Do high-growth-rate rabbits prefer diets richer on amino acids than those recommended?

+

Effect of the level of lysine, sulphur amino acids and threonine in diets for rabbits with high growth rate

Marín-García P.J., Ródenas L., López M.C.,
Martínez-Paredes E., Blas E., Pascual J.J.

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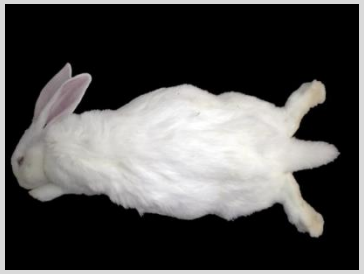
Instituto de Ciencia y Tecnología Animal

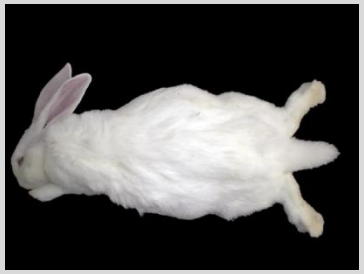
INTRODUCTION



PROTEIN

Carabaño et al., 2009

INTRODUCTION



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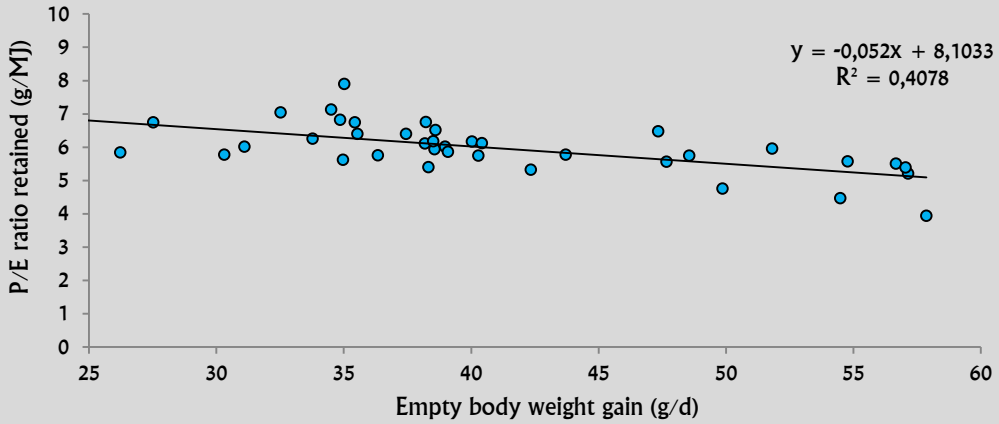
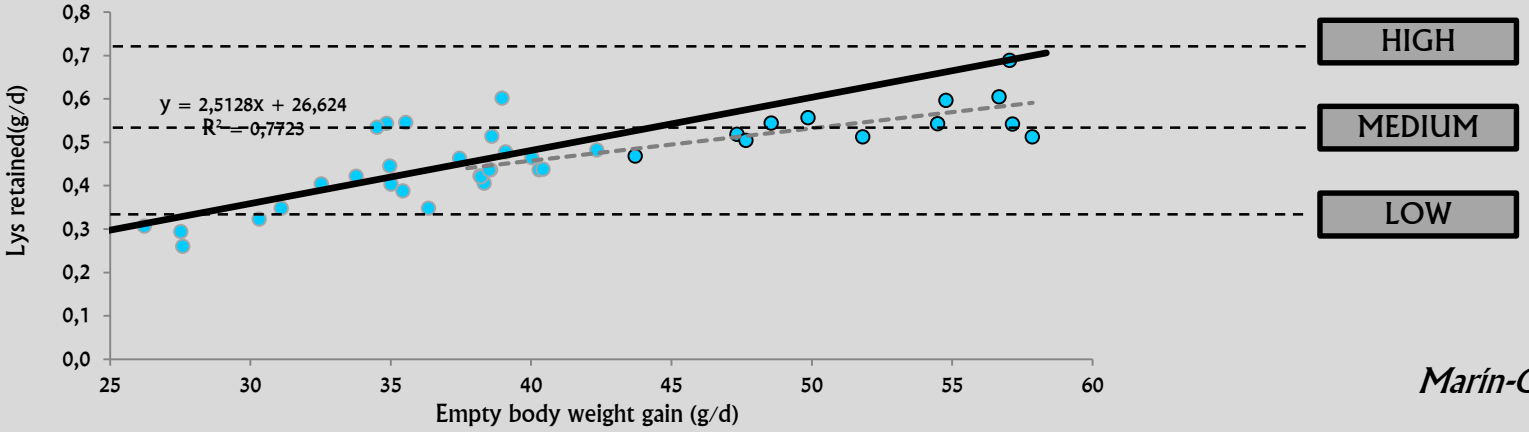


