

# Girinka Practical Training Manual

## Introduction

Girinka Program whose renaissance dates back as of 2006 is a Home Grown initiative formulated and is in a National social protection Programs.

It is therefore imperative to have it functioning as to serve the purpose of saving lives of the very needy Rwandans.

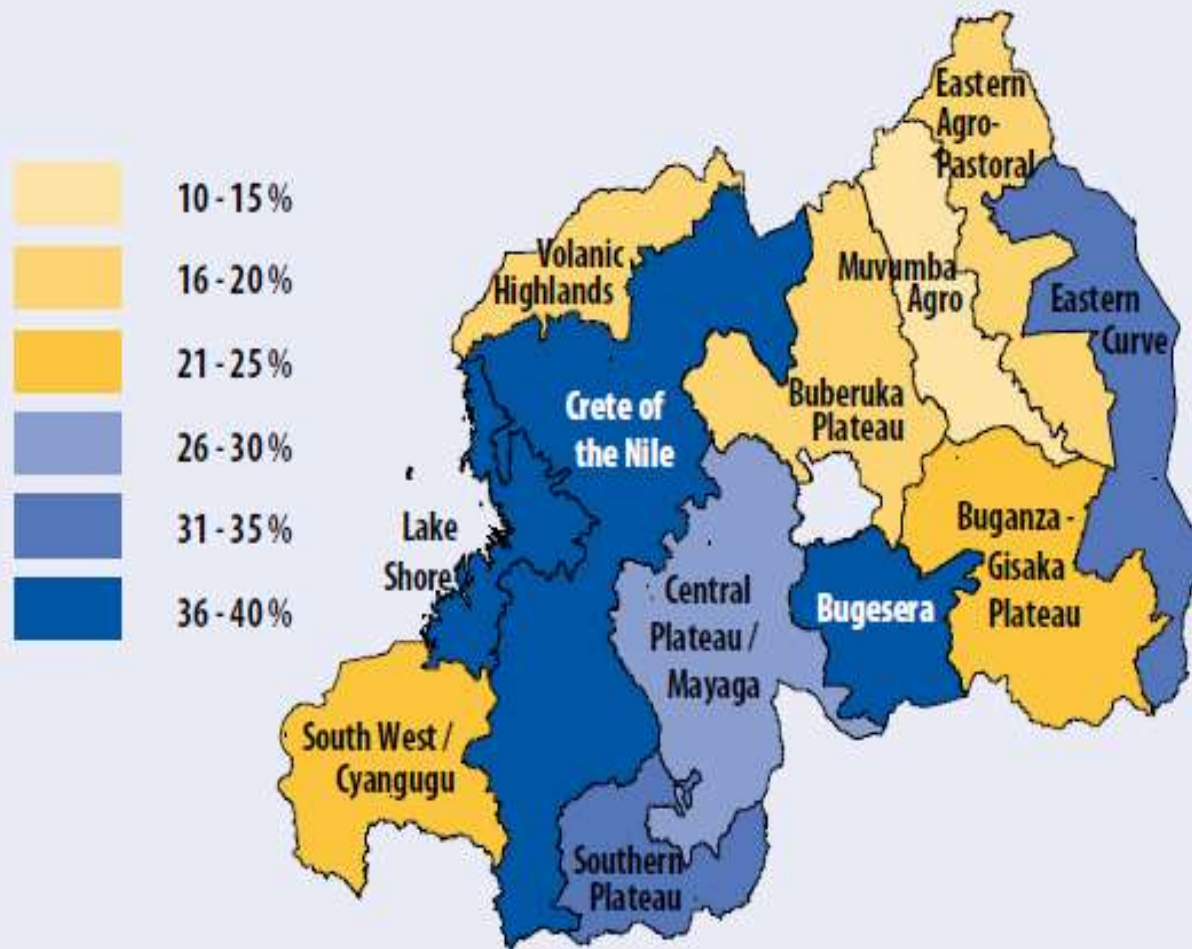
# Rwanda over view

- Population .....10,117,029
- Land size....26,338 Km<sup>2</sup>
- Population density...467 per Km<sup>2</sup>
- Fertility rate....6.1
- Persons below poverty line...56.9%,2006
- GDP per capita.....458 US\$
- Life expectancy...F is 52 yrs, M is 48.4 Yrs
- Population growth rate is 2.7%

