LIVESTOCK DEVELOPMENT NOTE: NO 5

THE YAWA BANANA: A POTENTIAL FEED FOR LIVESTOCK?

Bill JK Bakau and Monica Tom, Labu Animal Husbandry Research Centre, Agricultural Research Division, DAL, P O Box 1086, LAE, Morobe Province, Papua New Guinea.

ABSTRACT

The yawa banana has excellent agronomic attributes. These, and other processing and feeding qualities are discussed along with some of the recent findings.

***Key words**: yawa banana, choice feeding, village livestock production*

INTRODUCTION

One, if not, the major problem that we face in Papua New Guinea (PNG) with regard to village livestock production is that we do not have local crops which, without any reservation, can be grown mainly for the purpose of feeding livestock. Crops such as cassava, sweet potato and sago for instance, have been suggested. However, these crops require a lot of work to produce, and for village farmers, it would be too much to put most of their efforts into one activity when there are many other activities which they also have to attend. Moreover, many of these crops are staples in human diets and they may find it difficult to feed themselves as well as their animals.

What is required is a crop or two which, besides being a marginal food source, takes less effort to produce and produces high yields year-round. There is one crop which fits this description but has not been well appreciated as a feed for livestock. The crop is a banana, a polyploid, which is commonly known in PNG as *yawa*. This communication aims to report its potential value as a livestock feed source based on our recent studies.

AGRONOMIC ATTRIBUTES

For a crop to be considered as a good feed source for livestock, it has to satisfy two conditions;

1) it has to be a non staple food crop, and
2) is easy to grow, produces high yield and is easy to process.

Yawa is widely grown in many parts of the lowlands but is less preferred as compared to other local cultivars. However, perhaps, the most striking thing about the crop is its agronomic value. It is superior to other cultivars or even other food crops the villagers have been growing. Some of its qualities are as follows:

requires only one planting
excellent suckers and mature plant production rate
fast growth rate
grows in a range of soil types, including high water table soils
resistant to pests and diseases
tolerates shade
produces high yields
excellent rooting and anchoring system

The ability to produce almost an endless crop of ratoons solves the problem of continuity in supply of feeding material, which undoubtedly, has been the major set-back in village livestock production. Interestingly, the leaves, stems and even the fruits are also preferred by grazing livestock, so it can be grown either for fruit or as a forage.

Table 1: **Growth rates of 7-week old muscovy ducklings fed a commercial pullet developer and a yawa-protein concentrate supplement ration.**

Diet	Weight Gain (in gram)			
	7 week	10 week	13 week	15 week
COMMERCIAL				
Males	1120	1340(2460)	1940(3060)	2260(3380)
Females	720	890(1610)	1340(2060)	1480(2200)
YAWA BANANA				
Males	1000	1020(2020)	1940(2940)	2220(3220)
Females	670	720(1390)	1130(1800)	1310(1930)

Figures in *parentheses* are actual body weights (in gram) of the ducks at that particular age.

EVALUATION STUDIES

There is little information available on the feeding value of yawa or other cultivars in livestock. This is not totally unexpected, because the main line of thinking even now is that only root or tuber crops can satisfactorily substitute the cereals in livestock diets. Anything other than these crops was overlooked, or was considered less important in cereal substitution. Especially when PNG agriculture is based on root and tuber crops, it would be easier to use some of the surplus than having to produce an entirely different crop for the animals.

From our past work with roots and tubers and our recent work with the yawa, we have found that it is easier and takes less effort to plant, look-after, harvest, process and feed yawa than the roots or the tubers. We believe yawa is the "cereal" we have long been searching for. For instance, in our experiments involving 7-week old ducks, we observed that the group which was choice fed boiled yawa and a protein concentrate supplement performed as well as the group fed a commercially formulated ration (see Table 1). In rabbits, a similar type of performance was also observed. The group fed raw yawa grew at the same rate as those that were fed raw sweet potato or a commercially formulated ration (Bakau, *unpublished data*).

For some groups of animals, as is the case with rabbits and guinea pigs, very little effort is required in processing the crop before feeding, as they can eat it raw. More interesting though, is that besides ducks and rabbits, there are a number of animal species which can do well on yawa. As observed from our Station's herd, goats, particularly, relish yawa, including its fruit in which therefore, can be used in feeding in addition to the leaves and the stems.

CONCLUSION

Although more work is needed, there is "a message to take home" and that is grow more yawa if you are interested in raising ducks, rabbits, or even goats.