

Unit 8 Equine
Young Horse Development Project



Member's Manual
Draft 2008



Manitoba Agriculture, Food and Rural Initiatives
www.gov.mb.ca/agriculture/



4-H MOTTO

Learn to do by doing.

4-H PLEDGE

I pledge

My HEAD to clearer thinking

My HEART to greater loyalty

My HANDS to larger service

My HEALTH to better living

For my club, my community and my country

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This project is the result of cooperation between Manitoba 4-H and the Manitoba Equine Ranchers Association

Manitoba 4-H project material is cost-shared between:

- *Manitoba Agriculture, Food and Rural Initiatives*
- *Agri-Food Canada.*

Thank you to Alberta Agriculture for the use of their Young Horse Project material

SECTION

1

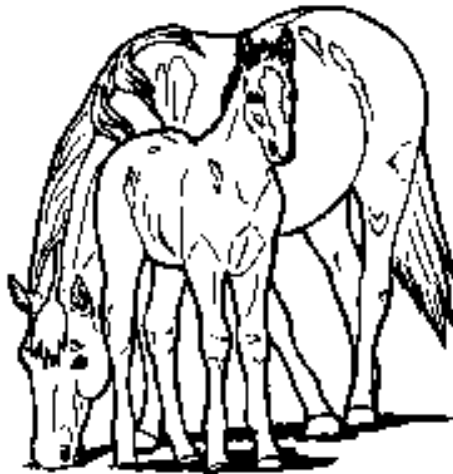
WELCOME

Welcome to the Young Horse Development Project. Over the next two years this project is intended to help senior 4-H members successfully raise and train a horse.

Light work should be done with a two year old because it has less physical strength and a shorter attention span than a three year old. A properly developed two year old could have six weeks of light riding in the summer of its second year. Light trail riding may be included. Too much riding at this age can contribute to leg and back problems as the horse gets older.

This project is **not** intended for the young or inexperienced member. Many of the basic skills must be learned before entering this unit. If the information is covered in other 4-H units, it has been shortened or left out of this project book. You will be expected to apply what you have learned about basic care, safety, general handling and riding. In some cases, physical strength is needed.

A wide variety of topics are covered. The sections on handling and riding look short but these will take you longer than any other part of the book because you must apply the information. The work is not difficult, but it takes a long time and patience. Work at a rate the horse can understand. You will be more satisfied with your final results.



SECTION	PROJECT COMPLETION REQUIREMENTS
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2	PROJECT COMPLETION REQUIREMENTS
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The Young Horse Development Project is designed to be completed over a two year period. To complete the Young Horse Development Project the member must complete:

- **“My 4-H Record Sheet” (both years).**
- **Pre-purchase evaluation(To be left in project book) including:**
 - Completed evaluation chart for a minimum of two ranch visits
 - An evaluation of no more than one 8 ½” x 11” page outlining your reasons for selecting / purchasing your foal. Be sure you have clearly indicated what you were looking for in a horse and why you selected the foal you purchased.
 - horse ID form
- **The project book, including all records and assignments.** Members to have completed section on longing by the end of year 1.
- **Monthly Progress Report:** You are required to write a monthly diary of your work/activities in YHDP- it is important to keep these diaries updated on a regular basis. (Minimum of 24 in total). The format is up to you. This is an excellent way to highlight anything new you are working on with your foal as well as any problems or successes that you experience. Highlights might include growth or milestones in foal development, any problems or challenges you faced, and new skills you and your foal learned

You are encouraged to keep a daily journal of your activities to help you complete your monthly progress reports. Include details on training, feeding and care of your project foal undertaken each month. You may wish to include pictures. (Insert more pages as required).

- **Take part in a yearling and under saddle presentation.**
- **Complete and return project evaluation at the end of year 1 and 2 of the project.**

The member is expected to be active in their local 4-H club and meet all club requirements for achievement. Their green record sheet should reflect this active involvement at club level.

By applying and being selected to participate in the Young Horse Development Project the member has agreed to abide by the following Rules and Regulations of the 4-H Young Horse Development Project.

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SECTION

3

RESOURCE RECORD

Although you are expected to train the animal yourself, you will want and need to seek out more information than is provided in the project book.

Some sources of information may include:

- trainers, clinicians
- veterinarians
- books
- magazines
- videos
- clinics you have attended
- CEF guidelines

Please list here the additional sources of information you used. Please add additional pages if necessary.

The other units in the Light Horse & Pony Project can also serve as an excellent resource for you:

Ride On

- Conformation
- Facilities
- Nutrition
- Horse Health
- Parasites & Deworming



Canter

- Longeing
- Conformation
- Facilities
- Feed
- Health
- Side Passing
- Lead Changes



Let's Jog

- Housing
- Preparing Halter Horses
- Safety
- Nutrition

Trot Please

- Facilities
- Trailering Your Horse
- Grooming
- Feeding and Nutrition
- Riding



Walk On

- Buying the First Horse
- Tack and Equipment
- Safety
- Feeding
- Care of the Horse
- Beginning Riding

4-H Livestock Judging Manual

CEF Guidelines

- Longeing

Horse Nutrition

Light Horse and Pony Project Unit 2, Unit 3 and Unit 4 (No longer in print. You or your leader may have a copy from previous project years)

Other Resource Material (available through MAFRI District offices)

- Horse identification Form
- 4-H Equine Manual Record Book
- 4-H Equine Ration Formulation – Excel
- Manitoba 4-H Horse Show Guide
- Let's Judge
- Judging Horses
- Safe Animal Handling CD ROM
- AQHA's "Rising Star Horse Camp"
- 4-H Awe Program

Videos

- The Rules are Black and White
- Every Time...Every Ride...
- Together on the Road
- Basic Horsemanship – Volume 1 – Fro the Ground Up
- Basic Horsemanship – Volume 2 – Health Care
- Basic Horsemanship – Volume 3 – Mount Up
- In the English Tradition – Part 1
- In the English Tradition – Part 2
- Loading and Trailering Horses
- Horse Judging – Part 1
- Horse Sense for Kids
- Harness Racing Careers
- Selecting & Showing Hunter Under Saddle Horses
- Advanced Training of the Western Horse
- Basic Horse Training
- Intermediate Horse Training
- Horses, Kids and Ethics

All of these video materials may be ordered through your district office of Manitoba Agriculture, Food and Rural Initiatives. Please allow some lead time when ordering – only one or two copies are available.

SECTION

4

INFORMATION SHEET

Member _____

Club _____

Club Leader _____ Year _____

1. I have completed Unit _____ in the 4-H Light Horse Project.

2. I will be purchasing a young horse for the project from _____

3. I would eventually like to use this horse for _____

4. I want a horse that will mature at nearly _____ hands high. It should be a _____ type of conformation.

5. Doing this project, I want to learn:

6. Three summaries of ranch visits including ranches name and date of visit:

7. Evaluation outlining your reasons for selecting your foal (maximum of one 8 ½ x 11 page).

8. Please attach 3 clear photos that show your project horse from each side plus head-on. On the lines below print or write a written description of your horse.

NAME _____

BREED _____ SEX _____

COLOR _____

HEIGHT _____ WEIGHT _____

MICROCHIP # _____

MARKINGS _____

SECTION**5****NUTRITION****HORSE MANAGEMENT: FEEDING**

Although horse people as a rule conscientiously try to feed well, a lack of basic understanding often results in an improper diet for the horse. Most novice horse owners and even many experienced producers do not appreciate and understand the importance of proper diets for horses.

Foals raised in Western Canada frequently do not reach their full potential in growth and performance because of improper feeding or management during their first year of life. This may be due to poor milking mares, mature or low quality pastures, lack of supplementation, parasites, or the influence of cold winter conditions.

TABLE 1 NUTRIENT REQUIREMENTS OF A HORSE
(MATURE WEIGHT OF 1150 LBS [523 KGS])

Age (Months)	Body Weight		Daily Feed		Digestible	Protein (kg)	Calcium (g)	Phosphorus (g)	Vitamin A (IU)
	(kg)	(lb)	(kg)	(lb)	Energy (Mcal)				
4	182	400	4.7	10.4	12	.6	25	14	8200
8	250	550	6.3	13.9	16.1	.8	28	16	11300
12	318	700	7.3	16.2	18	.81	27	15	14300
18	380	835	8.7	19.1	19	.86	26	14	17100
24	441	970	9.9	21.8	21.3	.9	28	16	19800

Based on a colt gaining 1.25 lbs per day until a year of age then dropping gradually to .75 lbs per day and maintaining that growth rate until 2 years of age.

Raising Foals

A foal should weigh approximately 10% of its mature weight at birth, 45% of its mature weight at 6 months of age and 66% of its mature weight at one year of age. That is, a foal that should mature at 500 kg (1100 lb) should be approximately 50 kg (110 lb) at birth, 230 kg (500 lb) at 6 months and over 330 kg (700 lb) at one year of age. They should gain over 0.9 kg (2 lb) daily from birth to weaning and over 0.5 kg (1 lb) daily from 6 months to 1 year of age.

Growth in terms of height is more dynamic. A foal should be approximately 85% of its mature height at 6 months of age and 90% of its mature height at 1 year.

If possible have your colt weighed within the first weeks after weaning. This will enable you to more accurately determine his nutritional needs. If it is not possible to have your colt weighed, then the following

table will provide a rough guide to its weight.

TABLE 2

<u>DETERMINE THE HORSES WEIGHT</u>			
<u>Girth Length</u>		<u>Weight</u>	
<u>Inches</u>	<u>(cm)</u>	<u>Lbs.</u>	<u>(Kgs)</u>
30	(76)	100	(45.5)
40	(102)	200	(91)
45.5	(116)	300	(136.5)
50.5	(128)	400	(182)
55	(140)	500	(227)
58.5	(148)	600	(273)
61.5	(156)	700	(318)
64.5	(164)	800	(364)
67.5	(171)	900	(409)
70.5	(178)	1,000	(455)
73	(185)	1,100	(500)
75.5	(192)	1,200	(545)
77.5	(197)	1,300	(591)

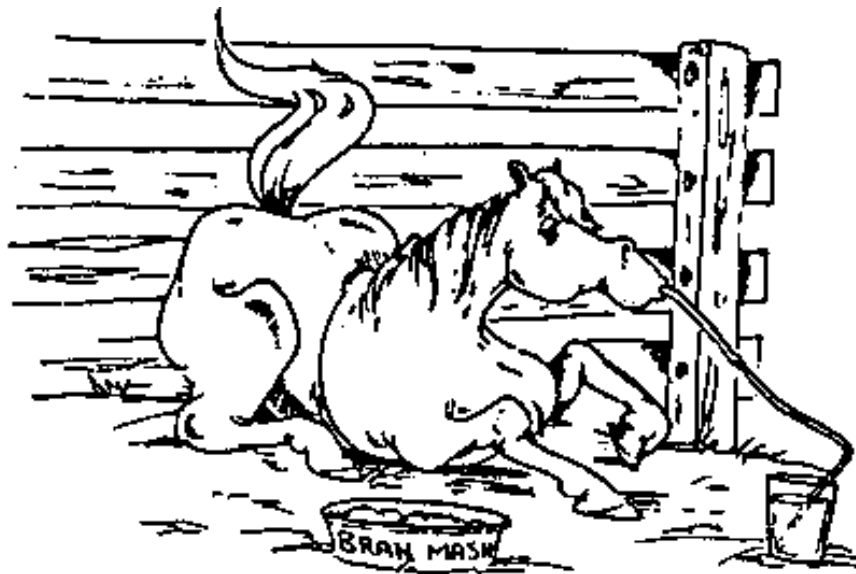


TABLE 3

SAMPLE DIETS

	HAY *1	OATS	SOYBEAN	MINERALS	VITAMIN A
--	--------	------	---------	----------	-----------

	lb	(kg)	Lb	(kg)	lb	(kg)	g *2	IU
DAILY DIETS FOR (400 kg) HORSES – MATURE WEIGHT								
Weaned Foals								
3 months	3-4	(1.6)	3	(1.4)	2	(.9)	85	7,000
6 months	6	(2.7)	4	(1.8)	1	(.4)	110	15,000
9 months	7.5	(3.4)	4	(1.8)	0.5	(.2)	60	15,000
Yearlings	9-11	(4.5)	3-4	(1.4)	---	---	20	20,000
Two Year Olds	12-14	(6.0)	1-2	(0.5)	---	---	10	25,000
DAILY DIETS FOR (500 kg) HORSES – MATURE WEIGHT								
Weaned Foals								
3 months	4.0	(1.8)	4	(1.8)	2	(0.9)	100	10,000
6 months	7.5	(3.4)	5-7	(2.7)	1	(0.4)	150	20,000
9 months	9.0	(4.1)	4-5	(2.0)	1	(0.4)	85	25,000
Yearlings	12-14	(6.0)	3-4	(1.6)	---	---	20	30,000
Two Year Olds	14-16	(7.0)	2-3	(1.0)	---	---	10	40,000
DAILY DIETS FOR (600 kg) HORSES – MATURE WEIGHT								
Weaned Foals								
3 months	5-6	(2.3)	4-5	(2.0)	2	(.9)	200	30,000
6 months	9	(4.1)	5-6	(2.5)	1	(.4)	160	30,000
9 months	11-13	(5.4)	4-5	(2.0)	1	(.4)	90	30,000
Yearlings	13-15	(6.4)	4-5	(2.0)	---	---	25	40,000
Two Year Olds	16-18	(8.0)	2-3	(1.0)	---	---	10	40,000

*1 Should be good quality alfalfa-grass mixture. Decrease hay by about 1 kg (2 lb) and increase grain by 1 kg (2 lb) if the hay is of questionable quality.

*2 Use mineral mix containing approximately 20% calcium, 10% phosphorus, 25% salt plus trace minerals for foals and one containing approximately 20% phosphorus for mature horses.

Foals will eat less than 0.45 kg (1 lb) of supplement daily before 2 months of age. By 4 months of age, they will eat about 1.5 to 2.0 kg (4 lb) daily. Foals should be weaned when they are eating 2.5 to 3.0 kg (6 lb) daily. They usually are weaned with few problems or setbacks. Once weaned, foals should be fed good hay to appetite plus 2.5 to 3.0 kg (5-7 lb) of a foal ration given two equal feedings daily. This amount of foal ration is fed through the winter. The feeding level should not be increased and no additional supplements given. By 9 months of age whole or rolled oats can replace one-half of the above foal ration. At one year or when good grazing is available the grain mix can be reduced to about 1.8 kg (4 lb) daily. This level of grain along with 5 to 7 kg (12 - 15 lb) of good hay can be fed throughout the horse's second winter as well.

