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# ITC Annual Report 2017 and Outlook 2018



Inaugural meeting of the Gambia's National Advisory Committee on Animal Genetic Resources held on 6-7<sup>th</sup> June 2017 at the Paradise Suites Hotel, Banjul, The Gambia

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## **Executive Summary**

This report highlights the Research and Development projects and the ITC transformation process to WALIC implemented in 2017 and the outlook for 2018. The limited core and research funds received in 2017 was used mainly to conduct few research and development projects such as Genetic Improvement supported by Nema project, and the elaboration of a National Strategy and Action Plan funded by AU-IBAR's Genetics project. It also further documented initiatives undertaken on the transformation process of ITC to WALIC.

#### Genetic Improvement Program

The routine breeding and selection process for elite breeding bulls rams and bucks were implemented throughout the year. Data gathered on control mating of breeding females, calving, weights, milk off-takes, weaning, treatments, livestock movements between stations, and mortality counts were recorded on the central database. Sixteen (16) out of the 20 selected elite breeding bulls were disseminated to livestock farmers that have satisfied the laid down criteria for a multiplier farmer. Nema project continued to support operations of the breeding programme.

#### Nema Project Support

Although a new tractor with accessories has been delivered to Keneba and put in use, the truck procurement is still constraint by the selected supplier not performing as required. Supplementary animal feeds ad veterinary drugs for year 2017 were procured by the project and delivered to ITC. Capacity of the Gambia Indigenous Livestock Multiplier's Association (GILMA) members were enhanced on institutional management and technical knowledge on animal production and health through training workshops organized by West Africa Rural Foundation and the international Trypanotolerance Centre. A new one hectare of *Panicum* and 2.5 hectares of *Brachiaria* pastures has been cultivated at Keneba station, 350 seedlings of *Lucaena* and *Moringa* were planted around the perimeter fence of the new pasture field. Large quantities of pasture biomass and maize stover were harvested and stored for feeding the animals during the long stressful dry season.

#### AU-IBAR Supported Project

The initiative to elaborate a National Strategy and Action Plan (NSAP) for the management of animal genetic resources in The Gambia is supported by AU-IBAR. The new National Advisory Committee (NAC) was inaugurated during their first working meeting. The recruitment process of a consultant to elaborate the NSAP has started. It is expected that the final NSAP document would be endorsed before end of 2018.

#### National and regional workshops

ITC was ably represented in four (4) national, three (3) regional workshops, and one 91) International conference. The national workshops were held in The Gambia and organized by ITC, USAID, National Agricultural Research Institute (NARI), and the Ministry of Agriculture. These workshops focused on application of biotechnology in Agriculture, committee inauguration and working meeting, validation of the new Agriculture and Natural Resources policy, and Experts Consultative meeting for developing a strategy to eradicate Peste des Petits Ruminant (PPR) disease.

The three regional workshops were held at Accra, Ghana and Dakar, Senegal and organized by the Secretariat of the Sub-regional Focal Point for the Management of Animal Genetic Resources West Africa and officials of the Genetics Project of AU-IBAR.

Nairobi of Kenya hosted the International Conference and Golden Jubilee celebration of the Commonwealth Veterinary Association (CVA).

#### Transformation process of ITC to WALIC

Efforts to constitute the new WALIC Governing Board have yielded additional 5 confirmed positions bringing the total number to 11 members. The remaining four slots are yet to confirm their interest in serving at the Board. This newly formed Board is yet to be inaugurated to commence their governance oversight role.

#### Outlook for 2018

Activities prevue for the year 2018 include the continuation of started and new Research and Development projects (Genetic improvement, Nema project support activities, AU-IBAR Genetics project support for the development of a National Strategy and Action Plan for Management of Animal Genetic Resources) as well as the mobilisation of resources for the launching of WALIC.

## Introduction

Although there was very limited financial and human resources available to the centre during the year 2017, some achievements were registered on the Research and Development agenda and revitalisation/transformation process of ITC to West Africa Livestock Innovation centre (WALIC). As indicated in the outlook for 2017 in the ITC Annual Report 2016, the main work plan for 2017 consisted of the continuation of Research and Development activities as well as the transformation process of ITC to WALIC. This technical report is presented in four sections: 1) Research and Development activities, 2) Revitalization and transformation process of ITC to WALIC, 3) Outlook for year 2018, 4) Conclusion, and 5) List of staff members.

Implemented Research and Development activities for the year 2017 are as follows:

- 1) Breeding and selection of elite breeding male animals using the Open Nucleus Breeding Scheme (ONBS) approach,
- 2) Nema Project supported activities,
- 3) P2RS project support on AI training,
- 4) AU-IBAR Supported project for the elaboration of NSAP, and
- 5) Participation at national and regional workshops.

The outputs from these research activities benefitted several livestock farmers, researchers, extension agents, and decision makers. Results of research activities were shared extensively with stakeholders and partners. Sixteen (16) elite N'Dama breeding bulls were disseminated to multiplier cattle herds around the country through the Gambia Indigenous Livestock Multipliers Association (GILMA). The bulls have been integrated into their new owners' herds. They have started the function of breeding at community herds thereby transferring and multiplying the genetic gains acquired from the nucleus herd.

Nema supported project activities implementation had reached important milestones with regards to 10-hectare pasture field development at Keneba station, institutional and technical capacity development of GILMA members. More work needs to be done to finalize truck procurement, installation of solar irrigation system, restocking with new ruminant livestock, and quarantine pen construction.

Funds raised from the P2RS project was used to train and equip eleven (11) Artificial Insemination (AI) selected from research, extension and farmer groups. N'Dama cows and their crosses in different locations around the country have been inseminated with conventional or sexed Holstein semen to produce dairy F1 crossbreds.

The genetics project of Au-IBAR is supporting a national effort to elaborate a National Strategy and Action Plan for the management of Animal Genetic Resources (AnGR) in the Gambia. This would provide the country a framework for better management of AnGR as per the Global Plan of Action on AnGR.

The transformation process of ITC to WALIC has achieved a milestone of constituting a new regional Governing Board as the governance oversight body for the new Centre. Inaugurating this new Board still poses a challenge. Overcoming this challenge would pave the way for launching WALIC.

Outlook for 2018 would focus on continuation of on-going and new research and development projects (Genetic improvement, Nema project support activities, AU-IBAR Genetics project support for the development of a National Strategy and Action Plan for management of Animal Genetic Resources) as well as the mobilisation of resources for the launching of WALIC.

## **1. Research and Development Activities**

#### 1.1 Genetic Improvement through Breeding and Selection for Elite Breeding males of Endemic Ruminant Livestock Breeds

#### 1.1.1 Introduction

The breeding program was established at the International Trypanotolerance Centre (ITC) in The Gambia in 1994 with the goal of increasing milk and meat production without losing its tolerance to common diseases. The programme operates as an Open Nucleus Breeding Scheme with a three tier structure: Nucleus, Multiplier and Farmer. The breeds of interest and of national relevance are N'Dama cattle, West Africa Dwarf goats and Djallonke sheep. Elite breeding males selected from the nucleus are passed on to the multipliers for multiplication and further dissemination of their offspring to other farmers. Through this way the genetic improvement of the national herd is cumulative and could reach about 1% over generations.

Many routine and new activities for strengthening the ITC genetic improvement program at Keneba were undertaken in 2016. Resource mobilization and partnership building with national and regional initiatives has been the key driving forces of the program throughout the year under reporting.

