Kansas 4-H Rabbit Leader Notebook

Level IV

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Advancing by Setting Long-Term Goals

*Rabbits, Level IV*

**What Members Will Learn . . .**

**ABOUT THE PROJECT:**
- Setting goals

**ABOUT THEMSELVES:**
- The importance of setting goals

**MATERIALS NEEDED:**
- Rabbit Member Guide and Annual Report (MG-16)
- Activity Sheet 1, Preparing Long-Term Goals

**ACTIVITY TIME NEEDED:** 60 MINUTES

**ACTIVITY**

Because of your involvement and achievements in past rabbit projects, you will now be helping other project members by sharing the information and knowledge that you’ve gained about rabbits.

As a junior leader, you also will be reviewing your own goals.

Your progress throughout Level IV is an important part of your rabbit project. Sometimes, setting long-term goals is difficult and, therefore, we don’t do it. But in Level IV, we have made several places for you to look at your progress.

Setting long-term goals does not need to be intense or elaborate. Rather, it should be simple and to the point. If you take time to review your long-term goals, you will have a better chance of reaching those goals.

Goals can be long-term or short-term. When using the Rabbit Member Guide and Annual Report for Level IV, let’s make both goals long-term—something you plan to do in two to five years.

Many of the things you have been learning in your rabbit projects are skills that are transferable to long-term goals, such as obtaining more education, getting a job, winning a scholarship, or even pursuing a career.

Now that you’ve completed the activity sheet, let’s fill out the Rabbit Member Guide and Annual Report using these two long-term goals.

**Leader Notes**

Complete MAP STEPS one to seven.

Pass out Activity Sheet 1, Preparing Long-Term Goals, and fill in the blanks.
DIALOGUE FOR CRITICAL THINKING:
Share:
1. What were your two goals?
2. What did you like most about this activity?

Process:
3. Why is it important to review your long term goals?
4. What skills do you have that you can use in other projects, activities or situations?

Generalize:
5. What did you learn about yourself from this activity?

Apply:
6. How will you apply what you’ve learned to other situations?

GOING FURTHER:
• Develop a job resume.
• Discuss developing a personal portfolio of your skills with a school counselor.

REFERENCES:
Author:
Gwen Bailey, Consultant; James P. Adams, Extension Specialist, 4-H Youth Programs, Kansas State University

Reviewed By:
Rabbit Design Team
ADVANCING BY SETTING LONG-TERM GOALS
RABBITS, LEVEL IV
Activity Sheet 1, Preparing Long-Term Goals

Long-term goals define your future. Select two of the following long-term goals that you might work on in Level IV.

CHECK TWO (of your choice)

_____ acquire more education
_____ get a job
_____ win a scholarship
_____ select a career path
_____ other

Now take one of these long-term goals and answer the following questions.

One of my long-term goals is to:

________________________________________________________

I hope to eventually use this long-term goal. How I plan to reach this goal is by:

________________________________________________________

To reach this long-term goal I will use my abilities of:

________________________________________________________

To reach this long-term goal I will need to improve on:

________________________________________________________

When I reach my goal in the future, I will know it’s been met by:

________________________________________________________
Recording Judges Comments at a Rabbit Show

Rabbits, Level IV

What Members Will Learn . . .

ABOUT THE PROJECT:
• How to take the judge’s comments during a rabbit show

ABOUT THEMSELVES:
• Understanding the importance of listening

Materials Needed:
• American Rabbit Breeders Association comment cards
• Pencils

ACTIVITY TIME NEEDED: 30 MINUTES

ACTIVITY

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

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 must have these two pieces of information to complete all the paperwork after the show.

The comment cards have areas where you can check as the judges give their comments. Often, the judge will say that the rabbit has good head, bone and ears. 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, check very good. However, if the hips are pinched, write pinched next to hips. If the rabbit is disqualified, 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.

There are five 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.

Leader Notes

Pass out the comment cards and pencils.

Have the members try to take comments as you give comments on a New Zealand White Senior Doe, ear #45B.

Check to see what the members 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.
There are 12 black Dutch senior bucks, 5V will be sixth. The saddle and the under cut are ragged. The left cheek is long and the right cheek has a drag off 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 each placing.

**DIALOGUE FOR CRITICAL THINKING:**

**Share:**
1. What is the easiest/hardest part of writing down what the judge says?
2. How did you maintain your concentration on listening and recording instead of watching?

**Process:**
3. How does careful listening help you take notes?
4. Why is it important to write brief but legible notes?

**Generalize:**
5. What are other circumstances where you needed to carefully listen?

**Apply:**
6. How will these listening skills help you in the future?

**GOING FURTHER:**
- Take comments at a rabbit show. Compare your comment card to the recording judges card.
- Compare the skills you learn in this lesson to those of a court reporter, secretarial transcriber or any others you can think of.

**REFERENCES:**

**Author:**
Clarence W. Linsey, Kansas State Rabbit Breeders Association; James P. Adams, Extension Specialist, 4-H Youth Programs, Kansas State University

**Reviewed By:**
Rabbit Design Team
### Judging Rabbit Showmanship

**Rabbits, Level IV**

#### What Members Will Learn . . .

**ABOUT THE PROJECT:**
- How to judge showmanship

**ABOUT THEMSELVES:**
- Accepting responsibility

#### Materials Needed:
- Rabbit Showmanship score sheets (from Level I lesson)
- American Rabbit Breeders Association Standard of Perfection
- Carpet for table
- Pencils
- Members with rabbits to participate in a showmanship contest
- Certificates of achievement

**ACTIVITY TIME NEEDED:** 40 MINUTES

<table>
<thead>
<tr>
<th>ACTIVITY</th>
<th>Leader Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>As the member becomes older and experienced, he or she can be very helpful to the 4-H program by assuming roles of leadership. One way this can be accomplished is for the member to judge showmanship. Although the score sheet lists points, it is best to write down comments and not try to assess a point value for each step. If the participant has trouble carrying the rabbit to the table, note that on the score sheet. Remember, the important thing is that all the tasks are complete. They do not have to be done in the exact order as on the score sheet. The judge must be alert and notice if the member checks everything. It is a good idea to note that a task was completed—you may want to check off the task as it is completed. If the member has a problem or if he or she does an outstanding job completing a task be sure to note this. The rabbit should be in good condition. However, remember the member can only use what he has at this time, therefore, only a few points are on the condition of the rabbit. The member should be confident and polite. The judge should ask several questions after the member has finished all the tasks. Often, the member will tell what and why something is checked while performing the task. In this case you will have a lot of your questions already answered.</td>
<td></td>
</tr>
</tbody>
</table>

Pass out the rabbit showmanship score sheets and discuss.
Some typical questions are:

What breed of rabbit did you use for showmanship? Do you raise any other breeds of rabbits?
How old are you?
In what class would you enter this rabbit at a show? How many rabbits do you have?
How many varieties are there in your breed?
What is the senior weight for your breed?
Is your rabbit a 4 class or a 6 class rabbit? What were you checking for when you checked the toenails? Why did you check the tail?

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

Generally, if the participants did a good job at checking the rabbit and they knew the answers to your questions, they will be in the purple ribbon group. Of course you will have to consider age; we would expect a 14-year-old to know more than a 7-year-old.

Have the members judge the showmanship participants one at a time. After the first participant has been excused, have the group discuss how they have evaluated the performance.

Continue evaluating the showmanship participants until all have participated. The group has now placed the participants into ribbon groups. Out of the purple ribbon group, the top ones usually are 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 often are asked to exchange rabbits and demonstrate how to examine them. Sometimes, a participant can do an excellent job at handling a particular rabbit but can not handle other rabbits.

The judge then makes the final selection of the top individuals. (If your group used the second interview, have the group decide on the top individuals.)

Distribute award certificates and ribbons. The certificates should be for participation and not for a placing.

**DIALOGUE FOR CRITICAL THINKING:**

**Share:**

1. What do you enjoy about judging rabbit showmanship?

2. What is a good, typical question to ask during a showmanship contest?
Process:
3. What do you feel is the most important component of rabbit showmanship?

4. What part does knowledge play in showmanship?

5. What is significant about the difference between showing a rabbit and being the judge?

Generalize:
6. What is significant about assuming the responsibility of a judge?

Apply:
7. How has your attitude about responsibility changed as a result of this activity?

GOING FURTHER:
• Assist the rabbit showmanship judge at a county fair.

REFERENCES:
Author:
Clarence W. Linsey, Kansas State Rabbit Breeders Association; James P. Adams, Extension Specialist, 4-H Youth Programs, Kansas State University.

