PROJECT REVIEW

SUSTAINABLE ANIMAL PRODUCTION STRATEGIES IN SENEGAL AND THE GAMBIA

Integration of livestock and horticultural farming in peri-urban areas.

Mixed farming in peri-urban areas and in small holder farms has been practised for many years in Kenya. The project described for Senegal and Gambia bears a lot of resemblance to what we have in the areas around Nairobi and other Kenyan towns. Differences arise due to the varying climatic and cultural practices. The rural-urban migration and the high population density bring about the same problems in all the sub Saharan countries.

GENERAL COMMENTS

1. According to the background information there is a shortfall of 45% of the human food supply. If this is so, there should be very little left for animal feed.

2. If the available quantity is appreciable then there is something wrong with either the storage and or marketing strategies which need to be looked into.

3. The study is looking to narrow only the gap between the livestock output demand for animal products. What about the horticultural products gap between supply and demand?

4. Two (onions and cabbages ) of the three horticultural crops mentioned are known to give undesirable taste/smell to the milk if fed in large quantities. Optimum quantities will have to be determined before implementation of the new feeding rations.

5. The augmentation of water availability during the dry season is of paramount importance. The damming and reservation of runoff water during the rainy season would provide water for use in the dry season. This same water could be used to grow highly nutritive animal feed e.g. lucern. Availability of water all year round would make it possible to grow fodder for the animals as well as continue with horticultural pursuits all the year round. The stored cereal stover could be used to augment animal feed. Because of the land shortage the horticulture by-products would bridge the gap left by the inadequate food supply. For best results this arrangement the animals would have to be zero grazed.

6. When animals are tethered they fertilise only the portion they walk on. When zero grazed the manure output will be increased by the bacterial action on the ẸbeddingÈ in the enclosed animal shed. The ẸbeddingÈ is made of indigestible farm product which is of poor nutritional value to the animal. The manure thus made by the animals would be used in the horticultural agriculture thus reducing the dependence on fertilisers.
7. Women are particularly suited to this type of mixed farming. They usually do not get preference in the job market due to gender bias. They are regularly available and tend to take their commitments seriously. The income earned would give them reasonable economic independence from their menfolk.

MERITS OF THE PROPOSAL

Food is in short supply in the sub-Saharan Africa. The continuing rural-urban migration has increased the urban population disproportionately with the food supply. Maximum use of the peri-urban farms for food production is imperative. The animal products and fresh vegetables have a short shelf life so the short distance from production area to the market will ensure minimum loss during transportation.

On proceeding with the critique a major assumption has been made, that a pilot study has already established that:

1. There is adequate nutritional value in those parts of the said vegetables used for animal feeds and
2. Their consumption does not give rise to objectionable ordours or tastes to the by-products used for human consumption e.g. milk and meat.

This research proposal aims to give the peri-urban medium scale mixed farmer the means of improving his/her economic returns from the limited land available. The market is larger than the supply and remains largely unfulfilled. The major impediment to his increased monetary returns is the poor productivity of his animals and the poor yield from his horticultural pursuits. This may be due to poor utilisation of materials available to him, e.g. the by-products of horticultural produce which is in turn due to ignorance. This study will shed light into the value of such by-products and establish to which extent it can be used to augment the animal feeds during the dry season. Getting baseline information is important for this study and others that may follow.

Small scale farming in peri-urban areas is usually the domain of women. Since most men move to the city in search of employment the women are left to fend for themselves and their offspring. Their involvement in this gainful venture gives them a certain degree of economic independence from men. This allows them to feed their families adequately both quantitatively and qualitatively as well as help with the education of their children.

PRACTICAL NEEDS AND STRATEGIC INTERESTS

The West African male and female farmers in isolated communities have the same basic requirements as their counterparts elsewhere in the world. They require adequate food, shelter,
health and education for themselves and their families. Often they lack knowledge of how best to optimally utilise the raw material in their possession. Knowledge gained from this study will help to improve their practical knowledge on the optimum interaction between their animal and horticultural practices. Their economic base will be improved. Increased production of horticultural and animal products will provide for home consumption and the surplus can be sold to the urban centres where possible. Where the communities are far from the towns the horticultural by-products can be fed to the animals while the animal product surplus can be made into butter or ghee for consumption during the dry season.

PERCEIVED WEAKNESSES

There is no indication if a pilot study has definitely identified significant nutritional value of the horticultural plants under study. The study would be in jeopardy if the products are found to have inadequate value at a later stage. In sub-Saharan Africa decline in agricultural productivity and land degradation are interrelated to increasing population pressure. High population growth rate maintains a high demand for agricultural produce. Traditional practices which long ago used to ensure natural resource preservation, e.g. crop rotation, and leaving the land fallow have been disrupted. Increasing agricultural production has been achieved by increasing land under cultivation to include marginal areas, forest reserves and hill slopes. This land clearing has ignored ecological consequences. The result has been land degradation, erosion, siltration in rivers, poverty, hunger and malnutrition.

This study recognises the non-renewable nature of most resources on which today's agriculture depends. Bad agricultural practices have contributed to the environmental degradation. A sustainable agricultural project must be resource conserving, socially supportive, commercially competitive and environmentally sound. It is not clear how this project will stimulate the farmer to minimise environmental degradation especially the reduction of soil erosion and reduction of fertiliser use. The use of manure to fertilise the fields should be strongly promoted. Interplanting with plants that discourage plant pests would reduce the dependence on pesticides.

In order to assess the impact of the changed feed management on the environment chemical analysis of the soil, the manure and other animal by-products should be carried out at the beginning and at the end of the project.
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