The bigger GR the lower P-E ratio

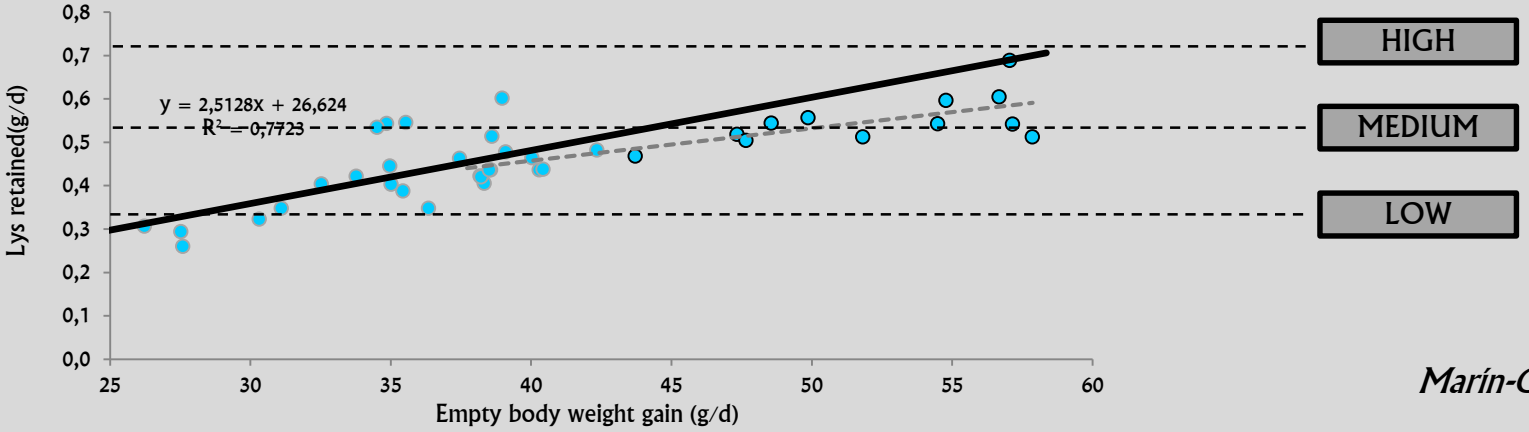
Marín-García et al., 2016

INTRODUCTION



Marín-García et al., 2016

INTRODUCTION



Marín-García et al., 2016

Marín-García et al., 2017

DIET 1

aa_1-aa_2-aa_3-aa_4-aa_5-aa_6-aa_7-aa_8-aa_9-aa_{10}

aa_{11}-aa_{12}-aa_{13}-aa_{14}-aa_{15}

aa_4-aa_8-aa_5-aa_{17}-aa_2-aa_7-aa_3-aa_{12}-aa_9-aa_6

DIET 1

aa_1-aa_2-aa_3-aa_4-aa_5-aa_6-aa_7-aa_8-aa_9-aa_{10}

aa_{11}-aa_{12}-aa_{13}-aa_{14}-aa_{15}

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aa_4-aa_8-aa_5-aa_{17}-aa_2-aa_7-aa_3-aa_{12}-aa_9-aa_6

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aa_4-aa_8-aa_5-aa_{11}-aa_2-aa_7-aa_3-aa_{12}-aa_9-aa_6