Foal Ration

The foal ration is extremely important for raising foals in western Canada. By the time a foal is 3 months of age, 50% of its nutrients must come from something other than milk. Pastures are green and lush from approximately mid-May to early August. After early August most pastures are too low in quality to provide sufficient extra nutrients for optimum growth of foals. The major nutrients required in a supplement are protein, calcium and phosphorus for growth of muscle and bone. Oats alone are not a satisfactory creep ration because they do not have the extra protein and minerals required. Therefore, the energy oats supply is deposited as fat because it cannot be used for growth. Many foals are weaned in a fat condition but smaller than normal because they have been given sufficient energy but an insufficient amount of protein and minerals. Foals that are weaned past mid-August without being creep fed have had their growth restricted. If the restriction has been lengthy it can be permanent.

Because of improper foal feeding, post-weaning growth problems are common. Often foals are not creep fed or weaned until October or November. Following weaning the foals are then fed excessive amounts of foal ration. They grow very rapidly to compensate for the early restriction. This rapid growth predisposes the foals to problems such as contracted tendons and epiphysitis. These growth problems are often associated with nutrient deficiencies, excesses, or imbalances, especially relating to minerals and vitamins. Epiphysitis and contracted tendons are seldom observed in foals that have been creep fed, weaned properly and fed sensible grain levels after weaning to maintain a steady, uniform state of growth.

The foals can be self-fed, although care should be given to adapting foals to the self-feeder and to mixing a ration so ingredients cannot be sorted. One major advantage of self-feeding is that foals can eat several times per day and there is no competition for feed. Hay and grain can be fed separately but one or the other should be limited.

Most of the foals selected for the 4-H YHDP will not have been creep fed while nursing the mares. Thus it is important to obtain your colt as soon as possible after September 1st, and then provide it with a balanced ration.

Colts and fillies should be separated after 8 or 10 months of age when sexual activity is apparent. Foals are playful and require considerable room to exercise so plenty of space should be available, ie. 28 to 47 m² (300 - 500 ft²) per head). One expects the foal to grow up to be athletic, and proper development of muscles and coordination needs to start very early in life. The deep snowfall and proper footing characteristic of western Canadian winters restricts horses' natural tendency to properly exercise themselves. Handling the foal is important and the younger initiated the better. Weaned foals should be halter-broken and some time should be spent grooming the foals and picking up their feet.

Feeding Problems in Foals

Each year numerous foals are mismanaged to the extent that they never reach their full potential in terms of size and performance. Major foal feeding problems include contracted tendons, epiphysitis and deficiencies.

Common causes include late weaning, overfeeding grain following weaning, under feeding, feeding unbalanced diets, misuse of minerals, and lack of proper supplementation to hay-grain diets. Prevention involves creep feeding foals and the proper use of supplemental protein, minerals and vitamin A.

Contracted Tendons

Contracted tendons generally occur either in newborn foals or in foals 6 to 12 months of age. The cause of the problem in newborn foals is generally unknown. Most foals with contracted tendons at birth improve gradually to become normal within a few weeks. As long as improvement is observed, treatment is not necessary. However, some foals do not improve and even become worse. In these cases treatment is necessary. A manganese deficiency is a possible cause of early contraction. Feeds can be analyzed for selenium, copper, manganese and zinc. If feed is grown on the farm, an analysis for these trace minerals every second or third year should be sufficient. If hay is purchased, then an annual analysis may be worth while. If trace minerals are deficient, either trace mineralized salt or a commercial mineral mix that has extra trace minerals should be fed to mares all year.

A more common type of contracted tendon occurs within 3 or 4 months following weaning. If foals are weaned late (October, November, December) and fed a high energy ration, contracted tendons are common. Compensatory growth occurs in foals following a two or three month period of restricted growth before weaning. During the rapid growth period following weaning, the bones apparently grow at a much faster rate than the tendons. Mineral and protein levels may have an influence. The incidence is much higher in Quarter Horses with a genetic tendency to have upright pasterns than in other breeds. Correction is generally possible if attended to quickly. Correction consists of reducing the foals to a maintenance diet so as to limit growth and bone development. A sample correction diet for a 227 kg (500 lb) foal is 4.5 kg (10 lb) grass hay plus 1.5 kg (3 lb) of a balanced foal ration.

Prevention is most important. Foals should be fed a creep ration that contains added protein, minerals and vitamins before weaning so as to keep them growing uniformly and to prevent excessively rapid growth after weaning. After weaning and throughout the winter, foals should be fed limited amounts 3 kg (6 lb/per day) of a balanced foal ration plus free choice good hay. A foal ration should contain about 16% protein, 0.8% Ca, 0.6% phosphorus, plus vitamin A and trace minerals. Foals should not be overfed or underfed prior to 1 year of age.

Epiphysitis (Inflamed swollen knees or ankles)

Epiphysitis occurs in ankles of foals 2 to 6 months of age and in the knees of foals 5 to 12 months of age. The foals are generally lame and the top ridge of the knee joint (or ankle) is swollen, warm and painful. The condition occurs because of damage to the growth plates. Bones grow from soft tissue (growth plate or epiphysis) present at their lower end.

The growth plate can be damaged because of a mineral deficiency or imbalance, vitamin D excess, offset knees, excessive energy intakes, compensatory growth, heavy bodies on fine bones, or most often a combination of the above.

The incidence is particularly high in Quarter Horses, especially those that are heavily fed for show or sale purposes. The condition is common in Appaloosas, Paints and Thoroughbreds as well. The condition seldom occurs in Arabians.

Correction is to restrict growth as described under the section dealing with contracted tendons. Epiphysitis and contracted tendons often occur together, however, epiphysitis may take longer to correct. Treatment with medication, bandages, etc. is not effective, however, it may be helpful if recommended by a veterinarian and provided the diet is restricted as described.

Prevention consists of using a foal ration that is balanced for energy, protein, minerals and vitamins, creep

feeding properly and feeding adequate but restricted amounts of a concentrate following weaning. Selection against offset knees, upright pasterns and fine bones should be practiced.

Deficiencies

Many foals never reach their full potential for size and performance because of nutrient deficiencies in their first year of life. Many of the common deficiencies are not readily observable, so even experienced horseman sometimes do not realize they have occurred or are occurring.

Phosphorus. All soils and roughage in western Canada are deficient in the mineral phosphorus.

The major role of phosphorus is in the development and maintenance of normal healthy bone. Phosphorus also has a role in reproduction as a component of several reproductive hormones.

No combination of hay and grain has sufficient phosphorus for a weaned foal. In most cases, free choice mineral mixtures are not consumed in sufficient quantities to meet requirements. On average foals have to consume 90 g of a supplement containing 14% phosphorus to meet requirements.

If foals do not receive or consume sufficient phosphorus, bone development and strength are reduced. Unless severely deficient, foals appear normal and healthy.

Prevention involves the use of a feed analysis and the addition of sufficient mineral to the grain mixture. The use of commercial palletted rations is often useful to prevent foals from sorting out and leaving the minerals which have been added.

To prevent creating a calcium phosphorus imbalance (higher levels of phosphorus than calcium), mineral mixtures for foals should contain at least as much calcium as phosphorus. If the hay contains no alfalfa, the calcium level in the mineral mixture should be higher than the phosphorus level. To avoid trace mineral deficiencies, mineral mixtures should contain added copper, zinc and manganese. Selenium should be included only in selenium deficient areas.

To prevent epiphysitis developing while a colt's bones are growing; that is until at least two and one half years of age, the calcium to phosphorus ratio in the total diet should not exceed three to one. Thus you must provide the required levels of each mineral and also make sure that the amount of calcium does not exceed three times amount of phosphorus. In many diets where the hay is mostly alfalfa, the calcium level will be very high. To balance the Ca:P ratio one can reduce the amount of calcium in a diet by using a hay with a lower percentage of alfalfa. Alternatively one may use a vitamin mineral mix low on calcium and high on phosphorus; for example 2% Ca and 18% P. Most common vitamin mineral mixes are either equal parts Ca and P or perhaps even twice as much Ca as P. These particular supplements will not compensate for the high Ca in a diet resulting from feeding alfalfa.

Protein. Most hay and grain mixtures have insufficient protein for weaned foals and a protein supplement must be fed. If foals are deficient in protein, growth of muscle and bone is restricted. Unless the deficiency is severe, foals look normal except for their reduced size. If the deficiency is severe, muscle deterioration and poor skin and coat condition are observable. On average, foals require the addition of either 0.45 kg (1 lb) soybean meal or 0.91 kg (2 lb) of a commercial supplement containing 20% protein. The commercial supplement has the extra calcium, phosphorus, trace minerals and vitamins required as well.

Energy. Weaned foals require grain in addition to hay which fed alone is insufficient in energy. If the diet is deficient in energy producing ingredients, foals become thin and overall growth is restricted. Many

foals are energy deficient if they are weaned in October or November and are not creep fed. Other causes include feeding and weaning foals with older horses, use of a poor hay, or feeding insufficient grain. Most foals require about 1.8 kg (4 lb) of grain plus supplements daily prior to weaning and 2.7 kg (6 lb) of grain plus supplements daily from 6 to 12 months of age. In addition 5 to 6 kg (10 - 14 lb) of good hay is required daily. Foals should not be fed with older horses as they require more than older horses, yet cannot compete as well.

The D E (digestible energy) levels of hay given in a lab analysis or from an estimated value table are based on the energy a cow can obtain from that feed. Horses are not quite as efficient as cows at using the energy from hay. In fact they are about 15% less efficient so you must multiply the given D E value by .85 when calculating the energy your horse receives from his hay. D E levels for grain or supplements are the same for horses and cattle therefore do not need adjusting.

If the colt is exposed to very cold temperatures, especially combined with wind and snow, it's energy requirements will increase somewhat. The amount of grain fed should be increased under these conditions. When a colt is in training and being ridden, the extra work may also call for a slight increase in the energy requirements.

Vitamin A. Vitamin A is often deficient in foals. Vitamin A assists in maintaining skin condition and in general resistance to disease. Foals should receive 20,000 IU daily of supplemental vitamin A. Most commercial supplements contain vitamin A. Excesses of vitamins can be toxic to horses so horseman are cautioned not to overfeed vitamins. Overfeeding occurs when several commercial supplements are fed at once.

Assume the vitamin A level in all feeds is zero except in a commercial feed because it has vitamin A added. Therefore unless you are feeding a "complete feed" you must add an adequate level of a vitamin mineral mix to the grain to provide both the needed vitamins and minerals

To summarize, in some cases foals were creep fed a concentrate mixture that contains about 16% protein, 0.8% calcium, 0.60% phosphorus, and 6,000 IU vitamin A per kg plus added trace minerals. Foals should be weaned when they are consuming about 1.8 kg (4 lb) of the above foal ration daily. However, after weaning, foals should be fed 5 to 6 kg (10 - 14 lb) good hay daily plus 2.7 kg (6 lb) of the above foal ration daily from 6 to 12 months of age. Horses that mature at weights less than 450 kg (1,000 lb) should receive slightly less foal ration and horses that will mature at weights above 600 kg (1,300 lb) should receive slightly more. Foal ration should be divided into two equal feedings per day. Free choice water is essential for normal growth of foals.

Yearlings and Two Year Olds

Yearlings and two-year olds can be handled together. Horses grow till they are three or four years of age but at decreasing rates. For example, a 320 kg (700 lb) yearling that will reach a mature weight of about 500 kg (1,100 lb) should gain about 0.45 kg/day (1 lb/day) during its second summer (12 - 18 months) and about 0.2 kg/day (0.5/day) during its second winter (18-24 months). Weight gain after two years of age will vary considerably. As a guideline, average weights of 320 kg (700 lb), 365 (800 lb), 440 kg (970 lb) and 475 kg (1,050 lb) at 12, 18, 24 and 36 months respectively are realistic.

Good pasture is the most economical and desirable method of growing yearlings and two-year olds. If supplemented with minerals, sufficient nutrients will be supplied and the horses will obtain adequate exercise. As the pasture matures in the fall, quality is reduced and supplemental protein and vitamins become necessary. During the winter, yearlings and two-year olds can be maintained on high roughage rations. Since yearlings and two-year olds do not compete well with mature horses they should be fed separately.

Additional resource: Horse Nutrition Made Easy.

Complete the Ration Worksheets for your foal at 8, and 18 months of age.



TABLE 4

AVERAGE COMPOSITION OF ROUGHAGES AND CONCENTRATES COMMONLY FED TO HORSES
(ALL VALUES ON AIR-DRY OR AS-FED BASIS)
 Adapted from United States-Canadian Tables of Feed Composition
 (National Academy of Sciences)

Feedstuffs	Digest Energy Mcal/kg	Crude Protein %	Ca %	P %
Grass/Alfalfa	2.000	12.5	1.05	0.20
Alfalfa hay (mid-bloom)	2.280	15	1.10	0.20
Sweet clover hay	1.980	14	1.10	0.20
Bromegrass hay	2.000	9.0	0.40	0.20
Prairie hay	2.000	7.4	0.31	0.19
Timothy hay	2.250	7.3	0.21	0.11
Oat hay	2.370	8.1	0.23	0.21
Oat straw	1.700	4.0	0.30	0.09
Wheat straw	1.900	3.2	0.15	0.07
Barley	3.250	11	0.05	0.30
Oats	2.980	11	0.08	0.30
Wheat	3.400	13	0.05	0.36
Corn	3.470	9	0.03	0.27
Rye	3.330	12	0.06	0.34
Wheat bran	2.750**	16	0.14	1.15
Wheat middlings	3.400	18	0.11	0.76
Grain screenings (#1 Feed)	2.780	13	0.43	0.39
Beet pulp (molasses)	2.890	9.1	0.68	0.10
– dried	3.020	6.7	0.16	0.03
Molasses (beet)	3.170	48	0.32	0.67
Soybean meal				
Rapeseed meal	3.000	37	0.50	0.95
Linseed meal	3.250	35	0.44	0.89
Alfalfa meal	2.540	18	1.30	0.24
(dehydrated)	2.350	16	1.20	0.28
Alfalfa meal (sun-cured)	3.200	44	0.13	1.43
Brewers dried yeast				
Brewers' dried grains	2.670	26	0.27	0.50
Dried skimmilk powder	3.560	33	1.25	1.00
Meat meal	3.180	55	7.90	4.00
Herring meal	3.440	72	2.90	2.20
Deflourinated rock phosphate			33.0	18.0
Dicalcium phosphate			31.0	18.0
Ground limestone			38.0	--
Monosodium phosphate			--	25.0

- Some data for horses give higher energy values for bran.

