of the three types of fur pelts

ABOUT THEMSELVES:

- To examine their personal beliefs and be able to support them

Material Needed:

- Several different rabbit pelts

ACTIVITY TIME NEEDED: 40 MINUTES

ACTIVITY

Leader Notes

One of the products of rabbit raising is the pelt. Some rabbits are raised primarily for the pelt, therefore it is essential to know how to judge pelts. We will discuss three types of fur pelts.

I. Commercial (normal) Fur Standards:

Designed to meet the requirements of fur normally used in the manufacture of fur garments or trim, the two fur classes of commercial, normal fur are Colored (all colors except white) and White (usable portions of pelt only). There are also classes for satin and rex fur.

Texture: *20 points* (Definition: The characteristic disposition or connection of threads, filaments, or other slender bodies interwoven as a fabric of close texture.) The coat should have “body.” It should not be harsh or like wire, nor too fine, silky, or woolly. It should have enough coarse guard hairs to offer resistance when stroked toward the head. This stroking action produces a reaction in the fur called “flyback.” That is the return, evenly and quickly, of the fur to its natural position over the entire body. The best furs stand straight up during and after flyback and do not assume a prone or flattened position. The undercoat should be soft and fine, interspersed thickly with heavier, longer guard hairs. These guard hairs serve to protect the soft undercoat.

Density: *15–20 points* (dense or thick). A good thick coat of fur all over the back, sides, chest, and flanks. Rabbits scoring high in density have a larger, more usable pelt. The underfur should be soft and dense, thick, with heavy protruding guard hairs. These guard hairs should be visible down to the skin and extend above the underfur; the stomach fur will be shorter. Avoid soft, woolly fur on the stomach and crotch.

Hand out the scorecards for judging rabbit pelts and discuss.

Have the members evaluate different rabbit pelts.

Discuss the members’ evaluation of each pelt.

Pictures or rabbit samples of each of the characteristics would be beneficial.

Leader Notes

Balance and Condition: *20–30 points* (balanced even and smooth). Fur length should be normal for the animal, with a differential between the tip of the guard hair and the underfur not to exceed $\frac{1}{8}$ inch. A dense coat is preferable to a thin coat. To be in proper condition, the fur must be set tightly in the skin, without evidence of moult, broken spots, mats of fur, or stains. The guard hairs should be alive and not brittle or dry. The coat should be clean, bright, clear of stain.

Color: *15–25 points*. Nature's natural color enhances the coat to a degree that cannot be duplicated by commercial dyeing.

Coat colors are classified as Sells, Shaded, Agouti, and marking patterns. Any color may be expressed in terms of three factors: hue, chroma (purity or saturation), and brightness (or value). Generally the most obvious or striking feature of color is its hue. The color is qualified as pale, dark, dull, light, clean, smutty, brindled, etc.

Matching colored pelts goes beyond selecting the ideal breed Standard's surface color. The depth of surface color is important. It must be carried well down the hair shaft in the self and shaded classes. In the Agouti classes, the proper intermediate color is important. To match correctly, the undercoat must also be considered. (Note color on hair shaft next to skin.)

Leather and Size: *20 points*. The leather side of the pelt should be smooth, lightweight, and supple. Cut pelt value if the tanned leather is heavy, beardy, torn, cut, or extremely ragged on the edges, or wrinkled. The dorsal fur is the usable portion. This portion covers the area from the neck to the rump at the tail juncture, and down the sides to the lower flanks. The ventral (belly) area has a shorter, softer fur. Size is important. The usable portion should be as large as possible.

Desired Qualities for Tanned Pelts: When judging pelts, we are guided by the commercial live animal fur standards. The best quality rabbit skins would be those taken from older animals during cold weather. Primeness of the pelt may be determined by blowing into the coat. A prime skin is in the best condition possible. Unprimed areas can be identified by the short fibers of the new in-growing fur. Evidences of shedding and the differences in rate of growth of the new hair is clearly evident on the flesh side of the colored skins by the extent and intensity of the pigment. White skins show only a faint amount of this discoloration. Again, the poorest quality skins do not have flyback; they feel soft and the fur mats easily.

II. Satin Fur Standards:

The ideal satin fur should be fine, very dense, and thick. The soft, dense undercoat should be interspersed thickly with luminous, slightly coarser, guard hairs, visible to the skin and extending above the underfur evenly $\frac{1}{8}$ inch. The coat should be well balanced, of uniform length, about 1

inch to 1 ¹/₈ inches long. Allowable lengths include plus or minus ¹/₈ inch. It must have a distinct glossy, lustrous sheen.

III. Rex Fur Standards:

The rex fur is short and plushlike. It stands straight upright and has guard hairs almost of identical length with those of the undercoat. Rex fur must be extremely dense, ⁵/₈ inch long, straight, upright with identical length and texture throughout the entire body. The fur has a lustrous sheen with an extreme amount of guard hairs, evenly distributed over the body without noticeably protruding. The fur is to be of good body with a plushlike effect and distinct, springy resistance to the touch. It should feel smooth to the touch without being soft or silky.

For the complete guide for grading and matching pelts, use a special card, tailored for each fur type, with delineation and point values for each factor.

DIALOG FOR CRITICAL THINKING:

Q: Raising rabbits usually means you are producing meat to eat or a pelt for someone's clothing. As you become involved in rabbit raising you need to be prepared to answer questions from those who oppose raising rabbits for meat or fur. How do you respond to, "You kill those poor little bunnies for a coat!" What is your position on raising rabbits for their pelts or for food?

Q: Are there other animal welfare issues that you perceive as possible problems?

GOING FURTHER:

1. Attend a rabbit fur or wool show.
2. Work with a judge at a fur show.

JUDGING RABBIT PELTS

Activity Sheet

Scorecard

NORMAL FUR PELTS		
Character	Points	Judge or Select for:
Texture	20	Flyback qualities necessary for durability
Density	15	Lush, thick-set coat, cushiony feel
Balance	15	Evenness of texture, density, and length
Condition	15	Prime, finished, free from stain and dirt
Color	15	Proper surface, intermediate, undercolor
Leather	10	Lightweight, soft, pliable
Size	10	Largest usable portion of pelt
	100	

SATIN FUR PELTS		
Character	Points	Judge or Select for:
Texture	20	Roll-back qualities necessary for durability
Density	15	Lush, thick-set coat, cushiony feel
Balance	10	Evenness of texture, density, and length
Condition	10	Prime, finished, free from stain and dirt
Sheen	10	High degree of luster, bright
Color	15	Proper surface, intermediate, undercolor
Leather	10	Lightweight, soft, pliable
Size	10	Largest usable portion of pelt
	100	

REX FUR PELTS		
Character	Points	Judge or Select for:
Density	20	Extremely thick-set, plush guard hairs, plentiful
Texture	15	Upright, springy, smooth to the touch
Balance	15	Same length, density, texture over entire pelt
Condition	15	Prime, lustrous, free from breaks, bare spots
Color	15	Proper surface, intermediate, undercolor
Leather	10	Lightweight, soft, pliable
Size	10	Largest usable portion of pelt
	100	



Conducting a Rabbit Skillathon

Rabbits, Level 4, Activity 4

What Members Will Learn . . .

ABOUT THE PROJECT:

- How to conduct a rabbit skillathon
- To work as a team member

ABOUT THEMSELVES:

- To improve decision-making skills
- To practice public speaking skills

Materials Needed:

See individual stations to determine the supplies needed

ACTIVITY TIME NEEDED: 30 MINUTES

ACTIVITY

Leader Notes

A skillathon involves experiential learning. The members learn by attempting to perform a task before being told how to do it.

The skillathon committee needs to:

1. Decide on the stations wanted, considering time and resources available.
2. Make up a realistic situation and task for each station.
3. Decide who will be in charge of each station.
4. Decide on the equipment or supplies needed at each station.
5. Delegate responsibility for gathering supplies.

Use older members as committee members and/or station facilitators for younger members.

The skillathon is an excellent teaching technique that can be used with any lesson.

Responsibilities of the station facilitator:

1. Familiarize yourself with the topic, supplies, and training aids.
2. Compile a list of questions to ask each team.
3. Set up your station to include a stand-up situation and task sign and the necessary supplies.
4. Allow the team members to discover for themselves how to accomplish the task, instead of telling or showing them how first.
5. Respond to questions with questions so the answers will be their own.
6. Ask the 4-H'ers how they would set up and conduct this same activity at a 4-H project meeting.
7. Mark the team's participation card.
8. Prepare your station for the next team.
9. Following the skillathon, inventory and pack up all equipment, materials, and signs.

Each station will need at least one facilitator. Each station should have its own supplies.

POSSIBLE STATIONS:

1. IDENTIFYING BREEDS OF RABBITS

Supplies: Pictures of 10 to 15 rabbit breeds, cards with breed names, and cards with breed characteristics.

Directions: Have the teams match the cards with breed names and characteristics with breed pictures. Let them check their answers. Follow up with questions.

Situation: You are showing one of the new members of your 4-H rabbit project the various breeds at the fair.