Reviewed By:
Rabbit Design Team
Judging Rabbit Pelts

Rabbits, Level IV

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:
• Importance of meeting standards

Materials Needed:
• Member Handout 1, Rabbit Pelt Scorecards
• Several different rabbit pelts

ACTIVITY TIME NEEDED: 40 MINUTES

ACTIVITY

One of the products of rabbit raising is the pelt. Some rabbits are raised primarily for the pelt, therefore, it is essential that the breeder knows 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 also are 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 to 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 shall 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.

Leader Notes
Pass 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.
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 ¼ inch. A dense coat is preferable to a thin coat. To be in proper condition, the fur must be set tight in the skin, without evidence of moult, broken spots, mats of fur, or stain. 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 dying; it is reality oriented.

Coat colors are classified as selfs, 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 also must 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 junction, 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 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 ¼ inch. The coat should be well balanced, of uniform length, about 1 inch to 1½ inches long. Allowable lengths include plus or minus ½ 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, ⅝ inch long, straight, upright with identical length and texture throughout the entire body. The fur has a lustrous sheen with an incredible supply 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 silty.

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

DIALOGUE FOR CRITICAL THINKING:
Share:
1. What are the three types of rabbit pelts?
2. What did you find the easiest/hardest about judging rabbit pelts?

Process:
3. Why are standards important to meet when working with pelts?

Generalize:
4. In what other activities have you had to meet a certain standard?
   What were the standards and how did you meet them?

Apply:
5. Standards are all around us. What are some standards that you think you will be required to meet in the future?

GOING FURTHER:
• Attend a rabbit fur or wool show.
• Work with a judge at a fur show.

REFERENCES:
Cooperative Extension Service, Washington State University
Standard of Perfection, American Rabbit Breeders Association

Author:
Daniel K. Andrews, Washington State University; Clarence W. Linsey, Kansas Rabbit Breeders Association; James P. Adams, Extension Specialist, 4-H Youth Programs, Kansas State University

Reviewed By:
Rabbit Design Team

All educational programs and materials are available without discrimination on the basis of race, color, national origin, sex, age, or disability.

15-Rabbits, Level IV
# Judging Rabbit Pelts
## Rabbits, Level IV
### Member Handout 1, Rabbit Pelt Scorecards

## Satin Fur Pelts

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

### Rex Fur Pelts

<table>
<thead>
<tr>
<th>Character</th>
<th>Points</th>
<th>Judge or Select for:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Density</td>
<td>20</td>
<td>Extremely thick-set, plushlike guard hairs plentiful</td>
</tr>
<tr>
<td>Texture</td>
<td>15</td>
<td>Upright, springy, smooth to the touch</td>
</tr>
<tr>
<td>Balance</td>
<td>15</td>
<td>Same length, density, texture over entire pelt</td>
</tr>
<tr>
<td>Condition</td>
<td>15</td>
<td>Prime, lustrous, free from breaks, bare spots</td>
</tr>
<tr>
<td>Color</td>
<td>15</td>
<td>Proper surface, intermediate, undercolor</td>
</tr>
<tr>
<td>Leather</td>
<td>10</td>
<td>Lightweight, soft, pliable</td>
</tr>
<tr>
<td>Size</td>
<td>10</td>
<td>Largest usable portion of pelt</td>
</tr>
</tbody>
</table>

## Normal Fur Pelts

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

### Think Back:

How did your responsibility change as you progressed from recording judges’ comments to that of maintaining a standard when selecting pelts?

What is significant about having the opportunity for responsibility and actually accepting a responsibility?

Why are standards important?
Conducting Tours and Field Trips

Rabbits, Level IV

What Members Will Learn . . .

ABOUT THE PROJECT:
• How to prepare for a tour and field trip

ABOUT THEMSELVES:
• Importance of decision making

Materials Needed:
• Calendar
• Chalkboard and chalk

ACTIVITY TIME NEEDED: 45 MINUTES

ACTIVITY

We are going to plan a field trip to some rabbitries in this area. First, we need to decide which rabbitries we would like to visit.

Select a date and time when your group would like to make this tour.

After you have selected the rabbitries you wish to visit, you need to contact each of the rabbitries to see if you could tour the rabbitry and if it would be convenient to have the group visit on the selected date. If the selected date isn’t convenient for the rabbitry, ask for a date that would be convenient.

Now, decide on transportation. Will cars be used or will a bus be available? The group needs to be sure that sufficient transportation is available to transport the group.

At this time, have the group make a list of questions that they would like to ask when the group visits each rabbitry.

After the group has completed their assignments, they will need to meet to make final plans. After the field trip is planned, each rabbitry should be contacted and given an approximate time when to expect the group.

Leader Notes

Ask the group for suggestions.

The Kansas State Yearbook or the American Rabbit Breeders Association Yearbook are good places to find rabbitries in your area.

Appoint a member to make these contacts.

Have another member check on and set up transportation.

Use chalkboard.
Leader Notes

Date of the Field Trip:
1. Meet at a central location, to carpool.
2. Arrive at the first rabbitry on time. The other times are only approximate.
3. Introduce the host to the group. Let the host conduct the tour.
   The group should ask questions as they are touring the rabbitry.
4. The group should be polite and not touch any of the equipment or rabbits unless given permission to do so.
5. Thank the breeders for showing you their rabbit operation.

After the tour:
The members should write thank-you notes to the breeders for sharing their rabbitries.

DIALOGUE FOR CRITICAL THINKING:

Share:
1. What are several things your group decided on before beginning the field trip activity?

2. What were the events that the group decided on together?

Process:
3. When/where would individual decisions affect the group?

4. Why was it important for the group to make decisions concerning the field trip?

Generalize:
5. What is the significance of group decisions versus individual decisions?

6. How does decision making affect other parts of your life?

Apply:
7. How will you act differently in the future as a result of reviewing group and individual decision making?
REFERENCES:
Kansas State Rabbit Breeders Yearbook, Shirley Wilson, Editor, 7415 North Yaggy Road, Hutchinson, Kansas 67502
American Rabbit Breeders Association Yearbook, American Rabbit Breeders Association, Box 426, Bloomington, Illinois 61701

Author:
Clarence W. Linsey, Kansas State Rabbit Breeders Association; James P. Adams, Extension Specialist, 4-H Youth Programs, Kansas State University

Reviewed by:
Rabbit Design Team
Conducting a Rabbit Skillathon
Rabbits, Level IV

What Members Will Learn . . .

ABOUT THE PROJECT:
• How to conduct a rabbit skillathon
• To work as a team member

ABOUT THEMSELVES:
• Facilitator skills

Materials Needed:
See individual stations to determine the supplies needed

ACTIVITY TIME NEEDED: 30 MINUTES

ACTIVITY

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.

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 members 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.

Leader Notes
Use older members as committee members and/or station facilitators to conduct for younger members.

The skillathon is an excellent teaching technique that should be considered with any lesson.
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.

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

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

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.

DIALOGUE FOR CRITICAL THINKING:
Share:
1. What station did you like the best? The least?

2. What was the easiest/hardest part of being a station facilitator?

Process:
3. What is the most important part of watching the groups work together?

4. How do you facilitate group decision making?

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 compliment each member about a specific item.
Leader Notes

Generalize:
5. What did you learn about your facilitating skills?

Apply:
6. When might you use these facilitator skills in the future?

GOING FURTHER:
See lessons on:
- Identifying Rabbit General Faults and Disqualifications
- Judging a Rabbit Class
- Identifying Parts of a Rabbit
- Understanding a Feed Tag
- Identifying Breeds of Rabbits
- Scoring a Judging Class

REFERENCES:
Agricultural Extension Service, University of Minnesota

Authors:
Clarence W. Linsey, Kansas State Rabbit Breeders Association; Thomas D. Zurcher, Extension 4-H Specialist, University of Minnesota; James P. Adams, Extension Specialist, 4-H Youth Programs, Kansas State University

Reviewed by:
Rabbit Design Team
Conducting a Rabbit Quiz Bowl

Rabbits, Level IV

What Members Will Learn . . .

ABOUT THE PROJECT:
• To conduct a quiz bowl
• To increase their knowledge of rabbits

ABOUT THEMSELVES:
• Understanding rules

Materials Needed:
• Electronic Quiz Bowl Unit (optional)
• Questions and answers about rabbits

ACTIVITY TIME NEEDED: 60 MINUTES

ACTIVITY

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 group into teams of two, three, or four members each. (County or state teams would require four members.)

