Annual Report
(NFY 2079/80)



Government of Nepal
Ministry of Agriculture and Livestock Development
Department of Livestock Services
National Livestock Resource Management and Promotion Office

Cattle Genetic Resource Center

Jiri, Dolakha
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Silage making



Milk feeding using milk feeder

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Preface



Livestock farming plays a crucial role in the Nepalese agricultural landscape, serving as the backbone of the country's rural economy. Access to superior genetic materials is essential for increasing farm production and productivity nationwide. The Cattle Genetic Resource Center, Jiri, fulfills this need by supplying superior genetic materials of dairy cattle and pigs across the country.

The center supports farmers by providing cattle breeds with superior genetic value and conducting training programs related to cattle keeping, accompanied by various support activities, both in cash and in kind. Recognizing that over 70% of expenditure in livestock farming is allocated to feeding, the center assists farmers by providing appropriate grass seeds suitable for their geographic and climatic conditions. In addition to offering high-quality cattle breeds (heifers and breeding bulls) and seeds of quality grasses, the center supports swine farming by providing superior piglets of exotic breeds.

This report aims to provide essential information about the center and its activities during Fiscal Year 2079/80, serving as a valuable resource for those interested in this field. I extend my heartfelt gratitude to my seniors for their valuable suggestions and guidance during the preparation of this report. I eagerly anticipate feedback on this report, which will greatly aid in its further improvement in future years.

Efforts have been made to document the projects and programs implemented at the farm since its establishment. However, due to the lack of records and the passing away of some former employees, the historical information about the farm has been somewhat elusive. To address this, inquiries were made with surviving individuals who were closely associated with the farm in the past. Additionally, available documents were studied to reconstruct the farm's history to the best extent possible.

Special thanks are due to Mr. Gana Bahadur Jirel (Livestock Development Officer), Dhana Maya Magar (Assistant Livestock Service Technician), and Mr. Bal Kumar Dahal (Assistant Livestock Service Technician) for their invaluable support in preparing this report. I am equally grateful to all staff and employees involved in the care and management of cattle, pigs, and other farm activities. Lastly, I express my gratitude to all those who have contributed to bringing this report in this form.

Dr Gopal Giri
Senior Livestock Development Officer

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Abbreviations

Act.	:	Acting
AD	:	Anno Domini
AI	:	Artificial Insemination
BS	:	*Bikram Sambat*
C	:	Centigrade
CGRC	:	Cattle Genetic Resource Center
CLDP	:	Co-ordinated Livestock Development Program
CRU	:	Cattle Resource Unit
D	:	Duroc
DAO	:	District Administration Office
DLS	:	Department of Livestock Service
E	:	East
Ha	:	Hectare
HF	:	Holstein Friesian
J	:	Jersey
JHF	:	Jersey and Holstein Friesian cross
JMDP	:	Jiri Multiple Development Project
Km	:	Kilometer
L	:	Landrace
LDF	:	Livestock Development Farm
LDO	:	Livestock Development Officer
masl	:	Meter above sea level
mm		Millimeter
Mt	:	Metric ton
Mt.	:	Mount
N	:	North
NARC	:	Nepal Agricultural Research Council
NFY	:	Nepalese Fiscal Year
NI	:	Natural Insemination

No.	:	Number
NRs	:	Nepalese Rupees
PARMU	:	Pasture and Rangeland Management Unit
S.N.	:	Serial Number
SNF		Solid Not Fat
ToR	:	Terms of reference
VDC	:	Village Development Committee
Y	:	Yorkshire

1 Introduction

The Jiri Valley, often referred to as Nepal's Switzerland and hailed as the gateway to Mount Everest, is nestled within the Dolakha district of the Bagmati province in central Nepal. It is enveloped by the Maali (Batase), Buldada, Cherdung, and Tame hills to the east, west, north, and south respectively. Situated in the northeastern part of the district, Jiri lies approximately 188 kilometers from Kathmandu and 55 kilometers from Charikot, the district headquarter.

As per the National Population and Housing Census of 2078 conducted by the National Statistics Office, the municipality's population stands at 16,109 with women comprising 51.52% and men 48.48% of the total. The Dolakha district has a population of 172,767, with 48.46% being male and 51.54% female. Jiri municipality is home to a diverse population encompassing various ethnicities and religions. The largest ethnic group is Chettri, accounting for 28.14%, followed by the Jirel community at 21.66%, and Sherpas at 18%. Additionally, Tamangs make up 11.27%, with the remaining population comprising Newars, Sunuwars, Kamis, Damais/Dholis, Brahmins, and others.

Situated at the heart of the picturesque Jiri Valley, the Cattle Genetic Resource Centre (CGRC), formerly known as the Livestock Development Farm (LDF), is enveloped by Ward numbers 4, 5, and 6 of Jiri municipality. The center spans approximately 209 hectares of land across two locations: 84 hectares in Jiri and 125 hectares in Khimti, Gokulganga Village Municipality of neighboring Ramechhap district. Positioned at an altitude of 1935 meters above sea level, the center is located between the latitude of 27°38' N and longitude of 84°14' E. The allocation of land for various purposes is detailed in Table 1.

Table 1 Land area and its allocation for different use

S.N.	Description	Land in Ha			Remarks
		Jiri	Khimti	Total	
1	Office buildings, Animal sheds, road and supporting buildings	6	4	10	
2	Forest, river and streams	19	30	49	
3	Cultivated forage areas	20	10	30	
4	Seasonal and permanent pasture land	39	81	120	
	Total	84	125	209	

During the summer, Jiri experiences mild warmth, while winters bring chilling cold. According to the Köppen–Geiger climate classification system, Jiri's climate is categorized as "cwb." Here, "C" indicates a humid temperate climate, "w" denotes "wet,"

signifying significant precipitation throughout the year, and "b" represents summer, indicating a dry season during the summer months. The average annual temperature is 14.3°C, with the highest maximum temperature typically occurring in June (22.9° C) and the lowest minimum temperature in January (0.5° C). The average annual rainfall is 2142 mm, with the lowest precipitation recorded in December (4 mm) and the highest in July (577 mm). Detailed meteorological data for Jiri is provided in Table 2.

Table 2 Meteorology of Jiri

Particular	Months												Average / Total
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Avg. Temperature (°C)	7	8.3	12.2	15.8	17.2	19.3	19.5	19.4	18.1	15.8	11.1	7.8	14.3
Min Temperature (°C)	0.5	1.5	5.3	9.7	11.9	15.7	16.5	16.1	14.4	11	5.1	1.1	9.1
Max Temperature (°C)	13.6	15.1	19.2	22	22.6	22.9	22.6	22.7	21.8	20.6	17.1	14.5	19.6
Rainfall (mm)	16	9	31	71	157	365	577	515	300	88	9	4	2142.0

2 Historical Background

The name "Jiri" is believed to have originated from the predominant Jirel community inhabiting the area. The Jirel community shares similarities with the Tibetan caste evidenced by some linguistic similarities between Jirel and Tibetan languages. Historically, when Mount Everest was first identified, attempts to summit it were often initiated from Jiri. For many years, Jiri served as the primary gateway to Mount Everest, bustling with climbers, sturdy porters, and mules making their way towards the ascent. However, with the opening of the BP highway (Kathmandu-Khurkot-Diktel), which provided direct access from Kathmandu to Everest, Jiri's prominence as a tourist hub diminished. Nevertheless, it's noteworthy that on June 16, 1910, Tenzing Norge Hillary and Edmund Hillary, the first climbers to conquer Mount Everest, traversed through Jiri as part of their journey. While Sir Edmund Hillary of New Zealand famously accessed Everest through Jiri, it's worth noting that Swiss geologist Tony Hagen holds the distinction of being the first foreigner to explore Jiri.

2.1 Transforming livelihoods through livestock development in Jiri

Before embarking on his journey to the Everest base camp, Hagen spent several days in Jiri. Struck by the resemblance of Jiri's environment, geography, and climate to his homeland, he was particularly impressed by the warm hospitality extended by the local Jirel community. Despite the challenges of transportation and the evident poverty among the Jirel people, Hagen was moved by their kindness and began contemplating ways to improve their livelihoods. Recognizing the potential of Livestock husbandry to uplift the community, he sought financial and technical assistance from the government of his country. This led to the establishment of the Livestock Development Farm in Jiri in 2014 BS (1957 AD). The current Cow Genetic Resource Center stands as a testament to this initiative, continuing Hagen's legacy of empowering the local populace.

In addition to the animal husbandry unit, crop production and horticulture units were also established to enhance agricultural output, including fruits and vegetables, within the district. This multi-faceted approach aimed to bolster both livestock and crop yields. Consequently, in recognition of its expanded scope, the Livestock Development Farm underwent a name change to Jiri Agriculture Center in 2018 B.S. (1961 AD)

In pursuit of comprehensive livestock development initiatives, a dedicated cattle breeding section was established at Khimti Lahre (now Gogulganga Ga. Pa. Ward No. 1 Chuchure of Ramechhap District). This section aimed to improve the genetic potential of local cattle, particularly in terms of milk and milk products. Breeding bulls of the Brown Swiss breed were imported from Switzerland to facilitate crossbreeding, enhancing the overall quality and productivity of the local cattle population.

On Magh 23, 2020 BS, Jiri Agricultural Center was officially handed over to the Government of Nepal in a ceremony graced by His Majesty King Mahendra Bir Bikram Shahadev. Until this point, the project had been managed and financially supported by the Swiss government, with John Muller, a Swiss citizen, serving as the project chief. Post-2020 BS, the project transitioned to Nepali management, still with continued financial backing from Switzerland.

2.2 Diversifying Development Initiatives by Implementation of JMDP

To address the healthcare needs of livestock, a veterinary unit was established in Jiri in 2024 BS, later evolving into a fully-fledged Veterinary Hospital by 2026 BS. As agricultural development progressed, the local community began advocating for programs in additional vital areas such as education, health, forestry, local development, and land conservation. Responding to these demands, the Jiri Multipurpose Development Project (JMDP) was launched in 2027 BS (1970 AD) to coordinate and implement various initiatives comprehensively.

The Jiri Multipurpose Development Project (JMDP) stands as a significant endeavor facilitated by the Swiss government in Jiri. This comprehensive initiative aimed to tackle diverse developmental challenges in the region, spanning agriculture, livestock, healthcare, education, forestry, and local infrastructure development.

