

Growth Performance of Sasso (X44n) Chicken Supplemented with Arachis (*Arachis pintoi* cv *amarillo*)

Arachis pintoi cv AMARILLO¹,
Janoz Xn Yesu S. LAQUIHON²,
and Joana Mae S. JAYSON³

¹Component study of “Utilization of *A. pintoi* as animal feed”

²Instructor, AFTD, ³BAT graduate,

DOSCST, Mati, Davao Oriental

Abstract

Sixty (60) X44N SASSO birds were randomly distributed to different treatments with an average initial weight of 432.75 grams. They were fed with MBRLC homemade concentrate (Treatment 1), homemade concentrate plus 5% *A. pintoi* supplement (Treatment 2) and homemade concentrate plus 10 % *A. pintoi* (Treatment 3). Results indicated that birds gained weight at twenty-seven (27) days of feeding with an average daily gain of 22.22g, 23.1 lg and 23.81g for Treatments 1, 2 and 3 respectively. Those birds given with 10% *A. pintoi* appeared to perform better compared to other treatments yet not statistically significant.

Keywords: *A. pintoi*, SASSO (X44N) birds

Introduction

Davao Oriental is known for its large coconut plantations where most of its people is dependent. Coconut can be harvested at two (2) to three (3) months interval. Due to the fluctuating price of copra, farmers must find an alternative source of income to make farming sustainable for their family. The raising of SASSO chicken could be one alternative. SASSO chicken had adopted to Philippine condition and can be raised by farmers under coconut trees. *A. pintoi* could be grown well under heavy shade and dense palm plantations (NSA Agriculture, 1995) and has the potential to be utilized as animal feed having 2.5 to 3% nitrogen content. Hence, this study .to evaluate the performance of SASSO (X44N Naked Neck) chicken fed with homemade concentrate supplemented with *A. pintoi* cv *Amarillo* in terms of weight gain, average daily gain, trend in weekly weight, cost of feeds to gain kilo in weight, and return on investment.

Methodology

Sixty (60) twenty-one (21) days old Naked-neck chickens were randomly distributed into three (3) treatments with four (4) replications and five (5) birds per replicate. A simple Completely Randomized Design (CRD) and Analysis of Variance (ANOVA) were used in the study. Birds were housed in a shed type backyard housing provided with 1ft² floor area Treatment 1 was fed purely on MBRLC homemade concentrate (Appendix Table 1), treatments 2 and 3 were supplemented with 5 % and 10% fresh *A. pintoí* respectively. *A. pintoí* was hand-harvested and was fed pre-wilted to birds in the morning. Poultry management practices were observed during the duration of the study.

Results and Discussion

Table 1 shows that birds with 10% *A. pintoí* supplementation tend to perform better compared to the other treatments. In it is interesting to note that as the *A. pintoí* supplementation increases, the birds performed better.

End weight, ADG and weight gain of birds are observed to be higher when supplemented with 10% *A. pintoí*. Though feed intake of birds with or without supplementation do not differ, feed to gain ratio was observed to decrease to some extent. It is further observed that it is more costly to feed birds with homemade concentrate alone than birds with *A. pintoí* supplementation. Consequently, higher return on investment (ROI) can be achieved.

Table 1. Growth Performance of SASSO chicken supplemented with different levels of *A. pintoí*.

Parameters	Treatments			f-value	CV (%)
	MBRLC homemade feeds (1)	MHF + 5 % <i>A. pintoí</i> (2)	MHF + 10% <i>A. pintoí</i> (3)		
Initial weight (g)	421.500	447.500	437.500	0.96	2.37
Weekly weight (g)					
Week 1	551.130	586.500	510.000	1.72	3.541
Week 2	705.600	758.500	699.000	1.851	2.216
Week 3	833.000	964.000	927.500	2.86	2.934
Week 4	1,021.000	1,071.500	1,080.500	2.13	1.38
Wt. Gain (g)	599.750	624.000	643.000	0.733	2.712
ADG (g)	22.220	23.113	23.815	0.732	2.709
Total Feed Intake (g)	2,631.310	2,543.000	2,543.000	2.74	0.798
FGR	4.410	4.120	3.960	1.769	2.755
Cost of feeds (PhP) per Kilo weight gain	48.480	45.280	43.520		
Return on Investment (%)	13.2	21.1	21.7		

