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Fact Sheet 98-21

Care and Management of the Ranch Horse

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During the development of the cattle ranching industry it was recognized that good horses were as important as water and grass to success. Ranchers came to know the value of a good ranch horse and the importance of providing it with appropriate care. They understood the type of horse needed to get the job done. Horses were selected and produced for a specific purpose. In fact, the early ranchers worked hard at improving their horses before they improved their cattle.

Through the years there have been many changes in the ranching industry. However, the horse is as important to ranching today as it was in the past. The horse is a valuable asset to a successful ranching operation. No amount of automation or mechanical devices can equal or replace a good working ranch horse.

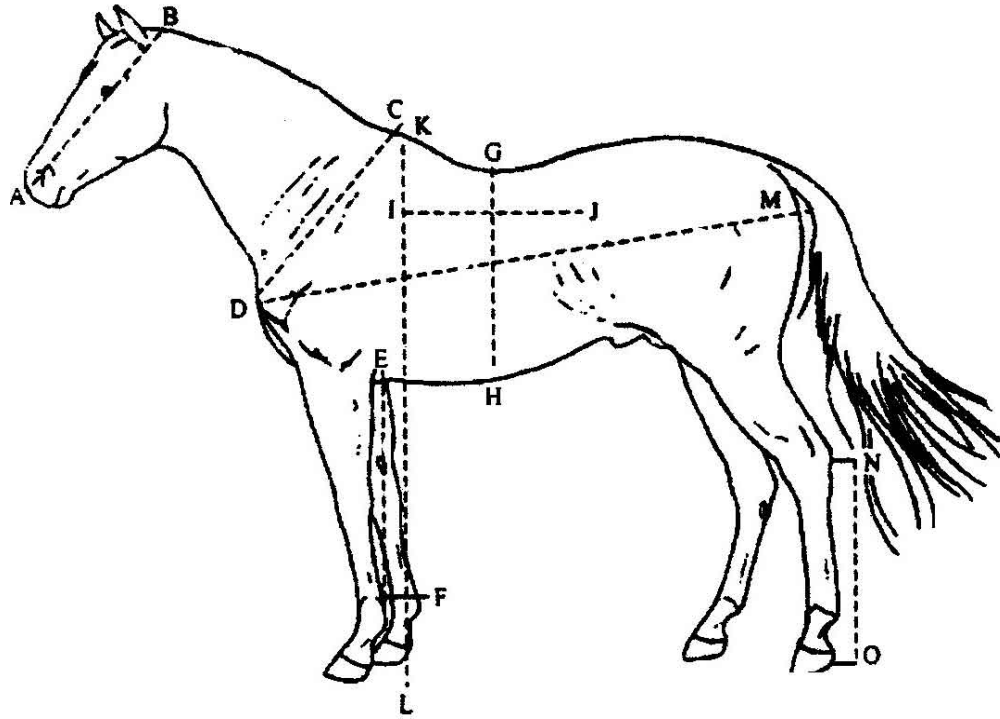
Ranch horses continue to be used under a wide range of conditions. To insure functions efficiency, durability, longevity, and cost effectiveness of the ranch horse it should possess specific characteristics and receive appropriate care.

Ranch Horse Traits and Characteristics

Conformation: The key to efficient movement and freedom from unsoundness in the horse is conformation. Conformation is considered a relationship of form to function. Poor conformation of the body or limb structure may contribute to or result in lameness. Selection of horses has been for specialized use rather than overall "balance". A common denominator among all good ranch horses is balance or "proportional" relationships. (Figure 1).

Figure 1: Proportional Relationships - Average Horse

Unit of Measurement	Proportional Relationship
Head Length (A, B)	1. Withers to point of shoulder (C,D)
	2. Xiphoid to fetlock (E,F)
	3. Back to abdomen (G,H)
	4. Dorsal angle of scapula to point of hip (I,J)
	5. Point of hock to ground (N,O)
Height at Withers (K,L)	1. Length of body from point of shoulder to buttock (D, M)



Traits: The heritability of selected traits are indicated in Table 1. Note that traits related to structure and conformation are more heritable than cow working ability, indicating that environment plays an important role in this trait. Although genetics determine what a horse can be, environment determines what the horse will be.

