

A Rwanda Smallholder Case Study



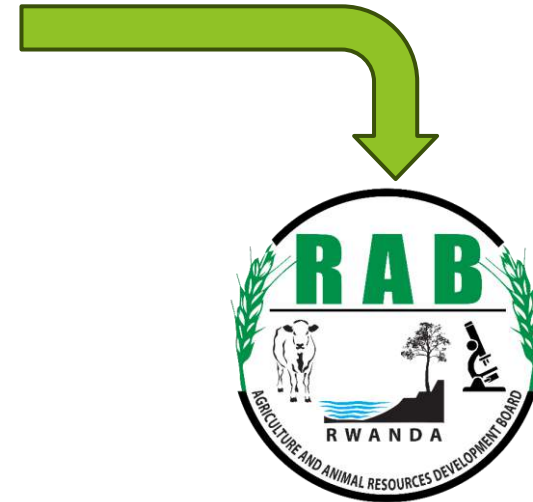
Developing Dairy in East African Smallholder Systems

June 28th 2023 - Grand Legacy Hotel, Kigali

Jersey Inka Nziza Partners in Dairy DVPT in Rwanda



RAB, RJAHS & JOA personnel at Songa Station Feb '22



Republic of Rwanda



Ministry of Agriculture & Animal Resources

MINAGRI & RAB

There have been many other stakeholders in the project partnership



It starts on a Rwandan farm
(Formerly Send a Cow)



SACPP LTD

Sustainable Agriculture Community Partnership
Program

Innovation In Agriculture

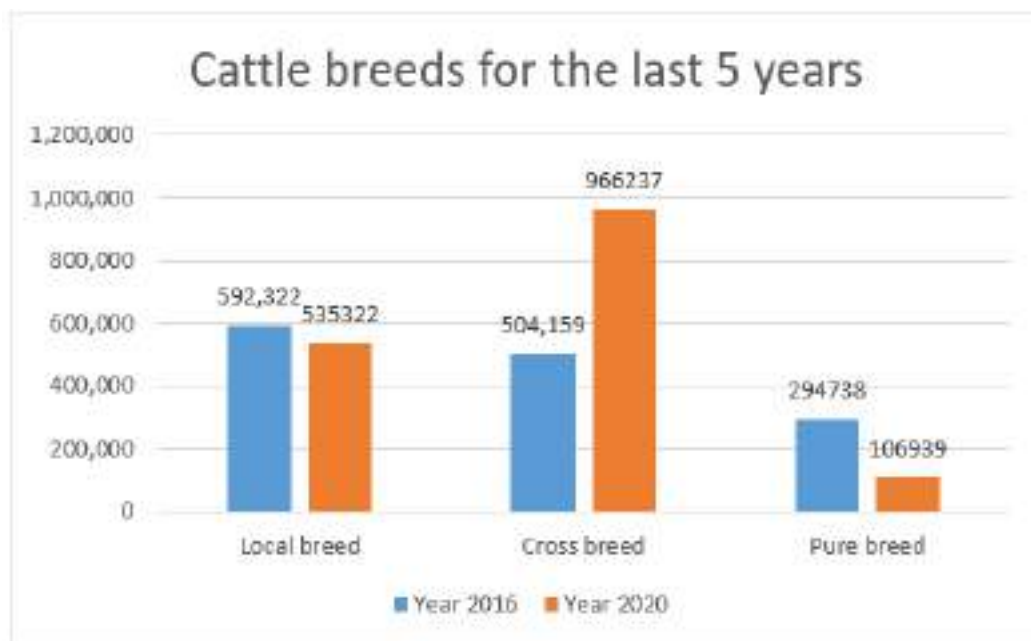


Centre for
Tropical Livestock
Genetics and Health

CATTLE POPULATION

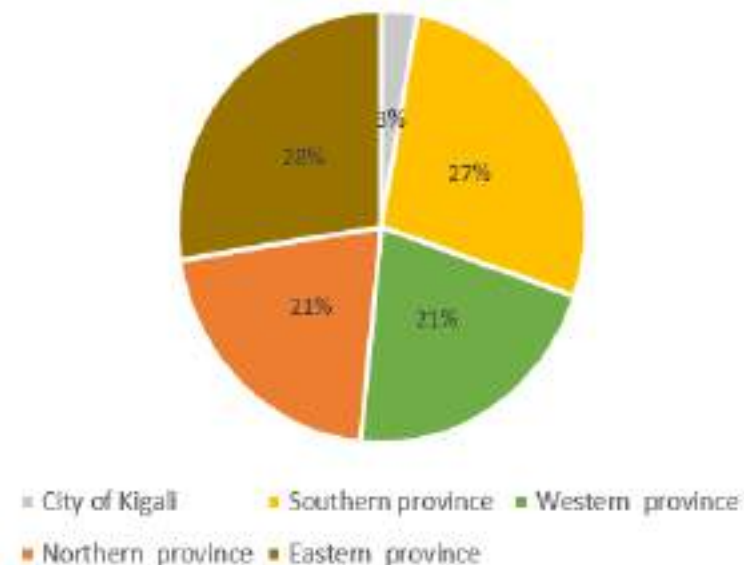
1.4 million

The recent census revealed that the total cattle population is estimated to be 1,424,180*



