SMALL RUMINANTS

West Africa 2010 CAADP Program Design and Implementation Workshop
Value Chain working group

END MARKET OPPORTUNITIES

MARKET OVERVIEW

• Throughout Africa and in humid West Africa in particular, small ruminants must be considered primarily as sources of meat and meat products. There is ample evidence from several African regions that demand for meat is strong and increasing.
• This reflects greater urbanization and associated higher incomes, which have led to large domestic and international trade movements (i.e. from the Sahelian nations to the west coast).
• Demand outside of Africa is also strong because of the sharp rise in income among oil-producing states in the near and Middle East. Small ruminants would appear to be a major underexploited food and capital resource in the humid zone.
• These animals are raised exclusively for meat, providing a flexible financial reserve for the rural population and playing important social and cultural roles.
• There have been few systematic attempts by farmers or development agencies to increase small ruminant production.
• The humid zone of West Africa has traditionally depended on areas to the north to meet its demand for animal protein.
• The disease trypanosomiasis, transmitted by the tsetse fly, has generally limited livestock production in the humid zone, and most resident animals are the indigenous, trypanosomiasis-tolerant dwarf breeds.
• Dwarf sheep and goats are the most common ruminant species found, with an estimated 14 million dwarf sheep and goats within the zone.

WEST AFRICA’S MARKET POSITION

• Small ruminant production in West Africa is not well developed.
• While ownership is widespread, average flock size is small. The fact that holdings are small does not give owners incentives for improved husbandry practices.
• Small ruminant production is a subsidiary or minor enterprise; it is not specialized livestock production and it provides a comparatively small proportion of total farm income, although the proportion increases for smaller farmers.
• In West Africa, contrary to many other farm resources, small ruminants are frequently owned by individuals for whom they might represent a major income source. Small ruminant production is a typical, small farmer activity attracting minimum investment in housing, feed, and health care, and is largely sustained by the potential of the indigenous breeds themselves.
• The end product of these systems is meat production and livestock are in general kept for sale, although they are widely consumed at religious festivals and during ceremonies.
West Africa Snapshot:

- The importance of small ruminants in West Africa in general is well recognized and small ruminants are reared mainly for four functions: (1) Meat, (2) milk, (3) skin and (4) wool, according to order of importance.
- According to the FAO (1982) tropical Africa has about one-sixth and about a third of the total world flock of sheep and goats, respectively. Total meat produced from small ruminants in Africa was 1.3 million metric tons (about 16% of the world total from sheep and goats).
- Within Africa, sheep and goats contributed 10.9% and 8.4%, respectively, of our total meat. Total meat from African sheep and goats contributed 12.5% of the world total meat production from these two species. Sheep and goats in Africa produced 8.6% and 18.2% respectively, of the world total amount of milk produced from these two species and the production from both accounted for 13.6% of milk collected from small ruminants in the world. According to one study, sheep and goats accounted for 17% of the total ruminant biomass in Africa.
- Sheep and goat production throughout much of the zone is one of a number of minor farm enterprises that lend a measure of diversity to the larger farm economy. Small ruminant keeping is not generally integrated with crop production in the zone. Few forage crops are grown, and manure is not generally returned to cultivated plots.
- The nature of small ruminant production in the zone varies from extensive, low-input systems based on free grazing and village scavenging to more intensive cut-and-carry feeding of confined animals and commercial grazing of sheep flocks.
- Although there has been no systematic reconnaissance of production systems in the zone, it is probable that the majority of animals are kept in free-roaming flocks which may or may not be tethered during the cropping season.
- In southwest Nigeria, for example, individual owners typically keep two to four breeding animals; goats are more commonly kept than sheep. In general, owners of free-roaming animals provide no special feed, housing or veterinary care.
- The major investment is in acquiring new stock; however, care-taking of animals is commonly practiced, thereby greatly reducing the initial cash investment.