The day to day management of the nucleus herds and flocks including health and nutritional components alongside the breeding component ensures more effective and efficient flow of elite breeding males from the nucleus to the end users through multipliers. The herd health program adheres to routine and basic health practices designed to prevent and control enzootic diseases affecting ruminants locally. Local feed resources are being utilized to support physiological functions under the low input system which commensurate with local production systems at community level.

The centre has a well-established recording system to account for pedigree and other performance traits such as milk yield and daily gain, which are the core of the defined breeding goal. On a monthly basis, animals are weighed from birth through weaning and until 36 months of age. All weaned calves at 12 months of age are transported to a high challenge area of tsetse (Kudang area) until 36 months of age, when their breeding values are estimated. Elite males obtained from the selection are disseminated to multiplier herds as prescribed under the three tier scheme shown in figure 3. The females are further allowed to go through their first lactation and subsequently selected phenotypically on milk production potentials and finally used as replacements as shown in fig 4. Its open nucleus nature gives room for screening from commercial production population and multiplier levels.

There is a geneticist, a pasture specialist, three field assistants, herdsmen and other staff assigned to the day to day running of the program and other technical matters.

The essential infrastructure is in place. There is a laboratory to support diagnostics and the necessary office equipment for the collection, storage and process of data to aid management decisions. ITC is mainly funded by the Gambia government, and receives some support from the project for Building Resilience to Recurring Food Insecurity under the administration of National Agricultural Land and Water Management Development Project (*Nema*).

#### 1.1.2 Nucleus herd and flock structure at Keneba and Niamina

There are nine herdsmen assigned to the five herds. Their daily functions include herding, milking, help in the monthly weighing of all the animals, monitor and report cows in heat for

mating, provision of feed supplements where necessary and stock checking. At the small ruminants unit only three herders are available.

For ease of management, monitoring and recording for data and genetic analysis, the herds have been divided into five herds. The herds comprise of calves, heifers, cows, teaser and breeding bulls. The teaser bulls have been vasectomised and are used for heat detection among heifers and cows on a daily basis. The composition of the five cattle herds, sheep and goats flocks as of December 2017 is shown in tables 1 and 2. The heifers and young bulls under performance testing at Niamina East are also presented in table 1.

Herd	Calves	Heifers	Nema	Young Bulls	Cows	Teaser Bulls	Breeding Bulls	Total per herd
BB							6	6
Herd 1	6	4	4		29	1		44
Herd 2	6	1	9		28	1		45
Herd 3	8	1	7		33	1		50
Herd 4	12	2	8		30	1		53
Herd 5	10	1	7		28	1		47
Missira		18						18
Sambel kunda		20						20
Touba1				22				22
Touba2				23				23
<b>Total Count</b>	42	47	35	45	148	5	6	328

Table 1. Nucleus cattle herd structure and size

#### Table 2: Nucleus flock structure and size

	Does/	Lambs/	Rams/bucks	Teaser bucks/	Breeding	Total
Species	Ewes	kids	>90 days old	rams	Rams/bucks	
Goats	148	32	12	1	3	196
Sheep	80	5	5	-	2	92

#### 1.1.3 Herd management

Herd management is the role of herdsmen, field assistants and a senior animal breeder/geneticist at station level. The management process involves the following:

- Monitoring the activities of the teaser bulls every morning,
- Facilitate natural servicing of females in heat in a timely manner,
- Monitoring the health status of all animals,
- Provision of feed supplement to those animal with very poor body condition score especially lactating cows,
- Separation of calves from their dams and supplement them with hay during the day time,
- Making sure that animals drink enough water, and
- Stock checking.

The following pragmatic interventions were instituted with the goal of improving the overall herd and flock management:

**Calf Management**: The overall calf management at the nucleus herd has improved substantially (see daily weight gain registered in 2016 in table 4) over the years. However, increased calf mortalities and lower weaning weights had been attributed to orphaned calves that lost their dams to incidence of CBPP in 2015, which coincided with the stress period. The calf holding area established in 2013 was maintained through the year 2016. This facility within the campus premises provided the calves enough shade, feed, and portable water *ad-lib*. Calves are admitted into the holding area when their dams are released for grazing and reunited with them for suckling upon return. This intervention reduced heat stress problems, allows better monitoring, reduced mortality rates, and produced healthier and stronger calves.

#### Mating System:

*H*erdsmen and technicians as usual, were sensitized on the importance of getting actual dates of dam mating and the identity of mating bull used. This data is quickly fed into the database once it is collected. More vigilance was exercised in herding the dams in all herds to avoid mating by unknown bulls, and heat detection of dams coming into oestrus was intensified. Teaser bulls were released early each morning and upon return from herding to identify dams on heat. Dams on heat were randomly allocated to a breeding bull in the mating pen for a period of at least 48 hours.

*Nutrition:* The feed reserve base for the breeding stocks in the cattle nucleus herds and small ruminant flocks were beefed up by the end of the year in preparation for the critical months of the dry season in 2016. The yield from the pasture field was stocked in the feed store for use in the dry period of 2018. By the end of 2017, about 10 tonnes of groundnut hay was purchased and stored for use during the critical period of the dry season.

#### 1.1.4 Data collection, entry and analyses

Data collection is a routine practice that provides essential information for analysis and improvement. It is the recipe for genetic analysis and the basis for estimating genetic parameters. Data obtained from the field is inputted into the ITC Breeding Database by the Animal breeder/geneticist. Entering the data is timely and accurate to prevent the outliers in subsequent analysis. After entry, the data is checked for possible errors.

All entries are obtained from weekly records of different activities such as mating, calving, milking, exits/culling, entries, treatment and mortalities. Data on monthly weights, trypanosomosis infection status, and Packed Cell Volume (PCV) levels of cattle are also entered into the database.

#### • Annual calving and mortality rate

There has been steady increase in the number of calves born each year and fall in calf mortality rate from 2010 to end 2014. The trend had shown a decrease in birth through 2015 but increased in 2016 with higher mortalities. The year 2017 was a very critical year for the nucleus herds. There was a drop in total birth as shown in table 3. A high number of pregnant cows died and those that delivered shortly succumb to the disease (CBPP). Most orphaned calves could not survive.

Year	Total Births				
		Total	Male	Female	Calf mortality (%)
2010	69	42	11	31	39
2011	88	44	19	25	50
2012	80	59	29	30	26.3
2013	93	85	42	43	8.6
2014	115	104	61	43	9.6
2015	62	57	25	32	8.1
2016	79	64	25	39	18.9
2017	45	32	11	21	28.8

Table 3: Calving and calf mortality rate in 2015

The decreased number of calving is attributed mainly to nutritional stress and incidence of contagious bovine pleuropneumonia (CBPP) cases in 2017 as shown in table 5. Out of 25 samples collected in 2017, 6 samples were found to be positive of CBPP, and this constitutes 24% on extrapolation. The episode led to the deaths of 50% of the total population of at cattle at the nucleus herds.

#### • Weight at birth, weaning and gain

The average calf weights at birth, weaning and average daily weight gain (ADWG) at 12 months of age over a five year period are indicated in the table below:

able 4. Wearing weights and average daily weight gains at 12 months								
Year	Pirth Waight (kg)	Weaning weight at 12	ADWG at 12					
	Difui weight (kg)	months (kg)	months (kg)					
2012	21.4	67.0	0.13					
2013	22.2	84.4	0.17					
2014	23.0	76.1	0.15					
2015	21.5	69.8	0.13					
2016	17.0	74.9	0.16					
2017	19.6	59.5	0.11					

Table 4: Weaning weights and average daily weight gains at 12 months

There had been a significant drop in weaning weight and average daily weight gain. This was attributed to the death of most dams when the calves were very young as a result of CBPP. Those that survived bottle feeding had very stunted growth.