# Land holding in Rwanda

S/No	Range in Ha		No. of families	% of total families
1.	Less than 0.25	0.25	264, 835	15
2	0.25	0.5	430,235	25
3	0.5	0.75	282,059	16
4	0.75	1.0	204,445	12
5	1.0	2.0	320,619	18
6	2.0	3.0	78,555	4
7	Greater than 3.	Over 3.0	47,462	3

# Percentage of food insecure households



## Vulnerable families in Girinka Program

- MINECOFIN, **2002** complemented by MINAGRI, **2005** found **1,752,970** families including Kigali residents
- Classified vulnerable families have less **0.75** ha
- Total vulnerable families were **977,129** out which **308,366** had cows leaving Girinka program to cater for **668,763** families.
- Government targeted **350,000** by **2017** but now covered **134,711** families thus only **38%**

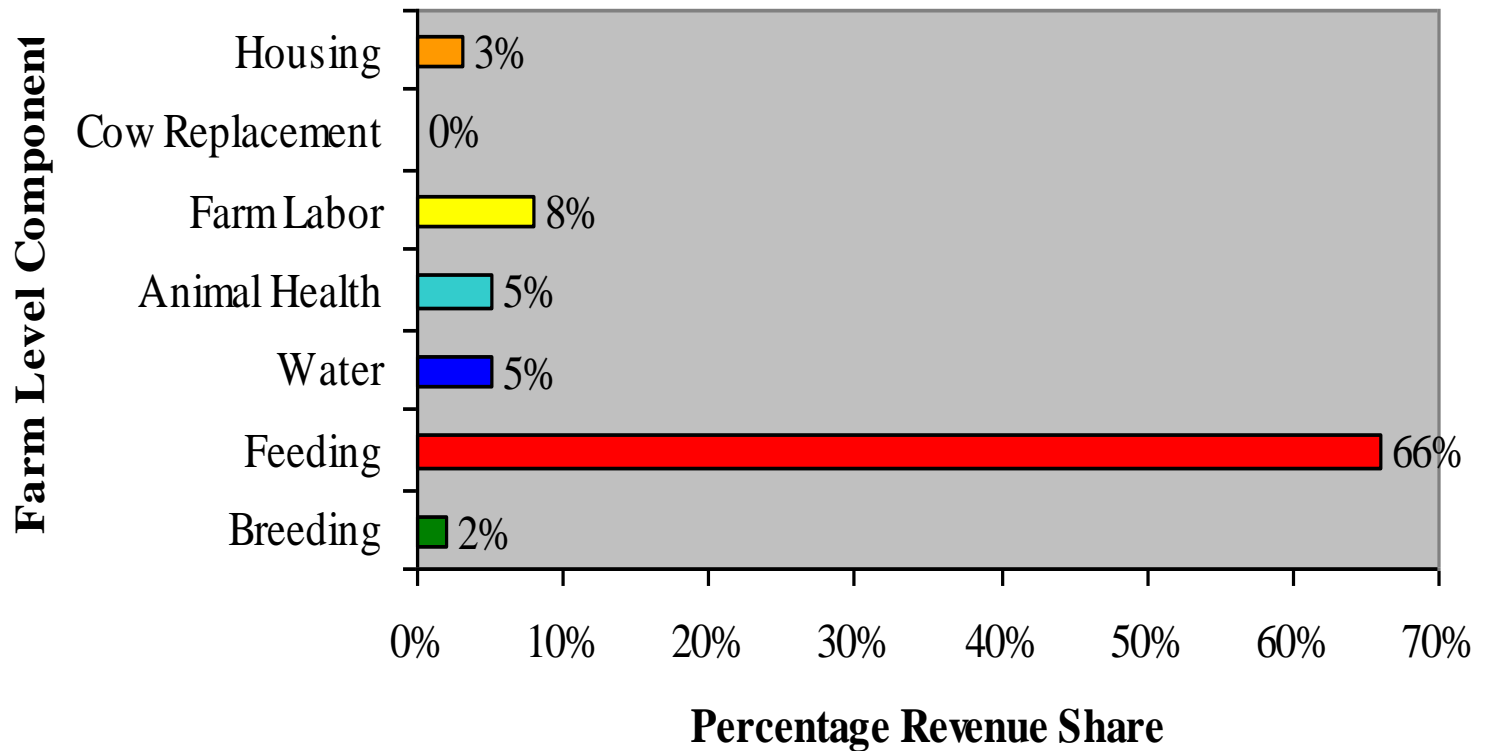
## Zonal Cow distribution as of Sept. 2012