RATION FORMULATION:

The following factors are important to remember when you are formulating rations:

1. Know or find out the nutrient requirements of the animal you are feeding. (NRC nutrient requirements of horses are given in Table 1) Make a list of them.
2. If at all possible, have your feeds, both grain and hay analyzed at a laboratory. The nutrient content of a feed grown during one year or in one field can vary tremendously from that grown during another year or in another field. Your local Ag Office can supply you with material and instructions for taking feed samples and having them analyzed. If it is not possible to have your feeds analyzed then you can use average estimated values as given in Table 4.
3. Determine the cost of each ingredient. When the cost of one is too high (for example, oats) you may be able to substitute other ingredients of lower cost to get the same nutrients.
4. Realize that there are some restrictions or limitations on the ingredients you use. For example, you cannot feed a horse only oats as the horse needs some roughage.
5. Determine the level of feed intake best for your horse. This will vary between 1.5 to 2.5 kg feed per 100 kg. live weight of the horse.
6. Remember to feed roughage at the desired daily level. Roughage intake should be restricted to about 1 to 1.5 kg. Per 100 kg. For horses in training.
7. Calculate the amount of energy the horse receives each day from hay and then feed enough grain to supplement the horse's total daily supplements.
8. Check to see if the ration supplies adequate amounts of protein, calcium, phosphorus, vitamins, etc. Use appropriate supplements if necessary.
9. Combine all the above considerations to formulate a balanced ration at the lowest possible cost.
10. Keep a record of everything you feed your horse along with costs. It is not necessary to keep a record of water.

You may wish to do your ration records using the computer. Please print the completed ration sheets and include in your book.

WORKSHEET - SAMPLE

RATION FORMULATION - 8 MONTHS

1. Estimated mature weight of horse 1200 lbs.
 Estimated present weight of horse 550 lbs

2. Present nutrient requirements of horse: (Table 1)

Daily Feed (Kg)	Digestible Energy (DE) (Mcal)	Protein (Kg)	Calcium (g)	Phosphorus (P) (g)	Vitamin A (IU)
<u>6.3</u>	<u>16.1</u>	<u>.8</u>	<u>28</u>	<u>16</u>	<u>11,300</u>

3. What feeds do you have for your horse?

grass-alfalfa hay, barley

4. What is the nutrient content of the above feeds? (feed test result) feed labels or table 4)

Type of feed	Digestible Energy (DE) (Mcal per Kg)	Protein (%)	Calcium (Ca) (%)	Phosphorus (P) (%)	Vitamin A (IU)
<u>grass/alfalfa hay</u>	<u>2.1</u>	<u>9.7</u>	<u>.67</u>	<u>.09</u>	-
<u>barley</u>	<u>3.6</u>	<u>9.8</u>	<u>.04</u>	<u>.36</u>	-

5. How many Kg of hay is your horse eating per day? 6.3

6. First balance the ration for energy (DE):

- | | |
|---|----------------------|
| a). DE requirements of horse (from question 2)? | <u>16.1</u> Mcal |
| b). Amount of hay fed (from question 5)? | <u>6.3</u> Kg |
| c). DE content of hay (from question 4)? | <u>2.1</u> Mcal / Kg |
| d). DE available from hay? [(B x C) x .85] | <u>11.2</u> Mcal |
| e). DE to be supplied by grain? (A - D) | <u>4.9</u> Mcal |
| f). DE content of grain (from question 4)? | <u>3.6</u> Mcal / Kg |
| g). Amount of grain required? (E ÷ F) | <u>1.4</u> Kg |

7. ~~**~~ - because of cold weather, grain was increased to 2.2 Kg
 Check the ration for Protein:

- | | |
|---|---------------|
| a). Amount of hay fed (from question 5)? | <u>6.3</u> Kg |
| b). Protein content of hay (from question 4)? | <u>9.7</u> % |
| c). Protein available from hay? (A x B) | <u>.61</u> Kg |
| d). Amount of grain fed (from question 6g)? | <u>2.2</u> Kg |
| e). Protein content of grain (from question 4)? | <u>9.8</u> % |
| f). Protein available from grain (D x E) | <u>.22</u> Kg |
| g). Total Protein fed? (C + F) | <u>.83</u> Kg |

8. Check the ration for Calcium (Ca): (round off c, f and g to nearest gram)

a.	Amount of hay fed (from question 5)?	<u>6.3</u> Kg
b.	Ca content of hay (from question 4)?	<u>.67</u> %
c.	Ca available from hay? [(A x B) x 1000]	<u>42</u> g
d.	Amount of grain fed (from question 6g)?	<u>2.2</u> Kg
e.	Ca content of grain (from question 4)?	<u>.04</u> %
f.	Ca available from grain? [(D x E) x 1000]	<u>1</u> g
g.	Total Ca fed? (C + F)	<u>43</u> g

9. Check the ration for Phosphorus (P): (round off c, f and g to nearest gram)

a.	Amount of hay fed (from question 5)?	<u>6.3</u> Kg
b.	P content of hay (from question 4)?	<u>.09</u> %
c.	P available from hay? [(A x B) x 1000]	<u>6</u> g
d.	Amount of grain fed (from question 6g)?	<u>2.2</u> Kg
e.	P content of grain (from question 4)?	<u>.36</u> %
f.	P available from grain? [(D x E) x 1000]	<u>8</u> g
g.	Total P fed? (C + F)	<u>14</u> g

10. Summary: Nutrients Supplied

Feed	Amount Fed Kg / day	Digestible Energy (DE) (Mcal)	Protein Kg	Calcium (Ca) g	Phosphorus (P) g	Vitamin A IU
grass alfalfa hay	6.3	11.2	.61	42	6	/
barley	2.2	7.9	.22	1	8	/
Total	8.5	19.1	.83	43	14	∅

11. Compare your horse's requirements for DE, Protein, Ca and P (from question 2) and the amounts supplied (Totals from question 10).

	DE (Mcal)	Protein Kg	Calcium (Ca) g	Phosphorus (P) g	Vitamin A IU
Required	16.1	.8	28	16	11,300
Supplied	19.1	.83	43	14	∅
Deficiency/Excess	+3	+.03	+15	-2	-11,300

12. Keeping in mind that the Ca : P ratio in the diet should be no more than 3 : 1, what additional supplements if any are needed to correct any deficiencies or imbalances noted in question 11?

I need a supplement with Vit. A and more phosphorus than calcium because we have excess calcium and a phosphorus deficiency. I can use a supplement such as Weatherguard #8 (2% Ca, 3% P, 500 KIU/kg Vit. A). Also can give a little bit molasses to stick the mixture to the grain. Be sure it is all eaten.

13. How much of the supplement is required, and what amount of the required nutrients will it supply?

Supplement	Amount Fed g / day	Digestible Energy (DE) (Mcal)	Protein Kg	Calcium (Ca) g	Phosphorus (P) g	Vitamin A IU
#8 Weatherguard	25	—	—	1	5	12,500
Molasses	40	.1	—	—	—	—
Total	65	.1	—	1	5	12,500

14. Final Ration

Include all feeds fed (roughage, grain, supplements) from question 10 and 13, and requirements from question 2.

Feed	Amount Fed Kg / day	Digestible Energy (DE) (Mcal)	Protein Kg	Calcium (Ca) g	Phosphorus (P) g	Vitamin A IU
Grass / Alfalfa Hay	6.3	11.2	.61	42	6	—
Barley	2.2	7.9	.22	1	8	—
#8 Weatherguard	40g	—	—	1	5	12,500
Molasses	25g	.1	—	—	—	—
Total	8.565	19.2	.83	44	19	12,500
Required	6.3	16.1	.8	28	16	11,300

15. Comments: *The Ca:P amount fed is 44 to 19 or a 2.3 to 1 ratio which is less than 3 to 1 so it is acceptable.*

WORKSHEET

RATION FORMULATION - 8 MONTHS

1. Estimated mature weight of horse _____
 Estimated present weight of horse _____

2. Present nutrient requirements of horse: (Table 1)

Daily Feed (Kg)	Digestible Energy (DE) (Mcal)	Protein (Kg)	Calcium (g)	Phosphorus (P) (g)	Vitamin A (IU)
--------------------	----------------------------------	-----------------	----------------	-----------------------	-------------------

3. What feeds do you have for your horse?

4. What is the nutrient content of the above feeds? (Feed test result, feed labels or table 4)

Type of feed	Digestible Energy (DE) (Mcal per Kg)	Protein (%)	Calcium (Ca) (%)	Phosphorus (P) (%)	Vitamin A (IU)

5. How many Kg of hay is your horse eating per day? _____

6. First balance the ration for energy (DE):

- | | |
|---|-----------------|
| a). DE requirements of horse (from question 2)? | _____ Mcal |
| b). Amount of hay fed (from question 5)? | _____ Kg |
| c). DE content of hay (from question 4)? | _____ Mcal / Kg |
| d). DE available from hay? [(B x C) x .85] | _____ Mcal |
| e). DE to be supplied by grain? (A – D) | _____ Mcal |
| f). DE content of grain (from question 4)? | _____ Mcal / Kg |
| g). Amount of grain required? (E ÷ F) | _____ Kg |

7. Check the ration for Protein:

- | | |
|---|----------|
| a). Amount of hay fed (from question 5)? | _____ Kg |
| b). Protein content of hay (from question 4)? | _____ % |
| c). Protein available from hay? (A x B) | _____ Kg |
| d). Amount of grain fed (from question 6g)? | _____ Kg |
| e). Protein content of grain (from question 4)? | _____ % |
| f). Protein available from grain (D x E) | _____ Kg |
| g). Total Protein fed? (C + F) | _____ Kg |

8. Check the ration for Calcium (Ca): (round off c, f and g to nearest gram)

- a). Amount of hay fed (from question 5)? _____ Kg
- b). Ca content of hay (from question 4)? _____ %
- c). Ca available from hay? [(A x B) x 1000] _____ g
- d). Amount of grain fed (from question 6g)? _____ Kg
- e). Ca content of grain (from question 4)? _____ %
- f). Ca available from grain? [(D x E) x 1000] _____ g
- g). Total Ca fed? (C + F) _____ g

9. Check the ration for Phosphorus (P): (round off c, f and g to nearest gram)

- a). Amount of hay fed (from question 5)? _____ Kg
- b). P content of hay (from question 4)? _____ %
- c). P available from hay? [(A x B) x 1000] _____ g
- d). Amount of grain fed (from question 6g)? _____ Kg
- e). P content of grain (from question 4)? _____ %
- f). P available from grain? [(D x E) x 1000] _____ g
- g). Total P fed? (C + F) _____ g

10. Summary: Nutrients Supplied

Feed	Amount Fed Kg / day	Digestible Energy (DE) (Mcal)	Protein Kg	Calcium (Ca) g	Phosphorus (P) g	Vitamin A IU
Total						

11. Compare your horse's requirements for DE, Protein, Ca and P (from question 2) and the amounts supplied (Totals from question 10).

	DE (Mcal)	Protein Kg	Calcium (Ca) g	Phosphorus (P) g	Vitamin A IU
Required					
Supplied					
Deficiency/Excess					

12. Keeping in mind that the Ca : P ratio in the diet should be no more than 3 : 1, what additional

supplements if any are needed to correct any deficiencies or imbalances noted in question 11?

13. How much of the supplement is required, and what amount of the required nutrients will it supply?

Supplement	Amount Fed g / day	Digestible Energy (DE) (Mcal)	Protein Kg	Calcium (Ca) g	Phosphorus (P) g	Vitamin A IU
Total						

14. Final Ration

Include all feeds fed (roughage, grain, supplements) from question 10 and 13, and requirements from question 2.

Feed	Amount Fed Kg / day	Digestible Energy (DE) (Mcal)	Protein Kg	Calcium (Ca) g	Phosphorus (P) g	Vitamin A IU
Total						
Required						

15. Comments:

NOTE: Be sure to enter the costs of your feed on record pages.

WORKSHEET

RATION FORMULATION - 18 MONTHS

1. Estimated mature weight of horse _____
 Estimated present weight of horse _____

2. Present nutrient requirements of horse: (Table 1)

Daily Feed (Kg)	Digestible Energy (DE) (Mcal)	Protein (Kg)	Calcium (g)	Phosphorus (P) (g)	Vitamin A (IU)
--------------------	----------------------------------	-----------------	----------------	-----------------------	-------------------

3. What feeds do you have for your horse?

4. What is the nutrient content of the above feeds? (Feed test result, feed labels or table 4)

Type of feed	Digestible Energy (DE) (Mcal per Kg)	Protein (%)	Calcium (Ca) (%)	Phosphorus (P) (%)	Vitamin A (IU)

5. How many Kg of hay is your horse eating per day? _____

6. First balance the ration for energy (DE):

- | | | | |
|----|---|-------|-----------|
| a. | DE requirements of horse (from question 2)? | _____ | Mcal |
| b. | Amount of hay fed (from question 5)? | _____ | Kg |
| c. | DE content of hay (from question 4)? | _____ | Mcal / Kg |
| d. | DE available from hay? [(B x C) x .85] | _____ | Mcal |
| e. | DE to be supplied by grain? (A - D) | _____ | Mcal |
| f. | DE content of grain (from question 4)? | _____ | Mcal / Kg |
| g. | Amount of grain required? (E ÷ F) | _____ | Kg |

7. Check the ration for Protein:

- | | | | |
|----|---|-------|----|
| a. | Amount of hay fed (from question 5)? | _____ | Kg |
| b. | Protein content of hay (from question 4)? | _____ | % |
| c. | Protein available from hay? (A x B) | _____ | Kg |
| d. | Amount of grain fed (from question 6g)? | _____ | Kg |
| e. | Protein content of grain (from question 4)? | _____ | % |
| f. | Protein available from grain (D x E) | _____ | Kg |
| g. | Total Protein fed? (C + F) | _____ | Kg |

8. Check the ration for Calcium (Ca): (round off c, f and g to nearest gram)

- a). Amount of hay fed (from question 5)? _____ Kg
- b). Ca content of hay (from question 4)? _____ %
- c). Ca available from hay? [(A x B) x 1000] _____ g
- d). Amount of grain fed (from question 6g)? _____ Kg
- e). Ca content of grain (from question 4)? _____ %
- f). Ca available from grain? [(D x E) x 1000] _____ g
- g). Total Ca fed? (C + F) _____ g

9. Check the ration for Phosphorus (P): (round off c, f and g to nearest gram)

- a). Amount of hay fed (from question 5)? _____ Kg
- b). P content of hay (from question 4)? _____ %
- c). P available from hay? [(A x B) x 1000] _____ g
- d). Amount of grain fed (from question 6g)? _____ Kg
- e). P content of grain (from question 4)? _____ %
- f). P available from grain? [(D x E) x 1000] _____ g
- g). Total P fed? (C + F) _____ g

10. Summary: Nutrient Supplied

Feed	Amount Fed Kg / day	Digestible Energy (DE) (Mcal)	Protein Kg	Calcium (Ca) g	Phosphorus (P) g	Vitamin A IU
Total						

11. Compare your horse's requirements for DE, Protein, Ca and P (from question 2) and the amounts supplied (Totals from question 10).