2.2.1 Key objectives of JMDP

1. Agricultural Development: The project focused on enhancing agricultural practices in the region, including the introduction of improved farming techniques, crop diversification, and the promotion of high-yielding crop varieties
2. Livestock Development: Livestock farming was a crucial component of the project, aiming to improve the quality of livestock breeds, enhance animal husbandry practices, and increase the productivity of the livestock sector
3. Health and Education: The JMDP sought to improve access to healthcare services and educational opportunities for the local population. This likely involved the establishment or enhancement of healthcare facilities and educational institutions in the area
4. Forestry and Environmental Conservation: The project likely included initiatives to promote sustainable forestry practices, combat deforestation, and conserve natural resources in the region
5. Local Development: The JMDP aimed to foster overall socio-economic development in the Jiri area, including infrastructure development, capacity building, and community empowerment initiatives

2.2.2 Initiation of Coordinated Livestock Development Program (CLDP)

As part of its initiatives, the Jiri Multipurpose Development Project (JMDP) also spearheaded the Coordinated Livestock Development Program (CLDP) across Ramechhap and Dolakha districts. This program, under the auspices of the JMDP, was designed to bolster the livestock sector within these 2 districts. This comprehensive program likely encompassed a range of interventions, including breed enhancement, animal healthcare provision, nutrition management, and the promotion of sustainable livestock farming practices

2.2.3 Key components of Coordinated Livestock Development Program

1. Livestock Breed Improvement: The CLDP likely emphasized the improvement of local livestock breeds through selective breeding, crossbreeding, or the introduction of superior genetic stock. This could involve initiatives to enhance traits such as milk production, meat quality, and disease resistance
2. Animal Health Service: The program likely provided veterinary care services to improve animal health and prevent the spread of diseases. This could include vaccination campaigns, disease surveillance, and the establishment of veterinary clinics or mobile health units.
3. Nutrition Management: CLDP may have promoted better livestock nutrition management practices to ensure animals receive adequate feed and nutrition. This could involve training farmers in proper feeding practices, promoting the cultivation of fodder crops, and providing access to supplementary feed resources
4. Capacity Building: The program likely focused on building the capacity of local farmers, extension workers, and veterinary professionals in livestock management and healthcare. This could include training workshops, demonstration farms, and the dissemination of educational materials.
5. Community Participation: CLDP may have involved active participation from local communities in program planning, implementation, and monitoring. This participatory approach helps ensure that interventions are culturally appropriate, sustainable, and responsive to the needs of the target population.
6. Monitoring and Evaluation: The program likely included mechanisms for monitoring progress and evaluating the impact of interventions on the livestock sector. This involves collecting data on key performance indicators, assessing outcomes, and making adjustments to program activities as needed.

Overall, the Coordinated Livestock Development Program under the Jiri Multipurpose Development Project was aimed to strengthen the livestock

sector in the target districts, improve the livelihoods of rural communities, and contribute to overall agricultural development and food security in the region.

2.2.4 Relocation of JMDP units and reinstating Jiri Agriculture Center

The central office of the JMDP was established in Kathmandu, with the formation of an Apex body comprising representatives from the relevant ministries. Field-level offices were subsequently set up in Jiri itself, leading to coordination challenges between the central and field offices. To address this, it was proposed that all agencies operate independently under the supervision of the respective ministries. Consequently, in 2028, it was decided to relocate these offices from Jiri to a different location. Following the relocation of other units, the Jiri Agricultural Center was reinstated, overseeing agricultural and Livestock service programs.

2.2.5 Relocation of Livestock and Agricultural units and reinstating Livestock Development Farm

The Jiri Agricultural Center was continued to work Until NFY 2041/42. In NFY 2042/43, the Veterinary Hospital formerly under the Jiri Agricultural Center was relocated to Charikot Dolakha. Presently, it operates as the Livestock Services Office under the Bagmati Province Government, serving Dolakha and Sindhupalchok districts with various livestock development programs.

Similarly, the Coordinated Livestock Development Program (CLDP) was transferred to Manthali Ramechhap to continue livestock service initiatives. Additionally, the crop development branch was relocated to then Kabre VDC, currently at Mainapokhari of Baiteswar Village Municipality, functioning as a Hill Crop Research Center under the Nepal Agricultural Research Council.

Similarly, during the same year, the horticulture development branch was relocated to then Botch VDC (now within Bhimeshwar Municipality). Consequently, units previously housed under the Jiri Agriculture Center were dispersed to different locations. Subsequently, the Livestock Development Farm was reinstated in place of the Jiri Agricultural Center. Furthermore, the cattle breeding section, originally established in Chuchure Khimti in 2018 BS (currently within Gokulganga Village Municipality of Ramechhap District), was incorporated into the framework of the Livestock Development Farm Jiri. With the relocation of all offices, it appears that the financial assistance provided to the Livestock Development Farm in Jiri by the Swiss government ceased. Consequently, livestock development activities are then funded through the budget allocated by the Nepalese government, and the farm continues to operate.

2.3 Transformation into Cattle Genetic Resource Center (CGRC) Jii

Following the state restructuring, in accordance with a decision by the Government of Nepal Council of Ministers, effective from the 1st of Shrawan, 2075, the Livestock Development Farm underwent a name change to the Cattle Genetic Resource Center (CGRC) Jiri. This rebranding was part of its integration into the Ministry of Agriculture and Livestock Development (Federal Government), specifically within the purview of the Department of Livestock Services and National Livestock Resource Management and Promotion Office (NLRMPO).

Before the establishment of the farm, the designated area for the Jiri farm was utilized as government pastureland, characterized by marshy terrain. Leveraging Swiss technical expertise, these marshlands were ingeniously transformed into arable land through the implementation of a sophisticated network of sub surface drainage systems, marking a pioneering endeavor in the region. Spanning the farm's center, the Jiri River served as a natural boundary, dividing its eastern and western sections, which respectively accommodated infrastructure and pastureland.

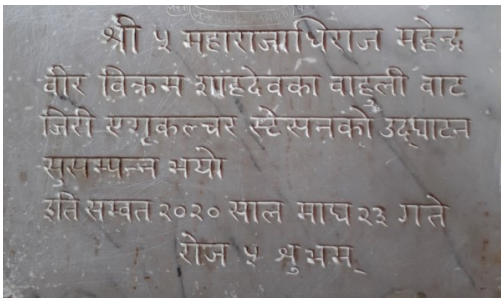


Figure 1: The monument inscription of inauguration ceremony

The names of chiefs who served farm from 2015 BS to so far is listed in Table 3.

Table 3 List of Farm Managers

S.N.	Name	Designation	Tenure		Remarks
			From	To	
1	Mr. John Muller	Joint Manager	2015	2020	
2	Mr. Prayag Dutta Tiwari	Chief Officer	2018	2024	
3	Dr. Heramba Raj Rajbhandari	General Manager	2022	2024	
4	Mr. Asta Dhoj Joshi	Chief Officer	2024	2026	
5	Mr. Iswari Raj Regmi	Chief Officer	2026	2028	
6	Mr. Shankar Bahadur Adhikari	Act. Chief Officer	2028	2030	
7	Mr. Ram Chandra Gupta	Chief Officer	2031	2031	
8	Mr. Ram Milan Upadhyay	Act. Chief Officer	2032	2038	

S.N.	Name	Designation	Tenure		Remarks
			From	To	
9	Mr. Shankar Bahadur Adhikari	Act. Chief Officer r	2038	2038	
10	Mr. Shatrughan Lal Pradhan	Act. Chief Officer	2038	2041	
11	Mr. Dala Ram Pradhan	Act. Chief Officer	2041	2041	
12	Mr. Renu Bahadur KC	Act. Chief Officer	2041	2042	
13	Mr. Ram Milan Upadhyay	Act. Chief Officer	2042	2042	
14	Mr. Renu Bahadur KC	For Chief Officer	2042	2045	
15	Mr. Yogendra Raut	Act. LDO	2045	2048	
16	Mr. Nathu Prasad Chaudhary	LDO	2048	2049	
17	Mr.P arsanna Kumar Koirala	LDO	2049	2049	
18	Mr. Sudarsan Prasad Regmi	LDO	2050	2050	
19	Mr. Mani Kumar Shrestha	LDO	2051	2052	
20	Mr. Yadunath Sharma	LDO	2052	2055	
21	Mr. Sudarsan Prasad Regmi	LDO	2055	2059	
22	Mr. Gyan Bahadur Thapa	LDO	2059/02/01	2062/02/30	
23	Mr. Chhabilal Adhikari	LDO	2062/02/31	2062/05/31	
24	Dr. Dinesh Prasad Parajuli	Senior LDO	2062/06/01	2063/09/04	
25	Mr. Chhabilal Adhikari	LDO	2063/09/05	2066/02/24	
26	Dr. Narayan Prasad Sharma	Senior LDO	2066/02/25	2068/03/23	
27	Mr. Tanka Kumar Shrestha	LDO	2068/03/24	2068/05/22	
28	Mr. Purna Prasad Manandhar	Senior LDO	2068/05/23	2069/10/19	
29	Dr. Dharma Raj Giri	LDO	2069/10/20	2069/12/30	
30	Dr. Sudhir Kumar Singh	Senior LDO	2070/01/02	2072/10/25	
31	Mr. Gana Bahadur Jirel	LDO	2072/10/26	2075/04/22	
32	Mr. Shankar Sah	Senior LDO	2075 /05/01	2076/09/27	
33	Mr. Shiva Prakash Acharya	Senior LDO	2076/10/06	2077/10/27	
35	Dr. Gopal Giri	Senior LDO	2078/01/06	to-date	

3 Objectives and Terms of Reference (ToR) of CGRC

The center is mandated to conserve, promote, utilize and improve the national genetic resources of the cattle. In addition, it has also mandate of adapting and transferring of improved breeding technologies to enhance the production and productivity of cattle. The major objectives of the center are as follows.