Value Chain Opportunities and Constraints

- **Distribution, ownership and flock size:** In many countries in West Africa, sheep and goat husbandry can be described as being casual rather than an organized activity for the following reasons: (a) animals have no benefit of prophylactic or curative medicinal treatment; (b) little or no supplementary feed is offered; (c) no good flock management is practiced; (d) poor housing and (e) tethering of animals during the planting season so as to avoid crop damage. The distribution of sheep and goats in Africa is not even and numbers tend to be higher in the drier areas. Thus, in some areas (e.g. in West Africa) flock sizes decrease from north to south. In East Africa (e.g. Ethiopia and Kenya) flocks are smaller in the highlands compared with the lowlands.
- **Research:** Genetic improvement and or efficiency of production can be more easily ameliorated in small ruminants because they have a faster population turnover rate. Such progress would be achieved if increased selection pressure is effectively applied. Available data suggests that reproductive efficiency of small ruminants in tropical Africa is reasonably high and hence fertility would not be recommended for any improvement unless present nutritional, health and management constraints are removed. The most important features of these livestock systems for on-farm research is the character of ownership and management of the livestock, small flock sizes, presence of small ruminants in the farming system as secondary or minor enterprises, and variability
in the production system. An integration of forage legumes into the cropping system of small stock owners would improve the productivity of their animals.

- **Production:** Small ruminants are widely distributed and are of great importance as a major source of livelihood of the small farmer and the landless in rural communities in tropical Africa. Indications, however, are that the productivity of small ruminants in this system is low and that there is ample opportunity for improvement. Improved animal nutrition appears to be a more critical factor in increasing small stock productivity. Native rangelands provide the cheapest source of nutrients for ruminants. It is however an accepted fact that for a greater part of the year, grasslands in the tropics does not supply sufficient nutrients to stock for greater productivity. Of paramount importance to economic productivity and reproductive efficiency in small ruminants is mortality. Both pre-weaning and post-weaning mortality of small ruminants in tropical Africa is very high. Land scarcity and lack of time for forage collection (under contained conditions) appears to be a constraint to increased flock size.

- **Inputs:** The idea that supplementation of grazing enhances the growth rate had also been documented. Thus, the need for supplementation of natural forage with agro-industrial by-products cannot be overemphasized. The use of conventional by-products (e.g. oil cakes and milling byproducts) is severely limited by availability and high cost. In some instances by-products, like bagasse and molasses, have had alternative uses (fuel or alcohol distillation) rather than for stock feeding.

- **Crop residue and by-products:** Many crop discards like cocoa husks and corn cobs have not found their way into stock feeding even though they have been shown to be potentially useful. Many of these crop discards are not used because production is by small scale farmers scattered over a wide area thereby making collection impractical. It must be mentioned however that there are several large plantations and or farms now in Africa on which such crop discards are allowed to rot. Such large scale farms could include fattening of small stock in their operations so as to utilize these discards. It is suggested that future breweries be required to include drying facilities so as to facilitate the use of the dried brewer's grains for stock feeding. This could be used for fattening about one million small ruminants for a 90 day period each year during the 1980s.

- **Animal Health:** An efficient, well-planned animal health service is a pre-requisite for increasing small ruminant production in tropical Africa. It must be stressed, however, that any improvement in animal health services must go hand in hand with an adequate improvement in the provision of feed. If this is not done, expected improvements in productivity may not be realized and could lead to further destruction of rangelands in major producing areas as a result of large increase in numbers. An improvement in the performance of small ruminants in tropical Africa would directly improve the diet and standard of living of the large number of rural smallholders. In West Africa, peste de petit ruminants (PPR) is endemic. Helminthiasis and ectoparasitosis are widespread in tropical Africa and both seriously affect the productivity of small ruminants. Helminthiasis is a serious problem towards the end of the rainy season while ectoparasitosis inflicts heavy damage during the rains to early dry season.