Zone	No. cows	% of total cows
Northern	25,291	18.7
Southern	34,789	27.5
Eastern	37,070	26
Western	35,109	25.8
Kigali	2,460	1.8
Total	134,719	100

# Priorities in Girinka Program

- Training of Girinka beneficiaries over 5000 FY 2012/13
- Girinka decentralization (earmarked funds) for 4019 H/C FY2012/13
- Heifer selection using basic guidelines (Blood %)
- Heifer distribution to selected beneficiaries
- Girinka initiatives (Fundraising events & recovery of pledges) 1000 H/C due for purchase
- Monitoring and evaluation

## Revenue Share of Farm Level Components





# Training of Girinka beneficiaries

Animal husbandry practices / pillars of animal production

➤ Nutrition

➤ Health

➤ Housing

➤ Breeding

➤ Management

Production (P) = Genetics (G) + Environment (E)

# Training manual contents (Dairy cow)

- Calf management(before birth, after birth, calf hood)
- Heifer management
- Management of In-Calf heifer
- Steaming up of cows
- Management of lactating cow
- Drying up of cows
- Challenge feeding

# Calf management

- The essential fundamental steps to successful calf management include:
- Maintaining good dry cow management
- Clean calving area
- Feeding high quality colostrums in time
- Keeping calves clean and comfortable
- Feeding adequate amounts of whole milk or high quality milk replacer until weaning

# Management before birth

- The last two months to parturition are very crucial for a healthy calf to be born hence requires its mother to be fed adequately as the calf is rapidly growing and there is a need for colostrum synthesis in the udder.

# Management after birth

- Immediately it is born, remove mucus from its mouth and nostrils, and clean its body using dry lags/hay, disinfect the navel cord, provide warm colostrums to the calf using a nipple and provide warm bedding. Feed the calf with colostrums based on its body weight and do so at a rate of 10% of its body weight. Calves born of breeds namely Jersey and Friesians ranging from 20 to 25 and 25 to 30 Kgs body weight respectively.

-

# Calf hood management

- The newly born calf has to be **identified** by tagging , date of birth and all data recorded.
- **Records** kept are; Tag number, date of birth, sex, complications at birth, periodic weighing, place of birth, colostrums fed, sickness at birth, treatments given, vaccination, deworming, weaning and ration changes.

# Nutritional management of calves

- **Nutritional management of calves**
- 
- Calf feeding program should be based on their body weights and targeted growth rates of **400-500g/day** of body weight gain.

# Feeding schedule at 12 weeks weaning

Age of calf (days)	Milk (kg/day)	Total cumulative milk (kg)	Calf starter(kg/day)
1 to 7	Colostrum	-	-
8 to 21	5	70	Handful
22 to 42	6	126	0.5
43 to 56	5	70	0.5
57 to 63	4	28	1.0
64 to 77	3	42	1.0
78 to 84	2	40	1.5
Total	25	350	4.5



# Calf weaning management practices

- Weaning is done when the calf can fully depend on other feeds apart from milk.
- Calves can be weaned at 12 weeks of life but can be done earlier.
- Weaning is done gradually as to avoid stress.
- Milk feeding is done twice a day, at weaning, you do it once before you finally wean it.
- Some **criteria** have been set for weaning as; if the calf is able to consume **1.5%** of its body weight on DM basis, has attained **two** times its birth weight and age. The expected body weight at weaning for Jerseys and Friesians are 70 to 80 Kg respectively.