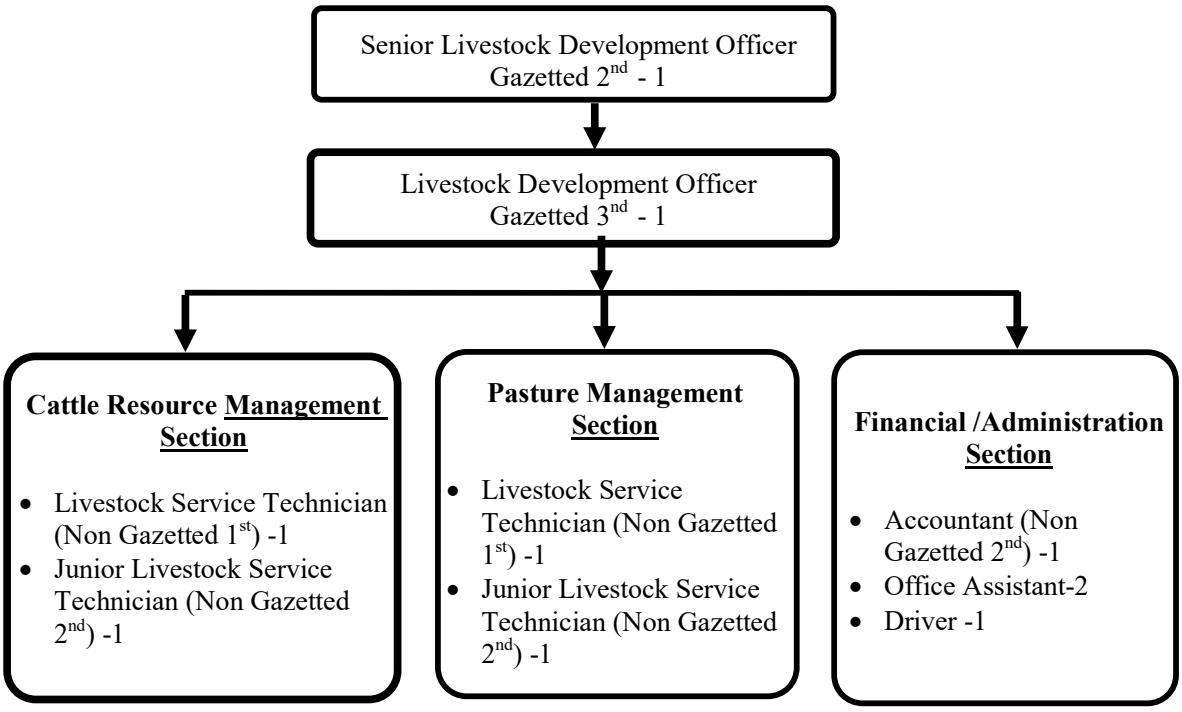
3.1 Objectives

- Develop, expand and manage the cattle nucleus herds at the national level.
- Develop, adapt and transfer the latest appropriate breeding technologies to improve the production and productivity of cattle at a national and international level.
- Adapt and transfer forage and pasture development programs and technologies suitable especially for alpine region.
- Conserve, promote and utilize the genetic resources of the cattle.

3.2 Terms of Reference (ToR)

- Establish and manage the nucleus and multiplier herds of cows focusing on national demand and farmers' choice
- Develop cattle Bull-Mother by choosing elite bull/mother.
- Maintain the purity of different breeds of cows.
- Develop and expand technologies that promote productivity of cattle.
- Improve breeds through the use of certified bulls proven sire and produce high-quality cows and bulls through the use of embryo production and transfer technologies.
- Develop proven bulls by the use of latest breeding technologies including progeny testing.
- Conduct outreach resource development programs by adopting latest cattle development techniques.
- Support to manage genetic biodiversity of cattle population of local breeds at the national level by practicing both in-situ and ex-situ conservation.
- Collaborate with the Nepal Agricultural Research Council (NARC), Universities and national as well as international institutions, research stations for adopting and expanding the technology related to cattle development.
- Cooperate with the local and regional level in coordination with National Livestock Resource Management and Promotion Office on issues related to cattle development.
- Conduct programs /seminars for capacity development of dairy farmers related to different issue of cattle improvement.
- Evaluate the performance of cattle by analyzing Data recorded in the center.
- Follow and expand the latest animal feed technologies at the national level.
- Develop and expand varieties of alpine grasses.
- Manage herds of exotic breeds of pig.

4 Organizational Chart



5 Major components

There are two major components on which the center is working at present. These are Cattle Resource Management Section,Pasture Management Sectionand Pig Management Section.

5.1 Cattle Resource Management Section (CRMU)

CGRC is one of the old and only one major research and production center for Jersey cattle in the country. During the early years of establishment, the farm was known as the resource center for Brown Swiss cattle. As demand for the Jersey cattle by dairy farmers increased, farm introduced Jersey cattle in NFY 2057/58 and all Brown Swiss cattle were completely replaced by Jersey and partially Holstein Frisian cattle. Now CGRC is primarily known as the resource center for Jersey cow. Cross bred breeding bulls, pure bulls, Jersey calves and heifers are distributed to the farmers of dairy pocket areas of the different districts. The bulls produced in the center are used for the genetic improvement of indigenous cattle by adopting natural breeding

practice in those areas where Artificial Insemination service for cattle is not available. At present female calves in the center are being kept as replacement stock and male calves are being sold to farmers through auction for use in natural breeding. The excess stocks of cows are being sold to farmers through auction annually.

The regular health inspection, drenching, vaccination programs is carried out in cows. In addition to this, serum and blood collection and its examinations is also carried out to prevent the cow from possible incidence of disease occurrence. Teat dipping of milking cows is also practiced regularly to prevent them from Mastitis. Special attention to pregnant as well milking cows is provided to prevent them from possible hazards.

5.1.1 Stock details of cow

Month wise total stock details is presented in Table 4. During NFY 2079/80, on an average, 125.3 cattle were reared on monthly basis ranging from lowest 107 in Kartik and highest 135 in Aswin month. 3.8 adult males were reared on monthly basis whose number varied from 34. Similarly, on an average 77.1 adult female were reared on month basis ranging from 75 to 81. Likewise the number of small male animals (male calves) ranged from 9 to 21 and that of small female animals (female calves) ranged from 18 to 35. The month-wise stock details of cattle at the end of NFY 2079/80 is presented in Table 4.

Table 4 Month wise Stock details of cattle at the end of NFY 2079/80

Month	Large male	Large female	Small male	Small female	Total
Shrawan	4	81	21	22	128
Bhadra	4	81	21	25	131
Aswin	4	81	20	30	135
Kartik	4	76	9	18	107
Marg	4	76	10	18	108
Poush	4	76	11	25	116
Magh	4	76	13	29	122
Falgun	4	76	15	32	127
Chaitra	4	76	16	37	133
Baisakh	4	76	18	34	132
Jestha	3	75	19	35	132
Aashad	3	75	20	35	133
Average	3.8	77.1	16.1	28.3	125.3

The details breed, name, age and parity of cattle reared in CGRC is presented in Table 5. In this Table the cows present from 2079/04/01 to 2080/03/31 are included. Due to practice of breeding cow with corresponding semen of breed, the production of cross bred are minimized and their number is dwindling year by year.

The number of JHF is reduced from 21 from previous year 2078/79 to only 16 in Fiscal Year 2079/80.

Table 5: Details of cattle reared in farm

S.N.	Tag no	Name of cow	Date of Birth	Parity
A)	Jersey (J) Breed			
I	Less than a year old			
1	22041	Rasila	2079/05/22	
2	22042	Samjhali	2079/05/21	
3	22046	Fuluma	2079/06/01	
4	22048	Tara	2079/06/13	
5	22050	Riya	2079/06/13	
6	22053	Sangita	2079/07/13	
7	22059	Safala	2079/09/12	
8	22060	Lila	2079/09/13	
9	22061	Sonika	2079/09/29	
10	22066	Nita	2079/10/25	
11	22073	Kanchan	2079/11/21	
12	22077	Puspanjali	2079/12/09	
13	22075	Lilamaya	2079/12/12	
14	22074	Ribana	2079/12/13	
15	22079	Ranjana	2079/12/10	
16	22081	Tanika	2079/12/27	
17	22088	Niku	2080/02/20	
II	Between 1 to 2 years old			
1	21975	Riyasa	2078/04/19	1
2	21981	Mira	2078/05/03	1
3	21980	Renu	2078/05/31	1
4	21993	Lekali	2078/09/22	1
5	22003	Rani	2078/09/27	1
6	22014	Purnima	2078/10/10	
7	22022	Rama	2078/12/05	1
8	22026	Kamini	2079/01/13	
9	22028	Lali	2079/01/14	1
10	22030	Samita	2079/01/23	1
11	22031	Kanchhi	2079/01/23	1
III	Greater than 2 years old			
1	22234	Tanki	2072/10/09	5
2	21997 (22206)	Sakira	2072/02/24	3

S.N.	Tag no	Name of cow	Date of Birth	Parity
3	22208	Nikita	2072/03/14	4
4	22202/22009	Trishna	2071/12/19	5
5	22299	Kunta	2074/04/15	5
6	22603	Kiran	2074/04/21	5
7	21994 (22265)	Chitra	2073/09/12	5
8	22271	Nabina	2073/10/27	5
9	22001 (9818)	Karishma	2067/01/10	8
10	22213	Suman	2072/05/16	6
11	21996 (71570)	Kaushila	2074/08/21	4
12	22498	Ranju	2074/12/26	4
13	21999 (71577)	Maina	2074/12/10	3
14	71569	Khairi	2074/08/22	4
15	21995 (71572)	Ramri	2074/11/26	4
16	71573/21906	Laxmi	2074/12/25	4
17	21998 (71575)	Nisha	2074/11/09	4
18	22215	Soniya	2072/06/12	5
19	22628	Uttisa	2074/12/05	4
20	22601	Isha	2074/04/18	5
21	22681	Talina	2076/06/04	3
22	22687	Lebina	2076/08/09	3
23	22676	Chameli	2076/04/02	3
24	22679	Safira	2076/05/19	2
25	22674	Kamdhenu	2076/03/07	4
26	22694	Kesari	2076/10/17	3
27	22671	Tasina	2076/02/21	2
28	22685	Sabina	2076/06/12	3
29	22004	Gauri	2076/04/12	2
30	22604	Mamata	2074/04/24	3
31	22643	Puspa	2075/04/23	3
32	22667	Bipana	2075/10/12	3
33	22669	Fulmali	2075/11/18	2
34	21908	Sumana	2076/11/22	1
35	21911	Krishna Kumari	2076/12/13	2
36	21914	Sonisha	2076/12/19	2
37	21916	Lal Kumari	2076/12/29	1
38	21918	Teriya	2077/01/05	2
39	22654	Tari "ka"	2075/11/26	3

