ANNUAL ACTIVITY REPORT FOR YEAR 2 AND INCEPTION REPORT FOR YEAR 3

WESTERN KENYA INTEGRATED ECOSYSTEM MANAGEMENT PROJECT

Louis Verchot



International Centre for Research in Agroforestry P.O. Box 30677 Nairobi, Kenya

Table of Contents

1.	Int	troduction1
2.	Tr	aining
3.	Sp	ecies screening trials
	3.1	Nyando basin
	3.2	Yala basin
	3.3 W	700dlots
4.	Ba	selines 4
	4.1	Nyando River Basin 5
	4.1	.1 Biophysical baseline survey
	4.2	Yala River Basin
	4.2	2.1 Biophysical baseline survey
	4.2	2.2 Socioeconomic baseline survey
	4.3	Nzoia river basin:
	4.3	B.1 Biophysical baseline survey
	4.3	3.2 Socio economic baseline survey
5	De	emonstration plots on degraded sites
	5.1	Lower Nyando Block
	5.1	.1 Meetings
	5.1	.2 Tree planting
6.	Ot	her support activities
7.	Ac	tivity planning for Year 3 12
	7.1	Baselines 12
	7.2	Demonstration trials
	7.3	Training

1. Introduction

Western Kenya Integrated Ecosystem Management Project (WKIEMP) has been initiated with support from the World Bank for implementation through a grant from the Global Environment Facility (GEF). The project, which became effective in July 2005, seeks to improve the productivity and sustainability of land use systems in selected watersheds in the Nzoia, Yala and Nyando river basins through adoption of an integrated ecosystem management approach. In order to achieve this the project will: (i) support on-and off-farm conservation strategies; and (ii) improve the capacity of local communities and institutions to identify, formulate and implement integrated ecosystem management activities (including both on-and off-farm land use planning) capturing local global environmental benefits. The project is based in Kisumu and is achieving its objectives through a community driven development process whereby communities decide on resources for infrastructure investments, technical assistance and implementation of ecosystem management activities.

KARI and ICRAF collaborated in the generation of baseline information that was used in the Project Appraisal Document (PAD) under a Project Development Facility (PDF). KARI requested ICRAF to further continue backstopping the project activities in the 2006/2007 and 2007/2008 work plans with the specific objectives of building capacity of KARI scientists and other local institutions to manage carbon assets including the establishment of a system to monitor and evaluate the biophysical impact of project activities, particularly the impact on net carbon absorption. The main objectives of this backstopping are to assist KARI to:

- a) Establish interventions that mitigate land degradation
- b) Evaluate and document the potential of different tree species to sequester carbon on degraded land
- c) Evaluate options for river bank protection
- d) Establish interventions that sequester carbon on agricultural systems
- e) Establish PAP intervention plots at several sites
- f) Establish a system for monitoring and evaluating changes in carbon stocks.
- g) Build capacity of KARI staff, other local institutions and communities to undertake monitoring and evaluation of changes in carbon stocks.

This report summarizes the progress made by ICRAF during the year 2006/2007 with respect to the deliverables outlined in the contract. The report

2. Training

While the major training subjects that have been outlined in the contract focus on carbon measurement and measurement of the non- CO_2 greenhouse gases (GHGs), a number of other ad hoc requests have come from the PCO and additional training sessions have been organized. For example, ICRAF organized a training course on nursery establishment and management. Training was provided by James Owek and Walter Adongo to several KARI staff to support the establishment of the 10 nurseries in the Lower Yala block.

Several trainings were organized that contribute to ICRAF's contractual deliverables vis-à-vis carbon measurement for the Project including:

- i) Socioeconomic baseline: Introduction course to the socio economic database. (November 2006)
- ii) Biophysical baseline: Training in vegetation classification and use of the biophysical datasheet. (February 2007)
- iii) Field measurement techniques: GPS and GIS training (1 week course at ICRAF) end June: All FO's, livestock officer, and M&E team
- iv) Micro catchment mapping in Lower Yala Sindundu

Finally, in the area of measurement of non-CO₂ GHG emissions from soils, one scientist from KARI Kakamega has been working with the ICRAF team in an area adjacent to the Kakamega forest to learn the field procedures of measuring N_2O and CH_4 emissions from soils.