Task: Identify the breeds and tell something about each breed.

2. IDENTIFYING PARTS OF RABBITS

Supplies: Picture of rabbit with the parts numbered, sheets with names of the parts, pencils.

Directions: Give the team sheets with names of the rabbit parts for the team to match names with the numbered parts of the drawing. Let them check their answers.

Situation: You are preparing for the rabbit showmanship and judging contest.

Task: Match the names with the parts.

3. DETERMINING A RABBIT'S FINISH

Supplies: Two rabbits with different finishes.

Directions: Have the teams demonstrate how to determine finish. Follow up with questions.

Situation: You want to select your most desirably finished market rabbit.

Task: Demonstrate how to determine a rabbit's finish.

4. IDENTIFYING RABBIT DISQUALIFICATIONS

Supplies: A list of disqualifications.

Directions: Have the team name as many disqualifications as they can. Follow up with questions.

Situation: A rabbit may be disqualified for several reasons.

It would be great to have a rabbit or two that have disqualifications.

Task: Name as many disqualifications as you can and give the reason for each disqualification.

5. JUDGING A RABBIT CLASS

Supplies: 2 to 4 easily placed rabbits, scorecards.

Directions: Allow the team to judge the rabbits. Ask questions concerning the class.

Situation: You have to judge a class of rabbits.

Task: Judge and place the class.

6. SCORING A JUDGING CLASS

Supplies: Hornel computing slide, pencils for scoring the results in station 5.

Directions: Provide teams with the official placings, and cuts. Have them find their scores.

Situation: An expert rabbit judge also judged the class of rabbits and presented placings and cuts.

Task: Using the expert's decision as the "official" placing, what is your score for the class?

7. UNDERSTANDING A FEED TAG

Supplies: Feed tags.

Directions: Provide the team with feed tags and let them explain what they read. Ask questions and discuss.

Situation: A feed store customer asks your help in understanding a feed tag.

Task: Explain to the customer what information the tag contains and tell how this helps in choosing a feed for a herd.

Divide the group into teams of 2 to 4 and assign each team a station. Move the teams to the next station every 10 minutes.

After all the teams have rotated through the stations, have each team select a station and give a short presentation to the entire group on how the team solved the task at a particular station.

Remember to praise everyone's efforts.

DIALOG FOR CRITICAL THINKING:

Q: Organization and preparation are important to a successful skillathon. In what areas of your life can you apply the principle of organization you learned from the activity?

Leader Notes



Conducting a Rabbit Quiz Bowl

Rabbits, Level 4, Activity 5

What Members Will Learn . . .

ABOUT THE PROJECT:

- To conduct a quiz bowl
- To increase their knowledge of rabbits

ABOUT THEMSELVES:

- To develop good questioning skills
- To improve leadership skills and self-confidence

Materials Needed:

- Electronic Quiz Bowl Unit (optional)
- Questions and answers about rabbits

ACTIVITY TIME NEEDED: 60 MINUTES

ACTIVITY

Leader Notes

HOW TO RUN A QUIZ BOWL

It takes several people to run a quiz bowl contest in a formal way. A county or state level contest would use an electronic quiz bowl unit with timers and responders for each team member plus a narrator, judge, timer, scorekeeper and study-room monitors.

However, we can have a quiz bowl at our project meeting in a less formal setting. Here are a few basic steps:

1. Divide the group into teams of two, three, or four members each. (County or state teams would require four members.)
2. If more than two teams participate, make a tournament type bracket to determine team play order and sequence.
3. True-false or yes-no type questions should not be used.
4. A match will consist of **32 questions**. The first half of the questions will be one-on-one. That is, team member will be matched to an opposing team member and take turns answering each question. Contestant 1A will go against 1B, 2A against 2B, etc. The last half of the questions will be toss-up for any member of either team to answer.
5. Bonus questions will be used to break a tie, since no competition may end in a tie.

Have the Level IV 4-H'ers set up the quiz bowl. Explain the rules to them. Have them design questions and appropriate answers. Make sure they have enough questions for the desired number of matches.

Quiz bowls may be run by having a timer use a regular watch or stopwatch and having members raise their hands to answer questions.

Leader Notes

6. No talking among team members in either the one-on-one or the toss-up portions of the contests is allowed.
7. The first person who activates the signaling device must begin to answer the question within 5 seconds. A correctly answered question is awarded **one** point. If the question is not answered or is incorrectly answered, **the opposing team will be given a chance to answer. No points are deducted for an incorrect answer.**
8. If no one activates the signaling device within 10 seconds, the question will be withdrawn.
9. When the signaling device is activated before the question is completely read, the moderator shall stop reading the question at once and that person may answer the question. If correct, the team will receive credit. If incorrect, the question will be re-read in its entirety and the other team will have an opportunity to answer it **within 5 seconds.**
10. If a team member other than the one who signaled answers, the question will be thrown out regardless of whether the response is correct or incorrect. If this happens more than once in a round by the same team, then one point will be deducted for each additional time this happens, with the question thrown out each time.
11. Questions within each round (preliminary, quarter-final, semi-final) will be the same. Different sets of questions will be used for each successive round. This necessitates isolating teams until their match. No one may enter or leave the isolation room once the match has begun, unless instructed by the contest official. The winning teams may not return to isolation until the next round begins.
12. The team with the most points after 32 questions is the winner.

After the quiz bowl is done, have the members who conducted it discuss what they did well, what they need to do better next time, what mistakes were made. Do a general critique.

DIALOG FOR CRITICAL THINKING:

Q: Setting up a quiz bowl, maintaining the flow of the activity, formulating good questions, and all the details involved in this activity should have been a good learning experience. Discuss what you have learned. How can you take what you have learned in this activity and apply it to other areas of your life? How important is following directions in this type of activity? Discuss.



Selecting a Judging Class

Rabbits, Level 4, Activity 6

What Members Will Learn . . .

ABOUT THE PROJECT:

- How to select a judging class

ABOUT THEMSELVES:

- To evaluate their feelings about competition

MATERIALS NEEDED:

- Classes of rabbits to be judged
- Judging score cards

ACTIVITY TIME NEEDED: 35 MINUTES

ACTIVITY

Leader Notes

A class is made up of four animals of the same sex and relatively the same age. The idea behind a judging class is not to “trick” the 4-H’ers, but instead to provide a learning experience. Therefore, in selecting the class, strive not to find the most difficult class to place, but instead choose a “placeable” class that requires the 4-H’ers to think through their decisions.

For example, a typical class could contain an easy top place, an easy bottom place and a middle pair that could arguably be placed either way. Variations of this basic theory are an easy top or bottom and the other three placings would be close, or a good class can consist of two close pairs. Avoid making a class of four animals that are very similar and therefore difficult to place.

DIALOG FOR CRITICAL THINKING:

Q: Placing animals in competition is important. This also happens to students in school where they are placed in competition with one another. What are the advantages and disadvantages of this kind of event?

Q: Remember a time when either you or someone in your class was chosen last for something. How did you feel? How did others feel? Imagine the long-term effects of this.

Now have the group judge the classes of rabbits. Ask the group if the classes were selected correctly.

Discuss the classes and why they were selected.

Leader Notes

GOING FURTHER:

1. Select several classes as part of a judging school or workout.
2. Help set up or conduct a complete judging contest.
3. Volunteer to be a rabbit judging coach for younger members.



Conducting a Judging Contest

Rabbits, Level 4, Activity 7

What Members Will Learn . . .

ABOUT THE PROJECT:

- How to conduct a judging contest

ABOUT THEMSELVES:

- The importance of learning by doing
- Learn self-confidence associated by accomplishing a new task

MATERIALS NEEDED:

- Test on rabbits
- Rabbits for identification
- Identification sheets
- Rabbits to be used in judging classes
- Judging scorecards
- Registration sheets
- Pencils
- Ribbons
- Refer to EM4502, *Judging Rabbits*

ACTIVITY TIME NEEDED: 90 MINUTES

ACTIVITY

4-H'ers can learn how to evaluate rabbits by participating in rabbit judging contests.

Select at least two judging classes for the contest.

Prepare a test on rabbits for the contest. The test should have 25–50 questions.

Use 10 to 20 rabbits in the identification contest.

STEPS IN HOLDING THE CONTEST:

1. Select the judging classes and obtain the official placings.
2. Put the rabbits to be used in the identification contest in their cages and make a key for the identification.
3. Prepare a station for the contestants to take the rabbit test.
4. Set up a table for the official scorers to check scores and total results.
5. Set up registration table.

Leader Notes

You could do variations of this procedure depending on time, amount of help, and rabbits available. For instance, you could have any number of the three major parts:
1. Judging Classes, 2. Identification,
3. Written test.

6. One helper is needed at each judging class, identification, and test station.
7. Several helpers will be needed to serve as official scorers.

