Union County 4H

Turkey

Handbook

<u>150TM Turkey, Market</u>

At the Union County Fair the Market Turkey project consists of one market turkey. Turkeys are shown at about 15 weeks of age. Each exhibitor must follow the announced hatch-date. Hatch-dates are published each year. **NPIP papers with hatch-date must be turned in at the time of check-in at the fair.**

*Processing the turkey after the fair is your responsibility. Make plans ahead of time.

Which Came First— The Turkey or the Egg?

It really doesn't matter, because you can learn and have fun with the 4-H Poultry Project studying either the chicken or the egg.

Purpose

• Learn how to brood, feed, and care for turkeys.

• Learn responsibility by having a flock of your own.

• Develop business ability by having a business enterprise of your own.

• Learn how to keep and use records.

• Learn interesting things about poultry.

Advantages

• Ohio's climate is favorable for poultry production.

• Poultry are easier to handle than larger animals.

• Only a small area is required.

• You will gain valuable knowledge of poultry production, which will be helpful if you decide to become a commercial poultry producer.

• There is a very large poultry industry in Ohio and the United States that is always looking for knowledgeable individuals to employ.

• You can help provide food for your family or you can sell eggs and/or birds for income.

Choosing a project

• Identify your objective. Do you want: To have fun? To add to the family food supply? To make money? To explore a career? To have something different for show? To help keep a breed from becoming extinct?

• Determine the space and equipment needed.

• How much money can you invest?

• What are the city and county ordinances where you live? Are there any restrictions?

Poultry Production Option

Selecting your project birds

• For the Union County Fair you must start with day-old turkeys, known as poults.

• Buy from a reliable source. NPIP papers are required when you check in at the fair.

• Because you may want only several birds, go to a hatchery to pick them up or order your turkeys as part of Union County's order.

• A list of approved hatcheries is available from the Ohio Department of Agriculture. When purchasing chicks, purchase only from producers who participate in the National Poultry Improvement Plan (NPIP). This is a U.S. Department of Agriculture (USDA) program in which all breeders from NPIP flocks are tested for some of the important diseases of poultry. This assures you that the chicks you receive are not infected with diseases.

Turkeys

- Typically for a 4H turkey project, members usually start with a minimum of 6 poults.
- Turkeys are very susceptible to drafts and can become quite easily.
- If you are not careful and do not check your poults often, they can pile up, causing a higher mortality rate.

Breeds

Broad Breasted White. This variety was developed from the Broad Breasted Bronze. It is also a heavy meat-type variety and is an efficient converter of feed into meat.

Broad Breasted Bronze. This variety originated in the 1930s in the Pacific Northwest. It is characterized by a large, meaty breast. When mature, toms of this breed weigh from 50 to 70 pounds (approximately 23 to 32 kg).

White Holland. This variety also was developed for its meat-producing qualities, but it is not as large or as broad-breasted as the Broad Whites or Broad Breasted Bronze. Several strains are noted for their high egg production.

Bourbon Red. This is a very colorful breed with most of its body covered with rich, dark, mahogany-colored feathers. The tail feathers and the primary and secondary wing feathers are pure white.

Additional turkey breeds can be found in the Standard of Perfection

Getting Started

Preparation and Brooding

The term *brooding* refers to the period immediately after hatch when special care and attention must be given to poults to ensure health and survival.

The term *rearing* refers to the remainder of life after brooding until maturity.

Handling of day-old poults has a direct relationship on the life-time production of the bird. Effective management begins before the day-olds arrive.

The three factors to control are environment, feed and water.