3. Species screening trials

3.1 Nyando basin

We identified 80 potential sites that were suitable for screening trials, but only 47 farmers ultimately engaged in the activity. A series of meetings was held to sensitize these farmers in establishment and management of the trials between October and December. A first baraza was held in December to discuss establishment and management of screening trials Twenty-two farmers participated in the meeting along with staff from KARI, MoA and the environment Officers. ICRAF completed characterization of the 80 trials using the same methodology as was used in the biophysical baseline. Infiltration studies were conducted on 50 of the 80 trials. Planting of the 80 screening trials was completed and a list of the species planted can be found in Appendix 1. One follow up meeting was held. A full list of species screening trials is presented in Appendix 1.

Tree species	Grand Total
Grevillea robusta	3264
Makhamia lutea	1008
Acacia passifolia	218
Acacia gerradi	310
Acacia polyacantha	936
Terminalia brownie	792
Total	6513

Table 1. Trees planted in species screening trials in Nyando River Basin.

When establishing the screening trials – several farmers were very interested but did not have the required area of 30m x 30m. Here ICRAF established woodlots instead. A total of 29 woodlots have been established and the details are given in Appendix 2.

3.2 Yala basin

We identified 160 potential sites that were suitable for screening trials, and all farmers ultimately engaged in the activity. A series of meetings was held to sensitize these farmers in establishment and management of the trials between October and December. ICRAF completed characterization of the 160 trials using the same methodology as was used in the biophysical baseline. Infiltration studies were conducted on 50 of the 160 trials. Planting of the 160 screening trials was completed and a list of the species planted can be found in Table 2. One follow up meeting was held. A full list of species screening trials is provided in Appendix 2.

Tree species	Grand Total
Grevillea robusta	10282
Makhamia lutea	4141
Senna siamea	3134
Albizia coriara	2657
Croton megalocarpus	297
Casuarina equisetifolia	601
Croton macrostachyus	290
Terminalia brownie	213
Total	21615

Table 2. Trees planted in species screening trials in Yala River Basin.

3.3 Woodlots

When establishing the screening trials – several farmers were very interested but did not have the required area of 30m x 30m. Here ICRAF established woodlots instead (Table 3). This met the needs of the farmers, but will not serve the needs of the project *per se*. However, these plantations will serve as useful demonstrations in these communities to raise awareness about the potential for indigenous species.

	No.
Tree species	planted
Various spp.	600
Cordia abssynica	473
Senna siamea	400
Croton macrostachyus	300
Albizia coriara	320
Maesopis eminii	220
Markhamia lutea	270
Grevillea robusta	250
Terminalia brownie	20
Croton Megalocarpus	20
Casuarina equisetifolia	450
Total Seedlings	3323

Table 3. Tree species planted in woodlots

4. Baselines

All block locations were finalized during the year (see Map 1). Baseline data collections activities focused on the Yala River Basin after the sampling was completed in the lower Nyando block. Because of the delays caused by the contract arrangements, ICRAF accelerated the baseline data collections to provide the Project with baseline data in a timely manner. Each block was entered into a separate database and shared with the PCO. Maps for all blocks were prepared and shared with KARI.

The socioeconomic database was modified to accommodate the additional questions and was updated to run more smoothly – ICRAF handed over the modified database to KARI in the fall of 2006 and KARI started entering data by the end of 2006. The biophysical database was also updated.



Map 1. Location of WKIEMP 100 km2 focal areas in western Kenya.

4.1 Nyando River Basin

4.1.1 Biophysical baseline survey

Following the signing of the first contract with KARI, ICRAF mobilized a team to collect the biophysical baseline data from Lower Nyando. Sampling was completed in September 2006. Data were collected from 160 plots and. 320 soil samples were collected for analysis. Infiltration studies were carried out on 48 plots.

Socio economic survey

The team re-sampled all the households in Lower Nyando to ask the added questions to the questionnaire. The task started in mid October and was completed in mid November – all 160 households were identified, however, 4 households no longer existed so 4 new households were included in the survey.

