Farmers' Perspectives on Local Feedstuffs and Introduced Forages: Case Study of Four Villages in Northern Nigeria

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The XXI International Grassland Congress / VIII International Rangeland Congress took place in Hohhot, China from June 29 through July 5, 2008.

Proceedings edited by Organizing Committee of 2008 IGC/IRC Conference

Published by Guangdong People's Publishing House

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Key words : local taxonomy , indigenous feedstuffs , forage legume , Nigeria

Introduction To support the crop-livestock intensification process in the Northern Guinea Savanna of Nigeria , a basket" of 9 herbaceous legume species was introduced in 4 representative villages . Assuming that the utilisation of these legume options was to be compatible with the existing knowledge and priorities , the prevailing livestock feeding concepts were analysed and then compared retrospectively with farmers' perspectives on the introduced forage species .

Materials and methods The study was carried out in Gobirawa (7°26′E , 10°55′N) , Dan-Birnin (7°16′E , 11°15′N) , Dunki (7°34′E , 10°55′N) , and Turawa (8°03′E , 11°04′N) , where 4 improved varieties of dual-purpose grain legumes (i .e . , for food and feed) and 5 forage species were introduced . The dual-purpose grain legumes comprised cowpea (*Vigna unguiculata*) , soybean (*Glycine max*) , groundnut (*Arachis hypogaea*) , and hyacinth bean (*Lablab purpureus*) while the forage species were *Centrosema pascuorum* , *Macrotyloma uniflorum* , *Stylosanthes hamata* , *Aeschynomene histrix* , and *Chamaecrista rotundifolia* . The interviewees were selected randomly (i .e . , according to their availability) among the farmers who took part in the legume evaluation process . To elicit the local evaluation and utilisation of the new legume options , periodic focus group discussions were implemented . As entry point for getting insight into local livestock concepts all locally available feed materials were inventoried using the free listing technique . The rationale underlying the choice and allocation of the local feed resources was investigated with contrastive elicitation questions why not only this . . . why do you still need this one . . ." until a clear decision model and feedstuff taxonomy emerged (Gladwin , 1980) .

Results & discussion The main feedstuffs used in the dry season are listed in Table1 . The local forbs , from which *Alysicarpus glumaceus* and *Ipomoea* spp . were most frequently listed , were cut in rainy season and conserved by rooftop drying .

Table 1 *Local taxonomy and cross-village listing frequency of the main feedstuffs .*

Feedstuff	Frequency(N=11)	Functional categorisation	Linguistic categorisation
Sorghum stover	64%	Just to fill animal's stomach"	No
Alysicarpus glumaceus	44.2%		*Ciyawa/Ganye*
Ipomoea spp .	50.8%		
Groundnut haulm	81.2%	Provide livestock with oil"	No
Cottonseed cake	20.8%		No
Sorghum testa[1]	84.4%		No

[1] The testa is separated from the endosperm by soaking prior to pounding and winnowing

Independently of their botanical differences the local forbs were lumped together as *Ciyawa* , i .e . , non-food wild species . No relationship was made between groundnut and *Alysicarpus glumaceus* as species belonging to the same legume family . In fact , there was no unified concept of legumes as such . Instead the feedstuffs were roughly differentiated in roughages to fill animal's stomach" and concentrates that give oil to animals" . Correspondingly the introduced legume options were categorised into cultivated crops (groundnut , soybean etc .) vs . *Ciyawa* (non-food forage species) . Since indigenous *Ciyawa* were still available per cut-and-carry" , the rate of utilisation of the new *Ciyawa*" was low (results not shown) . Contrarily , the grain legumes were accepted for their grain yield performance .

Conclusions Dual-purpose grain legumes proved compatible with farmers' livestock practices and knowledge in Northern Nigeria . Contrarily the *Cyawa*-image" of the introduced forages represents a barrier to their adoption and thus a challenge for extension .

Reference

Gladwin , Chr .H . , 1980 . A theory of Real Life Choice . An Application to Agricultural Decisions . In : Barlett P .F . (ed) . Contributions to Rural Development . *New York : Academic Press* , 45-85 .