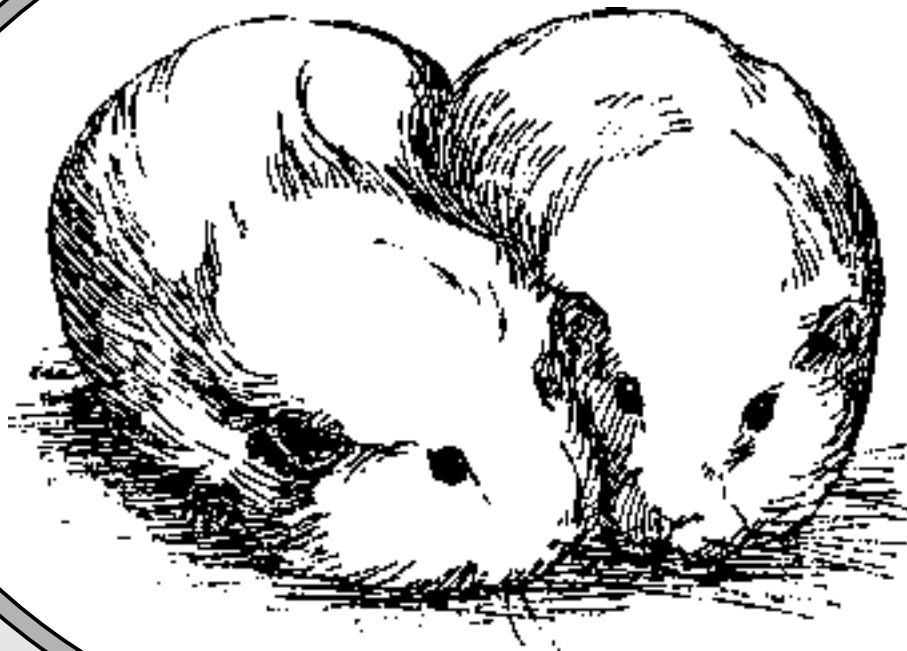


 PNW573

4-H CAVY PROJECT

LEADER GUIDE



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CONTENTS

Chapter 1	CURRICULUM INTRODUCTION	5
Chapter 2	CAVY OVERVIEW	10
Chapter 3	BEGINNING THE 4-H CAVY PROJECT	16
Chapter 4	BREEDING CAVIES	21
Chapter 5	DISEASE PREVENTION AND TREATMENT	25
Chapter 6	FITTING AND SHOWING THE CAVY	30
Chapter 7	SHOWS, COUNTY FAIR, AND STATE FAIR	37
Chapter 8	SPECIAL PROJECTS	41
Chapter 9	ADVANCED CAVY PROJECT	42
Chapter 10	DIGESTIVE AND CIRCULATORY SYSTEMS	48
Chapter 11	PHYSIOLOGICAL VALUES	50
	Washington State Cavy Advancement Program	53

APPENDIX

Meeting Activity Suggestions	61
Cavy Record	62
Cavy Pedigree	64
Stocking the First Aid Kit	65
Shows & Fair Survival Hints for Parents (and Leaders)	66
Terms	67
Website	72
PROJECT MEETING ACTIVITIES	73

CURRICULUM INTRODUCTION

CHAPTER 1

INTRODUCTION

4-H is the youth component of the Cooperative Extension Service and has academic ties to the land-grant universities. 4-H helps youth develop life skills that will enable them to become productive and happy adults. These life skills include:

1. a positive self-concept
2. effective interpersonal relations
3. good decision-making skills
4. good physical development
5. practical skills for living

The success of 4-H in developing these life skills depends on effective interaction between 4-H youth and their adult and teen leaders. The relationship is a partnership. It is not necessary for the adult to bring extensive subject matter knowledge to this partnership. Youth often develop subject matter knowledge very quickly when working with older youth and adults in a project. It is the encouragement, guidance, and maturity which adults bring to the partnership that is so important to the success of a 4-H'er in developing life skills through a project.

DESCRIPTION OF CURRICULUM

The 4-H Cavy Project is an animal science curriculum for youth in grades K through twelve. It consists of the curriculum introduction, cavy project information, and experiential (hands-on) activities. The hands-on activities can be divided into the following three sections:

- Health: environment and wellness
- Nutrition: what animals eat and drink
- Care: ensuring humane animal treatment

The Volunteer Leader

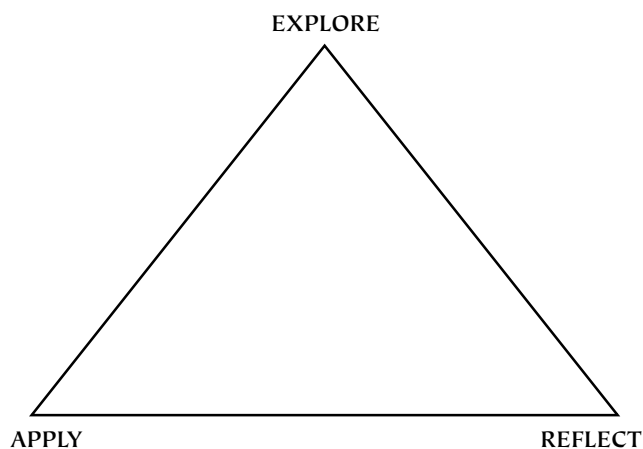
We, the volunteer leaders, are key in making this program work. Our enthusiasm and desire to help youth grow and develop in a positive learning environment will make the curriculum a success. Although the program is outlined in some detail, feel free to adjust the activities to meet the needs of your group.

And, thank you for giving your time and effort to today's youth!

Our Teaching Philosophy

The 4-H teaching philosophy is "learning by doing." Studies show that such experience-based, action-oriented learning has the greatest long-range

impact on the learner. The teaching techniques used in this program are designed to totally involve the youth in the learning process, and are based on the Exploratory Learning Model. Exploratory learning encourages youth to . . .



Explore an Activity

Youth "explore" and learn when they are involved in a hands-on learning activity. As an example, the activity could be judging a healthy cavy.

Reflecting on the activity

Youth "reflect" on the activity when they share and think about the activity. To do this the leader would ask the participants the following questions about the experience: What did they observe about the cavy?

Did the cavy show all the healthy signs? Did the members see any problems? If so, what? How could they be improved?

Apply the Activity

To complete the learning process, youth must "apply" what they have learned to everyday life. For this application the leader would ask the following questions: What have we learned today? What did the member learn today? How can we make sure we have a healthy cavy?

This process can turn any experience, good or bad, into a learning experience. To make this process work effectively, young people must understand how they can apply the results of the activities and the knowledge they have discovered

Each lesson has a triangle on the left margin, indicating each step in the Exploratory Learning Model: Explore, Reflect, or Apply. This model is one way of teaching science.

WHAT IS SCIENCE?

Science is not just a collection of facts. Facts are a part of science. We all need to know some basic scientific information: water freezes at 32°F (or 0°C); the earth moves around the sun; all animals need protein for growth. But, science is much more. Science is observing, communicating, organizing, comparing, relating, inferring, and applying. The following shows how the Exploratory Learning Model and scientific processes help youths learn:

Explore:

- *observing*
- *communicating*
- *organizing*

Reflect:

- *comparing*
- *relating*

Apply:

- *inferring*
- *applying*

Observing

The main route to knowledge is through observing, and using all the senses. This process is a distinct one by which people come to know about the characteristics of objects and their interactions.

Communicating

Objects, names, and events are described by people so that they can tell others about them. Communicating enables one to learn more about a greater range of information.

Organizing

Knowledge of principles and laws is gained through the systematic compiling, classifying, and ordering of observed and compared data. Bodies of knowledge grow from a long-term organizing process.

Comparing

Through comparisons, people systematically examine objects and events in terms of similarities and differences. By comparing the known with something unknown, one gains knowledge about the unknown. All measurements are a form of comparing.

Inferring

This is a process of realizing ideas that are not directly observable. It leads to predictive explanations for simple and complex phenomena.

Relating

Concrete and abstract ideas are woven together to test or explain phenomena. Hypothetical-deductive

reasoning, graphing coordinates, managing variables, and comparing effects of one variable on another help youth learn the major concepts of science.

Applying

Applying is using knowledge. Inventing, creating, problem solving, and determining probabilities lead to further knowledge.

Science also involves trial and error—trying, failing, and trying again. Science does not provide all the answers. It requires us to be skeptical so that our scientific conclusions can be modified or changed altogether as we make new discoveries.

Science is Questioning and Listening

Encourage youth to ask questions. A friend once asked Isidor I. Rabi, a Nobel prizewinner in physics, “Why did you become a scientist, rather than a doctor, lawyer, or businessman, like the other immigrant kids in your neighborhood?” Rabi responded, “My mother made me a scientist without ever intending it. Every other mother in Brooklyn would ask her child after school: ‘So? Did you learn anything today?’ But not my mother: She always asked me a different question. ‘Izzy,’ she would say, ‘did you ask a good question today?’ That difference—asking good questions—made me become a scientist!”

If we can’t answer all of our youth’s questions, that’s all right—no one has all the answers, not even scientists. And, youth don’t need lengthy, detailed answers to all of their questions. We can propose answers, test them, and check them with someone else.

UNDERSTANDING THE BASIC NEEDS OF YOUNG PEOPLE

Early Elementary (ages 6–8)¹

These children are the members of primary 4-H. Even if you do not work directly with this group, it is helpful to know what stage your new 4-H’ers have just completed.

Physical Growth

Early elementary-age children are at a period of slow, steady growth. The rapid changes of the infant/preschooler are behind them. The adolescent growth spurt is far away.

Six- to 8-year-olds are busy learning how to use their bodies by mastering physical skills. This includes

¹NCR Ext. Pub. #292, *Ages and Stages of Child and Youth Development*

everything from small muscle skills like printing with a pencil to large muscle skills like catching a fly ball. Because these skills are not yet polished, craft projects often end up messy, with crooked nails and too much glue. Activities need to be just that—active. Provide opportunities to practice skills, but use projects that can be completed successfully by beginners.

Growth in Thinking

Early elementary-age children are moving out of what psychologist Erik Erikson has called the “stage of initiative” and into the “stage of industry.” The child at this stage of development is more interested in the process than in the resulting product. This is just as well, however, because young children’s limited physical abilities mean that the finished products will not be perfect. Eventually, finishing a project will become as important as beginning it.

Thinking is very concrete at this time. If children have never seen it, heard it, felt it, tasted it, or smelled it, they have a hard time thinking of it. They enjoy activities and materials that are very concrete, as well. Rather than simply giving instructions verbally, leaders should demonstrate the activity. *Doing* is important for both the children and the leader.

Another thinking skill early elementary children are developing is learning to sort things into categories. This skill is one characteristic that makes collecting things so important and so much fun at this age. Collecting-type activities can be good for both group meetings and individual projects at this point.

Social Growth

School-age activities take children away from home and parents, some for the first time, and puts them in environments where they face new responsibilities and demands. As children move away from dependence on parents, they need to transfer that dependence to another adult, so the leader may become a central figure to the child.

Children are just learning how to be friends and may have several “best friends” at a time. Boys and girls sometimes enjoy playing together at this age, although by the end of this period the separation of the sexes will occur during most play. Fights, although occurring often, seldom have lasting effects.

The opinion of peers is becoming very important. Often, the 6- to 8-year-olds care more about being successful when their peers are watching than when just Mom and Dad are around. Small group activities are effective, but the children still need an adult to share approval.

Emotional Growth

Early elementary-age children are wrapped up in themselves. Their thinking capacity does not yet

allow them to imagine clearly what other people think and feel. “Dramatic play” or making believe they are someone else is the way children at this age begin to build that ability. Six- to 8-year-olds need and seek the approval of adults, because they are not yet confident enough to set their own standards.

Children at this stage like to play games. Rules and rituals become fascinating, but the children are not yet ready to accept losing. That is why success needs to be emphasized, even if it is small. Cooperative games in which every child wins can be especially enjoyable at this age. Failures should be minimized, and some measure of success should be found in every experience to ease the blows to young egos.

When an activity fails, the leader can help the children by interpreting the reasons behind the failures. Learning to cope with problems is a skill the 4-H leader can encourage in 4-H members. The usual 4-H practice of awarding competitive ribbons should be minimized or avoided here. **Competition with others is inappropriate at the primary 4-H level.**

Middle School (ages 9–11) and Teens (ages 12–17)

Belonging

The desire to belong is natural. It brings young people in contact with others. Belonging to a group helps young people grow because part of their feeling of personal worth is gained from what others think of them.

Independence

Becoming independent of parents is a sign of growing up. The youth’s desire to be independent is often challenging to parents and leaders, but all healthy boys and girls experience it. Youth may show their need for independence by impatience with adult and teen leaders and a preference for making up their own minds.

Achievement

Youth want to know that their efforts are worthwhile and appreciated. Projects should keep pace with the abilities of group members, bearing in mind that individual rates of achievement will vary. Include activities that require them to do things for others as well as for themselves.

New Experiences

Young people need and want to be active. They need new and different experiences to stretch their horizons.

¹NCR Ext. Pub. #292, *Ages and Stages of Child and Youth Development*

Affection

Affection or love is essential to personality development. Young people need to know that they are wanted and loved unconditionally.

Physical Growth

Physical growth in youth from middle school to high school varies drastically with age. Growth in middle school children (ages 9–11) is rather slow for most children. Youth at this age enjoy physical involvement. Projects that involve doing or making something are most successful.

From young teens to young adults youth experience growth spurts coinciding with the onset of puberty. The rapid changes in physical appearance may make young teens uncomfortable with their appearance. By the middle teens (age 15–17) most are comfortable with the changes in their bodies and know their own abilities and talents. Some talents are perfected at this stage (e.g., athletic talent) and new skills such as driving a car serve to move teens further away from the family and into the community as independent people.

Growth in Thinking

Middle school youth begin to think logically and symbolically. However, they still think in terms of concrete objects and can handle ideas better if the ideas are related to something they can do or experience with their senses. As middle school children begin to deal with ideas, they think of things as black or white. Something is either right or wrong. There is very little middle ground. Youth at this stage want to know how much they have improved and what they should do better next time.

Young teens (age 12–14) move from concrete to more abstract thinking. However, they still tend to think in all-or-nothing terms. Ready-made solutions from adults are often rejected in favor of young teens finding solutions on their own. Leaders and teachers who provide supervision without interference can have a great influence on young teens. Young teens can be very self-conscious, and a smaller group is usually less intimidating.

Middle teens are beginning to be able to think about the future and make realistic plans. At this stage youth are mastering abstract thinking. Yet they still have difficulty understanding compromise. In middle teen years teens can initiate and carry out their own tasks without supervision.

Projects requiring research and creativity give these teens the opportunity to demonstrate to themselves and others how much they have learned and how much they can accomplish on their own.

Social Growth

Middle school youth are beginning to identify with peers, although they still look to an adult for

guidance. At this stage, they still have difficulty understanding another person's thinking, however, they are beginning to discover the benefits of making other people happy. They begin to realize the benefits of pleasing others apart from immediate self-reward. Toward the end of this age range, youth are ready to take responsibility for their own actions. Decision-making skills are developed as the leader/teacher moves away from dictating directions to giving reassurance and support.

Young teens are becoming less dependent on parents. They enjoy participating in activities away from home. Providing young teens with opportunities to feel at ease with members of the opposite sex is an important function of group and social activities.

Middle teen relationship skills are usually well-developed and friendships formed at this stage are often sincere, close, and long-lasting. Teens in this age group want to belong to a group, but want to be recognized as unique individuals within that group. Leader/teacher relationships with these teens move from that of director/follower to advisor/independent worker. Consistent treatment from adults is important even though teens may act like adults one day and children the next.

Emotional Growth

Middle school children have a strong need to feel accepted and worthwhile. Emphasize successes, even small ones, and minimize failures. Don't compare children with each other. It tends to erode self-confidence. Additionally, it can cause problems in dealing with peers at a time when they are trying to build friendships. Compare individual past performance to present performance.

As puberty approaches, young people's emotions begin the roller coaster ride that will characterize them throughout their adolescence. Changes in hormones contribute to the mood swings, as do changes in thinking. Young teens are presented with the biggest challenge to their self-concept. Spending time with adults who are accepting and willing to talk about values and morals has a lasting effect on young people. This is a time for adults to help with self-knowledge and self-discovering activities. Be especially careful at this age to not embarrass the young teen. Activities that provide good things for others and demonstrate the teen's growing sense of responsibility are ideal.

Two important emotional goals of the middle teen years are independence and identity, although neither will be achieved completely at this time. Middle teens are learning to cooperate with others on an adult level. Activities filled with "busy work" or meaningless activities will cause these teens to lose patience and interest. Learning to interact with members of the opposite sex may preoccupy these teens. Unsettled emotions may cause the teen to be

stormy or withdrawn at times. In general, though, they will pride themselves on an increased ability to be responsible.

CURRICULUM GOALS AND OBJECTIVES

Participation in *The 4-H Cavy Project* curriculum will ensure that:

- Youth will humanely care for, feed, manage, and show cavies.
- Youth will learn that humane animal care is essential to providing a quality performance.
- Youth will be provided with the opportunity for personal development.

LESSON PLAN FORMAT

The general format of all the lesson plans follows. Routine is important to young people's feeling of security, so each lesson plan follows a similar outline.

This lesson is about

This section tells leaders what skills or competencies youth will gain from the exercises associated with the lesson.

What youth will learn

This section identifies what youth will learn about the project and about themselves. It relates to the goals and objectives.

Time needed

This identifies the suggested timeframe for completing the lesson.

Activity

This describes, step-by-step, how to complete the activity while involving the kids in the process.

What do I need to know?

Needed background information is given for the leader to teach the activity.

Activity sheet

This section describes how to complete appropriate activity, critical questions to ask, and critical answers to look for.

4-H TRADITIONS

In addition to offering educationally sound curriculum and functional, experience-based teaching techniques, 4-H has a rich heritage, with many time-honored traditions.

4-H Colors

The white in the flag symbolizes purity. The green, nature's most common color, represents life, growth, and youth.

4-H Emblem

The green, four-leaf clover has a white "H" on each leaf to represent the four "H's"—Head, Heart, Hands, and Health.

4-H Pledge

We recommend that the group recite the pledge at each meeting.

- I pledge my HEAD to clearer thinking,
- My HEART to greater loyalty,
- My HANDS to larger service
- And my HEALTH to better living, for my club, my community, my country, and my world.

4-H Slogan

"Learning by Doing" is the 4-H youth way of acquiring new skill. Learning how to get along with others comes from working and playing with the group.

4-H Motto

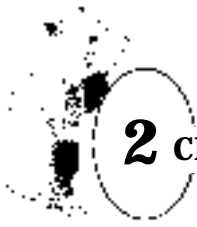
"To Make the Best Better" is the aim of 4-H youth work on improving project work and building better clubs, communities, and schools.



YOUR NEXT STEP AS A CAVY LEADER

In this section we have discussed the "hands-on" teaching philosophy. We have looked at how the hands-on philosophy can be an important part of teaching kids the science processes and introducing kids to the scientific method. Each of you now has a better understanding of how to work with kids, and why they act the way they do!

To help you with club meetings, read Chapter 2, "Cavey Overview," then read through the remaining chapters and the appendix. Following the appendix are project meeting plans and ideas.



CAVY OVERVIEW

Cavies, commonly known as guinea pigs, are delightful animals. Although timid, they generously give affection for a small amount of care. They are large enough for small hands to hold safely, but can present a challenging genetic project for the more advanced 4-H'er.

The cavy is popular as a pet because of its docile, gentle manner and attractive, roly-poly appearance. Its cleanliness and adaptability to a human environment make it easy to have in the home. In addition to being able to live in a home in the country, its ability to live easily in an apartment in the city makes it attractive to urban families. The cavy is an ideal first pet.

The 4-H Cavy Project is an animal project in miniature, teaching responsibility, patience, animal behavior, genetics, and record keeping. This project also gives you an opportunity to belong to a 4-H club, make new friends, learn new skills, and participate in 4-H activities. The cavy has earned its place in society as a pet and as a laboratory and show animal. The student of this project will reap many rewards including the companionship of the animal itself.

History and Uses

There is some confusion over the origin of the name "guinea pig." This rodent is not from Guinea in Africa, as the name infers, but is a native of Peru in South America. The label "guinea" may be confused with the name "Guiana," a port on the coast of South America, or cavies may have been sold by British sailors for one guinea (an old English coin). The name "pig" may be because of the way it grunts or squeals or because cooked cavy tastes a little like pork. Europeans and Americans rarely use the guinea pig as a source of food. However, Peace Corps volunteers in Peru report that it is considered a delicacy there and that it has a bland taste.

The Incas of ancient Peru raised cavies as a major source of protein and even used them in sacrifices to their gods. Cavies were kept in their homes, fed on kitchen scraps to fatten, then cooked and eaten.

Spanish conquerors of Peru were the first to import the cavy to Europe during the middle of the 16th century. They have been kept by Europeans as pets ever since. During the early 1900's, people in England and the United States started using cavies as show animals. There are many local, state, and national cavy shows held each year, usually in conjunction with a rabbit association. "Breeders," people who specialize in breeding cavies, concentrate on certain breeds or varieties. They work to improve the appearance and temperament of their specialty animal.

Many breeders participate in "shows," where their animals are evaluated according to the American Rabbit Breeders Association Standard of Perfection. Although the general public, and even some scientists, refer to this docile mammal as a guinea pig, its correct name is cavy (pronounced "kay-vee"). The terms are interchangeable. The name "cavy" is derived from its scientific name *Cavia porcellus*. "Porcellus" is the Latin name for "little pig." They are more closely related to chinchillas and porcupines than to rats, mice, or squirrels.

Cavies have been used since 1870 by eminent scientists like Louis Pasteur. They are useful for studying the causes and possible cures of a variety of diseases. Reportedly, millions of cavies are required annually in medical research in the United States in areas such as nutrition, pharmacology, allergies, radiology, immunology, serology, and genetics. The term "guinea pig" has come to mean "a subject of scientific research."

SCIENTIFIC CLASSIFICATION

KINGDOM—Animal

PHYLUM—Chordata (animals with a spinal cord)

SUBPHYLUM—Vertebrates (animals with backbones)

CLASS—Mammalia (warm-blooded animals that have a hair coat and nourish their young with mammary glands)

ORDER—Rodentia (gnawing animals whose front incisors continuously grow)

SUBORDER—Hystricomorpha (chinchillas, porcupines, etc. They have a zygomatic arch in which the jugal bone forms a center block.)

FAMILY—Caviidae (South American rodents with no visible tail, one pair of mammae, four toes on the forefoot, and three on the hindfoot)

SUBFAMILY—Caviinae

GENUS—*Cavia*

SPECIES—*Porcellus*

Description and Type

The cavy is a short-legged, stocky, “cobby” mammal with no visible tail. It has four toes on each front foot and three on each back foot. An adult cavy is from 10 to 14 inches long and weighs between 2 and 3 pounds.

The ideal “type” or conformation of a cavy includes: a broad head with a short, Roman nose; large, bright, bold eyes; drooping, petal-shaped ears; a high, full crown with medium body length; firm flesh; and high shoulders. One popular description of the cavy states that it should look like a brick with rounded edges.

Breeds

A national standard for cavies has been set by the American Cavy Breeders’ Association, the National specialty club of the American Rabbit Breeders’ Association. 4-H uses the same standards in order to classify cavies for their shows. These standards represent the goals of the cavy breeder. If our animals are not “perfect,” (and none are) this does not mean that they are less worthy of our love, care, and affection. We use these standards to help us select, breed, and show our animals.

Domestic cavies are divided into breeds according to differences in the hair of their coats. Such distinctions are genetic and will pass from one generation to the next. Currently, there are 13 standardized breeds, which can be divided into two categories: short coated and long coated.

Short coats. There are seven breeds in this category. They are *American*, *American Satin*, *White Crested*, *Abyssinian*, *Abyssinian Satin*, *Teddy* and *Teddy Satin*. The most popular and best-known breed is the *American*. It has short, smooth hair and best displays the preferred “type” in cavies. It is the cavy most commonly used in laboratory work and often found in pet stores.

The *American Satin* has a short, smooth coat. It’s hair has a hollow shaft that causes the coat, particularly in the lighter colors, to have “sheen” or appear “pearlized” like satin.

The *White Crested* is very similar to the *American* with the same short, smooth coat. It has, however, a single rosette centered on its forehead between the eyes and ears. The rosette consists of hairs radiating out from a center point. Although Cresteds of many color varieties are pets and 4-H projects, the only Cresteds allowed as a breed in U.S. open shows is the *White Crested*. The rosette or crest must be white and is the only white allowed on the body.

The *Abyssinian* has short, wiry hair. It is arranged into a specific pattern of rosettes that create ridges. Therosettes should be deep, complete and well-defined. Four saddle rosettes, two hip, two rump, and two shoulder rosettes are preferred, with stiff, straight hairs forming the ridges between rosettes.

The *Abyssinian Satin* has the same coat characteristics as the *Abyssinian*, but displays “sheen,” too.

The *Teddy’s* coat is short and dense, and the hair is wiry and kinky. Two strains have been developed: the soft, plush coat and the harsh, rough coat.

The *Teddy Satin* has a coat with the same characteristics of the *Teddy*, but with “sheen.”

Long coats. The four breeds that fall into this classification are the *Silkie*, *Silkie Satin*, *Peruvian*, *Peruvian Satin*, *Coronet*, and *Texel*. They are judged primarily on the length, density, and texture of their coats. Breeders of show animals encourage the growth of “sweeps,” or long sections of hair, by rolling them in wraps. An 18-inch show coat is possible! Since the coats on these animals grow about 1 inch a month, they require special care and require regular trimming to prevent matting if not kept in show coat.

The *Silkie* and *Silkie Satin* have a smooth, silky coat that grows straight back in a “cape look” or teardrop formation. The facial hair is short and smooth and the hair of its crown grows down its back, merging in to the long side and rear sweeps. *Silkie Satins* also display “sheen.”

The *Peruvian* and *Peruvian Satin* have 4 major “sweeps”: two on the sides, one at the rear and a frontal sweep also called “head furnishings.” There are two major rosettes on the hips that cause the long hair to fall forward.¹ When combed for presentation, the hair is parted down its back.

When in full show coat it is almost impossible to tell which end is the front. *Peruvian Satins* display sheen.

Newly accepted breeds currently of great interest are the *Coronet* and *Texel*. The *Coronet* looks like a *Silkie* with a coronet (rosette) on its forehead which can be any color. *Texels* have medium to long “ring-leted” kinky hair that is soft, dense, and springy to the touch, with faces resembling *Teddies*.

Some breeds have not yet received acceptance by the ACBA at this time; however, they are being developed extensively in the U.S. Cavy breeders have liked the satiny effect of the hollow hair so much that they have developed this feature in all other known breeds,² thus developing new breeds from the old familiar ones.

Many cavies are crosses between two or more recognized breeds. These animals may have characteristics of several breeds—a short coat with a single hip rosette, for example. Although they might not be eligible for an open show and probably will not place well in “breed” classes, they are suitable for 4-H showmanship and they make good pets.

