

ZC0205 Timeline Analysis

Purpose

The use of timeline tool was to explore how, when and why changes in agricultural technology and practices have occurred with a purpose of getting

- An initial understanding of the circumstances under which farmers acquire new knowledge and information.
- An understanding of how new ideas spread within the community.
- An understanding of the historical context in which current and future information will be interpreted and assimilated by farmers
- An appreciation of how much knowledge farmers have of the dynamics of local farming systems.

Methodology

The research team adopted an open-ended approach to the discussion on timeline. This gave the farmers opportunity to freely choose what to discuss and how far back they can go back. The assumptions here were that what the farmers are likely to dwell on are key events that are relevant or in one-way or another affect their livelihoods. Issues that affect people's livelihoods positively or negatively tend to arouse emotions and often are called to mind. The approach gave an insight on the key sources of livelihoods that the community depend on. A list of events was constructed from the eight timelines and simple analysis done on them such as frequencies. The events were also categorised into three groups: - Crop-based events, livestock-based events and others. The events under each category were further categorised and there frequencies used to rank them.

Observations

One general observation was that the years of events were placed arbitrarily after a long discussion among members. This was because it was difficult to remember exactly when an event occurred. More information was obtained where the team had male participants more than with female. This was common because men were able to debate on issues until a consensus was reached as compared with women. It was noted that women would remember the events very well but could not remember the years when the events happened. This could be attributed to the impact such events had on the household livelihoods.

From the timelines, the introduction of agricultural based technologies dates back to pre-independence days. Possibility of improving income generation seems to be a key determinant of adoption of such technologies. This is understandable on the basis that their livelihoods are depended on agriculture/livestock. Any improvement in income offers opportunity to improve their financial base. From the vulnerability context, three key natural disasters were identified namely famines, floods and drought and the frequency seems to be highest in the 1980's and 1990's.

Key finding is that it was possible to track down a specific technology from introduction to date especially those that have disappointed or resulted to improvement of farmer's livelihoods (chart 1 below).

Chart 1: Categories of events mentioned

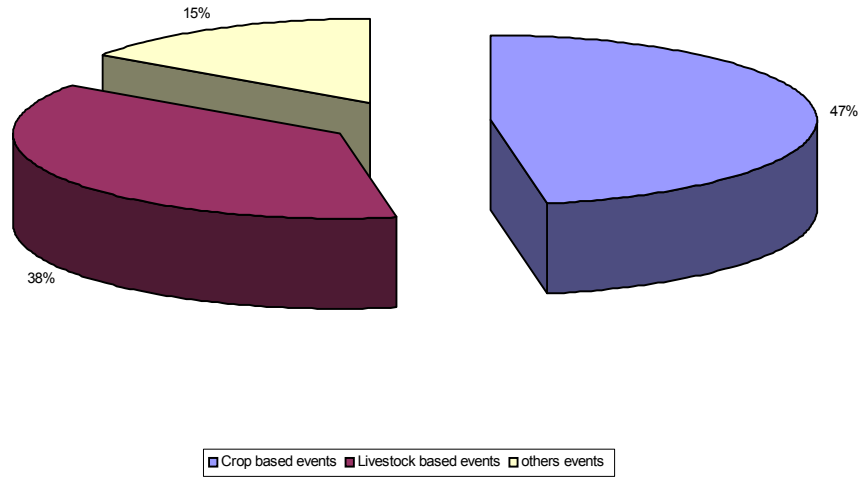
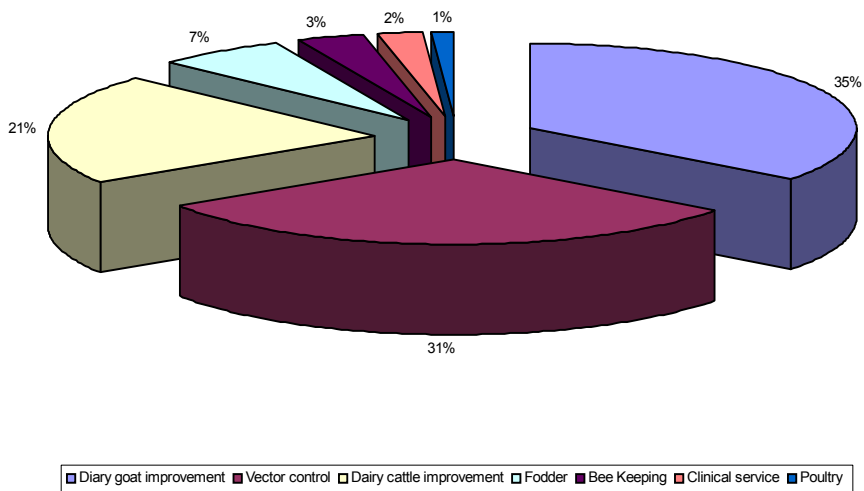


Chart 2: Livestock based Events



From Charts 1 and 2 above it is evident that the livelihoods of this people are based on agriculture. In chart 2 above, dairy goat groups drew the timelines, which explains why under the livestock based events the dairy goat events had a high frequency (35%). Disease control through vector control (31%) seems to be a major problem in the community with main interest revolving around dipping services. The other key issue observed from chart 2 is the dairy cattle improvement, where the groups trace the introduction of AI (21%) services up to the collapse of the same.