	DE (Mcal)	Protein Kg	Calcium (Ca) g	Phosphorus (P) g	Vitamin A IU
Required					
Supplied					
Deficiency/Excess					

12. Keeping in mind that the Ca : P ratio in the diet should be no more than 3 : 1, what additional supplements if any are needed to correct any deficiencies or imbalances noted in question 11?

13. How much of the supplement is required, and what amount of the required nutrients will it supply?

Supplement	Amount Fed g / day	Digestible Energy (DE) (Mcal)	Protein Kg	Calcium (Ca) g	Phosphorus (P) g	Vitamin A IU
Total						

14. Final Ration

Include all feeds fed (roughage, grain, supplements) from question 10 and 13, and requirements from question 2.

Feed	Amount Fed Kg / day	Digestible Energy (DE) (Mcal)	Protein Kg	Calcium (Ca) g	Phosphorus (P) g	Vitamin A IU
Total						
Required						

15. Comments:

A young horse requires better care than an older horse because its immune system is not as well developed. They get sick more often and are more likely to become infested with worms or other parasites.

A foal eats manure from its dam to get the bacteria needed by its digestive tract. Since all manure contains some parasite eggs, these are swallowed. With the small size of the foal's digestive tract, it takes fewer worms to pack together and cause colic. Deworming should be started early and done at six week intervals until after weaning. Try not to use the same type of dewormer every time because the internal parasites become immune to chemicals that are used often. This means that they will be less effective in treating your horse. Common signs of infestation are a poor hair coat, dull eyes, pot bellied (but thin) and a lack of energy.

Certain vaccinations should be given to young horses. Your veterinarian will be able to give you advice on a deworming and health care program.

Geldings

Foals produced by one half of the breedings are male animals. The owner is faced with the decision of what should be done with a colt.

It is not practical for all horse owners to keep young ungelded colts. They require separate facilities after they are weaned. It is not unusual for a colt less than one year of age to get a mare or filly in foal.

Other problems can also occur. A colt raised separately from other horses can develop problems in associating with other horses and people. Vices such as biting and kicking may develop due to playfulness or frustration. This may be "cute" in a foal, but is a definite problem with an older horse.

Many arguments are raised about castrating colts. One of the most common is that the horse will develop more muscle if it is not gelded until mature. Some people believe that there is better neck and body development. What you see in colts is fat being deposited. Because this is caused by hormones, the fat will be lost after the horse is gelded. The horses that do not lose the excess fat would have the crest no matter what age they were when castrated.

Owners need to consider why they want to leave a male horse ungelded, particularly if it is a grade or partbred horse. These horses are of little value as breeding stock. The decision to castrate a purebred colt is more difficult for the owner. It is tempting not to castrate a colt, particularly if it is your first colt, only foal, or of good quality. The owner must be able to evaluate the situation. There is little demand for average or poor quality stallions. They are not likely to contribute to the promotion of their breed as a sire and their use as a pleasure horse will be limited. Housing and upkeep are also more difficult than for mares or geldings.

There may be physical reasons for delaying castration of a horse. One reason is if one or both testicles are located inside the body cavity. These animals are known as monorchids, cryptorchids or ridglings. Major surgery is necessary in order to castrate the colt. The surgery is more dangerous because the veterinarian must open the body cavity. There is a greater risk of infection than for an ordinary castration.

These horses should not be kept uncastrated because they are more dangerous to keep than a normal stallion. They are extremely unpredictable and should not be considered as suitable mounts for anyone. Their behavior should not be compared to a gelding, as many properly castrated geldings will bother or mount a mare in a herd when comes into heat. A monorchid or cryptorchid will become very aggressive because he is unable to breed, but has the same hormone drive as a stallion. As this is a hereditary problem these horses should not be kept and used as breeding stallions. Most of the light horse breeds will not register colts with only one or no testicles that have descended from the body cavity.

If both testicles are in the scrotum, a colt may be castrated any time after birth. Few colts are castrated when they are weaned because castration and weaning are both stressful. In general, a young horse will recover and heal more quickly than a mature horse that is castrated.

Most castrations are done by a veterinarian using a general anesthetic. It involves making a small slit on the bottom of both sides of the scrotum and pulling the testicle and hormone forming tissue through the openings, cutting off the blood supply, then removing the testicle and attached tissue. The incisions are left open for blood and fluid to drain out. This reduces swelling and the chance of infection.

Many horse owners have come to recognize the value of a good gelding. Because they are not affected by hormone changes, geldings are more agreeable mounts than mares or stallions. As well, they are consistent performers as working and show animals.

Breed associations are recognizing the importance of good quality geldings. In some breeds, special shows and competitions are offered for geldings and their owners. This has increased the demand for good geldings. Now a gelding can bring a price similar to or better than, a stallion of the same quality.

SECTION

7

TRAINING

A good trainer has to put into use practical techniques of nutrition, psychology, medicine and fitness.

Feeding during training is as much an art as a science for one has not only to meet the nutrient requirements of the horse but the nutrients have to be supplied in a manner that complements the fitness part of the program.

The psychological aspect of training should be considered. Horses have a relatively small brain and are not gifted with the amount of intelligence many horse lovers would like to credit them with. Most of the horse's action are based upon instincts and memory; both of which are well developed in horses. Considerable breed differences exist however. For example, Quarter Horses are easily trained as stock horses, Standardbreds have a natural tendency to trot or pace and Thoroughbreds find running very natural. Choose the breed that has a natural instinct towards the training program you choose.

One of the strongest instincts in horses is that of responding to commands of a leader. Most horses want to be "led" or shown the way. They find security in following the directions of a trainer and this is probably one reason horses are so easily taught to do many varied exercises. Good trainers take advantage of this instinct by being consistent and thorough in the training program so the horse knows what is required of him at all times.

A horse also responds to discipline and reward if presented in a consistent uniform manner that the horse can relate to. Discipline may vary depending upon how nervous or sensitive the individual horse may be. Strong voice tones followed by repeating the desired exercise may be sufficient discipline for most horses. The horse should also be made to carry out exercises requested or the horse will remember the incident. One sign of a good trainer is not to attempt exercises that the horse is not ready for. The training program should progress gradually giving the horse plenty of time to feel comfortable with each new procedure. A horse should not be forced to concentrate for more than about 15 minutes on one exercise as it soon loses interest. During a training session the horse should be required to review past exercises before spending about 10 minutes with a new program. Reward is as important as discipline. The horse can be rewarded with a gentle voice, a pat on the neck or maybe a rest. Normally a horse should not be rewarded with food.

Reprinted from "Horse Nutrition"

HALTER BREAKING

It is easiest to halter break a foal when it is very young. This is easier for you and the foal because a small foal is easier to handle.

The method you choose will depend on where you are working, the size of the foal, and your size. On the following pages you find several methods of working with your foal. Choose one that suits you.

Working in a box stall or small pen move around until the foal is cornered and can not get away from you. Rub or scratch the foal while you talk to it. Repeat this several times before showing the foal the halter. Rub the halter over the neck and shoulders.

Before haltering, remove anything from the stall the foal may get caught on. To halter the foal, restrain it and have your helper halter it. Let the foal go loose in the stall. The foal will be upset with the halter and will fight it by shaking its head or bucking. Leave the foal like this for several hours; watch the foal until it gets used to the halter.

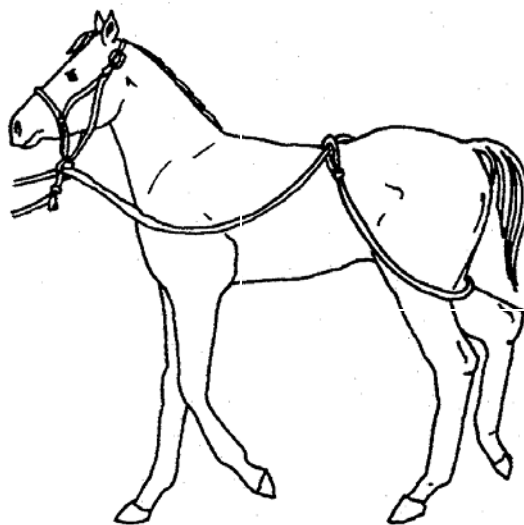
Before letting foal outside, take off the halter. This is done for safety reasons. If a foal catches the halter on anything, it will fight and can break its neck.

Use a strong halter and lead shank. If the foal breaks loose from you, it will try to do so again when you try to lead it. Training will take you longer than if you had started with the proper equipment.

Leading

There are several ways to teach a foal to lead. After a foal accepts the halter on its head, a lead shank can be attached. Pull the shank and release the pressure when the foal makes any move toward you. By doing this in the stall, the foal learns that it can not get away from you.

A bum rope is a popular method for teaching foals to lead. Snap the shank on the halter. Take a long rope or lariat and form a loop. Lay this over the hips, around the hindquarter and under the tail. Pull the loose end of the rope through the halter. When you walk forward, pull lightly on the lead shank, and firmly on the "bum rope". To escape pressure the foal will move forward. This method is also good for older horses that do not lead well.



Tying

Some guidelines when tying your horse:

1. Always tie the horse to a strong, solid object.
2. Tie the horse away from plank fences with a strong shank and halter.
3. Tie with a quick release knot.
4. Tie the rope short.
5. Tie the rope at eye level height to the horse (if possible).

If possible, tie the foal to a solid post out in an open area. You may want to put a tire tube around the post. When tied to a tire, the foal is less likely to strain its neck when it tries to pull away as the tire has some “give” to it.

Another good way to tie the foal is to run a rope around the girth of the foal and between the forelegs. The loop is tied so it can not tighten (figure “8” knot). This rope is run through the halter and tied to the post. Most foals will learn not to pull because of the pressure from the rope around their chest.

TRAILERING HORSES

Most 4-H members live some distance apart. This means that to have a group riding activity, the horses need to be transported. Horses may be trucked or trailered.

Trucking is usually done for short distances in smaller open trucks with stock racks. There should be materials on the floor to keep the horse from slipping. Sand or rubber mats are best because straw is slippery. The horse should be tied to keep it from moving around (and reduce the chance of slipping). A moving weight in a truck box can cause serious steering problems. Safety precautions are similar to trailering.

Trailering is a different type of experience for a horse. So many things in and around a trailer can be dangerous and frightening. Any of these can cause problems that can make a horse trailer shy.

Loading is one of the most common problems. One reason is that the eyes of the horse do not adjust easily to the dim light of the trailer. It takes time and patience to train a horse to load.

When loading or unloading horses, accidents are possible. Most trailers require that the horse step up into the trailer. A heavy pole placed in the space between the trailer bumper and the ground can keep a horse from getting a leg caught under the trailer if it slips and falls. This is a consideration for first time loading of horses. Once the horse is accustomed to loading, you should not need the pole.

Teaching a Horse to Load into a Trailer

The first problem in trailering a horse is to get it into a trailer. Some will walk in quietly, others act as if you were asking them to go into a lions den at feeding time.



Consider problems which may be caused by the trailer:

1. The back bumper of the trailer should be blocked underneath. This will keep the legs from sliding under the trailer.
2. The back doors must be held open or propped so they do not swing over and hit the horse. If these are half doors, a horse can rear and put its front legs over them.
3. Flooring - Always have good footing. Not only does this give traction, but it deadens the hollow sound underfoot. The sound of the flooring often scares the horse.
4. Never get into the same side of the trailer as the horse. You risk being crushed.
5. Do not hold the shank in a way that could pull your hand or arm between metal sections of the trailer. If you do not let go of the horse, you could injure your hand.

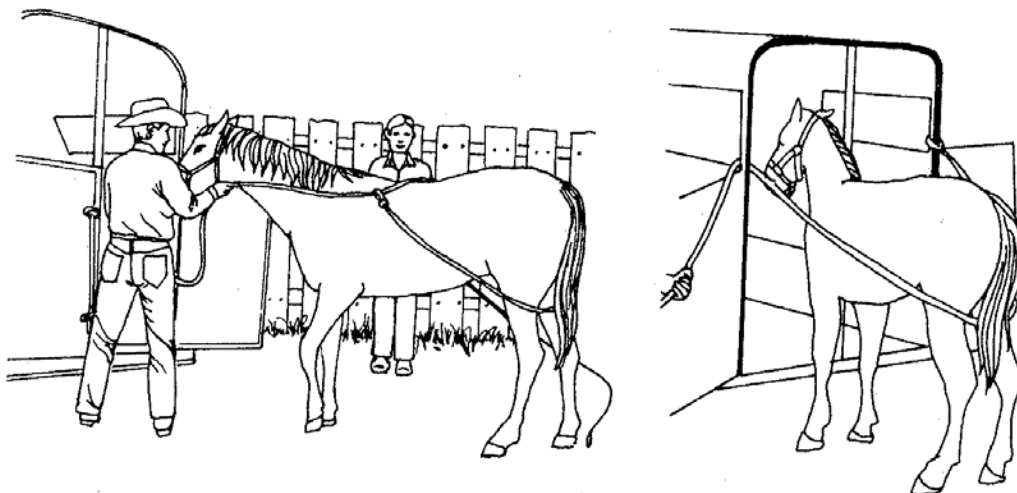
The way you park your trailer will help you load a green horse. Back the trailer up to a barn door, or beside a fence (a corner is ideal). This reduces the number of different ways the horse can escape.

There are two basic routes to follow for loading. The first one works with a reasonably quiet, sensible horse. The second method is useful for a stubborn horse or one having a temper tantrum.

To load a horse quietly, put an experienced old horse in the trailer. A second person should shake a bucket of oats at the front of the trailer while holding a second lead shank. As the horse goes into the trailer, put your shank over the neck. If that worked, you are lucky. It works well for young, quiet horses.

For a second try you can add a bum rope and/or a longeing whip. The bum rope controls the distance the horse moves the trailer from side-to-side and backward. The rope must be firmly anchored on one end and braced against a trailer part or other object for leverage.

The bum rope should not be allowed to slip down past the hocks of the horse. This method can be used to



practically lift the horse into the trailer. It keeps the horse lined up with the trailer door and reduces the distance the horse will back up. Two people can also link arms and lift the horse in. If possible, trailer the horse in advance of the time needed so you can be patient and take your time.

