FEED RESOURCES FOR RUMINANT ANIMALS IN IBARAPA AREAS

[1]Adedoyin, A.A., [2]Mosobalaje, M.A. and [3]Adedoyin, O. O.
[1]Department of Agric. Education, Emmanuel Alayande College of Education, Oyo, Lanlate Campus
[2]Department of Animal Production and Health, Oyo State college of Agriculture and Technology, Igboora
[3]Department of animal science, University of Ibadan, Ibadan.
E-mail: akintundedoyin@yahoo.com

Abstract
This study was conducted to survey the feedstuffs available for ruminants in Ibarapa areas. 180 questionnaires were administered out of which 151 were retrieved. Data collected were analysed using descriptive statistics. The results showed that (75%) of the respondents were educated while 4% and 21.1% of the others were illiterate and primary school leavers respectively. Majority (85%) of the respondents kept sheep and goat while (18%) of the others kept cattle only. Intensive/semi-intensive system of production were predominant among respondents. The predominant feedstuffs were Agro Industrial By-products (AIBs) such as peelings of crops, maize starch residue, maize straws, pastures and browse plants. Perennial crop by-product such as mango pods, cocoa husks, cashew nut waste, saw dust etc. were underutilized. Conclusively, the intensive or semi-intensive system of livestock rearing could benefit largely from these identified feedstuffs, while housing could be made available through local building materials with little costs.

Keywords: Predominant, Agro industrial by-products, ruminant animals

Introduction
The tropical countries could be the most food-productive areas on earth, far outdoing the temperate zonesbut at present they are that part of the world with the least to eat". At least 65% their arable land are underutilized (FMARD, 2014). Also, 50% of every crop consists of leaves and stems that people cannot eat but which can be used by ruminants. Inedible residues resulting from processed foods such as cassava peels, cassava starch residue, sieviate, (Adedoyin, et al., 2014), sugar-cane (molasses),brewery and cannery wastes and cereal by-products brewery waste (Babayemi et al, 2014) which areconverted into feeds for poultry, pigs and cattle in the industrialized countries are largely wasted in some underdeveloped tropical area. They should be utilized by ruminant to produce meat, milk and eggs (Devendra, 2007b). The success in agricultural development, however, is dependent to a very large extent on the efficiency in the use and management of the natural resources (land, crops, animals and water) (Devendra, 2011). With reference to animal production, there is increased emphasis and justification for improved production systems to accelerated the output of foods of animal origin in most tropical countries. This is directly linked to the fact that current tropical outputs of meat from ruminants are relatively low, with wastes from, the agricultural and industrial section are extremely valuable in the development of cheap, affordable nutrition feeds for Nigerian crop and livestock sectors. This paper examined available feed resources for optimal production of ruminant animals in Ibarapa areas.

Materials and Methods
The study was conducted in Ibarapa Areas of Oyo State, Nigeria, between June to December, 2015. Ibarapa areas fall within the savanna zones of the southwestern, Nigeria. The mean annual temperature is 27°c and annual temperature range of 8°c. Structured questionnaires were administered in selected locations in lanlate/maya, Eruwa, Igangan, Ayete, Idere, Igboora, and Tapa to 147 respondents (21 in each location). Data collected were analyzed using descriptive statistics.

Results and Discussion
Table 1 shows the general information on the respondents expressed in percentages. The rearing of cattle, sheep and goat in Ibarapa areas is common among young adults of age 30 and 50 years. Also, 68.7% of the respondents were females while 31.3% were males. Mostly the respondent 59.2% of them have up to tertiary education with only 4.0% having no formal education. The reason for this might be that farmer within age (30 - 50 years) were young and could more easily bear the risk of accepting new innovations aimed at improving ruminant production. The fact that they are young shows that they are active and can still face the challenges of life given the demands of integrating both crop and livestock enterprises, especially for labour. The