#### • Exits

radie di Linito di Cattie noni the nacieu	Table 5	. Exits	of	cattle	from	the	nucleus
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S/n	Animal category	Quantity	Reason for exit	Remarks
1	Bulls	1	Multipliers	Limit inbreeding
2	Young Bulls	20	Culled	Unfit for breeding
	Young Bulls	15	Multiplier	Dissemination
3	Young bulls	3	Lost/stolen	
4	Young bulls	7	Mortality	
5	Cows	2	No Information	
6	Cows	3	Emergency slaughter	
7	Cows	79	Mortality (Suspect CBPP)	
8	Heifer	2	Mortality	
9	Heifer (Nema)	45	Mortality	

	Heifer (Nema)	5	Lost/No Information	
	Heifer (Nema)	1	Attacked by hyenas	
10	Calves	72	Mortality (Suspect CBPP)	

The number of animals that exited the herds due to mortality could be attributed to CBPP, since some animals were found positive (annex 1). All the animals drink from the same source, hence serve as a potential source of infection. Another batch of blood samples would be collected and tested in 2018. There could be a confounding factor to the high mortality such as feed shortage caused by bush fires. Two third of the grazing site of ITC cattle was burnt. Another important factor was the timing of vaccination against CBPP, which was conducted in the stress period.

#### • Animal movement

A total of 29 cattle weaners were moved from Keneba station to Niamina during the year 2017. These weaners would be undergoing performance test under high tsetse challenge until the age of 36 months. Similarly, 31 mature heifers were moved from Niamina to Keneba station as replacement breeding females at the nucleus herd. The total that moved from Kerr Serigne to Niamina were 3 calves

Animal Category	Origin	Destination	Number	
Weaners	Keneba	Bansang (Niamina)	29	
Weaners	Ker Serigne	Bansang (Niamina)	3	
Heifers	Bansang (Niamina)	Keneba	31	

 Table 6. Movement of various categories of cattle between stations

#### • Mating and milk offtake

Mating is recorded as it occurs by a designated bull to cows/heifers coming to heat. There has been a good number of cows mated in 2017. A total of 103 cows were mated. This shows an increase of 30%. Only 4 cows repeated heat. Weekly records for milk off take of individual lactating cows were recorded and the average morning yields by season are shown in table 6. There was a significant drop in milk yield in all seasons which may be explained by the long dry spelt and episode of Contagious Bovine Pleuropneumonia.

 Table 7: Average morning milk yield by season in 2017

Season	Average Morning Yield (ML)
Rainy Season (June-September)	550.0
Early Dry Season (October-January)	482.0
Late Dry Season (February-May)	177.1

#### 1.1.5 Herd health interventions

The cattle herds were vaccinated against Black quarters and Haemorrhagic septicaemia, whilst the Small Ruminants were also vaccinated against Peste des Petits Ruminants (PPR) during the year 2017. All animals were strategically dewormed during the rainy season, while ectoparasite control, hoof trimming, and treatment of sick animals were carried out as required. Random blood and faecal samples were collected from the animals at Keneba and processed at the laboratory to determine infections, then followed by appropriate treatments.

All weaners, heifers and bulls at Niamina East district (Sambel kunda, Missira and Touba villages) undergoing performance testing for at least two years are bled every month to

determine their blood packed cell volume (PCV) and trypanosome infection status. Breakdowns of the sampling results and treatments are shown in table 7.

Item	Jan	Feb	Mar	Apr	May	Jun	July	Aug	Sep	Oct	Nov	Dec
No. of												
cattle												
weighed	140	143	138	142	138	76	126	108	95	91	86	83
No. of												
blood												
samples	140	143	138	142	138	76	126	108	95	91	86	83
No.												
Positive												
for												
trypanoso												
mes	2	1	0	1	0	0	2	2	3	9	8	0
Trypanos												
omes												
infection		0.4	0	~ -	0	0						0
rate (%)	1.4	0.6	0	0.7	0	0	1.6	1.9	3.2	9.9	9.3	0
No.												
treated												
for tryps												
with PCV	0	17	17	0	-	14	-	A	10	24	20	0.4
< 20%	8	Γ/	17	8	6	14	1	4	19	34	38	24

Table 8. Number of cattle in Niamina herds weighed, sampled and treated monthly

#### 1.1.6 Cattle herd and goat flock at Kerr Serigne

There is a F1 crossbred cattle herd (N'Dama x Holstein-Friesian) mixed with backcrosses to N'Dama, another cattle herd of pure N'Dama breed, and a flock of goats at ITC headquarters located at Kerr Serigne. The purpose of these herds is to serve as demonstration of livestock models that could be adopted by different categories of farmers at peri-urban areas of The Gambia for income generation, milk and meat production. In addition to revenue generation for the centre, the N'Dama cattle herd and goat flock also produce replacement breeding females for the nucleus herd and flock at ITC Keneba field station.



Figure 1.N'Dama demonstration herd

Figure 2. F1 crossbreds and backcrosses

Table 1.	Cattle herd	and goat	flock com	position
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Category	N'Dama herd	F1/Backcrossed herd	Goat flock
Mating males	0	0	1
Breeding females	4	15	17
Calves/Kids	3	11	4
Weaners	1	4	0
Young bulls/bucks	0	12	6
Heifer	0	12	0
Herd size 2017	8	54	28

#### Table 2. Entry and Exit

Animal	Calving/Kidding	Mortality	Sold/Cull	Lost	Movement
Category					
N'Dama	5	3	-	-	3
F1/Back Cross	8	8	14	-	-
Goats	27	20	3	11	-
Total	40	31	17	11	3

#### Main activities implemented in 2017 were:

• Monthly weighing

All station animals are weighed at the end of every month to determine weight gains/losses and body conditions and results incorporated into the database for further performance analyses.

• Daily milking and milk measurement

Milking is done daily and off-takes measured and recorded daily and monthly. Milk data records are incorporated into the database for further performance analyses.

• Supplementary feeding

Animals are supplemented with groundnut hay, rice-bran and spent grain from Banjul Breweries to provide them with energy, protein and other essential elements required for maintenance and enhance production.

• Vaccination

Cattle were vaccinated against Blackquarters and Haemorrhagic Septicaemia diseases, and goats against Peste des Petits Ruminants (PPR) disease

• Deworming

Worm burden were reduced through deworming exercises implemented in July, September and October 2017 through drenching with antihelmintic solutions such as albendazole.

• Spraying

Using acaricides (Antitic and Pour-on) in July, August and September to control ectoparasites mainly ticks on animals

• Data collection and entry

Data collected from all these activities is recorded and entered into the database

• Feed purchasing/exchange

This involves irregular supply of spent grain from Banjul Breweries with no cost apart from compensating them with 3 litres of milk for each supply we receive from them.

• Treatments implemented when necessary-

In July we treated 4 animals with antibiotics (Limoxin) for suspected cowdriosis infection

In August 4 animals were treated with antibiotics (Limoxin) for suspected cowdriosis

In September 1 treated with antibiotic and anti-inflammatory (Limoxin and Phenyljet) for abscess and 1 treated for muscle strain and limping (antibiotic and anti-inflammatory).

• Pasture production and utilization

One hectare of grazing land was cultivated with pasture between July and Sept by station labourers as an extension of pasture production on station.

Weeding of the above mentioned pasture field was done in September. After the weeding exercise, 50Kg of fertilizer (NPK) was broadcasted.

Cultivated pastures were harvested and used to feed calves and weaners. Calves and weaners are rotationally grazed on the re-growths of the harvested pasture.

