

ABSTRACT ID # 884313

## Introduction

Buffalo meat production has been demonstrating its importance in livestock. Water buffaloes generate quality products but the specie needs more research to be produced efficiently.

## Objective

The aim of this study was evaluated the association between serum parameters and feedlot performance and efficiency measures of water buffalo for meat production.

## Material and Methods

Seventy-five animals used were of three different genetic groups (Jafarabadi, Mediterranean and Murrah), with means of initial body weight and age of 314±117 kg and 13±1.2 months, respectively. Body weight were recorded at the beginning and every 28 days until the final of the efficiency period. Animals were allocated in collective pens provided with automatic feeder system to determine individual daily intake of diet and water. Blood samples were collected from the jugular vein on days 0, 56, and 84 and were evaluated by commercial kits. Animals were clinically healthy, with no skin lesion, intestinal and blood parasites, no diarrhea, urogenital or muscular abnormalities. Data were analyzed using the CORR procedure in SAS.

## Results

**Table 1.** Pearson partial correlation coefficient between blood parameters and feedlot performance and efficiency measurements of water buffaloes during efficiency period (84 days).

	COL	TRI	HDL	LDL	VLDL	GLI	INS	LEPT
CAR	-0.00741	0.36557	-0.28027	0.19185	0.36872	-0.11604	0.06891	-0.20943
	0.9493	0.0012	0.0142	0.0969	0.0010	0.3182	0.5542	0.0694
GR	-0.17722	-0.29731	0.01642	-0.20272	-0.29129	-0.03238	-0.11625	0.10743
	0.1256	0.0091	0.8881	0.0790	0.0107	0.7813	0.3173	0.3556
CGR	-0.04300	-0.37220	0.22706	-0.20825	-0.37302	0.08336	-0.08678	0.19584
	0.7123	0.0009	0.0486	0.0710	0.0009	0.4740	0.4561	0.0900
CA	0.12504	0.09922	0.06311	0.08949	0.10722	0.04693	0.14954	0.11394
	0.2818	0.3938	0.5881	0.4420	0.3566	0.6873	0.1973	0.3271
EA	-0.12467	-0.18426	-0.07159	-0.06915	-0.17540	-0.04150	-0.14342	0.01152
	0.2833	0.1111	0.5388	0.5528	0.1296	0.7219	0.2165	0.9213
GMD	-0.14432	-0.01118	-0.21580	0.01333	-0.00193	-0.11025	-0.01342	-0.04598
	0.2136	0.9237	0.0612	0.9090	0.9868	0.3431	0.9084	0.6933
CMS	-0.06132	0.15413	-0.21546	0.09766	0.15678	-0.10264	0.14026	-0.07507
	0.5988	0.1837	0.0616	0.4013	0.1762	0.3776	0.2268	0.5192
CMSPV	-0.00332	0.22379	-0.24367	0.18874	0.22846	-0.06079	-0.04713	-0.18382
	0.9773	0.0520	0.0339	0.1025	0.0471	0.6019	0.6860	0.1119

ADG = average daily gain; DMI = dry matter intake; DMIBW = dry matter intake in percentage of the body weight; F:G = feed conversion ratio as feed to gain ratio; G:F = feed efficiency as gain to feed ratio; RFI = residual feed intake; RG = residual gain; RIG = residual intake gain; GLI = glucose; INS = insulin; LEP = leptin; CHO = cholesterol; TRI = triglycerides; HDL = high-density lipoprotein; LDL = low-density lipoprotein; VLDL = very low-density lipoprotein.

## Highlights

- ✓ There are some correlations and tendencies between serum parameters and feedlot performance and efficiency measurements.

## Conclusions

The alterations of serum parameters according to performance and efficiency and these parameters can be used as tools to assist in decision making within the buffalo production system.



**Figure 1.** Determination of plasma leptin using commercial kit.

## Acknowledgement

Appreciation is expressed to São Paulo Research Foundation – FAPESP (process #2014/05473-7) for financial support.