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METABOLIZABLE COEFFICIENTS OF MORINGA LEAF FLOUR AND BOCAIUVA PULP MEAL IN SLOW - GROWING BROILERS

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Introduction

- The main raw materials used in feed formulations for poultry (corn and soybean meal) have a direct influence on the increase in production costs.
- The use of alternative ingredients reduces the production costs.



Source: Personal archive

Introduction

Table 1: Chemical composition and gross energy values of ingredients in natural matter

	Moringa	Bocaiuva	Corn	Soybean meal
DM (%)	89,63	92,47	90,04	91,64
CP (%)	15,02	3,97	7,06	43,48
EE (%)	3,21	12,64	3,0	1,78
MM (%)	12,50	5,08	1,08	6,28
CE (kcal/kg)	3.781	4.605	3.943	4.275

Objective

- To determine the metabolizable coefficients of alternative foods used in the formulation of diets for slow - growing broilers.

Material and methods



Completely randomized design
with four treatments and one
reference diet.

Seven replicates with ten birds per
experimental unit (350 chickens).

Water and
experimental diets *ad
libitum*

Monitoring of
weather and
relative humidity
twice daily

Three days of adaptation to
the diets and five days of
excreta collection in tree
stages (17 to 26; 47 to 54
and 67 to 76 days of age).

Material and methods



Dry
matter

Crude
protein

Ether
extract

Silva e Queiroz (2002)

Source: Personal archive

Results

Early Stage

Coeficient (%)	Moringa	Bocaiuva	Corn	Soybean meal	CV (%)	P Value
Dry matter	65,59 ^a	65,85 ^a	65,87 ^a	65,68 ^a	0,3	0,0392
Crude protein	60,91 ^{ab}	61,28 ^a	61,11 ^{ab}	60,77 ^b	0,44	0,0096
Ether extract	84,65 ^c	85,59 ^a	84,99 ^b	85,15 ^b	0,22	<,0001
Mean	70,38	70,91	70,66	70,53		

Growth Stage

Coeficient (%)	Moringa	Bocaiuva	Corn	Soybean meal	CV (%)	P Value
Dry matter	60,10 ^c	60,67 ^b	61,05 ^a	60,49 ^b	0,42	<,0001
Crude protein	54,58 ^a	54,84 ^a	54,69 ^a	54,20 ^b	0,4	<,0001
Ether extract	72,05 ^{bc}	72,88 ^a	71,96 ^c	72,15 ^b	0,15	<,0001
Mean	62,24	62,71	62,57	62,28		

Final Stage

Coeficient (%)	Moringa	Bocaiuva	Corn	Soybean meal	CV (%)	P Value
Dry matter	79,72 ^b	79,87 ^b	80,32 ^a	79,76 ^b	0,3	<,0001
Crude protein	58,96 ^a	58,99 ^a	58,98 ^a	58,60 ^a	0,48	0,0507
Ether extract	73,40 ^{ab}	73,63 ^a	73,09 ^b	73,13 ^b	0,45	0,0192
Mean	70,69	70,83	70,8	70,5		

Conclusion

- It can be concluded that the moringa leaves flour and the bocaiuva pulp are highly metabolizable coefficients by the slow growing broilers.
- The alternative ingredients have shown and that they can be used in formulations of rations in replacement (partial) soybean meal and corn, respectively.



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