

maturing crop, like sesame or sorghum. Regular plantings of sesame, groundnuts and sorghum generally occur in June and early July. These crops, too, may have to be replanted if rains are insufficient for germination or if sandstorms kill the seedlings.

According to an ideal expressed by farmers, every crop should be weeded at least twice. Although wealthy farmers can afford to hire labor for a third and even a fourth weeding of groundnuts, poor farmers are forced by their need for cash to hire their labor to other farmers and thereby neglect an adequate weeding of their own fields.

Harvesting operations are spread out over the period of late August to January, with the most activity occurring in October and November. All threshing operations are accomplished with hand labor.

Next to the vagaries of the climate, labor is the most important constraint on the cropping system. For many farmers the cost of hiring agricultural laborers is the largest input expenditure that they make. Looking at returns to labor by crop it was calculated that the rate of return was highest for millet, followed by groundnuts, sesame, and sorghum. Sesame's popularity among farmers, although its rate of return is lower than either millet or groundnuts, can be attributed to risk-aversion. Millet is relatively a greater risk to plant than sesame because of its higher susceptibility to pest attack, while unstable prices and a high outlay for the labor input limits the planting of groundnuts.

Animals play an important role in this farming system. The availability of drinking water, first, and pasture during the dry season, second, are the central-most constraints on livestock raising. Crop residues as well as commercial sorghum are an important source of fodder for working animals but herd animals subsist largely on the pasture that lies beyond the village's zone of cultivated lands. Most farm families own a donkey and several goats. Better-off families are able to invest in sheep and cattle. The largest herd of cattle recorded was 60 but the average herd size was only 6. Similarly, the largest herd of sheep was 120 but the average herd was also about 6.

Nearly every farm household supplements its income through off-farm activities. The latter include dry-season migration for a wage, charcoal manufacture, water-hauling, tailoring, carpentry, metalworking, itinerant marketing, and the operation of such capital-intensive enterprises as village shops, bakeries, flour mills, oil presses, cisterns, and trucks. Monetary gifts from relatives living elsewhere is another important source of income for about one-fourth of the farm households.

Farming in this region is not subsistence-oriented. Farm households purchase foodstuffs at village shops each day, or several times per week at least. These goods are paid for either in cash or in kind. In the latter case a crop is usually offered to the merchant as payment, the price of the crop having been determined by the schedule of prices prevailing among all crop buyers in the village. To obtain a cash income from agriculture, farmers may sell their crops (primarily sesame, groundnuts, roselle, and gum arabic) to a variety of buyers, including the shopkeeper, the urban crop merchant's agent who buys at rural crop markets, and jobbers and