¹These rosettes are not seen once the sweeps begin to grow.

²Except the *White Crested*.

Color Groups and Varieties

The four basic color groups that are nationally recognized are listed below with the varieties that fall within each group. More specific descriptions of the varieties may be found in the cavy section of the *Standard of Perfection*, published by the American Rabbit Breeders' Association.

The *Self* cavy (Beige, Blue, Cream, Red-eyed Orange, White, Black, Red, Lilac, Chocolate) is entirely one color. The belly color tends to be slightly lighter in some varieties. The color should be a uniform shade from tip to base. This is called "depth of color."

The *Agouti* cavy (Dilute, Golden, Silver) has a coat with two different colors on the hair shaft with a base color of beige, black, chocolate, or lilac and a tip color or cream, orange, red, or white.³ The belly color is the same as the tip color.

The *Solid* cavy (Golden, Brindle, Roan, Silver, Dilute) has a coat of intermixed hair colors evenly distributed over the entire body. The Dilute, Golden and Silver are similar to the Agouti, but have no separate belly color. They have ticking all over, including the belly. The Brindle has a coat of red and black intermixed hairs, while the Roan has white hairs intermixed with colored.

Color in the *Marked* cavy varieties (Dalmatian, TortoiseShell (TS), Tortoise Shell and White (TSW), Himalayan, Broken Color, Dutch) is preferably displayed in clear, well-defined patches and, for some varieties, in special placement. The ideal pattern for Tortoise Shell (red and black) and Tortoise Shell and White is a checkerboard of patches. The Dutch is white with colored eye patches and ears with colored hindquarters and partially colored feet. The Himalayan is a white-bodied cavy with black legs, ears, and nose. The Dalmatian is white-bodied with colored spots. It often has a colored head. The Broken Color can be any two or more recognized colors except Roan, Brindle, Tortoise Shell, Tortoise Shell and White, Himalayan, Dalmatian, and Dutch.



AMERICAN

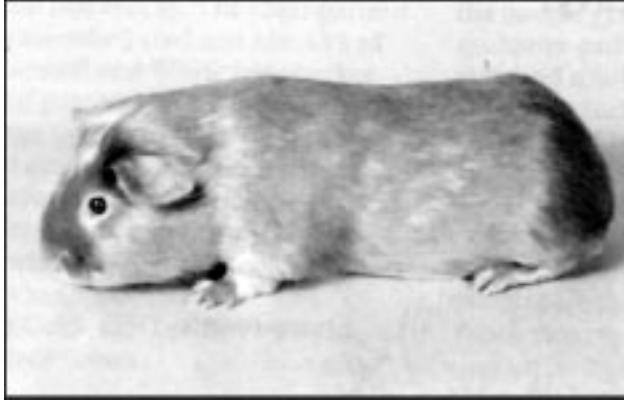


TEDDY



CORONET

³The belly color is a narrow band of color running from below the neck to between the rear legs.



SATIN



WHITE CRESTEED



PERUVIAN



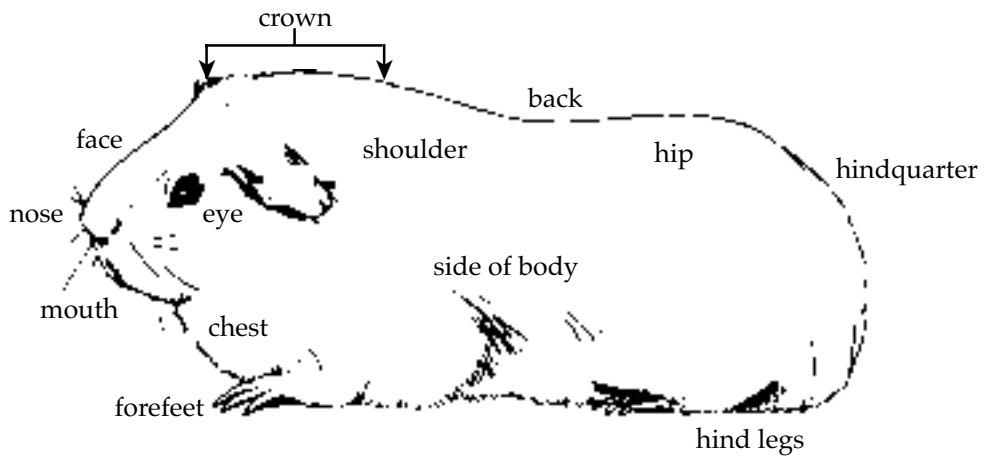
SILKIE



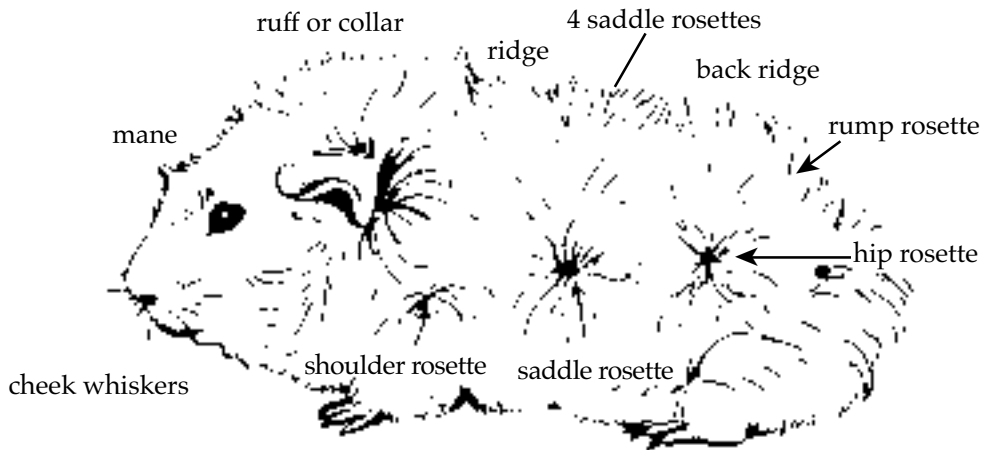
ABYSSINIAN



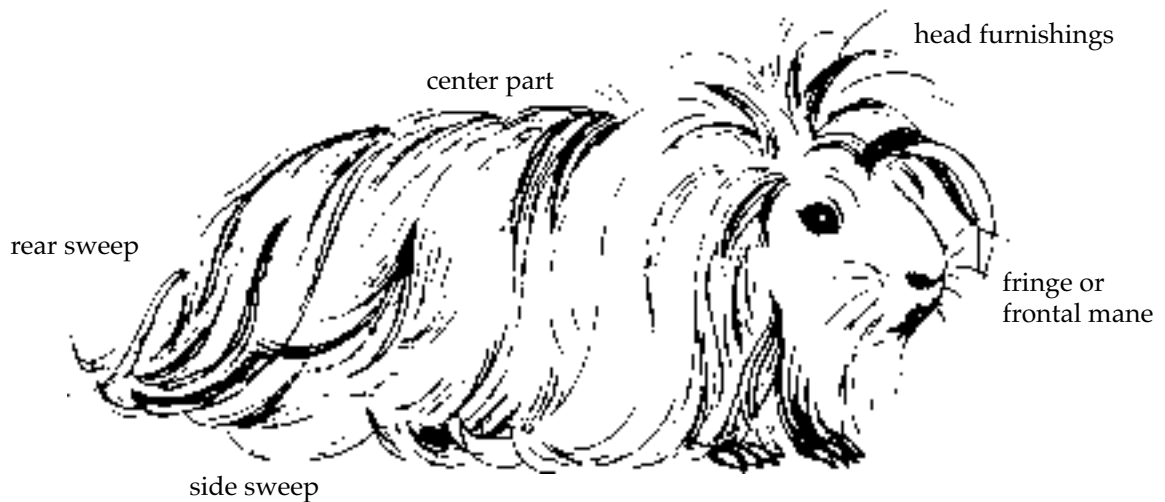
TEXEL



The American cavy



The Abyssinian cavy



The Peruvian cavy

Behavior

The more we know about cavies, the more we will enjoy this 4-H project and our own animals.

Cavies can hear high frequencies (sounds) far above and below the human range. They are notorious for recognizing the sound of the refrigerator door opening or rustling in a vegetable drawer. Studies have shown that cavies do indeed distinguish the footsteps of their caretaker from others. They can also quickly learn to respond to specific sounds.

The cavy's sense of smell is greater than ours, which can cause an uproar in the caviary when a favorite fruit or vegetable is detected. Cavies distinguish both individual cavies and different humans by smell rather than sight. Watch two cavies meeting for the first time notice how they sniff each other.

Cavies produce a wide variety of sounds, each with a different purpose. When calling to its owner or a cavy friend, the cavy will emit a loud, high-pitched squeak, often described as a shrill whistle. The young cavy calls its mother with this sound when it has strayed too far from her. She responds with a cooing, murmuring sound to soothe the little one.

The cavy also has a purring mating call. This is particularly used by the male when introduced to a female. After the couple get to know each other, they exchange calls with a gentle rolling purr and a soft series of chirps that indicate a feeling of contentment. Chattering of teeth accompanied by shifting of weight on fore feet is the cavy's direct warning for intruders to beware! They may bite!

Such body language is an important form of communication among cavies, because they are very social animals. When two cavies meet for the first time, they circle one another with fully extended legs. This is a normal pattern of establishing rank within a cage space or "territory." A mock battle may last a full day. Usually the largest animal in the group will establish dominance.

To reduce such confrontations add extra treats at time. This can distract a domineering animal from aggressive behavior.

It is delightful to watch a group of youngsters

practice the ritual of establishing rank by placing an over-turned food dish or block of wood in their midst. They play a game similar to our "king of the mountain." Cavies love to burrow in hay or play "hide and seek."

A loud sound or squeal of fear or pain from one animal will send all of them scurrying around in a panic or dashing quickly into a hiding place. When confronted with danger or a noise, they will often freeze in place. In the wild, cavies travel single file with adults at each end and young in the middle.

"Popping" is a behavior peculiar to cavies that often confounds new owners. From a standing position on all fours the cavy will jump straight up in the air. Often it will turn 180 degrees while airborne. There's incredible spring in those short legs.

Courtship behavior is also interesting to observe. The boar circles the sow with a cocky strut, swaying back and forth. The hair on his crown may rise and he chases the sow, sniffing at her rear. She usually ignores him, sometimes displaying boredom or irritation at his persistence. The mating usually takes place at night when she is receptive.

Coprophagy, or eating its own bowel movement, is normal behavior for a cavy. Coprophagy is necessary to cavy's digestive system. Nutrients from food incompletely digested on the first trip through the digestive system are often absorbed on the second. Remember, the cavy is a vegetarian and does not have a problem with worms unless fed infected grasses.

The joy and fellowship we experience in working with our cavies will grow as we become better acquainted with the particular behavior and personality of our own animals. Like our human friends, cavies differ widely in habits and personalities. When we know our cavy well, we will be able to identify moods and special needs more accurately. We will also be able to detect the onset of disease and increase the chance of preventing serious illnesses.

The attention we give our cavies will not only affect their health, but will determine whether they live a life of boredom locked up in a cage or a full life of activity and contentment.



BEGINNING THE 4-H CAVY PROJECT

HOW TO GET STARTED

Supply List

Have all supplies on hand before buying your cavy.

Solid Bottom Cage

18" x 18" or more - no wire floors.

Shavings

Dry fir or a fir and hemlock mix—no cedar shavings as the oil in them is toxic and can cause a reaction. Damp shavings can cause your cavy to get chilled and ill.

Water Bottle

Medium or large size.

Baby Bottle Brush

For scrubbing out the water bottle's algae growth.

Percolator or Baby Bottle Nipple Brush

For cleaning out metal tip of water bottle. Algae growth can build up inside the water bottle spigot and cause the ball to stick inside, preventing water to flow. Thus, a bottle will appear full and your cavy could dehydrate and die.

Non-Tip Feed Bowl

Plastic or lead-free ceramic—make sure there is no way feet or toes can get caught. Wash the bowl weekly.

Other Items

You will want to have these on hand: nail clippers, bird lice & mite spray, cat flea powder and cotton swabs.

Feed

(See Foods & Feeding section).

Selecting a Cavy

Before you buy a cavy, go to an "open" show or 4-H cavy event and look at the different breeds. Short coated breeds are better for beginners because their coats are easier to manage.

Have members buy the best animal they can afford. Have them decide what they are going to do

with the cavy: whether it is a pet, for showing and/or breeding. Select an animal with purpose in mind. A breed or variety that is unique in your area might help make it possible to join in a breeding project with other 4-H'ers. Select a breed that kids can manage. Long-haired cavies require special care. Look for a healthy animal. The following chart should help.

THE HEALTHY CAVY

APPETITE—Eats frequently

BREATHING—Silent and regular

BODY—Firm, no swellings, cuts, sores, or broken bones

TOENAILS—Trimmed, none ripped off, no extra toes

COAT—Clean, shiny, unmatted, and free of parasites

DROPPINGS—Small and firm, pellet-shaped

EARS—Clean, preferably untorn, no discharge

MANNER—Alert, inquisitive, and responsive

MOUTH—Dry, no sores or slobbering

MOVEMENT—Rapid shuffling, freezes when alarmed

NOSE—Clean, no mucous or discharge

TEETH—Four front teeth (2 top and 2 bottom) should be overlapping, not loose or broken

HINDQUARTERS—Dry, clean, no stains or signs of diarrhea



Cages and Carriers

Safety for both the child and the animal are the first consideration. The cage should protect the animal from outside predators and keep it from escaping. Beware of sharp metal edges and wires that could cut you or the animal. The door opening should be large enough for safe passage. The bottom should be waterproof, firm, and flat so as not to catch toenails and legs. Do not use wire bottoms.

The minimum space is 1¹/₂ square feet per adult cavy. The ideal cage size for one animal is 18 by 18 by 12 inches high.

Proper ventilation is required, but avoid drafts. A temperature range of 55–75°F is best. Cavies do not perspire; avoid direct sunlight and higher temperatures. Move to a cooler area if the room is warmer than 75°F. Suggestions for cooling cage area include: damp towel over cage, cold pop cans in cage or ice in empty dish. Do not get your cavy wet.

Twice weekly cleaning is necessary for both the animal's and the owner's health and comfort, so cages must be cleanable. More than one cavy in a cage will require cleaning more often.

Wood and wire cages are inexpensive to make and can easily provide security and good ventilation, although these also become urine soaked eventually.¹ Rabbit cages with solid metal pans have the advantage of being easy to clean. These cages are secure, long lasting, well ventilated, and available in many sizes. If there is a wire grid above the metal tray it can cause bumblefoot or broken limbs, so remove the grid. Wire cages with pans are the most costly, but best option. Feed stores and pet stores may carry these, or you can build your own.

Carriers are used for travel. They have the same requirements as regular cages, but are smaller. They should be roomy enough for the cavy to be comfortable. Carriers are useful for attending shows and for taking your animal to the vet. Small plastic cat carriers work well.

Dishes and Toys

A cavy will need a water bottle, preferably a plastic water bottle for rabbits (available from pet or feed stores). It must have a metal tip to prevent being broken by the cavy's sharp teeth. Water dishes are too easily tipped and soiled to be practical.

Select a heavy feed dish with smooth edges that cannot be easily tipped. If the dish is too low or large, the cavy will sit in it and soil the food. Gravity feeders such as those used in rabbit cages do not work well with cavies since they get their toenails caught on the metal seams.

Cavies love to play. An empty oatmeal box or small cardboard box with one end removed is a

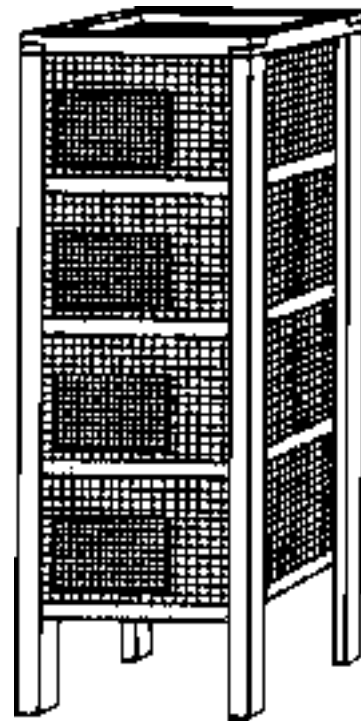
CAVY CONDOMINIUM

Frame:

- 2x4 inch lumber
- Attach 1x1 inch wire mesh to frame
- Use wire mesh to support metal trays
- Trays pull out the front
- Doors are large, off-center

Size:

- height 6 feet
- depth 18 inches
- width 18 inches for a single
(24 inches for a double)



simple hutch or hiding box. Do not paint the toys. Painted toys or boxes may be toxic to the cavy. Expect them to be chewed on and to require replacing.

Bedding

Cost and availability are two of the most important factors in choosing bedding. Cages should be cleaned twice a week, so be sure to select bedding that can be easily replenished. Use bedding for comfort and cleanliness. Select a material that is fine enough to be absorbent, but large enough not to block nasal or rectal passages.

¹Several coats of latex paint will keep them cleaner longer.

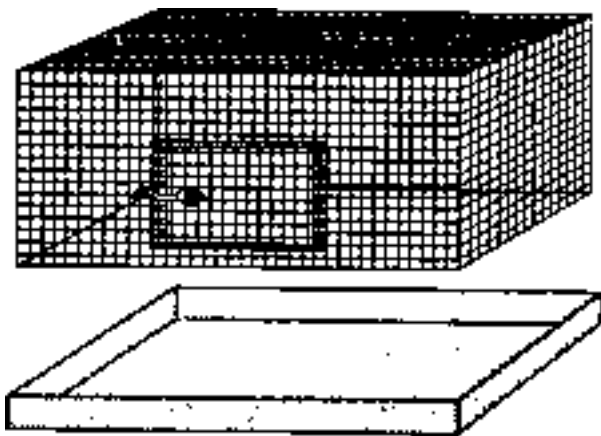
Cover metal cage pans with wood shavings (for absorbency and smell), and top with a generous amount of grass hay (for hiding and chewing). Change bedding often to keep urine smell under control, and disinfect cage with bleach solution occasionally (one tablespoon of bleach per quart of water), remembering to rinse well. Used bedding can be recycled with yard waste or can be combined into a garden composting pile.

Fir shavings (which may need to be presifted to remove any foreign matter) or Western Hemlock (often called White Shavings) are recommended. Do not use cedar shavings because the oil in the cedar is toxic.

WIRE/METAL CAVY RUN

(This style is adaptable to many sizes for different needs)

Top:	height 14–16 inches width 16 inches length 36 inches
Door opening:	8x12 inches
Door:	9x14 inches (Door may be put in top or better access to the cavy, if cages are not stacked)
Open bottom	
Metal pan or tray:	depth 2–4 inches width 16 ¹ / ₂ inches length 36 ¹ / ₂ inches



Foods and Feeding

Fresh water must be readily available at all times. Prepared pellets should be available at all times. Select what is available and what you can afford, as long as they are fresh (not from the grocery store). Cavy pellets are the best source of balanced nutrition. They usually contain vitamin C, but this vitamin deteriorates within 90 days of the pellet milling date or sooner. Supplement with additional vitamin C. Rabbit pellets with minimum of 16% protein are acceptable but do not contain vitamin C. **Do not use medicated pellets.**

Feed Vitamin C! Each animal should receive 125mg of vitamin C in their 32-ounce water bottle. You can use the same type of vitamin C that is used for people, which you can purchase at your local pharmacy or grocery. Some breeders prefer using natural vitamins containing no artificial ingredients. Do not use vitamin C containing sugar. Change the water bottle every 2 days even if it's not empty because the vitamin C loses its potency after that time.

Give as much grass hay or timothy hay as the cavy will eat. Small amounts of alfalfa are acceptable. Select clean hay, free from thistles, mold, mud and dust.

The following foods may be added to the feeding routine, but should not be considered their primary source of nutrition:

- Mixed grains such as COB (corn, oats, and barley) with or without molasses, 1 teaspoon 2 times a week.
- Alfalfa cubes, in place of alfalfa hay.
- Small amounts of fresh fruits—apples, bananas, oranges, for example: ¹/₈ of an apple.
- Small amounts of fresh vegetables—carrots, parsley, spinach, celery, just to name a few. For example: a 2-inch carrot piece, 1 small spinach leaf. (Note: head lettuce is mostly water and has little nutritional value.)
- Fresh field greens such as dandelion and fresh picked grass. Be sure they have not been sprayed with pesticides or chemicals. Wash all fruits and vegetables before feeding.
- Milk sops (bread soaked in milk) for lactating sows and babies. Remove uneaten portions after two hours to prevent spoiling.

The cavies may have digestive problems if you feed them onions, radishes, cabbage, cauliflower, broccoli, and potatoes. *Oleander*, *foxglove*, *digitalis*, and *rhubarb* are deadly! Avoid foods with dehydrated vegetables and sunflower seeds.

Check your animal EVERY DAY. Be sure it has food and water and vitamin C. Ask yourself: Does the cage need cleaning? Is the animal behaving normally? Is the room temperature correct? Does my pet need bedding or food? Have I handled my animal today?

Bath Time

Cavies are very clean. They groom themselves much as a cat would. If their cages are kept clean, they will not need a bath more than two or three times a year. If you are showing your cavy you may have to bathe it more often.²

Gather the things you will need for bathing before you get your cavy from its cage.

- Towel for drying your cavy after bath.
- Mild cat or kitten shampoo, baby shampoo — most human shampoos are too harsh and may cause allergic skin reaction.
- Q-Tips for cleaning ears.
- Nail clippers for trimming toenail
- Small plastic cup for rinsing.
- Small towel for sink bottom keeps footing stable.
- Hand held blow dryer—warm setting.
- Soft brush.

The kitchen sink is probably the easiest place to bathe your cavy. Make sure your house is warm before, during, and after bathing your cavy. Place the small towel in the bottom of sink and fill with about four inches of barely warm-to-the-touch water. Place the back legs of the cavy on the towel and support its front with your hand. Use the plastic cup to wet the coat.

Apply a small amount of shampoo behind the neck, middle of back and hindquarters. Gently work up lather and massage top and bottom of animal. Keep soap and water away from eyes, ears, mouth and nose. If you have a double sink you can fill the other side for rinsing or simply hold the cavy firmly and use the running water from the faucet. Rinse your cavy thoroughly.

Wrap cavy in a towel and gently clean the outer ears with a Q-Tip. *Do not* insert the Q-Tip into the ear canal.

Using the blow-dryer on warm setting, “finger dry” the hair. Talk in a gentle, soothing tone while working. Massage the cavy’s body to help diffuse the heat from the blow dryer and move the dryer continuously to avoid excessive heat on any one spot. When you think it is dry, turn off the blow dryer, let the hair cool off then check for dampness. After the hair is completely dry, brush the coat to help the natural body oils rejuvenate and bring out a healthy shine. Brush hair in the direction in which it grows. Trim the toenails once a month.

²Before bathing check boars for impaction or excess debris in perineal pouch (see Disease & Ailment chart).

KIDS AND CAVIES... WHAT CAN THEY DO IN 4-H?

There are several ways for a 4-H'er to participate in the cavy project. You can join a 4-H club that specializes in small animals, perhaps just cavies. Or, join a club specializing in both rabbits and cavies, since they use somewhat similar management techniques and equipment. Each 4-H club is unique, and their activities will vary from leader to leader.

Club meetings provide you with information and experiences that will further your knowledge of cavy husbandry, such as record keeping and proper handling. The meetings also provide opportunities to exercise social skills, participate in community service, and receive citizenship training; areas that are so important in the development of the 4-H'er as a well-rounded person.

Fitting & Showing (Showmanship)

Youth also present themselves and their cavy in Fitting & Showing contests. Special handling techniques are learned along with general cavy information, then members are evaluated. (See Chapter 6, “Fitting & Showing The Cavy.”)

Showing Cavies

Youths like to show their project animals. More than half of youth join 4-H to show an animal at the fair. Kids in the Cavy Project are no different. They want to show or present the best characteristics of their cavy to their peers, family, and friends. Showing animals teaches youth to care for a living thing, be responsible for an animal, and make decisions. In general, showing a cavy will teach kids the life skills to become responsible caring adults.

Judging Contests

Judging contests can be one of the most challenging, enjoyable, and informative experiences kids will have in 4-H. In this contest they get to act as judges. The 4-H'er tries to match the decision of the adult judge of the contest.

Kids will be asked to rank, in order of preference, items in categories such as bedding, food, equipment, breeding mates, and, of course, the cavies themselves. They may be asked to identify parts of the body, breeds, and varieties. Matching diseases, symptoms, and cures is another favorite subject.

Kids will get opportunities to judge cavies. When youth go through the class at first, they should make notes on the cavies. For example:

1. Good ears and eyes, fair body, poor condition, good color, disqualified for pea eye.
2. Good ears and eyes, fair body and conditions, fur color.

A scorecard may be used for part of this contest. Written and oral reasons may be requested. The judging contest provides you with a marvelous, first-hand experience in decision making. It is one of the highlights of the 4-H experience.

Public Presentations

One of the best opportunities to share enthusiasm and knowledge of a subject is through a public presentation or demonstrations. Singly or in pairs, 4-H'ers may deliver a speech or conduct a demonstration before a judge on any topic they choose. Winners are selected for each level: junior, intermediate, and senior. Audiences of interested observers are welcome.

Experience in public presentations will help you develop poise and self-confidence, which is useful in all aspects of life.

Records

Written records are the foundation of history. Without them, our information is vague and untrustworthy. We help to plan our future by knowing the past. Animal records are the written history of the project. Although keeping records is time-consuming and requires organization, it provides the information used to plan future animal projects. Accurate records also provide a way to pass your experience on to someone else. The following methods of record keeping are recommended:

The state 4-H record book will have sections to record all aspects of your cavy project such as project goals, project diary information, financial summary, and show records.

Personal cavy records. A large calendar, or dated diary kept near your animals is used to record births, deaths, sales, illness, and show dates.

A written pedigree, even if it is incomplete, for each animal.

A record card for each animal. This should tell the animal's history and breeding record as well as show placements and medical history.

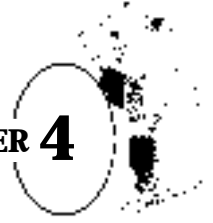
Weekly weighing. This is an invaluable tool in detecting illness and watching the progress of your animals.¹

A list of ear tag numbers is very helpful, especially when assigning new ear tags. This list serves to record sales, deaths, and additions, thus becoming an inventory of your stock.

Other records that might be kept are: "Legs" and Grand Champion papers, photos, and comment cards from shows.

If the youth sells an animal, records transfer to the new owner.

¹The A.R.B.A. requires weights to register an animal.



There are few projects as rewarding as watching a cavy family because their babies are among the cutest in the animal kingdom.