Activity/Period	J	F	Μ	А	М	J	J	А	S	0	Ν	D
Weighing	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х
Deworming						Х		Х		Х		
Spraying					Х	Х	Х	Х	Х	Х	Х	
Vaccination						Х						Х
Milking	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	х
Treatment	Whene	Whenever there is disease condition or sick animal										

Table 3. Health Intervention activities

Activity/Period	J	F	Μ	А	М	J	J	А	S	0	Ν	D
Clearing				Х	х							
Ploughing						Х						
Fencing						Х	х					
Sowing									Х			
1 <sup>st</sup> weeding									Х			
2 <sup>nd</sup> weeding										х		
Fertilizer										х		
application												

Table 4. Pasture Development

#### • Artificial insemination (AI)

In a bid to increase the number of crossbreds for more milk production to satisfy the growing demand, one AI technician from Senegal, Dr Landing Jarju, was contracted to inseminate our farm cattle. Tables 5 to 7 present results of cattle inseminations in two batches. Five (5) cows were inseminated with Holstein semen on 28<sup>th</sup> February 2017; one (1) cow on 25<sup>th</sup> April 2017; and ten (10) cows on 23<sup>rd</sup> August 2017.

Only two (2) out of the five inseminated on  $28^{th}$  February 2017 and three (3) out of the ten (10) cows inseminated on  $23^{rd}$  August 2017 got pregnant.

S/n	ID No.	Veteglan	Introduction of implant	PMSG injection	Removal of Implant	Insemination with Holstein semen
1	27017	02/11/17	02/11/17	25/02/17	25/02/17	28/02/17
2	27018	02/11/17	02/11/17	25/02/17	25/02/17	28/02/17
3	29003	02/11/17	02/11/17	25/02/17	25/02/17	28/02/17
4	12002	02/11/17	02/11/17	25/02/17	25/02/17	28/02/17
5	11007	02/11/17	02/11/17	25/02/17	25/02/17	Skipped
6	10002	Х	Х	Х	Х	28/02/17
7	11007	13/4/17	13/4/17	23/02/17	23/02/17	25/04/17

Table 5. Insemination activities for the first batch of cows

Table 6. Pregnancy diagnosis for the first batch of inseminated cows

Date	Ani. No	Pregnancy Diagnosis results	Remarks
25/07/2017	11007	Not Conceived	
25/07/2017	27017	Not Conceived	
25/07/2017	12002	Not conceived	
25/07/2017	29003	Conceived	
25/07/2017	27018	Conceived	
25/07/2017	10001*	Conceived	Served by F1 bull (ID: 11002)

Table 7. Insemination process for the second batch of cows

Animal	Introduction of implant	Removal of implant and	Insemination with
ID		injection of PMSG	Holstein semen
11007	25/07/2017	21/08/2017	23/08/2017
27017	25/07/2017	21/08/2017	23/08/2017
12002	25/07/2017	21/08/2017	23/08/2017
27629	25/07/2017	21/08/2017	23/08/2017
26583	25/07/2017	21/08/2017	23/08/2017
23589	25/07/2017	21/08/2017	23/08/2017
13008	25/07/2017	21/08/2017	23/08/2017
13012	25/07/2017	21/08/2017	23/08/2017
12009	25/07/2017	21/08/2017	23/08/2017
13009	25/07/2017	21/08/2017	23/08/2017

#### • Training of 11 Artificial Insemination technicians

A 10-day training of AI technicians was hosted at ITC where the farm animals were used for the practical aspects of the training.

Ani. No.	Pregnancy	Progesterone	Removal of PRID and	Insemination with
	diagnosis and	injection	injection of PMSG	sexed Holstein
	insertion of PRID			semen
28011	30/10/2017	6/11/2017	7/11/2017	9/11/2017
29002	30/10/2017	6/11/2017	7/11/2017	9/11/2017
23514	30/10/2017	6/11/2017	7/11/2017	9/11/2017
21005	30/10/2017	6/11/2017	7/11/2017	9/11/2017
21007	30/10/2017	6/11/2017	7/11/2017	9/11/2017
10005	30/10/2017	7/11/2017	8/11/2017	10/11/2017
11003	30/10/2017	7/11/2017	8/11/2017	10/11/2017
11005	30/10/2017	7/11/2017	8/11/2017	10/11/2017
12005	30/10/2017	7/11/2017	8/11/2017	10/11/2017

Table 8. Series of activities leading to insemination of nine cows

A second batch of ten cows were also examined for pregnancy before empty ones were prepared for insemination

Animal	Pregnancy	Pregnancy	Progesterone	Removal of PRID	Inseminated
ID	diagnosis	status	injection	and injection of	with sexed
	and insertion			PMSG	Holstein
	of PRID				semen
11007	1/11/2017	Not Pregnant	8/11/2017	9/11/2017	11/11/2017
27017	1/11/2017	Not Pregnant	8/11/2017	9/11/2017	11/11/2017
12002	1/11/2017	Suspected		9/11/2017	Confirmed
		pregnant			pregnant
27629	1/11/2017	Not Pregnant	8/11/2017	9/11/2017	11/11/2017
26583	1/11/2017	Not Pregnant	8/11/2017	9/11/2017	11/11/2017
23589	1/11/2017	Not Pregnant	8/11/2017	9/11/2017	11/11/2017
13008	1/11/2017	Pregnant			
13012	1/11/2017	Not Pregnant	8/11/2017	9/11/2017	11/11/2017
12009	1/11/2017	Not Pregnant	8/11/2017	9/11/2017	11/11/2017
13009	1/11/2017	Pregnant			

#### • Financial statement of the farm

Based on the financial statement of the farm, it is found to have positive balance as indicated in table 10 below. More efforts need to be put in place to enhance the productivity and outputs from the farm so that it contributes more internally generated revenue for the Centre.

Table 10. Financial statement of the headquarters farm in 2017

Expenditu	re	Revenue		
Item	Amount (D)	Item	Amount (D)	
Groundnut hay	35,000	Fresh milk	390,800	
Groundnut cake	-	Manure	800	
Rice bran	4,500	Culled animals	118,000	
Casual labour	119,625			
Drugs	3,120			
Rope	2,500			
Fuel for feed collections	53,000			

Car maintenance	11,910	
Herdsmen salaries	170,993.1	
Totals	400,648.1	509,600
Marginal surplus		108,952

### **1.2 Nema project support**

The Islamic Development Bank (IsDB) and the Government of The Gambia is financing a project on *Building Resilience to Recurring Food Insecurity in The Gambia*. The project has been approved in 2014, and implementation of activities started in 2015. This five year project is under the administration of National Agricultural Land and Water Management Development Project (Nema).

The project has several components, beneficiaries and service providers. International Trypanotolerance Centre (ITC) is the main partner/beneficiary for the sub-component on *Support to Livestock*. ITC would receive support towards its Open Nucleus Breeding Scheme (ONBS) for it to operate more effectively, and also build the Institutional and technical capacity of the Gambia Indigenous Livestock Multipliers Association (GILMA). Total budgetary allocation to ITC for the project's lifespan is US\$585,050.

Although there were delays in the procurement process, works and services, some planned activities for 2017 have been implemented with great success.

#### • Procurement of Tractor with accessories and Truck

The tractor with accessories has been delivered to Keneba and was used to prepare the ground for cultivation of animal feeds such as *Panicum* and *Brachiaria* grasses. The truck procurement is still constraint by some factors causing delays in its finalization. The contracted has not satisfied the required specifications for the desired truck.