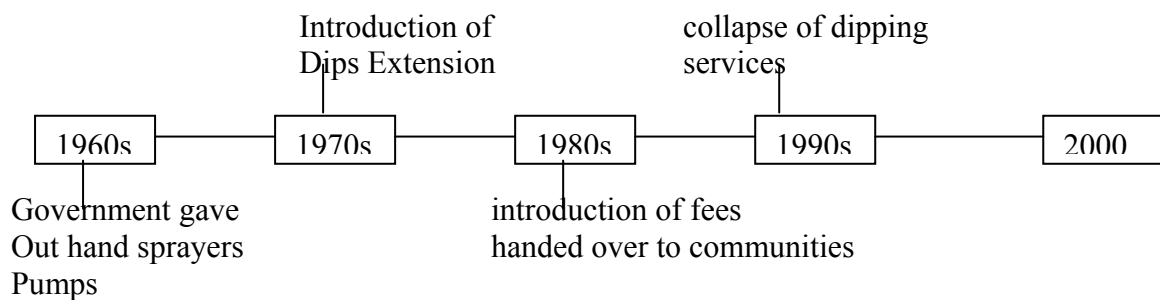
Three modes of technology introduction in the area were picked from the timelines namely farmers, extension and businessmen. The spread of avocado seedlings, mango varieties and bananas is said to have been through fellow farmers whereas the businessmen have been involved in the spread of seeds such as beans. Coffee, dipping

services and Artificial Insemination were introduced by government extension staff and picked up well because they all had impact on household incomes. However, liberalisation and poor prices of coffee led to the abandonment of coffee farming for other income generating activities such as intensification of banana farming. Dipping and AI services, which were introduced free of charge, started being paid for and subsequently collapsed. Market competition is one factor that seems to be featuring in the spread of technologies by farmers. Examples of this is where farmers who introduced mangoes restricted the spread of seeds or the dairy goat groups which were said to have kept information to themselves and denied willing farmers access to the same, a phenomenon van den Ban (2000) refers to as the “commodisation of knowledge”

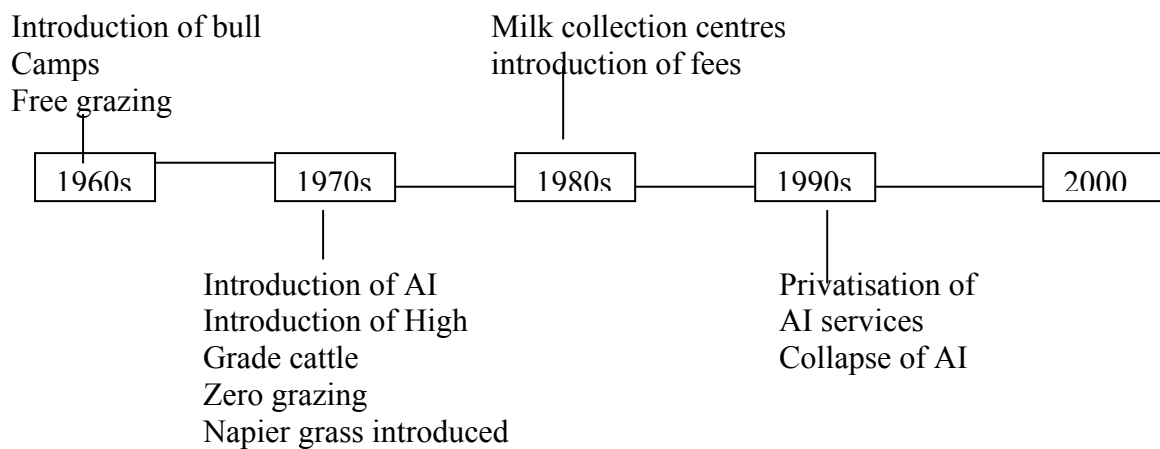
Features of the main livestock technologies introduce in the area

The report tries to compare the features of the following livestock based technologies AI, Dipping services and the dairy goats as they were brought out in the timelines. A summarised timeline for three main technologies with highest frequencies constructed from the farmers’ timelines is given below