Table 1: Heritability Estimates - Ranch Horse

Trait	% Heritable
Speed	
Walk	40-45
Jog/Trot	20-40
Gallop	20-40
Movement	40-45
Body-Weight, Length, Height	25-
Conformation	30-50
Temperament	25-40
Cow Working Ability	10-25

Table 2: Psychological Traits - Ranch Horse

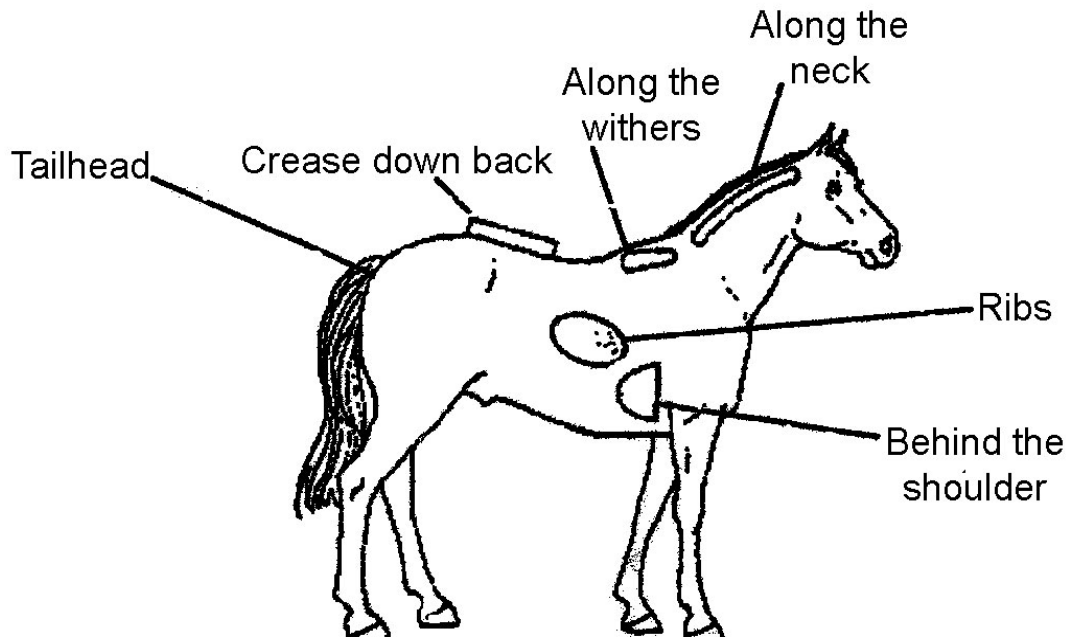
Desirable	Undesirable
Intelligent, Willing	Insecure
Responsive, Bold	Strong-Headed
Confident	Resentful
Safe	Shy, Defensive

Psychological Make-Up: The ranch horse is expected to be versatile under various conditions. The horse should also possess innate ability to perform a wide range of jobs given proper training. Table 2 indicates some desirable and undesirable traits.

Ranch Horse Care

Body Condition Score: Refers to the general state of health and body condition. A good vigorous condition is most desirable. Ability and endurance to work are affected by too little or too much body fat. For greatest work efficiency and durability ranch horses should be maintained in a moderate body condition. (Figure 2.)

Figure 2: Description of the Condition Score System (Source: Henneke et al. 1983).



Score	Description
1.	<i>Poor.</i> Animal extremely emaciated. Spinous processes, ribs, tailhead, and hooks and pins projecting prominently. Bone structure of withers, shoulders and neck easily noticeable. No fatty tissues can be felt.
2.	<i>Very Thin.</i> Animal emaciated. Slight fat covering over base of spinous processes, ribs, tailhead, and hooks and pins prominent. Withers, shoulders, neck structures faintly discernable.
3.	<i>Thin.</i> Fat built up about halfway on spinous processes, transverse processes cannot be felt. Slight fat cover over ribs. Spinous processes and ribs easily discernable. Tailhead prominent, but individual vertebrae cannot be visually identified. Pin bones not distinguishable. Withers, shoulders, and neck accentuated.
4.	<i>Moderately Thin.</i> Negative crease along back. Faint outline of ribs discernable. Tailhead prominence depends on conformation, fat can be felt around it. Hook bones not discernable. Withers, shoulders, and neck not obviously thin.
5.	<i>Moderate.</i> Back level. Ribs cannot be visually distinguished but can be easily felt. Fat around tailhead beginning to feel spongy. Withers appear rounded over spinous processes. Shoulders and neck blend smoothly into body.
6.	<i>Moderate to Fleshy.</i> May have slight crease down back. Fat over ribs feels spongy. Fat round tailhead feels soft. Fat beginning to be deposited along the sides of the withers, behind the shoulders and along the sides of the neck.
7.	<i>Fleshy.</i> May have crease down back. Individual ribs can be felt, but noticeable filling between ribs with fat. Fat y around tailhead is soft. Fat deposited along withers, behind shoulders, and along the neck.
8.	<i>Fat.</i> Crease down back. Difficult to feel ribs. Fat around tailhead very soft. Area along withers filled with fat. Area behind shoulder filled in flush. Noticeable thickening of neck. Fat deposited along inner buttocks.
9.	<i>Extremely Fat.</i> Obvious crease down back. Patchy fat appearing over ribs. Bulging fat around tailhead, along withers, behind shoulders, and along neck. Fat along inner buttocks may rub together. Flank filled in flush.

