

# **VISIT TO LUNYANGWA RESEARCH STATION AND SMALLHOLDER COFFEE FARMERS TRUST IN MZUZU**

## **BACKGROUND**

Being a newly established position in CAMAL, the Technical and Marketing executive undertook a trip to the Northern region of the country that is famous for coffee growing (Mzuzu Coffee). The visit was aimed at one familiarizing himself with other partners and stakeholders within the coffee industry and two to find out what kind of work the research station is carrying out and establish how the association can benefit from such research work.

While already in Mzuzu it was felt necessary to pay a courtesy call to Mzuzu coffee just to have a record of information about the efforts being made to foster the production of coffee and challenges being faced.

## **LUNYANGWA RESEARCH STATION**

Generally speaking, the station is doing some recommendable work in the region with smallholder farmers. Below are some of the research areas the station is carrying out trials. The research station is currently being headed by Mr. Chanika while Rennex Makono and Steven Nyirenda are the people behind the Coffee research.



Steven Nyirenda



Rennex Makono

### **Vegetative propagation**

The station has put up some trials on vegetatively propagated catmor population 129 variety (Nyika) and seems to be doing fine in terms of resistance to pests and diseases. However I shared with the researchers the experience from the Southern region with the VPs. The researchers acknowledged the incidence of die back and attributed it to poor selection at point of planting. The researchers ruled out the die back being caused by absence of strong tap root since the plant needs more fibrous roots for feeding itself.

### **Spacing**

There are also a number of trials on spacing alone as well as spacing versus nutrition regimes. The one on spacing versus nutrition regimes is still under way while the other one on spacing alone has been finalized and results have shown that, where tractors are not to be used the optimal yields can be realized if coffee is planted 2 x 1 m.

It was discovered that when spacing is lower than this as is the case with most smallholders up there, yield is higher due to high population and low per coffee plant. The crop easily turns into a hedge row and there is high probability for pests and diseases cross over from one plant to another.

However most smallholder farmers there are planting at 2 x 0.6 a technology which the researchers say was released prematurely.

### **Coffee under banana shade**

There is also some work currently being done with the smallholders whereby they are experimenting to interplant coffee with bananas. Why bananas? Because in Chitipa (Misuku hills) bananas are mostly their staple food and at the same time the bananas will provide shade to coffee. Naturally coffee grows under shade and it does well.

Though the technology has not yet been released, the farmers have already started planting bananas after every 6 rows of coffee.

### **Marching young coffee**

The researchers have proved it as very necessary to mulch coffee especially young coffee under three years as this reduces deaths. A lot of moisture is lost if coffee is left un-mulched during the dry season and this has a negative bearing on the young coffee. The question of the mulch acting as the breeding ground for pests was considered but the benefit defeats the effect of the moisture loss on the young coffee.

However, the researchers advise the need for consistent scouting for pests and if their occurrences reach a threshold then this justifies the need for spraying or removing the mulch.

### **Nutrition regimes versus Spacing**

As already stated above the trial on nutrition regimes is still in progress, but this trial was put up because of the hypothesis that we are overdosing our soils with fertilizers especially the estate sector and this would help us establish what rates are optimal. The researchers argue that most factors in the soil are not being checked such as soil ph and some minor nutrients eg zinc and boron.

### **White stem borer management**

The station has done quite a lot of work in management of white stem borer (kachibungu). The farmers are well versed with the techniques of managing the pest. Rarely do they apply pesticides but they have been trained to follow management practices such as:

- keeping the bottom 50 cm of their plants smooth,
- scouting for mother beetles,
- physically handling the borer it self after noticing the ring bark,
- and applying fipronil, if all the above means fail.

Fipronil (regent) has been proved by these researchers as a more effective so long is applied; 1) before onset of rains, October for the south and November for the north and 2) before the adults emerge.

