# Junior
# 4-H Horse Project Book
## (6th Year Junior)

Name: _____Birthdate: _____

Address:_____

Town: _____ State: _____ Zip Code: _____

Name of 4-H Club_____

Club Leader: _____

Years in 4-H: _____ Years in Horse Project: _____


Targeting Life Skills Model

New York State 4-H Horse Program

# 4-H Motto

To Make the Best BETTER

## 4-H PLEDGE

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.

# My 4-H Story

Activities you did with your club

Different programs/clinics you attended

What you and your horse learned this year

Fun things you did

What part of your project you liked best

What you gained out of being in the 4-H program

# Activities

Choose 4 of the activities to complete. Please attach the pages to the back of the Project Book.

1. In your own words, write a paragraph of 150 words that describes what to observe in horses should poisoning occur. The paragraph needs to be specific enough that it could be given to someone unfamiliar with horses and poisonous plants
2. Choose one legend or mythology that mentions of horses in it and develop a poster or presentation that tells the complete story
3. Take a picture of your horse's feed. Include a picture in the project book and identify what's in it and what percentage does each part represent.
4. Make a first aid kit or update your current first aid kit in your barn. Take a picture of the kit to put in your project book and a list of everything that is included in the kit.

5. Teach someone who does not know how to mount a horse

6. Using three horse pictures you find in magazines and make a list of the positive conformational traits of the horses in the pictures. Once you have completed the positive list, then compile a list of bad conformational traits of the horses in the pictures. Make sure you identify the positive traits first. Based on your evaluation of the structure of each horse, make your best prediction on how that horse might move.

7. Develop a poster on the normal stages of parturition and post-foaling care for the mare and foal.

## IMMUNIZATION

| Date | Vaccination |
|---|---|
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## PARASITIC CONTROL

| Date | Product |
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## HOOF CARE

| Date | Details |
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## DENTAL CARE

| Date | Details |
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## PHYSICAL & MEDICAL RECORD

| Date | Details |
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## NOTES

| Date | Details |
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# Equipment Inventory

| Item | Purchase price | Expected to last how many years? | Equipment cost per year* |
|---|---|---|---|
| Saddles | | | |
| Bridles | | | |
| Saddle blanket | | | |
| Saddle pads | | | |
| Halter | | | |
| Lead rope | | | |
| Lunge line | | | |
| Tie down | | | |
| Running martingale | | | |
| Bits | | | |
| Tail set | | | |
| Harness | | | |
| Winter blanket | | | |
| Cooler | | | |
| Hoof pick | | | |
| Hoof knife | | | |
| Hoof nippers | | | |
| Hoof rasp | | | |
| Brush | | | |
| Currycomb | | | |
| Mane-tail comb | | | |
| Sweat scraper | | | |
| Shedding blade | | | |
| Sponge | | | |
| Leg wraps | | | |
| Bucket | | | |
| Feed tub | | | |
| Clippers | | | |
| Hay net | | | |
| Girth | | | |
| Whip | | | |
| Tail braces | | | |
| Tail switches | | | |
| False tails | | | |
| Splint boots | | | |
| Quarter boots | | | |
| Ribbons | | | |
| Cart | | | |
| Trailer | | | |
| Fly masks | | | |
| Supplies: Shampoo, conditioner, detangler, fly spray, hoof polish, etc. | | | |
| Other: | | | |
| | | **Total equipment cost this year $** | |

* Divide purchase price by the number of years the item is expected to last.

# Hay is for Horses

Hay is the most important part of the horse's diet and makes up 50-100% of the horse's diet. It is the best source of energy, protein, vitamins, minerals and, most importantly, fiber that is necessary for normal gut function in the horse. The quality of hay varies considerably between different loads of hay.

Hay is the bulk of the horse's diet. Grass or alfalfa hays, or a combination of the two, are good sources of roughage. Grass hay is generally higher in fiber and dry matter than alfalfa, but alfalfa may be higher in protein, energy, vitamins and calcium. Hay can be long-stemmed in hay bales. Many horse owners feed grass hay or straight alfalfa or a combination of grass and alfalfa to their horses. Grasses commonly used as hay are brome, orchard, and timothy. Long stem hay is the traditional baled hay. It is cut, cured, and baled. It can be bundled in 30- to 80-pound square bales or large, round or long square bales that can weigh tons. Horse hay needs to be of good quality.

Horse hay should be bright green, leafy and fine textured, with a fresh, pleasant aroma. Musty hay or other indications of mold or heating, and dust, weeds and other foreign material in hay can be unhealthy for an animal. Color is an indicator of quality and nutrient content; good hay is a bright green. Most nutrients in hay are in the leaves, and leafy hay is a valuable source of food. Leafiness is influenced by the kind of hay, its maturity when cut, the weather conditions while growing and curing the hay, and curing procedures of the hay. Dust is objectionable in any feed for horses. It not only reduces the taste of the hay, it also aggravates respiratory problems. Avoid feeding moldy or dusty hay. This type of hay is unacceptable for horses.

**Quality of hay** can be measured in terms of qualitative and quantitative characteristics. Qualitative characteristics are most often visual appraisals. Quantitative characteristics are actual chemical measures of various nutrients and other components influencing nutrient amount and digestibility.

### Visual Measures

Two primary factors that influence forage quality are nutrient concentration and nutrient digestibility. Both of these are heavily influenced by the stage of maturity of the forage plant. Most of the highly digestible nutrients in forages are present in the leafy part of the forage. Less digestible components are present in the stem. As a plant matures the stems thicken and the amount of leaves decrease. Therefore, the nutrient rich and highly digestible proportions of the plant decrease with age, while the less digestible and less nutrient rich part of the plant increase. The ratio of leaves to stems provides a simple visual measure of maturity that can be used to estimate digestibility and nutrient content when comparing different loads of hay. The degree of maturity can also be estimated by the appearance of the seed heads on grasses and flowers on legumes. When a plant becomes fully mature, its seed head/flower will be in full bloom. So you do not want hays with full seed heads.

These qualitative methods provide some estimate of maturity that is useful for making comparisons between different loads of hay. However, they do not provide any information regarding nutrient concentration. Therefore, the combination of visual and laboratory analysis will result in selecting hay that meets the nutrient needs of your horse. Qualitative measures may be used initially to narrow down what hay to buy. But quantitative (analysis) measures should be used to make your final decision.

### Quantitative measures

The first step to having a hay sample analyzed by a forage testing lab (quantitative measure) is to obtain a representative sample. To properly sample hay, a core sampler should be used (figure 1). Core samplers can be purchased at most feed and farm supply stores. Several bales (10-20) should be sampled and then pooled for final analysis. The amount of forage sent to the laboratory for actual analysis is approximately one pound. It is important to choose a certified forage laboratory. Hay/forage testing labs can be found by calling your County Extension Offices. The cost for analysis is ranges from $18 to $40.00.

## Requirements

The hay that you buy should meet your horse's requirements. Table 1 lists a range of crude protein and ADF values suitable for meeting the nutrient requirements of various classes of horses. Table 2 lists the range of Relative Feeding Values (RFV) that can also be used determine the nutrient requirements for specific classes of horse.

When buying hay, look at nutrient content and digestibility of forages using both qualitative and quantitative techniques enables the horse owner to select the best value hay related to cost and nutrient requirements.

| Table 1. Crude protein, acid detergent fiber and neutral detergent fiber requirements for various feeding classes of horses (expressed on a 100% dry matter basis)**Class** | **% Crude Protein** | **% Acid Detergent Fiber** | **% Neutral Detergent Fiber** |
|---|---|---|---|
| Maintenance | 10 | 37-40 | 50-65 |
| Breeding Stallion | 10 | 37-40 | 50-65 |
| Performance | 10-12 | 30-37 | 40-60 |
| Broodmare | 12-18 | 30-37 | 40-60 |
| Growing Horse | 14-18 | 30-35 | 40-5 |

| Table 2. Relative feeding Value (RFV) ranges for different feeding classes of horse: RFV= [(Digestible Dry Matter X Dry Matter intake) / 1.29]**Feeding Class** | **Relative Feeding Value (RFV)** |
|---|---|
| Maintenance | 83 - 112 |
| Breeding Stallion | 83 -112 |
| Performance | 93 - 150 |
| Broodmare | 115 -152 |
| Growing Horse | 115-152 |

# Poisonous Plants

What plants are poisonous to horses?

Poisonous plants may be found in both the hay or pasture as wildflowers or weeds. Poisonous plants can also be cultivated plants that were never intended for horse feed or they could be trees near where horses are kept. The toxicity of poisonous plants ranges from slightly toxic to extremely toxic. Of course, the amount consumed also alters the toxicity.

Typical signs of ingesting poisonous plants include lack of coordination, trembling, hypersensitivity, weakness, labored breathing, heart irregularities, diarrhea and death. Some common poisonous plants and their effects on the horse are listed in Table 1. For more complete details about poisonous plants, one of the best sources is the USDA/ARS Poisonous Plant Research Laboratory website listed under Internet Resources.

**FIRST AID**

If a horse owner suspects a horse has eaten a poisonous plant, the first thing to do is to prevent further exposure to the plant or contaminated feed. Since many plant toxins affect behavior and coordination, caution must be exercised to avoid further injury to the horse and to avoid human injury.

A veterinarian should be called as soon as possible, since some medications can counteract the effects of the toxin. Also, if the consumption was very recent, the veterinarian may be able to evacuate a large amount of the plant from the digestive tract before the toxic effects become severe. Having a sample of the assumed poisonous plant will also be helpful in the diagnosis and treatment.