4.2 Yala River Basin

4.2.1 Biophysical baseline survey

The team commenced the collection of biophysical baseline data in Lower Yala in early September and completed the data collection in early November. The middle block of Yala was sampled from early March and was completed by the end of May: Data were collected from 160 plots and. 320 soil samples were collected for analysis. Infiltration studies were carried out on 48 plots.

4.2.2 <u>Socioeconomic baseline survey</u>

Lower Yala

The team commenced the collection of socioeconomic baseline data in Lower Yala on November 16th and completed the data collection on January 5th. The following sub locations were sampled:

Sub location	Cluster	No. Households
		interviewed
Kanyardet	1	10
Ndori	2	10
Kambare+Onyinyore	3	10
West Katieno	4	10
Kanyadet+Ndori	5	10
Rera	6	10
Kambare	7	10
Kambare	8	10
Dienya East	9	10
Onyinyore	10	10
Onyinyore	11	10
Ramula	12	10
Nguge	13	10
Uriri	14	10
Gombe	15	10
Uranga	16	10

Middle Yala

The team commenced the collection of socio economic baseline data in Middle Yala on April 10th and completed the data collection in early May. The following sub locations were sampled:

Sub location	Cluster	No. Households
		interviewed
Mudete & Gaigedi	1	10
Budywa & Vugina	2	10
Savane	3	10
Savane & Museno	4	10
Vokoli & Lusengeli	5	10
Itegero & Bugina	6	10
Chavogere	7	10
Shirulu	8	10
Lusengeli & Jivovoli	9	10
Itegero, Chavogere &	10	10
Kedoli		
Kaptech	11	10
Kaptech & Lukoye	12	10
Kisasi	13	10
Mulundu	14	10
Muhudu	15	10
Lukose	16	10

Upper Yala

The team commenced the collection of socioeconomic baseline data in Upper Yala on May 21st and was completing the sampling as the year drew to a close. The following sub locations have been sampled so far, the remaining 5 clusters will be completed shortly:

Sub location	Cluster	No. Households
		interviewed
Yet to be sampled	1	10
Kesses	2	10
Yet to be sampled	3	10
Kesses & Megun	4	10
Tulwet	5	10
Tulwet & Kesses	6	10
Kesses	7	10
Kesses	8	10
Tulwet	9	10
Tulwet	10	10
Kesses	11	10
Kesses	12	10
Koisagat	13	10
Yet to be sampled	14	10
Yet to be sampled	15	10
Yet to be sampled	16	10

4.3 Nzoia river basin:

4.3.1 Biophysical baseline survey

The team commenced the collection of biophysical baseline data in Lower Nzoia in early December and completed the data collection in February (the sampling was delayed because of flooding) - 160 points were surveyed and 320 soil samples were collected for analysis. Infiltration studies were carried out on 48 plots.

4.3.2 Socio economic baseline survey

The team commenced work in Lower Nzoia in late December and completed the task during the first week of March. The work was stopped for some weeks in January due to flooding of the block. The following sub locations were sampled:

Sub location	Cluster	No. Households
		interviewed
Sumba	1	10
Sifuyo & Nambare	2	10
Ruambwa	3	10
Namuduro	4	10
Nyadorera A	5	10
Sifuyo	6	10
Namduru & Sifuyo West	7	10
Kasadodo	8	10
Sigoma Uranga	9	10
Kabura Uhuyi	10	10
Sifuyo West	11	10
Masat East	12	10
Kaugagi Udenda	13	10
Kalkada Uradi	14	10
Masat West	15	10
Masat East	16	10

5 Demonstration plots on degraded sites

5.1 Lower Nyando Block

Rehabilitation of degraded areas continued in Lower Nyando in the 2nd project year. Several more sites were identified and activities were only launched in two new locations: Kowala and Kokoto in addition to the old site of Kalacha. The following activities have been taking place in the 2nd project year in these 3 sites:

5.1.1 Meetings

(Oct.-Dec. 06)

Site	Date	Agenda	No. participants
Kowala &	Oct. 23 rd	Introduction to rehabilitation of degraded	17
Kalacha		areas	
Kowala,	Oct. 27 th	Rehabilitation of degraded area	13, 9, 20
Kokoto, &			
Kalacha			
Kokoto	Oct. 30 th	Soil & water conservation - Aloes	All group members
Kowala Oct. 31 st		Tree management & other interventions	All group members
		for rehabilitation of degraded areas	
	Nov. 7	KARI/ICRAF WKIEMP activities	11 & 9
All sites Every Friday		Food for work – meeting the groups &	The entire 3 groups
		assessment of progress	