Selecting a Mate

To develop your cavy family you must have appropriate space, time, money, and energy; homes for the young; and a healthy sow. You may choose either a young sow over 24 ounces in weight and 4 to 7 months old (preferably around 6 months) or an older sow with previous birthing experience. Avoid choosing an older sow who has never birthed because her pelvic bones may have hardened, creating a risk that she would not deliver safely. You also need a healthy boar, who can be purchased or borrowed. He should weigh over 22 ounces and be at least 4 months old. Avoid placing a very young boar with an older, aggressive sow who may intimidate or injure him. The boar should complement your sow's best features and strengthen those that need improvement.

Particularly in a small cavy project, selection of a mate is restricted by what is available. The results will be more pleasing if you first select a healthy mate that is the same breed as yours, and then select on the basis of type and variety. Remember the objective in any breeding program is to create strong, healthy cavies.¹

Pregnancy

The sow is placed with the boar for at least 6 weeks. The sow's estrous cycle is 16 to 19 days. She is in heat (receptive to the boar) for about two days, during which the membrane that normally seals her vaginal opening breaks.

The membrane then reforms and the cycle starts over, unless conception has taken place. A sow is fertile for three to four years. A boar is continuously fertile for 4 to 5 years, but it is thought he can become sterile unless bred regularly.

The gestation period of a pregnant sow is 68 to 72 days. Palpation to determine pregnancy is performed by gently placing both palms of your hands up under the sow's abdomen. Feel for two egg-shaped swellings that are the sections of the cavy's two-horned uterus. Be sure to be very gentle! "Kickers" signal that birth will occur in three to four weeks.

¹Before placing boar and sow together, check the boar for impaction. Make sure no shavings or debris have collected in the sheath. Check the sow for any signs of infections of the reproductive organs (see Disease & Ailment chart).

To prevent problems such as pregnancy toxemia, provide special care for the pregnant sow.

- Handle as little as possible.
- Keep good nutritional habits.
- Provide exercise by placing the food dish and water bottle at opposite ends of the cage.
- Avoid all forms of stress to the sow, including showing.

Pregnancy toxemia may occur any time during and for a month after the gestation period but usually occurs close to the due date. Symptoms include listlessness, loss of appetite, and reduction of water intake. There is no proven cure. Sows can be lost to this problem despite the best conditions.

The boar and the sow can be left together for the entire pregnancy. He will not harm the pregnant sow or the babies. However, the boar should be separated two weeks before birth to prevent rebreeding the sow during her postpartum heat period. She may be housed with other sows, but avoid placing pregnant sows together when their due dates are close. They might drop their litters at the same time, even though one litter would be premature.

Parturition

A normal parturition (birth) takes 20 to 30 minutes and the usual litter size is between two and five babies. A nest is not necessary although extra hay is desirable for privacy. The sow often pulls the babies out, licks them clean, and then eats the accompanying sacs and the round, disk-like placentas. Eating the afterbirth probably stimulates the sow's milk secretion. The sow should be allowed to eat what she prefers. Remove any afterbirth after two hours. Do not handle the mother for 24 hours if you can avoid it. Any damage to the babies (bites, missing toes or ears) is a result of over-zealous cleaning or a difficult birth. Cavies are not cannibalistic!

If problems such as prolonged hard labor or an improperly positioned fetus occur during parturition, contact a veterinarian. If prolapse (part of the birth canal follows the fetus out) occurs, though this is rare, also contact a veterinarian.

Stillborns can happen in cavy births and occur for a variety of reasons that you cannot always prevent. Occasionally babies are born too quickly for the mother to clean the sacs from all their heads and a fetus suffocates. If you are present at such a birth, quickly peel the sac from the baby's head so it can breathe.

Cavy babies are born fully haired with their eyes open. They will almost immediately move around

and nibble solid food within 24 hours. A desirable weight for a newborn is three to four ounces.

A sow might reject her newborn if she is a mother for the first time. If the sow does not accept her babies within an hour or so, carefully move the mother into a small box with her babies. Cover the box with a towel and leave them alone for two hours until she is cuddling with her offspring. A mother may ignore a particular baby in the litter if she senses something is very wrong with it. This is Mother Nature's way of eliminating those too weak to survive.

Occasionally a baby is born with wry neck—with its head pulled to one side and difficulty in standing up. Do not confuse this with the wry neck middle-ear infection of rabbits and older cavy. In newborn cavies, the problem is usually muscular. In mild cases it will go away in 7 to 10 days. In severe cases, the baby may be unable to feed and will perish.

Possible Breeding Problems

To avoid problems, purchase new stock from reputable breeders and then isolate the animal for at least 10–14 days. During this time, check the cavy's general health, as well as for parasites such as lice and mites. Some causes of decreased fertility include:

- Obesity.
- Poor nutrition and lack of vitamin C.
- Early weaning —Do not wean before three weeks of age as males may not breed well.

Prenatal death of babies through aborting or being stillborn has three main causes:

- Stress.
- Poor diet. Maintain very good nutritional habits, but do not over feed treats as this may cause large babies.
- Overhandling or poor handling. Sometimes babies are malformed and the sow's body aborts the fetuses.

Difficult Delivery (Dystocia)—

There are four main causes of difficult deliveries and a couple of possible solutions:

- Babies are particularly large.
- The pubic symphysis fails to relax. It should dilate to between 20 and 25mm in order to deliver.
- Uterus fails to contract strongly enough.
- Failure to breed sow before 7 months of age. Not doing so predisposes the sow to partial or complete fusion of the pelvic symphysis.

Solutions may include —

- The use of oxytocin administered by a veterinarian to induce delivery in cases of "lazy uterus."
- Cesarean section. This is risky even in healthy animals. The procedure must be performed by a veterinarian.

Caring for a New Family

Cavy young are well tended by their mothers. If a litter is large (four or more), you may need to supplement the mother's milk with milk sops (bread soaked in diluted, evaporated milk or goat's milk). Provide good nutrition, moist bran with wheat germ, regular pellets, and plenty of water. Make sure that the babies have access to the adult's food and water as well.

If a litter is orphaned, it may be fostered to another lactating sow. She will usually accept the new babies within a few hours. A human foster parent can feed diluted evaporated milk or goat's milk every 2 hours using an eye dropper or syringe. For correct feeding procedure contact a veterinarian or a breeder. If neither is available, be very careful that the babies do not inhale the milk. The babies' lower abdomen and hindquarters should be gently massaged frequently, to stimulate bowel movements.¹ If possible, keep orphaned newborns housed with other cavies, removing them only for feeding. Older cavies will nurture the young of their social group.

Record the newborns' weight, sex, color, and condition. Spread out any folds in their ears. Note the head shape and overall type during the first 24 hours. Many breeders feel this is an accurate prediction of a cavy's appearance at one year old.

Continue good nutrition for your lactating mother. Poor nutrition may result in severe weight loss, or other health problems. Proper nutrition will correct such problems.

If blue breast or caked breast occurs, it can develop into mastitis, and infection of the mammary glands and teats. Releasing some of the milk will alleviate the problem in a few days. Warm compresses applied frequently to the hot, swollen area and gentle massage should do it. If not, see a veterinarian.

Weaning (separation of young from the mother) takes place at four weeks after birth. Removing the babies at the rate of one a day will reduce the sow's risk of developing caked breasts. Young, weaned sows can be housed with other sows, but not with boars. The risks of breeding too early are great. Young weaned boars can be housed with other boars of similar size and age.

When you wean the litter, you must cull them. Select "keepers" according to size, type, personality, or the special needs of your breeding program, dispersing others to pet stores, friends, through newspaper advertisements, or sales at open shows or pet shows.

With careful planning, selection of healthy breeding stock, and consistent attention to the details of pregnancy, parturition, and weaning, the development of your cavy family will be one of the most memorable events of your 4-H career.

¹Use a warm damp paper towel rubbed gently on their bottoms to stimulate urinations and bowl movements.

Cavy Genetics

Genetics is a vast and complicated, but fascinating, subject that will bring depth and interest to your cavy breeding program. Understanding a few basic principles of genetics will enable you to predict the probable result of breeding a pair of cavies.

All babies are born with physical characteristics that are passed to them from their parents on microscopic structures called chromosomes, which exist in pairs in each cell of the body. The baby received half of its chromosomes from each parent.

The hereditary coding for physical traits such as size, shape, color, coat texture, and color patterns, is located in genes on each pair of chromosomes. Thus, the baby has two genes (one from each parent) for each specific trait.

In some pairings, one gene will dominate the other; that is, it will be expressed in the baby's outward appearance. The other gene is called recessive. The baby will not appear to have that trait, even though the gene is present.

Color genetics

Predicting the color of your baby cavies can be fun. The same basic laws of genetics in breed coats apply in color genetics. However, so many different genes are involved that it gets quite complicated. There are two basic pigments—black and red—from which all the coat colors are derived. The presence or absence of these colors and the degree to which they are modified by related genetic factors will determine the specific colors of your cavy babies. A knowledge of cavy genetics will help you obtain clear colors and desired markings.

This section is intended as a general guideline for beginners in the cavy project. Detailed information may be available in your public library. See the advanced section in this manual.

Dark colors tend to dominate light ones. Dark cavies can produce light-colored young, but light-colored parents do not usually produce dark young.

For consistency, breed a given color variety to the same color. There are two exceptions. Never breed Roan to Roan or Dalmatian to Dalmatian or one to the other. Dalmatian is derived from Roan. A lethal genetic factor is involved with this variety. When two Roans are bred, the resulting litter may include weak, deformed, often blind babies that are called microphthalmic whites, although some offspring in the litter may be normal. Breed Selves to Selves, Solids, or Agoutis. Breed Broken Colors to other Broken Colors, or to TSW or TS.

To keep the patches of color on Broken colors clean, avoid breeding Broken colors to Roans or Brindles.

To avoid Broken colors with patches too small for showing (like a white foot or blaze), avoid breeding Broken colors to Selves.

For the clear white crest of the White Crested, you can use mis-marked breeding stock that displays the odd white toe or foot. There is an apparent connection between genetic factors for the white crest and those for the white spots.

The following is a list of varieties (colors) of cavies that breeders have found compatible in crossbreeding color groups.

Blacks to: Dalmatian, Himalayan, Golden or Silver Agouti, Roan, Brindle. (The young will be the color of either parent.)

Creams to: White (young will be either color), Cream (young will be cream), Red. (Cream can be a dilute of Red.)

Agoutis to: Agouti of any variety. Silver is the most recessive Agouti variety. Breed to pink-eyed Selves for Dilute Agoutis that require pink eyes.

Chocolates to: Beige, light-skinned Red, Chocolate-based Agouti.

Reds to: Brindle, Roan, Red-Eyed Orange, Cream (especially if Red and Cream carry or display the pink-eyed Dilute genetic factor).

Tortoiseshell and Tortoiseshell and White to: Broken colors with a good line down the belly and back.

White spotting is a somewhat recessive trait, and Self color is intermittently dominant over white spotting. When breeding a Broken or a Tortoiseshell and White, there is a tendency to develop too much white. Avoid this problem by occasionally breeding a Broken to a Self with a white foot or blaze.

The dilution factor causing pink eyes (which is different from that causing red eyes in albinos) will dilute black to lilac and chocolate to beige, while changing dark eye pigment to pink. To keep black and chocolate colors from fading, avoid breeding to known carriers of pink-eye dilution. To obtain the diluted colors, do breed known carriers of pink-eye dilution. Like most other genetic factors you can control this.

Many other characteristics are determined by genes. Size, type, ear length, and droop, width of shoulders, etc., are determined genetically. You can obtain your desired results by carefully selecting cavy mates. For example, if you want broad shoulders, do not breed two narrow-shouldered cavies together. Breed a narrow-shouldered one to a broad-shouldered one, keeping from the litter only the broader-shouldered cavies. Using genetic information in this way requires careful selection and strict culling, but the results can be dramatic. In a few

generations you can have a caviary carrying the trait you desired.

Learn the advantages and disadvantages of linebreeding, outbreeding, and crossbreeding. The breeding of distantly related stock (linebreeding) is the preferred method for most breeding programs. It quickly stabilizes a desired trait in your herd. At the same time, linebreeding will bring to your attention any undesirable genetic traits that your cavies carry recessively. It is usually unwise to breed parents to their offspring and should usually be avoided.

However, skipped generations within a line may be bred to enhance a particular trait.

Certain undesirable traits such as pea-eye, angel wings, and polydactilism (see Glossary) are thought to be genetic. When you realize they exist in your herd, you can eliminate them by testing, breeding, and culling. Understanding genetics will give you control of your breeding program and make your 4-H project more challenging and enjoyable.

(See Cavy Project Advanced Information section for more on Genetics)

DISEASE PREVENTION AND TREATMENT

CHAPTER 5



Adapted from material written by Rosalie Beard, Cavy Judge and Breeder

Cavies seem to lose their will to live if they become ill, so prevention is the keynote to keeping your cavy in good health. Observation is your best way of keeping minor ailments from developing into major illnesses. Changes in your cavy's habits or characteristics may be warning signs. Early detection is an essential ingredient in keeping your cavy healthy.

Symptoms of illness:

- Off feed
- Off water
- Listlessness
- Sitting hunched in a corner
- Eyes half-closed
- Hair ruffled
- Any unusual discharge (diarrhea, nasal mucous, etc.)
- Dull coat and eyes
- Sudden weight loss and excessive thinness

The diet preferred by the cavy may not give it the nutritional balance needed to sustain life, successfully undergo stress and reproduction, and keep it in top show condition. Nutritional imbalances are indicated by loss of or failure to gain weight, increased susceptibility to disease, hair loss, prenatal mortality, infertility, anemia, deformed bones, central nervous system abnormalities, or a reluctance to move.

Cavies cannot manufacture their own vitamin C (ascorbic acid). Other than ascorbic acid deficiency in cavies, malnutrition is uncommon if the proper protein content of the food and enough water are provided. These nutritional problems are uncommon, but may be encountered: Vitamin D, calcium, and phosphorus imbalances (metastatic calcification); lack of Vitamin A may cause hydrocephalus, or prenatal death; and Vitamin E deficiency causes muscular dystrophy, prenatal mortality, or seminiferous tubule degeneration.

Nutritional deficiencies, excesses, or imbalances are often obscured by secondary bacterial infections or metabolic disorders.

Fresh water and fresh, non-medicated pellets with 16% protein is an adequate diet for a cavy. For pregnant, lactating, stressed, and show cavies, 18–20% is considered necessary.

Factors predisposing to disease:

Environmental:

- Climatic extremes and changes (temperature, weather, etc.)
- Inadequate ventilation
- High ammonia levels (over-crowding, not cleaning cages often enough)
- Excessive drafts
- Dampness
- Crowding
- Improper bedding
- Lack of consistency in handling
- Social hierarchies
- Excessive noise
- Improper lighting
- Waste accumulation
- Exposure to animal vectors
- High or low humidity

Genetic:

- Sex differences
- Congenital abnormalities
- Inherited mutations
- Strain differences
- Immune system deficiencies

Metabolic factors:

- Age
- Obesity
- Concurrent disease
- Anorexia
- Lack of exercise
- Lactation
- Pregnancy
- Non-specific stressors

Dietary:

- Quantity insufficient due to amount supplied, inaccessibility, not recognized, not working or workable by age group or species involved (such as watering method used)
- Increased demand for nutrients (pregnancy, lactation, heat, cold, diet composition, disease)
- Competition
- Water frozen
- Inadequate in quality—improper formulation, intended for another species, unpalatable, deteriorated; contaminated by insects, mold, bacteria, urine, feces

- Dietary alterations—feed not recognized by the animal; alteration of intestinal flora due to dietary change or antibiotic administration; change in gastrointestinal flora at weaning

Cavies scatter their bedding into feeders and crocks and may urinate in their food dishes. They are notorious for chewing on and otherwise blocking their sipper tube waterers. They mix dry feed and water in their mouths and pass the slurry in the sipper tube, thereby blocking the tube or causing it to drip. They may refuse to eat or drink if the feed or feeders are changed. They need a feed of at least 16% protein, and 16% fiber. Feed should be fresh (within 90 days of the

milling), and vitamin C needs to be supplemented in the water. Vitamin C decreases as much as 50% in a 24-hour period if left in an open crock—even faster if metal or organic material is present, if exposed to light, or if the room temperature is elevated.

Cavies are also susceptible to *Bordetella pneumonia*, and thus should not be housed with rabbits, cats, dogs, or other species that carry it subclinically. Rabbits frequently harbor the organism of *Bordetella bronchiseptica* in their upper respiratory passages, but the usual consequence through ciliary and epithelial damage, is to be predisposed to other infections, particularly pasteurellosis. To be prepared, keep a first aid kit stocked and handy.

Disease & Ailments Chart

Ailment	Symptoms	Control
Abscess	Hard lump, sometimes beneath a scab. Often warm to the touch. Animal may appear listless and may stop eating.	Sterile lancing done at home or by a vet. Abscesses will gradually soften and drain on their own, providing the animal's general condition does not deteriorate. Hot packing helps draw abscess to a head. Completely drain and flush with hydrogen peroxide. Repeated flushing is necessary. (Do not use in deep or bleeding wounds. Bubbles produced during cleaning may cause an air embolism and sudden death.) Dress with topical antibiotic ointment.
Bald patches		Change to hardwood shavings or hay or treat with correct insecticide.
Broken bones	Limping, inactivity, noticeable distortion.	See vet. Put in a confining cage splint if necessary.
Broken front incisors	Tooth missing, chipped, or loose.	Even-up remaining teeth with toenail clipper (get experienced help), feed sops and wet pellets until the teeth grow back. Provide a block of wood for chewing. Carefully monitor to ensure proper regrowth.
Bumblefoot	Large callous on the large foot pad which is sometimes ulcerated.	Remove wire from bottom of cage or pack with bedding to provide soft floor.
Cervical adenitis	Enlargement of lymph glands in cervical region of throat. Pea to golf ball sized lump, filled with creamy pus, that will rupture.	To save others it is necessary to destroy all suspected animals.

Ailment	Symptoms	Cause	Control
Cloudy eyes	Cloudy film over eye.	Injury, foreign objects.	Remove object, apply ophthalmic ointment without cortisone regularly for several days.
Coccidiosis	Loss of weight and vitality, diarrhea.	Microscopic parasites acquired from infected food or bedding. Very contagious.	Treat under veterinary direction. Prevent by diligent cage cleaning. In early stages use neomycin sulfate as found in Biosol, Isolate, or Kaopectate.
Diarrhea (scours)	Loose or watery stools.	Viral infection or too many greens.	Treat under veterinary direction. Use Albon or Kaopectate. Feed pellets only. Boil water and limit greens or eliminate completely until well.
Ear problems	Holding head to one side, sense of balance disturbed.	Bacterial or viral infection.	See vet for treatment.
Earmites	Scratching of ears, shaking head, tipping of head so one ear is lower.	Mite infestation.	Consult a vet for treatment.
Fatty eye	Yellow or white fat usually on the lower eye lid that protrudes.	Usually hereditary.	None. Do not restrict food, as this will not cure the symptoms.
Hair chewing "barbering"	Hair trimmed irregularly and often very close to the skin.	Chewing.	Increase protein percentage of diet. Add extra hay or ignore. Separate animals if desired.
Heatstroke	Drooling and weakness, heavy breathing.	Exposure to heat or direct sun.	Get the animal out of the sun. Provide water. Watch closely. You may add cold pop cans or ice in a separate bowl. Cover cage with damp towels or sheets.
Hernial rupture	Protrusion of a loop or knuckle of an organ or tissue through an abnormal opening.	The inguinal ring is large relative to the size of the animal, predisposing them to inguinal herniation, particularly in neutered males.	Swellings will be soft and moveable and can usually be gently pushed into the abdominal cavity. See a veterinarian for permanent repair.
Impaction of the perineal pouch	Large blockage of feces, shavings and hair with an offensive odor, located in the perineal pouch.	Due to boar leaving "scent" in cage when marking his territory. Interior of pouch is coated with a sticky substance called secum which collects cage debris.	Keep cleaner cages. To remove, soften with mineral oil on a cotton swab and remove carefully in bits and pieces. Do not pull the lump out as it may be firmly attached to the testicles. Check often, as this problem usually reoccurs once it has begun.
Kidney deficiencies	Most common in older cavies. Great quantities of water consumed. Loss of 2 to 3 ounces of weight per week. May be blood in urine.	Thought to be hereditary. Cause not known. May be dietary caused by overfeeding high protein food or vitamin C.	Place animal on clean white towel to observe if blood present in urine. Monitor water consumed. Take to vet because both enlarged kidneys and kidney stones are treatable.

Ailment	Symptoms	Cause	Control
Lice*	Small, wiggly creatures that can be seen when hair is parted, particularly on rump or by ears. May appear as eggs on hair shafts.	Contact with infected animal. Parasites (see mites, lice and Selnick mites).	Cannot be hosted on humans. See "mites" for control.
Lymphadenitis	Swelling in the throat area, similar to Cervical adenitis. No evidence of external entry. Warm and hard to the touch.	Thistle thorn or oat husk gets embedded in the throat and becomes infected.	Rarely bursts on its own; try hot packing. If it doesn't rupture within 3 days take to vet. If it does rupture, treat with antibiotic salve such as neosporin. Very contagious. Isolate infected cavies.
Missing toenails		Various.	Keep clean and use a small amount of antibiotic ointment. The nail may grow back in time.
Mites*	Tiny black specks (can cut a V-shape on the belly or the back).	Contact with infected animal. Parasites (see mites, lice and Selnick mites).	Cat flea powder. Bird lice spray treatment for mites will also kill lice.
Mucormycosis	Swollen glands and/or death.	Moldy hay.	Check hay carefully.
Overgrown molars	Slobbering, drooling, severe loss of weight, mouth appears partially open.	Unknown (appears to come from lack of chewing), might be hereditary.	Seek advice of a veterinarian. Under anesthetic, back molars can be filed down but are thought to grow back.
Overgrown toenails	Nail is long, sometimes curved.	Cavy cannot wear down nails in soft bedding.	Trim the toenails regularly with a toenail clipper. Be careful not to trim too close to the flesh or it may bleed. If you accidentally cut into the "quick," apply "Quik-Stop," flour, cornstarch or a teabag.
Pea eye	A growth on the eyeball itself resembling a nodule or a pea. Not contagious. Not the same as "fatty eye."	Possibly hereditary.	None.
Pregnancy toxemia	Listless, off feed and water, inactive, eyes half-closed.	Metabolic disorder brought on by a combination of stress, age, diet, obesity, heredity, and advanced pregnancy.	Prevent (see section on pregnancy).
Pseudotuberculosis	Wasting, diarrhea, rapid breathing, coughing.	Not known.	Isolate and take to vet.
Red or swollen eyes		Conjunctivitis or foreign object in eye.	Check to see if foreign object is lodged in eye. Visit the vet to check for conjunctivitis.
Respiratory infections and pneumonia	Fever, discharge from nose, sneezing, poor appetite, listlessness. Ruffled hair. Backbone appears to stick out.	Virus, bacterial infections, poor ventilation, stress. Drafts run down the immune systems and make cavy more susceptible.	Isolate sick animal, keep warm, use steam vaporizer, Albon, or other sulfamethazine. Vicks nose sometimes helps. Increase vitamin C consumption. Pneumonia is often incurable. See veterinarian.

*Lice may appear as dark specks on light colored animals and light specks on dark colored animals.

*Mites may appear as dark specks on light colored animals and light specks on dark colored animals.

Ailment	Symptoms	Cause	Control
Ringworm	Bald patches, usually circular, on abdomen or back.	A fungus that is airborne or transmitted by humans.	Antifungal ointment containing griseofulvin.
Salmonella, paratyphoid, or "mouse disease"	Diarrhea and rapid death.	Contaminated food or hay from infected mice.	No cure. Keep food and hay in mouseproof containers. Very contagious. Isolate infected cavies. Potential for cross-contamination to people.
Sarcoptic Mange mites	Dry wrinkled scaly skin, dandruff, excessive scratching, sometimes leading to open bloody sores and even seizures if left untreated.	Burrowing parasites, picked up from other animals.	Treat infestation with Ivermectin orally on the advice of a vet, knowledgeable breeder or 4-H leader ONLY.
Scurvy	Loss of hair and muscle tone, bleeding gums, loss of teeth from looseness, peculiar gait, weight loss.	Lack of vitamin C.	Give vitamin C. Try small amounts given several times a day to prevent strain on kidneys.
Selnick mites	Serious hair loss with bare spots on belly. Animal appears run down—scabby sores and constant scratching.	Infested hay or contact with infected animal or cage.	Contact vet or knowledgeable breeder or 4H leader.
Sores or wounds	Any open wound or scratch.	Fighting from overcrowding or incompatibility. Check cage for sharp objects or wire.	Cut away hair and cleanse wound with antiseptic soap. Apply antibiotic ointment. Use care applying ointment where cavy may ingest it.
Swollen foot	Swollen and inflamed foot pad that doesn't appear to heal, despite a scab.	Unclipped nail or foreign matter lodged in foot.	See vet for treatment.
Tumor	A new growth of tissue in which the multiplication of the cells is uncontrolled and progressive. Mammary tumors may occur in the inguinal area. These will be hard and not easily moved.	Unknown.	See your veterinarian.
Urogenital problems	May be seen in boars. Off feed and water. Gelatin-like discharge from penis. Penis stiff, dry, and inflamed.	Dirty cage.	Clean cages. Use Vaseline on penis and sheath.
Vaginal infections	White mucous discharge, odor.	Bacteria from dirty cages, dirty boars. Older sows are perhaps unable to clean themselves or drag themselves on dirty cage bottom.	See vet for treatment. Disinfect cage and clean it often.
Wasting disease	Extreme weight loss. Progressive weakness leads to being off-balance. Paralysis of the hind-quarters, death.	Unknown, may be virus or starvation due to overgrown molars, nerve damage during birth, or nutrition deficiency.	Complete recovery is rare. Treatment depends on suspected cause.

STOCKING A FIRST AID KIT. Look in Appendix III for a handout that lists first aid ideas for cavies.

FITTING AND SHOWING THE CAVY

Cavy Showmanship

Choose an animal that is healthy and of good type. A calm, easy-to-handle animal is preferable. Make sure that your cavy is clean, groomed and free of external parasites. See that your animal is properly marked with a metal ear tag.

Work with your animal often. Calm, gentle, firm handling will help your animal feel secure. Practice posing and positioning your animal and gradually increase the time the animal remains in the “posed” position.

You and your cavy’s appearance are both important. Never bring a dirty cavy to the showmanship table. Its toenails should be trimmed and ears cleaned. You should wear a white, long-sleeved shirt and clean pants. No rings or bracelets should be worn because cavies’ toenails can catch in them. DO NOT chew gum or lean on the table. Always be attentive and keep your eyes on the judge.

Make sure you always let the judges see what you are doing and keep doing it until they nod their head or say “OK.” Then return the cavy to the posed position.

Be courteous and friendly. Answer the judges in complete sentences so that they know you understand the question. If you do not know the answer, respond honestly, “I do not know the answer to that question.” Eye contact with the judge is very important. Keep your attention on the judge. Remember to smile. If you feel nervous, take a deep breath and let it out slowly.