Environment

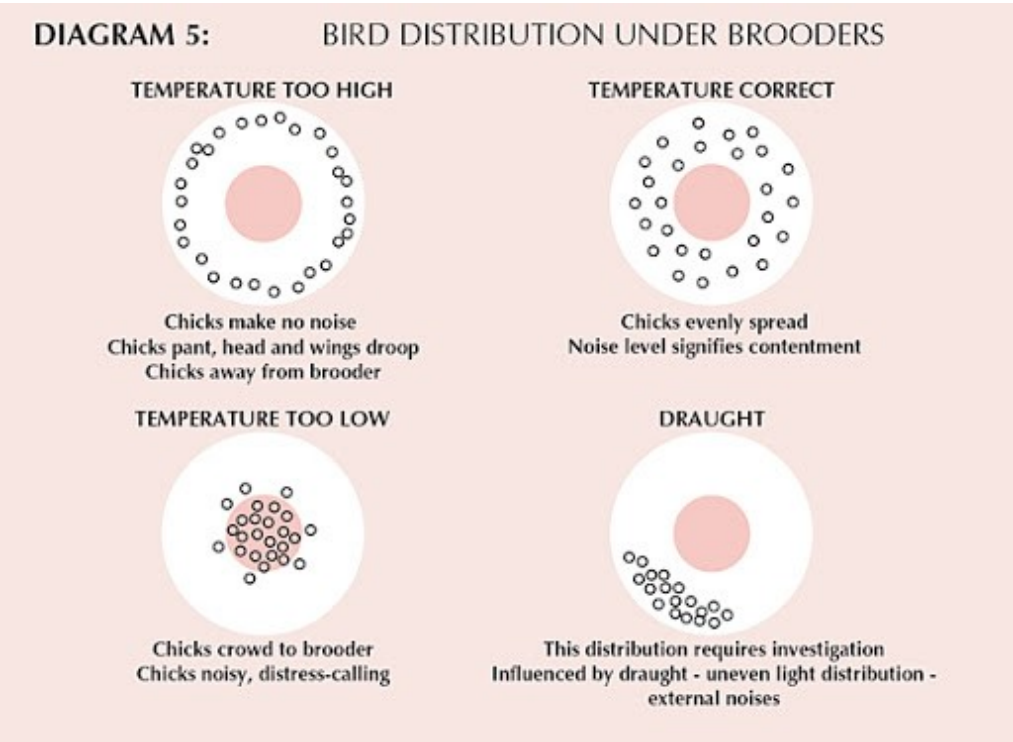
- Brooding houses should be isolated from other houses containing older birds. The producer should follow an “all-in, all-out” program, never mixing birds of different ages.
- Brooders must be set up in a draft-free environment.
- Heat lamps must be checked to ensure that they are working properly before the arrival of the poults. This is a routine check to be carried out daily.
- Ventilation should be adequate to remove undesirable gases such as ammonia and provide clean air but not so much to remove heat or create drafts.
- The brooding area should be heated to 95-98° before the arrival of the poults. Be careful to always check the temperature at the level of the poults.
- A hatched poult cannot maintain a proper body temperature without your help. Exposing a poult to cool temperatures in the first three weeks of life makes the bird uncomfortable and less likely to eat the feed and drink the water needed for a good start.
- Turkeys are very fragile as poults and will stack on top of each other if they are cold. This will result in the death of the ones underneath. Heated premises are definitely needed for brooding.
- Turn the heat on at least one day before the birds arrive. The temperature ½ " below the litter surface should be at least 80ºF. Even if the air is the correct temperature, the birds can be chilled by the cold floor under them.
- Pine shavings are the ideal bedding choice for brooding and rearing your poultry. Meat birds need at least 1” of clean fresh bedding for each week of age. A 3-week-old bird should be on3” of bedding.
- Bedding is used to conserve heat and must be leveled and compacted to prevent poult crowding.
- Bedding should not contain too much dust as it can cause your birds to have breathing problems.
- Cedar and hard-Wood chips should not be used as it will stain your birds.
- It is important to keep your bedding clean and dry at all times. Dirty bedding can cause health problems for your birds.
- Turkeys are prone to breast blisters if the bedding is wet or if it is not thick enough to protect the breast.

- Always remove any wet or caked bedding and replace it with dry shavings.
- The following chart shows the average temperatures for brooding poults as they mature week by week.

Age of Poults (weeks)	Temperature
1	95°
2	90°
3	85°
4	80°
5	75°
6	70°

Judging Bird Comfort

- The behavior and sounds of the poults will indicate their comfort level. Comfortable birds will form a circle under the lamp and make soft "cheeping" noises; cold birds will huddle and pile, and make sharp noises. If birds are too hot, they will crowd as far from the lamps as possible. Some birds will pant if the temperature is too high. Your birds will do a better job than a thermometer of telling you if they are comfortable. The diagrams below show how birds will move away or towards the heat lamp if they are hot or cold.



Brooding Guide

Age	Floor Space	Feeder Space	Waterer Space	Ventilation room temp.	Management Practices
1st week	1 sq ft per poult	2 linear inches per poult	Two 1-gallon waterers per 25 poults	Keep air fresh. Ventilate moderately. 70-100 degrees F	Place waterers near edge of brooder. Dip beaks in water when placed in brooder. Sprinkle feed on paper towels for 1st day. Fill feeders full.
4-8 weeks	2 sq ft per young turkey	2 linear inches per turkey	Two 3-gallon waterers per 25 turkeys	Increase ventilation to keep room cool and chicks comfortable. 70-90 degrees F	Keep area around waterers dry
9-15 weeks	8 sq ft per tukey	6 linear inches per turkey	Two 5-gallon waterers per 25 turkeys	Same 70-80 degrees F	Keep bedding dry. Remove wet areas and replace with dry.

