ethanolic saponification for fourteen hours with alkane analysis carried out by gas chromatograph. The DMI estimates were not affected by the forage regrowth period (P > 0.05). Only the pair of alkanes C32/C33 did estimate adequately the DMI, underestimating the total intake at just 8%, while the pairs C31/C32 and C35/C36 under and overestimated the forage DMI in -15.3 and +18.8%, respectively, (P < 0.05). The n-alkanes methodology presented potential to estimate the forage DMI in tropical conditions.

Table 1. Forage dry matter intake (DMI) observed and estimated with C31/C32, C32/C33 and C35/C36 alkane pairs in steers fed with tropical forage (São Paulo – Brazil).

	Regrowth age, days		Mean	SEM [1]
Methods	30	60		
Actual DMI	4.20	4.32	4.26 [b]	0.147
Estimated DMI				
C31/C32	3.50	3.72	3.61 [c]	
C32/C33	3.60	4.15	3.88 [bc]	
C35/C36	4.46	5.65	5.06 [a]	

[1] Standard error of the mean; [abc] Means values within columns with different superscripts are significantly different (P<0.05).

Key Words: Nellore, Palisade Grass

T244 The effect of non fibre carbohydrate on in vitro first order NDF disappearance of alfalfa. M. Danesh Mesgaran*, F. Rezaii, and A. R. Heravi Mousavi, *Ferdowsi University of Mashhad*, *Mashhad, Iran*.

The aim of this study was to determine the effect of supplementing sucrose or starch on in vitro first order NDF disappearance model of alfalfa. Samples of alfalfa were ground to pass 0.75 mm screen and dried at 80 ËšC for 48 h. One gram of non-supplemented or non-fiber carbohydrate supplemented samples (70 mg/g DM of feed sample as starch or sucrose) were incubated in a medium containing 40 ml cell-free rumen fluid, 60 ml mineral mixtures and 5 ml of cloth-cheese strained rumen fluid in a 200 ml bottle. Each bottle was finely bubbled with CO2. Rumen fluid was obtained from 4 Holstein steers fed corn silage, alfalfa hay, wheat straw, barley grain and soybean meal (3.4, 2.4, 0.8, 1.6 and 0.8 kg/d DM, respectively). Bottle of each sample was incubated for 24, 48, and 96 h at 39°C (n=4). Then, bottle content was filtered through a 22 Âµm filter paper. Unfiltered NDF was determined. Data were analyzed using GLM procedure of SAS and applied to a non-linear first order model [D(t)= D(i).exp (-k. time)+ I; where D(t) is potentially digestible fraction of DM , D(i) is potentially digestible residues, k is fractional rate constant of digestion (h-1) and I is indigestible fraction]. Indigestible fraction of NDF of alfalfa hay was significantly (p< 0.05) increased when it was supplemented with starch (0.63, 0.64 and 0.76 for alfalfa, alfalfa+sucrose and alfalfa+starch, respectively). The lowest constant rate of digestion was observed when sucrose (0.007) was added to alfalfa. Constant rate of digestion of alfalfa and alfalfa+starch was 0.01 and 0.02, respectively. Results of the present study showed that the first order fractional rate of digestion of NDF of alfalfa might be influenced by source of NFC. Therefore, there is a need to determine the associated effect of a feed and nature of NFC on fractional rate constant of digestion and indigestible fraction for each forage or a composed diet.

Key Words: NDF, Model, Disappearance

T245 Ruminal and post-ruminal protein disappearance of high oil sunflower meal treated with formaldehyde or sodium hydroxide. T. Mohammadabadi, M. Danesh Mesgaran*, and M. R. Nasiri, *Excellence Center for Animal Science, Ferdowsi University of Mashhad*, *Mashhad,Iran*.

This study was conducted to evaluate the effect of formaldehyde or sodium hydroxide on in situ ruminal disappearance and in vitro intestinal digestion of high oil (165 g/kg DM) sunflower meal (SM). Samples were: Untreated SM (USM), sodium hydroxide treated SM (SHSM, 40 g/kg DM), formaldehyde treated SM (F30SM and F60SM, 30 and 60 g/kg DM, respectively). Ruminal disappearance of sample was determined using four fistulated Holstein steers (400±12 Kg, body weight). Samples were weighed into nylon bags (19×12 cm, pore size 48 μm, n=6) and incubated in rumen for12 h. An in situ/ in vitro enzymatic 3-step procedure was conducted to determine post-ruminal disappearance of the samples. In this procedure, a part of ruminal-undegraded nitrogen (after 12 h rumen incubation) was included in pepsin and pancreatin to determine post-ruminal protein disappearance of the sample. DM content of all intact and incubated samples was determined using air-forced oven (65°C, 48 h). Nitrogen concentration of the samples was determined using Kjeldahl method. Data were analysed using GLM procedure of SAS. Results indicated that ruminal DM and CP of F60SM was significantly (P < 0.05) lower (0.42 and 0.39, respectively) than USM (0.7 and 0.65, respectively). Formaldehyde and sodium hydroxide caused an increase in post-ruminal CP disappearance (0.44, 0.4, 0.33 and 0.27 for F60SM, F30SM, SHSM and USM, respectively). Total tract CP digestibility for F60SM, F30SM, SHSM and USM was 0.83, 0.85, 0.88 and 0.93. It was concluded that both formaldehyde and sodium hydroxide caused an increase in the ruminal and post-ruminal CP disappearance of high oil content sunflower meal.
Key Words: High Oil Sunflower Meal, 3-Step, Disappearance

T246 The effect of feed iodine supplementation on milk production traits in dairy goats. A. Nudda*[1], M. Decandia[2], G. Epifani[2], G. Battacone[1], G. Spanu[1], and G. Pulina[1,2], [1]*University of Sassari*, *Sassari, Italy*, [2]*AGRIS Sardegna*, *Sassari, Italy*.

Iodine requirements are higher for goats than for other ruminants. An adequate supply of dietary iodine can prevent iodine deficiency disorders in goats and increase the iodine content in milk. However, the effects of iodine-enriched diets on milk production traits of lactating goats have been poorly investigated. This work aimed to determine the effect of iodine supplementation to dairy goats on milk yield and composition. Thirty crossbred dairy goats were divided into 3 homogeneous groups. Each goat was supplemented with potassium iodide (KI) at 0 (control group), 400 (group 1), or 950 μg of KI/day (group 2). The dose of KI (76.5% of iodine) was dissolved in water and administered every day for 8 weeks. Milk yield and milk composition (fat, protein, urea) were recorded weekly. Milk yield was not influenced by KI supplementation and averaged 1229, 1227 and 1179 g/d per head in groups 0, 1 and 2, respectively. Milk fat content was higher (P≤0.01) in group 1 (4.12%) compared to group 0 (3.78%) and group 2 (3.84%). The protein content was similar in groups 1 and 2 (on average, 3.43%), and tended to be higher than in the control group (3.36%). On the contrary, the milk urea concentration was significantly lower in the groups that received KI supplementation (32 and 33 mg/dl in groups 1 and 2, respectively) than in the control group (37 mg/dl). In conclusion, the doses of KI used in this study did not influence milk yield and had favorable effects