DIET 1

aa_1-aa_2-aa_3-aa_4-aa_5-aa_6-aa_7-aa_8-aa_9-aa_{10}

aa_{11}-aa_{12}-aa_{13}-aa_{14}-aa_{15}

aa_4-aa_8-aa_5-aa_{17}-[illegible]-aa_6 HIGH PUN

DIET 2

aa_1-aa_2-aa_3-aa_4-aa_5-aa_6-aa_7-aa_8-aa_9-aa_{10}

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aa_{16}-aa_{17}-aa_{18}

aa_4-aa_8-aa_5-aa_{17}-aa_2-aa_7-aa_3-aa_{12}-aa_9-aa_6

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aa_1-aa_2-aa_3-aa_4-aa_5-aa_6-aa_7-aa_8-aa_9-aa_{10}

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aa_{11}-aa_{12}-aa_{13}-aa_{14}-aa_{15}

aa_{16}-aa_{17}-aa_{18}

aa_4-aa_8-aa_5-aa_{17}-aa_2-aa_7-aa_3-aa_{12}-aa_9-aa_6

LOW PUN

OBJECTIVES

01 TO STUDY THE HABIABILITY OF RABBITS FOR TO CHOOSE BETWEEN DIETS WHERE PRINCIPAL AA ARE LIMITING HHHvsMMM

02 TO COMPARE THE PRODUCTIVE RESULTS OF THIS NEW COMBINATION MMMvsMHL

MATERIAL AND METHODS

	HHH	MMM	MHL
Lys	8,5 g/Kg	7,3 g/Kg	7,3 g/Kg
sAA	6,0 g/Kg	5,2 g/Kg	6,0 g/Kg
Thr	7,1 g/Kg	6,2 g/Kg	5,3 g/Kg

MATERIAL AND METHODS

MEZCLA BASAL → **+ AA** →

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INTAKE, WEIGHT, MORBILITY AND MORTALITY

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INTAKE, WEIGHT, MORBILITY AND MORTALITY

PROC MIXED of SAS (SAS, 2009) HOMOSCEDASTICITY

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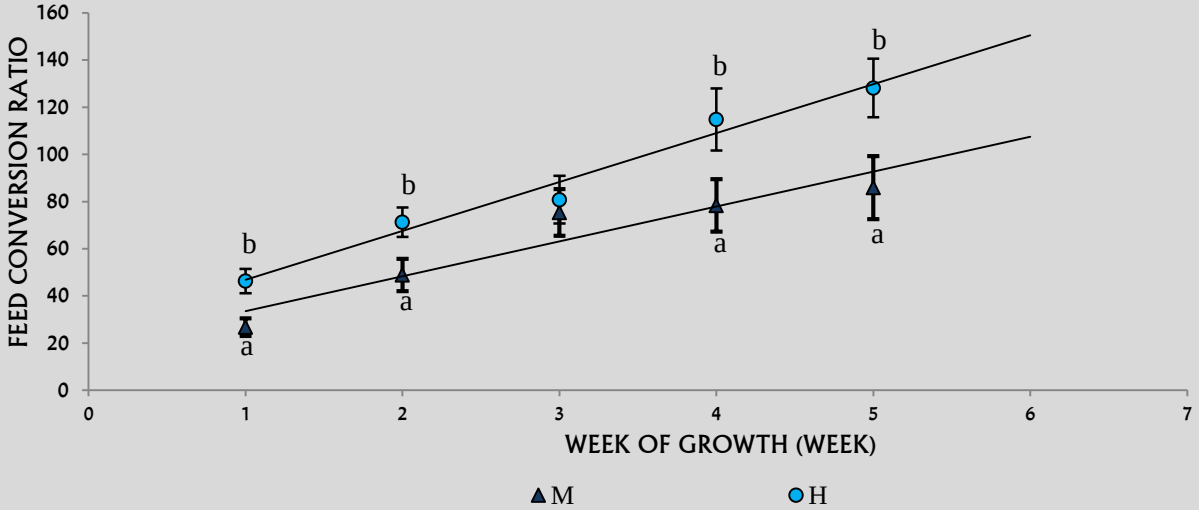
RESULTS AND DISCUSSION