#### • Development of 10-hectare pasture field

Keneba hosts the most important component of ITC's Breeding program, it is where the nucleus N'Dama cattle, West African Dwarf Goats and Djallonke sheep are bred and selected. It is at this station where all the genetic improvement of three ruminant species are carried out. The area has a very vast land for communal livestock grazing, however during the dry season all that grazing land is burnt to ashes by wild bushfires leaving the animals with barely nothing to feed on. In addition to these bushfires there is also an increase of cashew plantation in the area thus narrowing the area available for grazing both during the rains and dry season. To continue to manage the breeding herds effectively, it is extremely necessary to devise a strategy for the sustainable supply of feed to animals during the critical periods of the dry season. It is as a result of this that ITC and NEMA signed an MOU in which 10 hectares of pasture land is to be developed and fitted with solar energy driven water irrigation system to ensure a sustainable and reliable supply of quality feed during the dry season.



Figure 1. Wild bushfires burning the whole bush as early as February 2018

## Activity 1: Harvesting of *Panicum* and Andropogon from the old pasture field and clearing of new pasture field

Priority activities for immediate implementation were identified during an assessment mission in November 2016, these activities were:

- Clearing of new pasture plots in preparation for the laying of irrigation system
- Harvesting of *Panicum* and *Andropogon* grasses from the old pasture field
- Clearing of old pasture field

All the above mentioned activities were carried out successfully from January – June 2017, 6 hectares out of the 10 ha of the newly fenced pasture field were cleared ready for ploughing. About 10 tons of *Panicum* biomass was harvested from the old pasture field and transported to the feed barn inside the campus. One ton of *Andropogon* was also harvested, while the remaining lignified grasses were left on the field for the animals to graze.





Figure 2. Heap of Panicum and Andropogon grass from the 2016 harvest stacked at the feed barn in Keneba

## Activity 2: Ploughing transplanting and sowing of *Panicum*, *Brachiaria* and *Leucaena Brachiaria Seeds*

*Brachiaria decumbens cv Basilisk* grass species which has been known for palatability and high biomass production was identified amongst many species of Brachiaria. The seeds were sourced from Brazil; it took quite a while before the seeds were obtained however the 50kg that were paid for finally arrived on the 4<sup>th</sup> August 2017.



Figure 3. Brachiaria seeds in 2kg sachets

#### Establishment of a Nursery for Leucaena leucocephala

*Leucaena* has great potentials as animal feed especially for small ruminant, in addition it can serve as control to soil erosion, and it has also the ability to fix nitrogen to the soil. On May 15<sup>th</sup> 2017, 500 poly pots were acquired, prepared and sown with *leucaena* seeds.



Figure 4. Leucaena nursery in Keneba

**Ploughing:** few days after the onset of the rains, ploughing began; 5 hectares were ploughed in order to start the establishment of the new pasture field. The rest of the 10 hectares were given to local farmers who cleared it at their own expense in order to grow maize, this activity of maize growing is carried out inside the rest of the field by ITC staff and some villagers. All these areas (about 25 ha) that were cleared for maize growing was ploughed, this will reduce the unpalatable weeds and in addition the residues from the maize will be collected after harvest and conserved to serve as feed for livestock during the critical period in dry season. **Sowing:** Initially 1 hectare of the old *Panicum* seeds were sown, the seed driller was used to drill while the seeds were sown manually. Sowing using the seed driller was tested but because of the small size of the seeds it was not very appropriate so manual sowing was resorted to. Germination of the *Panicum* was poor as a result a second sowing was done this time putting more seeds in the furrow, percentage germination was better.



Figure 5. Sowing of Panicum and Brachiaria seeds

*Brachiaria* seeds were sown on the 11<sup>th</sup> August 2017, the seeds can be sown directly or made into a nursery and transplanted after 6-8 weeks however due to the late arrival of the seeds direct sowing was done, in total 2 hectares were sown manually.

**Leucaena leucocephala:** 350 *Leucaena* seedlings were planted around the perimeter fence of the 2 hectares of *Brachiaria*, in addition 75 *Moringa* seedlings were sown around the northern part of the fence perimeter.

#### **Activity 3: Weeding and Fertilizer application**

**Weeding:** due to late sowing of the *Brachiaria* seeds, weeding for both fields (*Brachiaria* and *Panicum*) started in September, the contract was given to a women group called 'Burto Tiaya Kalla', however due to the size of the fields and the nature of the weeds in them, it was suggested that some parts be given out to other women groups to fasten the process. The weeding of both fields (12 hectares) went well.



Figure 6. Weeding of the Brachiaria field

#### **Fertilizer Application**

The old pasture field has not been fertilized for the past few years, this has had some effect on its performance, however sufficient fertilizer has been applied this year, and this has greatly improved its performance. The new *Brachiaria* field was also fertilized after the completion of the weeding, in total 40 bags of NPK of 50kg each was applied on the 12 hectares that have been cultivated.

## Activity 4: Collection of Maize stover, harvesting of *Panicum* and Brachiaria biomass and harvesting of *Panicum* Seeds

This has been the final activity in 2017, in presenting the results of the activity it is important to highlight the rainfall pattern in Keneba during this period under review.

#### Rainfall pattern and its implication on Brachiaria

Studies carried out on *Brachiaria* grass species indicated that it is drought resistant, however it requires about 800 mm of rainfall to survive well. Total rainfall in Keneba for 2017 was **811 mm**, the rains started in June and ended on the 9<sup>th</sup> of October, July was the month with the highest rainfall with a total of **311.2 mm**. *Brachiaria* was sown on the  $11^{th} - 15^{th}$  August and from the date of sowing to the end of the rains in October 2017, only **425.4 mm** of rainfall was recorded, the implication there is that the Biomass was well developed but flowering for seed production started when the rains have stopped meaning that there were no matured seeds to be collected for the coming season.

#### **Biomass Quantification of Brachiaria**

Cut and weigh method of measuring dry matter for cattle and sheep was used to calculate the biomass of the 2 heater field of *Brachiaria*. A  $0.5m \times 0.5m$  quadrant was placed in an area in the field representative of the amount of grass in the field, the grass within the quadrant was cut to between 3.5 - 4 cm and place in a bag for weighing. The samples were weighed and dried under shade for two days. After drying, samples were weighed and biomass on dry matter basis

calculated. This activity was enhanced by a student pursuing his MSc degree in Nigeria who was under internship at ITC.



The result of this exercise showed that the yield per hectare was 37tons, this means that the entire 2 hectares is estimated to produce 74 tons of biomass.

#### **Collection of Maize stover**

During the rainy season about 25 hectares of land which is located within the fenced perimeter of ITC was given to herdsmen and some villagers to grow maize. This was done with a view that unpalatable weeds in the field will be eliminated and at the same time the by-products of the maize can be utilized as animal feed. Collection of the stover started in November, it is estimated that about 10 tons of maize stover have been collected. In addition to the stover the husk has been collected and finely grounded for animal feed. This has increased supplementary feed availability during the critical period of the dry season.





Figure 7. Finely ground maize husk

#### Harvesting of Panicum seeds

65 kilograms of *Panicum* seeds have been collected and stored for the next planting season.

#### Harvesting of Panicum and Brachiaria

Calculation of the biomass of the *Panicum* was not carried out, however it is estimated that the amount collected is about 15-20 tons of biomass. This is being used since January to date to supplement the mating bulls, calves and new arrivals of cows from Niamina and NEMA.



Figure 8. Harvested Panicum and Brachiaria

The 2 hectares of *Brachiaria* which was grown has been harvested manually, the process was labour intensive as the grass was dense, about 1 meter long, and interwoven. It is also itchy especially when the sun is hot, however it has all been cut, dried and is being stored at the ITC feed barn for use at critical periods.