- Feeder should always be hung so the feed tray is even with the birds back.
- Raise the waterers as the turkeys grow.
- Turkeys always grow to fit the space, more space=bigger birds

Feed and Water

- Fresh food and water should be available on arrival of the day-old poults.
- Use chick waterers, not open trays and do not place them directly under the light source.
- Fresh water should be available at all times. The waterers need to be cleaned on a routine basis.
- It is helpful to dip the poult's beaks into the water when you first place them into the brooder ring. Most turkeys will not learn to drink unless you teach them.
- Feed should be provided continuously. Never restrict feed during the brooding stage of turkey development.
- Water is the most important nutrient you can provide for your birds. If the water is not clean, your birds may not drink enough thus limiting their feed intake and their growth rate.

Guidelines for Feeding Your Turkeys

- **Begin** feeding your turkey poults a balanced turkey starter ration of at least 26-28% protein.
- Make sure they have feed at all times.
- Because turkeys are fast-growing, protein requirements are higher for a longer period of time.
- Protein requirements need to be higher when your turkeys start out and will decrease as they mature.
- You may choose to switch your birds to a grower-finisher before the show.
- This adds some "finish" to the bird. This can be done at your discretion anywhere from 2-4 weeks before the show.
- The starter helps build a strong skeletal system and the grower-finisher helps put the meat on the bird.
- Make sure your flock has continuous light so they can see the waterer and feeder at night.

Guidelines for Feeding Your Turkeys

Proteins

- Protein is a nutrient that must be present in adequate amounts in poultry food.
- Proteins are broken down into amino acids during the digestive process.
- Amino acids are classified as "essential" or "nonessential."
- The "essential" amino acids are those that cannot be produced in sufficient quantity in digestion to meet a bird's nutritive requirements. They must be supplied in the diet.
- Since most protein sources individually will not supply all essential amino acids, it is common to use combinations of materials containing protein.

- Common protein sources include meat meal, fishmeal, soybean meal, alfalfa meal, and corn gluten meal.
- All feed manufacturers are required to list the percentage of protein contained in their feed on a tag attached to the bag.
- Always check the feed you buy to ensure it has the required protein content.
- The amount of protein required in the ration varies by species, and in some cases, changes as the birds grow.
- Begin feeding your day-old turkey poults a turkey starter ration.
- Protein requirements need to be higher when your poults start out and will decrease as they mature.
- Turkey rations are higher in protein than they are for fancy poultry due to their quick rate of growth.
- A typical turkey starter feed should be between 26-28%.
- Poults can be fed starter for as long as you wish.
- Some growers like to switch their turkeys to a grower-finisher to add a little "finish" before processing.
- Gower-finisher feeds are typically 20-22%.
- The starter helps build a strong skeletal system and the grower-finisher helps put the meat on the bird.
- Since turkeys are grown for size and are shown at approximately 15 weeks of age, it is important to have a light on at all times so that your flock can eat and drink during the night.

Carbohydrates and Fats

- Both carbohydrates and fats serve as sources of energy for the birds.
- Most grains supply carbohydrates in large amounts but do not contain enough protein, minerals, or vitamins in amounts or quality to produce strong, vigorous birds.
- Carbohydrates also are found in other ingredients of vegetable origin, such as soybean meal. The most common carbohydrate source in typical poultry diets is corn.
- Fats are found in limited amounts in grains, and to a greater extent in some other feedstuffs such as meat or fish meals as well as in pure form.
- Usually, when fats must be added to poultry diets they are added as either vegetable oils or tallow (rendered animal fat).

Minerals

- Minerals are essential inorganic elements, and unless provided in sufficient supply, both egg production and hatchability may drop.
- Grains, their by-products, and other vegetable feed stuffs are low in minerals and must be supplemented with ingredients of higher mineral content. In nearly all poultry diets, a trace mineral premix is added to meet the birds' mineral requirements.

Vitamins

- Vitamins are required in small amounts for normal health, growth, and reproduction.
- Vitamins essential for viability and growth of chicks include among others Vitamins A, B12, D, riboflavin, and pantothenic acid. As with minerals, a vitamin premix is added to nearly all poultry diets to meet basic needs.