**PREVENTION**

The best way to deal with poisonous plants is prevention. Poisonous plants are not harmful until a horse eats them. In a pasture, a horse often eats poisonous plants when there is nothing else to eat. The best way to protect a horse from eating poisonous plants is by following management practices such as:

- Providing sufficient high quality forage;
- Recognizing poisonous plants;
- Managing pastures to prevent overgrazing and control weeds;
- Being knowledgeable and particular about the plants growing on your property; and
- Taking time to inspect the hay for weeds (or to buy certified weed-free hay).

**OTHER PLANTS**

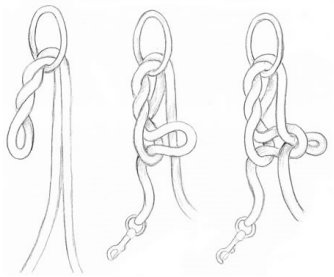
Some plants are not poisonous, but they are mechanically injurious. These plants can cause discomfort or pain to a horse. Plants that can cause mechanical injury to a horse include such plants as sand burrs, thistles, foxtail, cactus, goat head, stinging nettle and cockle burrs. Most of these plants cause sores in the mouth. These sores cause the horse to slobber, and have difficulty eating. Some can cause skin irritations or eye injury.

## On the next page choose 10 poisonous plants from this list; find a picture of the plant and glue it to the paper and identify it and give the signs/effects of your horse eating this plant

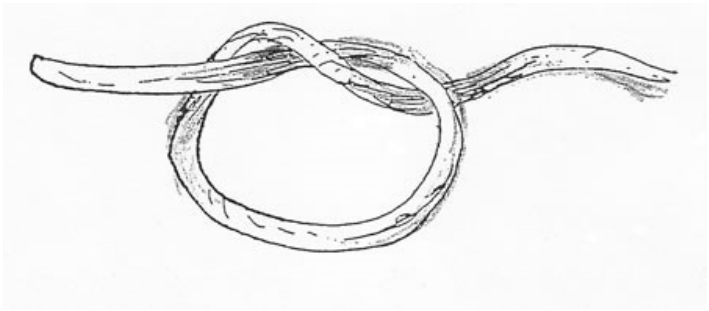
| | | | |
|---|---|---|---|
| Yew | Elderberry | Foxglove | Larkspur |
| Milkweed | Nightshade | Monkshood | Oleander |
| Polkweed | Yellowstar Thistle | Water Hemlock | Braken Fern |
| Alsike clover | Azalea | Black Walnut | Choke Cherry |
| Blue Flax | Tall Fescue | Horse Chesnut | Horse Tail |

# Poisonous Plants

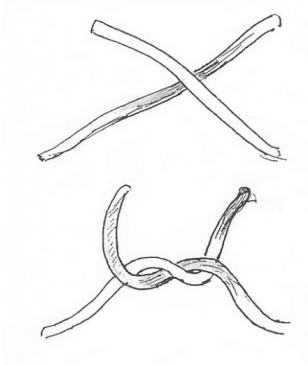
# Safe Knots for Tying Horses



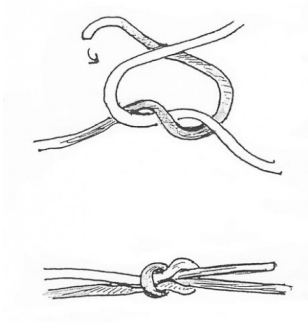
There are several knots that every horseman should know how to tie—that are useful when working with horses. There are times you need a knot that will never work loose, and other times you need one that can be untied easily and quickly, even if the horse has pulled back on the rope. Sometimes you need a slipknot, and other times you want a knot that will never slip or tighten up. For your own safety and the safety of your horse, know how to tie the right kind of knot for each situation. The easiest way to figure out how to make a certain knot is to practice; use a halter rope, or even a piece of baling twine or a shoelace, and practice making the knots. It's often easiest to envision the steps and figure them out if you are using a rope or a twine to try to make the actual knot.



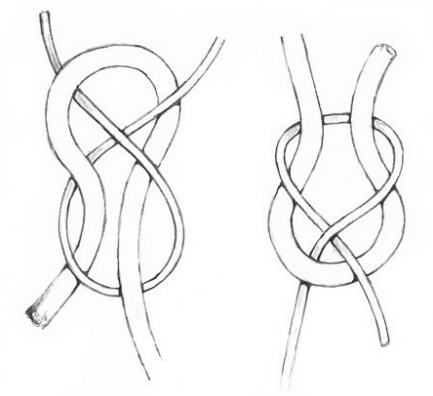
**OVERHAND KNOT** – This is the simplest knot of all—the one you make first when tying your shoes (before you do the bow). The overhand knot is sometimes the first step in forming a more complex knot.



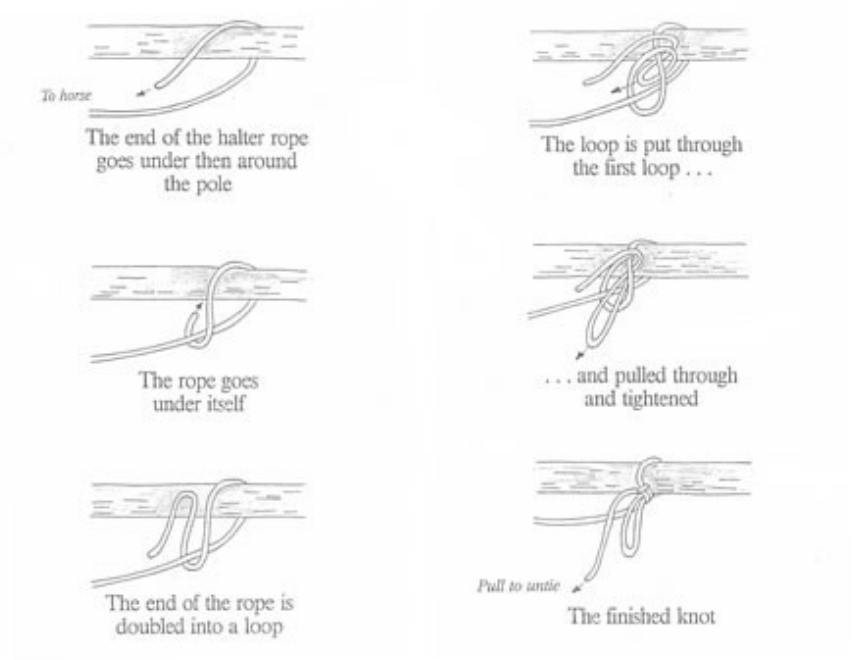
**SQUARE KNOT** – This is often the best knot to use when tying two ropes or twines together, when you don't want the knot to slip or come undone—as when tying a broken rope back together or tying a rope or piece of baling twine around a gate and gate post to keep the gate shut. A square knot is very simple: two overhand knots, one on top of the other, but the second one in reverse direction. Before it is pulled tight, the square knot looks like two closed loops leading in opposite directions and linked together. A properly tied square knot won't slip if the ropes or twines being tied together are of similar size and not too slippery. Make sure you don't tie a "granny knot," however (two overhand knots tied in the same direction). It will slip when pulled on and is not a dependable knot if you need it to hold securely.

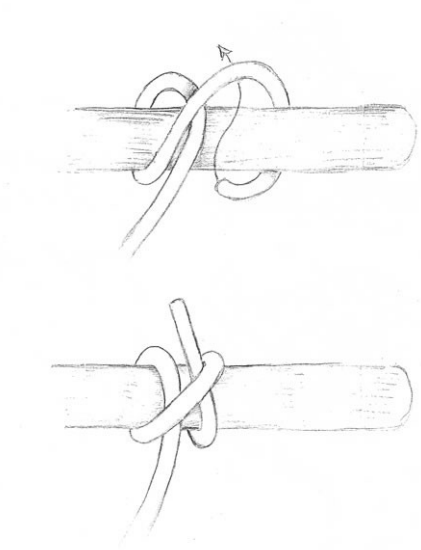


**WEAVER'S KNOT (FISH-LINE KNOT)** – If you are tying two ropes of vastly different diameter together (or ropes that are very slippery), a square knot may not hold. In this situation you can use a fish-line knot, like you'd use to tie a leader to a fish-line. Make a bend in the larger diameter rope and thread the smaller rope through and then around it, coming back out under itself. Then pull everything tight. Or, make a bend in the larger rope, put the smaller one through it, around one side, under the other side and back over itself, then tucking under the bend of the larger rope. When you pull everything tight, these knots will hold, and secure the two ropes together.



**MANGER TIE** – This quick-release knot is frequently used when tying a horse to a post or a fence rail. Also called a reefers knot or a bowknot, it is a good non-slip knot (like a square knot) but has the advantage of being more easily untied when it has been pulled tight—such as when a horse has pulled back on the rope. To tie this quick-release knot, start by putting the working end of the rope around the post or pole (with the working end coming out over the top of the pole). Then bring the end of the rope under the part that's coming away from the post or pole, and double it into a loop to put through the first loop—and pull until the knot is tight. The free end of the rope that comes out from the knot is what you'll pull on to untie it. If a horse nibbles on his rope when tied, you can keep him from pulling on the free end (and untying himself) by running the free end down through the loop. But then you must pull the free end up out of the loop before you can untie it by pulling on it.



**CLOVE HITCH** – This is a simple wrap around a pole, created by putting the rope once around the pole (going over itself to start a second loop) and poking the working end of the rope under itself as you bring it around to complete that second loop. This knot should only be used to go around something a horse cannot pull off (a pole fastened to the far side of the fence posts, or a pipe fence rail) and isn't quite as easy to untie if it gets pulled hard. But it can be very handy when used in conjunction with an easy-untie knot, since it keeps the rope from sliding along the pole or pipe, or sliding down a slippery tree. To make it easier to untie, combine it with a knot like a bowline. First tie a clove hitch around the pole to keep the rope from sliding. Then take the two ends that are left (the working end and the part that goes to the horse) and tie a bowline with those. Since the bowline is a non-slip knot, it won't tighten up if the horse pulls on it, and will be easy to untie. Another way to use a clove hitch is to make the simple clove hitch and then bend the working end of it back through the rope. Then a quick pull on the working end will undo the knot.