In the event that the horse is still outside the trailer, a whip is a useful piece of equipment when used correctly. Tapping the horse below the hocks is preferred to using it too high on the hindquarters giving the horse the impression that it can escape backwards. **ALWAYS STAY OUT OF KICKING RANGE WHEN YOU USE THE WHIP.**

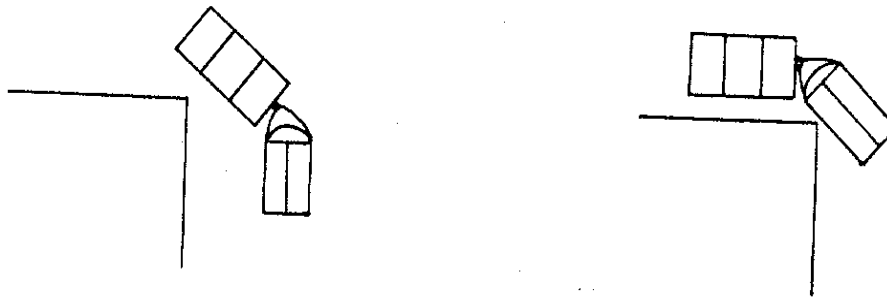
For extremely difficult cases (where the horse is mad and not afraid) severe use of the whip can be considered along with the bum rope and two lead shanks. The person using the whip repeatedly strikes the horse low on the legs until it decides that the inside of the trailer is a better place to be. This is severe, but sometimes needs to be done instead of allowing the horse to win the battle. If this to be done, most of the work should be done by experienced handlers or a horse trainer.

Driving with a Horse and Trailer

Many factors affect the way a horse travels in the trailer. Trailering can be a frightening experience. Go for a ride in you trailer, you may find rattles or broken springs or other areas that require maintenance. You can not locate these problems when you are in the pulling vehicle. Rattles can be corrected by filling the spaces with rubber stripping, cloth or electrical tape. The trailer should receive regular maintenance to prevent problems with the tires, shocks and wiring. Check all lights, signals and brakes before loading your animal.

The ability of the driver is very important. Poor drivers are a common cause of poor loading and traveling horses. Most drivers do not slow down for corners and stops. Stops and corners should be planned in advance. Slow down for them and change your speed gradually. Sudden speed or direction changes will throw the horse off balance causing it to try to brace itself against the walls and feed box. The horse will scramble to the opposite side of the trailer if corners are taken too quickly. Two horses doing this at the same time can cause a driver to lose control of the vehicle.

Fast stops are very hard on horses. While moving forward in the vehicle you know that your body is traveling at the same speed as the vehicle. A sudden stop will throw you forward. The same thing happens to the horse in the trailer. During the first phase of the stop, the body of the horse moves forward. After the vehicle stops, the body shifts toward the back of the trailer. A fast stop can cause a horse to fall if the footing in the trailer is poor.



Cornering and curves create an unusual situation. the trailer is still in the turn after the hauling vehicle is traveling straight (Figure 1 and 2). To keep the horses in balance, do not increase vehicle speed until the horse trailer is in a straight line with your vehicle. Slow down for highway curves. For right angle curves (street corners, driveways) slow down to 10-15 km/hr (5-10 mph). Speed should not be increased as you corner.

Before loading the horse into a truck or trailer, you can help make the trip more comfortable. If the weather is cold, blanket the horse. Watch when you blanket that your horse does not get too warm. Four horses in a closed trailer for example, will generate a fair amount of heat even considering winter conditions. Leg wraps or shipping boots will help protect the legs from injury and offer support when trailering long distances. Wrap the tail, since some horses lean on or rub the tailgate. A tail guard may be added over the tail wrap. Make sure the trailer is well ventilated so that the horses are comfortable both in winter and summer.

Before you leave the yard, check that all of the latches and doors on your trailer are properly closed. Check your lights to see that you have turn signals, brake lights and running lights. Stop to check the horses periodically.


Restraining Horses in the Trailer

There is a difference of opinion on whether horses should be tied in a trailer. Some people feel that in case of an accident, a tied horse can not be released and unloaded quickly enough. However, a horse that is not tied can cause problems. The horse may get its head turned back over the partition and not be able to lift it back. Two horses can reach each other around the front of a partition and fight, making it hard to control the pulling vehicle. Falling down, or rearing up and getting the front feet caught in the feed box, are also possible. If you are concerned with quick release, there are commercially made trailer ties that have quick release snaps. These can be set within your reach and are faster than untying a rope. If these are used, leave your lead shank attached to the halter, but out of the way so the horse can not step on it.

Transportation Regulations

If you need to trailer a horse for long distance, (over 8 hours drive) there are things you should know. A horse will get tired traveling. Give the horse several days rest before and after a long trip. The horse should be fed and watered along the way, but do not overfeed. Feeding can be done at campsites and gas stations. Some horses will not urinate in a trailer or will become stiff. Stop every four hours, unload the horse and walk it around. Do not let your horse eat grass when you stop, the grass may have been sprayed with chemical.

There are laws on the transportation of livestock that you should know. The Livestock and Livestock Products and Consequential Amendment Act of June 1997, Section 21(1) states – *“No person shall transport livestock within Manitoba without having in his or her immediate possession at all times during such transportation a livestock or animal bill of lading, a Manitoba Livestock Manifest in the form prescribed in the regulations, another form of livestock manifest acceptable to the director, a bill of sale, an animal identification registration certificate or other documentary proof of ownership of the livestock acceptable to the director.”* A livestock “Bill of Lading” which documents necessary information when hauling livestock is available from local Agricultural and Food Offices for a nominal charge. The bill of lading itself is mandatory.

 **Manitoba Livestock Manifest**

Owner's phone number <i>204-555-1234</i>		MB	Date <i>June 4 1998</i>				
Pay to owner <i>O.L.D. McDonald</i>		Pen Number					
Owner's address <i>Box 101, Anytown, MB</i>		Postal Code <i>R1A 2B3</i>					
On account of contributor <i>AS Above</i>		Contributor's phone number					
Contributor's address		Postal Code					
Consigned or transported to: <i>Top Dollar Auction Mart</i>							
Address <i>1st Street</i>		City or town <i>Anytown</i>					
Description of livestock							
Number	Colour	Kind	Brand or Identification	Brand location	Other brands or I.D.	Brand location	Other remarks
<i>2</i>	<i>BAY</i>	<i>Foals</i>					<i>Clip on Hip</i>
<i>2</i>	I certify that the information given above is true.				Vehicle licence number <i>123 ABC</i>		
Total	X Owner's signature (or authorized agent)						
Received and checked by		Driver's signature <i>[Signature]</i>					
Date	199	Time	Transporter's name <i>I Haul Anywhere</i>				
For inspector's use only		Transporter's address <i>Anytown, MB</i>					
		GST registration number					
		Hauling Charges <i>\$0.00</i>					
Inspector's signature		GST <i>-</i>					
		Total <i>\$0.00</i>					

- Name and address of owner
- Description and identification of animal(s) being hauled (color, tattoo number and/or brand)
- Date and point of pick-up
- Date and point of destination
- Name, address and license number of trucker (if applicable)
- Trucking charges (if applicable)

Transporter's Copy

WORKSHEET

TRAILERING HORSES

Q. How can horses be moved from place to place?

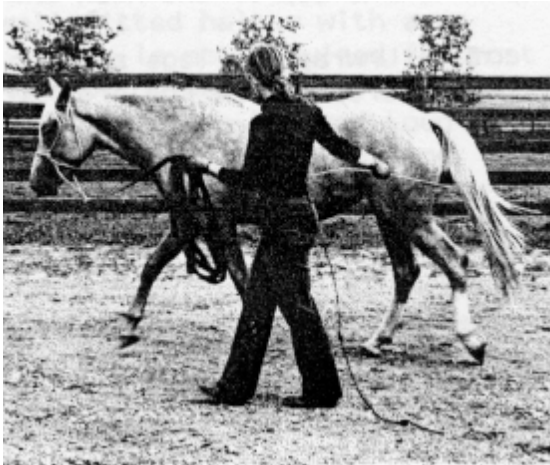
Q. When you are pulling a trailer, how soon after a corner can you pick up speed?

Q. What causes the scrapes on the inside walls of trailers?

Q. What should you do before you leave the yard with your horse?

Q. What care should be taken when you are trailering for long distances?

LONGEING



Longeing is the easiest way to begin training your young horse. It may be taught as early as six months of age, but most horses are not started until they are one to two years old. Unless the foal is being conditioned for halter competition, longeing is not necessary. Free exercise or ponying is better for exercising a young horse. A foal can get hurt doing too much work, too soon, since excessive longeing can be hard on the legs.

Longeing is used to teach a horse skills that will be needed for manners and balance. These skills will be used when you teach ground driving and begin riding.

This training teaches the horse to respect you as a handler. Longeing taught before ground driving and riding teaches the horse to perform specific skills. The horse learns to associate physical and verbal cues from the handler.

The time you spend longeing the horse will depend on your goals. If you are conditioning a young horse (kept in a barn) for halter competition, you will want to work it on soft ground for a minimum of thirty minutes (fifteen minutes in each direction) five days a week. For a young horse, exercise is important for normal bone and muscle development. Disposition will also be affected by the amount of exercise. Ponying is preferred to longeing for exercise.

Longeing for training and manners may be done for twenty or thirty minutes per session. The length of time you work will depend on the amount of energy the horse has and the length of its attention span. Your best results will come from working two to five consecutive days. Working the horse irregularly will be no benefit.

When you longe the horse, work the horse until it is moving with a steady rhythm at a walk and trot. If your horse tends to cut corners on one side of the circle, drive it to the outside of the circle with the whip. This will make riding circles easier because the horse will maintain its body bend and length of stride.

Care should be taken with the footing where you work. Deep footing or footing that gets slippery when wet, can lead to stress related injuries like bowed tendons or sore muscles. It is easier for the horse to work if the ground is soft, but not deep. The horse can slip if the surface is hard and has little traction.

Equipment

To longe a horse you will need a strong halter or longeing cavesson and a long rope or longe line (nylon web is lighter to hold than rope). A long whip is also needed. To protect the legs of the young horse, use splint boots or wrap the front legs. Coordination problems in young horses increase the chance of injury.

How to Use the Equipment

Please refer to the CEF guidelines for the proper way to hold a longe line. Not all trainers approve of the use of a chain when longeing a horse because it does not completely loosen after it is tightened. However, this method allows a smaller, lighter person to work an unruly horse. Unless the horse is not paying attention or is misbehaving, no pressure should be applied. When the chain is needed, give a quick jerk, then release the pressure.

The chain is also useful when teaching the horse to stop on command. The jerk and release is used at the same time as the horse is forced directly toward a wall or fence and the verbal command “whoa” is given. There are three ways to use a chain when you lunge. First, clip the chain on to the longe line. Run the chain through the bottom ring of the halter where the shank is attached, around the nose through the rings on the sides of the halter, back through the bottom ring and clipping the chain to the bottom ring of the halter, the chain itself, or to the longe line.

For the remaining two ways the chain goes through the side rings and over or under the jaw clipping to either side of the halter. The amount of control with these will vary with your horse. A major problem with using the chain is that it will need to be moved each time you change the direction of the horse.

Figure 6

Chain Around the Nose



Figure 7

Chain Under the Jaw



Figure 8

Chain Over the Nose and Snapped on Right Side - Lunge Horse to the Left



When you are teaching your horse to longe, use a corral or small area where the horse can not run away. The first thing to teach the horse is to travel in a circle around you.



It is easiest to teach the horse to go to the left because it is used to being handled from that side. The shank is held in the left hand when the horse goes to the left (counterclockwise). Hold it in your right hand when the horse is going to the right (clockwise). Please refer to the CEF guidelines for the proper way to hold a longe line. You may find you will use other methods of holding the longe line when your horse has been fully trained.

To move the horse forward, hold the longe line in one hand and the whip in the other. Move back from the shoulder of the horse toward its flank. Tap the horse on the hindquarters with the butt end of the whip. Tell the horse to walk. Keep doing this until the horse moves around you without stopping. After the horse has gone around several times let it stop. Say “whoa”. Praise the horse for obeying and then change direction.

Do this every day until the horse walks around you easily, on at least 15 feet of line. Have the horse work in each direction. Make sure you stay opposite the flank or the horse may stop and face you.

Speak clearly and firmly when you want the horse to listen. For example:

WALK	Increase your tone at the end of the word
TROT	“Ta..... rot” ter”
CANTER	“Can..... Voice in the opposite direction to the trot.
WHOA	“Ho” Say it sharply and quickly. Combine with a quick tug on the lunge line.

To teach the horse to canter, ask it to pick up the canter from the trot. Say “canter” and use the whip to push for more speed as the horse goes into a corner of the wall or fence. This way it can move outward in the circle to escape. Work toward the horse picking up the lead correctly and quickly. Bring the horse back to a trot if it has the wrong lead. Do this by giving the lunge line a jerk as you say “wrong” then repeat the command “trot”. Most horses will learn to correct themselves within a couple of steps. Ask for the canter again.

Your horse is ready to continue its training when it can maintain a rhythm at a walk, trot and canter.

WORKSHEET

LONGING

Q. Why would you longe a young horse?

Q. At what age can a horse be taught to longe?

Q. Why do you need to be more careful longeing a very young horse? How is this done?

Q. What equipment is used for longeing?

Q. How can you make your verbal commands clear to the horse?

Q. What further training uses the skills taught by longeing?

GROUND DRIVING

Ground driving teaches the basic skills needed when you start riding the horse. This can be started as early as one year of age but most work is done when the horse is two. The attention span of an older horse is longer and so training takes less time. Before starting to ground drive, you should get the horse used to a saddle. The horse does not need to be bridled at this stage. All of the work is done in an enclosed area.

To “sack out” a horse, work in a large stall or pen. The horse should be tied securely or held by another person. Get a cloth, sack or saddle blanket. Let the horse smell it, then start to rub the horse with the cloth. If the horse is quiet, start to flap the cloth gently over its body. Gradually move away from the horse as you flap the cloth. Use the same cloth or blanket the first time you saddle the horse.

The first few times the horse is saddled, let it smell the saddle before putting the saddle on its back. Tie at least one stirrup and the cinch up so that they will not fall and hit the side of the horse (the back girth should be removed). Let these down gently when the saddle is in place. Slowly tighten the girth (cinch). Do not do the cinch up too tightly, only enough to have it stay in place. Let the horse stand saddled for up to two hours in a box stall or small pen. Tying the horse is recommended to prevent rolling.