Periodic group meetings have been held with all participating groups prior to each rainy season to take stock of progress and to plan the way forward for the areas. Meetings were held in January and June 2007 in Kokoto; and in June in Kowala and Kalacha. In Kowala more emphasis has been given to tree management, while in Kalacha the priority has been to develop an action plan for of activities that the group will initiate in the subsequent two seasons. More informal weekly meetings have been held between with the 3 communities every Friday to both assess the work progress and to discuss challenges within the groups.

5.1.2 Tree planting:

Table 1 lists the number of tree seedlings distributed to the 3 degraded areas as well as the sister group to Kowala I – Kowala II in the long rainy season of 2007.

Tree species	Kowala I	Kalacha	Kokoto	Kowala II	Grand total
Acacia spp.	360	432	1744		2536
Grevillea robusta	2488	350	395		3233
Markhamia lutea	2288	712	1812	700	5512
Warbugia ugandensis	72	10	75		157
Croton spp.	288	0	72		360
Cordia abssynica	860	380	240		1480
Albizia coriara	484	290	880		1654
Cassia spp.	232	280	160	500	1172
Loquarts spp.	288		144		432
Calliandra calothyrsus	480	480	320		1280
Terminalia brownii	40		750		790
Casuarina equisetifolia	328				328
Moringa oleifera	320				320
Syzigum cuminii	144			1500	1644
Carcia papaya	0	140		300	440
Total no. seedlings distributed	8672	3074	6592	3000	21338

Table 1 Tree seedlings distributed in the long rains of 2007

In June, it became apparent that more tree seedlings had been raised than were being planted by ICRAF and KARI. Therefore, ICRAF distributed additional seedlings to the sister group of Kowala I, called Kowala II. The table below lists the species distributed.

No.	Name			Tree species		
		Markhamia	Acacia	Terminalia	Sigzium	Grevillea
1	Jane Otieno	20	5	20	10	
2	Dorcas Odiko	10	10	10	5	
3	Elsa Otrero	15	5	10	5	
4	Milka Oyoo	10	15	10	5	
5	Rael Otieno	10	15	20	5	
6	Rose Odhiambo	10	20	15	5	
7	Margaret Onyango	10	20	15	5	
8	Erick Omondi	10	15	10	5	25
9	Alseba Ochieng	10	5	10	10	
10	Agala Aloo	20	5	20	10	5
11	Julias Ggojo	15		10	10	10
12	Leonida	25		5	10	20
13	Mary Grwage	20		20	15	30
14	Omondi Abudha	20		20	30	30

Table 3 Tree seedlings distributed in the long rains of 2007 – additional tree distribution

6. Other support activities

Central nurseries - Kisumu and Maseno:

In the second project year the two central nurseries raised more than 100,000 tree seedlings of assorted species: approx. 60,000 seedlings in Maseno and 46,000 seedlings in Kisumu.

Meetings:

- Stakeholder meeting organized by Friends of Katuk (FOKO) November 21st
 2006 join attendance of ICRAF and KARI
- ii) Meeting at KEFRI Maseno on tree growing join attendance of ICRAF and KARI
- Sensitization meeting in Lower Nzoia river basin Usonga Location, Uranga Division, February 28th 2007
- iv) District Environmental Action Plan Meeting held at Nyando District Headquarters at Awasi - May 16th 2007
- v) Sensitization meetings in Upper Yala block series of meeting between May 11-23rd 2007
- vi) Professional Group Workshop Held at Maseno ATC on May 29th 2007
 - The workshop was convened by the Provincial Director of Agriculture in Nyanza joint attendance of ICRAF and KARI

Students:

In the second project year, ICRAF has had 2 MSc. students attached to the WKIEMP project. One student (Johannes Rupp) is looking at local institutions and the linkage to the global carbon market, whereas the other student (Peyton Smith) is looking at agroforestry in

relation to soil and water conservation using GIS. These students have been supported in the project under additional funds raised by ICRAF to supplement GEF funding.