Showmanship positions

The following methods have been proven acceptable for cavy showmanship. There are alternate ways, and you can be creative—Just be sure your animal is secure, safe, and comfortable. Try practicing these in order. Your best option for learning is to have an experienced showman or leader demonstrate. If you do not have experienced people to help you, you may use the position techniques listed.

To lift the animal, grasp it with your right hand. Surround its right shoulder and leg with two fingers and place your thumbs behind its left shoulder. Place your left hand under its rump for support (*see figures 1–16*).

Stay alert at all times. When not being asked to perform a specific handling technique, keep your hands off your animal as much as possible and down at your sides or behind your back. Do not do anything that will detract from the attractive presentation of you and your animal.

In addition to handling your cavy properly, you will be expected to answer questions that test your knowledge of your cavy project. You will be accountable for the material in the manual, the *ARBA Book of Standards* and possibly material unique to your county. You should be especially knowledgeable about the specific breed and variety of your showmanship cavy. The judge may ask you questions that will require you to handle your cavy as your answer.

SUGGESTED SCORESHEET FOR 4-H CAVY SHOWMANSHIP

25 pts	4-H member	Appearance is clean and neat. Wears suitable clothing. Conduct is pleasant, courteous, and attentive. Member is prompt.
25 pts	Animal	Appearance and condition: clean, healthy, free from defects, free from parasites, well-groomed, nails trimmed, and well-trained.
25 pts	Showing and handling	Attractive presentation of handling animal: follows instructions, alert, general handling, and safety. Hands off animal when not showing.
25 pts	Knowledge	To be combined with and used as part of showing and handling; management information and knowledge of specific breed or type.

WASHINGTON STATE 4-H CAVY FITTING & SHOWING SCORECARD

Event: _____ Date: _____ Class: _____

Champion: _____ Reserve: _____

	1	2	3	4	5	6	7	8	9	10
1) 4-H MEMBER 25 Points										
(8) Appearance: clean, neat appropriate clothing										
(15) Conduct: pleasant, courteous, attentive										
(2) Prompt										
2) ANIMAL 25 Points										
(15) Behavior: shows signs of being worked with										
(10) Appearance and Condition										
3) SHOWING & HANDLING* 25 Points										
(3) Presentation of the Animal: posing										
(15) Handling Skill										
(3) Alert: pays attention										
(4) Follows Judge's Instructions										
4) KNOWLEDGE APPROPRIATE TO AGE LEVEL* 25 Points										
(15) Cavy Care										
(10) Breed Information										
TOTALS										

*see worksheet on other side

Scorecard and worksheet provided by Snohomish County 4-H Program

4-H CAVY HANDLING/KNOWLEDGE WORKSHEET

(Apply these observations to sections 3 and 4 of the scorecard)

+ = Excellent / = Good - = Needs Improvement

	1	2	3	4	5	6	7	8	9	10
Pose your cavy (position to front)										
PRIMARY: How many toes on (front/hind) foot										
How many ears										
What is a sow										
What is a boar										
What is the pedigree										
What vitamin must you provide to your cavy daily										
Pivot your cavy (left/right)										
Check for blindness & return cavy to posed position										
What are you looking for										
Check for tumors or boils										
What are you looking for										
Check for straightness of (front/hind) legs										
What are you looking for										
Check for malocclusion										
What are you looking for										
Check for missing or broken toenails										
Sex your cavy and tell what it is										
Check for ear mites										
What are you looking for										
Put your cavy in the carry position										
Check for a cold										
What are you looking for										
Check for lice and mites										
What are you looking for										
Check your cavy for texture										
What are you looking for										
What is special (unique) about your breed										
What is a fault (name one)										
What is a disqualification (name one)										
Move member to another cavy and have them judge it										
What are its strengths										
What are its weaknesses										
Return to your cavy and judge it to the standard										
What are its strengths										
What are its weaknesses										
Ruffle up or move cavy—see if member restores it to condition/position										
Overall knowledge (care, feeding, health, breeding) ask questions as needed to determine										

FITTING AND SHOWING TECHNIQUES



FIGURE 1.
Front View:
Pose cavy forward toward judge in a comfortable balanced position.



FIGURE 2.
Side View:
Cavy's feet should be tucked underneath and it should sit quietly.



FIGURE 3.
Carry Position:
Tuck head underneath your arm, while supporting rear of cavy with your wrist and hand.



FIGURE 4.
Correct head tuck for carry position.



FIGURE 5.
Pivoting Your Cavy:
 Only the hand holding the cavy's chest actually moves. The other hand serves to rest the cavy on.



FIGURE 6.
Check Teeth for Malocclusion or Buck Teeth:
 Lay cavy on back and hold down with one hand. With other hand under cavy's head, reach around with thumb and fingers (so it cannot bite you) and gently pull its upper lips. Use index finger on the hand holding the cavy down to pull down lower lip.



FIGURE 7.
Checking for Straightness of Front Legs:
 Face cavy forward with one hand underneath to lift cavy's front end off ground slightly. With your other hand, slide your fingers gently down the leg. Avoid pulling on the leg as this causes the cavy to pull away.



FIGURE 8.
Checking for Straightness of Rear Legs:
 Place cavy on rump facing forward, hold with one hand and with other hand gently slide fingers down each leg. Do not pull.



FIGURE 9.
Sexing Your Cavy:
 Place cavy on rump. If it is a boar, gently pull back around opening to reveal sexual organ. If it is a sow, gently pull back with index finger just above opening to reveal "Y" shape opening. Be prepared to tell the judge the sex of your cavy.



FIGURE 11.
Checking for Lice and Mites:
 Spread hair apart and look closely at hair shafts, especially around tail bone area. Do not get in judge's view. On dark colored cavies, parasites will look like grains of salt and on light cavies, parasites will appear as dark specks.



FIGURE 10.
Checking for Missing or Broken Toenails:
 Gently spread out toenails over your finger to check. Roll cavy back on rump to reveal rear feet and then repeat spreading out toenails over your finger.



FIGURE 12.
Checking for a Cold:
 Listen to lungs by placing ear on cavy's ribcage. Also check eyes and nose for discharge. Look at and feel front legs for dampness.



FIGURE 13.
Checking for Blindness:
Look into eye to see if there is cloudy or milky film to cornea.



FIGURE 14.
Checking for Ear Mites:
Look into ear to see if there is a crusty, black film.



FIGURE 15.
Checking for Density:
On all breeds, except the Peruvian, blow into its hair. For the Peruvian, grasp the hair close to the skin and feel how thick it is.

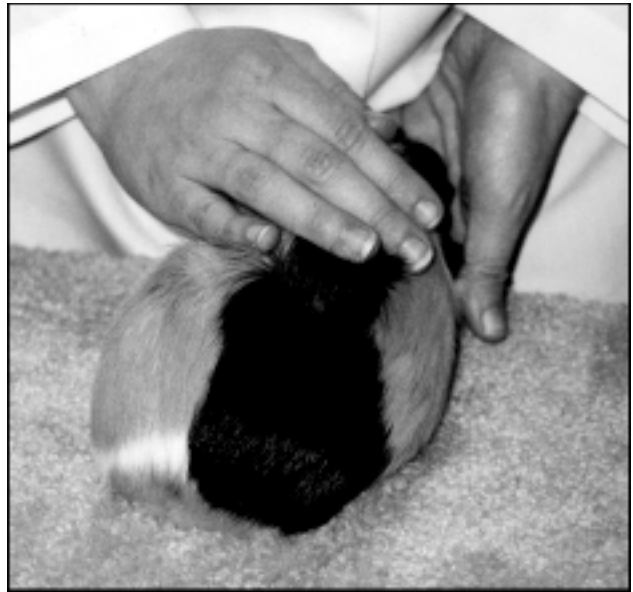
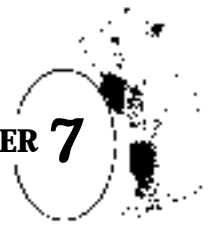


FIGURE 16.
Checking for Texture:
For the Peruvian, run hands down hair; For Abby or Teddy, pat coat. For American or Crested, rub hair towards head. Example shown is an American.

SHOWS, COUNTY FAIR, & STATE FAIR

CHAPTER 7



(This section provided by Sheryl Newland and Heather Bruce, Snohomish County 4-H Leaders)

Participation in the State 4-H Fair is open to all 4-H'ers in the cavy project who have earned a blue ribbon at the County Fair. A judging team may be chosen at the 4-H county fair to participate in the state judging contest.

Breed Classes

Breeds of cavies are judged at 4-H shows, your county 4-H fair and state fair somewhat differently than in open shows. Both shows are judged with the *Standard of Perfection* published by the American Rabbit Breeders Association, Inc. In 4-H breed classes all animals are given placement ribbons, in accordance with the Danish system of judging.

You, the 4-H exhibitor, will display your cavy to the judge by placing it in a judging coop. It is a valuable learning opportunity to hear the judge's comments and see the comparisons of the animals. Don't miss it! Be sure to not let the judge know who owns the different cavies, unless you are asked.

PREPARING FOR A SHOW

1. ON YOUR MARK...

- Make sure you keep a regular schedule of feed, water, treats, vitamin C, and hay. Be consistent. Use top quality food. Never feed a cavy something that you wouldn't eat yourself. If the food is a little past its prime, throw it out!
- Handle your animal a lot, so it gets used to it. Talk quietly to it, stroke it, check it over, etc. Then, when a judge is looking it over, it won't be too surprised.
- If your animal is in breeding, take it out of the breed pen for optimum conditioning. Obviously pregnant sows should never be entered in a show!! Boars are taken out at least a month before the show.
- Check for pests such as lice, ear mites, fleas, ringworm. Treat with appropriate medicine. Recheck one week before a show.

2. GET SET...

- Depending on the breed, bathe the cavy if necessary. Boars can have their scent glands,

located at the tail bone area, touched up with rubbing alcohol on a Q-tip prior to their bath if it is unduly sticky. Use a mild shampoo or one recommended by a veterinarian. Towel dry and then use a hair dryer on a warm setting. Then you may use a bird spray for lice if needed, or a cat flea powder.

- Check teeth to make sure there are none missing, broken, or wearing off at an angle.
- Separate animals into private cages. That way there will be no one to chew on or fight with. It will keep your animal's coat looking nicer.
- One week before a show trim their toenails, preferably after a bath because their nails are softer. Be careful not to cut too short because it can bleed. This also gives time for the nails to grow back into a more natural looking shape. If you have to trim their nails right before they go up on the table, it is still better than not doing it at all, as the judge will appreciate not being scratched. It also shows that you cared enough to think about them!
- Check boars to see if they are impacted. Clean the perineal sac, if necessary.
- Check their overall health. Weigh them. Know what class to enter them in. You also need to know their age, so your pedigree should come in handy. If you got your cavy at a pet store, and are unsure of the correct age, ask another breeder, or your 4-H leader. They will usually be better at guessing your cavy's age than the pet store.
- Enter the show before the due date. Call to verify with the show secretary if you're worried whether your entry was received.

Up to Two Days Before:

- Check carrying cages. Make sure they are all clean, sanitary, free of broken pieces, or wires that could poke and/or injure a cavy. Make sure handles are secure. Put in fresh shavings, add fresh hay, and put labels on top for easy identification (saves you time at a show if you have several of the same breed and variety). Make sure the cages are the right size for your breed.
- Wash/cut up treats for your cavies for the show. Put in a plastic bag and store in a refrigerator for no more than two days.

- Water bottles are not often seen at a show because a cavy may back up into the sipper tube and get wet. Try putting their water bottle on only after they are done for the day. Celery is a good source of water if they are thirsty before that. Carrots will stain under their chin, and are never given right before being shown.
- If the show is in winter, and in an unheated room, bring something like a sleeping bag pad for insulation. Put it under the cage to keep the chill off and a blanket or towel to put over the cage to keep out drafts.
- If you have a lot of cavies, you may consider getting your own grooming stand.
- The following is one breeder's recommended show kit. Try to have it packed and ready to go the night before the show, or even loaded in the car if you're super organized!

Show Kit

- Grooming table (optional)
- Metal comb or soft brush
- Toenail clippers
- Ear tagger, tags (optional)
- Scotch tape
- Scissors
- Felt pens (1 black, 1 bright)
- 3x5 note cards for signs (optional)
- Q-tips
- Old sock or piece of silk for grooming
- Treats for the cavy
- Water bottles
- Bottle holders
- Small towel
- Lice spray
- QuikStop for toes
- Pedigree book
- Business cards (optional)
- Snack or lunch for you
- Chair
- Hay, food for cavies
- ARBA *Standard of Perfection*
- ARBA card if registering an animal

3. GO!!!!

- Get plenty of sleep the night before. Remember to eat breakfast. Bring money for food or pack it the night before. You'll get hungry!
- Try to arrive at least 1/2 hour before the show or by the recommended check-in time so you can get a good place to set up away from doors and drafty areas. Keep aisles clear so people won't

trip over your cages, etc. Once you are set up you may have free time to help others. Find out what breed is up first, and get your animals ready in advance. Some breeds take quite awhile!

IMPORTANT TIP:

Always know what breed is currently up on the table, and what breed is next. If you have to leave for some reason, tell a responsible friend to listen for your breed and variety in case you do not make it back in time. Be sure someone knows where you can be found!

THE NUMBER ONE RULE AT A SHOW—DO YOUR BEST AND HAVE FUN!

Things to Remember at a Show

- It is one judge's opinion; the next judge may be totally different in his/her opinion.
- Don't be mad at your cavy because you didn't know something or it did not place well.
- If you learned something, it was worth it.
- It takes awhile to be a winner.
- Learn what to look for so you can buy better babies or stock.
- Ask a lot of questions!
- Thank the judge for coming!
- If you have animals for sale, be interested in the potential buyer and you'll sell more! Sell only quality, healthy stock with a pedigree you provide at the time of sale.

Sportsmanship

- Sportsmanship can be the hardest part of a show, even for adults!!!
- If the same person wins consistently, they must be doing something right! Find out what it is!
- Don't be a poor sport. You're not in 4-H to just be a winner. You're in it to learn, be supportive, to increase your knowledge and achieve growth in many areas.

- Don't criticize a judge in front of him or her. Think how you'd feel. He or she did his or her best, too.
- Wish your friends and competitors the best. Friendly competition is more fun. Sometimes you win . . . sometimes they win, have fun!
- You must be the owner and caretaker of your show cavy.

Show and Fair Survival Hints for Parents (and Leaders)

Look in Appendix IV for a handout that will help parents survive their child's showing experience.

TYPE JUDGING GUIDELINES

Here is a list of characteristics a judge looks for when judging a cavy on the "type" table. Consult your ACBA Standard for the importance of each characteristic listed here, and its relationship to the breed you're judging.

1. Correct body type
2. Correct color
3. Good ears
4. Good eyes
5. No disqualifications or faults
6. Right sex for the class
7. Correct ear numbers
8. The specialty for that breed (Aby-rosette)
9. Good texture and density of coat
10. Good condition.

SHOW CLASSES

Classes are the same for sows and boars.

Junior—Up to 4 months; weight: 12 to maximum weight of 22 ounces.

Intermediate—Up to 6 months of age; weight: over 22 ounces; maximum weight 32 ounces.

Senior—Over 32 ounces in weight.

CAVY JUDGING CONTEST GUIDELINES

These techniques can be used by the member to complete a judging contest and the same techniques

when applied to individual animals can help members decide on purchases or culls from a new litter.

In a Cavy Judging Contest, one usually has four animals to place correctly from the best to the worst example of the particular breed offered.

Procedure:

1. Check all cavies for disqualifications and faults unless you are told to do otherwise. While checking for these, get a quick overall impression of the cavy. Don't spend too much time on any one cavy at this point.
2. Look for the obvious first and last place animals and get a general idea of placement.
3. Go back through and check each cavy, finding the good and bad points and the faults. (There will be faults, as there is no such thing as a perfect cavy.) Try to keep an order in your mind...going from first to last place animal.
4. Look for the things that carry the most points according to the Standard. Look for the most important points and work down from there.
5. Base any obvious decision on the major point areas.
6. If the animals are close in placings, check the less important things such as eyes, ears, condition, etc. The point value will depend on the breed and variety you are working with.
7. Tie all your observations together and make the final decisions. Do not base your decisions on minor things, unless the two animals are nearly identical.

If you wish to give written reasons, write down the reasons in the same manner you did for your initial judging. Try to give two or three reasons for each cavy. Put the most important reasons first. DO NOT JUST WRITE A COMMENT CARD! Never be afraid to say something good about the 2nd, 3rd, and 4th place animals if they deserve it.

Following is an example of the correct way to write your reasons. (This is a class of broken teddies, the placing was 4-2-1-3.)

I place #4 over #2 because #4's coat had better resilience and overall kinkiness. Number 4 also has a broader, wider head and is in better condition than #2. However, #2 has better patching and distribution than #4.

I place #2 over #1 because #2's coat is slightly more dense than #1's. The markings on #1 are more in the form of hands, rather than patches.

Number 1 lacks in condition. I place #1 over #3 due to the fact that #3 was eliminated for having a severe infestation of mites. Number 3 has a long,

narrow head, while the head of #1 is wider and shorter. The coat on #1 is more resilient than that of #3. Number 3 is also in poor condition.

Therefore, I place this class of Teddies 4-2-1-3.

AVOID WRITING YOUR REASONS LIKE THIS:

#4—Very good resiliency, good texture and density, very good head, eyes, and ears, good condition, fair color.

#2—Good resiliency, texture and density, fair head, good eyes and ears, good condition and color.

#1—Fair resiliency, texture, density, fair head, good eyes and ears, fair condition and color.

#3—Poor resiliency, fair texture and density, poor head, fair ears, good eyes, poor condition. Disqualified for mites.

You can see the obvious difference between these two types of judging examples.

**REMEMBER THE MORE YOU PRACTICE THIS,
THE MORE CONFIDENT YOU WILL BECOME!**





4-H CAVY—YOUTH BREEDER PROJECT

Goal:

To encourage a youth breeding program in which the participant:

1. Selects and maintains a breeding group.
2. Studies genetic makeup of the animals in the group and anticipated results of the selected group.
3. Keeps accurate records of the group and its offspring.
4. Report, orally and in writing, the results of the breeding program.
5. Exhibits the project.

Prerequisites:

- Intermediate age or above.
- Second year in Cavy project.
- Must have received a blue or above in Fitting and Showing.

Project Specifics:

1. Selection of breeding group. Participant should own at least one of the animals in the group. Other animals may be “loaners.” After studying specific strengths and weaknesses and genetic makeup, mates are chosen and put into breeding.
2. Record keeping. Accurate records of breeding group should be maintained. Records to include: pedigrees, general health of animals, weights, calendar of breeding and delivery dates, birth records, growth records of pups, photographs of breeding group and offspring.

3. Reports. Written reports to include copies of records and photographs, reasons for group selection, report of results and changes to be made next time. Oral report in the form of a presentation of the project. Report to include either live boars, sows, and offspring or photographs of same, reasons for group selection, results and changes.

4-H CAVY BEHAVIOR LAB PROJECT

Options:

- A. Natural Behavior: Observe and record cavy behavior.
- B. Situational Behavior: Design and record behavioral experiments.
- C. Learned Behavior: Teach a trick to your cavy.

Project Specifics:

(Choose one that corresponds with an above letter)

- A. Choose a cavy or group of cavies as a study group. Observe natural behaviors such as posturing and vocalizations. Record your observations
- B. Choose a cavy or group of cavies to study. Design experiments or set up situations to observe behavior. Ideas: introduce new items; introduce a new individual; present mazes or obstacles courses. Do conditioning experiments. Record results and observations.
- C. Attempt to Teach Your Cavy a Trick. Record results and demonstrate to a group. You may use a video camera.

ADVANCED CAVY PROJECT

by Peter and Ceil Herman, ACBA members, ARBA judges

CAVY GENETICS

The word "genetics" causes panic in many cavy breeders. This need not be the case. A few terms and concepts need to be understood first, then all genetics problems become variations of the original principles.

The first concept is that every trait is controlled by a pair of factors called genes. One gene comes from the father and the other from the mother. The genes are carried on microscopic structures called chromosomes. There are many genes on a chromosome and many chromosomes in each cell of an organism. Every cell in a cavy (except sperm and eggs) contains 64 chromosomes, 32 from the mother and 32 from the father. The genes are arranged on the chromosome in a specific order, so that every trait has its own particular spot on a chromosome. This spot is called a *locus*. At each locus there are two or more choices called *alleles*. For example, at the coat length locus, there are two alleles possible, one for long and one for short. When the two alleles at a given locus are the same, the animal is *homozygous*. When they are different the animal is *heterozygous*. In breeders' terms, homozygous equals "pure breeding" and heterozygous equals "hybrid" for the trait in question.

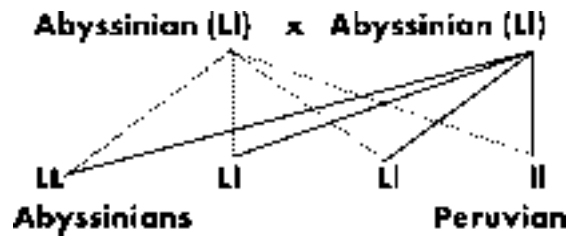
As many of you are aware, when a Peruvian is crossed with an Abyssinian, all the babies will have short coats. This occurs because of dominance. Very frequently, one allele will mask or dominate the expression of another allele at the same locus. The masking allele is called *dominant* and the masked allele, recessive. Thus, in our example, the babies had a gene for long from the Peruvian parent, and a gene for short from the Abyssinian parent. The gene for short is dominant over the gene for long, making all the babies appear short coated. You can see from this that an animal can look like a purebred and be carrying genes that make it otherwise.

In general, a capital letter is used to represent a dominant trait and a small letter to represent the recessive. We will use the letter "L" to represent this locus. L = short, and l = long. If we diagram the crossbreeding in our example, it would look like this:

Peruvian (ll) x Abyssinian (LL)

▼
Abyssinians (Ll)

If we were to take two of the so-called "Abyssinian" babies from this cross and breed them together, we would get both Abyssinians and Peruvians in an approximate ratio of three Abyssinians to one Peruvian.



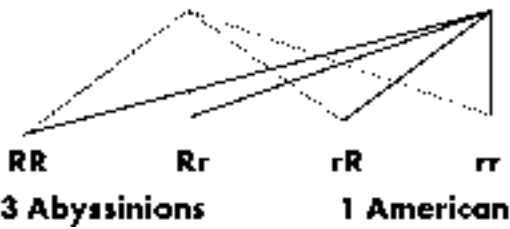
In genetics, the way an animal looks is called its *phenotype*. The genetic make-up of an animal is its *genotype*. The ratio of phenotypes in the above example is 3 short: 1 long, while the genotypic ratio is 1 LL: 2 Ll: 1 ll. At this point, let us warn you that we use the term "Peruvian" and "Abyssinian" only loosely in describing the phenotypes of offspring of such a mating. There are many modifying factors other than the gene L which distinguish a good show Abyssinian from a good show Peruvian.

When looking at Peruvians and Abyssinians, one can see that both breeds have rough coats, whereas Americans and Silkies both have smooth coats. This rough versus smooth character is controlled at the rough locus. The two alleles are the dominant rough (R) and the recessive smooth (r). If we cross an American (rr) with an Abyssinian (RR) we will get all rough coated babies. If we then cross these babies, we will have offspring produced in the ratio of three Abyssinians to one American, or three rough to one smooth.

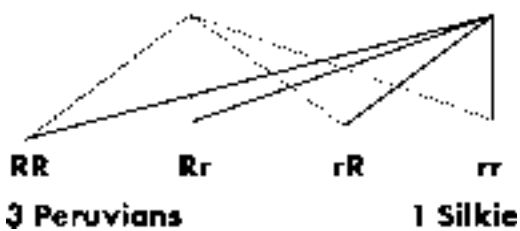
Thus, you can see that an animal which shows a dominant trait can either be pure for that trait (homozygous) or carry the recessive as well as the dominant (heterozygous). In order to express the recessive trait, an animal must be homozygous for it. This should help explain why occasionally a breeder will breed two Abyssinians together and come out with an American, or two Peruvians together and come out with a Silkie. In these cases, both the mother and father must carry the smooth gene (r). We will diagram these crosses.

Finally, after much introduction, we get to the genetic makeup of each of the breeds. As you can see

Abyssinian (Rr) x Abyssinian (Rr)



Peruvian (Rr) x Peruvian (Rr)



from our examples in the introduction, each breed has its own particular combination of alleles at the rough and long loci. Since some contain dominant characteristics, more than one combination of genes (genotype) can result in the appearance (phenotype) that we associate with each breed.

First, let us consider the American, with its smooth, short coat. As we have seen, smooth is recessive, so all Americans are rr. They can be either LI or LL at the long locus. Thus, a purebred American is rrLL, whereas a Silkie-carrying American is rrLl.

Since the Peruvian has a long coat which is a recessive, all Peruvians are ll. A pure Peruvian is RRll, while a Silkie-carrying Peruvian is Rrll.

A purebred Abyssinian is RR for rough and LL for short. Other combinations which look like Abyssinians are: RRLl (Peruvian-carrying), RrLL (American-carrying), RrLl (it is possible to get four phenotypes by crossing two of these together). The quality of rosetting in Abys is controlled, in part, by a locus known as rough modifier. This gene, M, suppresses the formation of rosettes. Show Abyssinians are Rmmm. RrMM animals can look completely smooth as a result of the rosette suppressing activity of MM.

Silkies are homozygous. Since they are both long and smooth coated, they must be homozygous recessive for both characters, making their genotype rrll. There are some rare cases where Silkie-looking animals contain R genes, having the genotype RrMlll. If you look closely at the feet you will almost always see hairs growing in the wrong direction.

Two of the newer breeds. White Cresteds and Teddies, are genetically related to Americans in that

both are homozygous, pure breeding, smooth and short (rrLL) at the rough and long loci. Each breed carries information at different loci which gives the breed its characteristic appearance. Cresteds carry the gene St for star. This gene is a dominant character which produces a rosette (star) in the center of the forehead. Star also produces a white spot about 50% of the time, even if no other spotting genes are present. Teddies carry the recessive alleles tt at the Teddy locus. This recessive trait causes the hair shaft to kink, giving Teddies their plush appearance.

Most of the "normal" breeds have been satinized in recent years. The satinized breeds are genetically just like their parent breeds with the addition of two recessive alleles at the satin locus. Thus, all satins are snsnsn, carriers are Snsn and pure "normal coats" are SnSn. Just like in rabbits and mice, the homozygous recessive satin allele causes a thinner hair shaft with a clear shell, giving the animal its sheen.