**Conclusion:** the major constraints to livestock production in the Gambia is the lack of adequate and quality feed, animals graze in communal pastures which are not managed. These communal pastures are highly invaded by unpalatable weeds which are resilient to drought and bush fires in addition year by year cashew farming is increasing; narrowing the grazing fields available. This menace of wild bushfires and cashew farming in the area of Kiang west is not likely to stop soon, therefore it is important to concentrate on the development of pastures for sustainable livestock feed for the nucleus breeding program. *Panicum* which has been established since 2012 has shown its ability to survive the long dry spell and express its ability to produce biomass for animal feed, *Brachiaria* which has just been introduced in 2017 has performed extremely well given the time of sowing and the ending of the rains. The amount of biomass collected will definitely go a long way in feeding the cattle in Keneba. The planting of maize has also played a significant role in enhancing livestock feed security, the maize stover collected and the husk will serve as supplementary feed in addition planting maize has reduced the unpalatable weeds in the field thus allowing palatable grass species to grow.

**Lessons Learnt:** During the implementation of these activities some constraints were encountered which serves as lessons to learn to enable the project to be more efficient in the next coming season.

- Labour is expensive and scarce in this area, it is not available in time when you need it
- Late sowing of Brachiaria resulted in seeds not being harvested
- Instillation of the irrigation facility for the new pasture field in order to continue to produce quality pastures for the livestock during the dry season will enhance animal feed security
- The seed driller seems not to be very appropriate for sowing tiny seed like Brachiaria and *Panicum*, as a result manual sowing was resorted to which is labour demanding and expensive
- Due to many stumps and tree roots the seed driller's hoes are breaking frequently especially if it hits a stump

- The bailer could not be used due to a missing drawback, this resulted to manual harvesting which is tedious, expensive and time consuming
- Planting maize and Collection of all crop residue (maize) for livestock feed during the critical period of the dry season is an important activity which must continue in order to benefit from those residues in the dry season.
- *Brachiaria* have proven to be doing well in the Gambia, however more information is needed on its drought tolerance especially where there is a long dry spell of about 6 months.
- It is well noted that *Brachiaria* has a potential to produce enough biomass, therefore efforts should be made to disseminate the specie in low land areas where rice is not grown to serve as a buffer and animal feed.
- Transplanted *Lucaena* and *Moringa* around the perimeter fence have been eaten by small ruminant that sneaks under the fence into the pastures.

#### **Recommendations:**

- The seed driller should be carefully studied; it may be necessary to request from the manufacturers a simple demonstration or training on how to effectively use the driller with the type of seeds available for sowing
- Weeding of the pastures should be done in time to avoid weed infestation, early weeding will also increase the biomass
- Fertilizer must be applied on pastures as some areas in the field are not fertile
- Repair or replacement of the buster pump of the old pasture for dry season irrigation
- It is important to harvest the *Panicum* seeds in time for storage and distribution
- The tractor needs a separate drawback for the baler to operate; besides there needs to be a demonstration/training of the tractor operator as to how to use the bailer. The absence of these has greatly affected the harvesting of the pastures
- It is well noted that Brachiaria has a potential to produce enough biomass, therefore efforts should be made to disseminate the species in low land areas where rice is not grown to serve as a buffer and animal feed.
- The fence should regularly be maintenance to prevent small ruminants sneaking into the field feeding on the young Leucaena and Moringa. One pragmatic approach is to re-enforce the fence perimeter with at least four layers of brick-walled fence.
- It is necessary to employ permanent pasture attendants to take care of the day to day activities in the pasture
- Extra 50 kg of Brachiaria seeds should be procured for the 2018 rainy season pasture cultivation

#### • Feed supplement and herd health management

Large quantities of groundnut hay and rice bran were purchased by the end of 2017 for supplement feeding of the breeding animals at the nucleus herd in Keneba station. High numbers of assorted antibiotics, anthelmintics, anti-inflammatory, wound dressing products and acaricidal products were purchased and delivered to ITC for use in maintaining the animals' health and improved productivity.

#### • Construction of a quarantine facility

Quarantine facilities for cattle, sheep and goats is planned to be constructed at ITC Keneba station. The design stage and elaboration of the specifications for these facilities have now been completed by Mahfous Engineering. The designed pens cost more than the allocated budget. Initiatives were taken to mobilize extra resource for the construction of the new pens. The process has not yet been concluded at the project and Islamic Development Bank level.

#### • Procurement of animals

Procurement of the second batch of animals comprising of 100 cows, 75 ewes and 65 does has been deferred to the next year that is 2018. This would allow us some time to have some quarantine pens in place before the new animals are purchased.

#### • Capacity enhancement of GILMA

A contract was entered into between ITC and the West Africa Rural Foundation (WARF) based in Dakar, Senegal to implement the recommended action plan following the Participatory Institutional Diagnoses (PID) of the Gambia Indigenous Livestock Multiplier's Association (GILMA) in 2014. WARF would undertake three missions to The Gambia to help support the revitalisation process of GILMA.

The first workshop on the *Strategic Reflection and Planning* for the GILMA was held in December 2016. This workshop was implemented by WARF with facilitation by ITC and the Department of Livestock Services. This workshop resulted into a renewed vision, mission and activity plan for the year 2017 for each GILMA.

The second workshop for GILMA members implemented by WARF ran from the 9<sup>th</sup> to 12<sup>th</sup> August 2017. It brought together 40 GILMA members, 2 resource persons from WARF, and technical staff from ITC at the Trans-Gambia lodge in Pakalinding village, Lower River Region. The training focused on organizational management and group facilitation, communication and information management, resource mobilization and financial management, and rural entrepreneurship.

ITC also implemented three training workshops to build the capacity and technical knowledge of GILMA members on Animal Production and Health. The first three-day exploratory workshop with the aim to identify, prioritize and plan for follow up workshops was held on  $9 - 11^{\text{th}}$  February 2017 at Jenoi Agricultural Training Centre in Jenoi village. Five specific broad areas were identified and prioritized for training.

The second workshop was held on the **27<sup>th</sup> to 29<sup>th</sup> July 2017** at the Trans-Gambia Lodge, Pakalinding village, Lower River Region. It brought together 45 participants (7 women and 38 men) from GILMA Fulladu and GILMA Saloum membership across the whole country, 4 resource persons, and support staff from ITC and Department of Livestock Services. There were both theory and practical sessions. Four broad topics covered during this training were as follows:

- Animal breeding and selection
- Management of breeding stock
- Pasture production and management,
- Compost pen construction, and
- Common livestock diseases transmission, control and prevention.

The third training workshop was held on the 11-12<sup>th</sup> **December 2017** at the Trans-Gambia Lodge, Pakalinding village and ITC Keneba station, Keneba village, Lower River Region. It brought together **45** participants (9 women and 36 men) from GILMA Fulladu and GILMA Saloum membership across the whole country, 2 resource persons, and support staff from ITC and Department of Livestock Services. Applied training methodology included the use of both theory and practical sessions.

Animal feed conservation techniques such as parrot making and bailing of harvested pastures were taught and demonstrated along with the farmers on the first day at Keneba. Hygienic method of milk drawing from lactating cows was also demonstrated and its importance in reducing milk contamination discussed with farmers.





Figure 2. Farmers tasting finished milk products

Milk processing into yoghurt and flavoured milk products were taught and did along with the trainees. Posters illustrating needed materials, equipment and procedural steps with pictures were prepared and distributed to all trainees.



