



Horses in the Morrow Project

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Horse Food

Assumptions

A horse requires the concentrates ration and either the grazing time or the hay ration. "Concentrates" refers to grain, often oats, although barley or maize can also be fed.

The quantities given assume average quality hay or meadowland.

For poor quality, double the quantity of hay or the grazing time.

For good quality, subtract 25%.

For the concentrates, average quality oats are assumed.

For barley, reduce ration by 10%, and for maize by 20%.

For poor quality, add 50% to required ration and assume the same quantity for all grain types.

Good quality is usually not used as animal feed, but should it be in this case, subtract 25% from required ration, also taking into account the grain type differences (ie -35% for good barley and - 45% for good maize).

Rations are given according to the size of the horse and the level of work, as listed in 'horse work'. For level of work, take the equivalent level once factors such as load and terrain have been taken into account, but do NOT include illness or injury in this calculation.

Codes

SP Small Pony

LP Large Pony

LtH Light Horse

MdH Medium Horse

HvH Heavy Horse

DrH Draft Horse

LtW Light Warhorse

HvW Heavy Warhorse

Horse Work

Definitions

Unload:	Horse carrying less than 10% of its body weight
Loaded:	Horse carrying 10-15% of its body weight
Heavily Loaded:	Horse carrying over 15% up to 30% of body weight
Overloaded:	Horse carrying over 30% of its body weight

A horse will refuse to move if loaded with more than 50% of its body weight.

Easy Work (10-18 mpd)	Walking, up to 6hrs/day at 3 mph or walk & trot, up to 2hrs/day at avg. 5 mph
Light Work (28-40 mpd)	Walking, up to 8 hrs/day at 5 mph or walk & trot, up to 4hrs/day at avg. 7 mph
Medium Work (42-56 mpd)	Walking, up to 12 hrs/day at 4 mph or walk & trot, up to 8 hrs/day at avg. 7 mph or walk, trot & canter, 6 hrs/day at avg. 8 mph
Hard Work (50-80 mpd)	Walk and trot, up to 10 hrs/day at avg. 8 mph or trot & canter, 5 hrs/day at avg. 10 mph
Very Hard Work (60-120 mpd)	Walk and trot, up to 15 hrs/day at avg. 8 mph or trot, canter & gallop, 5 hrs/day at avg. 12 mph

Overwork

A horse can be overworked in one of two ways:

- If it is kept in one type of work for more months than it can comfortably maintain, it suffers the effects of overwork. If then kept in that type of work for more than a month longer, it will break down.
- If a horse is made to do more than the equivalent of very hard work (either because it is overloaded etc., or because it is pushed on for a longer distance), it will become overworked and may break down. Take a cumulative 5% chance of the horse breaking down for each additional hour of work after the horse has become overworked, up to a maximum of double the comfortable distance, when it will stop and refuse to continue until rested for 1d10 hours. This may be modified for particularly tough or weedy horses.

Breaking Down

A broken down horse either dies or is completely useless for work:

Roll	Result
01-20	Horse dies of heart failure. Drops to ground.
21-25	Horse bursts major blood vessel. Thrashes in agony for 2d10 seconds, then dies.
26-50	Horse permanently strains back tendon. Lamé and cannot carry ordinary or heavier again.
51-75	Horse strains leg tendon. Permanently lame, but suitable for easy work after 2 months total rest. Could be bred from.
76-90	Horse temporarily strains tendon. Lamé and cannot carry load until rested, or injury becomes permanent.
91-100	Horse utterly exhausted. Refuses to move for 1d10 hours, and will not go faster than a walk for 1d10 days.

Assumptions

Work assumes a loaded, fit horse on good ground. Decrease difficulty of work by one for an unloaded horse. Increase by one for each level of load extra, and for muddy or rough ground. Increase by two for unfit, sick, lame, thirsty and underfed horses (cumulative).

A horse can maintain Easy and Light work indefinitely, Medium work daily for six months, hard work 5 days a week for 4 months, and Very Hard work 2 or 3 days a week for 4 months. Exceeding this causes overwork.

One month doing no work or two months doing Easy work will rest a horse. One month in Light work following by one month in Medium work will get a horse fit (this does not count towards the work period).