Two of the newest breeds, the Coronet and the Texel represent modifications of Silkies in that they are rrll. In addition, Coronets carry St, while the Texels carry rx (Rex) a gene very similar in appearance to the Teddy but at a different locus. All this may seem a little overwhelming! The take-home message is that all of the current breeds have a characteristic set of alleles at each of only six loci, Rough, Long, Star, Teddy, Rex and Satin. The easiest way to see the relationship between breeds is to put their genotypes in a table. Following is a list of all currently recognized breeds and a rexed version of the Peruvian (Alpaca) currently shown in Europe. Note that the genotypes listed in Table 1 refer only to pure breeding representatives of the breed!

Variety, or coat color, is controlled by the same set of genes in all breeds. Remember that the way the animals actually look will not necessarily be the same among breeds, even if they carry the same major genetic information for color. For example, in Americans you are looking primarily at top coat. In Abyssinians, you see top coat, but the undercolor is exposed by the rosetting. In long-coated breeds like Peruvians and Silkies almost all you see is undercolor since the hairs are growing continually.

All cavy colors are made from two basic pigments, black and red. The black series colors are black, chocolate, lilac, and beige. The red series colors are red, orange, and cream. All the varieties are comprised of these colors or white—the absence of color. We'll start by giving a list of the major coat color genes with a brief description of what they do (see Table 2). After that we will go through the varieties and venture a guess as to possible genotypes that yield desirable show phenotypes.

These genes, and those of another locus, the C locus, interact as the major factors that produce the color varieties that are in the show standard.

We should emphasize that there are many unknown, or uninvestigated modifiers, which can cause an animal to be close to the show standard while another animal of the same basic genotype without the modifiers might be pet stock.

The C locus is quite complex because there are five possible alleles. To make matters worse, there is no simple dominance. There are a number of different heterozygotes of lower C alleles that have the same phenotype. Table 3 shows basically what effect the different C alleles have on black and red pigment production. The alleles of the C series sometimes interact in strange ways.

For convenience we have grouped the varieties genetically rather than by the show Standard. The varieties of the Standard have been moved to Agouti or marked, depending on their genetic affinities.

The genotypes we have listed are our best guess of the desired show genotypes based on extensive reading, a dozen years of breeding experience, and

lengthy conversations with other knowledgeable breeders. They are by no means the only possible genotypes to achieve the desired show phenotypes. As we have said before, unknown or unstudied modifiers can have tremendous influence on an animal's appearance.

While cavy genetics by itself is an interesting aspect of our hobby, it is also an invaluable tool to a breeder who wished to improve his or her stock. The ACBA Newsletter publishes information on cavy genetics regularly and can put breeders with questions in touch with breeders who have answers. Additional information can be found in "Coat Color in Mammals" by A. Searle (Academic Press). The numerous papers of Sewell Wright and W.E. Castle can be found in any university library. They can provide hundreds of hours of interesting reading and are the basis for most of the scientific knowledge of cavy genetics.

TABLE 1

CENETICS GLOSSARY

LOCUS

Breed	Rough	Long	Star	Teddy	Rex	Satin
American	rr	LL	stst	TT	RxRx	SnSn
American Satin	rr	LL	stst	TT	RxRx	snsn
Silkie	rr	ll	stst	TT	RxRx	SnSn
Silkie Satin	rr	ll	stst	TT	RxRx	snsn
Crested	rr	LL	StSt	TT	RxRx	SnSn
Texel	rr	ll	stst	TT	rxrx	SnSn
Coronet	rr	ll	StSt	TT	RxRx	SnSn
Teddy	rr	LL	stst	tt	RxRx	SnSn
Teddy Satin	rr	LL	stst	tt	RxRx	snsn
Abyssinian	RR	LL	stst	TT	RxRx	SnSn
Abyssinian Satin	RR	LL	stst	TT	RxRx	snsn
Peruvian	RR	ll	stst	TT	RxRx	SnSn
Peruvian Satin	RR	ll	stst	TT	RxRx	snsn
Alpaca	RR	ll	stst	TT	rxrx	SnSn

TABLE 2

Locus Name	Gene (allele) Name	Symbol	Function
AGOUTI	Agouti	A	"A" causes ticked hairs to be produced in the presence of black pigment. Each hair has a base derived from the black series of colors and a tip derived from the red series. The belly color is the same as the tip color, appearing untipped.
	Ticked Belly	A ^r	"Ar" produces the solid agoutis. They have ticked hairs all over so that the belly color and back color are the same. Ar is recessive to A.
	Non-agouti	a	Animals with black series pigment that are non-agouti are aa. You cannot tell if a red is aa, Aa or AA because black pigment must be present to express the agouti trait.
EXTENSION	Extension	E	Allows the production of black pigment to extend throughout the coat, producing self animals of black series colors or agoutis.
	Partial Extension	e ^p	Allows black to extend partly through the coat, leaving patches of red and patches of black series colors or a mixing of black and red series colored hairs. Recessive to E.
	Non-extension	e	Restricts black pigment to the eye, leaving a red series colored coat. Recessive to E and ep
BLACK	Black	B	Causes normal black pigment resulting in black color.
	Chocolate	b	Modified black pigment granules are produced bb animals, converting black to chocolate. Gives eye a ruby cast.
PINK-EYE	Non-Pink-Eye	P	Normal pigment is produced.
	Pink-Eyed Dilute	p	The presence of pp causes an 80% reduction in the amount of black pigment produced, with little effect on red. The reduction of black pigment dilutes blacks to lilacs, and chocolates to beiges. The eye color is pink because the diminished black pigment allows the blood in the eye to show through. Reds and Creams carrying pp are REO (Red-Eyed Orange) and RE (Red Eyed) Creams respectively.
ROAN	Roan	Rn	Roans are RnRn. Homozygous RnRn animals are all white, with blue/ruby eyes, and frequently have deformities.
	Non-Roan	rn	Non-roaned animals are rn.
WHITE SPOTTING	White Spotting	s	Animals with ss usually have over 50% white. Animals with Ss are usually less than 50% white.
	Non-Spotted	S	Animals that are SS are not usually spotted. On occasion, they will have white toes or a white blaze.

TABLE 3

Allele	Symbol	Red	BlackEye-	Color
Full Color	C	++++	+++++	Dark
Dark Dilute	c ^k	++	++++	Dark
Light Dilute	c ^d	+++	+++	Dark
Ruby-Eyed Dilute	c ^r	none	++++	Dark/ruby cast
Albino/Himalayan	c ^a	none	++ (on points only, in presence of E or e ^p , otherwise none)	Pink

TABLE 4**SELF COLORS**

The Standard lists nine self colors, though Blue is scheduled to be removed from the 2001 Standard. All the other varieties are made up of some combination of these colors. In Table 4 we have listed only the important loci for each variety. The notation c^x indicates an unspecified lower C allele. When an allele is followed by an _the_ can be replaced by any allele of equal or lower dominance (E_ could be EE, Ee^p, or Ee).

Variety	Genotype	Comments
Black	EE BB ss CC PP	C produces the darkest color, unknown modifiers strengthen the undercolor.
Chocolate	EE bb ss CC PP	bb converts black to chocolate.
Lilac	EE BB ss c ^x c ^x pp	pp dilutes black in eye and coat.
Beige	EE bb ss c ^x c ^x pp	pp dilutes chocolate in eye and coat.
Blue	??????????????	There is no agreed genotype for blue. It probably involves heterozygosity at the C locus and modifiers.
Red	ee bb ss CC PP	bb tends to produce proper ear and foot pad color, C produces most intense top color, unknown modifiers influence undercolor.
Red-Eye Orange	ee bb ss c ^x c ^x pp	Lower C allele desirable for orange color.
Cream (Dark-Eyed)	ee bb ss c ^x c ^x PP	The presence of pp converts Dark-eyed to Pink-eyed Cream. The best color is produced by one of these genotypes c ^d c ^a , c ^k c ^a , and c ^d c ^r . Creams with the genotypes c ^d c ^d , c ^d c ^k , and c ^k c ^k are usually buff colored or "hot creams."
Cream (Pink-Eyed)	ee bb ss c ^x c ^x pp	
White	ee c ^a c ^a	ee produces clean points.

TABLE 5

AGOUTI VARIETIES

All agouti varieties must carry E to express the tipped agouti hairs throughout the coat. Animals with the genotype e^pe^p or e^pe will have spots of agouti color. There are two basic agouti colors, Golden and Silver. There are Golden Solids and Silver Solids as well. Table 5 shows the genotypes.

Variety	Genotype	Comments
Golden Agouti	AA EE BB ss CC	The basic agouti color and the genotype of wild cavies.
Silver Agouti	AA EE BB ss c^r	c^r eliminates red color leaving a white tip. It also dilutes the black base color to silver.
Golden Solid	A^rA^r EE BB ss CC	A^r causes the tipped belly hair.
Silver Solid	A^rA^r EE BB ss c^r	c^r eliminates red color leaving a white tip. It also dilutes the black base color to silver. A^r causes the tipped belly hair.
Dilute Agouti	Any of the above in combination with the diluting factors pp, bb, or c^xc^x to act on the black or red pigment.

TABLE 6

MARKED VARIETIES

There are several genetically related sets of varieties in this group. An examination of Table 6 will point them out.

Variety	Genotype	Comments
Himalayan	c^ac^a EE BB PP ss	EE and ss are required to insure a complete set of points. BB and PP improve point intensity.
Tortoise Shell/Brindle	e^p_BB PP ss	Unknown modifiers control the distribution of patches. Animals that are e^pe have more red on the average than e^pe^p animals.
Tortoise Shell and White	e^p_BB PP S_	The presence of S increases the clarity of patching. Animals with SS usually have more white than Ss animals.
Broken Color (with White)	any color and SS or Ss	Animals with SS usually have more white than Ss animals.
Broken color (with NO White)	$e^p_with A_or pp$ or bb	These are basically modified Tortoise Shells that carry genes that modify the black or red, the addition of SS or Ss converts these to modified Tortoise Shell and Whites. (For example a lilac, orange, and white.)
Dutch	any color and Ss or SS	Dutch pattern is not fixed by a known locus. There are unknown modifiers that increase the tendency toward getting the patches in the right place.
Roan	any color with Rnrn	Amount of roaning and pattern controlled by modifiers. Heads are usually not roaned.
Dalmatian	any approved with Rnrn	Amount and clarity of spotting and pattern controlled by modifiers.

NOTE: We feel strongly that breeds should be kept pure. We do not advocate the crossbreeding of cavies for any reason. The examples mentioned are merely illustrations of the results of such crosses.

DIGESTIVE AND CIRCULATORY SYSTEM OF A CAVY

DEFINITIONS

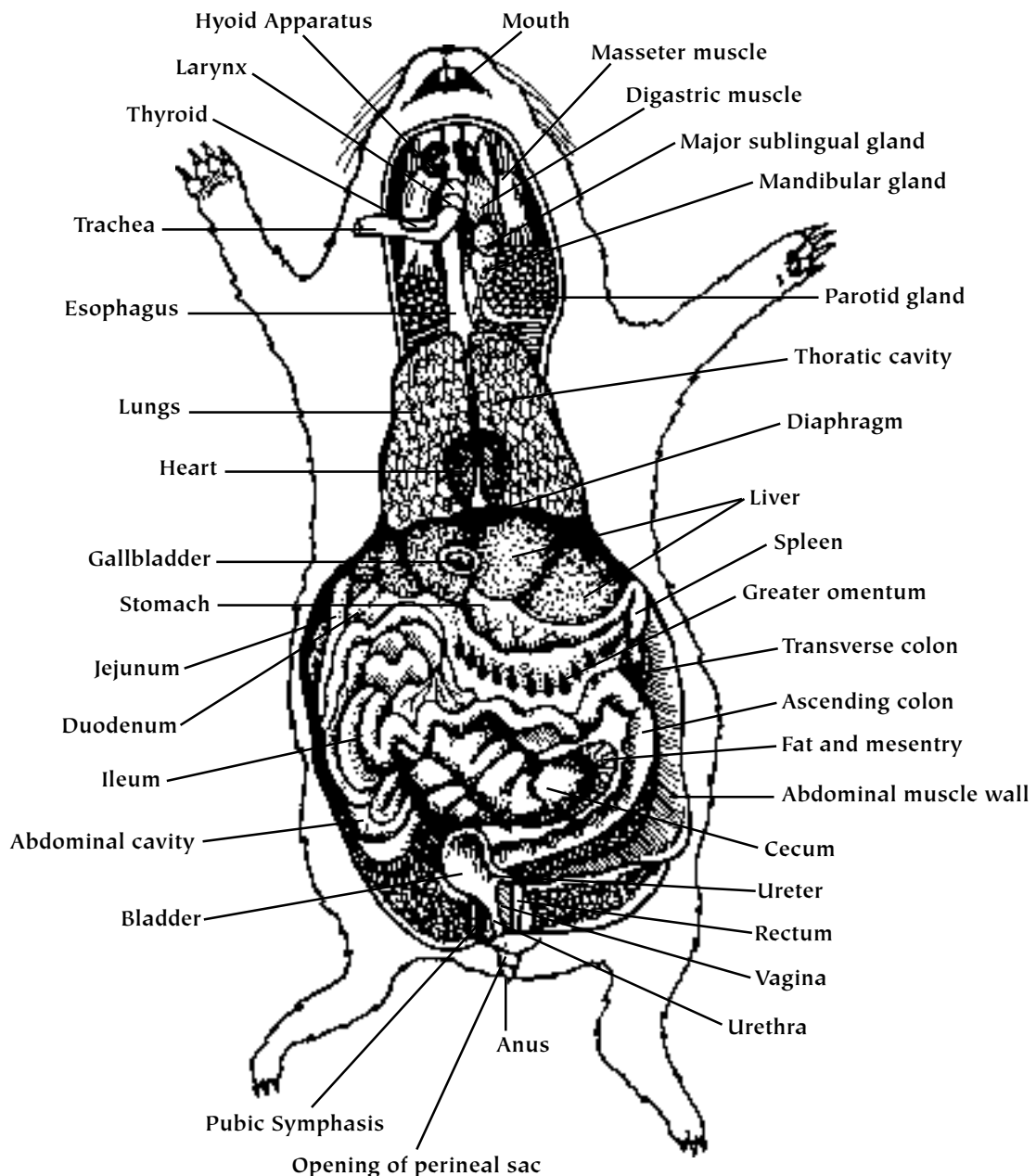
Abdominal cavity	Area where all digestive organs are held
Abdominal muscle wall	Holds all the insides in place
Anus	Where stool leaves to outside of body
Ascending colon	First part of the large intestine
Bladder	Where urine is stored until disposed of from body
Cecum	Part of the intestine, like the appendix on a human; at the junction of the small and large intestines
Diaphragm	Causes the lungs to expand and contract
Digastric muscle	Muscle that closes the mouth
Duodenum	First part of the small intestine
Esophagus	Where food passes (after leaving mouth) into the stomach
Fat & mesentery	Attachment of bowel to blood supply and rest of body. Fat insulates body and stores energy
Gallbladder	Stores bile used to digest fats
Greater omentum	Covers digestive organs and helps keep out infection
Heart	Pumps blood throughout the body
Hyoid apparatus	Bones that hold the larynx in place
Ileum	Hip bone
Jejunum	Major part of the small intestine
Kidney	Filters blood, urine is the waste product of filtration.
Larynx	Voicebox
Liver	Filters blood, produces clotting factors and some vitamins such as "D"
Lungs	Transfer oxygen to blood and waste gases (CO ₂) out of body
Major sublingual gland	Salivary gland starts digestive process
Mandibular gland	Salivary gland starts digestive process
Masseter muscle	Chewing muscle
Mouth	Where food is taken in
Opening of perineal sac	Where musk organ is located on boars; also an area which must be checked regularly in mature boars since it can become impacted and cause infection and further, even death
Parotid gland	Salivary gland starts digestive process
Pubic symphysis	Where bones of pelvis come together
Spleen	Helps filter blood and serves as a reservoir for red blood cells
Stomach	Where food is totally broken down and prepared for the small intestine
Thoracic cavity	Area which holds the lungs and heart
Thyroid	Regulates general metabolism
Trachea	Intake air passage
Transverse colon	Part of the large intestine
Ureter	Carries urine from kidneys (not shown, but at back of body) to bladder

Digestive Process

Basic breakdown: Food passes through the mouth, where the digestive processes start, and then down through the esophagus and into the stomach. There, stomach acids work on breaking down the food for absorption through the small intestine. After leaving the small intestine, food travels through the colon, where liquid is removed. What is left is the stool which is disposed of from the body through the anus.

Circulatory Process

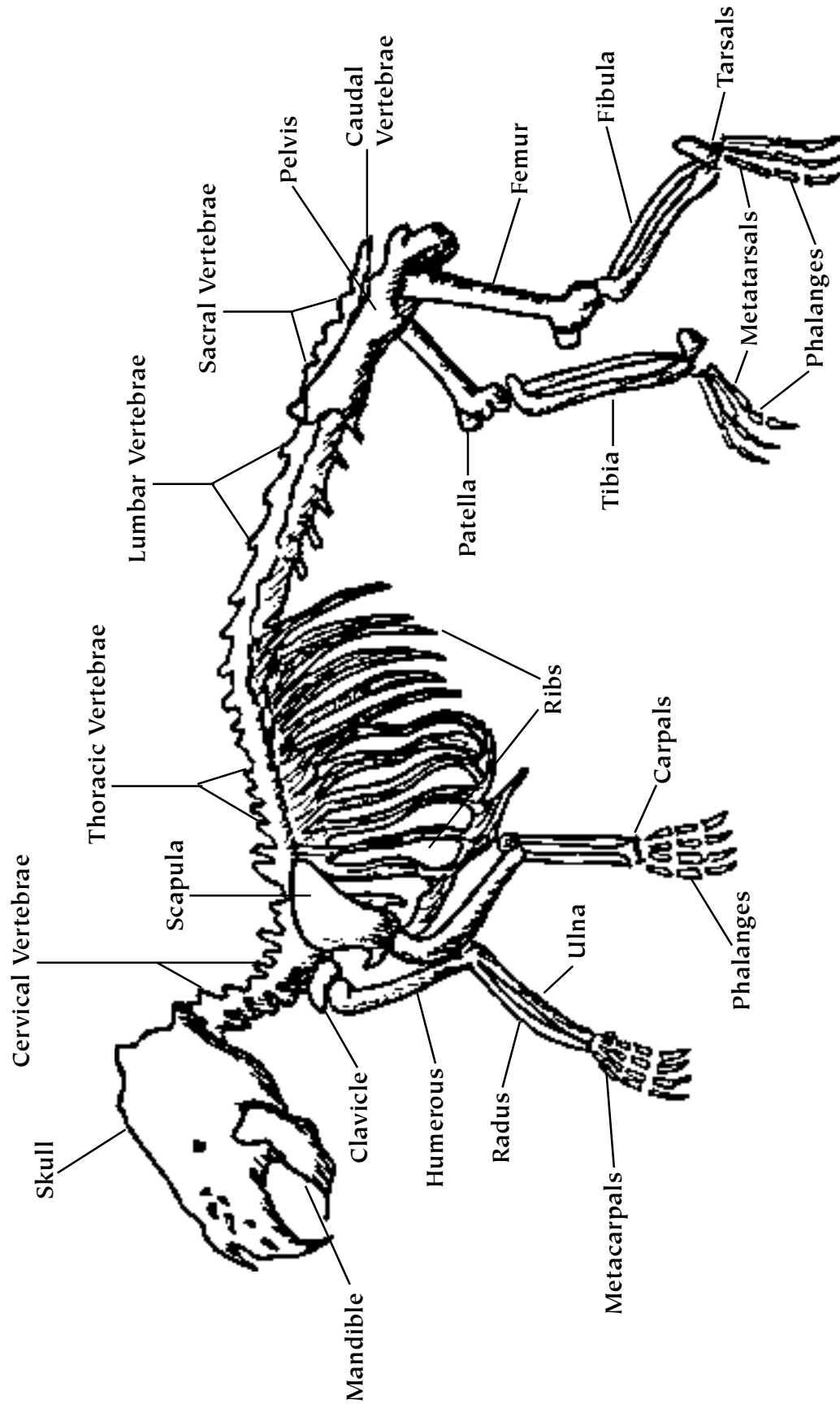
Basic breakdown: Blood is pumped from the heart through arteries to the various body organs. Each cell of the body is in contact with a capillary (a tiny blood vessel only slightly larger in diameter than a single red blood cell). Red cells deliver oxygen and pick up waste gas (CO₂) as they pass by each body cell. Other waste products are transferred to the blood and filtered by the liver and kidneys as it returns to the lungs through veins where the CO₂ is released and oxygen is absorbed by the red cells. Oxygenated blood goes from the lungs to the heart, brain and other organs with oxygen and food as if again circulates through the body.



CAVY—PHYSIOLOGICAL VALUES

The values listed below are approximations only and may not represent the normal range in a given population.

Adult body weight: male	900–1200 grams
Adult body weight: female	700–900 grams
Birth weight	70–100 grams
Body temperature	37.3–39.5°C
Life span	4–5 years
Food consumption	5g/100g/day
Water consumption	10ml/100g/day
GI transit time	13–30 hours
Cycle length	15–17 days
Gestation period	67–72 days
Postpartum estrus	fertile, 60–80% pregnancy
Litter size	2–5
Weaning age (lactation duration)	150–200g/ 14–21 days
Breeding duration, commercial	(Begin at 4–7 mo.) 18 mo.–4 years, 4–5 litters
Milk composition	3.9% fat, 8.1% protein, 3.0% lactose
Respiratory rate	42–104/mon
Heart rate	230–380/min
Blood pressure	80–94/55–58 mm Hg





**This section was written by M. Michele Thorp/ Louise Christofferson, and Penny Deggelman,
4-H Leaders, Lane County, Alden Hilliker, Former Extension Specialist, 4-H & Youth,
in cooperation with the 4-H Development Committee for Small Animal Projects.
Edited by Heather Bruce, Snohomish County 4-H Cavy Program Leader, Washington State.**

OBJECTIVES:

- To make your cavy project more interesting.
- Help you learn more about cavies.
- Help you develop greater skills with cavies
- Provide you with new, enjoyable experiences.
- Allow you to advance according to your ability, interest, and willingness to work.
- Provide you recognition for work well done.

The 4-H Cavy Advancement Program is an important part of your cavy project. It should be included as a part of your project records. Most of the answers to the questions asked in the advancement program can be found in your project manual. For information about your project, you will need to study other pamphlets and books.

As you complete each option, fill in the date and have your leader or parent initial it. When you have completed the required number of options for a step, tell your leader you are ready to be tested to qualify for that step. You will be asked questions on the work you have done. When each step is completed, you will receive an attractive advancement certificate from your leader.

Follow through the steps in consecutive order. You can do options for higher steps while you are working on a lower step, but you cannot qualify for the higher step until you have qualified for all preceding steps.

Substitutions for skill and personal development options can be made with the approval of your club leader.



STUDY EACH OPTION CAREFULLY. GOOD LUCK!

STEP ONE

This is the first step in the 4-H Cavy Advancement Program. When you have completed ten skill options and three personal development options, you qualify to complete Step 1.

Skill Options	Date Passed	Approved By
1. Identify, describe, and tell the important characteristics of three breeds of cavies.	_____	_____
2. Name, point out, and spell the following parts: shoulders, buck, rump, hip, nose, crown, chest, toes, and teeth.	_____	_____
3. Describe the following undesirable characteristics of cavies: pointy head, excessive flab, pear-shaped body, flat crown, buck teeth, and broken teeth.	_____	_____
4. Describe the following: registered, pure-bred, crossbred, parasite, pedigree, and wean.	_____	_____
5. Explain what feeds are important for cavies. What fresh vegetables should you not give to cavies? Why?	_____	_____
6. Demonstrate you are willing to provide fresh water, feed, vitamin C, and daily care for your cavy.	_____	_____
7. Keep a record of your cavy project including expenses and income.	_____	_____
8. Describe a suitable cage for your cavy and how to set it up for use.	_____	_____
9. Describe what you might do for your cavy's protection during extremely hot or cold weather.	_____	_____
10. What does a baby cavy look like and act like when it is first born.	_____	_____
11. Show and tell how to lift, hold, and carry a cavy.	_____	_____
12. Make a report of your breed of cavy.	_____	_____

Personal Development Options (Page 60)

1. _____	_____	_____
2. _____	_____	_____
3. _____	_____	_____

_____ is qualified and has completed all requirements
Name of 4-H Member Age

for Step 1 of the 4-H Cavy Advancement Program on ____/____/____.
Date

Approved by _____ Advancement Chair _____ Club Leader

STEP TWO

This is the second step in the 4-H Cavy Advancement Program. When you have completed ten skill options and three personal development options, you qualify to complete Step 2.

Skill Options	Date Passed	Approved By
1. Name and describe three additional breeds of cavies.	_____	_____
2. Build a suitable carrying cage, feeder, or some other cavy equipment.	_____	_____
3. Demonstrate how to tell the sex of a young cavy at approximately three weeks of age.	_____	_____
4. Explain how to breed a boar and sow (length of time together, whether to remove boar during kindling, etc.)	_____	_____
5. Take part in a 4-H Cavy Judging contest.	_____	_____
6. Take part in a 4-H Cavy Showmanship contest.	_____	_____
7. Describe the following disease/ailments and their remedies: lice, mites, colds, bumblefoot, diarrhea, salmonella, and broken teeth.	_____	_____
8. Describe the following undesirable conditions in a cavy: buck teeth, pea eye, coat faults, torn ears, eye circles, non-matching color in ears, feet, and toes.	_____	_____
9. Describe the desirable characteristics of your cavy's ears, type, crown, head, and eyes.	_____	_____
10. Start a library on cavy literature: books, magazines, bulletins, and 4-H material.	_____	_____
11. Explain the three major uses of a cavy.	_____	_____
12. Do a report on the history of the cavy.	_____	_____

Personal Development Options (Page 60)

1. _____	_____	_____
2. _____	_____	_____
3. _____	_____	_____

_____ is qualified and has completed all requirements
Name of 4-H Member Age

for Step 2 of the 4-H Cavy Advancement Program on _____ / _____ / _____ .
Date

Approved by _____ Advancement Chair _____ Club Leader

STEP THREE

This is the third step in the 4-H Cavy Advancement Program. When you have completed ten skill options and three personal development options, you qualify to complete Step 3.