7. Activity planning for Year 3

7.1 Baselines

The major activities for year three will be finishing the baseline. Due to the delays in signing the contract between KARI and ICRAF, data collection, which was originally scheduled to cover 30 months need to be compressed. At the same time, with decisions that have been made within the project to scale back the number of blocks, sampling will take less total time than originally planned. We anticipate completing all field collection – both socioeconomic and biophysical by the middle of the year. Data analysis and baseline reports will be available early in the fourth quarter of the year. However, to facilitate more efficient project planning and implementation, all databases will be shared as soon as possible.

7.2 Demonstration trials

ICRAF will expand the species screening trials and land rehabilitation trials in year three, particularly in lower Yala (Alwala and Sidundu). Expansion will primarily be done during the long rains. Two sites in lower Yala have already been identified for rehabilitation. Monitoring will continue on the species screening trials in Lower Nyando and Lower Yala blocks.

7.3 Training

KARI has identified the need for training in GIS and remote sensing basics to assist with project planning and activity monitoring. Gaining these skills is an essential prerequisite for more advanced work in carbon measurement and monitoring. Thus, ICRAF has proposed three modules:

- > An introduction to GIS;
- Spatial analysis
- Integration of GIS and remote sensing

These modules will be offered during the third and fourth quarters of the year.

Plot ID	Farmer Name	Sub- Species planted		Infiltration
		location		(+/-)
019	Leonard Akach	E.Jimo	M.Lutea+Grevillea	+
027	Daudi Keter	Tabita	M.Lutea+Grevillea	+
029	Philip Kirui	Tabita	A.Poly+Grevillea	+
030	Yukabeth Owino	E.Jimo	M.Lutea+Grevillea	+
031	Ojuang Ko'mbudo	E.Jimo	T.brownii+ Grevillea	+
033	Micheal Odhiambo	E.Jimo	T.brownii+ Grevellea	+
034	John Otieno Owouth	E.Jimo	A.gerradi+Grevillea	+
035	Henry Ochieng	E.Jimo	M.lutea+ Grevillea	-
036	John Okendi	E.Jimo	A.Poly+Grevillea	+
037	Monica Opiyo	E.Jimo	A.Poly+Grevillea	+
038	Pauline Obuom	E.Jimo	A.Poly+Grevillea	+
039	Ann Obuom	E.Jimo	A.Poly+Grevillea	+
040	Steven Ochieng	E.Jimo	A.Poly+Grevillea	+
041	Japheth Adera	E.Jimo	T.brownii+ Grevillea	+
043	Jeremiah Okumu	E.Agoro	M.Lutea+Grevillea	-
051	George Otieno Ogada	E.Jimo	A.gerradi+Grevillea	-
056	Were Olonde	E.Jimo	A.passi+ Grevillea	+
057	James OtienoManga	E.Jimo	A.gerradi+Grevillea	+
058	Shadrack Jole	E.Jimo	T.brownii+ Grevillea	+
059	Hellen Okoth	E.Jimo	T.brownii+ Grevillea	+
060	Ann Owour Owiti	E.Jimo	T.brownii+ Grevillea	-
063	Silpha Were	E.Jimo	A.Poly+Grevillea	-
062	Samson Otieno	E.Jimo	M.lutea+ Grevillea	+
064	Fransico Okwanya	E.Jimo	M.lutea+ Grevillea	+
065	Caren A. Onyango	E.Jimo	M.lutea+ Grevillea	-
066	Silvanus Pila Gunde	E.Jimo	A.Poly+Grevillea	+
067	Silvanus Aoko	E.Jimo	T.brownii+ Grevillea	+
069	Benard Ojijo	E.Jimo	T.brownii+ Grevillea	+
070	Leonard Nyaoke	E.Jimo	M.lutea+ Grevillea	+
071	Okoth Mwana	E.Jimo	A.Poly+Grevillea	+
072	Peter Ochieng	E.Jimo	A.Poly+Grevillea	+
073	Jared Omondi	E.Agoro	A.Poly+Grevillea	+
074	Risper Owiti	E.Jimo	T.brownii+ Grevillea	-