S.N.	Tag no	Name of cow	Date of Birth	Parity
40	22659	Sonu	2075/11/12	3
41	21921	Himani	2077/02/06	2
42	21934	Sarala	2077/04/30	2
43	21926	Fulu	2077/03/15	2
44	21936	Menukala	2077/06/05	1
45	21936	Menukala	2077/06/05	2
46	21946	Tashina	2077/09/18	
47	21948	Furwajema	2077/10/06	1
48	21948	Furwajema	2077/10/06	1
49	21950	Manjila	2077/10/08	1
50	21953	Kunjana	2077/10/23	1
51	21951	Kamala	2077/10/24	
52	21957	Karina	2077/11/04	1
53	21959	Sujana	2077/11/25	1
54	21960	Sarina	2077/11/25	1
55	21966	Sabi	2078/02/01	1
56	21966	Sabi	2078/02/01	2
57	21968	Binita	2078/03/03	1
58	21968	Binita	2078/03/03	2
B)	Holstein Friesian (HF) Cow			
I		Lless than a year old		
1	22062	Manika	2079/10/03	
2	22076	Sangam	2079/12/16	
II		Between 1 to 2 year old		
1	21982	Bindu	2078/06/01	
2	22006	Uma	2078/09/21	1
3	22038	Anjana	2079/04/13	
4	002-1741-4738.4	K Queen 1	2079/01/31	1
5	002-1763-3869-3	K Queen 2	2079/03/30	
6	002-1739-1053-9	K Queen 3	2079/02/26	1
7	002-1777-4907-9	K Queen 4	2079/03/08	1
III		Greaterthan 2 years old		
1	21904 (238)	Sarita (kha)	2069/07/27	7
2	22401	Tari	2074/09/01	3

S.N.	Tag no	Name of cow	Date of Birth	Parity
3	22407	Sangita	2074/12/18	4
4	2548	Muna	2074/09/27	3
5	22405	Pokhreli	2074/09/29	4
6	2543	Mali	2074/10/21	4
7	22411	Radha	2075/01/01	5
8	22480	Ujeli	2074/11/26	3
9	21992 (71574)	Nauli	2074/11/21	4
10	21924	Manisha	2077/02/18	1
11	21945	Nirjala	2077/05/26	1
12	21945	Nirjala	2077/05/26	2
13	21941	Prabina	2077/09/17	1
14	21941	Prabina	2077/09/17	2
15	21969	Bibisa	2078/02/24	1
16	21969	Bibisa	2078/02/24	2
17	21952	Ramu	2077/10/24	1
18	21952	Ramu	2077/10/24	2
c)	Cross of J and HF (JHF)			
i	JHF greater than 2 year old			
1	22274	Mandakini	2066/11/29	8
2	113	Tetari	2068/10/16	6
3	22258	Furki	2068/06/22	11
4	22000 (22263) (9920)	Kumari	2070/10/20	6
5	22010 (9917)	Kritika	2070/11/30	6
6	21903 (244)	Reshmi	2070/01/15	7
7	21902	Lalita	2064/10/01	8
8	22695 (102)	Tashi	2068/10/24	5
9	21991/9817	Sarita	2067/11/06	7
10	9905	Menuka	2070/04/30	6
11	22259	Ful Kumari	2072/08/17	4
12	21955	Sanchita	2077/10/25	1
13	21979	Mandira	2078/05/31	
14	21983	Lolipop	2078/08/20	1
15	22015	Furi	2078/10/14	1
16	22055	Manushi	2079/07/28	

5.1.2 Composition of cattle reared in farm

Three main categories of breed of cattle are reared in CGRC Jiri are mainly of Jersey, Holstein Friesian and cross of both. Now attempts have been made to keep animals of only pure line i.e. Jersey and Holstein Friesian. The offspring of cross of Jersey and Holstein Friesian are being upgraded to Jersey pure line by inseminating cross bred female with foreign Jersey Semen. Now there are 65.65 % cows are of Jersey breed and 22.14 % are of Holstein Friesian and 12.21 are those of cross of Jersey and Holstein Friesian (JHF). The number of JHF is decreasing year by year due to initiative maintaining cattle of only pure line. The composition of animal breed and age-wise in NFY 2079/80 is presented in Table 6.

Table 6: Breed and age wise composition of cattle (female only) in CGRC Jiri

S.N.	Breed	No of animals				Composition %
		< 1 year	1 to 2 year	> 2 year	Total	
1	Jersey	17	11	58	86	65.65
2	HF	2	9	18	29	22.14
3	JHF	0	0	16	16	12.21
	Total	19	20	92	131	

5.1.3 Details of Auctioned Cattle

CGRC Jiri carries out auction of animal once annually. During fiscal year 2079/80, the auctionprogram was carried out in 1 Kartik 2079 during which altogether 31 cattle were auctioned. The main objectives of auction are to maintain constant herd size in the farm and to provide milking cows and calves to the farmers in reasonable price. The cows for auctioned are selected from the data base of individual cow maintained in the farm especially focusing on parameters like age, milk yield, and fertility of animal etc. The description of auctioned animal is presented in Table 7. NRs 7,39,000.00 revenue was generated from auction.

Table 7: Description of auctioned animal in NFY 2079/80

Breed	Bull	Adult cow	Male calf	Female calf	Total
Jersey	1	9	12	1	23
Holstein Friesian (HF)		1		1	2
Jersey XHF		6			6
Total	1	16	12	2	31

5.1.4 Calving status of Cattle

Altogether 61 calvings were recorded during this fiscal year whereas the number during previous fiscal (2078/79) was only 50, which is 22 % increase in calving rate. One cow was aborted and one cow had still birth during this fiscal year. Out of 59 normal calvings, 37 female calves and 22 male calves were. Among the animal calved, 43 were matured cow and 18 were heifers. When considering the breed of cow, 71.1 % were Jersey and 8.5. % were Holstein Friesian and 20.4 % were cross of Jersey and HF (JHF) . The status of calving of cattle in the farm is presented in Table 8.

Table 8: Calving status of cattle

Description	Adult cow			Heifer			Total			Grand total
	J	HFX	HF	J	HFX	HF	J	HFX	HF	
No of normal calving	28	4	9	14	1	3	42	5	12	59
Male calves born	13	3	5	8	1	2	20	4	7	31
Female calves born	15	1	4	6	0	1	22	1	5	28

5.1.5 Mortality of Calves and adults

During NFY 2079/80, a five and half years old Holstein Friesian cow died due to illness which had intermittent fever, anorexia and prostration. Similarly 8male and 9 female calves were died when small animal was taken into account. In previous year 8 (6 male and 2 female) calves had been died. In this Fiscal year the mortality of calves had increased from 16 to 28 % . The main symptoms of diseased calves were diarrhea and prostration followed by death. The month-wise and breed wise mortality pattern of calves is presented in Table 9.

Table 9 : Month-wise and breed wise mortality pattern of calves in NFY 2079/80

Month	Jersey		HF		JHF		Sub Total		Total
	M	F	M	F	M	F	M	F	
Shrawan									
Bhadra	1						1		1
Aswin									
Kartik	1	2					1	2	3
Marg									
Poush	1						1		1
Magh	1	1			1		2	1	3

Month	Jersey		HF		JHF		Sub Total		Total
	M	F	M	F	M	F	M	F	
Falgun									
Chaitra		1						1	1
Baisakh	1	2				1	1	3	4
Jesth			1		1	1	2	1	3
Aashad				1				1	1
Total	5	6	1	1	2	2	8	9	17

The year-wise trend of calf born and their mortality from the year 2062/63 to 2079/80 is presented in Table 10. The Table reveals that the calf mortality during this Fiscal Year (NFY 2079/80) is 28.8 % as compared to 16 % in the previous fiscal year 2078/79. The mortality is seemed higher in Kartik, Marg, Baisakh and Jestha month (Table 9).

Table 10 Year-wise trend of calves born and their mortality

S.N.	NFY	Calf Production			No of Dead calves	Mortality%
		Male	Female	Total		
1	2062/063	6	5	11	1	9.09
2	2063/064	16	12	28	3	10.71
3	2064/065	10	12	22	1	4.55
4	2065/066	14	16	30	3	10
5	2066/067	14	8	22	0	0
6	2067/068	25	7	32	0	0
7	2068/069	21	20	41	5	12.2
8	2069/070	8	11	19	2	10.53
9	2070/071	16	16	32	2	6.25
10	2071/072	8	15	23	2	8.7
11	2072/073	21	24	45	7	15.56
12	2073/074	10	9	19	2	10.53
13	2074/075	23	26	49	4	8.16
14	2075/076	12	19	31	9	29.03
15	2076/077	25	20	45	17	37.7
16	2077/078	27	21	48	13	27.1
17	2078/79	28	21	49	8	16
18	2079/80	31	28	59	17	28.8

5.1.6 AI and NI service and cattle bull distribution

The center has been providing AI service for cattle and buffalo in Jiri. During NFY, total of 229 AIs were carried out, in which 77 AIs were done in office cows, 148 AI in famers' cows. Only 4 buffaloes were artificially inseminated during this fiscal years. Due to unavailability of trained staffs, the center is being unable to provide insemination services in Khimti, instead it has kept both buffalo and cattle bull to provide natural service. The center has kept cattle bull to provide natural service according to demand of local farmers in Jiri also. Altogether 38 NI service was provided in cattle of farmers in Jiri. Similarly 42 cattle and 33 buffalo of local farmers of Khimti were provided NI service. The AI service was increased by 4 % in this fiscal year 2079/80 as compared to NFY 2078/79. Altogether 113 natural insemination services were provided to cattle and buffalo in both Jiri and Khimti. The month wise details of AI and NI service provided by center in Jiri and Khimti area is presented in Table 11.