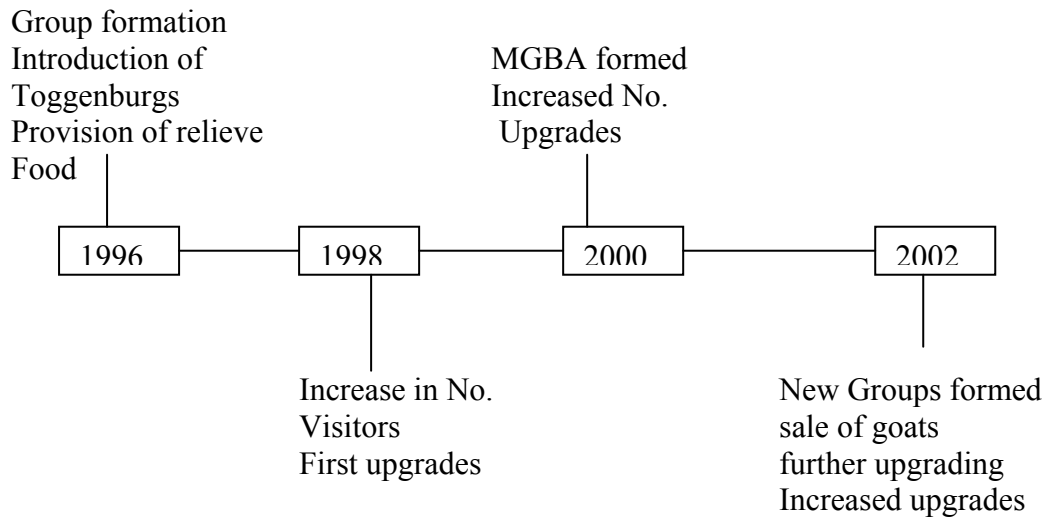
a) Disease Vector control



b) Dairy cattle improvement



c) Dairy Goat Improvement



From the timelines most of technology introduction seems to have taken place from the fifties to early seventies. Apart from the goats no new technology was mentioned in the late eighties and the nineties, instead the already introduced technologies seems to have suffered drawbacks

Physical characteristics of the timeline sites

a) Lower marginal areas

Most of the people living in the lower agro ecological zones migrated from the higher potential part of the district where the land sizes are small and the population high and in search for land for cultivation. These areas were settled in 1968. The land tenure system is secure with farmers owning land and some renting from their neighbours. The productivity of the land is poor due to depleted soils, continued cultivation and unreliable rainfall

Most of the farmers in this region depend on crop and animal production for their livelihood and have few or no non-farm income sources and the major challenge is usually drought and hence lack of income. The recurrent drought and dependency on farm produce for income in the area, most men and young people have moved to other towns to look for employment to be able to provide for their families. Women and children mainly do farm labour. Some sell households do sell out their labour to other slightly well up farmers to get income.

Due to the poor infrastructure in the areas information flow is limited and the farmers have to depend on their leaders (chief and assistant chiefs) for any information hence under development observed.

b) Medium potential Areas

Since this are is very accessible there is migration of labour to nearby towns. Majority of the women are involved in trading in farm produce such as bananas and avocadoes.

Most of the households use family labour to harvest coffee while in most cases and most of the young people have migrated to towns in search for employment while the old work in their farms or on other people's farms to earn some income.

The average land sizes in this areas range from less than 0.5 acres to 2 acres. Mostly the land is crop with bananas, coffee avocados and mangoes. Very small portions of land are planted with maize and beans and usually intercropped with the perennial crops such as bananas, mangoes, avocados and coffee. Most of the land is inherited from their parents who have not yet subdivided it to the sons in some cases. They rely on renting land on the lower part of the district, which is drier and where land sizes are big. Farmers also have access to the nearby forest where they get especially fodder for their livestock. They rely on renting land on the lower part of the district, which is drier and where land sizes are big. Farmers also have access to the nearby forest where they get especially fodder for their livestock.

Most farmers in these areas have access to other sources of income due to sale of milk, small micro enterprise activities, horticultural crops and other farm produce. Others engage in trade with food crops such as bananas to improve their livelihood. Almost all the farmers have a crossbreed cow that is zero grazed for milk production. The milk is sold through the farmers' dairy cooperative to Meru central union or Brook side. Coffee has been one of the major enterprises in the region but has been neglected for along time. However the enterprise is slowly being revived and the farmers have begun having an interest in it.

Most of the farmers in this region have access to useful information since the area is easily accessible. This is mostly so for men as observed from the non-group members who were mostly men and who are able to travel to different areas where they can obtain information.