ASSESSMENT OF *LEPTADENIA HASTATA* AND ITS UTILIZATION AS ANIMAL FEEDS IN DRY SEASON OF SOME SELECTED VILLEGES IN DUTSE LOCAL GOVERNMENT AREA OF JIGAWA STATE

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ABSTRACT
Study was conducted to assess utilization of Leptadenia hastata as animal feed in some selected villages of Dutse Local Government Area of Jigawa State, a semi-arid region experiences shortage duration of rain falls and long duration of dry season, which causing feed scarcity in the region. (100) structural questionnaires were administered to obtained background information of the respondents on the use of L. hastata as animal feed. Twenty seven percent respondents aged below 30 years, 21% age group between 30-45, 30% represents 46-60years,16% represents 61-75 years, only 6% represents above 75 age groups. Fifty eight percent respondents were married, 24% were single, 10% were divorced, only 8% respondents were widowed. Majority of the respondents were females with 63%. Ninety percent were Muslims, 7% Christians and 3% pagan. Majority of the respondents were Hausa with 65%, only 35% represents Fulani. 6-10 house hold size has the highest number with 39%, with least having 9% house hold size >Sixteen. 46, 23, 13, and 12% have acquired Qur'anic, primary, secondary and tertiary education. Only 6% of the respondents has acquired adult education respectively. Seventy percent respondents fed L. hastata during feed scarcity, 20% used L. hastata for milk enhancement, 8 % fed L. hastata for supplementation, only 2% fed L. hastata for fattening. Sixty percent respondents fed L. hastata as fresh, 40% fed as wilted or processed and consider it toxic feed. The data were analyzed using simple percentage. L. hastata were used in the study area and recommended as animal feed.
Keywords: Leptadenia hastata, Utilization, Dry season, Respondent and Animal feed.

INTRODUCTION
There are many shrubs and tree species in the tropics and subtropics that can serve as powders. However, they must be used more efficiently in order to meet up with nutritional requirement of the ruminant livestock (Oni et al.,2017). Browse plants comprise annual or perennial trees, shrubs and woody vines that are either legumes or non-legumes. They constitute valuable feed resources that may be eaten directly from the natural growth of the plants or lop or cut and carry so that leaves and flower portions can be eaten by ruminants Amodu and Otaru, (2004). They may be cut and fed as sole feed or combinations of different species fed as supplements to poor quality roughage. Since they are trees or perennial shrubs, they remain green all the year round, thus constituting a ready source of feed during the off-season periods. Browse plants furnish animals with protein, energy, vitamins and minerals, thereby playing a crucial role as a feed resource. Most browse plants have high protein and low crude fibre content which makes them suitable as fodder for livestock. Amodu and Otaru, (2004). Browse plants therefore, provide high quality and palatable feed to livestock at a time when grass quality and biomass is minimal. The unique characteristics of browse that have endeared them to livestock farmers lies in their ability to establish and grow fast, produce good leaf biomass, which remains green during the dry seasons when feed is scarce. Livestock producers often seek for alternative feedstuffs to meet the demand for storage. (Madibela *et al*., 2000). *L. hastata*, commonly known as "Yadiya" in Hausa language is an edible non-domesticated herbaceous vegetable that is widely

distributed in Tropical Africa; from Mauritania and Senegal eastwards to Cameroun, Ethiopia, Northern Kenya and to Uganda. *L. hastata* (pers) Deene belongs to the family *Aselepia deceae*, used as food by many African populations. It is commonly used as a vegetable and is considered as a famine food due to its high content of valuable nutrients in Niger Republic. It is also used as herbal medicine against milk drying, sex-impotence, trypanosomiasis, acute rhinopharyngitis and wounds Tamboura *et al.* (2005). The leaves are often chewed by shepherds against polydiasis and mouth dryness (Oliver, 1986) due to its high concentration of water, minerals and vitamins. In some parts of the Northern Nigeria, leaves extract is used for the treatment of stomach upset in children Akinniyi and Waziri (2011) The plant is an important camel, goat, and cattle fodder. In veterinary medicine the plant is used against colic in horses and cattle (Burkill, 1995).

MATERIALS AND METHODS

The study was conducted in some selected villages in Dutse local government area of Jigawa State. Dutse is a Capital City of Jigawa State and located between latitude 11.00^{oN} to $13.00^{oN}$and longitudes 8.00^{oE} to 10.15^{oE} high temperature are normally recorded between the month of April and September the daily minimum and maximum temperature are 15^{o}c and 35^{o}c. Rain season last from May to September with average rainfall of between 600mm to 1000mm. (JARDA, 2012).

Method of data collection

The survey was conducted using structural questionnaire, administered to livestock farmers in four (4) different villages of Dutse L.G.A of Jigawa State. Namely: (Kudai, Karnaya, Andaza and Sakwaya) One each from political ward that are outside metropolitan, within the study area. this has been used to ascertain the use of *L. hastata* (Yadiya) as animal feeds.

