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著者	Kang Min-soo
journal or publication title	Journal of Integrated Field Science
volume	1
page range	33-34
year	2004-03
URL	<a href="http://hdl.handle.net/10097/30923">http://hdl.handle.net/10097/30923</a>

## Grazing behaviour of Jeju Native Horses\*

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The famous, indigenous horses of Jeju, called "Chorangmal", can be seen grazing while walking leisurely on the expansive grassy slopes of Mt. Halla. As becomes readily evident in the old saying, 'Send your son to Seoul and your horse to Jeju', Jeju has been famous for its native horses for quite a long time. The Jeju horses (*Equus caballus*), a breed of native horses, are an important part of Korean heritage. It is believed that the Jeju horses are descended from "Kwahama", the native stock of horses which had been distributed on the Korean peninsula a long time ago. The native horses were cross-bred with horses brought to Jeju from China by the Mongolian army after the Mongol invasion during Koryo dynasty (1276-1376), to the Jeju horses

have evolved into a truly unique breed of horse well adapted to the natural environment of Jeju.

Since the Jeju native horses are considerably smaller than their western counterparts, they are also called 'Kwahama (horse that is able to pass under a fruit tree without touching it)' or 'Tojongma' (indigenous horse). A full-grown Jeju horse stands about 115 to 120 cm high and has a chestnut colored coat. It has a heavy head, big round eyes, a thick neck, and short, thick limbs. It is characterized by very strong hooves.

As they are very docile, the Jeju horses were used as beasts of burden in farming or transportation. These days, however, their number has sharply fallen as farming

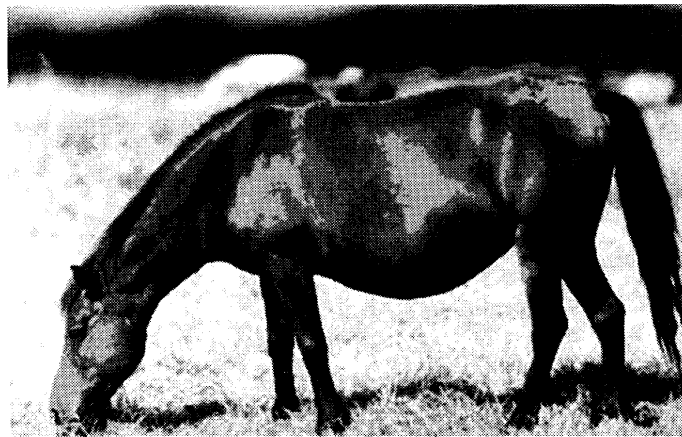


Fig. 1. Jeju native female horse

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\* This study worked by the development fund of Cheju National University.

operations and transportation have become increasingly mechanized. Pure-blooded Jeju horses are also in serious danger of being bred out of extinction due to increasing cross-breeds as a result of a lack of an effective breeding program. For their preservation, the Korean government designated the Jeju horse as National Monument No. 347 in 1986.

Table 1. Eating and resting time of Jeju mare horses

Month	No. of mare	Length of obser.+	Eating	%	Resting	%
Apr.*	11	360	247.9±66.6	68.9	85.8±45.2	23.9
May	9	420	239.4±69.6	57.0	100.6±84.5	24.1
June	10	420	234.8±67.7	47.9	125.5±61.8	35.0
July	5	420	298.8±53.5	71.1	33.6±31.4	8.0
Aug.	12	420	341.8±25.3	69.8	76.2±19.4	18.1
Oct.	6	360	219.0±62.5	60.8	81.6±18.7	22.8

\* Off grazing season

Length of observation(min) : 10:00–12:00 hr and 13:00–18:00 hr in Apr. – Aug.  
and 13:00–17:00 hr in Oct.

The eating and resting behaviour of 10 lactating Jeju native mare horses on pasture with free access to water were recorded from 10:00 hr to 18:00 hr. Lactating mares on the pasture spent 57.0%(239 minute) of the time foraging in spring and 47.9% to 71.1% in summer and 60.8%(219 minute) in fall. Time spent for resting by mares was 24.1% during May and 35.0% in July, 18.1% in August and 22.8% in October.

As the foals grew older, the number of feedings decreased with the highest in May at 11.8 times during the observation period, 7.3 times in June, 9.9 times in July and 5.5 times in November. A similar tendency was observed in suckling time, greatest in June(73 sec.), 79 seconds in May, 54 seconds in July and 32.1 seconds in November. Number of urinations

during observation was greater in spring(3.0) and summer(3.0), but decreased in fall(1.4 times). Number of defecations gradually increased from spring(3.0 times) and was highest in July(4.6 times) and lowest in November(3.3 times). Fresh weight of feces from one defecation on the pasture were 1,177g in May, 840g in June, 1,418g in July and 1,271g in October, however the lowest values were recorded during the off grazing season(778g). Mounting interval of stallion was 33.8 minutes when the stallion was introduced to the breeding mares on the first week. However, the time was delayed to 260 minutes after one week of introduction of the stallion. The time spent for mounting, intermission and ejaculation of stallion was 26.9 seconds on the first day, and no differences were observed at the end of breeding season.