QUICK-RELEASE TIE – A properly tied quick-release knot allows you to pull on the end of the rope to undo the knot, no matter how tight the knot has been pulled. For a quick, safe and easy knot for tying a horse, put a loop of the rope around the post, through the tie ring (or inner tube, or whatever you are tying to). The loop you put around the post or through the ring should then be twisted a couple of times. This twisting is what keeps the knot from getting pulled so tight it would be hard to undo. The twist makes a little space between the various parts of the rope, so there will be some flexibility when you have to loosen the knot. The loop of rope going toward the horse is then pulled through the loop that has been twisted. For safety, always do this with your fingertips, and not with your whole hand—so that if the horse set back at that point, your hand would not be caught in the loop. NEVER put your hand or any part of your body through a loop in a halter rope.

Pull the second loop through the first loop. Then put one or two fingers through that second loop to grab a piece of the rope that is attached to the post or tie ring. That piece is pulled through the loop, and the section of rope that goes to the horse is tightened to produce the final knot. This kind of knot is easy to untie by pulling on the loose end of the rope. The horse can be released quickly and easily in an emergency, even if the knot has become very tight.

This type of knot is best to use if you don't leave the horse alone without supervision, since he may be able to untie himself by nibbling and pulling on the loose end of the rope. You can thwart this by putting the free end of the rope through the last loop you created, but then it can't be undone as fast in an emergency. You must first take the end of the rope out of the loop before you can pull the knot loose

**Use the space below to practice the ties using twine and then attach one of each of the knots to the paper.**

## Horse Trailer-Safety Checklist Check these safety points before hauling.

- As a matter of course, clean your horse trailer out after every use. Even with rubber mats, the urine and droppings will take their toll on the floorboards if they are left to sit.
- Regularly washing the exterior of the trailer will give you the opportunity to check for rust, leaks in the roof, broken windows etc.
- Check the wooden floorboards, the ramp or tailgate, divider etc. for signs of rot. Also check the hinges, springs and latches to make sure they are secure and in good working order. Replace any parts that are rotten, broken or missing.
- The trailer hitch itself should be kept well lubricated and should be checked for missing parts. Make sure the chains are in good repair.
- Without the trailer jack, it would be impossible to lift your horse trailer on to the little ball on the bumper pull of your truck. Keeping it lubricated and cranking it every now and then, when it's not being used, will stop it from seizing up and becoming useless, just when you need it most.
- The brakes should be checked every time the trailer is hitched, to make sure they are working. Regular professional maintenance is recommended.
- Correct tire pressure will make it easier to tow the trailer and will save wear and tear on the tires. Replace any worn tires. Make sure pressure is correct. New tires can blow on a hot day due to not enough air.

**Before Hitch Up –** Make sure your vehicle is rated to tow the weight. Check hitch the carefully. Check balance of trailer, make sure rig is level, make sure lights and brakes work, if not, remove rust on hitch. , you should make sure the lights and turn signals work. Check the wiring and replace any bulbs that need replacing.

**Before You Load Up -** Check trailer for bees, remove any moldy hay, put fresh hay in trailer, and prepare horse to be loaded. Take last bathroom breaks, etc. Load horse.

**Before You Leave -** Walk all the way around the rig, check that all doors are secured, Open or unsecured doors are a common occurrence. The hitch is correctly attached and the plugs are all in order, remove wheel

| Truck / Trailer | Horse Supplies / Equipment | First Aid |
|---|---|---|
| Maintenance up to date<br>Tires – air/condition/lugs<br>Spare tire - air/condition<br>Brakes - truck/trailer<br>Hitch- foot up/plugs/pins<br>Jack<br>Lights<br>Trailer floor (2x year)<br>Bees/wasps<br>Doors closed<br>Flashlight<br>Cell phone<br>Tire gauge/lug wrench<br>Wheel chocks<br>Jumper cables<br>Fares/warning triangles<br>WD-40<br>Rope<br>Spare fuses | Halter – extra<br>Lead rope<br>Shank - extra<br>Chain<br>Crop<br>Sheet/blanket/wraps<br>Water<br>Hay/feed/bedding<br>Bucket<br>Coggins/health papers<br>Brushes/sponge/sprays<br>Tack/equip/helmet<br>Duct tape<br>Fire extinguisher<br>Tool kit - crowbar, hammer, screwdrivers, wrenches, pliers. | Non-stick pads/s. napkins<br>Vet wrap<br>Bandage cutters/scissors<br>antiseptic<br>cotton sheeting/quilts<br>Track/polo bandages<br>First Aide - horse/rider medications<br>Banamine, butte<br>Thermometer<br>Cleaning solution/saline<br>twitch<br>Knife<br>Fence tool/hoof pick |

# History of the Horse

How did the horse and its relatives evolve and become domesticated? Evolution of the horse did not occur in a straight line toward a goal, like a ladder. It was more like a branching tree. Many horse-like animals branched off the evolutionary tree and evolved along various unrelated routes, with differing numbers of toes and adaptations to different diets. Now one genus -- Equus -- is the only surviving branch of a once sprawling evolutionary tree. Of the several species within that genus, Equus caballus is today's true horse.

**ZOOLOGICAL CLASSIFICATION** The horse is a large herbivore adapted for running. It is a mammal of the horse family Equidae and the order Perissodactyla. But here is a more complete picture of how the horse and other relatives fit together:

- Kingdom: Animalia
- Phylum: Chordata
- Class: Mammalia
- Order: Perissodactyla
- Family: Equidae
- Genus: Equus

Species of the genus Equus include the following:

- Equus asinus represents the true asses and donkeys of northern Africa. The African wild asses are sometimes called Equus africanus.
- Equus burchelli is the Plains zebra of Africa. The Plains zebra is what people usually think of as the "typical zebra," with rather wide vertical stripes, and thick horizontal stripes on the rump.
- Equus caballus is the true horse, which at one time had several subspecies.
- Equus grevyi is the most horse-like zebra, the Grevy's zebra, a big zebra with the very narrow vertical stripes and huge ears.
- Equus hemionus includes the desert-adapted onagers of Asia and the Mideast, including the kiang.
- Equus przewalski is the oldest living ancestor of the horse. It was discovered in remote Mongolia and named Przewalski's Horse.
- Equus zebra is the Mountain zebra of South Africa, a little zebra with a dewlap and the gridiron pattern on its rump.

**PRZEWALSKI'S HORSE** The oldest living ancestor of the horse is the Przewalski's horse (Equus Przewalski). This ancestor was discovered rather recently in 1879 by a Russian explorer, Nikolai Mikailovich Przewalski, for whom the horse was named. He saw the horse as he traveled through a remote area of Mongolia.

Przewalski's horse is 12 to 14 hands high; dun colored (yellowish); with a light colored muzzle; a short, erect mane; a dark band along its back; as well as dark legs. Once threatened with extinction, the former Soviet Union established a refuge for the Przewalski's horse in the late 1970s. Although found in zoos around the world, this horse has never been domesticated.

**THE FOSSIL RECORD**

The Earth is very old -- 4.5 billion years or more. This vast span of time, called geologic time by earth scientists, is difficult to comprehend in the familiar time units of months and years, or even centuries. A great part of the secret of the Earth's age is locked up in its rock layers and the fossils in those layers. Scientist studying these layers and fossils have assigned names to the divisions of geologic time. Major divisions are called eras; eras are divided into periods; and periods are divided into epochs. Each of these divisions is expressed in terms of millions of years.

Common evolutionary trends are not seen in all of the horse lines. On the whole, horses got larger, but some horses -- referred to as Archeohippus and Calippus -- then got smaller again. Many recent horses evolved complex facial pits, and then some of their descendants lost them again. Most of the recent horses (in the last 5 to 10 million years) were three-toed, not one-toed. One-toed animals became apparent in the fossil record only because all the three-toed lines became extinct.

Additionally, these traits did not necessarily evolve together, or at a steady rate. The various structural characteristics each evolved in an interrupted series of changes. They did not evolve as a group of characteristics. For example, throughout the Eocene Epoch the feet changed little and only the teeth evolved. Throughout the Miocene Epoch both feet and teeth evolved rapidly. Rates of evolution likely depended on the environmental and biological pressures facing the species.

The evolution of the modern horse also includes other species of Equus that evolved along with the horse, such as the ass, or donkey; the onager; and various zebras.

The fossil record suggests that the following ancestors played a role in the evolution of the modern horse (Equus): eohippus, mesohippus, merychippus and pliohippus. Table 1 summarizes the role of these ancestors.

**Table 1. Evolutionary Ancestors of the Horse from the Fossil Record**

| Ancestor | Geologic Time | Location of Fossils | Description |
|---|---|---|---|
| Eohippus | Paleocene Epoch (65 to 55.5 million years | North America | Small horse-like animal about the size of a fox; fossil teeth suggest it browsed. |
| | Eocene Epoch (about 55.5 to 33.7 million | Europe | |
| Mesohippus | Oligocene Epoch (33.7 to 23.8 million years ago) | Europe and North America | Larger than Eohippus; more developed teeth and three toes on front legs, but side toes evolved smaller and middle toe strengthened. |
| Merychippus | Miocene Epoch (23.8 to 5.3 million years ago) | North America | About 35 inches tall; lived in herds; developed grinding teeth like modern horses; middle toe continued to develop and strengthen while side toes on legs continued to shrink. |
| Pliohippus | Pliocene Epoch (5.3 to 1.8 million years ago) | North America, Asia and Europe | First true one-toed (monodactyl) horse-like animal; most closely resembled modern horse |
| Equus | Pleistocene Epoch(1.8 million to 8,000 years ago) | South America, Asia, Europe, Africa | Modern horse evolves; but becomes extinct in North America. |

## DOMESTICATION OF THE HORSE

The following is a very brief overview of how the horse became domesticated and used by humans. For more details, explore the websites listed under Internet Resources.