Appendix 1 – Species screening trials in Lower Nyando – 47 trials

Plot ID	Farmer Name	Sub-	Species planted	Infiltration	
		location		(+/-)	
075	Benjamin Oriato	E.Jimo	T.brownii+ Grevillea	-	
076	Janes Okelo Opiyo	E.Jimo	A.passi+ Grevillea	-	
077	George Akach	E.Jimo	A.gerradi+Grevillea	-	
078	Onyoungo Pri. Sch.	E.Jimo	M.Lutea+Grevillea	-	
079	Joseph Molla	E.Jimo	A.Poly+Grevillea	-	
080	Deborah Juma	E.Jimo	M.Lutea+Grevillea	-	
0xx	Lilian Otieno		T.brownii+ Grevillea	-	
068	Yogo A. Fannel	E.Jimo	A.passi+ Grevillea	-	
020	Morris Mbhya	E.Jimo	A.Poly+Grevillea	-	
009	Clement Odera		T.brownii+ Grevillea	-	
010	James Ojwang		M.Lutea+Grevillea	-	
061	John Apiyo Bnodo	E.Jimo	M.Lutea+Grevillea	-	
0xx	Jacob Ila	E.Kabodho	M.Lutea+Grevillea	-	

NB: The full names for the species are as follows: *T.brownii – Terminalia brownii; A.Poly – Acacia polyacantha; A.gerradi – Acacia gerradi; A.passi – Acacia passi; Grevillea – Grevillea robusta; M.lutea – Markhamia lutea*

No.	Name					Species (N	o planted.))						
		Grevillea	Casuarina	Croton	Sigzium	Loquarts	Senna	Cordia	Papaya	Markhamia	Terminalia	Albizia	Moringa	Wambugia
1	Edwared Owiti	35	15	20	5	5	30			10				
2	Rael Membo	10	15	5	10		10	5		5	5			
3	Martiha Ovicho	10	5	10	5	5	10			10				5
4	Ogembo Awino	50		15	5	5	20	5		15				10
5	Penina Tula	30	5	10	5	5	5	5		10				5
6	Caren Ondenga	50	10	20	10	10	10	10	10	15				5
7	Alseba Ochieng	10	10	3								5		
8	Consolata Okella	13		10	5	5				20			10	5
9	Monica Opiyo	30		10						10				4
10	John Omondi	8	43		10	5	7			20				10
11	Nancy Omondi	90												
12	Philgona Otieno	25	10	15	5	5	5		10			2	10	2
13	Dorris Okello	10			10	10	8			10				5
14	Leah Mwana	35	34	5	5	5				10				10
15	Lilian Otieno	77	15	5	15	8	5	5	10	20				5
16	Pastor Abuna	20												
17	Galbert Ogonga	31	5	15	10	10	10	5	10	10				5
18	Margaret Obiero	20	20	10	5	5	10	5		5				5
19	Raphael Ocholla	32	5	5	5	5	5	5	20	12	10			3
20	Silpha Were	50	15	20	10	10	20	5	5	20		5		
21	Rose Odhiambo	35	10	10	10	5				20				
22	Rael Otieno	30								23				
23	Mofin Okonio	24		10	10	5	10			15	10			
24	Ann Obuon	30	20		5	10	10			10				2
25	Domnic Owiti	50												
26	Gordon Awino	30												
27	Odovo Auma	50												
28	Peter Otieno									50				
29	Richard Osumba	50												

Appendix 2 - Tree seedlings planted in woodlots & boundary planting by Kowala Environmental Rehabilitation group members on their farms, Lower Nyando