Rations

- Commercially mixed feeds usually are the best way to make sure poultry receive a proper balanced diet. Because turkey requirements change with age and productive status, feed names typically reflect the age and production level of the birds. For example, young turkeys from hatch to about 10-12 weeks of age should receive “starter” feeds.
- Birds being raised for meat should be fed a diet that is specifically formulated for meat birds. Scratch is not a balanced feed. Because it usually is cracked corn and wheat, consider it a supplement.
- The majority of turkey feed on a daily basis must be a prepared ration.
- Today, almost all feed is available in crumble or pellet form. This is the ground feed (formerly called mash) that is formed into a pellet, and sometimes crushed into a crumble.
- It is not advisable, and usually not successful, for 4-H members to mix their own feed. Poultry require additional sources of grains and protein because their diets require vitamin and trace mineral premixes. You also must own a grinder and mixer to mix your own feed. If you wish to mix your own poultry rations, visit with your local Extension faculty or the OSU Department of Animal Sciences.

Medicated feeds

- Most starter feeds have a coccidiostat added to the poultry ration to prevent coccidiosis.
- This additive adds little to the cost when you consider the amount of protection it provides.
- Medicated feeds are developed for young poults, so keep adult chickens away from these feeds. Also, do not give medicated feeds to laying chickens.
- Some companies mix non-medicated feeds. If you choose these feeds, you can expect a higher mortality (death rate) in your flock.
- Always follow the manufacturer’s recommendations for proper use of medicated feeds.

Diseases

- It is better to prevent rather than try to cure poultry diseases.
- You can prevent nearly all poultry diseases by following a strict sanitation, feeding, and management program.

- Always remove sick birds from the flock and give them special attention or kill them. If you suspect a disease outbreak, check with a local veterinarian.

Flock Management

- Raising turkeys and chickens together may lead to problems with sinusitis and blackhead.
- Never raise turkey poults on bedding that has been used for chickens.
- Clean and disinfect turkey areas before housing your birds as they are sensitive to disease.
- Chickens can carry organisms that do not may them ill but can be fatal to turkeys.

Parasites

- The most common poultry parasites are lice and mites.
- Feed stores stock insecticide dusting powders that are effective in reducing or eliminating the louse and mite problem. Check with your local Extension faculty for a list of insecticides approved for use on birds, roosts, and cages.

Selecting, Preparing and Showing Turkeys

- Examine all birds for defects that could cause them to be downgraded. General defects can include cuts and tears, broken or dislocated bones, bruises, crooked keel bone, deformed legs or wings, breast blisters or external parasite damage.
- Turkeys can bruise easily especially on the wing, breast or leg.
- When making your final decision on which turkey to show there are several things to consider.
    - Confirmation: The shape of the turkeys breast. It should be long, wideand carry back as far as possible on the keel bone. The closer the breast is to the shape of a brick, the better the breast is.
    - Fleshing: Refers to the amount of meat or muscle. The muscle needsto be firm with a small layer of fat called finish.
- Turkeys do not weigh in at the Union County Fair.
- After selecting your bird, make sure you give them a beauty bath.
    - Always sponge or rub the bird with the feathers, not against them.
    - Rinse the bird completely after shampooing, removing any residue.
    - After rinsing, remove extra water from the bird with a towel andallow the bird to dry.
    - Turkeys can be difficult to wash so keep them as clean as possible asthey mature.
- Before the show, spot clean or rewash your birds, depending on how clean they are. Check the shanks and feet as well. The judge likes clean turkeys!