Stone Age cave paintings on the walls of caves in Europe indicate that early humans first came into contact with horses when they hunted them for food some 100,000 to 10,000 years ago.

Two species of the horse family have been domesticated or tamed: 1) Equus Caballus, the horse; and 2) Equus Asinus, the ass or donkey. While the domestication of the horse is vague at times, the history of the domestic donkey is quite well-known. Donkeys were first domesticated in Egypt around 3,400 B.C.

Somewhere around 4,000 and 3,000 B.C., humans started to domesticate the horse. Excavations indicate that early farmers kept horses for meat and possibly milked the mares. Nomads during this time might have used the horse to pack their belongings as they moved from place to place. On the grasslands north of the Black Sea, the domestication of animals was already putting oxen in yokes for draft purposes in Mesopotamia. Around 3,000 B.C. donkeys were yoked and used for draft purposes. Somewhere between 2,000 and 3,000 B.C. the horse was yoked as a draft animal. This led to the development of breast straps and collars for horses, since the yokes developed for oxen tended to cut off the wind of horses. Due to their speed, horses became the favored draft animal.

**Wheels:** When the wheel began to appear in human progress towards the end of the forth millennium B.C. in the Near East, oxen and then donkeys were hitched to wagons with wheels. Paintings that date near the beginning of the third millennium B.C. depict wheeled vehicles being drawn by donkeys or mules. The four-wheeled war wagon came from Ur, in southern Mesopotamia, around 2,500 B.C. It required a yoked team of four donkeys.Humans learned to make lighter vehicles and wheels with spokes. With this knowledge, chariots were developed for warfare and for hunting. As horses were brought in from the grasslands of southern Asia to the civilization of the Near East, they were hitched to these chariots and the advantage of the horse became rapidly apparent. Around 1,500 B.C. all-metal bits were first used in the Near East, providing more effecting control of the teams that pulled chariots. For almost 1,000 years the horse was used exclusively in Europe as a harness animal, but that was about to change as the horse was used in warfare.

**Riding the horse:** The Roman Empire lasted from about 27 B.C. to 476 A.D. Warfare by the Roman army moved riding of the horse from a casual pursuit to the development of trained riders and horses. At first the Roman army was essentially an infantry. Enemies of the Romans such as the Persians to the east, Germanic tribes to the north and west, and the eventually nomadic tribes used horses, so the Romans converted to a predominantly cavalry-led force. A cavalry is an army component mounted on horseback. In current times the "cavalry" component of an army moves in motor vehicles or helicopters and is assigned to combat missions requiring great mobility.

With the fall of the Roman Empire, the Middle Ages began, lasting about 700 years. The early portion of the Middle Ages is called the Dark Ages. The Dark Ages were called such because they were a time of stagnation in learning and progress. Civilization went backwards for a time. Cities and towns were destroyed and transportation became difficult and dangerous. Chariot use declined and the horse became an animal for agricultural use in Europe during this period.

**The Renaissance:** The Renaissance occurred between 1450 and 1650. This period of time was a transition from medieval to modern in Europe. During this time people had a renewed interest in art, literature and science. Renewed interest in the horse increased together with the general zeal for discovery. The anatomy of humans, horses and other animals became subject to scientific study. Horse training became an art. Carts and wagons of the Middle Ages were redesigned and refined carriages were developed. Soon the horse assumed a more important role in transportation.

**Other civilizations:** Other civilizations developed an important relationship with the horse in similar ways and along a similar timeline. Two examples are the Scythians and the Chinese. About 800 B.C. the Scythians were nomadic horsemen with common customs and interests. Scythians were archers skilled at using a powerful bow from horseback. The Scythians' nomadic and destructive way of life was made possible by their vast herds of horses. Scythians were the first known to geld horses. The Scythians left no written record and much of what is known about them comes from the study of burial sites. The Chinese began using horse-drawn chariots slightly later than the Europeans. Horse-drawn war chariots were introduced to China during the Shang Dynasty (about 1,450 to 1,050 B.C.). Similar to the Romans, repeated invasions and plunder by the Huns forced the Chinese to develop a cavalry which proved to be a more effective defense against the Huns. As clashes with the Huns continued, the Chinese refined their riding and began using saddles.

Horses were used in large numbers in Europe before they were used in China. The Chinese did not use large numbers until about 300 B.C. By 700 A.D, the T'ang emperors had stud farms with as many as 300,000 horses. Paintings from the 10th and 11th century show the Chinese as horsemen, with rather modern-looking equipment. The Chinese also developed breast straps and collars for horses.

As colonists came to America, they brought the horse to the New World. Initially horses were used in America for transportation, work and agriculture. Then as new sources of power changed and became more available, horses in the United States horses started being used primarily for recreation.

**HORSES IN MYTHOLOGY**

Through the early history of the horse, humans held the horse in admiration, placed it with the gods, and developed legends and myths around horses and horse-like creatures. Some examples are listed below.

- Poseidon creating the horse
- Pegasus, the wild winged horse, tamed by Bellerophon using a golden bridle
- Centaur, the magnificent creature who had a body which was half horse and half man
- Epona, an ancient Gaul goddess of horses who lovingly protected the horse and stable
- Horses of Homer in ancient warfare in the Iliad
- Trojan Horse, the wooden horse that got the Greeks inside the wall of Troy
- Unicorn, a mythical animal with the legs of a buck, the tail of a lion, the head and body of a horse, and a single horn in the middle of its forehead
- Horse-drawn Chariot of the Sun used by the ancient gods of India
- The Four Horsemen of the Apocalypse described in the book of Revelations in the Bible

**Down**

**1.** Chinese dynasty with horse-drawn war chariots

**2.** Donkeys were first domesticated here in 3400 B.C.

**3.** Man who discovered oldest living horse ancestor in Mongolia

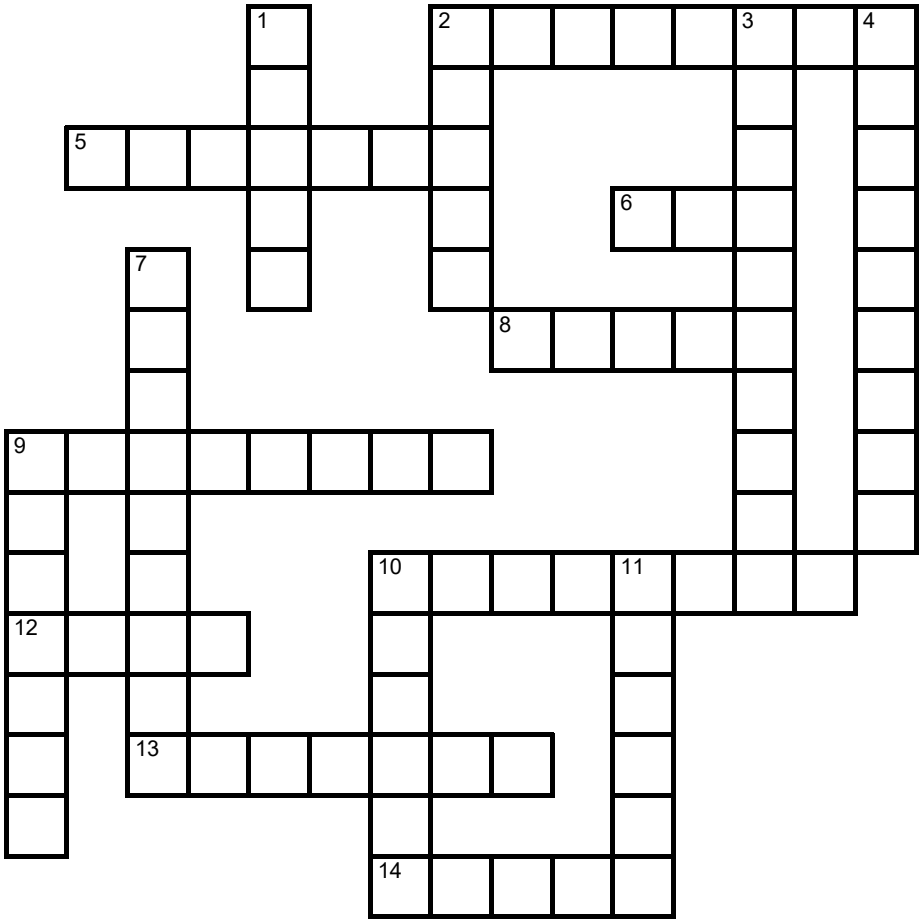
**4.** Nomadic horsemen around 800 B.C.

**7.** Plant-eating animal

**9.** Mythical half-man, half-horse

**10.** Carriages were refined in the ____ Ages.

**11.** Equus ____ represents the true asses and donkeys of northern Africa.




**Across**

2. Small horse-like animal from Paleocene Epoch

5. Army troop mounted on horseback

6. Number of toes on a modern horse

8. Equus burchelli is the Plains ____.

9. Equus ____ is the true horse.

10. Horses belongs to this class.

12. City conquered using the Trojan Horse

14. Horses belongs to this genus.

13. Horses belongs to this family.

# Parturition in the Mare

A live, healthy foal is the result of considerable time, money and effort. Good management practices should not be relaxed at any time in an equine program and especially not prior to the time the foal is weaned. The mare should be on a regular worming, exercise, and vaccination schedule and an adequate nutritional program, and the horse owner should have an established relationship with a veterinarian who will be available for advice or emergency calls.