Plot ID	Farmer name	Sublocation	Species planted	Infiltration	Plot ID	Farmer name	Sublocation	Species planted	Infiltratio
Y001	Willis Lukas Ombok /Julius	Kanvadet		*	LY049	Samwel Owenga Aduol	Gombe		*
Y002	Willis Lukas Ombok /Julius	Kanvadet		*	L Y050	John Lelo	Gombe		
Y003	Willis Lukas Ombok /Julius	Kanvadet		*	LY051	John Omach Omollo	Gombe		
Y004	Willis Lukas Ombok /Julius	Kanvadet		*	LY052	George Ouma Odera	Gombe		
Y005	James Awange Okwanyo	Onvinvore			LY053	Charles Adera Owino	Gombe		*
Y006	William Mivare Avaga	Gombe		*	LY054	Japheth Agan Onvango	Gombe		
Y007	Denis Omollo	Gombe			LY055	James Okello Munala	Gombe		
Y008	Daniel Mbulo	Gombe			LY056	Charles Onvango Oiwang	Gombe		
Y009	Daniel Otieno Obong'o	Rera		*	LY057	John Onvango Nvangor	Dienva East		*
Y010	Jorim Oloo Omala	Ndori			LY058	Bonface Ochieng	Dienva East		
Y011	Collins Onvango Ovoo	Rera		*	LY059	Tobius Ouma	Dienva East		
Y012	Collins Onvango Ovoo	Rera		*	LY060	Jared Ochieng Oduol	Dienva East		
Y013	Christine Odambi	Kambare			LY061	George Agola	Dienya East		
Y014	Jemima Achiena Odoo	Kambare			LY062	Florance Nyango'r	Dienya East		*
Y015	Jared Odhiambo Oliech	Wagai East		*	LY063	Mary Obita	Dienva East		
Y016	Thomas Wasonga Otieno	Wagai East			LY064	Michael Abaki Owiti	Dienva East		
Y017	Paul Otieno Aqwel	Wagai East			LY065	Silvanus Ogalla	Dienva East		
Y018	Paul Adera	Gombe		*	LY066	Mariko Otii	Dienva East		
Y019	Patrick Chiaii Ogundo	Gombe			LY067	Peter Mbula Oluoch	Dienva East		
Y020	Francis Odiwour Otieno	Onvinvore			LY068	Mary Okello	Dienva East		*
Y021	Walter Otiche	Onvinvore		*	LY069	Peterlis Otii Odima	Dienva East		
Y022	John Odwa	Onvinvore			LY070	Samwel Owino Ogolla	Dienva East		*
Y023	Mark Ochola Ongowo	Dienva East		*	LY071	Caleb Otieno Otumba	Kanvadet		
Y024	Paul Odhiambo Onyango	Dienya East			LY072	Rebecca Owino	Kanyadet		
Y025	James Ombonya	Dienva East			LY073	Leonard Aleng	Kanyadet		
Y026	James Duoya	Dienva East			LY074	Cloudio Onyango Odera	Kanyadet		
Y027	Mark Avieko	Dienva East		*	LY075	Clement Ochieng Odera	Kanyadet		
Y028	Dienva Primary	Dienva East			LY076	Josphine Apivo Okevo	Rera		
Y029	Meshark Oduma Okello	Dienya East			LY077	Michael Otiang Nyosro	Rera		
Y030	Samwel Owino Achach	Dienva East			LY078	Julius Obor	Rera		
Y031	John Nyang'or	Dienva East		*	LY079	Remjus Abwaja	Rera		
Y032	Pius Ouma	Dienva East			LY080	Marsella Obiero	Kambare		*
Y033	Anselm Bande Milalu	Dienya East			LY081	Anjelina Owino	Kambare		
Y034	Willium Ogonya	Kanyadet		*	LY082	Stephen Odima Owino	Kambare		*
Y035	Michael Boyi Owindu	Kanyadet			LY083	Anjelina Anyango Ogunde	Kambare		
Y036	George Oloo	Rera			LY084	Ndori Primary School	Ndori		*
Y037	Gabriel Obonyo	Rera			LY085	Luke Obondo	Rera		*
Y038	Benard Ouma	Rera			LY086	Bonface Obondo	Rera		
/039	John Owak Ojodo	Rera			LY087	Leonard Opiyo	Rera		
/040	Henry Matinde	Rera		*	LY088	Oscar Owiti Omira	Rera		
Y041	Joseph Otieno Dina	Rera			LY089	Absalom Odera Omira	Rera		
Y042	Jack Oduor Ogot	Ndori			LY090	Arnodah Amollo Otieno	Rera		
Y043	Margaret Odongo	Kambare		*	LY091	Peres Oraro	Kambare		
Y044	John Oguu	Kambare			LY092	Lawrence Pino	Wagai East		*
Y045	Maria Odundo Bonface	Rera			LY093	Alexander Ouma Omuok	Wagai East		
/046	John Okallo	Rera			LY094	Peter George Otieno	Wagai East		
r047	George Okiyo Oyieche	Rera			LY095	Dalmas Okello Ojwang	Wagai west		
Y048	William Aboka Ligula	Rera			LY096	Musa Siienvi	Wagai west		