CONDUCTING THE CONTEST:

1. Register the contestants.
2. Divide the contestants into four groups.
3. One group will go to Judging Class I, another to Judging Class II, another to the identification station, and the last group will go to the test station.
4. Collect judging cards, identification sheets, and tests after each group has completed a station.
5. Give official placings and answers to the official scorers so they can check them.
6. After every contestant has finished, the official scorers will need some time to complete the total score for each contestant.
7. Present awards.

DIALOGUE FOR CRITICAL THINKING:

Q: People usually learn better by doing something, rather than just being told how to do it. An example besides the judging contest would be driving a car or riding a bike. Telling someone how to do these things is not enough. Think of other activities where this is true.

Q: Discuss the differences between being a participant in a judging contest and the responsibilities in conducting a contest.

GOING FURTHER

Be the official judge and explain your placings and select the classes for a group of young members.



Preparing for and Conducting a Rabbit Show

Rabbits, Level 4, Activity 8

What Members Will Learn . . .

ABOUT THE PROJECT:

- The steps needed to hold a successful rabbit show

ABOUT THEMSELVES:

- To understand the importance of the step-by-step process
- To recognize consequences of decisions

Materials Needed—may be obtained from Extension office or ARBA:

- Entry blanks
- Comment cards
- Sanction forms
- Chalkboard or flip chart

ACTIVITY TIME NEEDED: 40 MINUTES

ACTIVITY

Leader Notes

In order to hold a successful rabbit show you must know the steps needed. Understanding how to prepare and conduct a rabbit show will make 4H'ers better exhibitors.

Put these steps on a chalkboard or flip chart

1. Select a date for the show.
2. Secure a location for the show.
3. Select a show superintendent, assistant superintendent, and show secretary.
4. Send for an ARBA sanction if this is to be a sanctioned show. (Most 4-H shows are not sanctioned so this step can be skipped.)
5. Obtain entry blanks and comment cards. These can be purchased from the ARBA. If this is to be a cooperative (4-H and ARBA sanctioned) show, co-op cards will also be needed.
6. Hire the judge(s) for the show. (Remember, if this is an ARBA sanctioned show, only licensed judges can be hired.)
7. Decide which breeds to be sanctioned.
8. Order the breed sanctions from the specialty clubs.
9. Prepare the catalog and mail to possible exhibitors.
10. Secure trophies and ribbons.
11. Appoint a committee to be in charge of the food stand.
12. The show secretary will collect all entries and entry fees.
13. The show superintendent, with the assistance of the group, should set up the showroom the day before the show if possible.

Leader Notes

14. The show superintendent will see that the show is started on time and that the show runs smoothly.
15. Hand out the trophies and ribbons won by the exhibitors.
16. If this is a sanctioned show, the show secretary sees that all the reports are completed and returned on time.
17. All members should help with the cleanup after the show.

Steps 4, 7, 8, and 16 can be ignored if this isn't to be an ARBA sanctioned show.

The show superintendent is responsible for getting the rabbits to the judging tables when needed.

4-H'ers will be needed to take comments at the judging tables.

Now have the group plan a rabbit show.

DIALOG FOR CRITICAL THINKING:

Q: Doing a rabbit show is a step-by-step process. What areas of your personal life involve a step-by-step process? What happens when you skip or omit steps when you are doing a project?

Q: Talk about the "people skills" that are needed in working with exhibitors and their parents. Role play some situations that occur when dealing with these shows. Example: after missing a deadline how will you deal with unhappy parents and exhibitors?

GOING FURTHER:

1. Attend rabbit shows before conducting your own.
2. Have licensed judges speak to your group about being a judge, what's involved, and how members can become judges.



Checking Water Quality for Nitrates and Nitrites

Rabbits, Level 4, Activity 9

What Members Will Learn . . .

ABOUT THE PROJECT:

- How to test water supplies for nitrates and nitrites

ABOUT THEMSELVES:

- To develop a concern and responsibility for our ecosystem
- To understand how chemicals affect them individually

Materials Needed:

- Safety glasses
- Test tubes
- 4 M sulfuric acid
- Hot water bath
- 1.5 M sodium carbonate
- Litmus paper
- 0.1 M iron (II) sulfate [ferrous sulfate]
- Concentrated sulfuric acid
- 1 M ammonium sulfate
- Distilled water
- Test tube holder
- Test tube rack
- Scales
- Graduated cylinder (100ml)
- Eye droppers
- Glass stirring rod

ACTIVITY TIME NEEDED: 30 MINUTES

ACTIVITY

Too many nitrates and nitrites in rabbits' drinking water are harmful. Often, abortions are the result. To check your water supply, use the following procedure:

1. Collect a sample of your water.
2. Put on the safety glasses. Always wear safety glasses when working with chemicals.
3. Prepare a 0.1 M solution of iron (II) sulfate. Weigh out 1.52 grams of iron (II) sulfate. Now add distilled water to make a total of

Leader Notes

Be sure to stress safety procedures **BEFORE** you start the activity.

If a school laboratory is available, perhaps this lesson could be held there.

You might ask a science or chemistry teacher to assist with this lesson.

Leader Notes

100 ml (milliliters) of solution. This must be freshly prepared each time you test for nitrates and nitrites.

4. Prepare the 4 M sulfuric acid. Put 78 ml of distilled water in the graduated cylinder and add concentrated sulfuric acid until you have 100 ml of solution. *NEVER POUR WATER INTO CONCENTRATED ACID.*
5. To 5 ml of your water sample add 3 ml of 1.5 M sodium carbonate. Heat for ten minutes in the hot water bath. Separate any precipitate that forms. The liquid portion is what you will need to use in the following tests. We will call this the prepared solution. This eliminates the heavy cations that might interfere in the following tests. (You may wish to take 20 ml of your water sample and evaporate it down to 5 ml in order to concentrate the nitrates and nitrites.)
6. To 10 drops of the prepared solution, add 4 M sulfuric acid drops until the solution is acidic. (Use the litmus paper to check to see if the solution is acidic. Blue litmus paper will turn red if the solution is acidic.) Stir and touch your stirring rod to the litmus paper.
7. Add 5 drops of freshly prepared 0.1 M iron (II) sulfate solution. If nitrites are present, the solution will become dark brown.
8. If the nitrite test was negative, put 10 drops of your prepared solution in a test tube. Add 4 M sulfuric acid drops until acidic. Now add 5 drops of 0.1 M iron (II) sulfate solution. Now add 5 drops of concentrated sulfuric acid as you hold the test tube at an angle so the sulfuric acid runs down the side and forms a separate layer at the bottom. Within a few minutes a brown ring will form at the interface of the two liquids if nitrates are present.
9. If nitrites are present, to 10 drops of prepared solution add 4 M sulfuric acid until acidic. Now add 4 drops of ammonium sulfate. Evaporate to a moist residue. Add 10 drops of distilled water and follow procedure 8.
10. If nitrates and/or nitrites are present in your water supply check with your local utility district about having the water checked for the actual amount of these pollutants.

DIALOG FOR CRITICAL THINKING:

Q: Where do nitrites and nitrates come from? What responsibility do you have to control this problem?

Q: If nitrites and nitrates are a problem for rabbits, what do you think they do to humans?

Q: What concerns do you have about other chemicals as they enter our food chain?

Q: What can you do in a general sense to help reduce all forms of pollution on our earth?

GOING FURTHER:

1. Check your family's water supply for nitrates and nitrites.
2. Have a chemical analysis done on your water supply.

Leader Notes



Balancing a Ration

Rabbits, Level 4, Activity 10

What Members Will Learn . . .

ABOUT THE PROJECT:

- How to balance a ration for their rabbits

ABOUT THEMSELVES:

- To evaluate their own diets and dietary habits

Materials Needed:

- Calculator
- Paper and pencils

ACTIVITY TIME NEEDED: 35 MINUTES

ACTIVITY

Leader Notes

The most expensive item in the production of rabbits is feed. If you hope to make a profit you must keep the cost of feed to a minimum while at the same time providing an adequate diet for rapid growth.

The National Research Council recommendations for crude protein for the following productive functions are: Growth—16 percent; Maintenance—12 percent; Gestation—15 percent; Lactation—17 percent.

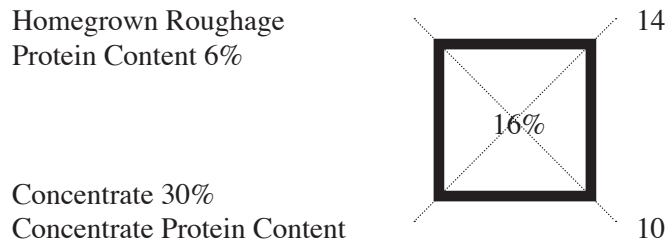
Even though rabbits are not efficient users of fiber, they can be fed a high percentage of fibrous feed including indigenous grasses and leafy shrubs. Slade and Hintz reported the digestibility of alfalfa crude fiber in selected animals as follows: rabbits—18 percent; horses—35 percent; ponies—38 percent; and guinea pigs—38 percent.