## Gestation Length

The normal gestation length of mares ranges from 320 to 380 days with an average of 338 to 345 days. Gestation length will be variable between mares and even the same mare from year to year. Gestation lengths shorter than 320 generally are considered premature and there is an expected need for veterinarian neonatal care procedures. Seasonal factors can impact gestational length. Mares foaling during long day lengths typically tend to have a shortened gestation, while mares foaling during shorter days have a longer gestation. All fetuses are not necessarily mature 320 days from the last breeding. As such, gestational length alone is not an adequate means of determining fetal readiness for birth.

Gestation lengths as long as 365 are not entirely uncommon; however, longer gestations may be a sign of impending foaling problems. For instance, extended gestation length is one of the problems associated with mares consuming endophyte- infected fescue hay or pasture.

### Predicting Day of Foaling

The accuracy of breeding records leads to increased accuracy in predicted foaling dates. A predictor of 335 days (11 months) after the last breeding date is used frequently. The 335 days is actually shorter than the expected average, and as such, will allow for an increased watch before most mares will foal.

There are several conformational changes that indicate a mare is approaching the day of parturition (Table 1). These signs are variable between mares and will change with successive pregnancies. Mammary development and colostrum production in the mare are reliable indicators of fetal maturity and readiness for birth. The calcium concentration of mammary secretions in a majority of mares will increase significantly 1 or 2 days before foaling. Mares with mammary secretion of calcium concentrations greater than 200 ppm have a 54 percent probability of foaling within 24 hours, 84 percent probability of foaling within 48 hours and 97 percent probability of foaling within 72 hours. Most mares foal within a short period of time if the mammary secretion calcium increases to levels between 300 and 500 ppm. Mares with mammary secretion calcium levels lower than 200 ppm have a less than 1 percent chance of foaling within 24 hours of testing. This response can be quantified with testing kits developed specifically for mare's milk, which are available through veterinarians. Water hardness test strips have also been used.

**Changes in Mares Suggesting Approaching Foaling Day**

| Sign | Usual Occourance |
|---|---|
| Udder fills: maiden mares may not exhibit; may have partial filling and regression Periodically through last trimester | 2-4 weeks prior |
| Change in conformation: tailhead musculation relaxes; abdominal area drops down. | 1 week - 1 month prior |
| Teats fill with milk: variable response | 2 days- 1 week prior |
| Dripping of milk: variable response | 1 day - 1 week prior |
| Waxing: secretions form wax like beads on end of teats, a yellowish, honey-like secretion (colostrum) | 1-4 days prior |
| Changes in milk mineral content: calcium concentration increases | 1.5-1 day prior |
| External genitalia relax: musculature under tailhead relaxes, becomes soft and loose | 1/2 - 1 day prior |

# Foaling Process

Mare behavior will gradually change during the weeks preceding foaling. They usually show signs that they will soon go into labor. The timetable though is far from being absolute. Some mares may show all the signs, while others may show just a few and will be in labor before you expect it.

Labor is divided into three stages.

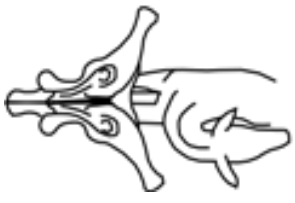
**Stage one** begins with the onset of contractions and generally lasts 1 to 2 hours. During the first stage of labor, the muscles of the pelvic girdle relax, allowing the bones to spread so the foal can be positioned toward the birth canal. Movement is often noticeable as the foal turns into position. The abdominal wall above the flank and behind the ribs becomes concave, and the tailhead becomes more prominent. Uterine contractions cause nervousness, erratic eating, sweating, pacing, tail switching and frequent urination. During this time the mare becomes anxious and restless. She may appear to be colicky. She may kick at her belly, pace, lie down and get up, look or bite at her flanks, and sweat. She may frequently raise her tail and urinate. Generally, this is the first stage of labor. However, be aware that colic remains a possibility. Contact your veterinarian if such behavior is prolonged for more than an hour or two without progress towards foaling.

Mares may exhibit some of these signs periodically for several days before they actually progress into the foaling process. Most mares will foal at night and prefer, if not require, a quiet, dark place to foal without disruptions. Even though it is advised by most veterinarians to keep a frequent watch on mares approaching the foaling time, disruptions can delay the onset of this stage of labor. Watch systems that emphasize a quiet, dark, uninterrupted environment will help the mare.

During this phase of labor, contractions move the foal through the cervix and into position in the birth canal. The fetal membranes, Chorioallantois, may become visible at the mare's vulva. Stage one ends when the amniotic sac breaks, which is signaled by a rush of fluid.

**Stage two** is the actual expulsion of the foal. This phase moves relatively quickly and usually occurs within 15 to 20 minutes after the mare's 'water breaks.' Taking more than 30 minutes to deliver may indicate a need for intervention from qualified attendants. If labor seems to be progressing, wait and watch. Even in a normal delivery, the mare may stand up, lie down and roll several times in an effort to properly position the foal for delivery.

Normal presentation of the foal resembles a diving position, the front feet first, one slightly ahead of the other, hooves down, followed closely by the nose, head, neck, shoulders and hindquarters. If you notice hoof soles up, the foal may be backwards or upside down and you should call your veterinarian immediately. It is important that the presentation of the foal is correct, and that qualified assistance be provided if delivery presentation is abnormal. The mare will remain lying down for several minutes following foaling. Figure 1 shows positions a foal can be in that may provide complications.



Most mares are down during the delivery of the foal; however, some insist on standing. Standing mares should be tied or held to prevent walking. An attendant should stand behind the mare so the arriving foal can be assisted. A fall may not only injure the newborn foal but also tear the umbilical opening in the abdominal wall and predispose the foal to a hernia. The urachus (tube leading to the urinary bladder) may also tear, causing urine leakage into the foals abdomen.

Do not pull on a foal progressing slowly through the vagina. If birth progress stops for more than ten minutes in one spot, apply gentle traction times with the contractions. If the foal feels "locked in," rotate the body one way, then the other; this might allow the hips to slip through the pelvic opening of the mare. Call a veterinarian if this technique is not immediately successful. Walk the mare until the veterinarian arrives.

Suspect malposition of the foal and call a veterinarian when only one foot is present, more than two feet are visible, feet are upside down, the nose does not appear, or the nose appears without the front feet.

As the foal emerges, the inner sac usually breaks. If the sac does not break, free the foal from the sac and wipe the nose and mouth. Foals not breathing well should be rubbed vigorously with a towel to stimulate breathing. Allow the foal to lie quietly behind the mare for 10 to 25 minutes until the pulsations in the umbilical cord cease. This allows the foal to take advantage of the blood remaining in the placenta still attached to the uterus. Then crush the navel cord and separate it three inches from the body and dip in antiseptic (iodine and glycerine). This antiseptic will destroy bacteria, help dry up the stump, and prevent infections. Dip the stump again in a few hours. Some individuals also dip the feet (a possible portal of entry for bacteria).

The novice horse owner should be warned to be careful. A mare's disposition can change quickly from friendly to aggressive at this time due to maternal instinct.

**Stage three** labor begins after delivery and is the phase during which the afterbirth, placenta, is expelled. Most placentas are passed within 1 to 3 hours after the foal is delivered. Call your veterinarian if the placenta has not passed within 3 hours. A retained placenta can cause serious problems, including massive infection and laminitis. A knowledgeable person should inspect the placenta to insure it was completely expelled and to check for other abnormalities that indicate a potential problem with the foal. The placenta should be expelled within 3 hours after foaling

**The Newborn**

The mare and foal will remain lying down for several minutes following foaling. The umbilical cord is usually still intact and blood continues to flow from the mare to the foal. The foal will move its head and body within minutes after birth. The umbilical cord should break as a result of this movement. If the umbilical cord is not broken within a few minutes after birth and has stopped pulsing, it may need to be broken by hand. The cord should break at a site approximately one inch from the foal’s abdomen, where the cord’s diameter is slightly narrower than the remainder of the cord. If it is necessary to manually separate the cord, it should be held firmly on either side of the intended break site, then twisted and pulled to separate. Never cut the cord, as twisting and pulling of the cord stimulate closure of the umbilical vessels and reduce the likelihood of bleeding from the cord stump. If bleeding persists following cord separation, pressure can be applied to the stump for several minutes by squeezing with a thumb and finger.

| **Foals:** Parameter | Average Time Post Foaling |
|---|---|
| Suckling reflex | Develop suckling reflex within 2 to 20 minutes; test by placing index finger in mouth. |
| Sternal recumbency | 1 - 2 minutes |
| Time to stand | 60 minutes; if foal takes over 2 hours to stand, problems might be present that need immediate attention. |
| Time to nurse | 2 hours; abnormal if foal takes over 3-4 hours. |
| Temperature | 37.2 to 38.6C or 99-101.5F in non stressed birth. |
| Heart Rate | Greater than 60bpm at 1 to 5 minutes post foaling. 80-130 bpm at 6-60 minutes post foaling; 80 to 120 bpm at 1-5 days post foaling. |
| Respiration Rate | 60-80 breaths per minute first 30 minutes; 30-40 breaths per minute at 1-12 hours after foaling. |

The foal should have an examination within 12 to 24 hours after it is born. Procedures include an ophthalmic exam, respiratory exam and visual checks for conformational abnormalities. As mentioned above, the foal's antibody levels in the serum should be tested for IgG antibodies, which should be above 800 mg/dl.

Early life handling of foals has benefits of imprinting acceptable behaviors around people. There are several publications on the timing and routines of imprinting. These sessions begin immediately after birth.

Foals and mares should be allowed access to paddocks or pasture within a couple of days post foaling. If weather and facility constrain access to paddocks, mares should be hand walked with the foals by their sides. Mares and foals should be turned into pastures or paddocks with other lactating mares within several days to a week after foaling.

# Clipping and Trimming

For neat appearance and showing, long hairs usually are clipped from the muzzle, ears, jaw, fetlocks, and bridle path. Different breeds have different clipping requirements, and you may trim your horse according to its breed type.