Skill Options	Date Passed	Approved By
1. Keep a sow production record through at least three litters.	_____	_____
2. Explain breeding, heat period, conception, gestation, and kindling or parturition.	_____	_____
3. Explain why cavies need fresh vitamin C, and how much they need daily. Name at least five different sources of vitamin C for cavies. Describe the advantages and disadvantages of each source.	_____	_____
4. What are several measures you can take to avoid problems in pregnancy and birth?	_____	_____
5. What is the difference between fur and hair?	_____	_____
6. Invite and introduce a guest speaker to one of your club meetings—a local cavy breeder, a feed dealer, a judge, a veterinarian, etc.	_____	_____
7. Explain or describe three more diseases of cavies and their treatment.	_____	_____
8. Describe fully “type” in a cavy.	_____	_____
9. What are “angel wings”? Where and how do they show up?	_____	_____
10. What is “condition” in a cavy? Tell what measures you can take to improve it in your cavies.	_____	_____
11. Cavies belong to the order Rodentia (rodents). Draw a picture or write a report on the cavy’s relationship to its rodent relatives.	_____	_____

Personal Development Options (Page 60)

1. _____	_____	_____
2. _____	_____	_____
3. _____	_____	_____

_____ is qualified and has completed all requirements
Name of 4-H Member Age

for Step 3 of the 4-H Cavy Advancement Program on _____ / _____ / _____ .
Date

Approved by _____
Advancement Chair Club Leader

PERSONAL DEVELOPMENT OPTIONS

(Choose a different option each time)

GENERAL 4-H

- A. Lead the Pledge of Allegiance and 4-H Pledge at a 4-H meeting.
- B. Lead a song or game at a 4-H meeting.
- C. Preside at a meeting of your 4-H club.
- D. *Write a news story for a local paper.
- E. *Participate in a radio or television program.
- F. *Present a demonstration or illustrated talk to your club.
- G. *Present a demonstration or illustrated talk to a group other than your 4-H club.
- H. *Serve as a host for a 4-H meeting. See that everyone is welcomed and made comfortable.
- I. *Participate in a Community Service Project.
- J. *Serve as chair of a club committee.
- K. *Participate in a judging contest.
- L. *Serve as a Junior or Teen leader.
- M. *Attend 4-H camp or serve as a camp counselor.
- N. *Develop and exhibit a science display which is related to cavies.
- O. *Make arrangements for a tour by your club.
- P. *Arrange for a film to be shown at your club meeting.
- Q. *Secure a speaker to talk at your club meeting.
- R. *Complete your 4-H records.
- S. *Get new members for your club.
- T. *Develop some of your own options with your leader's approval.

II. CAVY 4-H

- A. Serve as a superintendent, assistant superintendent, table superintendent, clerk, or show secretary at a cavy show.
- B. *Help prepare and work with your club leader on a cavy demonstration for your club.
- C. Work with some younger members of the club in improving or constructing cages or cavy equipment.
- D. Teach cavy showmanship to 4-H members.
- E. Participate in State 4-H Fair with cavies.
- F. Do a cavy presentation at your local 4-H fair.
- G. Share your cavy with a person who cannot have one, i.e., a young friend, an older shut-in, etc.

*These options may be repeated for credit in different steps.

APPENDIX

MEETING ACTIVITY SUGGESTIONS

There are many ways to help 4-H members acquire the information in this manual. The most obvious, of course, is to allow them to read the information. In addition, many of the topics suggested in the Advancement Program make good topics for meetings. Provide certificates for the members to earn when they complete a step in the *Advancement Program*. While it is suggested to complete these steps at home and at meetings, certification can be a job for the county program, with its own special committee chair.

Generally speaking, you should group the information for meetings. Pick one topic such as housing, food, diseases, etc. This makes learning the subject matter more manageable.

To make learning more fun, there are various activities that can be developed by either the leaders or parents; or, as members get older, they can develop some of these learning activities. When members create activities, a knowledgeable adult needs to check the information to make sure it is correct before using it for project meetings. Encourage members to do leadership whenever there is an opportunity. This includes teaching others—youth and adults. They do not need to be masters to teach!

Keeping in mind that you need to make age-appropriate activities, below are some suggestions for activities that can be created:

1. Using a 4-H Cavy manual or the Cavy Standard, **create crossword puzzles of terms**. Choose medical terms, cavy care terms, breeds, varieties (colors) or anything else you can group together that has similar topic information.
2. Make a **Find-A-Word sheet**, using the same terms as above. Run the words up, down, and even backwards and diagonally!
3. Make up **blank cavy part pictures** (without the labels), as well as digestive system or skeletal system and have members label them correctly. You may do this with rosette placements, long hair breed labels, etc.
4. Have members **show where the corresponding bones** are in their own bodies, as well as where their heart, lungs, etc., are located.
5. Create a **maze** inside the outline of a cavy (purely for fun).
6. Create **true or false sheets**, grouping various topics together.
7. Make up a **list of questions** about numbers and cavies.
Example (fill in the blank): Cavies have _____ toes on their front feet. Cavies have _____ toes on their hind feet.
8. **Make a list of Disqualifications and Faults** and have members put a “D” or “F” in front of each term.
9. **Make up a cardboard cavy** and trace around the outside, making several cavies on one sheet of paper (at least six). Have the members color the variety correctly, according to the Standard. Example: Dutch, Broken, Himalayan, Sells.
10. Make or buy a cavy puppet. Place **various food items** on a table in front of the cavy puppet (you or an experienced member). These items include things that would be healthy for a cavy to eat, and things that would be bad for a cavy to eat. Examples include: straw, pellets, orange slice, apple, carrot, hot dog piece, cookies, candy, etc. Have members offer the cavy the food items and have the cavy respond positively or negatively; the more dramatic the better. This is especially effective for younger members.
11. Create **Cavy Bingo cards**, using terms in the boxes. Make each bingo card in a little different configuration, but using mostly identical terms. Make smaller cards to draw from with the terms written on the little cards. Scramble cards, draw one and read.
12. Make up **Matching Games** with the word and its definition. This can be used with medical terms, glossary terms, and much more.
13. Go to a bookstore or educational supply house and buy inexpensive teachers’ **activity books**, geared toward the age level of the members you are working with. These booklets often have many projects you can adapt to fit what you are doing with the Cavy Project.
14. **Make up a game** that follows the format of a store-bought game. You can use popular games and rework them to be used with cavy information.

USE YOUR IMAGINATION!!



CAVY RECORD

Name _____ Breed _____

Variety _____ Sex _____

Birth Date ____/____/____ Weight _____ Ear# _____ Reg# _____

Medical Record

Vet Notes

Weight at: Birth _____ 2mo _____ 4mo _____ 6mo _____ 8mo _____ 1 year _____

Feeding Record

Personality

Notes

Sold to _____ Date _____

New name _____

Breeding Record

Mate	Color	Markings	Date Bred	Due Date	Date born	Litter #	# of s/b
------	-------	----------	-----------	----------	-----------	----------	----------

CAVY RECORD (CONTINUED)

LITTER #	S/B COLOR MARKING	BIRTH WT.	TYPE	COMMENTS	SOLD
1.					
2.					
3.					
4.					
5.					

LITTER #	S/B COLOR MARKING	BIRTH WT.	TYPE	COMMENTS	SOLD
1.					
2.					
3.					
4.					
5.					

LITTER #	S/B COLOR MARKING	BIRTH WT.	TYPE	COMMENTS	SOLD
1.					
2.					
3.					
4.					
5.					

LITTER #	S/B COLOR MARKING	BIRTH WT.	TYPE	COMMENTS	SOLD
1.					
2.					
3.					
4.					
5.					

LITTER #	S/B COLOR MARKING	BIRTH WT.	TYPE	COMMENTS	SOLD
1.					
2.					
3.					
4.					
5.					

LITTER #	S/B COLOR MARKING	BIRTH WT.	TYPE	COMMENTS	SOLD
1.					
2.					
3.					
4.					
5.					

Additional Information:



CAVY PEDIGREE

Breed _____ Variety _____ Sex _____ Ear# _____

Reg# _____ Born _____ G/C# _____ Sr Wt _____

Boar _____
Ear # _____ Reg # _____
Color _____ Sr Wt _____
G/C# _____

Boar _____
Ear # _____ Reg # _____
Color _____ Sr Wt _____
G/C# _____

Boar _____
Ear # _____ Reg # _____
Color _____ Sr Wt _____
G/C# _____

Sow _____
Ear # _____ Reg # _____
Color _____ Sr Wt _____
G/C# _____

Boar _____
Ear # _____ Reg # _____
Color _____ Sr Wt _____
G/C# _____

Sow _____
Ear # _____ Reg # _____
Color _____ Sr Wt _____
G/C# _____

Animal's Name

Sow _____
Ear # _____ Reg # _____
Color _____ Sr Wt _____
G/C# _____

Boar _____
Ear # _____ Reg # _____
Color _____ Sr Wt _____
G/C# _____

Boar _____
Ear # _____ Reg # _____
Color _____ Sr Wt _____
G/C# _____

Sow _____
Ear # _____ Reg # _____
Color _____ Sr Wt _____
G/C# _____

Sow _____
Ear # _____ Reg # _____
Color _____ Sr Wt _____
G/C# _____

Boar _____
Ear # _____ Reg # _____
Color _____ Sr Wt _____
G/C# _____

Sow _____
Ear # _____ Reg # _____
Color _____ Sr Wt _____
G/C# _____

I hereby certify that this PEDIGREE is correct to the best of my knowledge.

Signed _____ Date _____

Show Notes

Show	Date	Placement	Judge	Award	Leg
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____

Weights are now required by ARBA to register cavies

STOCKING A FIRST AID KIT

Just as you would keep a well-stocked first aid kit in your home medicine chest, you should get and maintain one for your covies. The necessary ingredients for a first aid kit for covies include both instruments and medicines. The following list should help you develop a kit that will serve you in treating minor problems or in an emergency until a veterinarian can be reached. Your veterinarian can help you get some of the ingredients, or you can purchase many of them from a feed store or pharmacy.

SUPPLIES:

- Hydrogen peroxide: to clean wounds.
- Antibiotic ointment: Neomycin, bacitracin or similar.
- Oral systemic antibiotic: Tetracycline or sulfa drug. NOT PENICILLIN OR RELATED ANTIBIOTICS—for respiratory and for gastro-intestinal infections. Check with your veterinarian for best types to use in your case.
- Antibiotic ophthalmic ointment: Oxytetracycline (terramycin) or similar for mild eye infections and injuries.
- Diarrhea treatments: Biosol or Kaopectate.
- Ivermectin: (1% Ivomec) for treating sarcoptic mange mites.
- Bird lice spray, flea/tick spray (non-aerosol), dips or powders: Pyrethrin-based and related compounds to treat hair lice and mites.
- Kitten or puppy milk replacer for orphaned pups. Use 2/3 strength.
- Mineral oil for cleaning impactions.

EQUIPMENT:

- 1CC and 5CC syringes for dosing and feeding (no needles needed)
- Tweezers
- Cotton swabs
- Nail clippers
- Small sharp scissors
- Tooth clippers: dog/cat nail clippers work well
- Eye droppers
- Small tongue depressors for splints
- Vet wrap tape: this type won't pull out hair

SHOW & FAIR SURVIVAL HINTS FOR PARENTS (AND LEADERS)!

RULE NUMBER ONE: EXPECT TO FEEL CONFUSED FROM TIME TO TIME!

Expect to feel happy, overwhelmed, bored, tired, enthused, and excited, too!

1. *Take a clipboard, notebook, chart* or some other writing aid to write down your daily schedule for both you and your 4-H member.
2. *Be sure to read all the posted information* inside & outside of the showroom. This includes the Herdsmanship sign-in sheets, the Fitting and Showing sheets and the Schedule of Barn Events. Transfer important information that pertains to you, your child or your club onto your personal record.
3. If your child is of reading age, *you may wish to give them a copy of the schedule* you make up. This teaches responsibility. As children get older they can make up their own schedules.
4. *Have all family members wear a watch.*
5. *Be on time* for events, herdsmanship and other responsibilities, and then *expect to stand around*. It is the nature of the program. Bring a hobby to work on or book to read or *volunteer to contribute by helping get things done around the barn...they'll train you and typically appreciate your help!!!*
6. *Try to be patient with the people working on your child's behalf...*they may be experiencing many of the same feelings as you. They appreciate your cooperation.
7. *Remain flexible.*
8. *Ask questions.* Senior and Intermediate members often have the answers you are seeking, but if it is very important, ask your Club Leader or the Barn Superintendents. If possible, group your questions.
9. *Pace yourself and help your children pace themselves.* It is a better idea to wait until after Fitting and Showing to go on the rides or eat the whole cotton candy. Get enough rest. See the Fair. There is a lot of free entertainment.
10. *Be sure your child gets enough fluids.* Kids seem to remember to eat, but often forget to drink enough healthy fluids while they are running around.
11. *Encourage your child to do his or her own work*, so he or she will learn new skills and be able to feel the pride of ownership and accomplishment. This may take you more time at first. Work on finding the very delicate balance between "helping to get started" and "doing for them." You may feel it would be easier to do it yourself, but please don't. This applies to everything from Herdsmanship to Fitting and Showing. SHOW them how—then let them try it out, correcting as necessary. Give sincere praise often...more often than corrections!
12. *Learn from the judges!* Encourage your children to stand close enough to hear what the judges are saying to the other exhibitors, without crowding them, especially before they go up on the Fitting and Showing table. They will be able to glean bits of information that may, in fact, be helpful as soon as they are up on the table. Remember, today's decisions are one judge's opinion on one day. Please, parents, if at all possible, be there for the Fitting & Showing.

TERMS

Abscess—A lump caused by an infection.

Agouti—Hair shafts with two bands of different colors; belly hair doesn't have the tip color.

Angel wings—Rosette(s) or swirls located over the hips or shoulders of an American cavy, giving a "winged" effect. This is a disqualification. Can appear on other breeds.

Back ridge—The erect ridge of hair running down the back of an Abyssinian from shoulders to rump, including the mane.

Bacteria—Tiny one-celled organisms; some are helpful to the digestive process and some cause diseases.

Balance of sweeps—Evenness of sweeps in a long-haired cavy.

Banded—Said of a cavy when the body is circled by a band or color.

Barbering—Chewing of the coat, either by the cavy or the cavy's cage mates.

Bare spot—A section of the cavy without hair/where there should be hair.

Birth sac—A thick membrane that completely covers the baby cavy in the pregnant sow. Must come off at birth.

Blaze—A strip of white color running from the nose to between the ears.

Bleeding—A band of light color extending under the chin, found on Agoutis and Dutch-marked cavies.

Boar—A male cavy.

Bonnet strings—A marking on Agoutis in which the belly color runs under the chin and onto the face. Not desirable.

Brassy—Term applied to Creams when the color is too dark and too harsh rather than the pale, delicate shade called for in the color description.

Breed—A race or class of cavies that reproduce offspring just like themselves. See AREA Standard.

Brindle—Red and black hairs mixed together to look like a single color. Can also mean patching with stray hairs.

Broken coat—Guard hair that is broken or missing in spots, exposing the undercoat. Areas where the coat is affected by molt, exposing the undercoat.

Bumblefoot—Hard, enlarged calluses on the cavy's feet caused by a wire cage bottom. Sometimes ulcerated and infected.

Carrying-cage show—A competition in which the animals stay in their cages except when being judged.

Cataract—A disease of the lens in an eye.

Cavia porcellus—The scientific name for a cavy; *Cavia* means short-tailed or tailless rodent, and *porcellus* means "little pig."

Cavy—Correct term for guinea pig.

Cesarean—A surgical operation in which an unborn baby is removed from its mother.

Chest—The front of the body between the front legs and neck.

Class—A category for cavy shows based upon the cavy's age and/or weight and sex.

Coccidiosis—A contagious disease that causes diarrhea.

Collar (ruff)—A lateral ridge of hair running across the shoulders of the Abyssinian cavy.

Colony—A group of cavies.

Comment card—A part of the coop card where judge's comments are made and evaluation of the cavy is recorded.

Condition of body—Physical state of health of the cavy.

TERMS (CONTINUED)

- Condition of coat**—Physical state of the coat of the cavy based on cleanliness, texture, and grooming.
- Conjunctivitis**—An infection in which the white of the eye appears pink and the eyelid area looks inflamed.
- Constipation**—The cavy has difficulty passing feces.
- Coprophagy**—When cavies eat their own bowel movement. Necessary for a healthy cavy.
- Coronet**—A rosette found on the forehead of a Coronet cavy.
- Crest**—A rosette found on the forehead of a Crested cavy.
- Crossbreeding**—The mating of two different breeds of cavies.
- Crown**—The area just behind the top of the cavy's head.
- Culling**—Removing undesirable animals from the breeding program.
- Dehydration**—Loss of fluids from the cavy's body, usually after diarrhea.
- Density**—The thickness of a cavy's coat.
- Depth of color**—How far a color carries down the hair shaft to the base of the skin.
- Diarrhea**—Loose bowel movements.
- Disease**—A condition that causes a cavy to get sick (see disease section).
- Disqualification**—A temporary or permanent defect, deformity, or blemish that makes the cavy unfit to take part in a show.
- Dominant gene**—A gene that may dominate another in a pair.
- Drag**—When color runs from a designated spot into another color as in Dutch, White Crested or Agouti.
- Double rosette**—Two centers instead of one in a rosette.
- Ear folds**—One or both ears have folds of skin on them.
- Estrous cycle**—In the sow, the period of time it takes for the egg to develop, mature, and be released for fertilization, and for the sequence to begin again.
- Eye circles**—A circle of color around the eye, lacking ticking. Found on Agoutis. Not desirable.
- Eye color**—The color of the iris (circle or color around the pupil) in the eye.
- Faking**—Any change in the external appearance of a cavy with the intent to deceive.
- Fatty eye**—Yellow or white fat usually on the lower eye lid that protrudes.
- Faults**—Qualities that detract from the overall perfection of the cavy.
- Fertilization**—The process in which egg and sperm join and begin the formation of a new cavy.
- Fetus**—The developing cavy / not yet born.
- Flesh spots**—Small areas of skin usually found on ears, nose and foot pads, where skin remains flesh colored and does not match surrounding skin color.
- Frontal**—The hair that falls over the face of a Peruvian cavy.
- Fungus**—A plant that has no green color, leaves, or flowers; can cause ringworm in cavies.
- Genes**—Tiny structures that carry family traits from one generation to another. There are two for each trait (one from each parent) passed on to each baby cavy.
- Genetics**—The science that describes how traits are carried from one generation to another.
- Gestation**—The time from conception to birth, about 68 to 72 days.
- Guard hair**—The longer, coarser hair on a cavy's coat, offering protection to the undercoat and providing quality and sheen to the coat.

TERMS (CONTINUED)

- Guinea pig**—The common name for *Cavia porcellus* or cavy.
- Gutter**—An undesirable line or part, extending from rosette centers in the coat of an Abyssinian cavy or from the crest of a Crested or Coronet cavy.
- Head furnishings**—Hair covering the head and face of a Peruvian cavy.
- Hernial rupture**—The protrusion of a loop or knuckle of an organ or tissue through an abnormal opening.
- Hybrid**—Crossbred animal.
- Impaction**—A condition, usually in senior boars, caused by a large ball of feces and dirty shavings blocking the anal area, making eliminating solid body waste difficult or preventing it altogether. It is found in the perineal sac. A disqualification.
- Inbreeding**—The mating of close family members, such as brother and sister or parent and child.
- Inguinal ring**—Normal opening between abdominal muscles through which the blood supply for the hind legs passes.
- In heat**—When a sow is receptive to a boar.
- Intermediate**—A cavy up to 6 months old and weighing between 22 ounces through 32 ounces.
- Junior**—A cavy up to 4 months old and between 12 and 22 ounces.
- Kink**—The condition of a coat, particularly in Teddies, where the hair shaft is more rigid and stands out from the body, while exhibiting some small amount of curl.
- Laboratories**—Places where cavies are used to test drugs for human use and to test cures from diseases that humans contract.
- Lactation (lactating)**—Nursing or production of milk.
- Leg**—A certificate awarded to a cavy at officially sanctioned AREA shows for a qualified win.
- Lice**—Tiny parasites that can infest cavy hair.
- Linebreeding**—Breeding family members together in order to produce certain desirable characteristics.
- Litter**—The babies born in a given pregnancy.
- Luster**—The degree of shine of normal coated breeds.
- Malocclusion**—Improper meeting of teeth. “Buck teeth.”
- Mammary glands**—The sow’s organs that produce milk.
- Mane**—The part of the back ridge of an Abyssinian cavy that extends from the back of the eyes to just past the shoulders. As applied to Silkies and Coronets, the long hair that sweeps back from the crown to join the rear sweeps, not parting, and all the same length.
- Marked color**—A group of varieties that includes Broken Color, Dutch, Himalayan, Tortoise Shell, Tortoise Shell and White, and Dalmatian.
- Mastitis**—An infection of mammary glands (also referred to as caked belly, caked breast, and blue breast).
- Mite**—A small parasite.
- Mixed breed**—An animal having more than one breed in its background.
- Muddy belly**—On Agouti cavies, it is caused by the tip color on the hair shaft of the belly being too short, allowing the darker base hairs to show through. A fault.
- Mustache**—The ridges of hair found on the sides of the face of the Abyssinian cavy.
- Open-centered**—A rosette having an enlarged center rather than a pin-point center(s).
- Ovary**—The female organ that produces eggs. Each sow has two ovaries.
- Palpation**—Very gently feeling the female cavy for pregnancy.
- Parasites**—Mites or lice living in the cavy’s hair or under the skin that can be controlled by shampoo, powder, or spray.

TERMS (CONTINUED)

- Parturition**—Birth of a litter; delivery.
- Patches**—Sections of color with definite shapes and preferable clean-cut edges.
- Pea eye**—A growth on the eyeball itself resembling a nodule or a pea.
- Pedigree**—The family history of a cavy, including a minimum of three generations (family tree).
- Placenta**—Round, disk-like afterbirth.
- Polydactyl**—Having an extra toe or toes; a disqualification.
- Popping**—Jumping straight up in the air.
- Postpartum heat**—The period immediately following delivery when the sow releases eggs for fertilization. The sow could become pregnant again during this time.
- Purebred**—An animal with at least three generations of the same breed on its pedigree.
- Pus**—Matter made up of bacteria, white blood cells, and serum; produced as a result of an infection.
- Rear sweep**—Hair covering the hindquarters of a Peruvian cavy.
- Recessive gene**—A weaker gene whose trait will not show up in new cavies unless it is paired with another recessive gene for the same trait.
- Resiliency**—The coat's capability to return to its original state after being brushed or patted.
- Ridge**—A line of upright hair, formed by adjoining rosettes, that is found on the Abyssinian coat.
- Roan**—A cavy color variety that is an intermixing of white and one or two other recognized colors.
- Rodent**—A gnawing mammal.
- Roman nose**—A wide, blunt nose, not too severe in bluntness.
- Rosette**—Hair that radiates full circle around a center point. Rosettes are found on the Crested, Coronet, and Abyssinian breeds. Hidden rosettes are found on Peruvians in long coats.
- Rotated eyeball**—An eye that is set in the socket so that the line of vision is cast upward.
- Rump**—The rear end of a cavy.
- Rump ridge (Rear Ruff)**—A lateral ridge of hair running across the hindquarters of an Abyssinian or Abyssinian Satin cavy.
- Saddle**—The middle of the cavy's back or the rear colored marking on a Dutch cavy.
- Saddle dip**—A flatness in the saddle area.
- Scurvy**—A disease caused by lack of vitamin C that causes loss of weight, muscle tone, and paralysis.
- Self**—The same color of hair, from base to tip of hair shaft, over the entire body.
- Senior**—A cavy six months of age or over 32 ounces.
- Sheen**—The degree of shine to the hair shaft of the Satin coat.
- Show board**—Board made expressly for presenting the long coated breeds to the type table. Dimensions should be 16x16x4 inches and covered in burlap.
- Side frills**—See Angel wings
- Side sweeps**—Hair radiating in a smooth semi-circle from the side of the body on a Peruvian cavy.
- Side whiskers**—Rosette or partial rosette located just behind and below the ear in the coat of an American or Crested cavy; a disqualification.
- Smut (smudge)**—(1) A dark, sooty appearing area affecting surface color. (2) Also used to describe the nose marking on a Himalayan cavy.
- Solid**—The same color uniformity over the entire animal. This uniformity may be obtained by either the intermingling of different colored hair shafts (Brindles and Roans) or Agouti colored (one base color, one tip color) hairs over the entire body. Should be devoid of markings and shadings. Has no belly band.
- Splashes**—Small uneven patches of color causing a splattered effect on a Tortoise Shell, Tortoise Shell and White, or Broken Colored cavy. A fault.

TERMS (CONTINUED)

Split stops—Condition found on the hind feet of a Dutch cavy where the marking color runs down between the toes. A fault.

Teat—The nipple of the sow where the baby cavies nurse.

Texture—Harshness or softness of a coat.

Ticking—A wavy distribution of longer guard hair, throughout the coat of the same color as the under or base color. Such ticking in Agouti cavies is usually produced by “self” colored hair shafts that match the base color.

Tipping—A color found at the end of the hair shaft in Agouti patterned cavies.

Toxemia—A poisoning of the sow during pregnancy, when poisons from the uterus are sent through the bloodstream. Also called ketosis.

Toxic—Poisonous.

Tumor—A new growth of tissue in which the multiplication of the cells is uncontrolled and progressive.

Type—Body conformation or shape of a particular part of the body.

Under color—Color of the base of the hair, next to the skin.

Unworthy of an award—When a cavy is not of the quality to receive a placing in type judging competition.

Uterus—The female organ in which the fetus develops and grows.

Variety—A subdivision of any recognized standard breed, distinct in color (a certain color class).

Vent disease—Venereal diseases in cavies of both sexes.

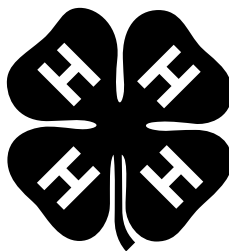
Virus—A submicroscopic organism that can cause diseases such as pneumonia.

Wall eyes (moon eyes)—Having a milky film over the cornea or appearance similar to moonstone. Colored eyes having an extremely light iris, giving a glazed appearance.

Wean—to remove the babies from their mother so they no longer can nurse.

Wrappers—Special papers or materials used to tie up and protect the long-coated Peruvian, Silkie, and Coronet.

Wry neck—A weakness of the muscle in a cavy’s neck that causes the head to be pulled to the side that may cause difficulty in standing.





WEBSITES TO EXPLORE

American Cavy Breeders Association

The ACBA is a non-profit Specialty Club of the American Rabbit Breeders Association, Inc., dedicated to furthering interest in the cavy through breeding, exhibition, and providing information promoting and aiding all aspects of cavy raising.

<http://acba.osb-land.com>

Cavy Publications

Welcome to Mary's Guinea Pig Publications & Resources

<http://www.buddies.org/kvsource/index.html>

The Winking Cavy Store!

The one-stop shop for unique guinea pig/cavy momentos, including cavy figurines, badges, thimbles, fridge magnets, T-shirts, posters, mugs, jewelry, and books on cavies.

<http://www.oginet.com/winkingcavy>

The Guinea Pig Compendium

A collection of guinea pig resources, including a detailed care guide, articles and references, and pointers to Guinea Pig and Cavy sites on the Web.

<http://www.aracnet.com>

Canny Cavies Website

A lighthearted and informative look at the cavy and guinea pig.

<http://www.oginet.com/Cavies>

The Washington State 4-H Program strongly suggests that youth use the World Wide Web only with adult supervision.

PROJECT MEETING ACTIVITIES

Newman J., & Busboom, J. 1994. *Assuring Animal Product Quality by Youth Producers*.
Extension, Washington State University, Pullman, 104 p.