Scientists at Oregon State University have observed that adding fiber to a high-energy, low-fiber diet improved the growth of weaning rabbits. Therefore, rabbits require some level of fiber for maximum growth. Davidson and Spreadbury have reported that diets with less than 6 percent fiber tended to promote diarrhea. Other researchers have reported that indigestible fiber of a relatively large particle size may be of value in preventing mucoid enteritis. Currently it is recommended that you feed fiber levels of not less than 10 percent and of relatively large particle size.

Rabbits can be fed garden waste, roadside grass and weeds, lawn clippings, home food preparation by-products such as potato peels, etc. (Rabbits can convert these “wastes” into a nutritious, white meat that can

Leader Notes

add variety to your meat diet.) These are satisfactory feeds for rabbits if you use additional protein to balance them properly. Plant protein supplements such as soybeans, peanuts, sesame, cottonseed, and linseed meals in pea-sized cake, flake, or pelleted form can be used with whole grain to make up the concentrate part of the ration. To figure out how much concentrate you need, the Pierson Square is a handy tool.



Have members do the Pierson Square using different roughage and concentrate levels.

Using the handout “Composition of Feeds,” do a Pierson Square for a growth, maintenance, gestation, and lactation ration.

Answer: Sweet potatoes have 1.8% crude protein and cottonseed meal has 41.6% crude protein. Lactating does need 17% crude protein in their feed. Using the Pierson Square you would need 24.6 pounds sweet potatoes and 15.2 pounds of cottonseed meal to make a diet with 17% crude protein.

Steps in using the Pierson Square:

1. Draw a square.
2. Write desired protein level of feed in the center.
3. Place in upper left protein content of the homegrown feed.
4. Place in lower left the protein content of your concentrate.
5. Subtract diagonally the small number from the larger number.
6. Reading horizontally gives the pounds of each feed needed.

In the example above, you need to feed 14 pounds of homegrown roughage to every 10 pounds of protein concentrate. In such diets, supply the rabbits with a salt source.

Could you make a balanced diet for your lactating does using sweet potatoes and cottonseed meal? Let’s also figure a balanced diet for a growth, maintenance, and gestation ration.

DIALOG FOR CRITICAL THINKING:

Q: Balancing a ration for rabbits involves careful thought. How well do you balance your own diet and what kind of thought do you give it? What are some ways you can improve your own dietary habits? (Include ideas on cholesterol, fats, fiber, and other “hot topics” of the diet.) Discuss fad diets and weight loss.

GOING FURTHER:

Visit a feed mill to observe a balanced ration being made.

COMPOSITION OF FEEDS

Activity Sheet

	<u>DM</u>	<u>TDN</u>	<u>DE</u>	<u>CP</u>	<u>Ca</u>	<u>P</u>
	<u>Percent</u>		<u>Kcal</u>	<u>Percent</u>		
			<u>per lb</u>			
Barley grain	89	70	1450	11.7	0.08	0.42
Beet pulp, dried	91	70	1375	9.1	0.68	0.10
Bread, dried	96	100	1900	15.8	0.0	0.0
Brewers grain, dried	92	58	1342	25.9	0.27	0.50
Corn dent #2	89	82	1661	8.9	0.02	0.31
Cottonseed meal, solvent	91	66	1320	41.6	0.15	1.10
Linseed meal, expeller	91	70	1400	35.2	0.44	0.89
Milk, cows, whole	12	25	298	3.1	0.0	0.0
Milk, dehydrated	94	99	3866	35.2	0.89	0.68
Oats, grain	89	65	1320	11.8	0.10	0.35
Sorghum, milo, grain	89	84	1680	11.0	0.0	0.0
Soybean meal, solvent	89	82	1640	45.8	0.32	0.67
Wheat grain	89	79	1595	13.0	0.0	0.0
Wheat bran	89	57	1193	16.0	0.14	1.17
Alfalfa hay, pre-bloom	89	58	1160	19.1	0.89	0.27
Alfalfa hay, early bloom	90	40	853	16.6	1.12	0.21
Clover, red, hay	88	43	874	13.3	1.42	0.19
Lespedeza, hay	90	39	837	14.8	0.0	0.0
Oat hay, early bloom	93	26	500	4.3	0.23	0.21
Soybean hay	89	45	683	14.5	1.15	0.20
Sudangrass hay	89	43	920	11.3	0.50	0.28
Vetch, common hay	88	46	945	17.6	1.20	0.30
Cabbage, aerial	8	8.0	155	1.7	0.0	0.0
Carrots, roots	12	10.8	198	1.2	0.05	0.04
Rutabaga, roots	13	10.0	230	1.3	0.0	0.0
Potatoes, sweet, tubers	42	28.0	709	1.8	0.0	0.0
Turnips, roots	9	7.4	140	1.2	0.06	0.02

Digestible Matter—DM; Total Digestible Nutrients—TDN;
 Digestible Energy—DE; Crude Protein—CP; Calcium—Ca; Phosphorus—P.

Source: *Table of Feed Composition*, N.R.C., National Academy Press, Washington D. C. 1982.

Leader Notes



Formulating a Rabbit Ration

Rabbits, Level 4, Activity 11

What Members Will Learn . . .

ABOUT THE PROJECT:

- What rabbits need for crude protein in their diet
- To use a simple math formula for calculating feed needs

ABOUT THEMSELVES:

- The importance of protein in their own diets

Materials Needed:

- Calculator
- Pencils and paper

ACTIVITY TIME NEEDED: 60 MINUTES

ACTIVITY

Rabbits need sufficient crude protein in their diet. If you don't feed commercial rabbit pellets, you must know how to formulate a balanced diet.

Try to formulate a 16 percent crude protein ration using the following feeds:

- Alfalfa hay
- Barley
- Salt
- Corn
- Soybean meal

Determine how many pounds of each feed it takes to make 100 pounds of total ration and have 16 percent (16 pounds) of crude protein. Use the handout showing nutrient content of feedstuffs to determine what percent of each feed is crude protein. **Remember:** the total weight of the ration must equal 100 pounds.

DIALOG FOR CRITICAL THINKING:

Q: Crude protein is important to a rabbit's diet. How important is crude protein in your diet? Check food you commonly eat for its protein content.

GOING FURTHER:

1. Check your rabbit rations for crude protein content.
2. Visit a feed mill and watch rabbit pellets being made.

Leader Notes

Ask the members to calculate the number of pounds of each feed needed in a 16% crude protein diet if they use alfalfa hay, corn, barley, soybean meal, and salt, to make 100 pounds of feed. Hand out the "Nutrient Content of Feedstuffs" tables.

Answer: The suggested ration uses 60% alfalfa hay, 21.5% corn, 15% barley, 3% soybean meal, and 0.5% salt. Thus, a 100-pound ration would need 60 pounds alfalfa hay, 21.5 pounds corn, 15 pounds barley, 3 pounds soybean meal, and 0.5 pounds salt. Change percent values to decimals and multiply by 100.

Hand out "Sample Rations" activity sheet and let members check the sample rations to see if the crude protein percentages are correct. Rations B, C, E, H are correct.

NUTRIENT CONTENT OF FEEDSTUFFS

Activity Sheet

	Dry Matter (%)	Crude Protein (%)	Total Digestible Nutrients (%)
Roughages			
Fescue Hay	88.5	10.5	54
Brome Hay	90.0	10.3	55
Alfalfa Hay	89.2	17.1	58
Prairie Hay	92.0	5.8	51
Clover Hay	87.0	15.7	54
Concentrates			
Corn, Shelled	86.5	9.9	91
Corn, Ear	87.0	9.3	90
Barley	88.1	13.3	81
Oats	89.5	13.5	77
Grain Sorghum (Milo)	87.0	10.1	84
Wheat Bran	89.0	17.1	70
Wheat	88.0	14.4	88
Protein Supplements			
Cottonseed Meal	92.5	44.3	74
44% Soybean Meal	89.0	51.5	81

From *United States-Canadian Tables of Feed Composition*, Second Rev., 1972, National Academy of Sciences.
Expressed on dry matter measurements.

SAMPLE RATIONS

Activity Sheet

SUGGESTED RATIONS

Use table to compute total pound crude protein per ration to see if it is the correct percentage of each total ration.

15% Crude Protein Rations

Ration A	Percent	Ration B	Percent
Alfalfa hay	70	Clover hay	70
Oats	20	Oats	29.5
Wheat	10	Salt	0.5
Salt	0.5		

16% Crude Protein Rations

Ration C	Percent	Ration D	Percent
Alfalfa hay	40	Alfalfa hay	50
Barley	38	Corn	23.5
Oats	18	Wheat bran	5
Soybean meal	3.5	Barley	11
Salt	0.5	Soybean Meal	10
		Salt	0.5

17% Crude Protein Rations

Ration E	Percent	Ration F	Percent
Clover hay	64	Alfalfa hay	50
Oats	30	Oats	45.5
Soybean meal	5.5	Soybean meal	4
Salt	0.5	Salt	0.5

20% Crude Protein Rations

Ration G	Percent	Ration H	Percent
Alfalfa hay	40	Alfalfa hay	55
Wheat	25	Wheat	25
Sorghum, grain	25	Sorghum, grain	7.5
Soybean meal	10	Soybean meal	12
Salt	0.5	Salt	0.5

Leader Notes



Increasing Productivity in the Commercial Rabbitry

Rabbits, Level 4, Activity 12

What Members Will Learn . . .