Figure 3. A parrot of Panicum grass

Figure 4. Bundle of bailed Panicum grass

## **1.3 P2RS Supported Project**

Artificial insemination (AI) has been used widely in improving cattle productivity through crossbreeding and upgrading of one breed of cattle with other breeds to acquire certain production traits like increased milk or meat production. AI and F1 cattle crossbred production was initiated by ITC since 1995 but its practice had stopped over seven years and no private practitioners took it up as business. Currently, farmers' rely on a Senegalese technician to provide farmers' needed AI services which is expensive and unsustainable. This matter was tabled with the P2RS project team to discuss possible solutions to alleviate this situation. A joint proposal with the Department of Livestock Services was submitted to and approved by

the P2RS project team for implementation. The main goal of this support was to train and equip selected technicians on Cattle AI so that farmers' access to such services would be enhanced.

With support of the P2RS project, a 10-day training workshop equivalent to 13 days, started on Monday 30<sup>th</sup> October and ended on Friday 10<sup>th</sup> November 2017 was implemented at the ITC headquarters in Kerr Serigne. Eleven technicians comprising of 4 from Department of Livestock Services (DLS), 4 from International Trypanotolerance Centre (ITC), 1 from National Livestock Owners Association (NaLOA), 1 from GILMA, and 1 from National Agricultural Research Institute (NARI) were trained and provided with Artificial Insemination equipment and supplies to enable them carry out cattle insemination as needed by livestock producers around the Gambia.



Figure 1. Group photo of AI technicians

Training covered themes on Reproductive Anatomy, Physiology, Diseases and disorders, Semen quality and management, and Artificial Insemination technique. There were both theory and practical sessions during the conduct of the training. A total of 21 cattle were prepared and inseminated during the training programme. Five resource persons – 4 from the Gambia and 1 Artificial Insemination expert from Senegal – coached the technicians' training. A follow up 5-day practical training on actual cattle insemination has been recommended to enhance the trained technicians skills and confidence on AI practice.



Figure 2. Practical gross anatomy and cattle insemination

A sensitization meeting with farmers was organized during the last day of the training to bring them up-to-date with developments to increase their access to AI service providers. Their concerns were heard and samples of crossbred cattle on station were shown to them.

General mass public sensitization was carried out through Radio Talk on Artificial Insemination at West Coast Radio and GRTS Radio on every Thursdays and Sundays respectively for four weeks. This made the general public much more aware of the importance of AI for improving cattle productivity.

The trained AI technicians with full insemination kits are found all over the country offering needed AI services for cattle farmers. There are also 20 sexed Holstein semen and 160 conventional semen in stock at ITC headquarters for use as demanded.

#### 1.4 AU-IBAR supported project

The proposal entitled "The Gambia National Strategies and Action Plans for Animal Genetic Resources" submitted to AU-IBAR for funding was accepted in August 2016. The objective is to prepare the National Strategies and Action Plans for the sustainable use, development and conservation of Animal Genetic Resources of The Gambia.

The requested detailed budget and work plan of activities was elaborated and sent to AU-IBAR. Members of the newly formed National Advisory Committee (NAC) and National Coordinator for Animal Genetic Resources were appointed by the Ministry of Agriculture. The inauguration and first working meeting of the NAC was held on 6 - 7<sup>th</sup> June 2017 at the Paradise Suites Hotel, Banjul, The Gambia.



Figure 1. Family photo - Honourable Omar A Jallow Minister for Agriculture seated fourth from right

Outcomes of the meeting include the following:

- The Assembly recommended that the inaugurated National Advisory Committee should include a legal representative
- Presented NSAP outline was finally adopted as the working document
- Activity plan was developed for National Advisory Committee (NAC)
- Roles be now called terms of references (TOR) for the NAC
- Membership criteria for NAC was critically reviewed and maximum of 30 members set for the committee
- Deputy Director General for the Department of Livestock Services, Mr. Lamin Saine, appointed as chairperson of NAC.
- The National Coordinator for Animal Genetic Resources management, Mr. Momodou Jeng, selected as Secretary to the NAC
- It was also agreed that consultancy would be offered for the elaboration of NSAP
- The TOR for the consultancy would be finalized quickly

The TOR for the consultant to be recruited was prepared and shared widely with stakeholders in July 2017 for interested persons to send in their expression of interests. Dossiers of two applicants were received and forwarded to the genetics project of AU-IBAR to process the contracting of the most suitable consultant to elaborate a National Strategy and Action Plan for management of AnGR in The Gambia. The contract is yet to be finalized and awarded.

## **1.5 National, Regional and International Workshops**

ITC was represented at the following national and regional workshops organized in 2017:

Table 10. List of attended workshops

S/n	Conference/workshop	Period	Venue
1	Agricultural Biotechnology Workshop	15 <sup>th</sup> March 2017	Kololi, The Gambia
2	Commonwealth Veterinary Association	25-28th April 2017	Nairobi, Kenya
	(CVA) Golden Jubilee celebrations and		
	International Conference		
3	Validation workshop for the Agricultural	11 <sup>th</sup> May 2017	Kololi, The Gambia
	and Natural Resources (ANR) Policy	4	
4	Organize the inaugural and first working	6-7 <sup>th</sup> June 2017	Kololi, The Gambia
	meeting of the National Advisory Committee		
	on AnGR management with support from		
	AU-IBAR		
5	Fourth Genetics Project Steering Committee	19-20 <sup>th</sup> July 2017	Accra, Ghana
	meeting		
6	Expert Consultative meeting for the	14-15 <sup>th</sup> August 2017	Kololi, The Gambia
	preparation of a PPR Eradication strategy		
7	Steering Committee meeting of the Sub-	28-29 <sup>th</sup> September	Dakar, Senegal
	Regional Focal Point West Africa for AnGR	2017	
	Management		
8	General Assembly of the Sub-Regional	15-16 <sup>th</sup> November	Accra, Ghana
	Focal Point West Africa for AnGR	2017	
	Management		

## 2. Transformation process of ITC to WALIC



#### **2.1 Constitution of the new Governing Board for WALIC**

Appointment of the oversight governing body of WALIC which would replace the defunct former ITC Council has nearly been completed by sending invitation letters signed by the honourable Minister of Agriculture to identified institutions and experts. The new invitation letters sent out in 2017 include those for the Islamic Development Bank (IsDB), ECOWAS Commission, two experts, ROPPA, and follow up letters to Senegal and Niger. The only outstanding entity not yet invited to the new governing board is a regional livestock Nongovernmental Organization (NGO) operating in West Africa which is yet to be identified.

### 2.2 Inaugural meeting of WALIC's Governing Board

Attempts were taken up during the last quarter of 2017 to mobilize needed financial resources to stage the first governing board meeting. A request letter for support to stage the first board meeting was sent to the Director of African Union Inter-African Bureau for Animal Resources (AU-IBAR). Discussions are ongoing on how to better organize this meeting for greater successes that would enhance setting up of structures, staffing and resource mobilization for the operations of WALIC.

## 3. Outlook 2018

#### **3.1 Research and Development Activities**

#### **3.1.1 Genetic Improvement programme**

All of the activities currently being carried out at all the field stations (Keneba, Kudang and Sololo) would be continued in pursuit of our efforts to improve the performance of the three ruminant livestock breeds without affecting their resistance to a number of diseases or reducing their adaptability to the environment in which they have thrived well over several generations. These animals constitute a valuable animal genetic resource for millions of livestock producers in the region. The main output of the breeding programme in the form of improved Breeding Bulls, Bucks and Rams is expected to be disseminated to multiplier livestock farmers in late 2018.