The researchers discourage the use of Tameron because it is a broad spectrum pesticide therefore it also eliminates natural predators for other pests. However research has also shown that all varieties are quite susceptible to stem borer.

No research on smelly plants was done by Lunyangwa, as this was done by the Coffee Research Unit.

## **DISCUSSION**

A lot was discussed with the researchers in relation to production challenges CAMAL members are facing especially the estate sector in the southern region. These range from prevalence pests and diseases to yield. The researchers agreed that there was indeed need to do something about these challenges as they increased the cost of production and this has a huge bearing on the future of coffee industry.

The researchers suggest that now time has come that apart from looking for disease resistant varieties, farmers in collaboration with research institutions should start looking for alternatives rather than relying on spraying chemicals alone. This turns out to leave an imbalance in the environment. Most of the pesticides used are non-selective therefore they wipe out the natural predators of some pests thereby accelerating the problem.

With understanding that research need a lot of funding that CAMAL can not afford on it own, and also in the same understanding that donors could not fund long term projects such as reasonable research could be, the researchers alluded to the idea of linking up with other research institutions and tap from them. The research is willing to develop a joint proposal with the association to foster the idea and backstop the CAMAL efforts.

### **SMALLHOLDER COFFEE FARMERS' TRUST (SCFT)**

The journey to the north would be incomplete without paying a visit to the smallholder farmers. The visit started with the Trust Head office in luwinda in Mzuzu where I met with the General Manager who briefed me as follows:

SCFT currently has about 3000 members/farmers who are expected to produce about 350 tons of green beans this year as per their first crop estimates. This year the smallholders seem have a good crop and are estimating a harvest of 1.5kg of cherry per tree as compared to the usual 0.9kg. The Catmor 129 populations are heavily bearing hence need for staking. Currently they have 2 million coffee trees in production while 1.6 million trees are young coffee.

The General Manager said the commercialization of the smallholder coffee sector has brought enthusiasm among smallholder farmers and this has led to more farmers willing to join the trust. However due to constraints the trust could no longer register new members.

The trust projects production for 2009 to 600 tons of green beans and targets to produce 3000 tons of green beans per year by the year 2018 translating to 1 ton per member. The trust plans to expand at the rate of 2.5 million trees per year for the next 2 years and 1.5 per year million later.



Smallholder coffee



coffee growing under shade

## **CHALLENGES**

Unlike the estate sector the smallholder farmers are not struggling with the pests and diseases, but this does not mean that they are completely spared. You can still spot a few plants with CBD and white stem borer, thanks to the heavy rainy season.

The major challenge for smallholder farmers happens to be inputs, especially fertilizers. This has been a major constraint to expansion both in terms of increasing membership as well as individual member hectareage expansion.

The CFC project helped a lot to train farmers manage the white stem borer without relying much on chemicals (see the Lunyangwa report above). You can hardly spot a bush attacked by stem borer.

Although the Catmors seem to be resistant to leaf rust, there are still some weaknesses shown to leaf minors.

## **PROCESSING & MARKETING**

The Trust has prepared well for the expanded production explained above and following its strategic plan it has since purchased a new hurling and sorting machine to be installed soon. The Trust plans to purchase another plant the following year to balance out the pressure.

The trust sales only 25 tons of roast and ground coffee, equivalent to 30 tons of green beans, on the local market and the rest is exported. There are plans to jack this up to 100 tons by creating coffees that meet Malawians taste and also support CAMAL efforts to stimulate the local market for fine coffees by targeting the youth and training entrepreneurs.

## **SUGGESTIONS FOR IMPROVEMENT**

The General Manager also outlined the need for building the capacity of the CAMAL secretariat by making sure that Technical and marketing Executive is properly trained in cupping and all quality issues. He suggested that the T&ME spends some time liquoring with the team in Mzuzu, pay a visit to John Taguma in Zamabia and more exposure in other international exhibitions. These efforts may lead to CAMAL having an independent and qualified cupper.