**census numbers are subject to verification*

Proportion of Cattle across Rwandan Provinces



Eastern and Southern provinces have the larger numbers of cattle

Cross-bred cattle are dominant followed by the local breed

BACKGROUND

- The Government of Jersey Island has a long-term partnership with Rwanda to improve the livelihoods of thousands of Rwandans through enhanced dairy production.
- The relationship and cooperation between the Island of Jersey and Rwanda dates back to 2004, with the visit of HE the President of Rwanda to Jersey Island.
- HE the president discussed collaborative efforts to strengthen dairy production through the use of Jersey cattle genetics and training of AI Techs



BACKGROUND Contd

- In the following years (2005-12), through the Royal Jersey Agricultural & Horticultural Society (RJAHS), the Island of Jersey supported Rwanda through the provision of Jersey breed semen for cross-breeding.
- In May 2016, the two governments signed an MoU whereby the Government of Jersey committed to support the improvement of dairy cattle breeding in Rwanda.
- Since 2017, RJAHS, in collaboration with SACR/Ripple Effect and RAB, have been implementing projects funded by Jersey Overseas Aid (JOA), aimed at supporting Rwandan dairy livestock keepers. Part of these efforts include mobilising an increased number of trained AI Techs, thereby improving access to Jersey breed genetics



The Jersey Breed in Rwanda



Why is the Jersey appreciated?

- Milk yield, composition, and market suitability
- Feed intake, eating behaviour,
- Fertility, Health, Heat tolerance, and Longevity
- Lifetime production efficiency
- Suitability for different production
- Others

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JERSEY INKA NZIZA 'ACHIEVEMENTS'

1. Genetic Improvement

CROSS-BREEDING

- Jersey

BREEDING METHODS

- Artificial Insemination

Since 2017 over 240,000 units of Jersey semen and 100 Jersey embryos have been shipped from Jersey Island to Rwanda for artificial insemination and implantation

Within the Jersey Inka N'Ziza project alone, 13,935 project farmer owned cows were artificially inseminated

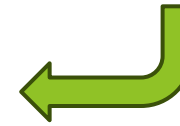
- Embryo Transfer (MOET)



2. A pilot to develop a National Cattle Database for Rwanda



PILOTING THE NEW NATIONAL SYSTEM



14,019 project farmers and 2,472 cattle recorded into the system

Number	Fertility status at end date	Milking status at end date	Lactat group	Breed	Sex	Name	Official ID	Date of birth	Age (end)	Lact. no.	Last calving	Wean status at end date
778701	Pregnant	Milking		RWL	FeB	MUTESI	778701	21/07/15	3y10m	1	11/04/18	434 Weaned

No.	Birth or calving date	First serve	No. serves	Conc option	Total days	Days in milk	Dry days	Cum. milk kg	Cum. protein	Cum. fat	Cum. SCC	305d milk kg	305d protein	305d fat	305d SCC	High SCC	No. mast.	No. lame	Milk of herd
0	21/07/15		0	710	995														0
1	11/04/18	100	2	204															100%

Date	Day	Done	Event	Gu	Result	Detail	Operator	Remarks
11/04/18	0	<input checked="" type="checkbox"/>	CALV			???		
20/07/18	100	<input checked="" type="checkbox"/>	SER		Normal	AMBITION (100)		
01/11/18	204	<input checked="" type="checkbox"/>	SER		Normal	EMPEROR (104)		
30/01/19	204	<input checked="" type="checkbox"/>	PD	Fix		30 EMPEROR		
05/05/19	434	<input type="checkbox"/>	DRY					
08/08/19	484	<input type="checkbox"/>	CALV			EMPEROR		

3. AI Technician training



Jersey Inka N'ziza Project delivered 5 pallets of AI equipment to fully equip the 137 AI Technicians trained through the project



- Supply Artificial Insemination tool kits
- Refresher training and training in PD
- Cow Health and Disease Management

4. Farmers trained on Fodder Production and Conservation

**RIPPLE
EFFECT**

It starts on a Rwandan farm



Fodder production

Hay making

and Tube silage making

Under Jersey Inka N'ziza, some 2,800 farmers were trained by Send a Cow Rwanda (now Ripple Effect) in fodder production and conservation

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ON-GOING PROJECTS & FUTURE PLANS