the amount of hay allowed for maintenance and provide enough grain for the increased energy needed for work. Work increases the energy need 50 to 70% over maintenance. The working horse may not be able to consume enough hay to satisfy its needs. Then, grain that is higher in energy density must be fed (Table 3). Providing some grain to the working ranch horse is helpful in fulfilling nutrient needs without excessive feed consumption. (Table 4)

Table 3: Nutrient Needs - Diet Dry Matter Vs.. Feed Composition Digestible
Adapted from: Lewis, L. 1995. Equine Clinical Nutrition. NRC. 1989. Nutrient Requirements of Horses

	Digestible Energy Mcal/lb	Protein %	Calcium %	Phosphorus %
Activity				
Idle	0.80	8	0.25	0.20
Work				
Light	1.05	10-11	0.27	0.22
Moderate	1.30	10-11	0.28	0.24
Feed Composition				
Alfalfa	1.0-1.1	15-20	1-1.4	0.20-0.25
Grasses	0.7-1.0	6-10	0.3-0.5	0.15-0.30
Cereal Grains	1.5-1.7	9-12	0.02-0.1	0.25-0.35

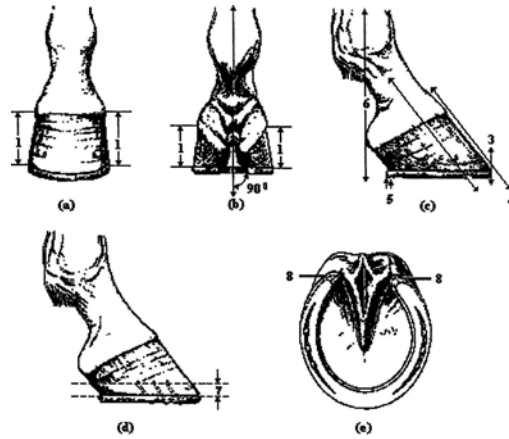
Table 4: Grain Needed for Work

Work	Grain per hour of work (lbs.)
Light	0.5 - 1.5
Moderate	1.5 - 3.0

1. In addition to 1.5-1.75 lbs./100 lbs. body weight daily of good quality hay.
2. Amount fed should be adjusted as needed to maintain desirable body condition.

Therefore gastrointestinal over-fill is avoided. The amount of grain fed should provide for optimum body weight and condition. Horses too thin will not have adequate body fat for a source of energy during prolonged or frequent activity. They will also have lower levels of muscle glycogen. This will result in reduction of work ability. On the other hand, fleshy horses with a body condition above moderate will require more feed at rest and work. They will also produce more body heat. For optimal work ability and health it is important to maintain a moderate body condition.

Figure 3: Hoof Balance



Farrier Care: Factors such as genetics, environment, nutrition, and disease can predispose the horse to lameness. Neglect of the horse's foot can also result in lameness and loss of use. Foot care provided on an approximate eight week schedule is necessary for the prevention of foot and lower limb problems. The foot must be trimmed and balanced as determined by need. It is important to insure the hoof is level, balanced, and trimmed for correct angulation and breakover. The relationship of toe to heel length is important (Figure 3). There are various reasons for shoeing horses: to increase traction, to protect the hoof wall against breaking and excessive wear, to alter the action of the of the foot and lower limbs, and to improve defects in movement. There are several types, sizes, and weights of shoes available. The type and weight of shoe selected is determined by the type of work as well as the working conditions. Appropriate foot care and management will enhance efficient movement, usefulness, and longevity of the ranch horse.

Veterinary Care: Good veterinary care plays a major role in the usefulness and longevity of the ranch horse. They should be checked annually by a veterinarian to insure their health status. They should also be on appropriate immunization, parasite control and dental program as recommended by your veterinarian. Should horses be used in rodeos, roping, and other competitive activities off the ranch several immunizations should be considered. Conditions to consider vaccinating for are: encephalomyelitis, tetanus, distemper, influenza, rhinopneumonitis, and potomae horse fever. Consult your veterinarian for a specific health prevention program.

Summary

Good ranch horses make a valuable contribution to a successful ranching operation. Functional efficiency, durability, and longevity can be achieved through appropriate selection and training that is coupled together with good care and management.

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