Bathe and dry your horse thoroughly before clipping. Start practicing a month or more before a show to accustom your horse to the clippers. Grasping an ear may quiet an uneasy animal. Place a firm hand near the area to be clipped to reduce sensitivity.

You need electric clippers, hand clippers, or a comb and a pair of sharp fetlock scissors with curved blades. Electric clippers are easiest to use and give the best results; but you can do a fairly good job with scissors, a comb, and a lot of patience.

The following clipper blades are recommended:

#10 for general clipping
#15 for finer clipping
#40 (surgical blade) for "sharper" ears and bridle path

Have clipper blades sharpened periodically. Use a lightweight oil or kerosene on the blades before, during, and after clipping for a painless, smooth job.

If you use scissors, lift the hair with a comb and then snip it off to give a smoother surface and protect the horse from an accidental jab. Hand clippers are hard to operate, tiring to use, and do not blend hair well.

## Muzzle

If you decide to remove the whiskers, first use the #10 blade. You then can clip the muzzle more closely with a #40 blade or finish carefully with a safety razor. It is not required that you remove the whiskers completely.

If your horse is pastured most of the time, it is best to leave whiskers about 1 inch long. Never clip the eyelashes or the hairs inside the nostrils. These are essential for the horse's safety and comfort.

## Ears

Hold an ear in one hand and clip the outer edges. Clip downward on the upper part and upward along the lower curve of the ear. To leave a natural point, do not clip the tips.

Trim the inner ear even with the edges to give a neater appearance without removing the inner ear hair. If you clip the inside of the ear, first put a large piece of cotton in the ear to keep hair from falling down inside. Brush the inside of the ear clean before removing the cotton.

Horses kept on pasture either need the hair left in the inner ear or a good insecticide to protect them from flies and gnats.

## Jaw

Trim the long hair between the jaws and under the throat closely. Use a #10 blade and clip against the direction of the hair growth. Do not clip the cheek or jowl, because this changes the color of the hair.

## Legs

There are two ways of clipping legs: trimming and booting-up. **Trimming** is done in the direction of the hair growth, and **booting-up** goes against the hair growth. If the horse does not stand still, a helper could pick up the opposite foot to help prevent the horse from moving.

### Trimming

(#15 blade recommended)

Trim excess hair from the lower legs by pointing the clippers down and running them lightly and evenly down the leg. Repeat several times, being careful to lift the blades gradually at the end of each stroke. This procedure thins and removes excess hair, but does not change the color of the clipped areas.

To trim the fetlocks, pick up the hoof and run the clippers around and under the bulge of the fetlock joint.

Reverse the clippers and trim the hair at the coronet band by clipping upward, making an even edge around the hoof.

### Booting-up

(#10 blade recommended)

Clip against the direction of the hair, blending carefully below the knee and hock. This is often done on white legs.

Carefully peel or cut off **chestnuts** (the horny, insensitive growths found on the inside of the legs above the knees and below the hocks). They are softer and easier to trim after bathing. Trim off **ergots** (small, horny growths on the back of the fetlocks) close to the skin (use scissors) to allow close clipping of the fetlock hair.

## TRIMMING AND GROOMING BREED PREFERENCE OPTIONS

| BREED | SET-UP | TRIMMING AND GROOMING PREFERENCES |
|---|---|---|
| American Saddlebred | Stretched | Pleasure horses: manes and tails long and natural.<br>Braiding optional (forelock and first lock of mane with ribbons). |
| Andalusian | Squared | Minimum clipping.<br>Bridle path no more than 1 inch. |
| Appaloosa/P.O.A. | Squared | Clear hoof polish only.<br>See Western or Hunter type for more information. |
| Arabian/part Arabian | Hind: one forward, one behind | Bridle path 6 to 8 inches.<br>No braiding except hunt seat. |
| Connemara | Squared, not stretched | Usually shown as typical Hunters, braiding optional.<br>Bridle path 1 inch.<br>Ears need not be trimmed inside. |
| Hunter | Squared | Mane pulled 3½ to 4½ inches, generally braided with conservative or matching color yarn. Scalloped or button braids optional.<br>Forelock braided. Bridle path no longer than 1 inch.<br>Tail long and full. Braiding tail is optional, but never braided unless mane and forelock also are braided. |
| Miniature Horse | Squared, not stretched | No braiding.<br>Body clipping common. |
| Missouri Fox Trotter | Squared | Bridle path according to conformation.<br>Forelock and first lock of mane braided with ribbon. |
| Morgan | Slightly stretched | Bridle path 6 to 8 inches.<br>No braiding except hunt seat. |
| Mustang | Squared | Natural appearance is desired. Muzzle, ears, and feathers are not clipped.<br>Minimum bridle path (up to 2 inches).<br>No hoof black. |
| Paso Fino | Squared | Bridle path not required, but may be up to 4 inches.<br>Face, ears, and legs trimmed, but natural look is desired.<br>No braiding. |
| Peruvian Paso | Squared | Bridle path not required, but may be up to 2 inches.<br>Natural appearance is desired.<br>Roach mane is acceptable.<br>No hoof black (clear only). |
| Quarter Horse/Paint | Squared | Bridle path length depends on personal preference.<br>Mane usually shortened, may be banded for Western or English, or braided for English. |
| Saddle Type | Squared or stretched | Natural long mane.<br>Tail long, full, and natural. |
| Shetland Pony | Stretched | Bridle path 4 to 6 inches.<br>Forelock and first lock of mane braided with ribbon.<br>Body clipping common. |
| Tennessee Walking Horse | Stretched | Bridle path 6 to 8 inches.<br>Forelock and first lock of mane braided with ribbon. |
| Warmbloods | Open, so all four legs can be viewed from the side<br>Balanced on all four feet | Bridle path 1 to 2 inches.<br>Braided mane and forelock optional. |
| Welsh Pony | Squared, not stretched | Manes and tails natural.<br>Minimum bridle path.<br>Full feathers allowed in Division A.<br>Braiding optional for Division B.<br>Ears not trimmed inside. |
| Western/Stock Type | Squared | Mane may be natural, roached, or pulled to 3½ to 4½ inches, and may be banded.<br>Tails natural. |

## Bridle path

Use a #15 or #40 blade (#40 gives the neatest, closest trim). Clip forward toward the poll to keep the bridle path from getting longer each time it is trimmed in case the clippers slip. The length of the bridle path should be a minimum of 1 inch or per breed standard.

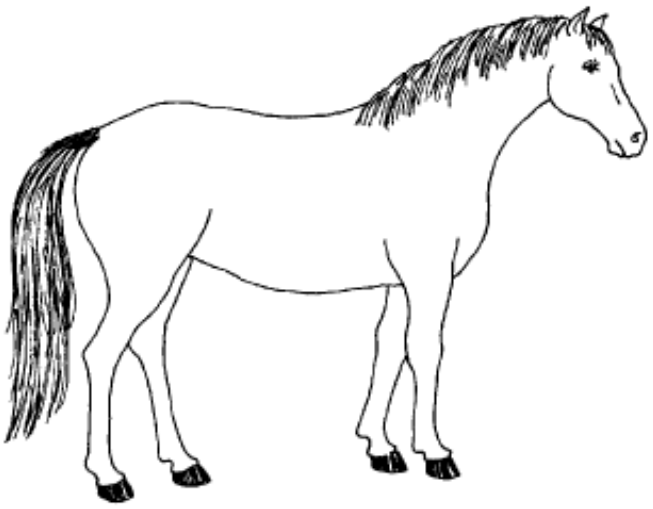
## Body Clips

A pastured horse needs a natural winter coat. However, a hard-working horse's coat becomes soaked with sweat and can take hours to dry. In cold weather, a wet coat quickly conducts heat away from the horse's body, which can lead to chills. A body clip of some type may be a good solution.

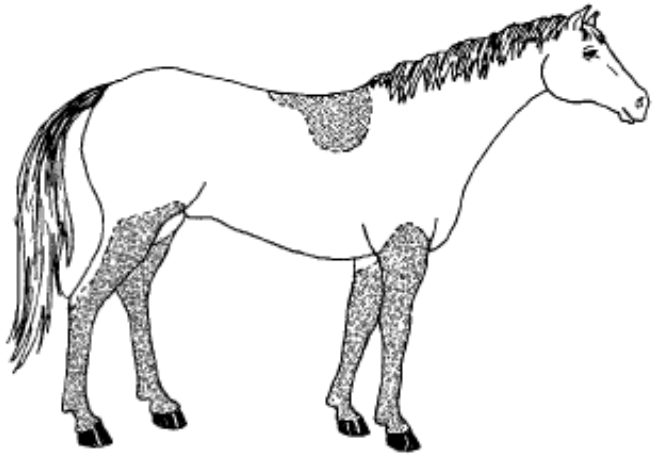
A clipped coat is a bit shorter than summer length, so most horses with body clips require a blanket for protection from cold. With a partial clip, the horse does not get as hot and dries more quickly, but still has quite a bit of its natural coat, so it may not need a blanket.

To avoid needing to clip twice, wait until the horse sheds its summer coat and establishes its winter coat. If you clip in the spring, do it before the horse begins to shed. Otherwise, you'll clip off the ends of the new summer coat and it won't be as rich and glossy. A full clip usually grows out in about 3 months.