2. If more then 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, each respective team member will take turns for the option of answering each question. Contestant 1A will go against 2A, 1B 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, as no competition may end in a tie.

6. No talking among team members in either the one-on-one or the toss-up portion of the contest should be allowed.

Leader Notes

Have the Level IV members 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 stop watch and having members raise their hands to answer questions.
Leader Notes

7. The first person who activates the signaling device must begin to answer the question within five seconds. A correct answer is awarded one point. If the question is not answered or is incorrect, the opposing team will be given a chance to answer. No points will be deducted for an incorrect answer.

8. If no one activates the signaling device within 5 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 five 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, 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.

DIALOGUE FOR CRITICAL THINKING:

Share:
1. What did you like/dislike about setting up and carrying out a quiz bowl?

Process:
2. Why is it important to follow the specific rules of the quiz bowl?

Generalize:
3. What are rules that influence other activities that you work with?

Apply:
4. What are some rules that will be important to your future plans?

After the Quiz Bowl is done, have the members who conducted the quiz bowl discuss what they did well, what they need to do better next time, what mistakes were made. Do a general critique.
REFERENCES:
Registrar’s Study Guide, American Rabbit Breeders Association
Judge’s Study Guide, American Rabbit Breeders Association
A Progressive Program For Raising Better Rabbits And Cavies, American Rabbit Breeders Association
Standard Of Perfection, American Rabbit Breeders Association

Author:
Clarence W. Linsey, Kansas State Rabbit Breeders Association; James P. Adams, Extension Specialist, 4-H Youth Programs, Kansas State University

Reviewed by:
Rabbit Design Team

Think back: (Record these questions and answers on a separate sheet for your record book.)
Which of the three teaching/learning methods used in the last three lessons was most effective? Why?
________________________________________________________________________
________________________________________________________________________
When and why might you select a different learning method?
________________________________________________________________________
________________________________________________________________________
Selecting a Judging Class

*Rabbits, Level IV*

What Members Will Learn . . .

ABOUT THE PROJECT:
- How to select a judging class

ABOUT THEMSELVES:
- Use of purpose and prioritizing with decision making

MATERIALS NEEDED:
- Classes of rabbits to judged
- Judging score cards

ACTIVITY TIME NEEDED: 35 MINUTES

ACTIVITY

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 members, 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 members 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.

When selecting animals for a class, decide what breed objective or judging principle you want to accomplish. Example: point out animals with disqualifications, type faults, marking faults, color differences, and fur or wool differences. Be sure the items are readily detectable—unless trying to make a hard class.

Obtain the services of qualified judges for official placings. Remember the animals are placed according to the American Rabbit Breeders Association Standard of Perfection—not a group or audience consensus.

For meat pen classes use the following guidelines.
Meat type—40 percent—most important criteria. Select animals that are short and compact, with well-filled and rounded bodies of firm flesh. Smooth, well-filled hindquarters and good depth of body are especially important. Hindquarters are most important, loin second, and forequarters are third.

Leader Notes

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

Condition—30 percent–Try to have both fur and flesh in prime condition.
Uniformity—20 percent–Should be present in meat type, weight, size,
appearance, condition and fur.
Fur—10 percent–Conform to breed description and uniform on all three
animals.

DIALOGUE FOR CRITICAL THINKING:
Share:
1. What is a judging class?
2. What other experiences have you had in judging rabbits?

Process:
3. Why is it important to understand the selection of a class?
4. What purposes would you select classes for? Why?
5. Why is it important to prioritize or rank rabbits?

Generalize:
6. What projects or activities do you prioritize?

Apply:
7. How does having a purpose help you make a decision?
8. How will you prioritize things differently, now that you’ve com-
   pleted this lesson?

GOING FURTHER:
• Select several classes as part of a judging school or workout.
• Help set up or conduct a complete judging contest.
• Volunteer to be a rabbit judging coach for younger members.

REFERENCES:
Author:
Clarence W. Linsey, Kansas State Rabbit Breeders Association; James P.
Adams, Extension Specialist, 4-H Youth Programs, Kansas State
University

Reviewed By:
Rabbit Design Team

Cooperative Extension Service
Kansas State University
Manhattan

All educational programs and materials are available without discrimination on the basis of
race, color, national origin, sex, age, or disability.
Conducting a Judging Contest

Rabbits, Level IV

What Members Will Learn . . .

ABOUT THE PROJECT:
• How to conduct judging contest

ABOUT THEMSELVES:
• The importance of learning by doing
• Learn self-confidence associated with accomplishing a new task
• The importance of planning

MATERIALS NEEDED:
• Test on rabbits
• Rabbits for identification
• Identification sheets
• Rabbits to be used in judging classes
• Judging score cards
• Registration sheets
• Pencils

ACTIVITY TIME NEEDED: 90 MINUTES

ACTIVITY

Members can learn how to evaluate rabbits by participating in rabbit judging contests.

At least two judging classes should be selected for the contest.

A test on rabbits should be prepared for the contest. The test should have 25 to 50 questions.

Ten to 20 rabbits should be used 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.
6. One helper is needed at each judging class, the identification and test station.
7. Several helpers will be needed to serve as official scorers.

Variations of this procedure could be held 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.
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 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 results.

DIALOGUE FOR CRITICAL THINKING:
Share:
1. What was the easiest/hardest part of conducting a judging contest?

Process:
2. Why is it important to have everything ready to go when the contest begins?
3. What is the difference between participating in and conducting a judging contest?
4. What are the skills that you used when conducting a judging contest?

Generalize:
5. What planning and organizational skills do you think you will use when participating in other events?

Apply:
6. How will you use what you learned about conducting a judging contest in the future?

GOING FURTHER:
• Be the official judge and explain your placings and select the classes for a group of young members.
REFERENCES:
Standard of Perfection, American Rabbit Breeders Association
A Progressive Program For Raising Better Rabbits & Cavies, American Rabbit Breeders Association

Author:
Clarence W. Linsey, Kansas State Rabbit Breeders Association; James P. Adams, Extension Specialist, 4-H Youth Programs, Kansas State University

Reviewed by:
Rabbit Design Team
Preventing for and Conducting a Rabbit Show

Rabbits, Level IV

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:
• Entry blanks
• Comment cards
• Sanction forms
• Chalkboard and chalk or flip chart and marker

ACTIVITY TIME NEEDED: 40 MINUTES

ACTIVITY

In order to hold a successful rabbit show, it is important to know the steps needed. Understanding how to prepare and conduct a rabbit show will make members better exhibitors.

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 American Rabbit Breeders Association (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 co-oped 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.
14. The show superintendent will see that the show is started on time and that the show runs smoothly.
15. Be sure to hand out the trophies and ribbons won by the exhibitors.

35-Rabbits, Level IV

Leader Notes
Put these steps on a chalkboard or flip chart
16. If this is a sanctioned show, the show secretary is responsible to see that all the reports are completed and returned on time.

17. All members should help with the clean up 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 to see that the rabbits get to the judging tables when needed.

Members will be needed to take comments at the judging tables.

Now have the group plan a rabbit show.

**DIALOGUE FOR CRITICAL THINKING:**

**Share:**
1. What was the easiest/hardest part of preparing and conducting a rabbit show?

**Process:**
2. What did you learn from this broad and involved endeavor?

3. Why is it important that all pieces of a project be ready and prepared to go at any given time?

**Generalize:**
4. What did you learn about yourself when doing this lesson?

5. What did you learn about others?

**Apply:**
6. How can you apply what you learned to other situations in your daily life?

**GOING FURTHER:**
- Attend rabbit shows before conducting your own.
- Have licensed judges speak to your group about being a judge, what’s involved and how members can become judges.
REFERENCES:
Secretaries’ Handbook, American Rabbit Breeders Association

Author:
Clarence W. Linsey, Kansas State Rabbit Breeders Association; James P. Adams, Extension Specialist, 4-H Youth Programs, Kansas State University

Reviewed by:
Rabbit Design Team

Think back: (Record these questions and answers on a separate sheet for your record book.)
Compare the skills needed to select a judging class, conduct a judging contest, or conduct a rabbit show? How are they different or the same?

How does purpose and responsibility change in the three previous events?

37-Rabbits, Level IV
Checking Water Quality for Nitrates & Nitrites

Rabbits, Level IV

What Members Will Learn . . .

ABOUT THE PROJECT:
• How to test water supplies for nitrates and nitrites

ABOUT THEMSELVES:
• To develop an environmental awareness
• Importance of safety when working with chemicals

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 the rabbit’s drinking water are harmful. Often, abortions are the result of too much nitrates.