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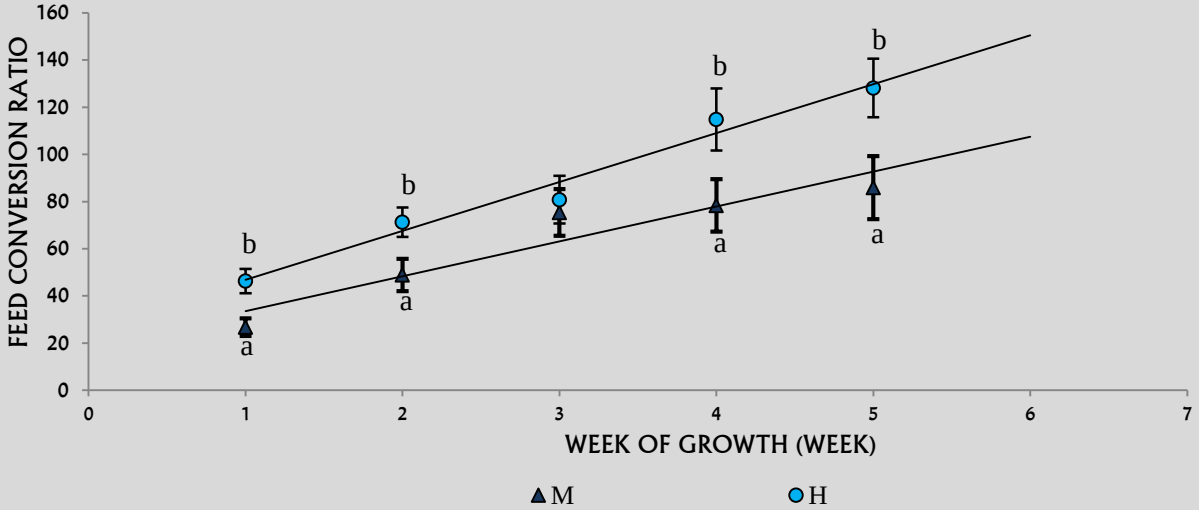
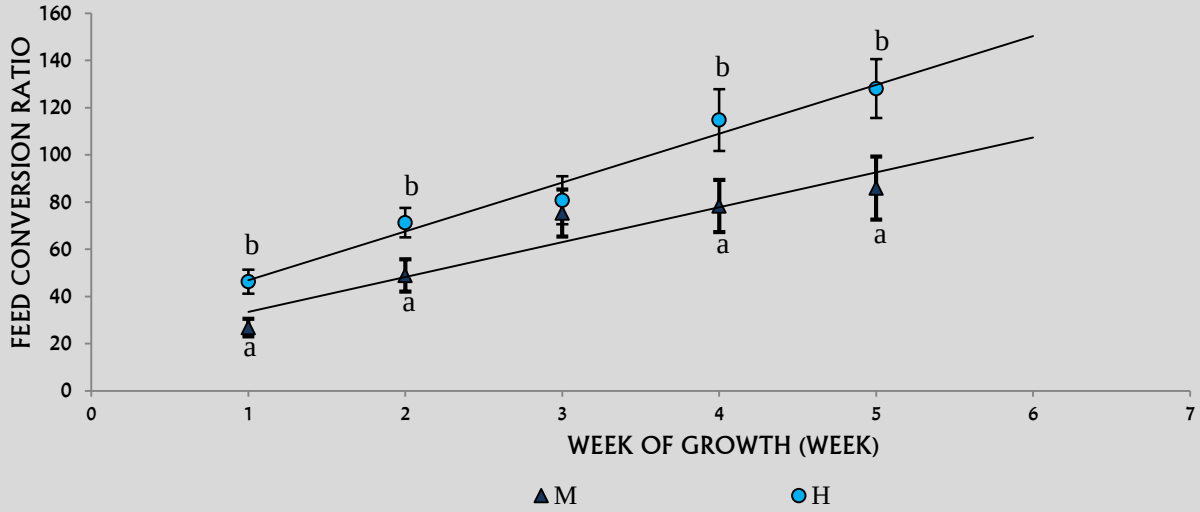