Table 11 Month wise AI and NI services carried out in Jiri and Khimti in NFY 2079/80

Month	AI Service					NI Service				
	Office cattle (Jiri)	Farmers' catle (Jiri)	Total AI in cattle	Farmers' buffalo (Jiri)	Total AI	Farmers cattle (Jiri)	Farmers cattle (Khimti)	Total NI in Cattle	Farmers buffalo (Khimti)	Total NI
Shrawan	6	31	37	0	37		4	4	4	8
Bhadra	9	19	28	2	30		3	3	8	11
Aswin	12	21	33	2	35		2	2	6	8
Kartik	6	15	21		21	2	1	3	6	9
Marg	3	4	7		7	3	2	5	4	9
Poush	3	20	23		23	6	5	11	3	14
Magh	2	1	3		3	6	5	11	2	13
Falgun	8	3	11		11	11	4	15		15
Chaitra	8	8	16		16	7	6	13		13
Baisakh	7	13	20		20	3	4	7		7
Jestha	11	6	17		17	0	3	3		3
Aasad	2	7	9		9		3	3		3
Total	77	148	225	4	229	38	42	80	33	113

The year wise AI and NI service carried out by the center since NFY 2071/72 to NFY 2079/80 is presented in Table 12

Table 12 Year wise AI and NI Services and distribution of bull

NFY	AI Service (No)				NI No.		Bull Distribution No
	Office cattle	Farmer's cattle	Farmers buffalo	Total AI	Cattle	Buffalo	
2071/72				220			7
2072/73				134			4
2073/74				230			1
2074/75				180			1
2075/76				175			-
2076/77				130			-
2077/78	55	99	12	166	90	27	-
2078/79	106	114	8	228	137	73	3
2079/80	77	248	4	229	80	33	0

During NFY 2079/80, there was no demand of bull from breeding centers, although they were all informed of the availability of quality bull in the center on time.

5.1.7 Milk production

Although total milk production and average productivity of cow in the center had been increasing during past few years, the trend disrupted in this fiscal year 2079/80 due to decreased budget allocation and increased feed price. During this NFY 2079/80 the total milk production is 117.9 MT which is 13.4 %decrease than previous Fiscal Year 2078/79.

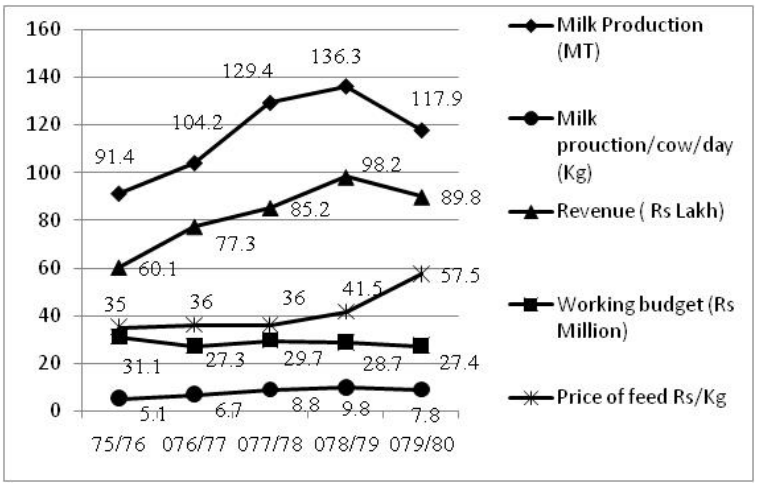


Figure 2: Year wise Milk Production, milk productivity, price of feed per kg, revenue generation and budget (working) allocation for the center

The productivity of cow has been decreased to 7.8 Kg/cow/day from 9.8 Lt in previous year. Which accounts 20.4% decrease when compared to productivity of cow in last fiscal year 2078/79. The decrease in milk production and productivity of cow is due to price hike of cattle feed together with decreased annual budget allocation for the office. Due to unavailability of adequate budget together with price hike of feed, center is compelled to provide lesser amount of feed to milch cattle than the amount used to be offered in previous Fiscal year. The price of feed per Kg during this Fiscal year Rs 57.5/kg excluding transport cost which was more than 38 % rise in price than in previous year. The average no of milking cows reared per day in the NFY 2079/80 is 40, whose no in the previous year 2078/79 was 39.7 which indicate almost equal when compared. For ease of understanding, the trend of milk production, revenue generation, price of per Kg/feed, productivity of animal and recurrent (working) budget allotted for the center has been presented in Figure 2.

Month wise total milk production, average no milking cow, average milk per day in a month, average milk productivity/day in a month, and the name of cow having highest yielder in particular day of month NFY 2079/80 is presented in Table 13.

Table 13: Month wise milk production, productivity and average no of cow

Month	Total milk (Kg)	Average Daily milk prod (Kg)	Highest yield in month (Kg)	Aver age no of cow	Average Producti vity Kg	Highest product ivity in month Kg	Highest yielding cows		
							Tag no	Name	Milk Productio n Kg /day
Shrawan	12536.4	448.8	473.2	44.9	10.0	10.5	21999	Maina	15.1
Bhadra	12684.2	420.3	460.3	44.6	9.4	10.2	22009	*Trishna*	17.1
Aswin	12002.1	396.9	420.3	45.6	8.7	9.1	22009	Trishna	15.2
Kartik	8799	310.4	359.8	37.8	8.2	9.4	22271	Nabina	12.5
Marg	7801.4	262.7	309.4	36.8	7.1	7.9	22271	Nabina	13.6
Poush	7567	263.3	295.8	37.6	7.0	8	2548	Muna	11.4
Magh	7071.1	252.4	284.9	35.0	7.0	8	21992	*Nauli*	14.7
Falgun	8336	286.4	367.6	38.6	7.4	9	22224	Tanki	14.4
Chaitra	9628.9	321.0	371.3	40.2	8.0	8.9	21904	Sarita Kha	12.6
Baisakh	8805.3	289.5	332.7	42.3	6.8	7.8	71569	*Khairi*	11.9
Jestha	10735.9	340.3	387.5	44.6	7.6	8.8	22009	Trishna	13.8
Aashad	11958.7	389.4	440.3	46.7	8.3	9.4	22480	Ujeli	12.8
Total/ Average	117926.1	331.8		41.2	7.8				

5.1.8 Breed wise lactation yield of Cow

In order to know the breed wise lactation yield of cow, Data was analyzed, and the average lactation yield was found highest in cross of Jersey and HF (JHF). The average yield of a herd was found to be 2203 Kg. Whereas the yield in cross of Jersey and HF was found to be 2124, Jersey was found to be 2160 Kg and Holstein Friesian was found to be 2445 Kg. The summary of breed wise lactation yield is presented in Table 14.

Table 14: Breed wise lactation yield of cow

S.N.	Breed	No of cows	Average milk yield (Kg)
1	Jersey (J)	45	2160
2	Holstein Friesian (HF)	13	2445
3	Cross of J and HF (JHF)	14	2124

5.1.9 Month wise Comparison of calving no and sex ratio of calves born in 5 years

To identify the trend of calving and sex ratio of calves born, Data from NFY 2074/75 to 2079/80 was tabulated and studied. It was found that Kartik and Marg months are very critical and less no of calving occurred during these months, During 2079/80, 59 calves were born, in which 22 are male and 37 were female. The percentage of Female were 62.7 where as percentage of male was 39.3. When all the 6 Fiscal year were considered, the the male and female percentage is 51.9 and 48.1 % respectively. The month wise comparison of calving and birth record of calves born in 6 NFY is presented in Table 15.

Table 15: Month wise calving and birth of male and female calves over 5 years

Month	2074/75		2075/76		2076/77		2077/78		2078/79		2079/80		Total		
	M	F	M	F	M	F	M	F	M	F	M	F	M	F	Total
Shrawan	6	6	2	2	0	1	4	2	1	1	0	1	13	13	26
Bhadra	6	4	4	1	4	1	2	2	2	2	1	5	19	15	34
Aswin	1	2	3	0	0	5	2	4	3	2	0	5	9	18	27
Kartik	2	0	2	0	1	0	1	0	2	1	2	3	10	4	14
Marg	0	1	0	0	0	1	0	0	1	1			1	3	4
Poush	1	1	1	1	2	0	2	1	2	3	2	4	10	10	20
Magh	0	0	2	3	2	2	2	5	9	2	2	4	17	16	33
Falgun	2	1	1	3	5	1	2	3	2	0	2	4	14	12	26
Chaitra	1	2	0	3	5	3	2	0	3	1	2	7	13	16	29
Baisakh	0	1	1	0	1	1	2	1	2	5	4	2	10	10	20
Jesth	2	4	0	2	4	2	1	3	3	0	4	1	14	12	26
Aashad	4	2	0	2	4	2	5	1	2	0	3	1	18	8	26
Total	25	24	16	17	28	19	25	22	32	18	22	37	148	137	285

5.1.10 Comparison of Age at First Calving and Calving interval

18 heifers were calved during NFY 2079/80, this number during NFY 2078/79 was 13. From the analysis of these 18 heifers, the *age at first calving* was found to be 865.7 days (28.8 Month) as compared to 830.2. days (27.7 month) in NFY 2078/79. It is increase of 35.5 days (1.22 month) which accounts 4.3% increase in the age at first calving than previous fiscal year (Table 16).

Table 16: Age at first calving

S.N.	Tag no	Name of Heifers	Date of Birth	Breed	Calving date	Age at first calving (Days)
1	21938	Sashi	2077/05/17	J	2079/11/08	905
2	21945	Nirjala	2077/05/26	HF	2079/09/04	831
3	21941	Prabina	2077/09/17	HF	2080/01/25	860
4	21940	Tamu	2077/06/05	JHF	2079/09/12	829
5	21952	Ramu	2077/10/24	HF	2080/02/17	846
6	22679	Safira	2076/05/19	J	2079/05/23	1099
7	21908	Sumana	2076/11/22	J	2079/07/13	963
8	21911	Krishna Kumari	2076/12/13	J	2079/06/23	922
9	21914	Sonisha	2076/12/19	J	2079/09/29	1014
10	21918	Teriya	2077/01/05	J	2079/07/11	917
11	21921	Himani	2077/02/06	J	2079/05/21	834
12	21934	Sarala	4/31/2077	J	2079/09/12	876
13	21926	Fulu	2077/03/15	J	2079/06/01	808
14	21936	Menukala	2077/06/05	J	2079/07/04	759
15	21953	Kunjana	2077/10/23	J	2080/01/24	823
16	21959	Sujana	2077/11/25	J	2080/02/20	817
17	21966	Sabi	2078/02/01	J	2080/02/07	736
18	21968	Binita	2078/03/03	J	2080/03/15	743
Average Age at first calving						865.7 Days (28.8 months)

In the same way 43 cows other than heifers were calved in the center in NFY. From the study of calving of 43 cows, (Table 18) average calving interval was found to be 400.8 days (13.3 month) as compared 452.1 days (15.1 month) days in previous year which is decrease of 51.3 days (1.7 month) and which accounts 11.3% decrease in calving intervals. as compared to previous fiscal year. The calving intervals of cows are presented in Table 17.