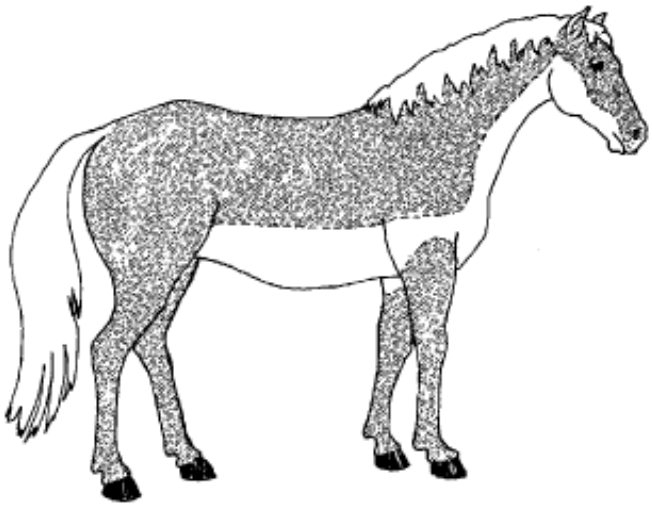
There are many types of body clips. The illustrations here and on the next page show the most common ones.



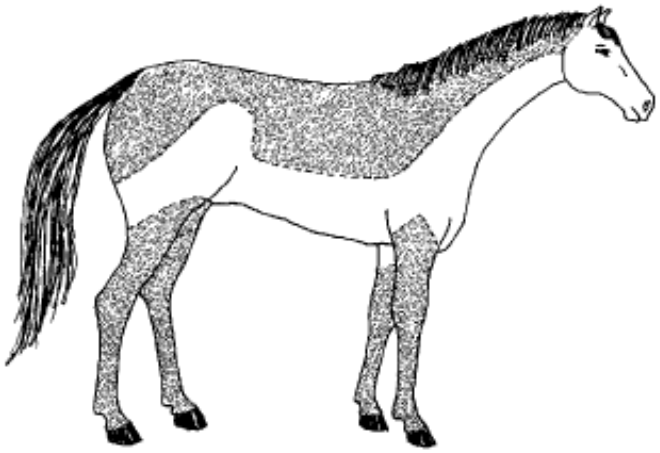
**Full clip**—An all-over body clip.



**Hunter clip**—The body and head are clipped, but long hair is left on the legs and on a **saddle patch** (in the shape of the saddle), which protects the skin of the back.

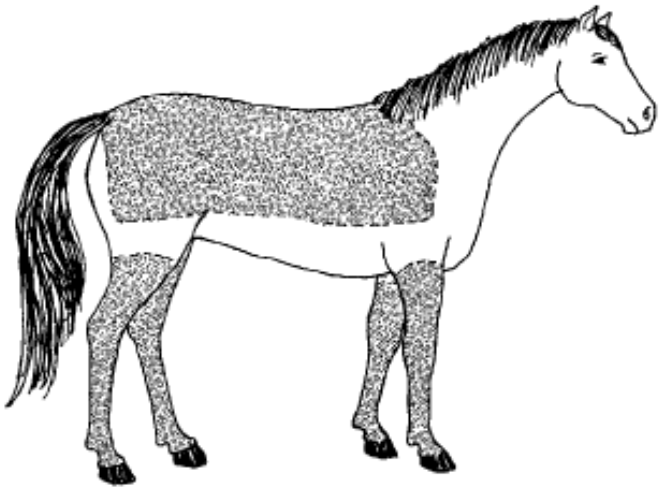


**Trace clip**—A partial clip of the bottom of the belly and chest up to about the height of the traces of a carriage.

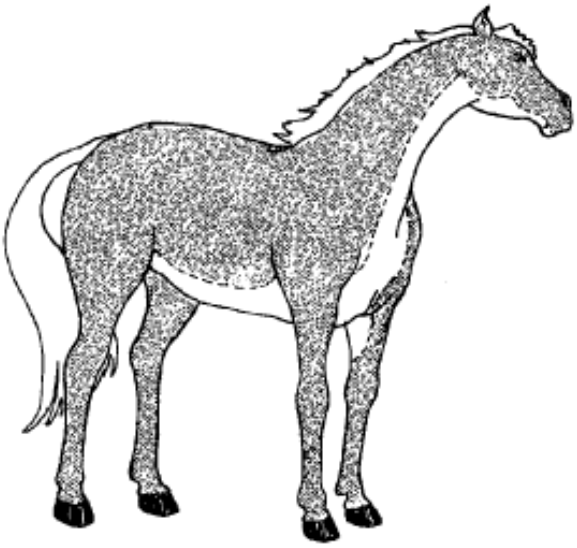


**High Trace clip** (or **racing clip**)—A partial clip of the bottom of the belly and chest and at least part of the neck and shoulder. Brings the line of the clip higher up on the belly, with a keyhole running up into the flank and hindquarters.

BODY CLIPS, CONTINUED



**Blanket clip**—Removes long hair from the neck, chest, and belly and sometimes the legs, leaving a neatly squared-off blanket of long hair that protects the muscles of the back and loins.



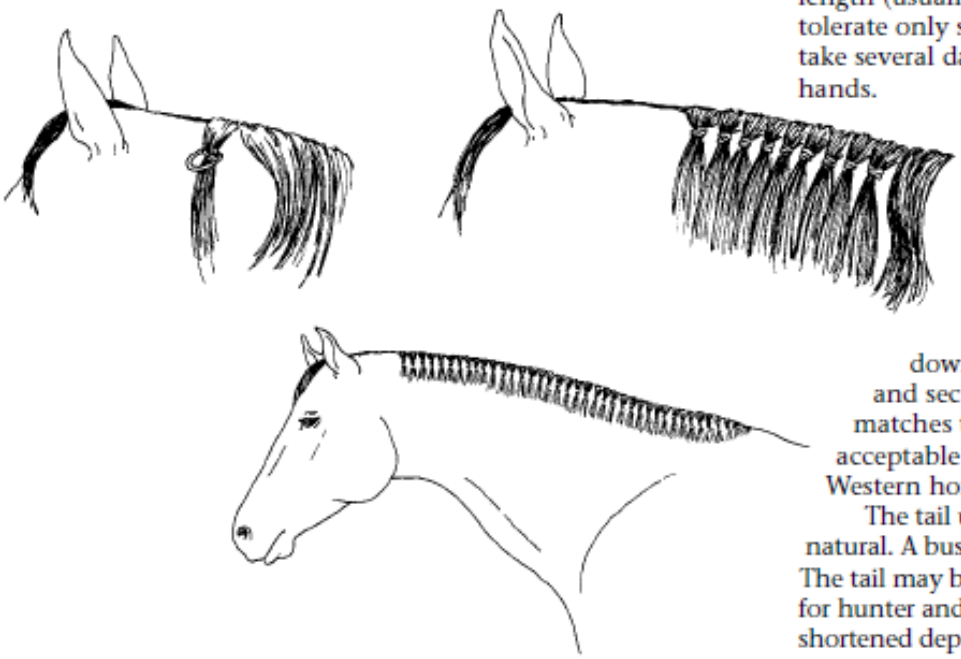
**Strip clip**—The most conservative clip. Only a strip of the underside of the neck, chest, and belly are clipped, leaving the horse with almost all of its natural coat while still allowing it to cool faster.

## MANE AND TAIL

A mane's length is determined by breed type and use. Manes of stock horses and Hunters are usually thinned and shortened, or **pulled**. Natural manes and tails often need to be evened or thinned also. Scissors are not recommended for shortening manes.

To pull a mane, hold the ends of a small patch and push the shorter hairs up with a comb, then pull out just a few long hairs at a time. Brush it out frequently to check the length (usually 4 to 6 inches). The horse may tolerate only short sessions, and the job may take several days. Wear gloves to protect your hands.

BANDED MANE



Train the mane to lie smoothly on one side. **Banding** is one way to do this. To band a mane, pull it to 3 to 4 inches in length. Wet the hair and part it into small sections about ½ inch wide. Comb each section down flat against the side of the neck and secure it with a rubber band that matches the color of the mane. Banding is acceptable in the show ring for hunter and Western horses.

The tail usually is left long, full, and natural. A bushy tail may be thinned and pulled. The tail may be **banged** (cut straight across) for hunter and dressage mounts or clipped or shortened depending on use and/or breed type.

# Braiding

Hunters are traditionally braided for neatness and to enhance the horse's conformation. Banding is not considered a traditional hunter braid.

Generally, if the mane is braided, the tail is braided as well, even though it is not required. It is not acceptable to braid the tail without braiding the mane.

Braiding is not allowed in saddle seat, but you may tie a ribbon by the bridle path.

Banding is acceptable in Western, though some breeds prefer long manes. It is a good idea to check the breed standard for the breed you are showing.

## Mane

Braiding can improve the appearance of a horse with a full or coarse mane, but it must be done correctly. It is better not to braid a mane than to do it sloppily.

Thin and shorten the mane first. Ribbon or thread are recommended instead of rubber bands. Remove the braids as soon as possible to avoid breaking off hairs.

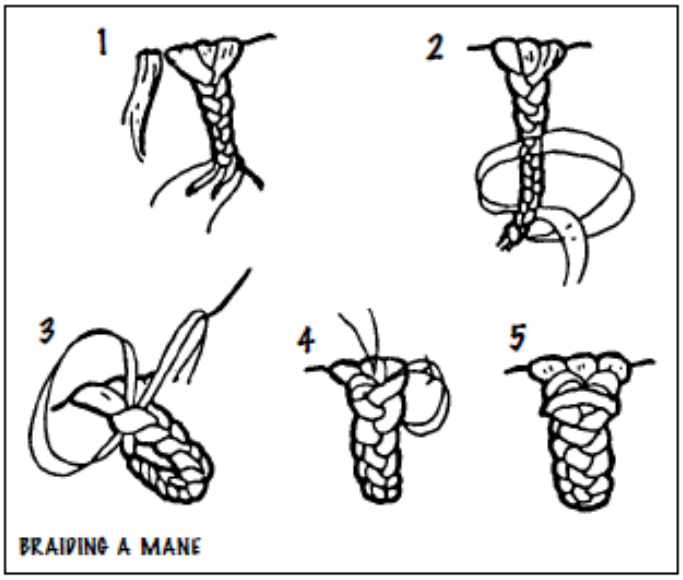
Separate a 2- to 4-inch segment of mane and wet it with a sponge, then comb. Separate the segment into three equal strands and braid two-thirds of the way to the end. Keep the braid very tight, especially at the beginning.