To check your water supply, the following procedure can be used:
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 (M = mole) solution of iron (II) sulfate. Mole is the amount of a substance with a weight in grams equal to molecular weight of the substance. Weigh out 1.52 grams of iron (II) sulfate. Now add distilled water to make a total of 100 ml (milliliters) of solution. This must be freshly prepared each time you test for nitrates and nitrites.

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.
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 10 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 (positively charged ions) that might cause interference 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 dropwise 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 dropwise 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 in an inclined position 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 county Extension agent about having the water checked at Kansas State University for the actual amount of these pollutants.

**DIALOGUE FOR CRITICAL THINKING:**

**Share:**
1. What was the easiest/most difficult thing about testing your water for nitrates and nitrites?

**Process:**
2. What affect could nitrates and nitrites have on your rabbit’s health?
Generalize:
3. What are other concerns about water quality that we have?
4. What other environmental concerns do you have? Why?

Apply:
5. How will you act differently in the future as a result of this activity?

GOING FURTHER:
- Check your water supply for nitrates and nitrites.
- Have a chemical analysis done on your water supply.

REFERENCES:
* College Chemistry With Qualitative Analysis, Holtzclaw and Robinson, 8th Edition
* Semimicro Qualitative Chemical Analysis, Louis J. Curtman

Author:
Clarence W. Linsey, Chemistry Department Chairman, MidAmerica Nazarene College; James P. Adams, Extension Specialist, 4-H Youth Programs, Kansas State University

Reviewed by:
Rabbit Design Team
Balancing a Ration
Rabbits, Level IV

What Members Will Learn . . .

ABOUT THE PROJECT:
• How to balance a ration for their rabbits

ABOUT THEMSELVES:
• Impact of calculations

Materials Needed:
• Member Handout 2, Composition of Feeds
• Calculator
• Paper and pencils

ACTIVITY TIME NEEDED: 35 MINUTES

ACTIVITY

The most expensive item in the production of rabbits is feed. If one hopes to make a profit, the cost of feed needs to be kept 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. Scientists have reported the digestibility of alfalfa crude fiber in selected animals as follows: Rabbit—18 percent; Horse—35 percent; Pony—38 percent; and Guinea Pig—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. Scientists have reported that diets with less than 6 percent 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 fiber levels of not less than 10 percent and of relatively large particle size should be fed.

Rabbits can be used to make use of 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 add variety to the family meat diet. These are satisfactory feeds for rabbits if one uses 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.

Home Grown Roughage  
Protein Content 6%  

Concentrate 30%  
Concentrate Protein Content 10

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, the protein content of the home-grown 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 home grown roughage to every 10 pounds of protein concentrate. In such diets, you will need to 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.

DIALOGUE FOR CRITICAL THINKING:
Share:
1. What was the easiest/hardest thing about using the Pierson Square?

Process:
2. Why is it important to balance the ration of your rabbit?
3. Why do you need a formula to do this?
Generalize:
4. What impact does careful calculation have on other projects?

5. In what other circumstances do you use a formula to calculate an outcome?

Apply:
6. How does being able to calculate an outcome impact your approach to a problem or concern?

GOING FURTHER:
• Visit a feed mill to observe a balanced ration being made.

REFERENCES:
Cooperative Extension Service, New Mexico State University

Author:
Clarence W. Linsey, Kansas State Rabbit Breeders Association; James P. Adams, Extension Specialist, 4-H Youth Programs, Kansas State University

Reviewed by:
Rabbit Design Team
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<td>11.3</td>
<td>0.50</td>
<td>0.28</td>
</tr>
<tr>
<td>Vetch, common hay</td>
<td>88</td>
<td>46</td>
<td>945</td>
<td>17.6</td>
<td>1.20</td>
<td>0.30</td>
</tr>
<tr>
<td>Cabbage, aerial</td>
<td>8</td>
<td>8.0</td>
<td>155</td>
<td>1.7</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Carrots, roots</td>
<td>12</td>
<td>10.8</td>
<td>198</td>
<td>1.2</td>
<td>0.05</td>
<td>0.04</td>
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<tr>
<td>Rutabaga, roots</td>
<td>13</td>
<td>10.0</td>
<td>230</td>
<td>1.3</td>
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<tr>
<td>Potatoes, sweet, tubers</td>
<td>42</td>
<td>28.0</td>
<td>709</td>
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<tr>
<td>Turnips, roots</td>
<td>9</td>
<td>7.4</td>
<td>140</td>
<td>1.2</td>
<td>0.06</td>
<td>0.02</td>
</tr>
</tbody>
</table>

Digestible Matter—DM; Total Digestible Nutrients—TDN; Digestible Energy—DE; Crude Protein—CP; Calcium—Ca; Phosphorus—P.
Formulating a Rabbit Ration
Rabbits, Level IV

What Members Will Learn . . .

ABOUT THE PROJECT:
- The rabbits need for crude protein in their diet
- To use a simple math formula for calculating feed needs

ABOUT THEMSELVES:
- The importance of mathematical adjustments

Materials Needed:
- Member Handout 3, Nutrient Content of Feedstuffs
- Activity Sheet 2, Checking Rations for Protein
- Calculator
- Pencils and paper

ACTIVITY TIME NEEDED: 60 MINUTES

ACTIVITY

Rabbits need sufficient crude protein in their diet. If you do not feed commercial rabbit pellets, you need to know how to formulate a balanced diet.

Let’s start by trying to formulate a 16 percent crude protein ration using the following feeds:
- Alfalfa hay
- Barley
- Salt
- Corn
- Soybean meal

Your task is to 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.

Leader Notes

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

Answer: The suggested ration uses 60 percent alfalfa hay, 21.5 percent corn, 15 percent barley, 3 percent 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 multiple by 100.

Hand out Activity Sheet 2, “Checking Rations for Protein,” and let members check the sample rations to see if the crude protein percentage is correct. Rations B, C, E, H are correct.
DIALOGUE FOR CRITICAL THINKING:

Share:
1. How did you approach figuring crude protein for various diets?

2. Did you use a calculator? Why or why not?

Process:
3. Why is it important to compute the protein content of a ration?

4. How does the percent of the crude protein affect the cost of your feedstuffs?

Generalize:
5. How do you make adjustments in other projects to control costs?

Apply:
6. How can you apply what you’ve learned about adjustments to new situations?

7. How might a computer assist you in making calculations and adjustments?

GOING FURTHER:
• Check your rabbit rations for crude protein content.
• Visit a feed mill and watch rabbit pellets being made.

REFERENCES:
Cooperative Extension Service, New Mexico State University

Author:
Clarence W. Linsey, Kansas State Rabbit Breeders Association; James P. Adams, Extension Specialist, 4-H Youth Programs, Kansas State University

Reviewed by:
Rabbit Design Team
FORMULATING A RABBIT RATION
RABBITS, LEVEL IV
Member Handout 3, Nutrient Content of Feedstuffs

Table 1.

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

From United States-Canadian Tables of Feed Composition, Second Rev., 1972, National Academy of Sciences. Expressed on a Dry Matter Basis
FORMULATING A RABBIT RATION
RABBITS, LEVEL IV
Activity Sheet 2, Checking Rations for Protein

SUGGESTED RATIONS
Have members use Member Handout 3, Nutrient Content of Feedstuffs to compute total pounds crude protein per ration to see if it is the correct percentage of total ration.

<table>
<thead>
<tr>
<th>15 Percent Crude Protein Rations</th>
<th>17 Percent Crude Protein Rations</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Ration A</strong> Percent <strong>Ration B</strong> Percent</td>
<td><strong>Ration E</strong> Percent <strong>Ration F</strong> Percent</td>
</tr>
<tr>
<td>Alfalfa hay 70</td>
<td>Clover hay 70</td>
</tr>
<tr>
<td>Oats 20</td>
<td>Oats 29.5</td>
</tr>
<tr>
<td>Wheat 10</td>
<td>Salt 0.5</td>
</tr>
<tr>
<td>Salt 0.5</td>
<td>Salt 0.5</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>16 Percent Crude Protein Rations</th>
<th>20 Percent Crude Protein Rations</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Ration C</strong> Percent <strong>Ration D</strong> Percent</td>
<td><strong>Ration G</strong> Percent <strong>Ration H</strong> Percent</td>
</tr>
<tr>
<td>Alfalfa hay 40</td>
<td>Alfalfa hay 50</td>
</tr>
<tr>
<td>Barley 38</td>
<td>Corn 23.5</td>
</tr>
<tr>
<td>Oats 18</td>
<td>Wheat bran 5</td>
</tr>
<tr>
<td>Soybean meal 3.5</td>
<td>Barley 11</td>
</tr>
<tr>
<td>Salt 0.5</td>
<td>Soybean Meal 10</td>
</tr>
</tbody>
</table>

Think back:
Why is the chemical content of a rabbit ration important? Which chemicals are most important? Why?