ABOUT THE PROJECT:

- How to calculate conception average, weaning average, yearly production average, and production number
- How to use recorded information to cull herd

ABOUT THEMSELVES:

- To examine their feelings toward euthanasia
- To examine their feelings about abortion

Materials Needed:

- Chalkboard
- Calculator
- Paper and pencils

ACTIVITY TIME NEEDED: 40 MINUTES

ACTIVITY

Leader Notes

To be successful, a commercial rabbit breeder must constantly cull the herd on the basis of productivity. The following steps will help you make decisions about which animals to cull.

Keeping records helps you evaluate the productivity of each doe and is time well spent. George F. Collins, Ralston Purina Company, suggests that one should be careful to keep only records that will be useful in making breeding decisions. This list includes:

Doe's identification
Date bred
Doe's weight
Date served and buck's identification
When palpated (+ or - pregnancy)
Date kindled
Number alive
Number dead
Date weaned
Number weaned
Number dead due to diarrhea
Production number
Average weaning weight

Leader Notes

George Collins suggests that you use production numbers to evaluate rabbits for future breedings or for culling purposes.

In order to calculate the Conception Average:

$$CA = (\text{number of litters/number of breeding}) \times 10$$

Weaning Average:

$$WA = (\text{number of young produced/number of litters})$$

and Yearly Production Average:

$$YPA = (\text{number of litters/number of months in production}) \times 12$$

You will also need the Productive Age. 6–12 months = 0; 12–18 months = 1; 18–24 months = 2; 24–30 months = 3; more than 30 months = 4.

Now calculate the Production Number:

Production Number = conception average + weaning average + yearly production average + productive age

For example, we have a Californian doe that is 26 months old. She has produced 94 young in 12 litters since she was put in production at 6 months. She has been bred 14 times. What is her production number?

$$CA = (12 \text{ litters}/14 \text{ breedings}) \times 10 = 8.6$$

$$WA = (94 \text{ young}/12 \text{ litters}) = 7.8$$

$$YPA = [12 \text{ litter}/20 \text{ months in production } (26-6)] \times 12 = 7.2$$

$$PA = 3 \text{ since the doe is 26 months old.}$$

Therefore the production number of this doe is:

$$\text{Production number} = CA + WA + YPA + PA = 8.6 + 7.8 + 7.2 + 3 = 26.6$$

The ideal production number is 25.0 or better.

Production numbers should also be calculated for the bucks.

You will need to have the following information:

Buck's identification
Doe served
Doe pregnant (+ or -)
Date kindled

Use chalkboard to show this process and define terms.

Work example on chalkboard.

Number alive
Number dead
Date weaned
Number weaned

The production number for a buck equals the conception average plus weaning average plus productive age.

For example; we have a White Satin buck that is 20 months old. He has been involved in producing 120 young in 20 litters since he entered the herd at 6 months of age. He has serviced 41 does.

Work example on chalkboard.

The production number for this buck is calculated as follows:

$$CA = (20 \text{ litters}/41 \text{ breedings}) \times 10 = 4.9$$

$$WA = (120 \text{ young}/20 \text{ litters}) = 6$$

$$PA = 2$$

$$\text{Therefore, the production number} = 4.9 + 6 + 2 = 12.9$$

The ideal production number for the buck is 15.5 or better.

Now have the members calculate production numbers for the following rabbits and decide which ones should be culled from the herd.

Doe #345 is 21 months old. She has produced 80 young in 10 litters since she entered the herd at 6 months old. She has been bred 13 times.

Doe #445 is 15 months old. She has produced 40 young in 5 litters since she entered the herd at 6 months old. She has been bred 12 times.

Buck #145 is 20 months old. He has been involved in producing 130 young in 17 litters since he entered the herd at 8 months of age. He has been used 34 times.

Buck #Y18 is 25 months old. He has been involved in producing 224 young in 28 litters since he entered the herd at 8 months of age. He has been used 43 times.

Answers:

Doe #345 has a production number of 25.6.

Doe #445 has a production number of 19.9.

Buck #145 has a production number of 14.6.

Buck #Y18 has a production number of 17.5.

Leader Notes

Therefore, doe #445 and buck #145 should be culled from the herd. However, do not cull doe #445 until you have a replacement for her.

Remember:

1. Calculate production numbers every three months.
2. Keep only the highest quality bucks.
3. Keep only the does that are most productive.
4. The top 10 percent of the does based on production numbers should be mated with the top 10 percent of the bucks. Future replacement stock should be selected from these matings.

DIALOG FOR CRITICAL THINKING :

Q: Culling a herd could be considered as similar to euthanasia in humans. Discuss the pros and cons of euthanasia. Is there **ever** a good reason for euthanasia? If you were diagnosed with a disease for which there is no cure and the death was long, slow, and painful, would your position change? How would you feel if instead of you, it was a loved one who had to suffer?

Q: Some anti-abortion proponents see abortion as a form of culling. Are there **ever** reasons for abortion? If you were told you would have a profoundly disabled child, mentally, and physically, would you choose abortion?

GOING FURTHER:

Have the members calculate production numbers for their rabbits and decide which ones should be culled from a commercial herd. Fancy breeds will have much lower production numbers.

CULLING RABBITS THROUGH RECORDS

Activity Sheet

Doe Breeding Record

Doe No. _____ Born _____ Breed _____

Sire _____ Dam _____ Litter No. _____

Date Bred	Date Due	Buck No.	Date Kindled	No. Young Born		Number Young Retained	Litter No.	Date Weaned	No. Weaned	Weaning Wt.
				Alive	Dead					

Buck Breeding Record

Doe No. _____ Born _____ Breed _____

Sire _____ Dam _____ Litter No. _____

Doe	Date Bred	Result of Breeding			Weaned		Notes
		Kindled		Passed	Number	Weight	
		Alive	Dead	Date			

Leader Notes



Understanding Systems of Breeding

Rabbits, Level 4, Activity 13

What Members Will Learn . . .

ABOUT THE PROJECT:

- The various breeding programs
- How to use a line breeding chart

ABOUT THEMSELVES:

- The problems of human inbreeding

Materials Needed:

- Chalkboard or flip chart

ACTIVITY TIME NEEDED: 45 MINUTES

ACTIVITY

Leader Notes

The goal of a breeding program should be to develop a strain of rabbits that possess all the desired traits. A strain of rabbits is one in which individuals are related and possess similar characteristics and have the ability to pass these desirable qualities on to their offspring.

This can be accomplished by several different breeding programs: inbreeding, linebreeding, outcrossing.

INBREEDING—Inbreeding is the mating of closely related individuals designed to decrease the amount of variation between individuals and make them more alike in appearance and genetic make-up. This is accomplished by mating father to daughter, mother to son, or brother to sister. Inbreeding not only sets in the desired characteristics but the undesirable ones may also appear. Cull the offspring carefully to eliminate any undesirable traits.

LINEBREEDING—Linebreeding is the mating of less closely related individuals in the herd in order to maintain a high relationship to some outstanding ancestor. It is a mild form of inbreeding. This is accomplished by mating cousins, uncles to nieces, or aunts to nephews. Again culling is essential.

OUTCROSSING—Outcrossing is the mating of unrelated individuals within the same breed. This has a tendency to increase the amount of variation between animals and make them less alike in looks and genetic makeup.

List and define each breeding program as it is discussed or have small groups write a definition for a program and tell about it.

Leader Notes

REMEMBER:

1. Keep accurate records. Know which rabbits are producing the type of rabbits you desire.
2. Cull your litters. Don't keep animals that do not possess the traits you are breeding for.
3. Many breeders use a combination of these breeding programs.

ACTIVITY

You may use the linebreeding chart to carry out a linebreeding program. The circles represent the offspring, a solid line leading from a circle represents the male, and a dotted line represents the female. Number 3 is a result of mating 1 and 2 and contains half of the genetic makeup of the sire and dam.

Hand out the "Linebreeding Chart" to each member and discuss thoroughly.

Number 4 is a result of mating 1 and 3. Number 4 now contains 75 percent of the genetic makeup of the male and only 25 percent of the genetic makeup of the female.

Mating 3 male to 2 will produce 5. Number 5 has 75 percent of the original dam's genetic makeup and only 25 percent of the original sire.

Mating of a 4 male with a 5 female results in 7. Number 7 has 50 percent of the original sire's genetic makeup and 50 percent of the original dam's genetic makeup.

Using the linebreeding chart, have the members figure out the genetic makeup of the offspring if:

1. Number 7 is mated to 11.
2. Number 9 is mated to 11.

DIALOG FOR CRITICAL THINKING:

Q: Inbreeding can be acceptable and desirable for rabbits. What do you know about inbreeding in humans? Can you legally marry brothers, sisters, cousins, or other close relatives? What are your feelings about this? What do you understand to be the problems associated with inbreeding?