Table 17 Calving intervals

S.N.	Tag no.	Name of cow	Date of Birth	Breed	Parity	Calving date	Date of previous calving	Calving interval
1	22234	Tanki	2072/10/09	J	4	2079/11/21	2078/10/28	389
2	21904	Sarita (kha)	2069/07/27	HF	6	2079/12/01	2078/10/12	415
3	21994	Chitra	2073/09/12	J	4	2079/12/14	2079/01/29	319
4	22000	Kumari	2070/10/20	JHF	6	2079/12/21	2078/10/20	427
5	22010	Kritika	2070/11/30	JHF	5	2079/04/25	2078/01/16	464
6	2548	Muna	2074/09/27	HF	3	2079/07/28	2078/06/01	422
7	22601	Isha	2074/04/18	J	3	2080/03/28	2079/05/06	327
8	22676	Chameli	2076/04/02	J	2	2079/11/17	2078/10/28	385
9	22643	Puspa	2075/04/23	J	2	2079/12/09	2078/10/10	425
10	22669	Fulmali	2075/11/18	J	2	2079/08/16	2078/07/01	411
11	22654	Tari "ka"	2075/11/26	J	2	2079/06/13	2078/04/19	420
12	22213	Suman	2072/05/16	J	5	2080/01/20	2079/01/23	362
13	22685	Sabina	2076/06/12	J	2	2080/02/32	2079/02/31	358
14	22626	Kasturi	2074/12/04	J	3	2079/06/17	2077/10/24	601
15	22208	Nikita	2072/03/14	J	4	2080/02/20	2078/11/20	457
16	22009	Trishna	2071/12/19	J	4	2079/05/22	2078/04/09	408
17	21905	Kunti	2067/0306	JHF	7	2079/10/20	2078/07/18	459
18	22299	Kunta	2074/04/15	J	4	2079/11/29	2079/01/08	325
19	22603	Kiran	2074/04/21	J	4	2079/11/21	2078/12/13	343
20	22258	Furki	NA	JHF	10	2079/09/12	2078/10/14	333
21	22271	Nabina	2073/10/27	J	4	2079/07/24	2078/05/31	419
22	22401	Tari	2074/09/01	HF	3	2079/05/31	2078/05/20	376
23	22498	Ranju	2074/12/26	J	3	2079/12/10	2078/12/05	370
24	22406	Subi	2075/01/21	N/A	2	2079/06/11	2078/03/03	465
25	22407	Sangita	2074/12/18	HF	3	2079/12/16	2078/12/12	369
26	71569	Khairi	2074/08/22	J	3	2079/12/13	2078/07/23	508
27	22405	Pokhreli	2074/09/29	HF	3	2079/04/13	2078/06/01	316
28	2543	Mali	2074/10/21	HF	3	2079/10/03	2078/03/28	554
29	21995	Ramri	2074/11/26	J	3	2080/01/10	2078/09/27	470
30	21906	Laxmi	2074/12/25	J	3	2079/12/12	2078/06/06	554
31	21998	Nisha	2074/11/09	J	3	2079/10/25	2078/11/24	335
32	22411	Radha	2075/01/01	HF	4	2080/01/07	2079/02/04	337
33	22480	Ujeli	2074/11/26	HF	3	2080/03/01	2078/09/21	527
34	21992	Nauli	2074/11/21	HF	3	2079/10/14	2078/10/08	371

S.N.	Tag no.	Name of cow	Date of Birth	Breed	Parity	Calving date	Date of previous calving	Calving interval
35	21902	Lalita	2064/10/01	JHF	8	2080/01/20	2078/08/20	518
36	22601	Isha	2074/04/18	J	4	2080/03/28	2079/05/06	327
37	22681	Talina	2076/06/04	J	2	2079/12/27	2078/12/13	379
38	22687	Lebina	2076/08/09	J	2	2079/09/13	2078/09/22	356
39	22674	Kamdhenu	2076/03/07	J	3	2080/03/02	2079/07/06	240
40	22694	Kesari	2076/10/17	J	2	2079/11/17	2079/01/03	318
41	22671	Tasina	2076/02/21	J	2	2079/05/27	2078/05/31	361
42	22667	Bipana	2075/10/12	J	2	2079/10/26	2078/10/28	363
43	22659	Sonu	2075/11/12	J	2	2079/10/15	2078/10/01	379
Average Calving interval (Days)								400.8

5.1.11 Milk Quality in NFY 2079/80

The Ultrasonic Milk Analyzer is used to analyze quality of milk produced in the center. Milk quality of each milking cow is tested once in a month. Average SNF % was found highest 10.9 % in Poush, whereas it was highest in Magh and Poush (11.0 %) in last year 2078/79. Annual average SNF % was found to be 10.7 %. The annual average fat % was found to be 4.4 similar as that of previous year. Average protein content was 3.9 %. Average PH and conductivity was found to be 6.1 and 5.2 respectively. Several parameters are almost similar as that of previous year except the no of sample size. The quality of milk parameters and their values analyzed by Ultrasonic milk Analyzer is presented in Table 18.

Table 18: Milk quality analysis

S. N.	Month	No of sample (No of milking cows)	Average							Remarks
			Fat %	SNF %	Density	Protein %	Lactose %	PH	Conductivity	
1	Shrawan	47	4.1	10.7	36.1	4	5.7	6.1	5.3	
2	Bhadra	46	4.1	10.4	35.7	3.9	5.8	6	5.4	
3	Aswin	48	4.4	10.6	36.1	3.9	5.8	6	5.3	
4	Kartik	39	4.4	10.6	36.4	3.9	6	6.2	5.3	
5	Marg	39	4.4	10.7	36.8	3.9	5.8	6.2	5.3	
6	Poush	35	4.4	10.9	36.3	4.1	5.9	6.2	5.4	
7	Magh	35	4.2	10.6	36.7	3.9	5.8	6.1	5.3	
8	Falgun	40	4.1	10.8	37.8	4.1	5.8	6	5.3	
9	Chaitra	40	4.3	10.6	36.1	3.9	5.9	6.1	5.4	
10	Baisakh	42	4.3	10.7	36.1	3.8	5.9	6.2	5.4	
11	Jestha	48	4.4	10.6	36.5	3.8	5.8	6.1	5.2	
12	Aashad	48	4.5	10.4	36.8	4	6	6.1	5.4	
Annual Average			4.4	10.7	36.6	3.9	5.9	6.1	5.2	

5.1.12 Ranking of cow

The milk production of individual cow is recorded in daily basis in the center. The total milk production of individual cow is adjusted to 305 days and cows were ranked on the basis of phenotypes (milk yield). Accordingly 58 cows were categorized from highest milk yielder to lowest milk yielder. Nikita is the best cow in the the herd whose milk yield is 3690.7 Kg. But in the last year Reshmi was the topper in milk production whose yield was only 4723.7 Kg. The number of cows whose yield is greater than 3000 has drastically increased in recent years. In the NFY 2079/80 there were 12 cows exceeding 3000 Kg milk per lactation. The highest milk yielders to lowest yielder cow are presented in Table 19.

Table 19 Ranking of cow on the basis of milk production

S. N.	Name of cow	Breed	Tag no	Date of birth	Coat color	Milking days	Milk Yield (Kg)	Adjusted Lactation yield Kg
1	Nikita	J	22208	2072/03/14	Red	104	1258.48	3690.7
2	Ujeli	HF	22480	2074/11/26	B&W	399	4574.62	3496.9
3	Sangita	HF	22407	2074/12/18	B&W	281	3204.38	3478.1
4	Furki	JHF	22258	2068/06/22	B&W	258	2769.28	3273.8
5	Ramri	J	21995	2074/11/26	Reddish brown	439	4696.32	3262.8
6	Ranju	J	22498	2074/12/26	Red	253	2674.56	3224.3
7	Kritika	JHF	22010	2070/11/30	B&W	387	4075.95	3212.3
8	Kiran	J	22603	2074/04/21	Red	281	2940.9	3192.1
9	Nauli	HF	21992	2074/11/21	B&W	256	2645.34	3151.7
10	Nabina	J	22271	2073/10/27	Black	359	3651.98	3102.7
11	Tanki	J	22234	2072/10/09	Red	315	3202.8	3101.1
12	Kunti	JHF	21905	2067/03/06	B&W	320	3177.4	3028.5
13	*Soniya*	J	22215	2072/06/12	Red	349	3408.64	2978.9
14	Trishna	J	22009	2071/12/19	Red	307.5	2908.08	2884.4
15	Chitra	J	21994	2073/09/12	Brown	264	2489.2	2875.8
16	Isha	J	22601	2074/04/18	Red	247	2326.6	2872.9
17	Kumari	JHF	22000	2070/10/20	B&W	407	3820.9	2863.3
18	Karisma	J	22001	2067/01/10	Red	264	2470.6	2854.3
19	Fulmali	J	22669	2075/11/18	Red	339	3147.36	2831.7
20	Mali	HF	2543	2074/10/21	B and W	469	4302.52	2798.0
21	Sarita kha	HF	21904	2069/07/27	B&W	341.5	3124.66	2790.7
22	Lalita	JHF	21902	2070/01/15	B&W	387	3513.36	2768.9
23	Laxmi	J	21906	2074/12/25	Faint Red	457	4117.43	2748.0
24	Tari	HF	22401	2074/09/01	B&W	261	2345.9	2741.4

