

Memorandum

To: Jean-Paul Deprins
CC: Rino Solberg
From: Jan Vandenabeele
Date: 22nd Dec 2011
Re: Report on visit to Kiambere on 21st Dec 2011

Participants

- Better Globe Forestry Ltd (Jan Van den Abeele, Tom Sila)
- John Njeru (local BGF staff)

The heavy rainstorms of 20th and 27th Nov upon questioning turned out to have been freak hail storms. This resulted in damaged seedlings both in the nursery and in the field. In the block "W of Katithini" I have seen lots of dry seedlings. Part of them will resprout (they are being watered), part of them is attacked by fungi (secondary infection) and will stay dead. The report of tree counting of Dec will shed light on this.

The hail storms came with strong winds, and were extreme, as follows:

- 20/11/11: 40mm in 25', at night
- 27/11/11: 50mm in 30', at 19pm

In nursery, the damage suffered is extensive, added to the losses by fungal infection in the tunnels.

problem	Seedlings lost
Fungal infection	9,000
Hail storm 20 th	22,500
Hail storm 27 th	33,700
Rejects killed as result of storms	10,000
total	75,200

This is a serious set-back and our planting program for both Dec and Jan is affected. The rejects are normally given as donation, and KenGen only could receive 700 out of the 1000 promised because of lack of plantable seedlings. The rejects are kept in the nursery and after some weeks are selected again as some of them recover and become acceptable for planting again.

While the advice of KEFRI regarding the fungal infection in the tunnels was good, the one in the aftermath of the rainstorms was not. We applied Bayleton as recommended, and it has a growth inhibiting effect on young mukau seedlings. I haven't seen it myself, not having had time to go through the nursery, but according the Njeru the very young seedlings' root growth stops, and older seedlings don't grow further in height but develop an umbrella shape. I notified KEFRI (Jane Njuguna) of that.

The effect of hail on young mukau seedlings is hence severe. The leaves are shredded and they "dry" apparently by burning from the cold. Not much can be done as seedlings are obligatorily subjected to full sunlight and outdoor conditions as part of the hardening off process before planting.

The seedlings under plastic cover were also affected, as the sides were just blown up, despite fastening. There, we could do away with the individual plastic covers and construct a comprehensive roof with shade netting.

Hail storms are extremely rare and it is the first time residents of Katithini have seen them, while Njeru has knowledge of one some 12 years ago in Kiambere (destroying hardy seedlings of *Cassia siamea*), and longer ago in Kiritiri.

Remarks

- I fine-tuned the watering system for block "W of Katithini". This will be reflected in a new version of the order for its components.
- Forms for the follow-up of mukau fruit supply were discussed, and some modifications will be introduced.
- Some mukau of 1 years old are attacked & killed by soil borne fungi (most likely *Fusarium*). All mukau in that block will be sprayed with Copper to increase their resistance.

Jan Van den Abeele,

Executive Director
Better Globe Forestry Ltd