What is the significance of math and safety when working with rabbit rations?

How will these skills and knowledge be useful to you in the future?
### Keeping Financial Records With a Computer

#### Rabbits, Level IV

**What Members Will Learn . . .**

**ABOUT THE PROJECT:**
- How to use Microsoft Works spreadsheet to keep financial records

**ABOUT THEMSELVES:**
- Appreciation of Technology

**Materials Needed:**
- IBM PC Computer or IBM PC Compatible Computer
- Microsoft Works
- Member Handout 4, Rabbit Feed Example
- Member Handout 5, Feed Record

**ACTIVITY TIME NEEDED:** 60 MINUTES

**ACTIVITY**

The computer has become a very popular and efficient way to keep records. The computer is an excellent tool for the rabbit raiser.

1. Title the spreadsheet Rabbit Feed Record
2. Label column A, line 4: Date
3. Line 4, label column C: Family Ration
4. Line 4, label column E: Calf Manna
5. Line 4, label column F: Miscellaneous Costs
6. Line 28, label column B: Total Feed Costs
7. Record feed costs as they occur. In our example, we have purchased rabbit feed about every two weeks. Remember to save the program each time you work with it. To save the program, press the “Alt” key, “F” key, and key “A” at the same time. You will be asked to name the file the first time you save your program. Afterwards, you will be asked if you want to replace the old file with the new data. Press the “Y” key or “enter” and the new data has been stored.
8. Use the directional keys to activate column D28.
9. Type =Sum(C5:C29)+Sum(D5:D29) and press the “enter” key. The total feed costs for the year have been calculated.

In a similar matter you can set up a spreadsheet for your income, miscellaneous expenses, etc.

Different software and computers will determine how you will computerize your records.

---

**Leader Notes**

Give first handout to members.

If you do not have Microsoft Works, use Member Handout 5, Feed Record, as a guide to set up a spreadsheet on your home computer.
Leader Notes

**DIALOGUE FOR CRITICAL THINKING:**

**Share:**
1. What do you think was the easiest/hardest thing about a computer spreadsheet?

2. How have you previously kept records?

**Process:**
3. Why is it important to understand how computers work and how they can save you time and money?

4. Why would you use a computer to keep financial records?

**Generalize:**
5. In what other projects have computers been important? Why?

**Apply:**
6. How will you use computers in the future?

**GOING FURTHER:**
- Explore all the various kinds of computer programs available.
- Brainstorm all the ways you can use computers in your 4-H projects.

**REFERENCES:**
Microsoft Works User’s Guide

**Author:**
Clarence W. Linsey, Kansas State Rabbit Breeders Association; James P. Adams, Extension Specialist, 4-H Youth Programs, Kansas State University

**Reviewed by:**
Rabbit Design Team

Cooperative Extension Service
Kansas State University
Manhattan

All educational programs and materials are available without discrimination on the basis of race, color, national origin, sex, age, or disability.

52-Rabbits, Level IV
## KEEPING FINANCIAL RECORDS WITH A COMPUTER

**RABBITS, LEVEL IV**

**Member Handout 4, Rabbit Feed Example**

<table>
<thead>
<tr>
<th>Date</th>
<th>Family Ration</th>
<th>Miscellaneous Expenses</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-12-89</td>
<td>$62.45</td>
<td></td>
</tr>
<tr>
<td>1-29-89</td>
<td>64.45</td>
<td>$8.50</td>
</tr>
<tr>
<td>2-12-89</td>
<td>64.45</td>
<td></td>
</tr>
<tr>
<td>2-28-89</td>
<td>64.45</td>
<td></td>
</tr>
<tr>
<td>3-12-89</td>
<td>63.65</td>
<td>$8.50</td>
</tr>
<tr>
<td>3-30-89</td>
<td>63.65</td>
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<tr>
<td>4-12-89</td>
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<td>4-29-89</td>
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<td>5-31-89</td>
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<tr>
<td>6-10-89</td>
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</tr>
<tr>
<td>6-28-89</td>
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</tr>
<tr>
<td>7-30-89</td>
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<td>8-29-89</td>
<td>62.45</td>
<td></td>
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<tr>
<td>9-8-89</td>
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<td>$8.50</td>
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<td>10-11-89</td>
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<td>63.45</td>
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<tr>
<td>11-12-89</td>
<td>63.45</td>
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<tr>
<td>11-28-89</td>
<td>64.85</td>
<td>$8.50</td>
</tr>
<tr>
<td>12-13-89</td>
<td>64.85</td>
<td></td>
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<tr>
<td>12-30-89</td>
<td>64.85</td>
<td></td>
</tr>
</tbody>
</table>

Total Feed Costs: $1,573.10
## KEEPING FINANCIAL RECORDS WITH A COMPUTER

### RABBITS, LEVEL IV

**Member Handout 5, Feed Record**

(Record the kind, amount, and value of feed each time a purchase is made or quantity of home-raised feed is set aside for the project.)

<table>
<thead>
<tr>
<th>Date</th>
<th>Kind of feed, hay, grain, greens, protein supplement, etc.</th>
<th>Amount of feed (lbs., bu.)</th>
<th>Cost of feed</th>
<th>Remarks (Ration fed, feed changes, feeding troubles, etc.)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>Per bu. cwt., lb. Total</td>
<td></td>
</tr>
<tr>
<td>Jan 10</td>
<td>Pellets</td>
<td>50#</td>
<td>$10.96/cwt $5.48</td>
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</tr>
</tbody>
</table>

### Other Expenses

<table>
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<tr>
<th>Date</th>
<th>Who To/From Whom</th>
<th>Item</th>
<th>Amount</th>
<th>Market &amp; Breeding</th>
<th>Skins Sold</th>
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<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>No. Total Wt. Prices Per Lb. Total Value No. Value</td>
<td></td>
</tr>
<tr>
<td>1/15</td>
<td>ABC Supplies</td>
<td>Crock</td>
<td>$2.25</td>
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<td></td>
</tr>
<tr>
<td>2/15</td>
<td>XYZ Rabbitry</td>
<td></td>
<td>3 12# .55</td>
<td>$6.60</td>
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</tr>
<tr>
<td>3/15</td>
<td>Home Use</td>
<td></td>
<td>2 8# .55</td>
<td>$4.40</td>
<td></td>
</tr>
</tbody>
</table>

### Totals

---

### Receipts

54-Rabbits, Level IV
Increasing Productivity in the Commercial Rabbitry

Rabbits, Level IV

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:
• Value of using information in decision making

Materials Needed:
• Chalkboard and chalk
• Member Handout 6, Doe and Buck Breeding Records
• Calculator
• Paper and pencils

ACTIVITY TIME NEEDED: 40 MINUTES

ACTIVITY

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

Keeping records that will help evaluate each doe can require time but it 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 for does 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 died due to diarrhea
- Production number
- Average weaning weight
George Collins suggests that you use production numbers to evaluate rabbits for future breedings or for culling purposes.

**Conception Average (CA)** = \(\frac{\text{number of litters}}{\text{number of breeding}} \times 10\)

**Weaning Average (WA)** = \(\frac{\text{number of young produced}}{\text{number of litters}}\)

**Yearly Production Average (YPA)** = \(\frac{\text{number of litters}}{\text{number of months in production}} \times 12\)

**Productive Age:** 6-12 months = 0; 12-18 months = 1; 18-24 months = 2; 24-30 months = 3; more than 30 months = 4.

Now, let us 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?

\[
\text{CA} = \frac{12 \text{ litters}}{14 \text{ breedings}} \times 10 = 8.6
\]

\[
\text{WA} = \frac{94 \text{ young}}{12 \text{ litters}} = 7.8
\]

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

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

Therefore, the production number of this doe is:

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

The ideal production number should be 25.0 or better.

Production numbers also should be calculated for the bucks.

You will need to have the following buck information:

- Buck’s identification
- Doe served
- Doe pregnant (+ or -)
- Date kindled
- Number alive
- Number dead
- Date weaned
- Number weaned
The production number for a buck equals the conception average (CA) plus weaning average (WA) plus productive age (PA).

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.