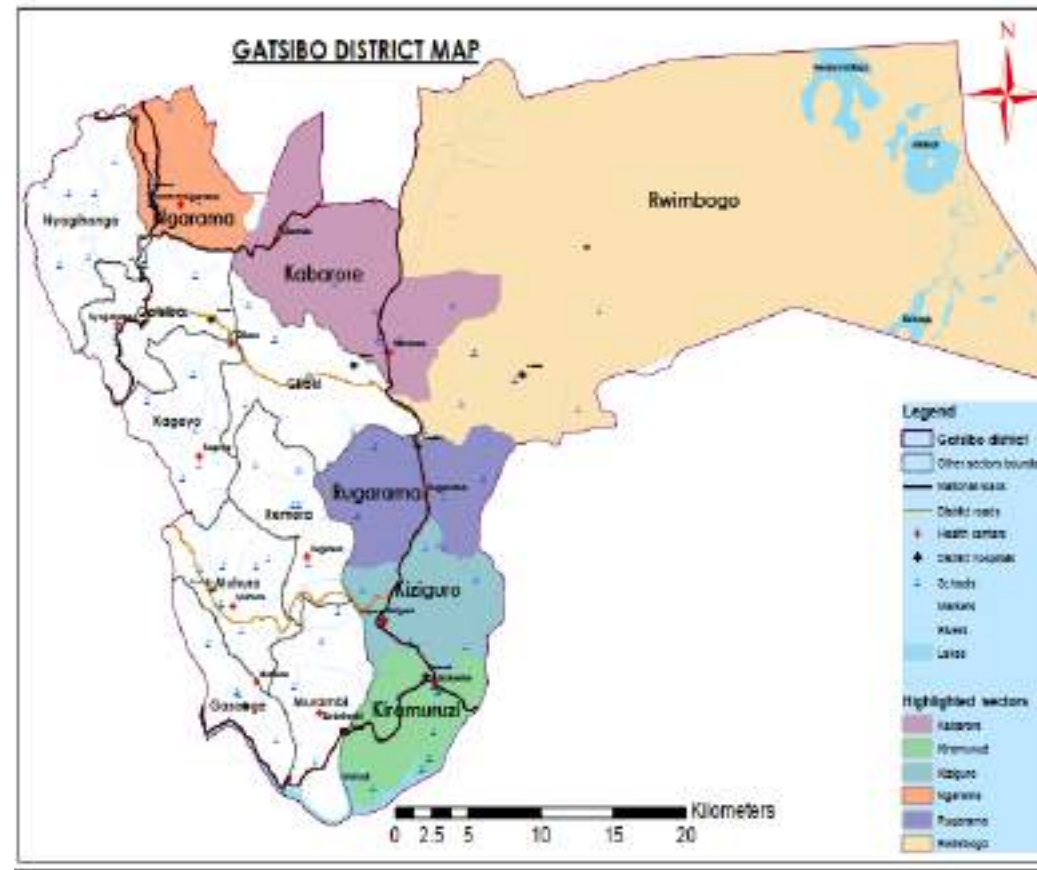
Current activities under the 2Yr Songa Station Development project RJAHS & RAB:

- Publication of a Feasibility Study investigating how best to develop Songa Station into a Centre of Dairy Excellence
- Produced 250 Jersey breed embryos, to establish a Rwanda national Jersey herd
- Collected a further 140,000 units of Jersey breed semen awaiting consignment to Rwanda,
- Continuing the piloting of the Rwanda National Livestock Database & capacity building of RAB staff



In the Pipeline for 2023 – Dairy Data & Pastoral Dairy Systems

- Continuing the development of the Rwanda National Livestock Database (RNLD)
- Rolling out specialized pastoral dairy training in identified key areas in North East Rwanda, in support of a new farmer cohort with a unique set of challenges, plus the new milk processing plant.
- Support of key infrastructure services to the dairy industry in these areas: AI & other technical services and training



Dairy Data & Pastoral Dairy Systems contd

- ▶ To include agroforestry, GHG emissions and Climate Smart Dairy Farming (fodder species such as *Brachiaria*, *Chloris gayana*, *Desmodium distortum*, ...)



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One of many success stories

NIMUGIRE Emertha

A female farmer located in Muhoza Cell, Ntarabana Sector, Rulindo District, Northern Province

NIMUGIRE Emertha

Before the Jersey Cow:

- She had 4 Friesian cows, it was very hard to feed and manage the cows,
- “I had to allocate one worker in addition to the house boy who was in charge of keeping and feeding the cows. The worker was paid 30,000 Frw”,
- “and the milk production was 4-8 litres per day”,
- Due to her financial capacity, It became a burden for her to manage & feed the cows whilst the production remained small,
- As a solution to the above, she decided to remain with one cow. She got Jersey cow by crossing her cow with Jersey semen bull from Jersey Island.



NIMUGIRE Emertha

The Benefits of my Jersey Cow:

- Jersey cow is easy to manage and feed, “***it is no longer a burden for me***” Emertha said,
- “I’m producing up to 14-16 litres per day with one cow” Emertha confirmed,
- Emertha is able to generate 90,000 RWF per month with one cow,
- She even reduced to one worker, therefore, she is also able to save the 30,000 RWF she was paying the worker.



NIMUGIRE Emertha

Impact of the Jersey Cow:

- Emertha confirmed that her livelihood was highly improved due to the Jersey COW,
- Her two children were able to complete the university due to the Jersey cow,
- Her family improved their nutrition as the cow produces enough milk to feed the family too,
- Whilst Emertha also gets enough organic manure for crop production.



“I have a happy family due to my Jersey cow”

Presented by

Rwamuhizi Innocent
The Rwanda
Technical Dairy
Consultant/RJAHS