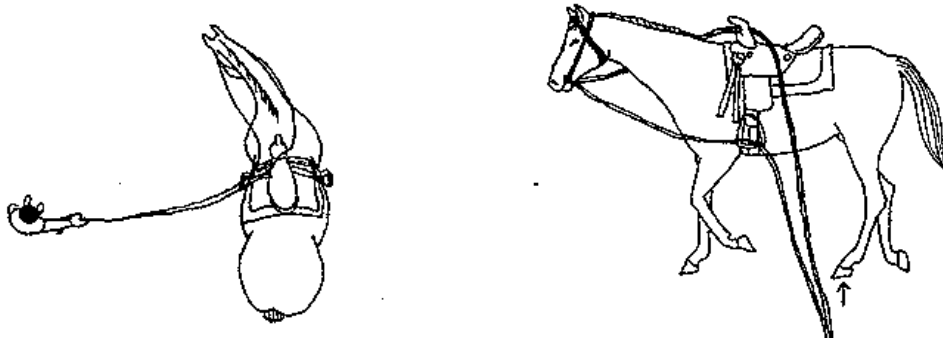
Most horses adjust well to the saddle until they begin to move. The saddle causes an uncomfortable feeling when they move. When you start working the horse with the saddle, tie the stirrups together with a string under the belly of the horse so that they do not bang against its sides and startle it. The horse should be longed with the saddle for several weeks before you begin ground driving (longe before each driving lesson). The horse is ready to continue its training when it works quietly at a steady speed, obeys your verbal commands and obeys the reins.

To ground drive use two long ropes, driving reins, or longe lines. When you are ground driving, your stirrups should be tied together. The horse is familiar with the longe line, but not with its new use. Before starting new work on the horse each day, review the previous lesson. In this case, longe the horse until it is working quietly. Attach the longe lines to the saddle horn and run one line through each stirrup and on to the ground. let the horse get used to the dragging lines by doing this daily until it accepts them.

Ground driving is similar to longeing. The horse is worked in a large circle with the lines attached to the sides of the halter or cavesson. Bring the outside line up and over the saddle seat. Hold the inside line like a longe line, although it is through the stirrup. Try to keep slack on both lines as you ask the horse to move forward. Position yourself so that your body is to the inside of the circle behind the hindquarters of the horse.

When you are teaching the horse to turn, loosen the outside rein so the horse can move its head and neck. Ask the

horse to turn when the hind leg in the direction of your turn is on the ground. This means the left hind leg for a left turn, the right hind leg for a right turn. As the turn is completed, the outside line will need to be lifted over the saddle. The line may spook the horse if it gets under its tail or below the hocks.



To stop, ask the horse verbally, give and take with the lines. The lines should not be pulled tight and held. It is possible to teach the horse to stop with light pressure as long as it is paying attention to you.

Backing may also be taught. Remember, backing is not natural for the horse. It must learn to move its legs in the proper sequence. This is like a trot in reverse with the diagonal legs moving together. Work for balance, not speed.

When you start teach the horse to back, have someone help you from the ground. Give and take with the reins and say “back” as the other person taps the horse on the front knees or pushes on the centre of the horse’s chest.

As your horse becomes used to driving, you will be able to work directly behind it. For your own safety, work far enough back to be out of striking range. Most people find it easier to work further away from the horse because it gives more leverage with the reins.

When the horse is working well, continue ground driving using a bridle headstall and bit, or hackamore with the long reins attached. The first few times begin driving with the halter then change the attachment of the reins to the bit.

When you are training the horse, do not try to teach a new skill unless the horse knows its earlier lessons. If progress is not possible, go back a step and work on the basics that will be needed for the new skill. Continue doing this until the horse is ready to progress.

WORKSHEET

GROUND DRIVING

Q. Why should a horse be taught to ground drive before you start riding?

Q. If the horse has not had time to get used to the driving lines before you start driving the horse, what can happen?

Q. What has the handler done wrong?

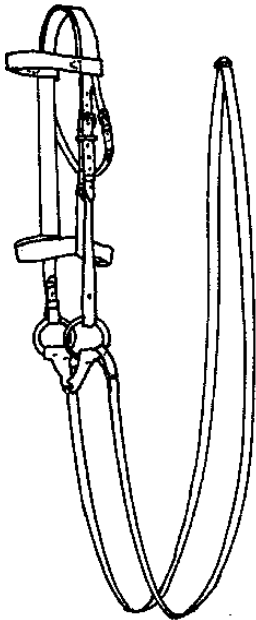
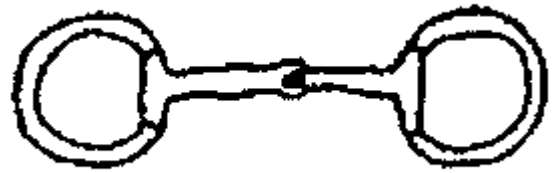
Q. Why do horses have trouble learning to back up?

Q. How can you teach the horse to stop when you are ground driving?

STARTING TO RIDE

Bridling

After the horse has been longed and ground driven with a halter, you will start bridling the horse. To keep from damaging the mouth of the horse, use a large diameter snaffle bit with a broken mouthpiece. Some people prefer to use a hackamore for early training so that the mouth is not damaged before the horse learns to respond to rein and leg pressure.



When you are bridling a young horse, you need to be gentle. Rough or incorrect handling will make the horse hard to bridle. You must be careful of the ears, eyes, mouth as you bridle and unbridle.

Before bridling, lengthen the headstall and remove the reins. To put the bridle on, hold the headstall in your left hand. Reach between the ears of the horse with your right hand and grasp the top of the headstall (the headstall may also be held over the bridge of the nose with your right hand reaching under the jaw and around the head). Support the bit with your left hand and press the bars of the mouth with the thumb and forefinger of this same hand (palm under the jaw) to open the mouth. Balance the headstall so that the bit does not bang against the teeth as it goes into the mouth. As you pull the bridle on be careful around the eyes so that the headstall does not rub them.

As you slip the headstall over the ears, bring each ear forward one at a time. Pulling them back is not natural and can hurt, making the horse hard to bridle. Adjust the headstall so the bit rests on the bars and is high enough that the horse can not get its tongue over the bit. Leave the bit in for at least one hour per day for a few days. The horse may be turned loose in a stall or fed with the bridle on (no reins attached) during this hour. This is to give the horse time to get used to carrying the bit in its mouth.

When the horse is used to the bit in its mouth, you may start ground driving with the lines attached to the bit.

Hackamore

A hackamore is made up of a bosal, fiador, headstall and mecate or reins. The most common bosal is made of braided rawhide or leather. The thickness and stiffness will vary. A soft and thick bosal is gentle. To fit, it is placed near the soft cartilage of the nose (Figure 13). The bosal should be short enough that lifting the heel knot with the reins puts pressure on the cheeks before the knot touches the chin (Figure 14). The bosal should not slip up the nose in order to make contact.

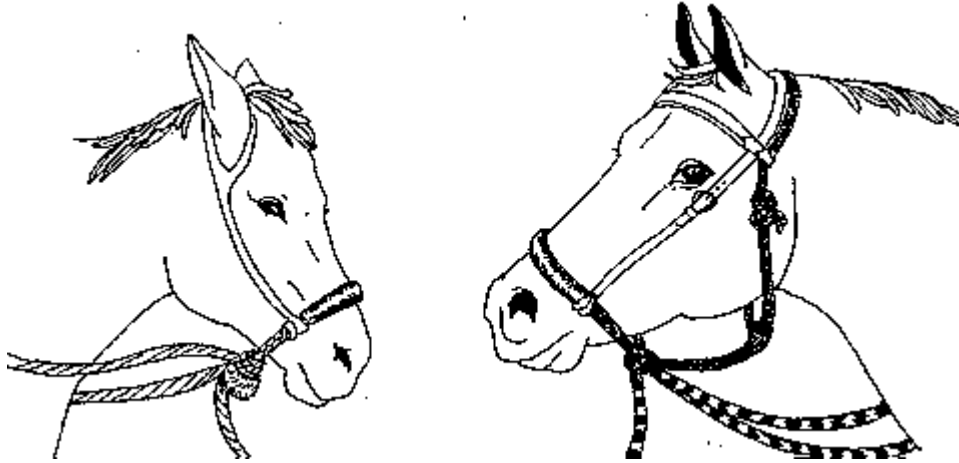


figure 13

The hackamore uses a “direct rein” (Figure 15) and a “bearing rein” (Figure 16) or “indirect rein” (Figure 17). The horse responds to three different pressures from the bosal. One is direct pressure on the nose and chin from an even pull on both reins. The second is lateral pressure applied to the nose by the direct rein. The third is the pressure of the bearing rein against the neck.

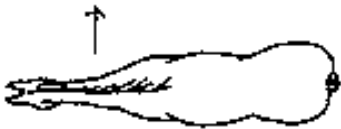


Figure 15
“Direct Rein”

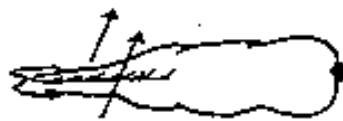


Figure 16
“Bearing Rein”

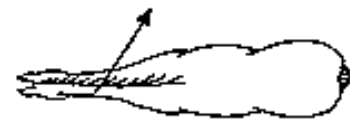


Figure 17
“Indirect Rein”

Pressure is only used with a hackamore when the rider is asking for a specific response. Direct pressure is only used long enough to get a response, then the reins are released. It is used to turn or circle the horse. After the horse has learned this, the bearing rein is used by laying it across the neck of the horse. As with the bridle, the hackamore is used with two hands for training.

Mounting

By this time, your horse should be used to handling and obeying a number of cues from you. To prepare for mounting, saddle and bridle the horse as usual. Longe and drive the horse as you have been doing, then pull on the stirrups and lean on them (with your hands) and flap them against the sides of the horse for several days.

When the horse accepts this and does not move away, you can prepare to mount. Work in an enclosed area with few distractions. Saddle and bridle the horse as usual (leaving the halter on underneath the bridle) following with the longe and drive lesson so the horse is quiet before you mount and then proceed as follows:

1. Have a helper hold the horse by the halter and shank.
2. Grasp and shake the mane and neck.
3. While holding the mane, lean sharply on the stirrup several times.
4. Hold the stirrup with your right hand and put your left foot in the stirrup.
5. Stand in the stirrup, then get down.
6. If the horse is quiet, repeat Steps 2-5, leaning over the seat of the saddle a time or two. Stroke the horse on the other side and talk to it (hold onto the saddle seat or horn).
7. If the horse is still quiet after this is repeated, slowly swing your leg over the saddle and lower yourself gently into it. Take care not to accidentally bump the horse with your leg as you do this (or jab the horse with your left toe). Praise the horse.
8. Step down from the saddle the same way.
9. Repeat this process from the right side.

After this has been done the horse should be led with a rider on its back, then ridden on the longe line. The rider should not use leg pressure the first few times. Both the rider and helper should use voice commands. For some reason most horses accept this quietly until the third ride. Some horses then get excited. If the horse does get excited, do not tighten your legs or use the reins unless the head goes down to buck (only use the reins to lift the head up, then release the pressure). The rider and handler on the ground need to force the horse to move forward if this happens. When horses are moving forward well at a trot, most will stop fighting. For turning, use a direct rein.

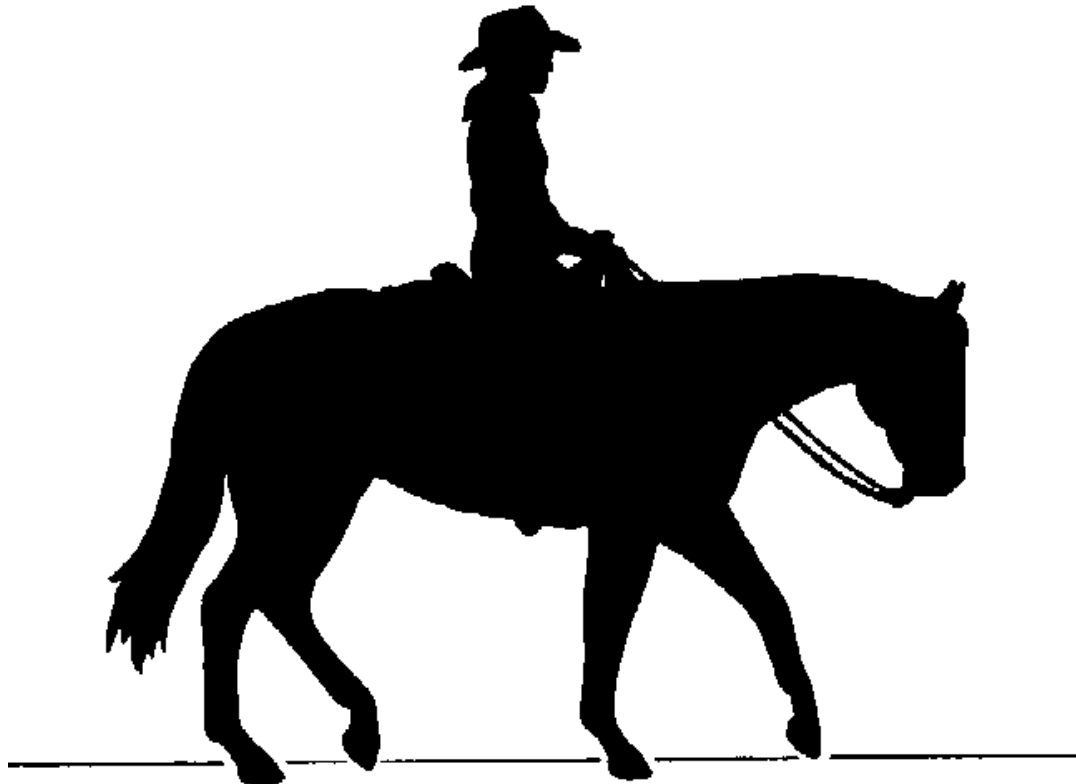
By the fourth ride the horse should move forward with a voice command from the rider. Convincing a young horse to move forward is often difficult therefore your early riding will concentrate on getting good forward movement and a rhythm at a walk and trot. All young horses also feel rough on the first few rides. Their gait is uneven as they are not used to balancing with a rider and are uncertain about what is expected.

During the early stages of riding the horse is worked on a loose rein. Practice direction changes at a walk using the reins (direct rein, Figure 15) and bumping the side of the horse with your outside leg. When the horse is reining

more easily, you can use a bearing rein (Figure 16). The horse is started this way because a direct rein feels similar to working on a longe line. As the horse learns, your rein hand is used closer to your body. Use as little pressure on the bit as possible, so that the mouth of the horse does not get damaged. Rein pressure on the bit is avoided, except for cues, until after the horse has learned to move forward well and does not tighten its jaw against the bit.

Do not overwork your horse when you begin to ride. Stop riding when the horse does what you ask correctly. Praise it so it knows it is right. A good reward for most young horses is to let them stand quietly for a few minutes before continue working. There should be little or no reason for punishment because the horse will not understand what it is being punished for. If you do not get a response to a new cue, go back to a skill the horse knows. Progress is only made when the horse is ready.

When the horse is going well, you can shorten the reins. They will be shortened until you have light contact with the bit when the horse holds its head in a natural position. This gives the horse some support. If the horse tightens its lower jaw against the bit, give the reins more slack, slowly working toward shortening the reins again.