Turkey Showmanship

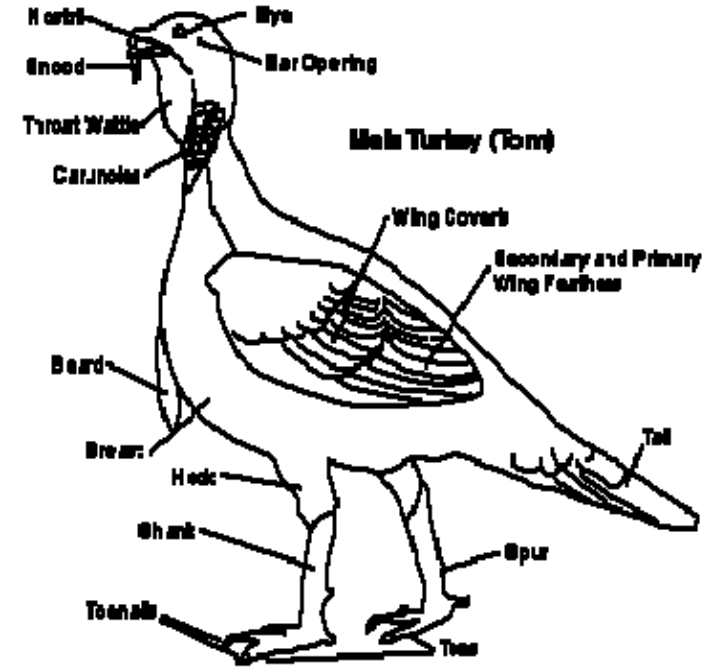
- Always take clean birds into the show arena for showmanship.
- When showing your birds, be proud of a job well done. Demonstrate to the judge all that you have learned.
- Have Fun!

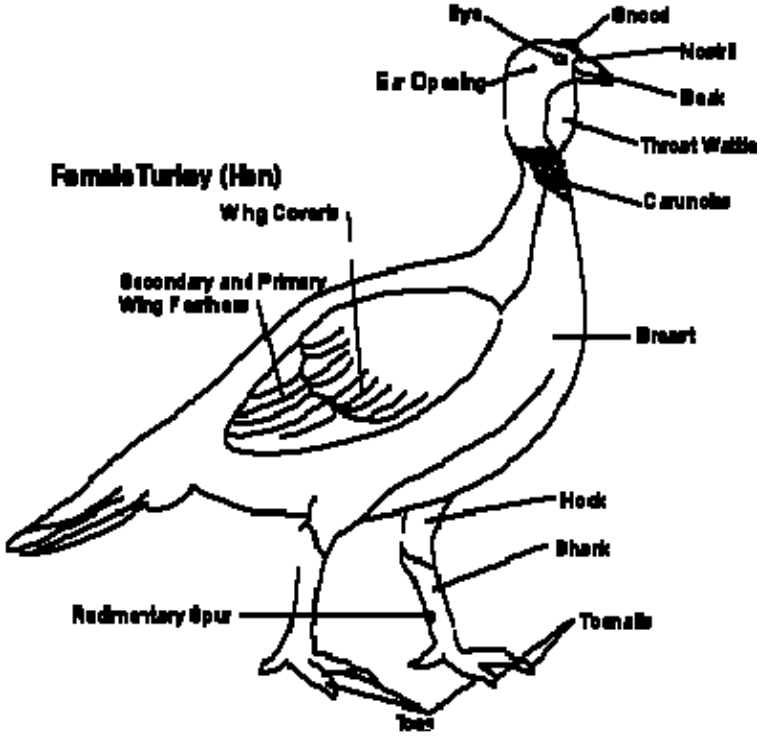
    - **At the end of the fair it is your responsibility to have your birds processed. Make arrangements for processing well in advance. Ask your advisor for names and locations of processors.**
    - **If you sell your birds at the livestock auction you must deliver them to the buyer.**

Biosecurity

- A good sanitation program is essential to a successful 4-H poultry project.
- Thoroughly clean and disinfect the place in which the turkeys are to be brooded at least 1 week before the ducklings arrive.
- Remove all litter and manure from the previous brood.
- Scrape or sweep bits of manure and other debris from the sidewalls and floor.
- Sweep the dust from the sidewalls and ceiling. This is important because one tiny bit of manure can harbor millions of disease-causing organisms for months.
- Thoroughly wash the brooding area with water and a good detergent. After the area has dried, disinfect the area with an approved disinfectant (ask your local Extension faculty for advice).
- Thoroughly wash and rinse all waterers and feeders and set them in the sun. The sun is one of the best disinfectants available, but it must strike all surfaces. Turn the equipment for complete coverage.
- Place a pan of disinfectant near the door and always step in it when entering or leaving the turkey brooding area.
- During the brooding period, one of the messiest areas in the house will be around the waterers. Lessen this problem by placing the waterers on raised platforms. Such platforms can be made using 2 x 4s. Cut four pieces of 2 x 4-inch boards into 30-inch lengths. Place the pieces on edge to form a square and nail the corners. This makes a platform 4 inches high and 30 by 30 inches square. Cover with 1-inch hardware cloth or welded wire fabric.
- When bringing in new adult birds or returning birds to your flock after showing, it is a good idea to quarantine them for about 2 weeks prior to returning them to the flock.
- Turkeys that appear healthy may be carrying disease organisms from contact with other birds.
- A quarantine area consists of several small pens that are a distance from your main flock. Care for the quarantined birds after caring for the rest of your flock. If the birds in quarantine are infected, they will show signs of disease in 2 to 3 weeks.