S. N.	Name of cow	Breed	Tag no	Date of birth	Coat color	Milking days	Milk Yield (Kg)	Adjusted Lactation yield Kg
25	Sujana	JHF	21959	2077/11/25	B&W	31	274.9	2704.7
26	Nisha	JHF	21998	2074/11/09	B&W	306	2669.3	2660.6
27	Uttisa	J	22628	2074/12/05	Faint Red	373	3238.05	2647.7
28	Chameli	J	22676	2076/04/02	Red	378	3252.98	2624.8
29	Radha	HF	22411	2075/01/01	B&W	302	2587.6	2613.3
30	Suman	J	22213	2072/05/16	Red	339	2836.74	2552.2
31	Kunta	J	22299	2074/04/15	Red	328	2681.66	2493.6
32	Khairi	J	71569	2074/08/22	Red	333	2716.2	2487.8
33	Maina	JHF	21999	2074/12/10	Black	337	2720.95	2462.6
34	Bipana	J	22667	2075/10/12	Raddish Brown	294	2353.88	2442.0
35	Krishna Kumari	J	21911	2076/12/13	Red brown	272	2120.5	2377.8
36	Prabina	HF	21941	2077/09/17	B&W	67	521.7	2374.9
37	Puspa	J	22643	2075/04/23	Black	292	2238.42	2338.1
38	Nirjala	HF	21945	2077/05/26	B&W	206	1568.1	2321.7
39	Kesari	J	22694	2076/10/17	Red	280	2130.28	2320.5
40	Tamu	J	21940	2077/06/05	Red	198	1492	2298.3
41	Kunjana	J	21953	2077/10/23	Red	67	476.1	2167.3
42	Fulu	J	21926	2077/03/15	Red	299	2111.2	2153.6
43	Talina	J	22681	2076/06/04	Red	337	2308.66	2089.4
44	Safira	J	22679	2076/05/19	Red	308	2091.8	2071.4
45	Sabina	J	22685	2076/06/12	Red	355	2408.9	2069.6
46	Sarala	J	21934	2077/04/31	Red	198	1332.2	2052.1
47	Teriya	J	21918	2077/01/05	Red brown	258	1694.4	2003.1
48	Lebina	J	22687	2076/08/09	Red	280	1826.84	1990.0
49	Sumana	J	21908	2076/11/22	Red	255	1644.5	1967.0
50	Sabi	J	21966	2078/02/01	Raddish Brown	53	334.5	1925.0
51	Kamdhenu	J	22674	2076/03/07	Red	499.0	3136.7	1917.2
52	Sonu	J	22659	2075/11/12	Red	299.5	1880.12	1914.6
53	Tari Ka	J	22654	2075/11/26	Red	364	2267.1	1899.6
54	Ramu	J	21952	2077/10/24	Red	45	272.2	1844.9
55	Himani	J	21921	2077/02/06	Black	308	1762.3	1745.1
56	Menukala	J	21936	2077/06/05	Red	265	1424.2	1639.2
57	Sashi	J	21938	2077/05/17	Red	124	646.8	1590.9
58	Soniksha	J	21914	2076/12/19	Red	124	564.8	1389.2

5.2 Pig Production Unit

The center is maintaining nucleus herd of exotic breeds of pig which consists up pure line of Landrace (L) and Yorkshire (Y) along with their crossbreds. The produced piglets are being distributed as per the demand of the farmers. The demand for L and Y piglets is higher in Dolakha and Ramechhap districts.

5.2.1 Stock details of pig

At the end of NFY 2079/80 there were 74 pigs among which 16 were sows, 1 boar of Landrace, 2 boar of Yorkshire. Hence there are total 3 boars. There were 6 gilt, out of which 5 are of Landrace and 1 is of Yorkshire. There were total of 49 piglets of Landrace, Duroc and their crosses. When breed is considered, there were 35 pig of Landrace, 12 of Duroc, 6 of Yorkshire and 21 were of cross bred (DLY) (Table 20).

Table 20: Stock of pig at the end of NFY 2079/80

S.N.	Categories of pig	Unit	L	D	Y	Cross	Total	%
1	Sow	No	9	2	3	2	16	21.6
2	Boar	No	1		2	0	3	4.1
3	Gilt	No	5		1		6	8.1
4	Piglets	No	20	10		19	49	66.2
	Total		35	12	6	21	74	100

5.2.2 Production of piglets and their Mortality before weaning

During Fiscal year 2079/80, total of 128 piglets were born and out of this 19 piglets died before weaning. The overall mortality of piglet during this fiscal year was 14.8 % whereas mortality during previous fiscal year was 8.4 %, higher during NFY 2079/80. When month wise pattern of piglet death over 4 years' Data was compared, the lowest mortality was found in Falgun month (4.8 %) followed by Kartik and Poush month (5.2 and 5.5 %) respectively. The highest mortality was found during Bhadra and Jestha month (33.3 and 26.8 % respectively). When birth of piglet was observed there was higher piglet birth during the month of Baisakha which is followed by Falgun and Shrawan month. The years wise and month wise production status of piglets and their mortality before weaning is presented in Table 21.

Table 21: Year wise and month wise piglet births and their mortality

Month	2076/77		2077/78		2078/79		2079/80		Total		
	Born	Death	Born	Death	Born	Death	Born	Death	Born	Death	Mortality
Shrawan		0	10	2	59	4	10		79	6	7.6
Bhadra	27	9	0	0					27	9	33.3
Aswin	21	8	39	0	8				68	8	11.8
Kartik	0	0	30	1	20	2	8		58	3	5.2
Marg	32	1	5	0			22	6	59	7	11.9
Poush	24	3	0	0	19	0	12		55	3	5.5
Magh	12	3	0	0	21	2	9		42	5	11.9
Falgun	0	0	55	1	5		24	3	84	4	4.8
Chaitra	5	0	0	0	19	3			24	3	12.5
Baisakh	81	14	19	0			11		111	14	12.6
Jesth	10	2	23	10	23	3			56	15	26.8
Aashad	0	0	0	0	17	2	32	10	49	12	24.5
Total	212	40	181	14	191	16	128	19	712	89	12.5
Mortality %		18.9		7.7		8.4		14.8			

Similarly month wise and sex wise production of piglets and their mortality and distribution during NFY 2079/780 is presented in Table 22. 54 farmers or beneficiary organization purchased 101 piglets in this fiscal year.

Table 22: Month wise piglet production, sex wise death pattern and their distribution

S.N.	Month	No of piglet born			No of piglet dead			No of piglet distributed
		Male	Female	Total	Male	Female	Total	
1	Shrawan	6	4	10				14
2	Bhadra							15
3	Aswin							0
4	Kartik	4	4	8				0
5	Marg	7	15	22	4	2	6	1
6	Poush	5	7	12				14
7	Magh	5	4	9				9
8	Falgun	16	8	24	1	2	3	12
9	Chaitra							26
10	Baisakh	7	4	11				1
11	Jestha							9
12	Ashad	21	11	32	4	6	10	0
	Total	71	57	128	9	10	19	101

The production and distribution of piglet from NFY 2070/71 to 2079/80 is presented in Table 23.

Table 23: Year wise production, death and distribution of piglet

S.N.	Year	Production (No)	Dead (No.)	Distribution (No)
1	2070/71	210		190
2	2071/72	210		168
3	2072/73	161		180
4	2073/74	154		81
5	2074/75	152		150
6	2075/76	209		148
7	2076/77	212	40	169
8	2077/78	191	15	152
9	2078/79	191	16	141
10	2079/80	128	19	101

5.2.3 Age at first farrowing

During NFY 2079/80, 3 gilt were farrowed which were brought from LBO Pokhara. The age at first farrowing was found to be 400.6 days (13.3 Month). Last year no single gilt was farrowed. The average age at first farrowing is presented in Table 24.

Table 24: Age at first farrowing

S.N.	Tag no	Date of Birth	Date of farrowing	Age at first Farrowing
1	811	2078/10/08	2079/10/27	384
2	824	2078/10/08	2079/11/23	411
3	806	2079/02/16	2080/03/29	407
	Age at first farrowing			400.6

5.2.4 Farrowing interval

During NFY 2079/80, 7 sows (other than gilt) farrowed 100 times and their respective farrowing interval was calculated. The average farrowing interval was found to be 172.9 days (5.7 month), which was 186.9 days (6.2 month) in previous year 2078/79. This was 7.5 % decrease in farrowing interval indicating positive gain in Sows. The no of sows and their respective farrowing details is presented in Table 25.

Table 25: Farrowing interval

S. N.	Tag no	Date of Birth	Parity	Farrowing date BS	Date of Preceding Farrowing BS	Farrowing interval
1	486 (7446)	2076/01/15	6	2079/08/06	2079/03/01	158
2	887	2075/11/04	8	2079/10/21	2079/05/28	146
3	887	2075/11/04	9	2080/03/28	2079/10/21	159
4	823	2076/08/15	4	2079/04/25	2078/11/10	166
5	822	2076/08/15	5	2079/11/18	2079/05/12	190
6	481(453/ 883)	2073/05/14	10	2079/09/05	2079/03/29	160
7	481(453/ 883)	2073/05/14	11	2080/03/06	2079/09/05	183
8	483 (19045)	2076/02/08	6	2079/07/24	2079/02/17	157
9	483 (19045)	2076/02/08	7	2080/01/07	2079/07/24	167
10	485	2076/02/08	2	2079/11/11	2079/03/13	243
	Average FI					172.9

5.2.5 Major Technical Parameters in Pig

Major technical parameter from pig from year 2073/74 to 2079/80 is presented in Table 26. During NFY 2079/80 10 sows farrowed 13 times giving 128 live piglets. The overall litter size was 9.8 which is greater than last year record. 19 piglets died before weaning with mortality 14.8 %, which slightly greater than previous year (NFY 2078/79). The average farrowing interval is found to be 172.9 days (5.7 month) and the age at first farrowing is 400.6 days (13.3) month.

Table 26 : Major technical parameters in Pig

S. N.	NFY	Number of Farrowing	No of piglet born alive	Litter size	No of piglet died before weaning	Piglet mortality %	The age at first farrowing Days	Average farrowing interval
1	NFY 2073/74	18	150	8.3	30	20		
2	NFY 2074/75	12	152	12.7	27	12.1	366	193.7
3	NFY 2075/76	16	209	13.1	41	19.3	369	219.1
4	NFY 2076/77	14	212	15.1	40	18.9	347.9	157.0
5	NFY 2077/78	26	181	7.0	15	8.29	410.6	199.4
6	NFY 2078/79	20	191	9.6	16	9.5	NA	186.9
7	NFY 2079/80	13	128	9.8	19	14.8	400.6	172.9

5.3 Pasture Management Section (PMS)

The center has around 30 Ha (20 Ha in Jiri and 10 Ha in Khimti) of cultivated forage area and 120 Ha (39 Ha in Jiri and 81 Ha in Khimti) permanent pasture area for grazing cattle (Table1).Permanent pasture land constitutes Ryegrass (*Lolium perenne*), Paspalum (*Paspalum dilatatum*), Kikuyu (*Pennisetum clandestinum*), White clover (*Trifolium repens*), Dubo (*Cynolon dactylon*) and other local grasses. The cultivated forage constitutes Oat (*Avena sativa*), Maize (*Zea mays*), Setaria (*Setaria speculata*) and Napier (*Pennisetum perpureum*).