Conclusions and Recommendations

End weight, ADG and weight gain of birds are observed to be higher when supplemented with 10% *A. pintoi*. It was noted that higher weight gain and ADG can be achieved when the level of *A. pintoi* supplementation. However, feed intake of birds with or without supplementation, feed to gain ratio had decreased to some extent. It is further observed that it is more costly to feed birds with homemade concentrate alone than bird with *A. pintoi* supplementation. Likewise, it is also noted that higher return on investment (ROI) can be achieved with *A. pintoi* supplementation.

A. pintoi is then recommended to be planted under plantation crops and utilized as animal feed (grazing, cut and carry or milled). It could also serve as weed control (Laquihon, et al, 2000) while it improves soil texture, preserves soil moisture and prevent soil erosion (Portillo, 2000).

It is also suggested that further evaluation on utilization of *A. pintoi* as animal feed (forage or leaf meal) and higher levels of *A. pintoi* supplementation be made on other animals.

Literature Cited

Holmann F. and Rivas L, 2000. Early adoption of *Arachis pintoi* in the humid tropics: The case of dual-purpose livestock systems in Caqueta, Colombia. Centro Internacional de Agricultura Tropical, Apartado Aereo 6713, Cali, and Colombia

Laquihon, G. Jr., P. Wilson, J.J. Palmer, 2000. Testing and Development Newsletter. Mindanao Baptist Rural Life Center

Nacalaban, W. Le Van An, P. Asis, L. Moneva and E. Barbarino, 273 pp., 2000. Working with Farmers the key to Adoption of Forage Technology.

Portillo Z., 2002. Sustainable Farming in the Peruvian Amazon.

Sosa, C.A., E. Castillo, J. Jarillo, L. Mannetje, A. Aluja, and R.A. Monsalve, (2000) Ruminal degradation and crude protein content of native pastures with or without *Arachis pintoii*, in the humid tropics of Mexico. Centro de Enseñanza, Investigación y Extensión en Ganadería Tropical, FMVZ, UNAM. Apartado Postal 136, Martínez de la Torre, Ver. CP 93600. Tel y fax 3243941. Wageningen Agricultural University, The Netherlands. Universidad de Ciencias Ambientales, Santa Fe de Bogotá, Colombia.

The State of New South Wales, NSW Agriculture, 1995. Legumes for the Tropics and Sub-tropics Pinto peanut (*Arachis pintoii*). Prime Notes CD-ROM. DPI Books, GPO Box Brisbane, Qid 4001

Appendix

Appendix Table 1. Proximate Analysis of feed concentrate used in MBRLC.

Ingredients	ME (Kcal)	CP (%)	Lys (%)	Meth (%)	M+C (%)	CF (%)	Fat (%)	Ca (%)	P (%)
Yellow corn	1178.10	3.08	0.11	0.07	0.13	0.70	1.33	0.01	0.09
Rice bran	750.00	3.54	0.21	0.08	0.13	2.64	3.39	0.02	0.51
Soybean	495.00	6.60	0.44	0.10	0.20	1.10	0.12	0.04	0.10
Copra Meal	118.80	1.53	0.05	0.03	0.05	0.86	0.62	0.49	0.05
Ipil-ipil Leaf Meal	33.00	0.73	0.02	0.01	0.02	0.38	0.12	0.02	0.01
Fishmeal	64.49	1.20	0.12	0.04	0.05	0.04	0.10	0.15	0.09
Shell Powder	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.38	0.00
Meat and Bone meal	95.00	2.25	0.11	0.03	0.04	0.13	0.43	0.60	0.30
Afsillin	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Salt	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	2734.39	18.93	1.06	0.35	0.61	5.84	6.10	1.71	1.15
Requirement	2800.00	18.00	0.95	0.36	0.72	5.00	5.00	1.18	0.64