GOING FURTHER:

1. Invite a geneticist to speak to your group about the values and problems with inbreeding.
2. Discuss genetic mutations and their values.

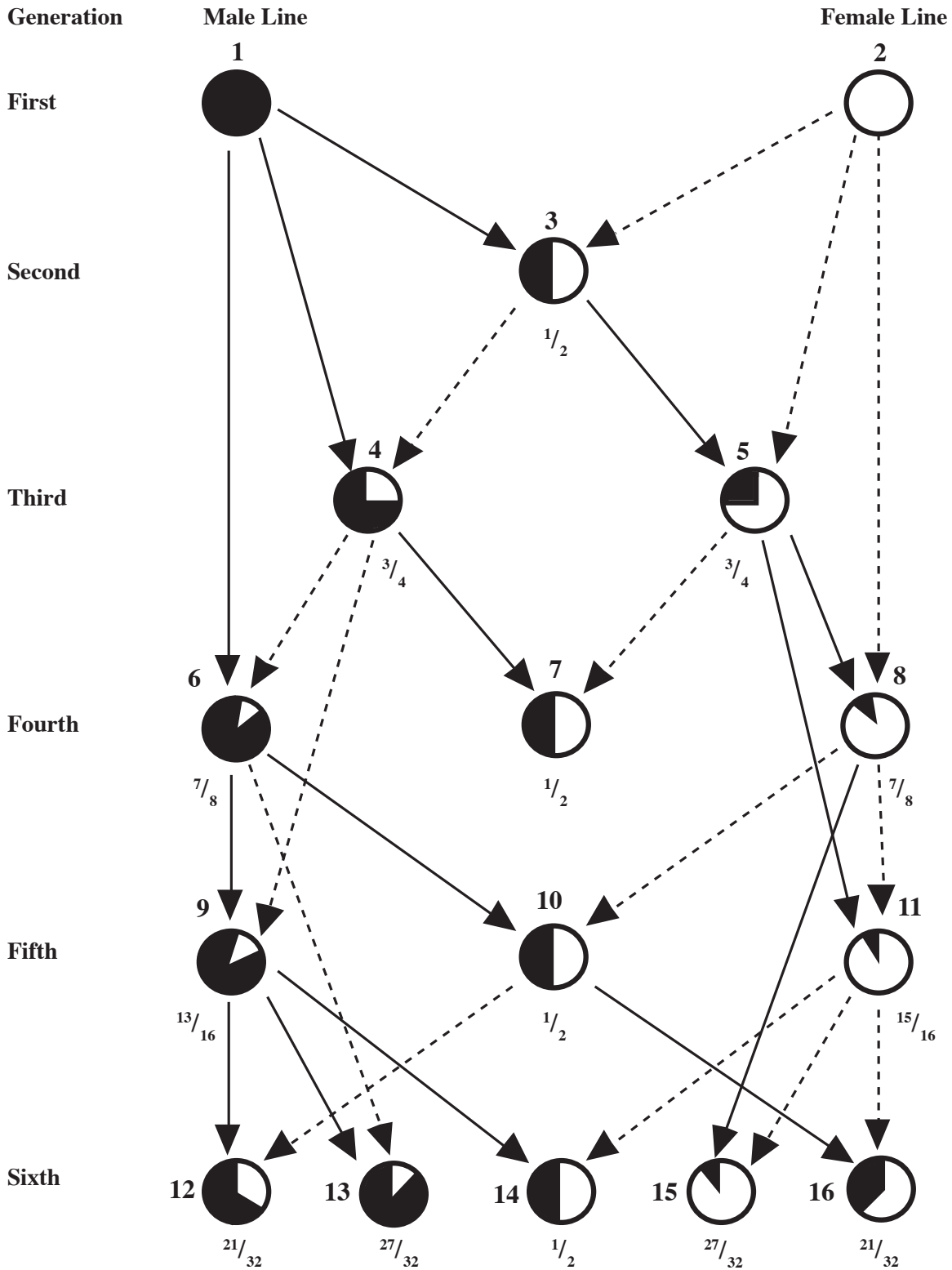
1. Answer: The offspring will have $\frac{21}{32}$ of the original dam's genetic makeup and $\frac{11}{32}$ of the sire's.

2. Answer: 50 percent of the genetic makeup of the original dam and 50 percent of the genetic makeup of the original sire.

Ask each member to tell what type of breeding program he or she is using.

LINEBREEDING CHART

Activity Sheet



Leader Notes



Tracing Genetic Defects

Rabbits, Level 4, Activity 14

What Members Will Learn . . .

ABOUT THE PROJECT:

- A basic understanding about dominant and recessive genes
- How to use Punnet squares
- Genetic terms

ABOUT THEMSELVES:

- Evaluating their feelings about passing family traits to their children

Materials Needed:

- Chalkboard or flip chart
- Paper and pencils

ACTIVITY TIME NEEDED: 60 MINUTES

ACTIVITY

Leader Notes

Buck teeth are an example of a genetic defect found in rabbits. If you understand dominant and recessive genes, you will better understand how to eliminate genetic defects in your herd.

Pass out the paper and pencils and have the members try to work the genetic problems. Discuss the results of the problems.

GENETICS

Each rabbit develops from a single cell, the fertilized egg. This single cell divides to form two cells, then these divide to four, then eight and so on. In the first divisions, mother and daughter cells are identical; later daughter cells change to form tissues and organs that make up the rabbit's body. The genetic materials of these cells is composed of many small units referred to as genes. Genes are located on thread-like bodies called chromosomes.

Chromosomes occur in pairs and their numbers vary from one species of animal to another. Genes also occur in pairs. Genes are passed from parent to offspring in sex cells known as gametes. Female gametes are called ova or eggs, and male gametes are known as spermatozoa or sperm.

An important step in the formation of gametes is a random separation of the paired chromosomes to form new cells having only one chromosome of each pair. This process is called meiosis. At fertilization, the female and male gametes unite and the pair of chromosomes is restored. Thus, the number of chromosomes in the offspring remain constant from generation to generation. One pair of chromosomes (referred to as X and Y) determine the sex of the rabbit. If X and Y chromosomes are paired at fertilization, a male is produced; if two X chromosomes are paired a

Illustrate on chalkboard or flip chart.

Leader Notes

Define various terms by listing on chalkboard or flip chart and asking members for definition.

Genotype
Phenotype
Homozygous
Heterozygous

female is produced. The female can transmit only X chromosomes to her offspring, but a male can contribute either an X or Y chromosome.

Characteristics of rabbits may be controlled by one or many genes. Traits such as coat color are controlled by one or two pairs of genes. Growth rate, litter size, and milking ability are controlled by several or possibly many pairs of genes. Genotype refers to the make-up or combination of genes that control a particular characteristic. The response visibly observed from the genotype is called the phenotype; for example, color, size, etc.

Two genes control color in rabbits: a for albinism (absence of color) and A for full color (actual color depends on other genes). Since genes appear in pairs combinations possible are AA, Aa, or aa. When either AA or aa occur the genes are said to be homozygous. When Aa occurs the genes are said to be heterozygous. A is called the dominant gene and a is the recessive gene. (Dominant genes are identified with capital letters and recessive genes are identified with small letters.)

Using a Punnet square we can see the genetic combinations resulting for mating an aa male with an AA female.

Do examples on chalkboard or flip chart and discuss results.

		Female Gametes	
		A	A
Male Gametes	a	Aa	Aa
	a	Aa	Aa

The genotypes will all be Aa and thus the phenotypes will all show full color.

Assume an Aa male is mated to an Aa female. The following combinations will result:

		Female Gametes	
		A	a
Male Gametes	A	AA	Aa
	a	Aa	aa

Leader Notes

One-fourth of the rabbits will have a AA genotype (full color), one-half of the rabbits will have Aa genotype (full color), and one-fourth of the rabbits will have aa genotype (albino or white). Note that three-fourths of the rabbits will have a color phenotype and one-fourth will have the albinism or white phenotype.

A second pair of genes control color pattern: s for solid body color and S for agouti. (Agouti is dominant over solid color.) If an AaSs male is mated to an AaSs female, what are the possibilities?

		Female Gametes			
		AS	As	aS	as
Male Gametes	AS	AASS	AASs	AaSS	AaSs
	As	AASs	AAss	AaSs	Aass
	aS	AaSs	AaSs	aaSS	aaSs
	as	AaSs	Aass	aaSs	aass

Do this example on chalkboard or flip chart and count the genotype and phenotype results.

Genotypes: 1/16 AASS agouti
 2/16 AASs agouti
 4/16 AaSs agouti
 2/16 AaSS agouti
 2/16 Aass solid color
 2/16 aaSs albino
 1/16 aass albino
 1/16 AAass solid color
 1/16 aaSS albino

Phenotypes: 9/16 agouti
 3/16 solid color
 4/16 albino

The type of gene action expressed in this example is known as recessive epistasis. Epistasis is a type of gene action where one pair of genes exerts influence on another pair of genes. Therefore, when albino aa is in the

Define epistasis.