# Heifer management & feeding

- A successful heifer raising program requires breeding , nutrition, housing, and overall management.
- A healthy heifer is the key success of Dairy industry.
- After weaning, heifers are fed on a ratio that accelerates their growth based on their body weight.
- Heifers should be closely **observed** and **fed** correctly with forage and concentrate to avoid the growth retardation after milk is withdrawn or weaned.

# Heifer feeding

- Heifers should achieve a growth rate of 500–700 g/day. This ensures that they will come on heat at the right time, as puberty is related to size rather than age
- Achieving first calving at 27 or fewer months of age is possible only if the **growth rate is high**. The heifers which are underfed grow slowly and do not reach breeding weight at the desired age
- Protein is extremely important in the diet of growing heifers to ensure adequate frame size, wither height and growth.
- • Puberty is related to calving age and to size (a feeding indicator) rather than the age of the heifer. The consequences of poor feeding are therefore manifested in delayed first calving and commencement of milk production.
- • Feeding heifers with too much energy feeds leads to fat infiltrating the mammary glands thus inhibiting development of milk secretory tissues or cells hence reducing milk yield.
- • Underfed heifers lead to small sized heifers which are liable to have dystocia.

## Breeding of heifers

- After **puberty**, the heifers become sexually and will normally manifest signs heat implying they are ready for service.
- One has to be care full not to only rely on signs but **BW** has to be considered before breeding the heifers.
- In general, exotic heifers and their **crossbreeds** if fed well will be ready for service at the age from **15 to 18** months
- . The expected live body weight at breeding for Jersey and Friesian heifers are **230 to 275** and **300 to 320** Kg respectively.

## Signs of heat

- Restlessness and below
- Reddening and swelling of vulva
- Mounting other cows
- Stand for other cows to mount
- Reduced feed intake
- Mucus discharges from the vulva

# Artificial Insemination

- Artificial insemination is more preferred compared natural service due to more advantages AI has. AI is done based on AI thumb rules of AM/PM.
- The AM/PM rule thumb implies that when heifers show heat signs in the morning, you inseminate it in the afternoon.
- Insemination records are very vital since you keep monitoring to see if the animal conceived on first insemination.
- If there is a conception failure, the animal will come back to heat after 18 to 24 days with average of 21 days.
- If no any heat signs after 21 days of service, you presume it has conceived.
- Two to three months after AI, the inseminator will come to check if it's positive hence pregnant or not.
- Pregnancy duration is 9 months, beyond this call the veterinarian to check the abnormality.