Cattle, sheep, and goats restocking at the nucleus flocks and herds at Keneba station would be continued through breeding of the present stock and introduction of new stock from the Nema IsDB Building Resilience Project in The Gambia.

Works on the construction/rehabilitation of Bull mating pens at Keneba station is expected to take off in early 2018.

#### 3.1.2 Nema project support

The activities that were planned for 2017 but not realized would be taken up in 2018. Hence, we expect that a new truck for livestock transportation would be delivered, the solar operated irrigation system installed, additional four hectares of pasture field established, quarantine pens constructed, feed supplements and veterinary supplies delivered, and monitoring outcomes of the GILMA capacity enhancement activities are expected in 2018.

#### 3.1.3 AU-IBAR supported project

Following the conclusion of the inaugural meeting of the new national Advisory Committee (NAC) held in Banjul last June 2017, a Term of Reference for consultancy to elaborate a new National Strategy and Action Plan for the Management of Animal Genetic Resources was developed. The TOR was circulated widely for interested persons to send in their applications. Three CVs and expressions of interest were received and sent to AU-IBAR Genetic Project to select one consultant for the job. Although the selection process was not concluded in 2017, it is expected that the process would be finalized in early 2018 so that the National Strategy and Action Plan (NSAP) document would be elaborated and validated before the end of 2018.

### **3.2 Transformation process of ITC to WALIC**

ITC would continue to mobilize resources through partnership and collaboration with the governments of member countries, CORAF/WECARD, and ECOWAS commission. The new WALIC would be launched as soon as sufficient financial resources are mobilize to operate and recruit new staff to start implementing programmes of the new 10-year Strategic Plan (2013-2022).

## 4. Conclusion

Substantial achievements on research and development activities were attained as in proportion with the small staff size and limited financial resources. The main success on the revitalization and transformation process of ITC to WALIC was the constitution of the new Governing Board, although it is yet to be inaugurated to perform its oversight governing functions of the new Centre. Some start-up fund is highly needed to fast track the launching and operationalization of WALIC.

#### No. SN Title NAME **POSITION HELD Kerr Serigne Station** Finance & Admin. Staff Officer-In-Charge Arss Secka 1 1 Dr 2 2 Mr Lamin Drammeh Senior Accountant 3 3 Fatou Bittaye Accounts Clerk Mrs Lamin F Janneh Admin. Clerk 4 4 Mr 5 Sheriffo Kanteh 5 Mr Driver Support Staff 6 Mr **Ousman Barrorw** Cleaner 6 7 7 Mr Sajar Drammeh Cleaner Abdou Touray Night Watch. 8 8 Mr Saidou Jadama Night Watch. 9 9 Mr 10 Security Guard 10 Mr Lamin Jammeh Alagie Jammeh Security Guard 11 11 Mr 12 12 Sulayman K. Sarr Security Guard Mr Security Guard 13 13 Mr Mamud Sidibeh Momodou Drammeh 14 14 Mr Security Guard 15 15 Mariama Faburay Security Guard Ms Lamin K Darboe Sen Livestock Assistant 16 16 Mr 17 Ansumana Ceesay Sen Livestock Assistant 17 Mr 18 18 Mr Nuha Bojang Sen Livestock Assistant 19 Sainey Fatty 19 Mr Herdsman 20 20 Mr Alagie Mbye Herdsman 21 21 Adama Kujabi Herdsman Mr 22 22 Mr Saliff Jammeh Herdsman Kausu Jawara 23 23 Mr Enumerator Kutubo Bojang 24 24 Mr Labourer 25 25 Mr **Ousman Sillah** Labourer 26 26 Mustapha Badjie Labourer Mr 27 27 Bakary Gibba Labourer Mr Ebrima Sillah 28 28 Mr Labourer Keneba Breeding Station **Operation Staff** Modou Jeng 29 1 Mr Station Manager 2 Nerry Corr Pasture Manager 30 Mr Yusupha Wally 31 3 Livestock Assistant Mr 4 32 **Omar Marong Tractor Operator** Mr Sheriffo Sanyang Truck Driver 33 5 Mr 34 6 Ansumana Jarju Field Assistant Mr 35 7 Mr Tijan Tamba Field Assistant Ebrima Kolley 8 Field Asst. 36 Mr 37 9 Mr Musa Jallow Herdsman 10 Mr Fabakary B Ceesay 38 Herdsman

## 5. ITC Staff List as at 31<sup>st</sup> December 2017

39	11	Mr	Fabakary Drammeh	Herdsman		
40	12	Mr	Kebba Jallow	Herdsman		
41	13	Mr	Jamanty Ceesay	Herdsman		
42	14	Mr	Ousman Baldeh	Herdsman		
43	15	Mr	Alieu Saidy	Herdsman		
44	16	Mr	Njobo Bah	Herdsman		
45	17	Mr	Masanneh Bah	Herdsman		
46	18	Mr.	Alkali Kebbeh	Herdsman		
47	19	Mr	Kulayma Sillah	Herdsman		
48	20	Mr	Sunkaru Manneh	Herdsman		
49	21	Mr	Abdoulie Minteh	Herdsman		
50	22	Mr.	Fanding Ceesay	Security Guard		
51	23	Mr	Momodou Manjang	Security Guard		
52	24	Mr	Saidy Ceesay	Security Guard		
53	25	Mr	Siyaka Ceesay	Security Guard		
54	26	Mrs	Tumbul Samateh	Cleaner		
Bansang / Sololo Station						
Opera	tion Staf	f				
55	1	Mr	Modou S Gaye	Station Manager		
56	2	Mr	Lamin Jamanka	Herdsman		
Support Staff						
57	3	Mr	Kalipha Touray	Multi-purpose		
58	4	Mr	Momodou B Jallow	Multi-purpose		
59	5	Mr	Lansana Jarra	Night Watchman		
60	6	Mr	Momodou Fatajo	Day Watchman		
61	7	Mr	Kalifa Touray	Night watchman		
Kudang sub-station						
Operation staff						
62	1	Mr	Massaneh A. Bojang	Senior Livestock Assist.		
63	2	Mr	Alagie Bah	Herdsman		
64	3	Mr	Alanso Sidibeh	Herdsman		
65	4	Mr	Madi Camara	Herdsman		
66	5	Mr	Sulayman baldeh	Herdsman		
67	6	Mr	Sheriffo Bayo	Herdsman		

#### LABORATORY RESULTS FOR CBPP SUSPECTED OUTBREAK SAMPLES FROM KENEBA

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CASE NO.	ANIMAL ID	SAMPLES	PERCENTAGE	RESULT
1	23605	0.654	38.09663	negative
2	36048	0.396	68.31625	positive
3	25583	0.541	51.33236	positive
4	36022	0.587	45.94436	negative
5	36081	0.71	31.53734	negative
6	31574	0.491	57.18887	positive
7	36013	0.738	28.25769	negative
8	31562	0.657	37.74524	negative
9	30508	0.707	31.88873	negative
10	36092	0.605	43.83602	negative
11	36081	0.717	30.71742	negative
12	36056	0.644	39.26794	negative
13	36043	0.406	67.14495	positive
14	3514	0.587	45.94436	negative
15	30540	0.292	80.4978	positive
16	30511	0.697	33.06003	negative
17	36080	0.715	30.95168	negative
18	36048	0.426	64.80234	positive
19	32548	0.749	26.96925	negative
20	30551	0.703	32.35725	negative
21	36007	0.577	47.11567	negative
22	36090	0.681	34.93411	negative
23	36046	0.557	49.45827	negative
24	33532	0.702	32.47438	negative
25	39623	0.789	22.28404	negative