Use the illustration at right to help you.

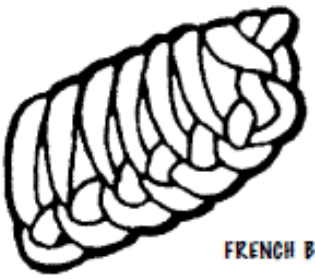
1. Lay a 10-inch piece of yarn behind the braid. Add the ends to two of the strands of hair and keep braiding.
2. Separate yarn ends from the hair, wrap them around the braid, and pull through tightly.
3. Thread both yarn ends through a needle. Sew up through the top of the braid, around the left side, and wrap up through again.
4. Repeat on the other side of the braid.
5. Separate yarn ends, wrap them around, and tie them in the center. Cut the ends of the yarn short.

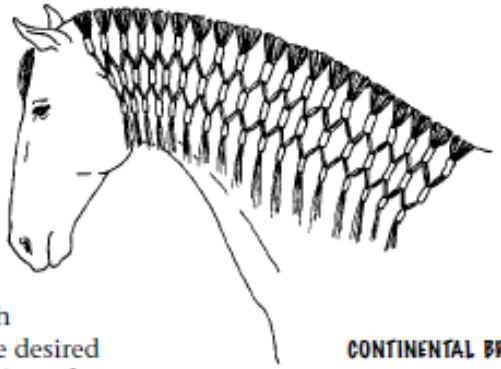
You also can fasten braids with two rubber bands (use size #8).

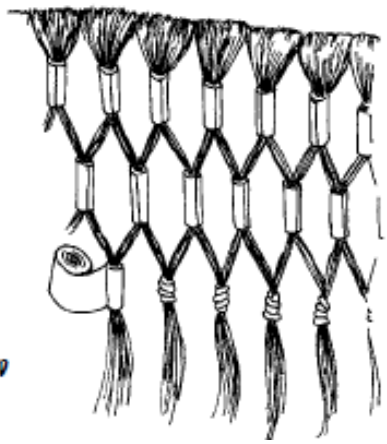
Other braiding techniques include scallops, sewn-in button braids, Continental braiding, and French braiding. French braiding is done on horses with long manes that you don't want to cut or pull short. Start a French braid with a 3-inch strand. When the braid has reached the desired length, begin adding a 1- to 2-inch section of mane each time you cross the left side of the

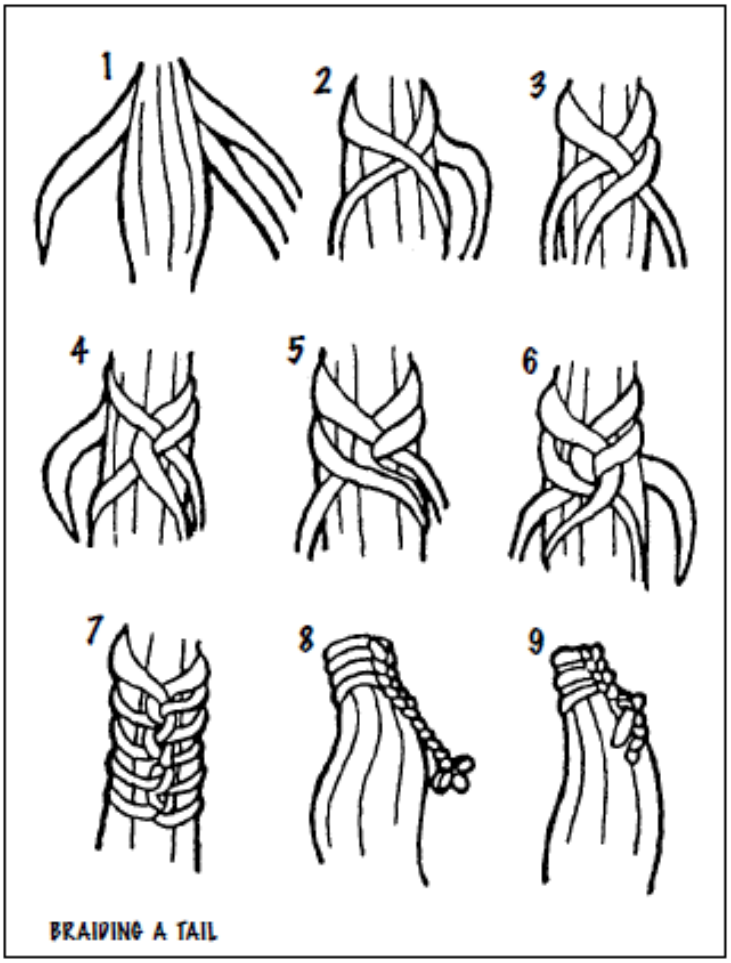


BRAIDING A MANE


FRENCH BRAID


CONTINENTAL BRAID





BRAIDING A TAIL

braid to the center. Secure the braid with a rubber band or yarn. To get a raised look, go under each strand as you braid instead of over.

## Tail

Tails are braided for neatness and to show off the hindquarters and legs. It gives the horse a finished appearance. To get a raised effect, go under each strand as you braid rather than over.

To finish the tail, braid out about 5 or 6 inches, then double the braided end up with the unbraided section on top pointing up the tail bone. Put a rubber band around the doubled-back braid, then turn the braid under and slide it up underneath the tail braid until just a small braid is still showing. Finally, put a rubber band around the small loop at the bottom of the tail braid.

The pinwheel method is another way of finishing the tail braid.

1. How often should you groom your horse?

2. What tools are required to groom your horse?

3. Describe how you would groom and clip your horse.

Education Center

Cornell University
Cooperative Extension
Cattaraugus County

Education Center
28 Parkside Drive
Ellicottville, NY 14731
t. 716-699-2377
f. 716-699-5701

cattaraugus.cce.cornell.edu

# 4-H Youth Horse Program

## COMMITMENT TO EXCELLENCE

- I believe that participation in the 4-H Horse Program should demonstrate my own knowledge, ability and skill as a caretaker and exhibitor of equines.
- I will do my own work to my fullest extent that I am safely capable and will accept advice and support from others.
- I will not use abusive, illegal, fraudulent, deceptive or questionable practices in the feeding, fitting and showing of my animal(s), nor will I allow my parents or any other individuals to employ such practices with my animal(s).
- I will read, understand and follow the rules put forth by the Cattaraugus County 4-H Horse Program, without exception, for all horse shows in which I am a participant, and I will ask that my parents and supervisors of my project do the same.
- I wish for my horse project to be an example of how to accept what life has to offer, both good and bad, and how to live with the outcome.
- I realize that I am responsible for:
    1. The grooming, and care of my project animal(s),
    2. The proper care and safe, humane treatment of my animal(s),
    3. The safe handling of my animal(s) at all times,
    4. Demonstrating strong moral character as an example to others.
    5. Supporting and respecting all the youth and volunteers at any and all 4-H events

_____ _____

4-H Youth's Signature Date

_____ _____

Parent/Guardian Signature Date

_____ _____

4-H Educator's Signature Date

# NYS 4-H HORSE CERTIFICATE

____ Personally owned

____ Family owned

____ Non-owned
(See non-ownership policy/reverse side)

Date _____ 20____

Name of Animal

Date Animal Born (Mo.) (Day) (Yr.) Sex M ☐ G ☐

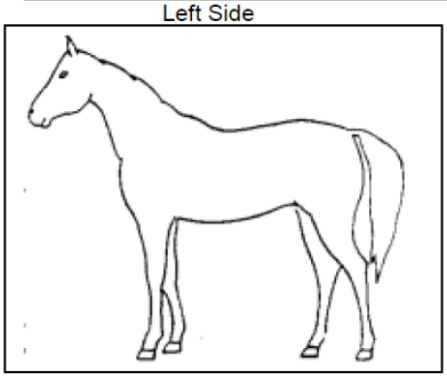
Name of Sire

Name of Dam

Registry/Breed Reg. No.

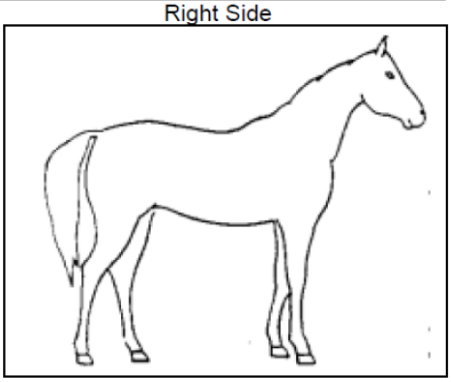
Date of Purchase Member County

Left Side



Draw markings on each side and face identical to your horse

Right Side



Color Owner

Height Address

Weight

(Zip)

Signature of Owner

This animal has been officially designated as the 4-H project animal of the 4H'er as of June 1 of the current project year.

**Name of 4-H'er** _____

Address _____

_____ Zip _____

Telephone _____ Email _____

_____
Member's Signature

**Parent/Guardian** _____

Address _____

_____ Zip _____

Telephone _____ Email _____

_____
Parent/Guardian Signature

**4-H Leader Name** _____

Address _____

_____ Zip _____

Telephone _____ Email _____

_____
Leader's Signature

**Educator** _____ County _____

Address _____

_____ Zip _____

Telephone _____ Email _____

_____
CCE Educator Signature

Remember to include a copy of your current Coggin's test - test dated this year or last year. *Proof of rabies vaccination required - must he current, given more than 14 days prior to arrival at fairgrounds, and remain current for duration of the Fair.

***See reverse side for important information***