majority of the respondents (81.6%) rear sheep and goat only. This conforms to an earlier report by Devendra and Leng (2011), that a cattle farming in developing countries is primarily a smallholder concern enterprise. Fifty-three percent (53.1%) of the respondents practiced semi-intensive system of livestock production as compared to the (38.1%) of the respondents that practiced extensive systems. This result obviously negates the widely reported traditional extensive systems prevalent in tropical Africa.The observation might be due to cropping and protection reasons. Most of the farmers (42.95) acquired their foundation stock from the local market and this obviously shows the potential of these markets as channels of acquiring foundation stocks. Initial stock could also be received as gifts from family and friends (31.3%) and contractual agreements (25.8%) in which case the kids are shared by two parties involved on explicitly agreed basis as suggested (Otchere, 1985, and Odeyinka and Ajayi, 2004). Table 2 showed the list of feedstuffs fed ruminants by farmers in Ibarapa areas. Pastures, cassava peels, yam peels, cassava sieviate, yam sieviate, maize starch residue, maize straw, cowpea foliage, millet straws were commonly fed to ruminants in this Area. Meanwhile, mango pods, cowpea hulms, cashew nut, waste; cocoa husk, oil palm by-products, and *Cajanus cajan* were additionally available. At present, supplementary feeds (perennial crop by-products are not used optionally as most small farmers do not known their potentials for ruminants' production. Meanwhile, Sowande, et al. (2002), and Mosobalaje, et al. (2015) reported 10% inclusion level of sawdust in the ration of Sokoto Gudali cattle without an adverse effect on growth performance. Babayemi et al (2014) also suggested the inclusion of these group as strategic feed supplement especially during the dry season when the quality of herbage in low and when animals tend to lose weight.

Conclusions and Recommendations

The use of cereals for human consumption necessitates the fomulation of ruminant's ration using Agro-industrial by-products (AIBs) and other household wastes. The ruminant animal requirement for mineral and vitamin should be looked into and a standard ration formulated on the basis of identified feedstuffs. Intensive or semi-intensive system of livestock rearing could benefit largely from these feedstuffs while housing could be provided from locally available building materials with little costs e.g. rough plank, bamboo etc. The nutrients master plan of perennial crop by-products be determined and published, also made available to farmers in Ibarapa areas through extension agents.

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Table 1: General Information on the Respondents

Characteristic	Responses	No. of Respondents	Percentage n=147
Age	10-19	08	5.4
	20-29	09	6.1
	30-39	51	34.7
	40-49	43	29.3
	50 and above	36	24.5
Sex	Male	46	31.3
	Female	101	68.7
Education	Primary	31	21.1
	Secondary	23	15.7
	Tertiary	87	59.2
	None	06	4.0
Livestock Types	Goat	70	47.6
	Sheep	50	34.0
	Cattle	27	18.4
	Cattle, Goat & Sheep	06	4.0
System of Production	Intensive	13	8.8
	Semi-intensive	78	53.1
	Extensive	56	38.1
Sources of Initial Stock	Local Purchase	63	42.9
	Gift	46	31.3
	Contractual agreement	38	25.8

Source: Field survey (2015)

Table 2: List of feedstuffs fed to ruminants by farmers in Ibarapa areas

Lanlate/Maya	Eruwa	Igboora	Ideere	Igangan	Tapa	Ayete
Cassava root peels	Cassava root peels	Cassava root peels	Dried plaintain peels	Dried plaintain peels	Cassava root peels	Cassava root peels
Yam Peels	Yam Peels	Yam Peels	Cassava root peels	Cassava root peels	Yam peels	Maize Straws
Yam Seiviate	Yam Seiviate	◊*Stylozanthes spp*	Yam peels	Yam peels	Cajanus cajan	Yam Peels
Maize-starch residue	*Glircidia Sepium*	◊*Centrosema spp*	*Panicum maximum*	Maize straw	Maize straw	Driedplaintain peels
Maize straw	*L .leucocephala*	Gliricidia sepium	*Pennisetumpurperun*	Millet straw	Millet straw	Millet Straw
Cowpea foliage	Millet straws	L.leucocephala	*Palm Oil Mill	* Palm Kernel waste	*L. leucocephala*	*Water melon waste
Groundnut husks	*Cocoa husks	Yam seiviate	Effluent (POME)	*Oil palm trunks	*Pennisetum*	Cucumba Wastes
*Mango pods	*Cashewnut waste	Maize straw	* Palm kernel waste	* Cocoa husk.	*purpureum*	*Gliricidia sepium*
*Cowpea hulms			* Oil palm trunks		* Coca husk	*L. leucocephala.*
*Cashew nut waste			* Cocoa husk			* Coca Husk
Panicum maximum			*Cashew nut waste			*Cashew nut waste
Pennisetum						* Palm kernel waste
purperum						

Source: Field Survey (2015)

◊ Not always available during dry season

* Potentially important perennial crop by-products for feeding ruminants