WORKSHEET

STARTING TO RIDE

Q. What type of bit is used to train horses?

Q. What can be used in place of a bridle and bit?

Q. What parts of the horse do you need to be careful of when you are bridling? Why?

Q. What type of hackamore should be used for training?

Q. When you ride with a hackamore you use what type of rein pressure?

Q. How can you prepare your horse for being mounted for the first time?

Q. How do you mount the horse the first few times?

Q. What help should you have the first few times you ride?

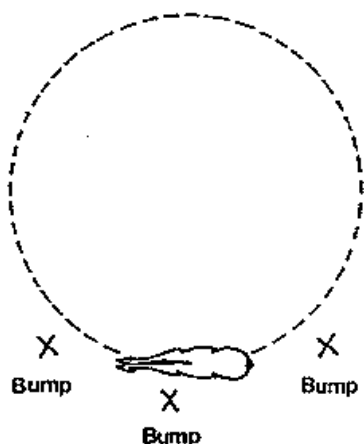
Q. Why should punishment be limited during training?

Q. What are the first gaits the horse is taught? What is expected of the horse?

THE LOPE OR CANTER

The lope or canter is not taught at the same time as the walk and trot. Like a small child, the young horse often has a problem with balance and may have problems with coordination. Adding the weight and bulk of a rider can make this more difficult for the horse.

Longeing your horse (riderless) is the easiest way to teach it to canter. Asking for the canter or lope in a circle against a corner helps the horse pick up the correct lead from a trot. If the horse takes the wrong lead or is cross-firing, slow to a trot, then ask for the canter or lope again. When the horse is traveling incorrectly, it is uncomfortable and the horse may get upset. By correcting the horse this way, it learns what is correct and comfortable. With work, the horse will slow down at this gait and relax.



After the horse is working steadily at a walk and trot with a rider on and having light rein contact, you can begin to ride the canter or lope. This is done much the same way as beginning to ride the horse. Have a handler with the longe line control the horse and give a verbal cue as it trots into a corner. Sit deeply in the saddle, give the verbal command and bump the horse with your outside leg behind the girth. As your horse comes off the rail to follow the circle, bump the horse with your outside leg closer to the cinch to cue it to turn the corner. Bump the horse again as you move toward the wall. The rail is usually enough of an aid to form the other half of the circle. Do this for several days before working without the longe line.

During the first few rides without the longe line, have your helper stand in the center while you both give the verbal command in a corner. The horse learns by association. Your reins should be loose except when using a direct rein to turn and leg aids are used to hold the horse on the turn or curve. The horse will slow down and relax with continued work.

When the horse is easy to control in a circle, you can begin to ride on the rail. The canter cue should still be given while circling the horse.

WORKSHEET

THE LOPE OR CANTER

Q. Why does a young horse have trouble learning to lope or canter?

Q. How is the horse taught to lope or canter?

Q. From what gait is a young horse trained to pick up the canter or lope?

Q. What should you do when the horse does not pick up the correct lead or is not traveling with its legs in the correct order (or cross-fires)?

Q. When can you start to ride the horse at the lope or canter?

Q. Why do you start the horse at a lope or canter the same way as you rode the horse the first few times?

SECTION

8

**PRESENTATION
CRITERIA**

As part of your project your foal will be taking part in an evaluation as a yearling and as a two year old. Proper show ring attire is required. Either English or Western attire is acceptable. The advisory committee recommends that you refer to the Manitoba 4-H Horse Show Guide for guidance in preparing your foal for the show ring.

YEARLING EVALUATION

Explanation of Pattern

At the judge’s signal, walk your horse to the judge. Stop and set-up for inspection. After inspection, back your horse approximately 10 feet, then trot on to the marker. Stop and turn your horse 180 degrees to the right and pause. Proceed to the trailer, and load and unload your horse (time limit two minutes). The trailer used will not have partitions in place and will not have a ramp. (NOTE: the preferred method is to lead the horse in and back the horse out.) Following this, you will require an assistant carrying a lunge line. This assistant should be waiting at the marker when you have unloaded your horse. Have your assistant hold your horse while you pick up all four feet (time limit two minutes). Hold the foot in a position where you could “pick or trim the hoof”. Then take the lunge line and lunge your horse at all three gaits, in both directions. You may use a lunge whip if desired. You will be given a maximum of three minutes to demonstrate your horse lunging. A signal will be given after a minute and a half and at the end of the allotted time. Leave the arena after completing lunging.

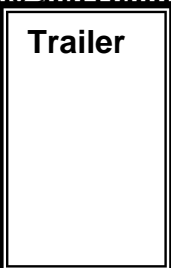
Evaluation Criteria

In items 1,2 and 6 to 13, the horse’s training is to be evaluated, as opposed to quality and movement. A horse that responds promptly and willingly is to be scored highest. In item 4, condition as a reflection of proper nutrition is to be scored. Both over and under condition are to be discounted. Other signs of improper nutrition such as epiphysitis, are to be considered. If a maneuver is omitted or taken out of order, a score of zero will be given for that maneuver.

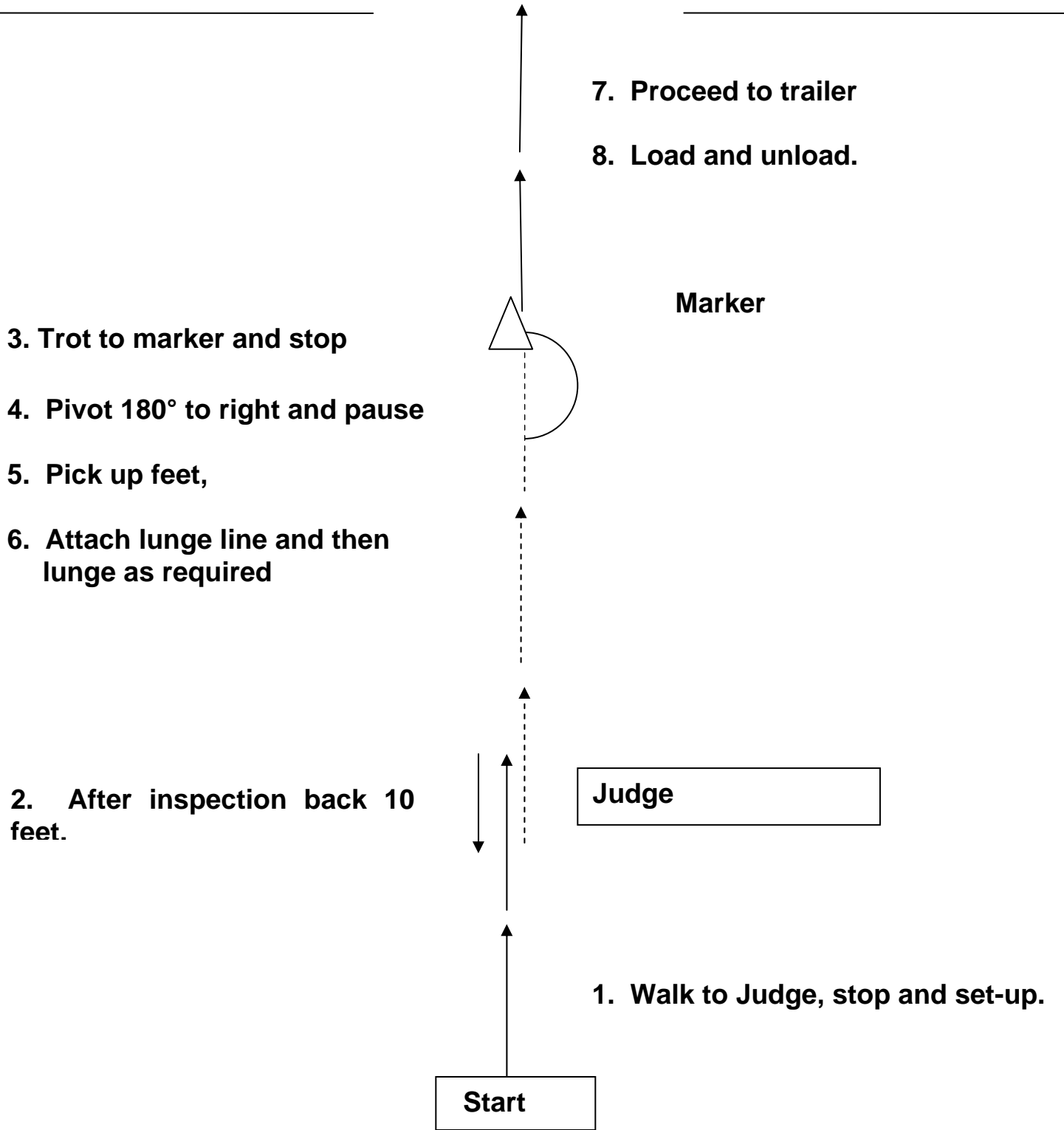
Safety at all times is of primary importance – be aware of using proper methods when trailoring, lunging etc. Loss of points will be made for dropping the lunge line, inattention to the horse, etc (look in lunge line section)

NOTE: Prior to the start of individual patterns, all the yearlings will be brought into the ring for the evaluator to assess grooming and conformation.

NOTE: The following pattern is to be worked as stated, NOT as drawn. The drawn pattern is just to give the general idea of what the pattern will look like in the



9. Presentation ends after unloading from trailer.



Yearling Presentation Pattern

SCORE CARD FOR YEARLINGS

	ITEM	VALUE	SCORE
1.	Grooming	30	_____
2.	Conformation	20	_____
3.	and movement	20	_____
4.	Walk and Stop	20	_____
5.	Set up for inspection	10	_____
6.	Back up approximately 10 feet	10	_____
7.	Trot and stop	20	_____
8.	180 turn	10	_____
9.	Pick up all four feet	10	_____
10.	Lunge in first direction	15	_____
11.	Stop and reverse	10	_____
12.	Lunge in second direction	15	_____
13.	Load and unload	20	_____
14.	Condition	40	_____
15.	Safety (proper attire, handling lounge line etc)	10	_____
	 TOTAL	 260	 _____

2 Year Old Evaluation

Explanation of Pattern

To begin the class, you will be dismounted, with your horse saddled and bridled. At the judge's signal, lead your horse to the center of the arena; the first half of the way at a walk, then jog / trot the remainder of the way. Stop, turn 180 degrees to the right. Mount your horse. Make a 90 degree pivot to the left. Starting a left hand circle (counterclockwise) walk one half a large circle (width of arena.). Trot/jog the second half of the large circle (width of arena). Lope/canter 2 large circles to the left. Come to a stop. Change directions and walk half a large circle (width of arena) to the right (clockwise). Trot/jog the second half of the large circle. Lope/canter 2 large circles to the right (clockwise). Come to a stop in the center and settle. Back up 10 to 15 feet. Proceed at a walk to the marker on the far wall of the arena. Facing the wall, side pass 6 to 10 feet first to one side and then to the other. Walk to the logs and proceed over the logs at a walk. Jog/trot to the judge and stop. Dismount. Unbridle and rebridle your horse. Unsaddle and present your horse to the judge for inspection (you may have a helper to hold your saddle). Leave the arena after inspection.

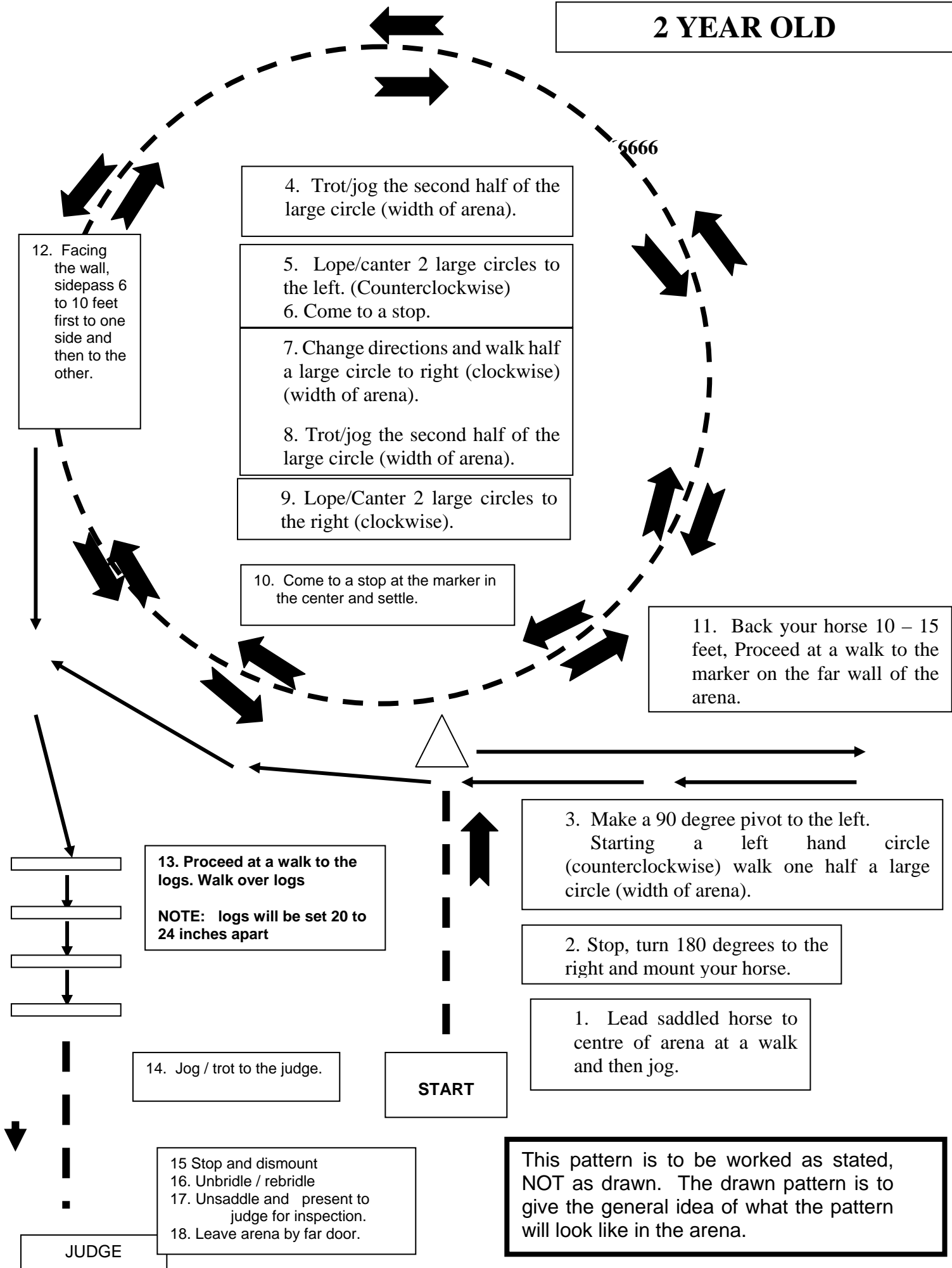
Evaluation Criteria

As with the yearling evaluation, the horse's training is to be evaluated as opposed to the quality of gaits and movement. The goal is to develop a well trained horse that has a good basic training foundation and may then later build on this foundation to become a horse that will be competent for one or more of a number of uses from trail riding to competing in speed events. Thus in each of the items the horse that scores the highest is the one that promptly and willingly responds to the cues giving by the rider. For items 2, 15, 16 and 17, the horse that stands quietly and accepts the particular procedure should be scored highest. When scoring items 19 (conformation) and 20 (condition), particular attention should be paid to signs of over use, such as lack of body condition, saddle marks, etc. These score should also reflect proper nutrition of the young horse. If a maneuver is omitted or taken out of order, a score of zero will be given for that maneuver.