The production number for this buck is calculated as follows:

\[ CA = \frac{20 \text{ litters}}{41 \text{ breedings}} \times 10 = 4.9 \]

\[ WA = \frac{120 \text{ young}}{20 \text{ litters}} = 6 \]

\[ PA = 2 \]

Therefore, the production number = 4.9 + 6 + 2 = 12.9

The ideal production number for the buck should be 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.

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.

Answer Key:
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.

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.
Leader Notes

DIALOGUE FOR CRITICAL THINKING:

Share:
1. What did you like or dislike about this activity? Why?

Process:
2. What part does productivity play in operating a commercial rabbitry?

3. How do you think you can increase productivity in your rabbitry?

Generalize:
4. In what other projects is performance data important?

Apply:
5. How might computers assist in computing and processing performance data in the future?

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.

REFERENCES:
Domestic Rabbits, November-December, 1984

Author:
Clarence W. Linsey, Kansas State Rabbit Breeders Association; James P. Adams, Extension Specialist, 4-H Youth Programs, Kansas State University

Reviewed by:
Rabbit Design Team
INCREASING PRODUCTIVITY IN THE COMMERCIAL RABBITRY
RABBITS, LEVEL IV
Member Handout 6, Doe and Buck Breeding Records

Doe Breeding Record

<table>
<thead>
<tr>
<th>Doe No.</th>
<th>Born</th>
<th>Breed</th>
<th>Sire</th>
<th>Dam</th>
<th>Litter No.</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Date</th>
<th>Due</th>
<th>Buck No.</th>
<th>Date</th>
<th>Litter No.</th>
<th>No. Young Born</th>
<th>Number Retained</th>
<th>Litter No.</th>
<th>Date</th>
<th>No. Weaned</th>
<th>Weaned Wt.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Alive</td>
<td>Dead</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Buck Breeding Record

<table>
<thead>
<tr>
<th>Buck No.</th>
<th>Born</th>
<th>Breed</th>
<th>Sire</th>
<th>Dam</th>
<th>Litter No.</th>
</tr>
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<tr>
<th>Doe</th>
<th>Date Bred</th>
<th>Result of Breeding</th>
<th>Weaned</th>
<th>Notes</th>
</tr>
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<tr>
<td></td>
<td></td>
<td>Kindled</td>
<td>Passed</td>
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<td></td>
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<td>Alive</td>
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59-Rabbits, Level IV
Think back:
How many types of records can you name? What is the purpose of each?

Which types of records are most valuable to you? Why?
Understanding Systems of Breeding
Rabbits, Level IV

What Members Will Learn . . .

ABOUT THE PROJECT:
- The various breeding programs
- How to use a line breeding chart

ABOUT THEMSELVES:
- Significance of heredity

Materials Needed:
- Chalkboard and chalk or flip chart and marker
- Member Handout 7, Line Breeding Chart

ACTIVITY TIME NEEDED: 45 MINUTES

ACTIVITY

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 appear. One needs to cull the offspring carefully to eliminate any undesirable traits.

LINE BREEDING—Linebreeding is the mating of less closely related individuals in the herd in order to maintain a high relationship to some outstanding ancestor. 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.

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

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

Hand out the “Line Breeding Chart” to each member and discuss thoroughly.

The linebreeding chart illustrated may be used 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.

Number 4 is a result of mating Number 1 and Number 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 Number 3 male to Number 2 will produce Number 5. Number 5 has 75 percent of the original dam’s genetic makeup and only 25 percent of the original sire.

Mating of a Number 4 male with a Number 5 female results in Number 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 Number 11.
2. Number 9 is mated to Number 11.

DIALOGUE FOR CRITICAL THINKING:

Share:
1. What are the three systems of breeding?
2. What did you learn from this activity?

Process:
3. What is the significance of inbreeding, line breeding, and out crossing?

Generalize:
4. What difficulties or successes did you encounter when you tried these various breeding systems?
5. How important is the breeding system to the productivity of your rabbitry?

Apply:
6. How will you breed your rabbits differently based on what you learned from this activity?

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.

62-Rabbits, Level IV
GOING FURTHER:
- Invite a geneticist to speak to your group about the values and problems with inbreeding.
- Discuss genetic mutations and their values.

REFERENCES:

Author:
Clarence W. Linsey, Kansas State Rabbit Breeders Association; James P. Adams, Extension Specialist, 4-H Youth Programs, Kansas State University

Reviewed by:
Rabbit Design Team
UNDERSTANDING SYSTEMS OF BREEDING
RABBITS, LEVEL IV
Member Handout 7, Line Breeding Chart

<table>
<thead>
<tr>
<th>Generation</th>
<th>Male Line</th>
<th>Female Line</th>
</tr>
</thead>
<tbody>
<tr>
<td>First</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Second</td>
<td></td>
<td></td>
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<td>Third</td>
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<td>Fourth</td>
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<td>Fifth</td>
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<tr>
<td>Sixth</td>
<td>12</td>
<td>16</td>
</tr>
</tbody>
</table>

64-Rabbits, Level IV
Tracing Genetic Traits
_Rabbits, Level IV_

What Members Will Learn . . .

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

ABOUT THEMSELVES:
- Importance of information

Materials Needed:
- Chalkboard and chalk or large poster board and pens
- Paper and pencils

ACTIVITY TIME NEEDED: 60 MINUTES

ACTIVITY

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.

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 are produced which change to form tissues and organs which make up the rabbit’s body. The genetic materials of these cells are 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 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 Punnett square we can see the genetic combinations resulting for mating an aa male with an AA female.

<table>
<thead>
<tr>
<th>Female Gametes</th>
<th>Male Gametes</th>
</tr>
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<tbody>
<tr>
<td>A</td>
<td>a</td>
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<tr>
<td>A</td>
<td>Aa</td>
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<td>A</td>
<td>Aa</td>
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<td>A</td>
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</table>

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:

<table>
<thead>
<tr>
<th>Female Gametes</th>
<th>Male Gametes</th>
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<tbody>
<tr>
<td>A</td>
<td>AA</td>
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<tr>
<td>A</td>
<td>Aa</td>
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<td>A</td>
<td>a</td>
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<td>Aa</td>
</tr>
<tr>
<td>a</td>
<td>AA</td>
</tr>
<tr>
<td>a</td>
<td>Aa</td>
</tr>
</tbody>
</table>

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?

<table>
<thead>
<tr>
<th>Female Gametes</th>
<th>AS</th>
<th>As</th>
<th>aS</th>
<th>as</th>
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<thead>
<tr>
<th>Male Gametes</th>
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<tr>
<td>AS * AASS * AASs * AaSS * AaSs *</td>
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<tr>
<td>* * * * * * * * * * * * * * * *</td>
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| AS * AASs * AAAss * AaSs * Aass * |
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| aS * AaSs * AaSs * aaSS * aaSs * |
| * * * * * * * * * * * * * * * * |

| as * AaSs * Aass * aaSs * aass * |
| * * * * * * * * * * * * * * * * |

Genotypes:  
\[ \frac{1}{16} \text{AASS} \] agouti  
\[ \frac{1}{16} \text{AASs} \] agouti  
\[ \frac{1}{16} \text{AaSs} \] agouti  
\[ \frac{1}{16} \text{AaSS} \] agouti  
\[ \frac{1}{16} \text{Aass} \] solid color  
\[ \frac{1}{16} \text{aaSs} \] albino  
\[ \frac{1}{16} \text{AAss} \] solid color  
\[ \frac{1}{16} \text{aaSS} \] albino

Phenotypes:  
\[ \frac{1}{16} \] agouti  
\[ \frac{1}{16} \] solid color  
\[ \frac{1}{16} \] 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 homozygous state, the agouti gene S or non-agouti gene s is not allowed to express itself.

Define epistasis.
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. Do a Punnet square for a mating of two heterozygous parents: male Bb, female Bb. Discuss results.

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.

**DIALOGUE FOR CRITICAL THINKING:**

**Share:**
1. What was the easiest or most difficult thing when computing probabilities of genetic traits?

2. What was unique or the most interesting when exploring the various combinations?

**Process:**
3. What is the significance of recessive and dominant genes?

4. Why do you need to know the genetic traits of your rabbit?

**Generalize:**
5. What genetic traits are important in production animals? Why?

6. How might this information be used in tracing hereditability of a family characteristic?

**Apply:**
7. How might you use genetic information in the future?
GOING FURTHER:
- Use a Punnet square and determine your own eye genotype.