Leader Notes

homozygous state, the agouti gene *S* or non-agouti gene *s* is not allowed to express itself.

The gene *b* for buck teeth is recessive to the gene *B* for normal teeth. A rabbit can have normal teeth and still carry the gene for buck teeth. Such animals are called carriers of the recessive gene or heterozygous for normal teeth.

Ask the following questions.

QUESTIONS TO ASK

1. What is a dominant gene?

Answer: Only one dominant gene is needed for a trait to appear.

Example: Normal teeth *Bb*.

2. What is a recessive gene?

Answer: Two recessive genes are required for the trait to be expressed. Example: Buck teeth *bb*.

3. What is the result of mating a normal toothed buck *BB* to a normal toothed doe *Bb* that carries the recessive gene for buck teeth?

Answer: All of the offspring will be normal toothed but one-half of the offspring will be carriers for buck teeth.

Have members do a Punnet square for the mating in question 3 and count the phenotypes.

DIALOG FOR CRITICAL THINKING:

Q: If you knew you carried a recessive gene for cystic fibrosis, or some other debilitating disease, would you choose to have children? What other human traits are passed on to your children through your genes?

Genetic counselors can help parents and potential parents cope with the fact of genetic problems. Imagine how you would feel if you were told you and your spouse had a 25 percent chance of conceiving a disabled child.

GOING FURTHER:

Use a Punnet square and determine your own eye genotype.



Understanding Fur Genetics

Rabbits, Level 4, Activity 15

What Members Will Learn . . .

ABOUT THE PROJECT:

- The heat sensitive genes
- The dominant and recessive genes for fur traits

ABOUT THEMSELVES:

- To evaluate the ethical and emotional issues of selective breeding as it relates to humans
- To evaluate their feelings about an outside authority having so much say in their private lives

Materials Needed:

- Chalkboard or flip chart
- Paper
- Pencils
- Genetic references

ACTIVITY TIME NEEDED: 60 MINUTES

ACTIVITY

Leader Notes

It is important to understand the genetics of fur, so you have fewer problems producing rabbits with the desired traits.

Coat color in rabbit involves the interaction of many genes. Formation of the normal dark pigment requires a series of steps and enzymatic reactions. In the Californian marked varieties, a phenotype is characterized by white body fur and black areas at the tips of the feet, tail, ears, and nose. The pattern results from the presence of a gene (c') that controls the production of the enzyme needed to catalyze the formation of the dark pigment. This temperature effect that is responsible for the pattern can be observed by checking a doe who has pulled hair for a litter. The new fur will come in black if the weather is cold. Another way to observe this is to shave a portion of the fur and put an ice pack on the shaved area. The new fur will be black. The reason Californian marked young are dark is because they were chilled in the nest box. After the rabbit moults, white fur will come in.

In rabbits, multiple genes influence fur pigmentation: C (wild), c'' (Chinchilla), c' (Himalayan) and c (Albino). The Wild gene, C , is dominant over the other three. So that CC , Cc'' , Cc' , and Cc genotypes all produce a full-colored individual. A Chinchilla rabbit is produced when the genotype is $c''c''$. A Himalayan marked rabbit is produced when the genotypes are: $c'c'$ or $c'c$. A white rabbit is produced when

List these traits and their genetic code on chalkboard or flip chart.

Leader Notes

the genotype is cc. However a light gray rabbit is produced when the genotype is c''c' or c''c.

List these traits and codes.

Have the 4-H'ers work this out. Use the Punnet square. All offspring would have spotted pattern and short hair. What is the genotype? FfSs

Demonstrate a Punnet square with a simple trait from a reference.

Use the Punnet square. Each parent can produce four gene combinations—FS, Fs, fS, fs.

Show this Punnet square and discuss. The offspring are: 9 short hair, spotted pattern; 3 long hair, spotted pattern; 3 short hair, self-colored; 1 long hair, self-colored.

Have members diagram with a Punnet square.

The normal fur gene (N) is dominant over the satin fur gene (n). In rabbits the gene for spotted pattern (S) is dominant over the gene for self-colored (s). The gene for short hair (F) is dominant over the gene for long hair (f) (Angora)

Problem 1:

What are the possibilities for the offspring if a pure breeding, spotted, patterned short-hair rabbit is mated to a self-colored angora rabbit?

Problem 2:

What are the possibilities for the offspring if two FfSs rabbits are mated?

	FS	Fs	fS	fs
FS	FFSS	FFSs	FfSS	FfSs
Fs	FFSs	FFss	FfSs	Ffss
fS	FfSS	FfSs	ffSS	ffSs
fs	FfSs	Ffss	ffSs	ffss

Note that 75 percent of the rabbits have short hair, 75 percent have the spotted pattern, 25 percent have long hair and 25 percent have the self-colored coat.

Problem 3:

A Californian-marked Satin rabbit is mated to an albino normal fur rabbit. What will their offspring look like? Assuming that the Californian Satin is c'c'nn and the normal fur, white rabbit is ccNN, all offspring would have the genotype c'cNn. Therefore they would all have the Californian markings and have normal fur.

DIALOG FOR CRITICAL THINKING:

Q: Selective breeding or choosing which animals to breed based on their genetic traits is important in running successful animal operations. How do you feel about this same idea imposed on humans?

GOING FURTHER:

1. Have a speaker come in and discuss the “regression” effect as it applies to human genetics.



Judging Rabbit Carcasses

Rabbits, Level 4, Activity 16

What Members Will Learn . . .

ABOUT THE PROJECT:

- What to look for when judging a rabbit carcass

ABOUT THEMSELVES:

- The importance of the decision-making process

Materials Needed:

- Rabbit carcasses
- Freezer wrap or pans

ACTIVITY TIME NEEDED: 60 MINUTES

ACTIVITY

You must know how to judge quality carcasses in order to be able to produce them for your customers.

A rabbit carcass should be neat and clean. There should not be any bruised areas. The ribs should be well covered with meat. The loin should be wide and deep. The hips and hind legs should be full and meaty. Internal fat should be at a minimum and there should be little external fat.

Now discuss the correct placings and why the classes were placed that way by the official judge.

DIALOG FOR CRITICAL THINKING:

Q: In rabbit judging there are specific traits that make a good rabbit. What are desirable traits you look for in friends? What are undesirable traits that cause you to choose to exclude someone as a friend?

Q: Discuss judging people in general. What are problems that occur when this happens. How do you feel about others judging you? Think of a time when you misjudged someone.

GOING FURTHER:

1. Visit a rabbit processing plant.
2. Plan a live meat pen show, then dress the fryers, judge the carcasses, and compare results of live and carcass shows.

Leader Notes

Pass out Judging Scorecards and discuss each item.

Point out what a good carcass should look like using one of the carcasses available.

Have the members judge the carcasses. The carcasses should be in classes of 4 specimens per class.

After the group has had a chance to judge the carcasses, ask for volunteers to give oral reasons on a class.

SINGLE CARCASS SCORECARD

Activity Sheet

Single fryers — not over 10 weeks of age, weight not over 5 pounds.

	Possible points	Score
Dress-out percentage.....	40	_____
Appearance	60	_____
Shape (type)	20	_____
Color.....	15	_____
Texture.....	10	_____
Fat.....	10	_____
Organs	5	_____
Total Points	100	_____



Preparing Rabbit for the Table

Rabbits, Level 4, Activity 17

What Members Will Learn . . .

ABOUT THE PROJECT:

- The nutritional value of rabbit meat
- How to prepare a rabbit dish

ABOUT THEMSELVES:

- How to make decisions and support their positions

Materials Needed:

- Freshly dressed rabbit
- Cooked rabbit
- 1 can mushrooms
- 1 can water chestnuts
- 1/2 cup blanched whole almonds
- 1 medium onion
- Paprika
- Rabbit broth
- A 2-quart casserole
- Rabbit cookbooks
- Cooked rice
- Can opener
- Spoon
- Paper plates and plastic forks

ACTIVITY TIME NEEDED: 60 MINUTES

ACTIVITY

Leader Notes

Rabbit meat is high in protein and thus is an excellent source of protein that could help end worldwide malnutrition. Once you know how easy it is to prepare rabbit, you will be able to promote rabbit meat well.

Rabbit meat is higher in protein but lower in fat, uric acid, cholesterol, sodium, and calories than any other meat available today.

Rabbit meat is easily digested and is recommended by many physicians for diets where red meat is restricted.

Rabbit meat should be well done.

Rabbit meat can be used fresh, cured, smoked, sweet-pickled, soured, roasted, barbecued, or substituted in any veal or poultry recipe.

Leader Notes

According to the U.S. Department of Agriculture, rabbit meat has 20.9% protein, 10.2% fat, 67.9% moisture, and 795 calories per pound.

Now have the group prepare a rabbit dish. This time we will prepare Rabbit Almond Casserole.

(Any rabbit recipe could be substituted for the Rabbit Almond Casserole.)