LESSON 1 PROMOTES CAVY WELL-BEING

What Youth Will Learn:	<ul style="list-style-type: none">• This project expects a responsibility to humanely care for, feed, and exhibit a cavy.• To identify current and potential problems with animal well-being that may occur when caring for and exhibiting a cavy.
Time Needed:	45 minutes
Science Processes:	Observing Communicating Comparing Relating Applying
Life Skills:	Decision making Communication

WHAT DO I NEED TO KNOW?

A cavy project can be fun, but also requires responsibility. When owning a cavy, it is important to remember that the care and feeding of a cavy is a major part of the responsibility, but there is also responsibility involved when exhibiting a cavy at a fair or show. Showing a cavy can be fun and requires that the cavy owner show by example the respectful and humane treatment of an animal. Youth and adults observing the cavy exhibitor can develop a positive or negative impression from an exhibitor's cavy management. This project is indeed an important responsibility.

Respectful cavy management is a way of thinking or attitude developed as you learn about your animal. If a youth has never owned an animal, learning respectful cavy management is the first step in becoming a responsible animal owner. Developing a respectful attitude toward the cavy affects not only how the cavy is cared for, but the cavy owner's behavior in other areas of life also. It means youth accept the responsibility of their actions. It means they take pride in doing their best. They continually strive to learn how to do a better job in caring for the cavy, showing a cavy, and generally becoming a more skillful, responsible person.

Respectful animal management, or cavy management, relates to a term often used in business called Quality Assurance. This term simply means managing the quality of each component of a project for long-term benefit to a customer. If we apply this concept to the cavy project, it means demonstrating quality in the cavy project can influence the interest in cavies far beyond what one could imagine.

Quality care and feeding of the cavy, following a veterinarian approved health program, preparing properly for a cavy show or fair exhibition, and respectful behavior by the exhibitor all assures quality is demonstrated in the cavy project. This quality demonstrated can cause interest to grow in this project. Observers at a fair or show may want to become a part of a 4-H cavy project or purchase a cavy to raise themselves. Cavy breeders may see an increase in their business because of the respectful management demonstrated by a youth exhibitor.

To achieve quality assurance, respectful cavy management must happen in all areas of the project. For example, if a cavy cage is not cleaned properly, a cavy may become stressed. This stress could affect the cavy during a show and the cavy could exhibit stressful behavior. A knowledgeable observer may conclude that this cavy has not been receiving respectful management and become concerned about animal welfare.

Concern for animal welfare or well-being has increased in recent years. The term “animal welfare” refers to an animal’s state of doing well, i.e., it is healthy, fast-growing, and reproduces normally. It is comfortable, free from pain, and exhibits normal behavior for its species. In order for cavies to do well, they require an adequate environment for physical and psychological health. All animals need the following:

- adequate and clean air, water, and feed;
- safe and adequate housing;
- enough variation and security in their living environment to prevent boredom or fear; and
- careful handling to avoid unnecessary suffering.

We must all be concerned for the well-being of animals. Such concern automatically qualifies each of us as an “animal welfarist” and we can be proud of the respectful animal management that we advocate. The animal welfare ethic expects that humans may use animals for their own benefit as long as the animals are treated humanely and respectfully throughout their lives. Those who believe in animal welfare attempt to minimize pain to cavies and treat them with respect at all times.

Believing in animal welfare is much different than believing in animal rights. The animal rights ethic expects that animals have the same rights and feelings as humans and that people may not use animals in any way. Many also believe that humans have a duty to help animals obtain their rights. Some animal rightists become publicly vocal and demonstrate their views. A few animal rightists even commit acts of violence on behalf of animal rights issues.

Most animal raisers treat their animals humanely. However, there are individuals who don’t take their responsibility to animals seriously. Then, there is considerable room for improvement. Areas of concern that can apply to cavies include the following:

- Confinement rearing
 - Inadequate lighting
 - Overcrowding or overly aggressive cage mates
 - Social isolation
 - Poor air circulation
 - Lack of sanitation
 - Boredom
- Management procedures
 - Rough handling
 - Lack of high quality feed and water
 - Inadequate health programs
- Physical environment
 - Cold, wet, drafty conditions
 - Lack of shelter or protection from the elements
 - Lack of bedding
 - Pests such as flies
 - Overheating in summer
 - Filthy, unsanitary conditions

- Transportation
 - Crowding
 - Temperature extremes
 - Food and water deprivation
 - Rough handling

Members of the public observe the way we treat cavies at fairs and shows throughout the country. We do many things correctly, and we can be proud of our respectful cavy management. The question is, do we always treat our animals humanely? It is important to have our youth consider how treatment of their cavies will be perceived by others. Are there things we do that might be considered inhumane? Could reasonable people be negatively influenced enough to stop their interest in the show or fair, or not consider raising cavies as a valuable youth project?

HOW DO I INTRODUCE THE LESSON TO YOUTH?

Lead a discussion with youth about quality assurance, animal well-being, and well-being areas of concern. Discuss how we would apply these concerns to Respectful Cavy Management. Write down the important points of the discussion on a white/blackboard, newsprint, or a large piece of cardboard. Refer to the previous background information to help youth learn the correct answers to the following questions:





- What do you believe to be Quality Assurance? Define each word in the discussion and apply to cavies.
- What is Respectful Cavy Management?
- What is animal well-being?
- What are the well-being areas of concern?



LESSON 1, ACTIVITY 1

UNDERSTANDING QUALITY

MATERIALS NEEDED: QUALITY EVALUATION SHEETS (SEE NEXT TWO PAGES FOR SHEETS)

Activity: What to do with Youth	Discussion Topics: What Questions to Ask Youth
<p>Pair younger youth with older youth members if possible. This activity will have youth identify what quality is.</p> <p> Briefly discuss quality (5–10 minutes)</p> <p>Then hand out the quality evaluation sheets.</p> <p>Discuss how people view quality differently.</p> <p>Tell the youth pairs to interview two or three other people before the next meeting, so they can report the results to the rest of the group. This activity will be completed at the second meeting. It is titled Activity 2, “Understanding Quality.”</p>	<p> <i>Communicating</i></p> <p>Ask the youth to describe what they think quality is.</p> <p> <i>Comparing</i></p> <p>Do other people have different views about what quality is to them?</p> <p> <i>Inferring</i></p> <p>Who might have different ideas of what quality is?</p>

ATTITUDES AND RESPONSIBILITIES TOWARD CAVIES WHICH PROMOTE WELL-BEING AND RESPONSIBLE CAVY MANAGEMENT

*Youth Quality Interview Form
(You may want to interview more than two or three people)*

Show Spectator 1

Name _____

Age _____ Occupation _____

Suggested Questions:

When you go to a cavy show, how do you define the quality of the event?

Is there anything else about a cavy event that is important to you?

What factors affect which cavy show you choose to observe?

Show Spectator 2

Name _____

Age _____ Occupation _____

Suggested Questions:

When you go to a cavy show, how do you define the quality of the event?

Is there anything else about a cavy event that is important to you?





What factors affect which cavy show you choose to observe?

LESSON 1, ACTIVITY 2

HUMANE TREATMENT OF CAVIES: SELF-ASSESSMENT

We can be proud of the way youth and adult leaders treat cavies at shows and fairs throughout the country. But, do we always treat our animals humanely? Are there things we do that might be considered inhumane? Might reasonable people be upset enough to withdraw their support of our shows and fairs?

Materials Needed: A supply of small stuffed toy animals, or a number of cardboard cutouts in the shape of cavies. Also, several cavy cages and equipment used in cavy care. Some of these items need to be inappropriate or unsafe for use in cavy care. (Examples are incorrect bedding materials or unsafe cavy toys.) A table that is at least four feet long. Have enough supplies for half the number of youth in the group to use.

Activity: What to do with Youth	Discussion Topics: What Questions to Ask Youth
<p> Group the youth in pairs. Explain to them that they are going to role-play putting on a cavy show. One-half of the group will be cavy exhibitors, and one-half the group will be show spectators. Several of the exhibitors will demonstrate quality cavy care and showing and several will demonstrate inhumane practices. The spectators will observe the behaviors and make notes on paper.</p> <p>Have the cavy exhibitors prepare their “pretend” cavies for exhibit. Allow them to talk among themselves about their presentation. They then role play cavies and exhibitors without using voices, or talking to the spectators. Preparation for the show, showing, and ending the show could be three short acts in a three-act play.</p> <p>The spectators observe the show, writing down any observations they make on humane or inhumane behavior, or any quality assurance observations.</p> <p>The group leader or teacher moves the play along, encouraging kids to keep each act to 3-4 minutes. Lead a discussion. Be sure each participant has a chance to talk. If time allows, repeat the play, reversing roles each half of the group plays.</p>	<p> <i>Observing, Communicating</i></p> <p>Spectators: What did you notice about the preparation for the show? During the show? After the show? Did you see any exhibitor actions that you would identify as inhumane?</p> <p>Exhibitors: How did you decide what to demonstrate in the play? What did you notice about how you demonstrated humane treatment? Was it difficult to demonstrate inhumane treatment?</p> <p> <i>Comparing, Relating</i></p> <p>Spectators: Were the cavies handled differently during the show than before or after the show? How did you choose what behavior you identified as humane or inhumane?</p> <p>Exhibitors: How did you feel about demonstrating different behaviors in caring for and showing cavies? What did you notice about the spectators? Did they react as an audience to different treatment of the cavies?</p> <p> <i>Applying, Inferring</i></p> <p>All: Do you think the practices demonstrated could be improved? How? Do you think you could demonstrate and use better practices with your own cavy? How could the preparation and care of cavies be a good example of Respectful Cavy Management?</p>

**POSSIBLE ANSWERS FOR
DISCUSSION QUESTIONS:
HUMANE PRACTICES**

- Feed a balanced ration.
- Provide plenty of clean drinking water.
- Prepare cage and get supplies before getting my cavy.
- Start training cavies to be handled at a young age.
- Observe cavies daily and get medical treatment for those that need it.
- Follow a planned health program to control internal and external parasites and other diseases.
- Provide a warm dry cage that is adequately ventilated and well-bedded.
- Always treat cavies with compassion and respect.
- Don't bring a sick cavy to a show.
- Make sure show cages are appropriate size.
- Multiple day shows require larger cages.
- Have cavy cage labeled at show.
- Lice spray cavies before and after every show.

**POSSIBLE ANSWERS FOR
DISCUSSION QUESTIONS:
INHUMANE PRACTICES**

- Transporting cavies in an overly warm or cold environment.
- Improperly medicating cavies, e.g., using unapproved drugs or approved drugs contrary to label directions.
- Failure to keep cages clean and dry.
- Failure to keep fresh food and water available at all times.
- Taking personal frustrations out on cavies.
- Leaving cavies out of their cages and unattended on the petting table.
- Allowing cavies to fight and injure each other.



LESSON 2

CAVY STRESS

What Youth Will Learn:

About the Cavy:

- Controlling stress in the cavy's environment is necessary.
- The body reacts to stress to protect itself from harm.
- Some practices cause short-term stress but result in long-term animal well-being.

About Themselves:

- They react to stress in different ways.
- They are responsible for controlling their cavy's environment and providing for its well-being.

Time Needed:

45 minutes

Science Processes:

Observing
Communicating
Comparing
Relating
Applying

Life Skills:

Decision making
Communication

WHAT DO I NEED TO KNOW?

What is stress?

We have all heard about stress. People may say they have had a stressful day at home or at work. We sometimes hear that stress makes people behave differently: "Oh, don't mind Johnny. He's been under a lot of stress lately." We also hear about people who become ill when they are experiencing stress. Cavies can experience stress and may change behavior or become sick as a result. A cavy can be stressed when something in its environment or management causes a change in the animal's function, structure, or behavior. The stress symptoms a cavy displays usually mean we need to change something in the cavy's environment or care.

Excessive heat or cold, physical exertion, pain, change in diet, social pressure, poor husbandry, and disease agents are all examples of things that cause stress in animals. It is impossible to avoid all the things that cause stress. Identifying stress and minimizing stressful situations for your cavy allows for greater well-being of the animal.

Stress from environmental and management aspects of cavy care can be classified into four broad categories: thermal, physical, disease, and behavioral.

Thermal Stress

Factors that lead to thermal stress include: temperature (heat or cold), humidity, wind, and solar radiation. Cold stress affects younger or sicker animals more than mature, healthy animals, while heat stress affects heavier or lactating animals more than lighter, younger animals. In addition, certain animals are more capable of adjusting to cold or hot climates. Cavies do best in a temperature range of 55°–75°F. Deviations from this cause undue stress to cavies.

Physical Stress

Physical stress is caused by the physical components of an animal's environment, i.e., space available for the animal and the surfaces with which the animal comes into contact. Shows and fairs are stressful due to a change in its environment.

Disease Stress

Disease stress is the stress that results from the onset and spread of disease.

Behavioral Stress

Behavioral stress includes those factors that affect normal behavior (e.g., appetite, grooming) of the animal. Adequate space should be provided for activities such as feeding, resting, and playing.

Is all stress bad?

There are practices (e.g., ear tagging) that cause short-term stress and may also be painful. Other management practices, such as separating the young from their mothers during the process of weaning, may also cause short-term stress. Spraying to prevent lice infestation can be temporarily stressful. Although these management practices cause stress over a short period, they are beneficial. They give long-term health and management benefits to individual animals and their cage mates by preventing long-term stress from injury, disease, or nutritional factors.

How can we evaluate stress?

Observation is the only practical, reliable method to evaluate stress. Stress is difficult to quantify, but there are observable indicators of stress. Stress, pain, or suffering may be recognized by the following:

- Lack of appetite
- Disease symptoms
- Abnormal posture
- Slow growth rate
- Elevated respiration rate
- Restlessness
- Lameness
- Unusual vocalizations
- Lack of self-grooming
- Self-isolation from cage mates
- Listlessness
- Hair chewing or hair loss

See complete list of symptoms of illness in "Disease Prevention and Treatment" section on page 25.

How does stress affect animals?

Under stressful circumstances, biochemical reactions in the cavy's body stimulate the body to perform at higher than usual energy levels, which results in increased heart and breathing rates plus high blood pressure. When cavies are under excessive or long-term stress, these stress reactions may cause the animal to become ill. It also causes the animal to become more susceptible to disease. For these reasons, we must seek to control the level of stress in our animals by reducing or removing causes of stress (we call them stressors) whenever possible.

What can we do to control unnecessary stress?

To control an animal's stress, we must control the stressors by providing for the animal's basic needs, comfort, and mental well-being. This includes providing adequate, safe cage space, avoiding overcrowding, and keeping surroundings clean and dry. Take care of its well-being by using compassionate training methods that minimize discomfort. Exhibitors must not cause stress by using improper handling and showing techniques before and during shows. Finally, minimize stressors as much as possible when traveling to and from the show. We may not be able to control all of the stressors that a cavy is exposed to, but we can minimize them.

We have an obligation to recognize the signs of stress in animals, take steps to minimize or remove the stressor whenever possible, and reduce the negative effects on the animal's health and well-being.

Materials adapted with permission from: Animal Care Series, University of California Cooperative Extension, Davis, CA. Editors: Gary Beall, Ed DePeters, James Parley, Wayne Jensen, Jim Oltjen, William J. van Riet, and Carolyn Stall.

HOW DO I INTRODUCE THE LESSON TO YOUTH?

Lead a discussion with youth about stress. Write down the important points of the discussion on a white/blackboard, newsprint, or a large piece of cardboard. Refer to the previous background information to help youth learn the correct answers to the following questions:

- What is stress?
- What are the different kinds of stress?
- Is stress all bad?
- How can we evaluate stress?
- How does stress affect animals?

Hands-On Learning Activities







Follow the directions for each of the hands-on activities on the following pages. Start with Activity 1.

LESSON 2, ACTIVITY 1

CAVY STRESS AND WELL-BEING

Activity 1: If You're Healthy and You Know It

Materials Needed: A Large piece of paper, poster board, or blackboard; several healthy cavies; and the "Healthy Characteristics" chart.

Activity: What to do with Youth	Discussion Topics: What Questions to Ask Youth
<p>This activity will help youth recognize the physical characteristics of normal, healthy cavies and practice observation and analysis skills. Engage youth in the following discussion:</p> <p> Review and discuss physical symptoms of stress in people.</p> <p> Divide youth into groups to observe the physical appearance of the cavies. Have them write down descriptions of the cavy's physical appearance.</p> <p>Make an empty chart on the large piece of paper or blackboard, based on the "Healthy Characteristics" chart. Fill in the chart with answers from the group's observations. Also, have them describe how the cavy's physical appearance might change if stressed. (Refer to page 16, "The Healthy Cavy.")</p> <p>Discuss what youth can do to help cavies recover from stress and when a veterinarian's care may be required.</p> <p>You could also invite a veterinarian to speak.</p>	<p> <i>Observing</i></p> <p>What happens to our bodies when we become stressed?</p> <p> <i>Observing</i></p> <p>What is the animal's nose like? Wet? Dry? Cold? Warm? How does its coat feel? How do its eyes look? Skin? Teeth?</p> <p> <i>Relating</i></p> <p>Ask youth to describe the cavies' features and how they might change if the animals were stressed.</p> <p> <i>Applying</i></p> <p>What might we do to help a cavy recover from physical signs of stress?</p>



HEALTHY CHARACTERISTICS









FEATURES	EXAMPLES OF CHARACTERISTICS
Eyes	Clear or bright, clear of discharge
Teeth	Unbroken and/or absence of overgrown incisors
Hair	Clean, free of parasites; no bald patches; appropriate for breed
Nose	Cool to touch and free of mucus or crust
Skin	Free of scaling, lesions, boils, or cuts
Body Waste	Feces are formed into oblong pellets
Feet	Clean, nails unbroken or not overgrown

LESSON 2, ACTIVITY 2

CAVY STRESS AND WELL-BEING

Activity 2: If You're Healthy and You Know It

Materials Needed: A Large piece of paper, poster board, or blackboard; several healthy cavies; and the "Animal Behavior" chart.

Activity: What to do with Youth	Discussion Topics: What Questions to Ask Youth
<p>Behaviors can be demonstrated by posture, movement, vocalization, and eating habits. This activity will help youth recognize the behavior of normal, healthy cavies and practice observation and analysis skills. Engage youth in the following discussion:</p> <p> Discuss different behaviors that humans can exhibit. Have individuals describe some of their different behaviors.</p> <p> Divide youth into groups to observe the behavior of the cavies.</p> <p> Make an empty chart on a large piece of paper or blackboard, based on the "Animal Behavior" chart. Fill in the chart with answers from the youths' observations.</p> <p> Discuss what the youth can do to help reduce stress for cavies, thereby making them healthier.</p> <p>*Optional: Have individuals physically demonstrate human and animal behavior. Younger children may enjoy this.</p>	<p> <i>Observing</i></p> <p>How do we act when we are healthy? Content? Angry?</p> <p> <i>Observing</i></p> <p>*Have youth describe the sounds and movements the cavies make.</p> <p> <i>Relating</i></p> <p>What was the cavy's behavior like when it was first picked up? How did it change after it was petted for awhile?</p> <p> <i>Applying</i></p> <p>What might we do to help the cavy's behavior improve?</p>

ANIMAL BEHAVIOR







FEATURES	EXAMPLES OF CHARACTERISTICS
Content	Head up or between front feet Sits or lies quietly Breathes evenly
Unhealthy	May not eat or drink May not move around cage May be hunched in corner May have unusual discharge
Frightened	Tries to hide Rapid movement Heavy breathing
Angry	Teeth chattering Shifting body from side to side Biting
Mating	Purring sound Male swaggers

LESSON 2, ACTIVITY 3

STRESS AND ANIMAL WELL-BEING

Materials Needed: Youth Activity Sheet “Stress Identification”

Activity: What to do with Youth	Discussion Topics: What Questions to Ask Youth
<p> For this activity the youth should be at a cavy owner’s house or some other place where cavies are living.</p> <p>Review the four categories of stress and have youth detect potential stressors by filling out the stress identification worksheet.</p> <p>Summarize the stressors the youth observed.</p> <p>Discuss how to reduce possible stress factors</p>	<p> <i>Observing</i></p> <p>What things do you see that could cause these cavies stress?</p> <p> <i>Relating</i></p> <p>Of the stressors observed, which are: physical, thermal, disease, and behavioral stressors?</p> <p> <i>Applying</i></p> <p>How could the stressors be reduced for the cavies you are observing?</p>

STRESS IDENTIFICATION

Directions: In this activity look at the cavies' environment. Identify factors that could cause stress. This stress could be physical, thermal, behavioral, or disease. In the spaces provided below, identify the facts that could cause stress in the cavies you observed.

THERMAL	PHYSICAL	DISEASE	BEHAVIORAL

LESSON 3

BASIC HOUSING NEEDS OF CAVIES

This Lesson is About:	How animals are healthier and more comfortable when their facilities are designed with the animals' needs in mind.
What Youth Will Learn:	<p><i>About the Cavy:</i></p> <ul style="list-style-type: none">• Shelter and space requirements for a cavy• The importance of good ventilation• What role bedding plays in keeping animals comfortable and healthy• The importance of good sanitation• Waste management <p><i>About The member:</i></p> <ul style="list-style-type: none">• That the cavy's comfort is influenced by space and shelter.• That all animals and people have basic shelter needs.• That the member is responsible for providing adequate housing for his or her cavies.
Time Needed:	45 minutes
Materials Needed:	<ul style="list-style-type: none">• Activity Sheet for Leaders/Teachers, "Space Requirements"• Activity Sheet for Leaders/Teachers, "Bedding and Sanitation"

WHAT DO I NEED TO KNOW?

INTRODUCTION

Cavy facilities are anything built to house or confine cavies. These should be designed to meet the basic needs of the animal. Safety, health, and comfort of the cavy is very important. It is inhumane to keep animals in stressful conditions. (Refer to pages no; 16–19.) When planning a good cage setup, basic needs that should be kept in mind are:

- Protection from summer heat and winter cold, (temperature between 55°–75°F).
- Adequate space for the animal's health and comfort.
- Convenient feed and water supply.
- Cleanliness and sanitation.
- Protection from predators.

Shelter and Space Requirements

Shelter from harsh environments is needed to ensure the cavy's comfort and health during extremes in weather (windy, hot, cold, and wet conditions).

The size and design of the cage should provide areas for feeding, watering, resting, and elimination. Each should be large enough for the animal to stand, turn around easily, lie comfortably, and have room to walk the circumference of the cage with freedom and ease. A minimum cage size is 18 x 18 x 12 inches for each cavy.

Check the section on housing and accessories for more detailed information on space requirements and designs for cages and carriers.

Ventilation

Proper ventilation or air movement should provide fresh air exchange for cavy in a cage or carrier. Poor air movement encourages health problems and the transmission of infectious diseases because of moisture and toxic gas buildup and temperature fluctuations. Proper ventilation removes moisture, maintains air temperature at a degree of comfort for the animals, removes toxic gases, and stabilizes air.

Bedding

Clean, dry bedding is an excellent insulating material and contributes to the cavy's comfort and health. Bedding loses its insulating properties when it becomes wet. Select a material, usually white shavings, that is fine enough to be absorbent, but large enough not to block nasal or rectal passages. (See "Bedding" section.)

Sanitation

Many microorganisms live in and multiply outside the host animals, infesting cages and carriers. They expose cavy to possible diseases and parasites. Reduce the number of organisms in the environment and the incidence of disease outbreaks through good sanitation practices. Prompt and proper removal of wastes, and cleaning and disinfecting housing and equipment reduces the spread of disease. Keep dishes and water bottles clean.

Normally, the cleaner the environment, the healthier the animals will be. Accumulations of body wastes and spoiled feed result in an increase in the number of microorganisms such as bacteria, protozoa, and viruses that may cause digestive and respiratory problems.

Waste Management










Dispose of waste in a manner that will maintain sanitary conditions, prevent fly breeding, minimize odors, and protect groundwater quality. Composting may be a good alternative to other waste disposal methods, but it requires commitment and time. The end product can be used as fertilizer for plants.

LESSON 3, ACTIVITY 1

BASIC HOUSING NEEDS FOR CAVIES

Activity 1: Space Requirements

Materials Needed: Small room, walk-in closet, or other confined space; household thermometer; mirror

Activity: What to do with Youth	Discussion Topics: What Questions to Ask Youth
<p> Designate a very small room with a door such as a walk-in closet or bathroom to represent a small cage.</p> <p>Take the room temperature before the youth enter.</p> <p> Place several youth into the confined space. The room should be crowded with the door closed. Have the youth try to perform normal day-to-day activities. For instance, have them lie down, eat, and walk around in the room.</p> <p>Note: The room should be crowded enough to allow only one individual to lie down at a time.</p> <p>After several minutes take the room temperature. Gradually have the youth leave the room one at a time. After each dismissal, have the youth left in the confined room perform the same day-to-day activities.</p> <p>Note: There should be an increase in the room temperature due to body heat and an increase in humidity.</p>	<p> <i>Observing</i> What is the starting room temperature?</p> <p> <i>Observing</i> How do you feel? Are you comfortable? Do you feel stressed and more irritable? Why or why not? Describe the way you feel.</p> <p> <i>Comparing</i> Do you feel warmer after a few minutes? What is the room temperature? Does the air feel stale? Does the air feel moist?</p> <p> <i>Comparing</i> After each dismissal ask the youth how they feel.</p> <p> <i>Relating</i> Can you relate what you've learned? How might crowded conditions affect cavies?</p> <p> <i>Applying</i> What health problems might be created by the extra heat and moisture that result from crowded conditions?</p> <p>Note: Because moist warm conditions are ideal for microbial growth there is an increase in health problems, particularly digestive and respiratory problems.</p> <p> <i>Applying</i> What are some of the other problems that might be created by crowded conditions?</p> <p>Note: Cavies experience stress under very crowded conditions. This can result in poor growth performance, lower feed intake, lowered feed efficiency, poorer reproductive performance, more competition for resting space, food and water, increased fighting, and cannibalism.</p> <p>Sanitation also becomes a big management problem under crowded conditions.</p>

LESSON 3, ACTIVITY 2







BASIC HOUSING NEEDS FOR CAVIES

Activity 2: Bedding and Sanitation

The following activities demonstrate the principles of sanitation and the concepts of the bedding requirements for cavies. This activity teaches youth the principles of sanitation and the insulating and absorption properties of different bedding material. Even though the need for clean sanitary bedding for cavies and people differ, many of the same principles and concepts influence these needs.