REFERENCES:
Cooperative Extension Service, New Mexico State University
Ohio Cooperative Extension Service, The Ohio State University

Author:
Clarence W. Linsey, Kansas State Rabbit Breeders Association; James P. Adams, Extension Specialist, 4-H Youth Programs, Kansas State University

Reviewed by:
Rabbit Design Team
Understanding Fur Genetics
Rabbits, Level IV

What Members Will Learn . . .

ABOUT THE PROJECT:
• The heat sensitive genes
• The dominant and recessive genes for fur traits

ABOUT THEMSELVES:
• Importance of probability in their lives

Materials Needed:
• Chalkboard and chalk or flip chart and marker
• Paper
• Pencils
• Genetic references

ACTIVITY TIME NEEDED: 60 MINUTES

ACTIVITY
It is important to understand the genetics of fur, so there are fewer problems producing rabbits with the desired traits.

Coat color in rabbits 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 the genotype is cc. However, a light gray rabbit is produced when the genotype is c”c’ or c”c.

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

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’n and the normal fur, white rabbit is ccNN, all offspring would have the genotype c’c’Nn. Therefore, they would all have the Californian markings and have normal fur.

**DIALOGUE FOR CRITICAL THINKING:**
**Share:**
1. What do you like the most or least about working with a punnet square?
2. What fur pigmentation did you like the best? Why?
Process:
3. Why do you think it is important to understand the genetic quality of your rabbit’s fur?

4. What is the significance of being able to predict the probability of various fur types?

Generalize:
5. How important is genetic probability in other animals?

6. What is the significance of being able to predict the probability of various fur types?

Apply:
7. How can you use probabilities in making future decisions?

GOING FURTHER:
• Have a speaker come in and discuss the “regression” effect as it applies to human genetics.

REFERENCES:
Cooperative Extension Service, The Ohio State University

Author:
Clarence W. Linsey, Kansas State Rabbit Breeders Association; James P. Adams, Extension Specialist, 4-H Youth Programs, Kansas State University

Reviewed by:
Rabbit Design Team
Think back:
What is the significance of genetics?

How valuable is the hereditability of various genetic traits? Give examples and explain.

Why is probability important or useful?
Judging Rabbit Carcasses

Rabbits, Level IV

What Members Will Learn . . .

ABOUT THE PROJECT:
• What to look for when judging a rabbit carcass

ABOUT THEMSELVES:
• Understanding standards in their lives

Materials Needed:
• Rabbit carcasses
• Freezer wrap or pans
• Member Handout 8, Rabbit Carcass Scorecard

ACTIVITY TIME NEEDED: 60 MINUTES

ACTIVITY

It is important for the member to know what type of product he or she is producing. By judging rabbit carcasses, the member will learn what to strive for in producing rabbit fryers.

Dress-out percentage = Carcass weight / Live weight × 100
A good fryer will have a dressing percentage of 55 to 58 percent.

Appearance:
A rabbit carcass should be neat and clean. There should not be any bruised areas on the carcass. 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. Muscle tissue should be dense, firm and pearl white in color. Internal fat should be at a minimum and there should be little external fat.

Now, discuss the correct placings and why the classes would be placed as they were by the official judge.

Leader Notes

Pass out Rabbit Carcass Scorecard and discuss each item to consider.

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 four specimens per class.

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

**DIALOGUE FOR CRITICAL THINKING:**

**Share:**
1. What do you like about judging?
2. What don’t you like about judging?

**Process:**
3. Why is it important to have standards for judging rabbit carcasses?
4. What purpose does the scorecard serve when you are judging?

**Generalize:**
5. What standards do you set for other projects?
6. What are some basic standards that you use on a daily basis?

**Apply:**
7. How can you apply these standards in the future?

**GOING FURTHER:**
- Visit a rabbit processing plant.
- Plan a live meat pen show, then dress the fryers, judge the carcasses and compare results of live and carcass shows.

**REFERENCES:**

**Author:**
Clarence W. Linsey, Kansas State Rabbit Breeders Association; James P. Adams, Extension Specialist, 4-H Youth Programs, Kansas State University.

**Reviewed By:**
Rabbit Design Team
JUDGING RABBIT CARCASSES
RABBITS, LEVEL IV
Member Handout 8, Rabbit Carcass Scorecard

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

<table>
<thead>
<tr>
<th>Category</th>
<th>Points</th>
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</thead>
<tbody>
<tr>
<td>Dress-out percentage</td>
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</tr>
<tr>
<td>Appearance</td>
<td>60</td>
</tr>
<tr>
<td>Shape (type)</td>
<td>20</td>
</tr>
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<td>Color</td>
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<td>Texture</td>
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<tr>
<td>Fat</td>
<td>10</td>
</tr>
<tr>
<td>Organs</td>
<td>5</td>
</tr>
<tr>
<td>Total Points</td>
<td>100</td>
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</table>
Preparing Rabbit for the Table
Rabbits, Level IV

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 position

Materials Needed:
• Freshly dressed rabbit
• Cooked rabbit
• 1 can mushrooms
• 1 can water chestnuts
• ½ cup blanched whole almonds
• 1 medium onion
• Paprika
• Rabbit broth
• 2-quart casserole
• Rabbit cookbooks
• Cooked rice
• Can opener
• Spoon
• Paper plates and plastic forks

ACTIVITY TIME NEEDED: 60 MINUTES

ACTIVITY

Rabbit meat is high in protein and, thus, is an excellent source of protein for ending worldwide malnutrition. The breeder needs to understand how easy it is to prepare rabbit if they are to be good promoters for rabbit meat.

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 recommended by many physicians for diets where red meat is restricted.

Rabbit meat should be cooked well done.

Rabbit meat can be used fresh, cured, smoked, sweetpickled, soured, roasted, barbecued or substituted for any veal or poultry recipe. According to the U.S. Department of Agriculture rabbit meat has 20.9 percent protein, 10.2 percent fat, 67.9 percent moisture and 795 calories per pound.
Rabbit Almond Casserole

Ingredients are:
- 4 cups cooked rabbit
- 1 can mushrooms, drained
- 1 can water chestnuts
- ½ 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 ½ the rabbit in the casserole dish.
4. Top with almonds, chopped onion, water chestnuts, and mushrooms.
5. Cover with rabbit broth.
7. Bake for 30 minutes in a 350˚F oven.

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

After the casserole is done, serve over rice.

**DIALOGUE FOR CRITICAL THINKING:**

**Share:**
1. What are several advantages of eating rabbit meat?
2. What is your favorite recipe? Why?

**Process:**
3. For all the work that you’ve done concerning rabbits, why is it important to be able to prepare a good rabbit recipe?
4. What is the protein, fat, moisture, and calories content of 1 pound of rabbit meat?

**Generalize:**
5. How does the nutritional content of rabbit meat compare with the nutritional content of beef, sheep or chicken meat?
6. How should nutritional content of the food you eat affect your food choices?

**Apply:**
7. What will you do differently in the future as a result of this lesson?
GOING FURTHER:
- Have the members prepare rabbit dishes for others.
- Develop your own rabbit recipes.
- Begin keeping your own set of rabbit recipes.

REFERENCES:
Official Guide To Raising Better Rabbits, American Rabbit Breeders Association
Domestic Rabbit Cookbook, American Rabbit Breeders Association
Rabbit is Just Good Eating, Kaw Valley Rabbit Club

Author:
Clarence W. Linsey, Kansas State Rabbit Breeders Association; James P. Adams, Extension Specialist, 4-H Youth Programs, Kansas State University

Reviewed By:
Rabbit Design Team

Think back: (Record these questions and answers on a separate sheet for your record book.)
What is the significance of food safety when preparing rabbit?

How important is rabbit as a food source in various countries?

How important will rabbit be as a food source in the future? Why?
Analyzing for Causes of Death (Necropsy)

Rabbits, Level IV

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

Materials Needed:
• Scissors
• Sharp knife or scalpel
• Rubber gloves
• Specimen bottles filled with 10 percent formula or alcohol
• Rabbit to be examined
• Newspapers
• Disinfectant
• Chalkboard and chalk or flip chart and markers

ACTIVITY TIME NEEDED: 60 MINUTES

ACTIVITY

Since there are very few diagnostic laboratories for rabbits in the United States, it is important that one becomes efficient in home necropsy so that one can forward information found to a specialist who will be able to analyze disease problems.

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

When you do a necrospy at home, you will want to find a place that has good lighting and where you will not be disturbed during the necrospy. Cover the area with plastic (Garbage bags will work fine), and lay several layers of newspaper on top of the plastic. Now, if you have scissors, sharp knife, rubber gloves and specimen bottles handy you are ready to proceed.

