Feeding Horses under Emergency Conditions

In an emergency situation the feeding of large numbers of horses will have to be simplified and well managed. Horses should be fed individually or in small groups. They should be fed twice a day at regular intervals. If horses are fed in groups, the most aggressive ones should be fed first. If that is not possible, close observation at feeding time should ensure that horses allow one another access to feed and water.

When horses are moved and mixed and their diets are changed, they become predisposed to colic, laminitis, and hyperlipidemia. Because horses coming from many different sources are also likely to have been fed a great variety of diets, the likelihood of dietary problems should be reduced by a diet for moderate energy levels.

Under resting conditions and when ambient temperatures are greater than 40º F (4º C), a horse should consume about 2% of its body weight per day in dry matter. About 75% of this feed should be derived from forage (hay) and 25% from grain. Oats and sweet feed are the preferred grains to feed under emergency conditions because they are least likely to cause nutritional problems.

Total feed intake depends on body size. For example, a 1000-lb horse will require 7.5 lb (approximately one fifth of a rectangular bale) of hay and 2.5 lb of grain twice a day. This amount should be given to the horse in the morning and in the evening. A horse also requires approximately 2% of its body weight in water per day and 1 to 2 ounces of loose salt. All feeding requirements are doubled for lactating mares and increased at low temperatures (Tables 29-1 and 29-2).

Table 29-1 Use of girth to estimate a horse's weight

Girth circumference*		Body weight	
cm	Inches	kg	lb
135	53	200	440
151	59	300	660
164	65	400	880
183	72	500	1100
198	78	600	1320
240	94	700	1540

From MacCormack JAD, Bruce JM: *Farm Building Progress* 105:10-13,1991.
*This measurement is made behind the horse's foreleg.

Table 29-2 Feeding requirements of horses in winter

		Body weight in pounds							
Degree of protection	Severity of winter	220	440	660	880	1100	1320	1540	1760
Exposed	Mild	1.7	1.45	1.31	1.22	1.16	1.11	1.07	1.04
	Average	1.85	1.58	1.43	1.33	1.26	1.20	1.15	1.11
	Severe	2.00	1.70	1.54	1.44	1.36	1.29	1.24	1.20
Open front shelter	Mild	1.52	1.31	1.20	1.13	1.07	1.04	1.02	1.00
	Average	1.65	1.43	1.31	1.22	1.16	1.11	1.07	1.05
	Severe	1.79	1.54	1.41	1.32	1.25	1.20	1.15	1.11
Exposed with rug	Mild	1.35	1.19	1.09	1.04	1.01	1.00	1.00	1.00
	Average	1.47	1.29	1.18	1.11	1.07	1.04	1.01	1.02
	Severe	1.59	1.39	1.28	1.20	1.14	1.10	1.07	1.04
Open front shelter and rug	Mild	1.21	1.08	1.02	1.0	1.00	1.00	1.00	1.00
	Average	1.32	1.16	1.08	1.04	1.01	1.00	1.00	1.00
	Severe	1.42	1.25	1.16	1.10	1.06	1.03	1.01	1.00

From MacCormack JAD, Bruce JM: *Farm Building Progress* 105:10-13, 1991.
Values in the table are the amount by which the regular feeding requirement should be multiplied.

Determining the total amount of feed needed for a group of horses starts with estimating the total biomass of all horses. Table 29-3 can be used for this purpose. Based on the total biomass of the herd, the total amount of hay, grain, water, and salt per day can be calculated. The total biomass can also be used to estimate the amount of manure that should be removed each day. Horses produce approximately 0.5% of their body weight in manure every day. In addition, the soiled bedding material that should be removed is approximately the same amount as the hay fed.

Table 29-3 Typical weights and heights of horses

Breed type	Adult weight (lb)	Foal weight (lb)	Approximate height (hands*)
Giant	1500-2000	150-200	>17
Full size	750-1200	75-100	15-17
Pony	500-700	50-75	<15
Miniature	200-400	20-40	<40 inches

* One hand is equal to 4 inches. Horses' heights are measured at the highest point of the shoulder (withers).
These weights can be used to estimate the total biomass of a band of horses.