## Feeding of in calf heifers

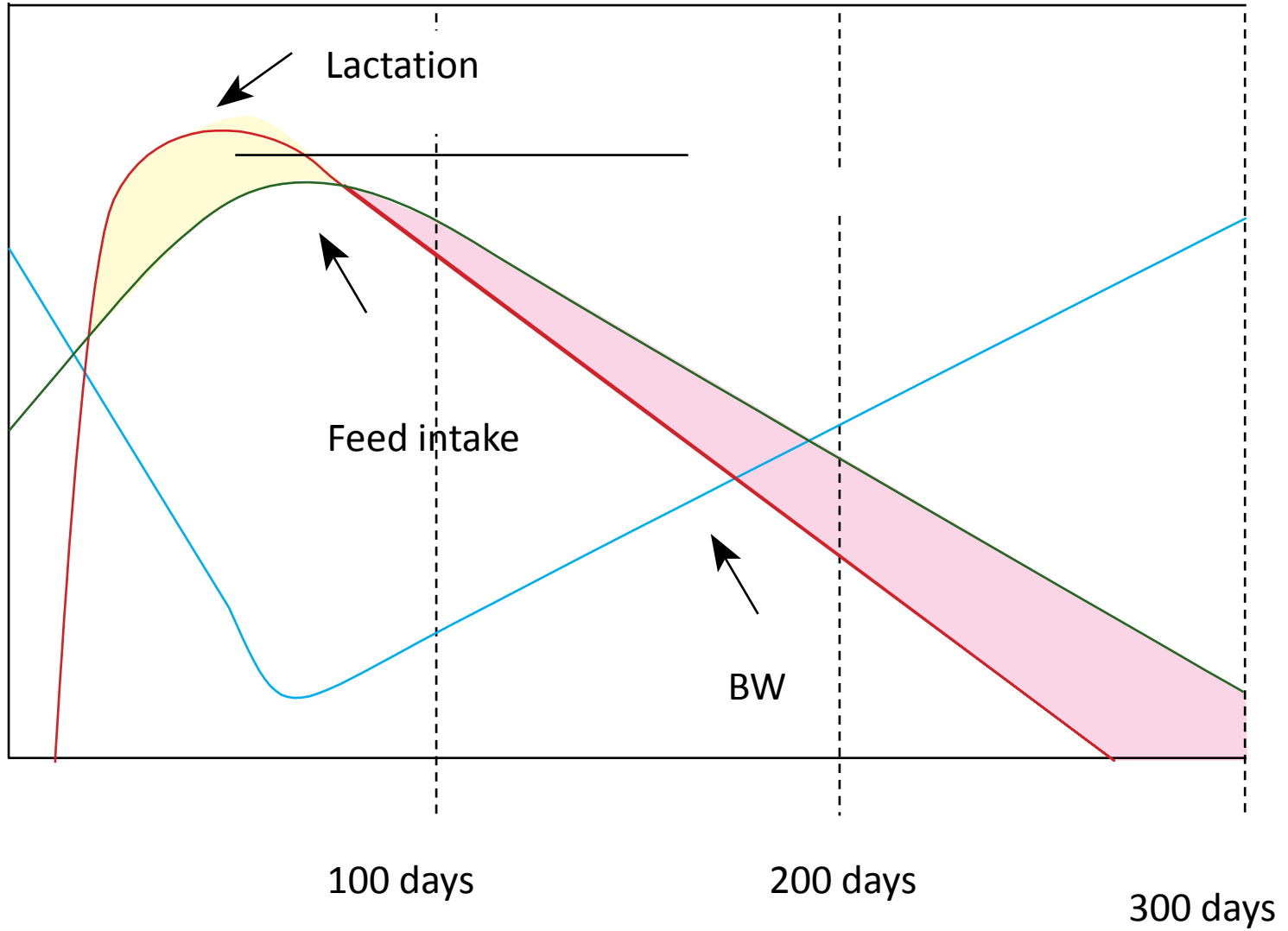
- In calf heifers are not mature yet at 60% of their maturity BW.
- They require special feeds to cater for growth/body maintenance and their physiological status (embryo).
- At 7 months of gestation period, the in calf heifer is given nutritive feeds (**Steaming Up**)

# Feeding of lactating cow

- Quantitatively, **energy** is the most important nutrient considered during the formulation of dairy cow rations.
- **Energy** content requirement in feed formulations account for **60%** in ration compounding. The Energy requirements of a lactating cow depend on 4 factors:
  - **Maintenance**—keeping the cow alive—which depends on body size (bigger cows require more), activity (walking long distances to graze increases the requirement) and environmental temperature (too cold or too hot increases the requirement)
  - Amount of **milk** the cow produces
  - The energy content of milk, indicated by **butter fat** content—the higher the fat content, the more energy required
  - Reproductive condition—**pregnant** cows require more energy to cater for the growth of the calf



# Lactation Curve



# Challenge feeding

- Lactating cows may be challenged with increasing amounts of concentrate until there is no corresponding increase in milk production.
- This method of feeding is recommended only if the extra milk produced **offsets the added cost** of the concentrate.
- Challenge feeding should take place in the **early** lactation, when there is a risk of underfeeding.
- Continue this until the cow reaches **peak** milk production, **4 to 10 weeks** after calving

# Drying of lactating Cows

- After lactation period 305 days/ 7 months PD
- Gradual drying to avoid mastitis
- Teat dips
- LMY as per records
- Assess feasibility of dairying (maintain or cull)

- Thanks for your eminent contributions
- Training Girinka Beneficiaries/Action Plan