1. Put on the rubber gloves and go over the animal very carefully to notice any abnormalities or external parasites. Be sure to 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?

3. The first incision should be made just in front of the genitals through the skin and muscular wall. The incision should continue along the

Leader Notes

The leader of this lesson must have experience and knowledge of normal, healthy organs so they can help members detect abnormalities.

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.

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.
mid-line (center) to the chin. Be sure not to 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.

Your first necropsy may be rather crude, but with practice one can recognize abnormalities readily.
DIALOGUE FOR CRITICAL THINKING:

Share:
1. What did you enjoy/dislike about this activity?

2. When performing the necropsy, what were some things you observed?

Process:
3. Why is it important to know the cause of your rabbit’s death?

4. Why is it important to take careful notes when doing this activity?

Generalize:
5. How do you use note taking and observation skills in other activities that you participate?

Apply:
6. When and where do you think you will use observation skills in the future?

GOING FURTHER:
• Visit a veterinarian doing a rabbit necropsy.
• Study the diseases common to rabbits.

REFERENCES:
Official Guide to Raising Better Rabbits, American Rabbit Breeders Association

Author:
Clarence W. Linsey, Kansas State Rabbit Breeders Association; James P. Adams, Extension Specialist, 4-H Youth Programs, Kansas State University

Reviewed By:
Rabbit Design Team
Making Fur Toys and Other Items
Rabbits, Level IV

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:
• The value of using all resources

Materials Needed:
• Rabbit pelts which have been blocked
• 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
The members can establish an extra income for the sale of items made from rabbit pelts. The members need to know the correct way to work with the rabbit pelt.

The steps 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 set 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.
   c. Work the skin with your fingertips pushing upward and outward, be sure to tack in place as you work. (Care should be given not to stretch too tightly as the skin might tear.)
   d. Allow two to three hours for the skin to dry.

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

**DIALOGUE FOR CRITICAL THINKING:**

**Share:**
1. What did you make? Why?

2. Is fur an easy or difficult item to work with? Why or why not?

**Process:**
3. Why is it important to wet the fur before blocking it?

4. Why is it important to block the fur before cutting it?

**Generalize:**
5. How will the promotion and use of by-products enhance the rabbit industry?

6. What is the importance of by-products in other industries?

**Apply:**
7. What is the significance of the impact of byproducts on the total value of an industry?

**GOING FURTHER:**
- Make your own rabbit skin project.
- Design a pattern of your own.
REFERENCES:

Author:
Clarence W. Linsey, Kansas State Rabbit Breeders Association; James P. Adams, Extension Specialist, 4-H Youth Programs, Kansas State University

Reviewed by:
Rabbit Design Team
Exploring Rabbit Careers
Rabbits, Level IV

What Members Will Learn . . .

ABOUT THE PROJECT:
• Various related careers available

ABOUT THEMSELVES:
• Their feelings about pursuing a rabbit related career

Materials Needed:
• Pencils and paper
• Member Handout 9, Rabbit References

ACTIVITY TIME NEEDED: 60 MINUTES

ACTIVITY

It is important for the members 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.

Leader Notes

A week or so before the meeting have each member select a career to research.

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

Members take turns reporting.
Leader Notes

DIALOGUE FOR CRITICAL THINKING:
Share:
1. What career did you like the best? Why?

2. What career do you feel would be the most difficult to prepare for? Why?

Process:
3. What problems did you have in reviewing rabbit careers?

4. What career in the rabbit industry do you think is the most significant?

Generalize:
5. What factors do you need to consider when pursuing a rabbit career?

6. What capabilities or skills would you use in the rabbit careers that you explored?

Apply:
7. How will various capabilities or skills help you pursue your first career choice?

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

REFERENCES:
Pacific Northwest Cooperative Extension Service
Domestic Rabbits, American Rabbit Breeders Association

Author:
Clarence W. Linsey, American Rabbit Breeders Association; James P. Adams, Extension Specialist, 4-H Youth Programs, Kansas State University

Reviewed by:
Rabbit Design Team
EXPLORING RABBIT CAREERS
RABBITS, LEVEL IV
Member Handout 9, Rabbit References

PRINTED MATERIAL
Domestic Rabbit Cookbook
American Rabbit Breeders Association
P.O. Box 426, Bloomington, IL 61701

Rabbits for Food and Profit
Farmer’s Digest, Inc.
Box 363, Brookfield, WI 53005

Domestic Rabbits: Diseases and Parasites
U.S. Department of Agriculture
Agriculture Handbook No. 490

A Progressive Program for Raising Better Rabbits & Cavies
American Rabbit Breeders Association, Inc.
P.O. Box 426, Bloomington, IL 61701

Standard of Perfection
American Rabbit Breeders Association
P.O. Box 426, Bloomington, IL 61701

The Rabbit—A Dissection Manual
T.A.G. Wells, 1968, Dover Publications,
180 Varick Street, New York, NY 10014

Bass Equipment Company, P.O. Box 352, Monett, MO 65708,
has the following books for sale:
  Raising Earthworms for Profit
  Earthworm Feed and Feeding
  Raising the African Nightcrawlers
  Modern Angora Wool Farming
  Raising Rabbits the Modern Way
  How to Tan & Sew Your Rabbit Furs

RABBIT ASSOCIATIONS
Kansas State Rabbit Breeders Association
Clarence W. Linsey, Secretary
316 South Mahaffie
Olathe, KS 66061

American Rabbit Breeders Association
Glen Carr, Secretary
Box 426
Bloomington, IL 61701
The Rabbit Project’s Impact on Personal Development

Rabbits, Level IV

What Members Will Learn . . .

ABOUT THE PROJECT:
• How to develop life skills through the rabbit project

ABOUT THEMSELVES:
• The importance of setting long-term goals
• The importance of personal development

Materials Needed:
• Rabbit Member Guide and Annual Report (MG-16)
• Activity Sheet 3, Personal Skills Identification

ACTIVITY TIME NEEDED: 45 MINUTES

ACTIVITY
As you conclude Level IV of the rabbit project, it is important to think about the things you've learned and the accomplishments you've made.

Over the four levels of the rabbit curriculum, you have gained many skills that will help you in the future. It is important to identify and reflect on these skills. This process is called personal development. Evaluating how you’ve done in a project or activity gives you insight into how you might improve on the activity in the future.

Personal development is not easy. It requires honesty, creativity, and planning.

Leader Notes
Pass out Activity Sheet 3, Personal Skills Identification.
Leader Notes

DIALOGUE FOR CRITICAL THINKING:
Share:
1. What are several of the skills you’ve gained while working on your rabbit project?

2. Which skills do you plan to improve? Why?

Process:
3. Why is it important to know your skills?

4. Why is it important to self-evaluate your skills?

Generalize:
5. In what other circumstances will you be able to use these skills?

6. In what other circumstances will you use some type of self-evaluation technique?

Apply:
7. How will you use these skills in the future?

GOING FURTHER:
• Visit a job placement service about developing a resumé.
• Have a business recruiter visit your group.
• Practice by conducting mock interviews.

REFERENCES:
Author:
Gwen Bailey, Consultant; James P. Adams, Extension Specialist, 4-H Youth Programs, Kansas State University

Reviewed by:
Rabbit Design Team
THE RABBIT PROJECT’S IMPACT ON PERSONAL DEVELOPMENT
RABBITS, LEVEL IV
Activity Sheet 3, Personal Skills Identification

Here are some of the skills that you have developed during your rabbit project. Check the skills that you feel you have mastered.

___ Uses time wisely
___ Estimates how much things will cost and follows a budget
___ Gathers, buys, stores and distributes supplies for a project
___ Gives clear instructions, explains to others how to do a task and helps others correct their mistakes
___ Works well with people
___ Is a team member
___ Uses leadership skills of identifying main issue, persuading others, negotiating, working with diverse groups
___ Gathers, organizes, communicates, and uses information
___ Uses computers and technology
___ Understands and can work with people, ideas and things
___ Reads, writes, listens, and speaks with others
___ Thinks creatively by making decisions, solving problems and using imagination
___ Is responsible, has high self-esteem, gets along with others and shows honesty

Reflect on the skill that is your greatest asset?

Reflect on the skill that you need to improve on?

The information that you’ve collected from this personal skills identification activity might be included on your resume. Your resume might be used to obtain a scholarship, to acquire more education or to get a job.

How would you summarize your personal development skills so that it could be included on your resume?

How will this process of personal development help you in the future in setting long-term goals?