RESULTS AND DISCUSSION

Table 1. presents the results of the personal data of the respondents. It shows that majority of the respondents were females with 63% and males were 37% and most of the respondent (30%) are within age bracket of 46-60 years. Majority of the respondents were Hausas with 65% and with 35% of Fulani. Ninety percent of the respondents were Muslims with 7% Christian, only 3%were pagan. Fifty-eight of the respondents were married, 24% were single, 10% were divorced and only 8% were widowed.

Table 1. Distribution of the respondents based on Gender, Age, Tribe, Religion, and Marital status

Parameters	Frequency (%)
Sex:	
Male	37
Female	63
Age:	
Below 30 years	27
30-45years	21
46-60 years	30
61-75 years	16
Above 75 years	6
Tribe:	
Hausa	65
Fulani	35
Religions:	
Islam	90
Christianity	7
Pagan	3
Marital status:	
Married	58
Single	24
Divorced	10
Widowed	8
House hold size	
1-5	28
6-10	39
11-15	24
>16	9

Source Field Survey 2020

Table 2 represents the results of the respondents on the level of education. Results shows that most of the respondents had Quranic education (46%), Primary education 23%, Secondary education13%, Tertiary educations 12% with only 6% Adult education. All the respondents value the *L. hastata* as feed for their livestock. Majority of the respondents fed Camel with (35%), *L. hastata*, Goat with (32%), Cattle with (18%) and (15%) of the respondents fed to sheep. Most of the respondent fed *L. hastata* during feed scarcity (70%), (20%) of the respondents fed the *L. hastata* for Milk enhancement, (5%) of the respondents fed *L. hastata* for both Fattening and Supplementation. (100%) of the respondents' fed *L. hastata* better during dry season and (40%) of the respondents' process *L. hastata (*wilting*)* before offering to their livestock. (60%) of the respondents fed as fresh, (40%) of the respondents consider *L. hastata* as toxic feed. The age distribution of the respondents in the study area revealed that majority of the farmers were young. This observation was in accordance with the finding of (Babandi *et al*., 2020) who reported that, people with age rate between 30-60 are the majority involved in this activity. Moreover, findings from the result indicted that both male and female used *L. hastata* as animal feed in the dry session. Religious distribution of the respondents in the study area revealed that majority of the farmers were Muslim, and majority were Hausa tribe. The house hold characteristic of the current research in Table1 is not agreement with finding of (Endale 2015) who reported that characteristics of the respondents is 79% male and 21% females' households' heads, in the current studies, the result indicate 63% female and 37% males. (6-10) number of the house hold size was the majority with 39% house hold size. The research also revealed that majority of the farmers attend various schools such as Qur'anic, primary, secondary school as well as tertiary institution and adult education as well. The respondents further reported that *L. hastata* in the study area were fed to animals as whole and as supplement to improve fattening, and milk yield. This research is in line with finding of (Burkill,1995). Whose result shows that, *L. hastata* is an important

camel, goat, and cattle fodder. In veterinary medicine the plant is used against colic in horses and cattle.

Table 2. Distribution of the Respondents Based on level of Education, Feeding value, Species of the animals, Purpose of feeding, Time of better Consumption and Toxic effect of *L. hastata*

Parameters	Frequency (%)
Level of education:	
Quranic education	46
Primary education	23
Secondary education	13
Tertiary education	12
Adult education	6
Feeding value:	
Fed to animals	100
Not fed to animals	0
Species of the animals:	
Cattle	18
Sheep	15
Goat	32
Camel	35
Purpose of feeding:	
Fattening	2
Milk enhancement	20
Supplementation	8
Fed during feed scarcity	70
Time of better consumption:	
Dry season	100
Rainy season	0
Both season	0
Processing before consumption:	40
Process	60
Not process	
Toxicity of *L. hastata*:	
As fresh	60
Wilted	40

Source field survey 2020

CONCLUSION AND RECOMMENDATION

The study concluded that, *L. hastata* were used as animal feed in some selected villages of Dutse Local Government area of Jigawa State. *L. hastata* has a good potential in livestock maintenances especially during feed scarcity in the area, therefore, *L. hastata* can be used in animal feeding and allowing the possibility in using it in livestock diet without much detrimental effects, especially in the dry season when feed is scarce. The traditional content of the plant suggested that, it has the potentials to meet the nutritional requirement for maintenances of the animals its utilization as livestock feed, will serves in reducing fed scarcity problems due to improper utilization.

ACKNOWLEDGEMENTS

The authors gratefully acknowledge the contributions of village heads, pasturalist and the entire people of Kudai, Karnaya, Andaza and Sakwaya villages, for their response and contributions.

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