Materials Needed:

<p><i>Bedding Activity</i></p> <ul style="list-style-type: none"> Metal bowl for each type of bedding *Straw, sawdust, wood chips and other types of bedding material Water Colander 	<p><i>Sanitation Activity</i></p> <ul style="list-style-type: none"> Loaf of bread Paper plates Plastic wrap Spray bottle of water
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Activity: What to do with Youth	Discussion Topics: What Questions to Ask Youth
<p>Bedding Activity to illustrate the insulating and absorption properties of different types of bedding material.</p> <p> Instruct the youth to measure equal amounts—about two quarts—of straw, sawdust, wood chips, etc., into chilled bowls.</p> <p>Have them hold their hands for a few minutes in each type of bedding material.</p> <p>Add one quart of water to each bowl of bedding material. After five minutes, have youth strain the bedding through a colander and collect the water. Measure the amount of water drained from the wet bedding material.</p> <p>Have each youth put his or her hands in each of the damp bedding materials for a minute or so.</p> <p><i>*Cedar shavings are toxic to cavies!</i></p>	<p> <i>Communicating</i></p> <p>Which bedding do you use for your animals?</p> <p> <i>Comparing</i></p> <p>Do you notice a difference in how warm your hand feels in each of the different types of bedding material?</p> <p> <i>Inferring</i></p> <p>Which bedding do you think will absorb the most water? Why?</p> <p> <i>Comparing</i></p> <p>Which bedding did absorb the most water?</p> <p> <i>Applying</i></p> <p>Which bedding would you use for your cavy? Why?</p>

Activity: What to do with Youth	Discussion Topics: What Questions to Ask Youth
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Sanitation Activity: To illustrate the principles of sanitation, perform the following activity.

 Place one piece of bread on a paper plate. Mist it with water and cover it with plastic wrap.

Momentarily place a separate piece of bread in the following locations before putting them on separate paper plates: kitchen counter top, bathroom floor, and the floor of an animal's cage. Mist each of these pieces of bread with water before covering them with plastic wrap.

Label each bread sample. Keep the bread at room temperature or warm environment for one week.

Compare the growth on each slice of bread.

 *Communicating*

What do you think the bread will look like next week?

 *Communicating*

Will the pieces look different?

 *Comparing*

After one week how are the slices of bread different? Which one has the most growth on it?

 *Inferring*

What was the source of the growth on the slices of bread?

 *Applying*

Why do you think one has more growth?

Note for the Leader/Teacher. In order to maintain safety while performing this activity, keep all of the bread samples on the same property from where they were taken. In addition, don't incubate bread samples in the kitchen or any other area where food is prepared or eaten.

LESSON 4

NUTRIENTS, FEEDING, AND THE IMPORTANCE OF QUALITY WATER

This Lesson Is About: How to determine what nutrients are in feeds by reading feed labels and how animals will be healthier and more content when clean, good tasting water is provided to them.

What Youth Will Learn:

About the Cavy:

- How to know what nutrients are contained in a feed
- How to determine the major ingredients in a feed
- How to determine if a feed contains medication
- Sources of feed contamination
- Importance of changing feed brands slowly
- Importance of storing feed correctly
- Water is an important nutrient in a cavy's diet
- The water needs of a cavy are affected by the environment
- Water quality changes with different sources

About Themselves:

- They are responsible for the well-being of their cavies.
- Both they and their cavies have basic food needs.
- Food for cavies and people needs to be stored properly and protected from contamination

Time Needed: 45 minutes

Life Skills: Decision making
Communication

WHAT DO I NEED TO KNOW?

NUTRIENTS AND FEED LABELS

Feeds mixed by a feed company must have a label that lists the ingredients, such as corn, barley, or soybean meal, that it contains. The actual amount of ingredients is not usually given, but the largest is usually listed first. Ingredients may be listed as general types, such as "grain products" or "animal protein products."

The label also must state the analysis of the feed, which explains what nutrients are in it. Nutrients are the building blocks contained in feeds for cavies and foods for humans. Nutrients are chemical substances required by animals in order to live, grow, have young, and make milk. Every living thing (human beings, animals, and plants) needs nutrients.

Cavies (and people) require the following nutrients:

- WATER carries other substances around in the body and helps regulate body temperature.
- CARBOHYDRATES furnish energy for moving/working, growing, and for generating heat.
- FATS are used to store energy.
- PROTEINS are used to build parts of the animal's body, like muscle or skin
- MINERALS make the animal's skeleton strong and regulate movement of water in the body.
- VITAMINS are only needed in very small amounts in the diet, but they are important because they "catalyze" or start necessary chemical reactions in the body.

The label on animal feed tells the ingredients and nutrients it contains. The actual amount of nutrients (and feed) required depends on the type of animal, its age, how fast it is growing, and its environment. Simple feedstuffs, such as: cereal grains, protein supplements, or roughages do not always have feed labels.

FEED CHANGES, STORAGE, AND CONTAMINANTS

Choosing feed of high quality and storing these feeds properly is important in order to produce a high quality product. Avoid feeds that are moldy or contain foreign material (pieces of wire, plastic, feces, or weeds).

Store feeds properly. Keep dry feeds in a clean, dry place, protected from birds, rodents, and pets. Birds and small animals (even your pet dog or cat) can spread diseases and parasites. Feeds that are allowed to get wet or stored in a damp place can become moldy. Some molds produce toxic substances ("mycotox-ins") that contaminate the feed and make it taste bad to your cavy. This can make your cavy sick. Many feeds cannot be stored for long periods of time. The fats and oils in the feed begin to spoil. Vitamin supplements can lose their effectiveness. Hay or silage can be stored for an entire winter, as long as it is protected from the weather and animal pests (e.g., mice, rats, birds).

Never feed grains that have been treated for use as seed. The chemicals used for treating seed grain are very dangerous to animals and to people. If it is suspected that there is a problem with feed, ask for help from a person who is knowledgeable in animal nutrition.

WATER AS A NUTRIENT

Many people don't think of water as a nutrient. In fact, going without water will harm cavies much sooner than going without food.

What does water do in your animal's body?

- Water is a delivery system. It carries other materials around in the body and helps get rid of waste products.
- Water dissolves other chemicals that are necessary for the body to work and allows chemical reactions to occur.
- Water cushions and lubricates joints. Imagine how scratchy your eyes would feel if there were no tears in them, or how hard it would be to swallow without the saliva in your mouth.
- Water is especially important in regulating body temperature. Animals cool themselves by the evaporation of water from their skin (sweating) or by using their mouths and noses (panting). Unlike dogs, panting in a cavy is a symptom of extreme over-heating and requires immediate attention.

Cavies should always have clean, good-tasting water to drink. An animal's need for water is greater during hot weather, during pregnancy, and when they are nursing. Even young animals who are still drinking milk need to have clean, fresh water to drink. A cavy's feed intake is closely related to its water intake. If young animals do not have access to water, they will not begin to eat solid food as quickly. Clean the water bottle often, including the inside of the spigot the water comes through.

In some areas, water may contain dissolved substances, such as nitrates or sulfates. Water can also carry infectious disease organisms (bacteria). Although you can't see these substances, they can be unhealthy for you and your animals. Usually, water that has been declared safe by the State or County Public Health Department will be suitable for animals.

The water at fairgrounds or shows may taste different and cavies may not drink water that tastes strange if they are not used to the flavor. If you think this might be a problem, begin to flavor your cavy's water with lemon juice two weeks before the show. Then you can add this to the water at the show to keep your animal drinking. A preferred option is to bring water from your home. Remember to add 125 mg. of Vitamin C to a 32-ounce water bottle each time you refill it. (See "Foods and Feeding" sections.)











LESSON 4, ACTIVITY 1

FEEDS AND FEEDING TO PROMOTE WELL-BEING

Activity 1: Water Quality

Materials Needed: Three to four containers of water (each should hold enough water for group to get a sample out of each), salt/ vinegar, lemon juice, molasses, sugar, disposable cups (3-4 per youth), 3 five-gallon buckets, measuring device (2–4 quart size), water, and pencil and paper for each youth.

Activity: What to do with Youth	Discussion Topics: What Questions to Ask Youth
<p><i>Directions:</i></p> <p> Prepare three or four containers of water. Add one of the following flavoring agents to each of the containers you prepare: salt (1/2 teaspoon per quart of water), sugar, molasses, vinegar, or lemon juice. Provide disposable cups for the youths to taste a sample of water from each container. Have each member taste each water sample. Have them write down how each sample tasted.</p> <p>Add lemon to each sample and have individuals taste.</p> <p> Calculate the amount of water that an average size cavy would drink. Determine the amount of liquid that an average youth drinks each day.</p> <p>In each of two different buckets, place the amount of water that they calculated.</p>	<p> <i>Observing</i> Did the water taste good or bad? Did it taste like minerals? Which one tasted the best?</p> <p> <i>Comparing</i> Does the water taste differently? Does it taste better or worse? Did the worst tasting sample taste better with lemon or sugar?</p> <p> <i>Inferring</i> Do you think your cavy could get used to the taste of the lemon?</p> <p> <i>Observing</i> Ask the youth to observe how much water their cavies drink, then report to the group.</p> <p> <i>Comparing</i> How much water does your cavy drink compared to another cavy?</p> <p> <i>Inferring</i> Do the different cavies have different water intake needs? How does this affect their well-being?</p>

POINTS FOR DISCUSSION

Usually the water that one is used to drinking tastes the best. Water from different sources may contain more minerals, chlorine, or sulfur than the water you are used to drinking.

Adding lemon to the water masks the taste of the water. In addition, if you add lemon flavor to unfamiliar water it brings a familiar taste to the new water and may keep your cavy drinking water that it would otherwise not drink. It is preferable to bring water from home.






When your cavy does not drink enough water, it becomes dehydrated and stressed, and can then become sick. Sick and stressed animals do not feed well and do not perform to their maximum capability.

LESSON 4, ACTIVITY 2

FEEDS AND FEEDING TTO PROMOTE WELL-BEING

Activity 2: Water Quality

Materials Needed: Feed labels from: cavy's food, pet's food (dog, cat, etc.), and the analysis information from a cereal box (have youth bring all three types), example of medicated feed tags

Activity: What to do with Youth	Discussion Topics: What Questions to Ask Youth
<p><i>Directions:</i></p> <p> Each person in the group should bring a feed label from their cavy food, another pet's food, and the analysis information from a cereal box. Have the youth compare the information on the labels.</p>	<p> <i>Observing</i></p> <p>Which ingredient is the major ingredient for each feed? What nutrients are analyzed in each feed?</p> <p> <i>Comparing</i></p> <p>Are the same nutrients analyzed across all feeds? How do the labels differ? How are they the same?</p> <p> <i>Applying</i></p> <p>Why is it important to read the labels provided with a feed?</p> <p> <i>Inferring</i></p> <p>If you do not follow the directions on a feed tag how will it affect the well-being of your cavy?</p>

POINTS FOR DISCUSSION

Usually the major ingredient for a feed is listed first. This is a requirement for human foods, but not for animals feeds.

Usually crude protein, fat, and fiber are measured in all feeds.

Labels differ according to the type of feed. For instance, mineral supplements list the major minerals and vitamins that are provided and not the amount of protein, fat, or fiber since most mineral supplements are not fed to provide these nutrients. On the other hand, feed grains provide the amount of protein, fat, and fiber, but not necessarily the amount of all minerals and vitamins.

Read feed labels in order to assure that your animal is receiving a balanced diet. You need to know what is in your feed to know if your animal's diet is balanced. Medicated feeds have specific directions for their use. They are only fed to the species indicated on the label. All label directions should be closely followed. Cavies need non-medicated feed.

LESSON 5

EDUCATING THE PUBLIC ABOUT CAVIES

This Lesson Is About:	How people’s feelings towards raising cavies are affected by their care in public settings.
What Youth Will Learn:	<i>About the Cavy:</i> <ul style="list-style-type: none">• The effect of their actions on public perception of cavies• Importance of creating a positive impression <i>About Themselves:</i> <ul style="list-style-type: none">• They are responsible for the well-being of their cavies.• They affect how people perceive cavy ownership and shows
Time Needed:	45 minutes
Life Skills:	Decision making Communication

WHAT DO I NEED TO KNOW?

People’s feelings toward showing cavies are affected by many things. A cavy owner plays an important part in how the public views animal ownership. Not everyone approves of raising cavies. Most people agree that animals should be given the best care possible. These personal beliefs were created by experiences people have had with animals in the past. Future observations and experiences will affect how people think about raising cavies.



Cavy exhibitors have a responsibility to make sure that people have good feelings about how animals are raised and shown. The public wants to make sure that cavies are treated well. They want to make sure that adequate water, feed, and comfort are provided. It is your job as a cavy exhibitor to meet people’s expectations.

Attitudes toward animal ownership can be greatly influenced by animal events such as the local fair. In addition to your cavy being on display, the way you raise and treat your cavy is also on display. For this reason, members should do everything they can to create a positive public feeling towards their cavies and themselves. An adequate supply of quality food, bedding, and water as well as proper animal handling practice both at home and at the show fosters positive impressions.

The exhibitor has access to a unique forum to educate the public. The local fair (animal barns in particular) attracts a diverse population of people whose knowledge of animal production practices varies greatly. Exhibitors can inform the public about safety and quality practices followed by today’s cavy owners. Educational displays and demonstrations are excellent ways to impart information to a public who would not otherwise obtain the information. Having youth teach people about cavies and animal showmanship allows them to play a positive role in informing the public and leads to positive public impressions toward cavy owners and youth showmanship programs.

LESSON 5, ACTIVITY 1

PLANNING EDUCATIONAL DISPLAYS

Activity: What to do with Youth	Discussion Topics: What Questions to Ask Youth
<p>In this activity, your group should decide on a topic for an educational display. Some possible topics are:</p> <ul style="list-style-type: none"> • animal handling • cavy behavior • assuring quality cavy care • breed identification • cavy health • cavy stress <p>The educational display you develop should stimulate thought, teach facts, or show a process. It may also result in action on the reader's part. The educational display could be a poster,* a tabletop display, a mobile, or a large display. Often displays have less than 60 seconds to get their messages across, so planning is important. Have your group choose a subject area for the display. Once the group has decided on the subject area, help the group select a title that will:</p> <ul style="list-style-type: none"> • identify the exhibit (tell the content) • be short and simple (4–5 short words) • attract attention (interest audience to continue reading) <p>Once a title has been chosen, construct an outline of the subject matter that the group would like to present.</p> <p>At this point, you may want to break the youth into small groups, each developing one or two aspects of the outline. When the subject matter that will be included in the display is developed, have the groups choose attention-grabbing techniques to display the information. Some attention-grabbing techniques are:</p> <ul style="list-style-type: none"> • actual objects • models • illustrations • motion • lighting • color • contrasts <p>Lettering in the display should be:</p> <ul style="list-style-type: none"> • consistent in style • horizontal • bold enough to read easily from a distance (consider line thickness as well as letter size) <p><small>*NOTE: This information can be used for creating an individual youth's educational poster. Group displays are made with more than one poster.</small></p>	<div style="margin-bottom: 20px;">  <p><i>Communicating</i></p> <p>What do you think the public should know about cavies? Of these topics, which one would you like to educate the public about?</p> </div> <div>  <p><i>Organizing</i></p> <p>What form of educational display should we make (e.g., poster,* tabletop display, mobile)?</p> <p>What should we title the display?</p> <p>What things about our topic do we want the public to know? (Helps group create an outline)</p> <p>What types of things should we use to grab the public's attention?</p> </div>

**Activity:
What to do with Youth**

**Discussion Topics:
What Questions to Ask Youth**

Letter Size for Visibility
(with good light, eyes, and color)

<i>Viewing Distance</i>	<i>Min. Letter size</i>	<i>Line Thickness</i>
10 feet	1/2 inch	3/32 inch
20 feet	3/4 inch	1/8 inch
30 feet	2 inches	5/16 inch

- When selecting colors to use in the display, remember that color can make any display into one that attracts and teaches.
- Use only two or three colors, with one being dominant.
- Neutral or soft colors are best for backgrounds (grays, light greens, light blues, pale yellows, white).
- Bright or intense colors are best for smaller areas or the center of interest (bright yellows, reds, oranges).
- Dominant colors are best for the lettering (black, dark blue).
- Combinations such as black on yellow or red on white are easier to read than those that are “complementary,” such as red on green, or yellow on violet.

When selecting material, keep the following suggestions in mind:

Backgrounds posterboard, cardboard, wallboard, plywood, pegboard, fabrics, corrugated paper.

Illustrations photos, cutouts, drawings, cartoons, objects.

Lettering use felt-tipped pens, speed-ball pens with wide points, brushes, stencils, cutout letters, or rubber stamps for lettering. Keep lettering simple, clear and well spaced. Mount cutout letters with a quick-drying glue.

Fasteners use casein glue, rubber cement, staples, tacks, masking tape, hot glue, or cellophane tape. Rubber cement is best for mounting photographs, paper, or thin cardboard and cutout letters. Casein glue is probably most convenient and economical.

Determine arrangement

- Strive for a simple, uncluttered effect.
- Lettering is usually dominant.
 - Read from left to right; top to bottom.
 - Lead eye to center of interest.

When the display is finished ask the youth how they feel about how the display turned out.

Material adapted from EM4573, *4-H Educational Display Guidelines*, Washington State University Extension.



Comparing

Do you think the display conveyed the information we set out to communicate?



Relating

Was our display effective and how can we improve it for the future?



Inferring

How does creating a display affect the public perceptions of the cavity project?

LESSON 6

*Appropriate for Advanced Cavy Members
(Intermediate and Senior members)*

ACTIVISTS AND TALKING TO THE NEWS MEDIA

This Lesson Is About:	How people’s feelings toward raising cavies are affected by care of cavies in public settings.
What Youth Will Learn:	<p><i>About the Cavy:</i></p> <ul style="list-style-type: none">• The effect of their actions on public perception of cavies• Importance of creating a positive impression• Importance of a well-informed spokesperson <p><i>About Themselves:</i></p> <ul style="list-style-type: none">• They are responsible for the well-being of their cavies• They affect how people feel about animal production
Time Needed:	15 minutes
Life Skills:	Decision making Communication

WHAT DO I NEED TO KNOW?

Human conflicts arise when a situation or condition exists in which someone or something is threatened.

Animal Welfare/Rights problems exist when people become aware that animals are handled (raised) in a way they do not like.

Animal Welfare/Rights problems become issues when two or more people or groups of people disagree about the scope, seriousness, or the appropriate solution to the problem. The position taken by a person on an issue is directly related to personal beliefs and values. Beliefs are ideas that a person believes are true, even though in reality they may not be true. Often a person’s beliefs are strongly related to his or her values. A value is the comparative worth a person places on something. Each individual has personal values that develop in response to past experiences. Values may involve money, beauty, prestige, or other things. Beliefs and values can help people make decisions and choices when the possible answers are not clearly right or wrong.

Opinions are based on logic, emotions, or philosophy. Opinions can be based on misinformation.

(The above background information is borrowed from: Alaska Model Science Curriculum, AK Department of Education, Juneau, AK.)

People referred to as animal activists often don't think it is right to raise or use cavy for showing or pleasure. These people may attend cavy events to protest against animal captivity. Clubs should plan ahead to handle situations such as these. Before the animal event takes place, appoint someone as a spokesperson to respond to animal activists. Conduct a meeting in advance of the cavy event. Invite all parents, fair management and employees, youth club advisors, and members. Also consider inviting your county Extension personnel. At this meeting establish a rule that only one person is authorized to speak on behalf of the event (e.g., fair or show). A backup spokesperson should also be chosen. These people should be even-tempered, knowledgeable, and should field questions from the media and any outspoken or confrontational animal activists.

Clubs should also consider appointing someone to monitor animal handling. This person should inspect housing areas for overcrowding, frequency of cage cleaning, amount of bedding, adequate food and water, as well as methods of handling.


An action/reaction plan should be in place for all members and parents in the event that picketers or protesters appear at the fair. Do not confront demonstrators. Animal rights activists want publicity. They get it by starting a confrontation. Getting into an argument or "shouting" match is what they want. Confronting them will not change their minds and will only draw more attention to their efforts. Calmness and tolerance are the most effective attitudes to take towards animal rights picketers or demonstrators. If animal activists badger or harass youth, monitors should call for the spokesperson to deal with the activists. If protesters are disrupting your activities or exhibition area, ask them to stop. If this does not work, request assistance from event officials, security, or call the police. Remember, no matter how annoying, the activists have a constitutional first amendment right to be on public property as long as they obey the law.

A reporter may want to ask a youth about his or her particular animal project. In this case the youth should respond freely. However, if the reporter wants to know about other youth projects or youth groups in general, the youth should suggest that the reporter talk to the show spokesperson. If you don't feel comfortable answering a question (i.e./ a hypothetical situation), tell the reporter that. Don't be evasive. Be as honest and forthcoming as possible, while still being in charge of the information you want to impart. Remember everything you say is fair game. Nothing is "off the record." An interview is not necessarily over because the reporter turns off the tape recorder, camera, or closes the notebook.



LESSON 6, ACTIVITY 1

ANIMAL ACTIVISTS AND TALKING TO THE MEDIA

Activity: What to do with Youth	Discussion Topics: What Questions to Ask Youth
<p>Directions</p> <p>There are six different fair board meeting role play cards. Copy and cut enough cards so each member in your group can have one. (More than one youth may have the same role.)</p> <p>Choose an animal welfare/ rights concern the group would like to use for the role play. You can use one from the list of concerns shown at the end of this lesson, or come up with your own.</p> <p>Review the facts describing the chosen concern with the group by doing the following:</p> <ol style="list-style-type: none"> 1. Divide the group into pairs, with each pair having one or two fact cards. 2. Instruct the pairs to describe a fact card to their partners. 3. Bring the groups together and ask each youth to share with the group what they think the fact card represents. <p>Randomly hand out the role play cards.</p> <p>Allow time for the youth to read the cards and ask many questions (privately to you). Youth should keep the information on the cards to themselves.</p> <p>Read or have one of the youth volunteers read the role play scenario description to the group.</p> <p>Begin the role play and continue for 20–30 minutes.</p> <p>As leader during the fair board meeting role play, you will take on the role as the fair board chairperson. Your role is to keep things moving, insure that everyone has an opportunity to share his or her point of view, and encourage the youth to answer the following questions:</p> <ol style="list-style-type: none"> a. How serious is the animal rights/ welfare concern? b. Should we really be concerned about it? c. What should we do? (Get advice from public on what action, if any should be taken.) <p>Note: It is helpful to take notes on flip chart paper so everyone can see that his or her point of view is represented.</p>	<p style="text-align: center;"> <i>Communicating</i></p> <p>Which concern would you like to discuss?</p>

**Activity:
What to do with Youth**

**Discussion Topics:
What Questions to Ask Youth**

The following strategies will stimulate discussion during the town meeting role play.

1. As the chairperson you may want to identify the specific concern the group is addressing and state the facts, again.
2. First, focus on the positive.
3. Have all sides state their interpretation of the concern, for example:
 - a. As an advocate of this position, how would you describe the problem?
 - b. As someone who is not worried, how would you describe the concern?
4. When youth make statements, ask questions like:
 - a. Can anyone add to that?
 - b. How does that make you feel?
 - c. How could you state that differently?

To bring closure to the fair board meeting role play, ask the group to give the chairperson clear direction on what action to take. Describe the importance of compromise.

Debrief from the role play by asking the following questions to direct the discussion. (Debriefing is when they explain how they felt about the role play.)

- a. How did you feel about your role?
- b. Did you think the roles described real points of view?
- c. Did any one opinion win? Why?
- d. How does your personal opinion compare with the one you role played?

Note: Depending on how responsive and involved the group is in the role play, the instructor may wish to do the role play again at the next group meeting.



Observing

Youth will be observing (exploring) the varying points of view surrounding the animal rights/welfare issue. In addition, they will be communicating their assigned points of view on the issue.



Relating

Youth will relate (reflect) their experiences in the role play by describing their feelings about their assigned roles.



Comparing

Youth will also reflect on their experiences by comparing their personal opinions to the roles that they played.



Apply

Youth will apply their understanding about issues by describing what makes a concern an issue.

ROLE PLAY SCENARIO

READ THIS BEFORE YOU BEGIN THE FAIR BOARD MEETING ROLE PLAY.

The fair board of your community (your instructor) has received complaints about the way cavies are treated at the local fair. The fair board has called an open meeting of community members (assigned roles) to find out what community members think about the concerns. Your goal for this meeting is to develop a plan of action addressing what to do about the concern.

You may choose:

Option 1

How to take action to improve this animal care problem.

Option 2

How to determine the seriousness of the concern.

LIST OF CONCERNS

- Cavies are often seen being roughly handled at the fair.
- Cavies at the fair are lying in cages with unsanitary bedding.
- The cavies seem crowded in cages.
- People who have animals at the fair have been involved in confrontations with animal activists. These confrontations have been televised.
- The local fair was shown on television. The reporter found some animals were not fed or watered regularly, and their bedding was not changed for days.

ROLE PLAY CARDS

Photocopy enough of these so you will have enough role play cards for the number of youths in your group. More than one person may play the same role, but try to have as many roles represented as possible.

CITIZEN A

Who are you?

You are an average citizen who has no background in cavy ownership.

Who do you blame?

You like to go to the fair and see the animals with your children. You are concerned that the cavies not be mistreated. You want your children to have a positive experience at the fair.

What should be done?

You feel the fair board should make sure the cavies are not being hurt. You are not an animal rights activist, but you think everything possible should be done to protect animals. You would like to learn more about how cavies are raised.

CITIZEN B

Who are you?

You are an animal rights activist. You don't think animals should be used for anything. Ideally, you would like to see all animals set free and allowed to live as they want and deserve.

Who do you blame?

You think the fair is taking advantage of the animals and using them to attract visitors and turn a profit. You also blame the producers of cavies who don't care about animals and are merely "factory farmers."

What should be done?

You think the fair should be closed to cavy shows. The only thing at the fair should be a carnival and domestic displays such as arts and crafts, or cooking.

CITIZEN C**Who are you?**

You are a cavy breeder and the past five generations of your family have been animal producers. You raise animals for showing, and have children who show at the fair.

Who do you blame?

You blame the fair's problems on poor management, supervision, and education.

What should be done?

You think all people showing at the fair should possess a basic knowledge of animal care and be tested on this knowledge. You also think the fair should organize some way to monitor cavy well-being.

CITIZEN D**Who are you?**

You are a member of the media. You don't have a lot of background with cavies but often cover local fairs. You have seen problems like the one being addressed at this meeting before.

Who do you blame?

You think it is okay to show cavies, but that animals are often mistreated, especially when at the fair. You wonder if they are also mistreated at home.

What should be done?

You feel someone should make sure the cavies are not being mistreated at the fair and that the parents and teachers should take a more active part in making sure the animals are not mistreated.

CITIZEN E**Who are you?**

You are a young person who raises and shows cavies. You have raised and shown cavies for two years.

Who do you blame?

You blame the fair's problems on the lack of direction from the fair's management. There aren't any written policies.

What should be done?

You think the fair board should have written policies and that someone should be responsible for carrying out these policies. You also feel that penalties should be imposed on people who don't follow the rules.

CITIZEN F**Who are you?**

You are a member of the community who has animals. You are experienced with cavies and have a deep resentment against animal rights people.

Who do you blame?

You haven't noticed any problems and blame animal activists and do-gooders for stirring up trouble where there is none.

What should be done?

You feel this meeting is unnecessary and that by holding the meeting, the fair board is giving in to the animal rights people.

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