Parts of a Turkey





Glossary of Terms

Abdomen—The underpart of the body from the point of the keel to the tail.

Amino Acids—Amino acids are building blocks of protein. For example, if a brick wall represented protein, each brick in the wall would be an amino acid.

Anticoccidial—A drug to prevent coccidiosis.

Axial feather—The short feather growing between the primaries and secondaries of the wing.

Bantam—A diminutive fowl—some being distinct breeds, others being miniatures of a large breed or variety, approximately one-fourth to one- fifth their size. Usually ornamental in character, some breeds have considerable merit as egg producers, a few as meat fowl.

Breast—The entire forward part of the body of live fowls from the juncture of the neck and body down to the rear point of the keel bone.

Brood—1. A distinct group or birds, usually of the same age, placed as a group. 2. The act of rearing chicks using heat and other management options.

Cock—A male fowl 1 year old or more. Cockerel—A male fowl less than 1 year old.

Condition—The state of a fowl with regard to health, including cleanliness and brightness of plumage, head parts, legs, and feet.

Coverts—Those feathers that cover the base of the primary and secondary wing and main tail feathers.

Dubbed/dubbing—A term used to describe the close trimming of the comb, wattles, and earlobes of the male.

Earlobes—The fleshy patch of bare skin below and behind the ears, varying in size and shape with color, either red, white, blue or purple, according to the breed.

Enamel-white—The satinlike white surface color found in the earlobes of Mediterranean breeds.

Faking—A self-evident attempt to remove or conceal a disqualification or serious defect to create merit which does not naturally exist; results in disqualification.

Hock—The joint between the lower thigh and shank, sometimes incorrectly referred to as the knee.

Keel—In chickens and turkeys as well as most birds, large bony protrusion on the midline of the breastbone; it resembles the keel of a boat, both as to shape and position.

Keelbone—The large bony protrusion on the midline of the breastbone or sternum.

Line-breeding—Mating of distantly related individual birds.

Plumage—The collective feather covering of the entire body of a fowl, including the head, neck, wings, tail, and, where specified for breed, the shanks and toes.

Poult—The young of the domestic turkey before the sex can be determined.

Poultry—A general term applied to all domesticated fowl, including chickens, turkeys, and waterfowl.

Primary feathers—The long, stiff feathers of the wing, growing from the last segment of the wing. When at rest, these feathers are folded under and are completely hidden by the secondaries when the wing is properly folded; also known as "primary flight feathers." These feathers are responsible for power during flight.

Pubic bones—The thin, terminal portion of the hip bones that form part of the pelvis. Considered important in evaluating productivity of the female fowl.

Pullet—For exhibition purposes, a female fowl less than 1 year old.

Secondary feathers—The long, stiff wing feathers growing from the middle wing segment. When the wing is folded, the exposed secondaries form a triangular area known as the "wing bay." These "secondary flight feathers" are responsible for lift during flight.

Shank—The portion of the leg below the hock, exclusive of the foot and toes; the metatarsus.

Spur—A stiff, horny projection from the rear inner side of the shanks, rounded or pointed according to age, prominent in the male fowl, may be present in female fowl, increasing greatly in size with age.

Stern—The rear underpart of a fowl extending from the rear end of the keel bone to the ends of the pubic bones.

Sternum—The breastbone to which the ribs and keel are attached.

Strain—Fowl of any breed or variety that have been line-bred for a number of years and that reproduce uniform characteristics with marked regularity.

Stub—A short section of the stem of a feather, sometimes with a few short barbs attached. A disqualification when found on shanks or between the toes of clean-legged breeds

Uropygial gland—The oil or "preen" gland, the only skin gland in birds. A large gland opening on the back at the base of the tail feathers, secreting an oily fluid which the fowl applies to its feathers during preening. It is especially developed in waterfowl because the oil helps make the plumage shed water.

Variety—A subdivision of a breed, distinguished either by color, color and pattern, or comb.

Wattles—The thin, hanging growths of flesh at either side of the base of the beak and upper throat; usually much larger and longer in males than in females. Usually red in color, but purple in Sumatras and Birchen, and brown in Red Modern Games and Silkies. Should be fine and soft in texture, slightly concave in surface, regular in outline, and uniform in size.