Hours worked

Easy work: 2-6 hours
 Light work: 4-8 hours
 Med. work: 6-8 hours
 Hard work: 5-10 hours
 V.hard work: 5-15 hours

A note on how long a horse would need to graze to maintain itself if in Medium work without being fed grain (not possible for Hard or Very Hard work):

Horse SP LP LtH MH HH DrH LtW HvW

Hours 5 6 7 9 10 15 9 12

Remember that after grazing the horse would need « hour to digest. Also, any horse will need at least 2 hours sleep per night.

Tables

There are two tables, one giving the ideal rations to keep a horse in top working condition, the other giving the rations that a horse could get by on. The times that the difference would come into play would be during a match of some kind between horses, when the one on ideal rations would have the edge over the one that wasn't (eg pulling, racing, or stamina contest), and when a horse is being pushed hard. If a horse is on 'get by' rations, halve the time that they can comfortably stay at a given level of work, and double the effects of being heavily loaded.

The figures on the table are in the order:

No. Of hours grazing/ pounds of hay/ pounds of concentrates

Horse	Ideal Rations				
	Easy	Light	Medium	Hard	Very Hard
SP	4 / 9 / -	3 / 6 / 2	3 / 6 / 3.5	3 / 6 / 5	3 / 6 / 6
LP	5 / 10 / -	4 / 8 / 2	3 / 6 / 4	3 / 6 / 6	4 / 8 / 7
LtH	6 / 12 / -	4 / 9 / 2.5	4 / 9 / 5	4 / 9 / 7.5	5 / 11 / 9
MdH	7 / 14 / -	5 / 11 / 3	5 / 11 / 6	5 / 11 / 9	6 / 13 / 11
HvH	8 / 18 / -	6 / 13 / 3.5	6 / 13 / 7.5	6 / 13 / 12	8 / 17 / 14
DrH	10 / 22 / -	8 / 18 / 5	9 / 19 / 10.5	9 / 20 / 16	11 / 24 / 20
LtW	7 / 15 / -	5 / 11 / 3	6 / 12 / 6.5	6 / 12 / 10	7 / 14 / 12
HvW	9 / 19 / -	7 / 14 / 4	7 / 15 / 8.5	7 / 15 / 15	9 / 19 / 15

Horse	Bearable Rations				
	Easy	Light	Medium	Hard	Very Hard
SP	4 / 9 / -	4 / 9 / -	4 / 8 / 2	4 / 8 / 4	4 / 9 / 4.5
LP	5 / 10 / -	5 / 10 / -	5 / 9 / 2.5	4 / 9 / 5	5 / 10 / 5.5
LtH	6 / 12 / -	6 / 12 / -	5 / 11 / 3	5 / 11 / 6	6 / 13 / 7
MdH	7 / 14 / -	7 / 14 / -	7 / 14 / 4	7 / 13 / 7	7 / 15 / 9
HvH	8 / 18 / -	8 / 18 / -	8 / 17 / 4.5	8 / 16.5 / 7	9 / 20 / 11
DrH	10 / 22 / -	10 / 22 / -	11 / 24 / 6.5	11 / 24 / 13	13 / 29 / 16
LtW	7 / 15 / -	7 / 15 / -	7 / 15 / 4	7 / 14 / 8	8 / 17 / 9
HvW	9 / 19 / -	9 / 19 / -	9 / 19 / 5	9 / 19 / 10	10 / 23 / 12

Load Guidelines

Horse type	Loaded	Heavily loaded	Horse weight
		Weights in pounds	
Small pony	50-75	75-150	500
Large pony	60-90	91-180	600
Light horse	80-120	121-250	800
Medium horse	100-150	151-300	1000
Heavy riding horse	130-195	196-390	1300
Draught horse	200-300	301-500	2000
Light warhorse	110-160	161-350	1100
Heavy warhorse	150-225	226-450	1500

Small pony:	"Native" type, wild or semi-wild, herded Shetland, Dartmoor, Tarpan
Large pony:	Selectively bred for size and quality, may be herded New Forest, Haflinger
Light horse:	Ladies' or pleasure mount, or nomad cavalry Morgan, Hackney, Mustang, Arab
Medium horse:	Light hunter type Trakener, Andalusian
Hvy. Riding horse:	Heavy hunter, carthorse or large cob Hanoverian, Hoistein, Russian trotters
Draught horse:	Cart/plough horse Perceron, Shire
Light warhorse:	Light cavalry mount Thoroughbred
Heavy warhorse:	Heavy or armored cavalry mount Destrier