Appendix 3 - Tree seedlings planted in screening trials in Lower Yala- 160 trials

		Species				Species			
Plot ID	Farmer name	Sublocation	planted	Infiltration	Plot ID	Farmer name	Sublocation	planted	Infiltration
LY097	James Miyago Obunde	Kanyadet		*	LY145	Arnesty Atieno	Kanyadet Upper		
LY098	George Okoth Obunde	Kanyadet			LY146	George Ojwang	Kanyadet Upper		
LY099	Emilly Atieno	Kanyadet			LY147	Antony Ochieng	Onyinyore		*
LY100	Kennedy Ouma	Kanyadet			LY148	Michael Suji	Onyinyore		
LY101	Peter Okatch	Kanyadet			LY149	Leonidah Achieng Ochwoga	Gombe		
LY102	Morris Otunga	Rera			LY150	Uriri Primary School	Uriri		*
LY103	Nicholas Oluoch	Rera			LY151	Ambrose Oketch Rieni	Uriri		
LY104	John Ayoo Onyango	Onyinyore			LY152	Samson Agani Okumu	Uriri		
LY105	Morris Ochieng	Gombe		*	LY153	John Omulo Atego	Rera		
LY106	Peter Ouma Ojwang	Gombe		*	LY154	Martin Ajwang	Rera		
LY107	Wilfred Osare Omollo	Gombe			LY155	Morris Juma Ngutu	Ndori		
LY108	Bethwel Okal	Onyinyore			LY156	Fredrick Otieno Opondo	Ndori		
LY109	Benard Omondi	Onyinyore			LY157	Jackton Omollo	Kanyadet		
LY110	Musa Owuor Adera	Onyinyore			LY158	Joshua Ngoe Mwama	Ndori		
LY111	Eliakim Oketch	Gombe		*	LY159	Paul Onyango Athoo	Ndori		
LY112	Solomon Okingo Ogili	Gombe			LY160	Maritha Olenyo	Kanyadet		
LY113	Kanyadet Primary	Kanyadet		*					
LY114	James Mayamba Okoth	Ndori		*					
LY115	Evaline Achieng	Kanyadet							
LY116	Walter Okumu	Kanyadet							
LY117	Joseph Obunde	Kanvadet							
LY118	Joseph Ombok	Kanyadet							
LY119	Charles Otieno Onvimbo	Wadai East		*					
LY120	Jacob Ocholla Ovuga	Wagai East							
LY121	Samuel Otieno Ocholla	Wagai East							
LY122	Sammy Odembo	Uriri							
LY123	George Orek	Uriri		*					
LY124	Nimrode Okumu Ongonga	Uriri							
LY125	Jacktone Ochieng Ondeng	Uriri							
LY126	George Odhiambo Osore	Uriri							
LY127	Francis Ondiek Mihuvu	Rera							
LY128	James Ovomba Anove	Rera		*					
LY129	Regina Atieno Omondi	Rera							
LY130	John Ogosa Otieno	Gombe							
LY131	Daniel Owino Onindi	Gombe							
LY132	Thomas Obiero Andala	Gombe							
I Y133	Caroline Odhiambo	Gombe							
LY134	Hitlar Ratiari Kapesa	Gombe							
LY135	Seth Ligula	Ndori		*					
LY136	Peter Okuon	Ndori							
I Y137	Samwel Okello	Ndori							
LY138	Joseph Okumu	Kanvadet							
LY139	Agnetta Juka	Kanvadet							
LY140	Marceline Akoth	Rera		*					
LY141	Morris Okallo	Rera							
LY142	John Joshua Onvwera	Rera							
LY143	Samwel Adongo	Kanvadet Unne	r	*					
LY144	Morris Onvango	Kanvadet Uppe	r						
		,							