Rabbit Almond Casserole

Ingredients:

4 cups cooked rabbit 1 can mushrooms, drained
1 can water chestnuts 1/2 cup blanched whole almonds
1 medium onion Paprika
Rabbit broth

1. Take the rabbit meat off the bone.
2. Cube four cups of rabbit meat.
3. Spread 1/2 the rabbit in the casserole dish.
4. Top with almonds, chopped onion, water chestnuts, and mushrooms.
5. Cover with rabbit broth.
6. Sprinkle with paprika.
7. Bake for 30 minutes in a 350°F oven.

(*Official Guide to Raising Better Rabbits* has a diagram showing how to cut up a rabbit.)

While waiting for the casserole to bake, cut up a rabbit for frying.

After the casserole is done, serve over rice.

DIALOG FOR CRITICAL THINKING:

Q: Some people do not like to eat meat. Be prepared to argue the benefits of eating meat. Next, explain why rabbit meat is better than other kinds of meat.

GOING FURTHER:

1. Prepare rabbit dishes for members' parents.
2. Develop your own rabbit recipes.
3. Begin keeping your own set of rabbit recipes.



Analyzing for Causes of Death (Necropsy)

Rabbits, Level 4, Activity 18

What Members Will Learn . . .

ABOUT THE PROJECT:

- How to conduct a necropsy
- To recognize healthy versus unhealthy animal tissue

ABOUT THEMSELVES:

- To improve observation skills
- To beware of ethical considerations

Materials Needed:

- Scissors
- Sharp knife or scalpel
- Rubber gloves
- Specimen bottles filled with 10 percent formalin or alcohol
- Rabbit to be examined
- Newspapers
- Disinfectant
- Chalkboard or flip chart

ACTIVITY TIME NEEDED: 60 MINUTES

ACTIVITY

Since there are very few diagnostic laboratories for rabbits in the United States, it is important for you to become efficient in home necropsy. This way you can forward information to a specialist who will be able to analyze disease problems.

Whenever a rabbit dies without an obvious cause, it should be examined.

When you do a necropsy at home, find a place that has good lighting and where you will not be disturbed during the necropsy. Cover the area with plastic (garbage bags will work fine), and lay several layers of newspaper on top of the plastic. Have scissors, sharp knife, rubber gloves, and specimen bottles handy.

1. Put on the rubber gloves and go over the animal very carefully to notice any abnormalities or external parasites. Note any abnormalities.
2. Lay the animal on its back with the neck and legs extended. Note the size and condition of the animal. Is the animal the correct size for its breed and age?

Leader Notes

Since it isn't very likely that a rabbit will die just when this lesson is planned, a fryer could be used to demonstrate this procedure. Ask a local veterinarian to help with this.

Have someone list the steps or items checked and findings on a chalkboard or flip chart after each is examined. This will serve as a summary to determine what might have caused death.

Leader Notes

3. Make the first incision just in front of the genitals through the skin and muscular wall. The incision should continue along the mid-line (center) to the chin. Do not damage any of the internal organs during this procedure.
4. Carefully expose the abdominal viscera. You may wish to make lateral incisions at the hind legs and just behind the rib cage.
5. Note if there is any excessive fluid within the abdominal cavity.
6. Carefully examine the abdominal viscera.
7. Remove the liver. Examine it for any abnormalities on the surface. Now carefully cut the liver to examine the internal structure.
8. Remove the kidneys and examine them externally and internally.
9. Remove the spleen and examine it externally and internally.
10. Examine the stomach; note size, color, and condition.
11. Examine the small intestines, noting size, color, and condition.
12. Examine the cecum; note size, color, and condition.
13. Examine the large intestines, noting color, size, and condition.
14. After the exterior of the gastrointestinal tract has been examined, carefully open up the tract and check the lining for abnormalities.
15. Clean up the debris from the examination of the gastrointestinal tract.
16. Open the chest cavity. Examine the lungs and heart for abnormalities.
17. Examine the windpipe for abnormalities.
18. Remember, any time an abnormality is found it should be preserved so it can be examined by a professional.
19. Carefully dispose of the carcass and debris.
20. Disinfect the gloves and clean up all the instruments used.

If rabbits or fryers are available, let every member do a necropsy while you are demonstrating.

Your first necropsy may be rather crude, but with practice you will recognize abnormalities readily.

DIALOG FOR CRITICAL THINKING:

Q: One of the skills you will need to make a thorough necropsy report is your ability to observe carefully. Observation skills can be improved through practice. What are some things you can do to practice and improve your observation skills?

Q: What you have done on your rabbit is done to humans in the form of an autopsy. What are the pros and cons of doing this on humans? What are the ethical considerations involved?

GOING FURTHER:

1. Visit a veterinarian doing a rabbit necropsy
2. Study the diseases common to rabbits.

Leader Notes



Making Fur Toys and Other Items

Rabbits, Level 4, Activity 19

What Members Will Learn . . .

ABOUT THE PROJECT:

- How to block a rabbit skin
- How to mark and cut a pattern on the rabbit skin

ABOUT THEMSELVES:

- To evaluate their beliefs about animals as clothing

Materials Needed:

- Rabbit pelts which have been blocked
- A rabbit pelt which needs to be blocked
- Pattern for a toy
- Fine-point ballpoint pen
- Exacto knife
- Toy made of rabbit skin
- Chalkboard and chalk
- A piece of plywood
- Small hammer
- Pliers
- Sponge
- Long tacks or push pins
- Lukewarm water

ACTIVITY TIME NEEDED: 45 MINUTES

ACTIVITY

Leader Notes

The 4-H'ers can establish an extra income for the sale of items made from rabbit pelts. The 4-H'ers need to know the correct way to work with the rabbit pelt.

The steps which one should follow when making an item out of a rabbit skin are:

1. A pattern should be selected.
2. All skins should be blocked before marking and cutting a pattern. In order to block a rabbit skin you should:
 - a. Dampen the leather side of the skin, fold and let sit a minute or two for the water to soak in and make the skin more pliable.
 - b. Tack the bottom end in three to four places.

Demonstrate this procedure and all steps as you proceed through the activity.

Leader Notes

- Demonstrate how to mark the pattern on a pelt.
- Demonstrate how to cut out the pattern.
- Show the finished product.
- c. Work the skin with your fingertips pushing upward and outward; be sure to tack in place as you work. (Care should be taken not to stretch too tightly as the skin might tear.)
 - d. Allow two to three hours for the skin to dry.
 3. Check the fur side for any bald or damaged areas.
 4. Draw on the leather side of the pelt to show all the bald and damaged areas.
 5. Using a fine-tipped ballpoint pin, mark the pattern on the leather side of the pelt.
 6. Using an Exacto knife gently cut out the pattern. Be sure to just cut through the leather portion of the skin. Always elevate the skin with your hand as you cut out the pattern.

Your article can now be sewn together. You can hand sew, but machine sewing is best.

DIALOG FOR CRITICAL THINKING:

Q: It is currently in vogue to avoid wearing animal pelts. Discuss the pros and cons of wearing animal furs.

Q: How would you talk about this issue to an animal welfare advocate?

Q: Are there any differences between wearing pelts like mink and rabbits versus the pelt of baby seals or an endangered species?

GOING FURTHER:

1. Make your own rabbit skin project.
2. Design a pattern of your own.



Exploring Rabbit Careers

Rabbits, Level 4, Activity 20

What Members Will Learn . . .

ABOUT THE PROJECT:

- Various rabbit related careers available

ABOUT THEMSELVES:

- Their feelings about pursuing a rabbit related career

Materials Needed:

- Pencils and paper
- Rabbit References Activity Sheet

ACTIVITY TIME NEEDED: 60 MINUTES

ACTIVITY

It is important for the 4-H'ers to learn about rabbit related careers. This lesson involves library research on rabbit related careers that each member is responsible for reporting on at the following meeting.

Examples of some rabbit related careers are: veterinarian, laboratory technician, tannery worker, commercial rabbitry operator, processing plant manager, and animal nutritionist.

DIALOG FOR CRITICAL THINKING:

Q: After listening to all of the reports, which career most appeals to you and why?

Think of as many ways as possible that you can apply the information you've learned in these reports to your own life.

GOING FURTHER:

1. Have guest speakers from a couple of the rabbit related career fields come speak to the group.
2. Tour a commercial rabbitry, processing plant, feed company, veterinary laboratory, or a tannery.
3. Research the amount and kind of education you'll need to be employed in the rabbit related career of your choice.

Leader Notes

A week or so before the meeting have each 4-H'er select a career to research.

Hand out "Rabbit References" for members to use as a beginning to researching a career.

Members take turns reporting.

Adapted from a Kansas State University Cooperative Extension Service publication written by Clarence W. Linsey, Kansas State Rabbit Breeders Association, and reviewed by James P. Adams, Extension Specialist, 4-H Youth Programs, Kansas State University.

Revised for Washington State by Nancy K. Baskett, 4-H Program Assistant, Pierce County, and Jerry A. Newman, Extension 4-H Youth Development Specialist.



4-H 

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