+16%

+66%

53.5 g/d

RESULTS AND DISCUSSION



+16%

+66%

53.5 g/d

COULD CHOOSE

Costrel *et al.*, 2011

HHH DIET MORE BALANCED

Gidenne *et al.*, 2002; Marín-García 2016

SOME LIMITING AA

OBJECTIVES

02 TO COMPARE THE PRODUCTIVE RESULTS OF THIS NEW COMBINATION

MMMvsMHL

RESULTS AND DISCUSSION

TABLE 1: PERFORMANCE DURING GROWTH TRIAL (28-63 DAYS) WITH EXPERIMENTAL DIETS			
	DIET		
	MHL	MMM	P-VALUE
n	37	31	
INTAKE (g/d)	151±2.2	149±2.4	0.540
GROWTH RATE (g/d)	56.0±0.70	53.4±0.75	0.011
FEED CONVERSION RATIO	2.70±0.026	2.79±0.027	0.014

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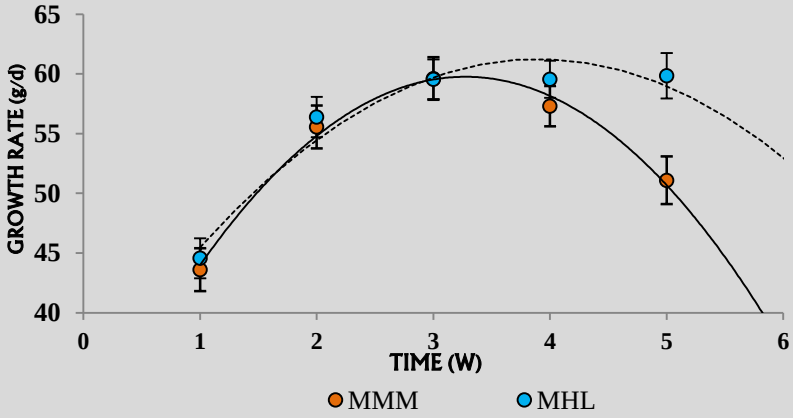

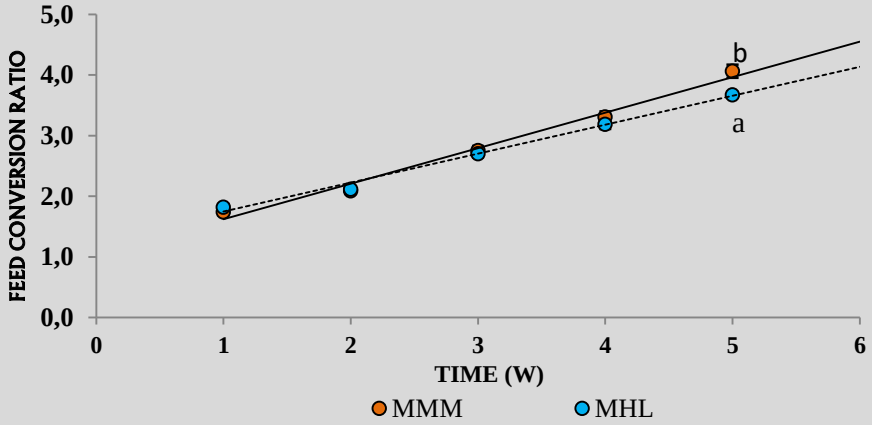

CONCLUSIONS

C1 RABBITS HAVE THE HABIABILITY FOR TO CHOOSE BETWEEN DIETS WITH DIFFERENT AA LEVELS

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C2 MORE INDICIES OF THE PRESENCE OF SOME LIMITING AA

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C2 MORE INDICIES OF THE PRESENCE OF SOME LIMITING AA

C3 IT SHOULD INCREASE THE SULFUR AMINO ACIDS (TO 6 G/KG) AND REDUCE THE LEVELS OF THREONINE (TO 5.3 G / KG)

Do high-growth-rate rabbits prefer diets richer on amino acids than those recommended?

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Effect of the level of lysine, sulphur amino acids and threonine in diets for rabbits with high growth rate

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