

*Study of Feeding Efficiency and Feeding Behavior Response
of local Cattle Post-Transportation using
KM Camara Nusantara*

**Nur'aini, SPt
Dr. Despal
Prof. Luki Abdullah**



Location



Farm Location



HR Sapi Elite Farm (RPH Jatimulya, Tambun, Bekasi, West Java)

- February-March 2019
- Transportation Route :
 1. Kupang – Tanjung Priok (KM Camara Nusantara)
 2. Tanjung Priok – Cibitung (Truck)
 3. Cibitung – HR Sapi Elite Farm (Truck)

Andaka Cattle Farm (Kp. Cibodas, Conggeang, Sumedang, West Java)

- May 2019
- Transportation Route :
 1. Ciawi – Sumedang (Truck)

Table 1 Nutrient composition of feed at each Location Farm (100% Dry Matter)

Nutrient (% Dry Matter) ^a	Type Of Feed				
	HR Sapi Elite			Andaka Cattle Farm	
	Field Grass	Concentrate	Soybean curd	Elephant Grass	Rice Straw
Dry Matter	52.22	78.73	11.70	12.55	85.23
Ash	9.32	10.53	7.22	15.10	12.67
Crude Protein	3.23	14.12	15.50	16.52	4.60
Crude Fat	0.35	6.78	8.59	4.47	5.29
Crude Fiber	40.39	12.50	16.50	33.08	30.2
Nitrogen Free Extract	46.71	57.07	52.18	30.83	47.24
Total Digestible Nutrien	49.57	64.38	71.86	53.92	56.6
NDF	78.51	-	-	65.27	-
ADF	49.57	-	-	41.36	-

Dry Matter of Field Grass 24.4%
Destianingsih (2014)

Crude Protein min. 13% dan TDN 70%.
SNI 3148.2 :2009

DM 14.69% and protein 23.39%
(Suprapti 2005)

Table 2 Feeding data on livestock body weight at each research location

Parameters	HR Sapi Elite	Andaka Cattle Farm
Average Body Weight (kg)	274	229,9
Feeding Data (kg DM)		
Grass	2,09	0,20
Rice Straw	-----	2,94
Soybean curd	0,59	-----
Concentrate	0,59	-----
Total	3,26	3,13
Persentase Pakan (% DM)		
Grass	39,42	5,25
Rice Straw	-----	94,75
Soybean curd	11,04	-----
Concentrate	49,53	-----
Total	100	100
Percentage of Feed / kg Body Weight (%)	1,93	1,36

Meat and Livestock Australia (2012) :

livestock access to **water and high-fiber** after the arrival of livestock is the most important priority during the recovery process from stress due to transportation.

Table 3 Average of Intake and Feed Efficiency at each research location

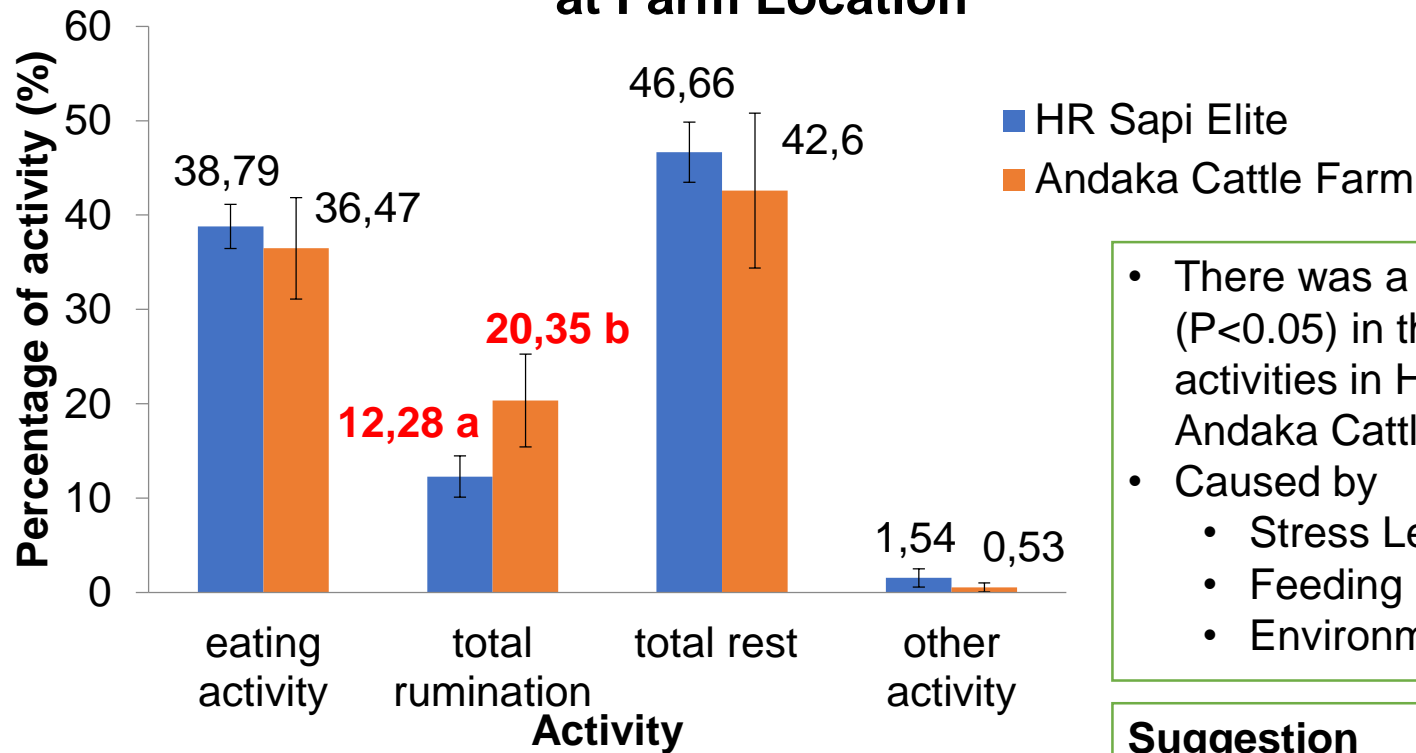
Parameters	Location	
	HR Sapi Elite	Andaka
Total Observed Time (07.00-17.00) (hours)	10	10
Eating Time (hours)	3,24	3,53
Rumination Time (hours)	0,94	1,97
Intake		
Dry Matter Intake (g BK)	5298,12	3133,75
NDF Intake (g NDF)	4159,44	1602,43
Feed Efficiency		
Feeding Efficiency (g DM hours ⁻¹)	1691,79	895,84
NDF Efficiency (g NDF ⁻¹)	1328,18	458,85
Rumination Feeding Efficiency (g BK jam ⁻¹)	5686,84	1657,82
Rumination NDF efficiency (g NDF jam ⁻¹)	4464,61	852,57

Normal rumination time on Cattle is 6-7 hours/day (Fraser 1997;Beauchemin 1991)

HR Sapi Elite (39%)
Andaka (82%)

Factors affecting rumination: Forage quality, feed digestibility and consumption of NDF (Beauchemin 1991)

Graph 1 Comparison of Feeding Behaviour at Farm Location



- There was a significant difference ($P < 0.05$) in the total rumination activities in HR Sapi Elite and Andaka Cattle Farm
- Caused by
 - Stress Level Transportation
 - Feeding Management
 - Environment

- Suggestion**
- Refinement of Feed during Transportation
 - Nutrient Quality of Feed
 - Feeding Management on Farm

Patterns and changes in rumination: the response of animals to stress (Schirmann 2011)



THANK YOU