Safety at all times is of primary importance – be aware of using proper methods when performing the pattern. Loss of points will be made for inattention to the horse, etc.

Note: after the final participant has completed the pattern, all two year olds will enter the ring as a group and be evaluated for conformation and condition.

2 YEAR OLD



SCORE CARD FOR TWO YEAR OLDS

ITEM	VALUE	SCORE
1. Lead at walk and jog / trot	5	_____
2. Stop, turn 180 degrees to the right and stand for mounting	20	_____
3. Make a 90 degree pivot to the left, and starting a left hand circle (counterclockwise), walk one half of a large circle (width of arena)	10	_____
4. Trot/jog second half large circle (width of arena)	10	_____
5. Lope/canter 2 large circles to the right	15	_____
6a. Come to a stop	10	_____
6b. Change directions	5	_____
7. Walk first half of large circle to the left (clockwise)	10	_____
8. Trot/jog second half large circle (width of arena)	10	_____
9. Lope/canter 2 large circles to the left (clockwise)	15	_____
10. Come to a stop and settle	10	_____
11. Back up 10 to 15 feet	15	_____
12. Sidepass to both sides	20	_____
13. Walk over logs	10	_____
14. Jog / trot to the judge and stop	15	_____
15. Dismount	5	_____
16. Unbridle and rebridle	10	_____
17. Unsaddle	10	_____
18. Grooming	10	_____
19. Conformation	20	_____
20. Safety (proper attire, handling etc)	10	_____
TOTAL	245	_____

SECTION

9

RECORD KEEPING

Keeping records is an important part of 4-H club work and a vital part of any farm business. Good records will tell you and others about your work and progress. Good records also help evaluate and improve your work.

Hints for good record keeping:

1. **Monthly Progress Report:** You are required to write a progress report for each month of your project. (Minimum of 24 in total).

Highlights might include:

- growth or milestones in foal development
- any problems or challenges you faced
- new skills you and your foal learned

You are encouraged to keep a daily journal of your activities to help you complete your monthly progress reports.

Include details on training, feeding and care of your project foal undertaken each month. You may wish to include pictures. (Insert more pages as required).

2. Make a habit of filling out each section on a regular basis.
3. Do calculations on scrap paper. When you are sure they are right, transfer to your record book. **Extra pages can be added if required, including picture pages.**
4. Be as neat as possible. Records are important for reference, so they must be easily read.
5. **Yearly Inventory:**

Tack and Grooming Supplies: List all your equipment - both old and new. Describe the condition of each item (fair, good excellent, etc.). Don't forget such things as brushes, combs and pails.

Riding Apparel: This includes your boots, jeans, hat, jacket, chaps, brushes, helmet, shirt, etc. needed for riding.

Miscellaneous Equipment: Here's where you can list feed tubs, hay nets, tack box, etc.

Your beginning inventory will be a record of everything you had when you started the project.

Your closing inventory will list everything you had at the end of the project year-including anything new you acquired. Value each new item at the price you paid for it or at an estimated selling price for your used items (if you were to sell it). Your closing inventory from your previous 4-H year may be used as your beginning inventory for the new year.

6. **Monthly Records:** Be as accurate as possible in recording amounts fed to your horse. If you

estimate - be reasonable. Veterinary, farrier and bedding costs should also be recorded on a monthly basis. If your monthly records are accurate and complete, it will be easy to total amounts for cost records at the end of each year.

7. Feed Records: Whenever feed is weighed you should record the kind and weight for transfer to your monthly records.

The following may be helpful:

FEED	Approximate Weight of One Gallon (4.5 L)	Weight of One Bushel (36.4 L)
Barley	6 lbs (2.7 kg)	48 lbs (21.8 kg)
Oats	4 lbs (1.8 kg)	34 lbs (15.4 kg)
Wheat	8 lbs (3.6 kg)	60 lbs (27.3 kg)

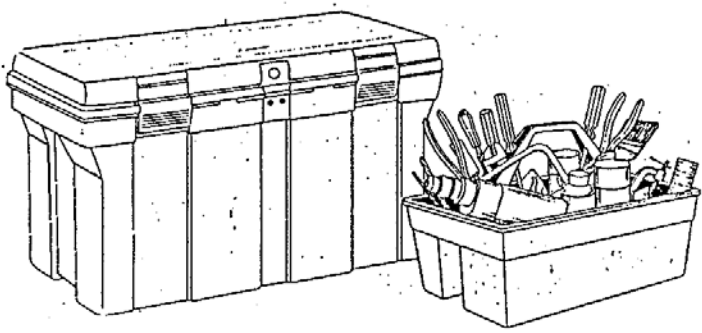
If ground or rolled grain is used, assume the weight per gallon to be 25% less than listed.

To arrive at a figure for the column weigh the amount of grain and/or hay at one feeding. Multiply this by the days in the month for a total weight. The multiply by the unit price to find the total value.

8. Remember - pasture isn't free. To help estimate pasture costs you may use the PFRA pasture rates. Your local MB Agriculture Office or PFRA Office can provide the most up to date rates.
9. If you wish you may choose to complete these records on the available computer program. If so, please print a copy if you completed records and include in your book.

Grooming Supplies

Item	Beginning Inventory				Closing Inventory				
	Date Started: _____				Date Closed: _____				
	A	B	C	AxC	D	E	F	DxF	
	Number or Amount	Condition of Item	Cost or Value	Total Value	Number or Amount	Condition of Item	Cost or Value	Total Value	
<i>Example</i> Body Brushes	2	fair	2.00	4.00	2	fair	1.50	3.00	
TOTAL					TOTAL				



Feed Records

DATE	PASTURE	GRAIN	SUPPLEMENTS	HAY	BEDDING	BOARDING
SEPT.						
OCT.						
NOV.						
DEC.						
JAN.						
FEB.						
MAR.						
APR.						
MAY						
JUNE						
JULY						
AUG.						
TOTAL FEED						
x PRICE/ UNIT						
TOTAL VALUE						



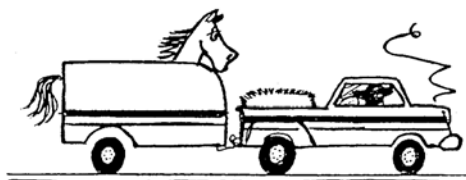
Additional Expenses

This chart allows you to record any expenses not covered under the other headings.

Additional Expenses

DATE	LESSONS/ TRAINING		HORSE SHOW ENTRY FEES		TRANSPORTATION AND FUEL		OTHERS	
		\$		\$		\$		\$
<i>example</i> June 5			Regional 4-H Horse Show	\$ 22.50	Home to show	\$25	stall sign	\$15
		\$		\$		\$		\$
		\$		\$		\$		\$
		\$		\$		\$		\$
		\$		\$		\$		\$
		\$		\$		\$		\$
		\$		\$		\$		\$
		\$		\$		\$		\$
		\$		\$		\$		\$
		\$		\$		\$		\$
		\$		\$		\$		\$
		\$		\$		\$		\$
		\$		\$		\$		\$
		\$		\$		\$		\$
		\$		\$		\$		\$
		\$		\$		\$		\$
		\$		\$		\$		\$
		\$		\$		\$		\$
TOTAL		\$		\$		\$		\$

Grand Total



Income Earned (related to project) YEAR 1

DATE	PRIZE \$	SALE OF EQUIPMENT	OTHER	TOTAL RECEIVED
				\$

Project Summary

A. Income

1. Closing Inventory:	Project Animal	_____
	Tack	_____
	Grooming Supplies	_____
	Riding Apparel	_____
	Misc. Equipment	_____
2. Income Earned:		_____
	Grand Total A	_____

B. Expenses

1. Beginning Inventory:	Project Animal	_____
	Tack	_____
	Grooming Supplies	_____
	Riding Apparel	_____
	Misc. Equipment	_____
2. Feed Record - grand total		_____
3. Health Record - grand total		_____
4. Additional Expenses - grand total		_____
	Grand Total B	_____
Profit or Loss (Total A - Total B)		_____

Checklist for Care and Handling of Horses

A Code of Practice has been developed by the Canadian Horse Industry. The code is voluntary and is intended as a realistic guide for the humane treatment of horses. 4-H members are encouraged to treat their animals within the guidelines outlined by the code.

Below is a basic checklist for you to complete.

MY 4-H HORSE WAS:	YES/NO
❖ Protected from the weather	
❖ In a safe place for the animal and myself	
❖ Free to stand up and lie down comfortably	
❖ Given clean, dry bedding regularly	
❖ Given adequate feed regularly	
❖ Able to drink clean water at all times	
❖ Given access to salt and minerals unless incorporated into diet	
❖ Kept in suitable body condition with proper diet and exercise	
❖ Checked regularly	
❖ Handled so that both my animal and myself were safe	
❖ Handled quietly and firmly with no unnecessary pain or distress	
❖ Treated to prevent health problems (eg. vaccination)	
❖ Treated for any health problems it had	
❖ Transported in a vehicle with high sides and safe footing	

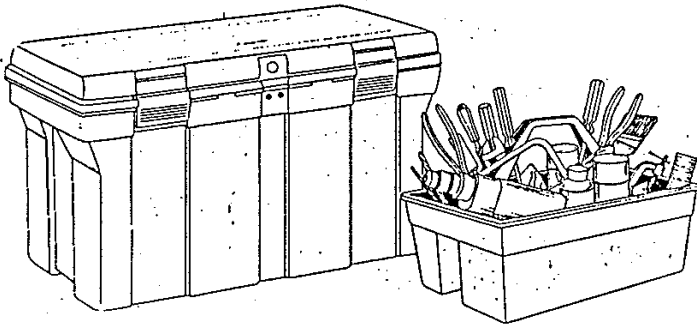
Tack Inventory – YEAR 2



Item	Beginning Inventory				Closing Inventory			
	Date Started: _____				Dated Closed: _____			
	A	B	C	AxC	D	E	F	DxF
	Number or Amount	Condition of Item	Cost or Value	Total Value	Number or Amount	Condition of Item	Cost or Value	Total Value
<i>Example</i> English Saddle	1	new	\$400	\$400	1	good	\$400	\$400
D-ring Snaffle					1	new	15	15
	TOTAL				TOTAL			

Grooming Supplies

Item	Beginning Inventory (from Year 1)				Closing Inventory				
	Date Started: _____				Date Closed: _____				
	A	B	C	AxC	D	E	F	DxF	
	Number or Amount	Condition of Item	Cost or Value	Total Value	Number or Amount	Condition of Item	Cost or Value	Total Value	
<i>Example</i> Body Brushes	2	fair	2.00	4.00	2	fair	1.50	3.00	
TOTAL					TOTAL				





Riding Apparel

Item	Beginning Inventory (from Year 1)				Closing Inventory				
	Date Started: _____				Date Closed: _____				
	A	B	C	AxC	D	E	F	DxF	
	Number or Amount	Condition of Item	Cost or Value	Total Value	Number or Amount	Condition of Item	Cost or Value	Total Value	
<i>Example western hat</i>	1	new	\$95	\$95	1	V.G.		\$85	
TOTAL					TOTAL				



Miscellaneous Equipment

Item	Beginning Inventory				Closing Inventory				
	Date Started: _____				Date Closed: _____				
	A	B	C	AxC	D	E	F	DxF	
	Number or Amount	Condition of Item	Cost or Value	Total Value	Number or Amount	Condition of Item	Cost or Value	Total Value	
<i>Example pails</i>	2	Good	\$10	\$20	2	good		\$18	
TOTAL					TOTAL				

Feed Records

DATE	PASTURE	GRAIN	SUPPLEMENTS	HAY	BEDDING	BOARDING
SEPT.						
OCT.						
NOV.						
DEC.						
JAN.						
FEB.						
MAR.						
APR.						
MAY						
JUNE						
JULY						
AUG.						
TOTAL FEED						
x PRICE/ UNIT						
TOTAL VALUE						



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Grand Total

Additional Expenses

This chart allows you to record any expenses not covered under the other headings.

Additional Expenses

DATE	LESSONS/ TRAINING		HORSE SHOW ENTRY FEES		TRANSPORTATION AND FUEL		OTHERS	
		\$		\$		\$		\$
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		\$		\$		\$		\$
		\$		\$		\$		\$
		\$		\$		\$		\$
		\$		\$		\$		\$
		\$		\$		\$		\$
		\$		\$		\$		\$
		\$		\$		\$		\$
		\$		\$		\$		\$
		\$		\$		\$		\$
		\$		\$		\$		\$
		\$		\$		\$		\$
TOTAL		\$		\$		\$		\$

Grand Total



Income Earned (related to project) YEAR 2

DATE	PRIZE \$	SALE OF EQUIPMENT	OTHER	TOTAL RECEIVED
				\$

Project Summary – Year 2

A. Income

1. Closing Inventory:	Project Animal	_____
	Tack	_____
	Grooming Supplies	_____
	Riding Apparel	_____
	Misc. Equipment	_____
2. Income Earned:		
	Grand Total A	_____

B. Expenses

1. Beginning Inventory:	Project Animal	_____
	Tack	_____
	Grooming Supplies	_____
	Riding Apparel	_____
	Misc. Equipment	_____
2. Feed Record - grand total		_____
3. Health Record - grand total		_____
4. Additional Expenses - grand total		_____
	Grand Total B	_____
Profit or Loss (Total A - Total B)		_____

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Below is a basic checklist for you to complete.

MY 4-H HORSE WAS:	YES/NO
❖ Protected from the weather	
❖ In a safe place for the animal and myself	
❖ Free to stand up and lie down comfortably	
❖ Given clean, dry bedding regularly	
❖ Given adequate feed regularly	
❖ Able to drink clean water at all times	
❖ Given access to salt and minerals unless incorporated into diet	
❖ Kept in suitable body condition with proper diet and exercise	
❖ Checked regularly	
❖ Handled so that both my animal and myself were safe	
❖ Handled quietly and firmly with no unnecessary pain or distress	
❖ Treated to prevent health problems (eg. vaccination)	
❖ Treated for any health problems it had	