During this NFY 2079/80, about 220 Kg of forage seed was produced. Out of which, Paspalum (*Paspalum dilatatum*) accounts 150 Kg and Ryegrass (*Lolium perenne*) accounts 70 Kg (Table 27).

Table 27: Details of forage seed production and distribution

S.N.	NFY	Production (Kg)	Distribution (Kg)
1	2070/71	270	270
2	2071/72	280	280
3	2072/73	300	300
4	2073/74	305	220
5	2074/75	258	258
6	2075/76	402	259
7	2076/77	190	95
8	2077/78	127.1	60
9	2078/79	184.5	184.5
10	2079/80	220	220

Cattle are allotted 7 to 8 hours of grazing time daily in the pasture year-round. After milking, they are promptly taken to pasture lands and returned to the shed for evening milking. Grass is collected through a cut-and-carry system by workers, then chaffed and allowed to wilt overnight before being provided to the cattle the following evening. During the dry season, particularly from Marg to Baisakh (approximately 6 months), pasture lands are largely devoid of green grass. To compensate, cattle are fed hay, maize silage mixed with cultivated rye grass, oat, and vetch green fodder during this period.

Concentrate ration is given to the cattle during evening milking. In the morning milking session, animals are provided with Khole, a mixture of cracked maize and mustard cake cooked with water. Special attention is dedicated to calves, milking cows, pregnant cows, and sick animals.

The center operates a "Hydroponic Fodder Production Unit" to address feed deficits during the dry season. This unit, established in NFY 2075/76, has a production capacity of 500 kg of forage per day. The produced forage is primarily offered to milking and pregnant cows after being mixed with hay. While some positive impacts on milk production, in terms of quantity and quality, have been observed, a comprehensive study on the exact effects and impacts of hydroponic forage is yet to know.

During NFY 2079/80, the Hydroponic unit produced 310 kg of fodder daily. It operates from the month of Marg to Baisakh. The unit serves as a demonstration of new animal feeding technology for the public and students visiting the center.

5.4 Outreach programs

5.4.1 Cattle outreach program

To enhance farmers' income and improve cattle genetic resources, the center has initiated a cattle outreach program. This program involves the establishment of cattle breeder groups in various municipalities and village municipalities across Dolakha and Ramechhap districts. Presently, five cattle breeder groups have been established. The center provides support to these groups through various programs on an annual basis. Further details regarding the cattle breeder groups in the outreach areas are outlined in Table 28.

Table 28 : Details of cattle breeder groups of outreach areas

S.N.	Name of group	Address	Date of Formation	Group member			Saving fund NRs
				Male	Female	Total	
1	Hariyali Dhaule cattle breeder group	Gokulganga 1, Garjyang, Ramechhap	2073/06/11	13	12	25	125000
2	Setidevi cattle breeder group	Dhunge, Jiri	2074/04/10	10	15	25	60000
3	Mathillo Sikri Tatha Chepte cattle breeder group	Sikri, Jiri 6 and 7	2074/75	20	5	25	44000
4	Jireswory cattle breeder group	Kune, Jiri 4, Dolakha	2074/75	7	18	25	15000
5	Tamakoshi cattle breeder group	Tamakoshi 3, Jafe, Dolakha	2074/75	13	13	26	13000

All of these groups were established during NFY 2074/75, with the exception of the Hariyali Dhaule cattle breeder group, which was formed during NFY 2073/74. In NFY 2074/75, partial grants were allocated to all these groups to facilitate the purchase of 75 milking cows. Additionally, various supportive activities were undertaken, including cow-keeping training, distribution of fodder tree saplings and alpine grass seeds, vaccination, cow insurance, farmer visit programs, and grants for cowshed improvement.

In the fiscal year NFY 2079/80, farmers received additional support in the form of anthelmintics, mineral mixtures, and oat grass seeds.

5.4.2 Pig outreach program

The center launched a pig outreach program in NFY 2073/74 with the aim of boosting farmers' income and providing access to improved pig breeds. As part of this initiative, the center extends assistance to pig breeder groups for pig keeping. Below are the details of these groups.

a. Nigale Pig Breeder Group, Jiri-8, Dolakha

The pig breeder group was established in NFY 2073/74 with 25 members and has since accumulated NRs 35,000.00 in its savings fund up to NFY 2079/80. In NFY 2074/75, the group received 27 piglets (25 females and 2 males) free of charge, alongside other supportive activities including drenching, vaccination, and training programs. These follow-up programs, such as drenching and vaccination, have been consistently conducted throughout NFY 2079/80.

b. Dumariya Pig Breeder Group, Dumariya-1, Sunsari

The pig breeder group was established in NFY 2075/76 with a total of 15 members. In the same fiscal year, the group received 32 piglets, comprising 30 females and 2 males. Additionally, the group benefited from various supportive activities including drenching and vaccination. These supportive programs have continued throughout NFY 2079/80.

5.4.3 Fate of outreach programs

The Government has been gradually reducing the budget of the outreach area of this Center. Figure 4 confirms the truth. Hence the center is unable to support the farmers of outreach area according to their expectation. .

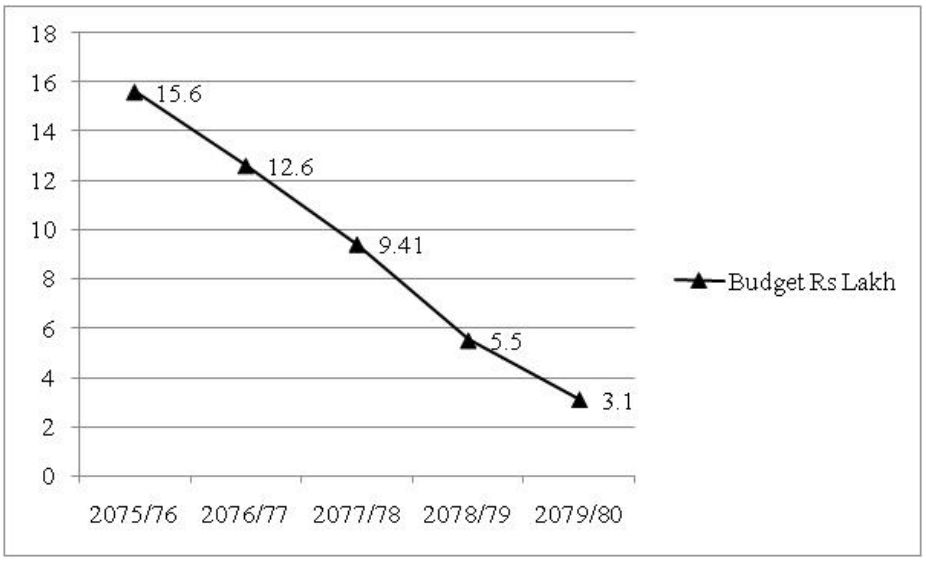


Figure 3, Trend of Budget allocation by Government for outreach program

6 Major annual activities and progress in NFY 2079/80

In Fiscal Year 2079/80, the center allocated NRs 30 Lakh for recurrent expenses and NRs 274.07 Lakh for capital expenses. The recurrent budget saw a decrease of 12.68 Lakh compared to the previous fiscal year, NFY 2078/79. Similarly, the capital budget experienced a reduction of NRs 125 Lakh compared to the previous year. The total budget amounted to NRs 304.07 Lakh

Under the capital budget heading, two programs were carried out.

- Construction of a water tank with a storage capacity of 50,000 liters and extension of the pipe network for the sprinkle irrigation system
- Construction of a manure pit

Under the recurrent budget, there were programs management and maintenance of cattle nucleus herd, management of pig nucleus herd as well as its promotion, multiplier herds management and promotion programs (outreach resource center development and management), dissemination of technical knowhow etc. The salary of staffs, office management cost, cost for other allowance for staffs, cost of animal feed and forage are included in the recurrent budget. The detailed programs of NFY 2079/80 and targets and progress achieved are presented in Table 29. Similarly, the weightage progress and Financial progress on Trimester, Half yearly and Annual basis are presented in Table 30 and Table 31 respectively.

Table 29: Annual Programs of NFY 2079/80 with Target, budget and Progress

LMBIS Code	Program	Budget heading	Unit	Annual				
				Target	Weightage	Budget (Lakh)	Progress	Weightage progress
A) Capital Budget								
11.4.15.155	Construction of Water tank with storage capacity of 50000 Liter water and extension of pipe network for sprinkle irrigation system	31155	Times	1	6.58	20.00	1	6.58
11.4.22.739	Construction of Manure pit	31159	Times	१	3.29	10.00	1	3.29
I	Capital budget sub total				9.87	30.00		9.87
B) Recurrent Budget								
1.1.1.4	Gazetted 2nd class	21111	Person	1	2.69	8.17	1	2.69
1.1.1.5	Gazetted 3rd class	21111	Person	1	2.40	7.29	1	2.40
1.1.1.6	Non Gazetted first class	21111	Person	2	3.43	10.42	1	3.43
1.1.1.7	Non Gazetted 2nd class (Administration)	21111	Person	1	1.49	4.54	1	1.49
1.1.1.30	Office assistant 5th grade	21111	Person	2	3.01	9.15	2	3.01
1.1.1.93	Non Gazetted 2nd class (Technician)	21111	Person	2	3.35	10.20	2	3.35
1.3.1.3	Cloth allowance for permanent employees	21121	Person	9	0.30	0.90	8	0.26
1.2.1.12	Local allowance for permanent employee	21131	Person	10	0.48	1.46	8	0.38
1.2.2.1	Price increase allowance for permanent employee	21132	Person	9	0.71	2.16	8	0.63
1.2.8.6	Miscellaneous allowance (including allowance for auction of animal)	21139	Times	3	0.13	0.40	3	0.13

LMBIS Code	Program	Budget heading	Unit	Annual				
				Target	Weightage	Budget (Lakh)	Progress	Weightage progress
1.2.9.7	Meeting and office guarding allowance	21139	Person	5	0.15	0.46	5	0.15
1.6.4.1	Insurance fund based on Employees contribution	21213	Person	10	0.16	0.48	8	0.13
2.1.2.3	Electricity expenses	21111	Month	12	0.66	2.00	12	0.66
2.1.2.6	Electricity expenses for Machine and equipment operation	21111	Month	12	0.66	2.00	12	0.66
2.1.3.5	Water expenses	22111	Month	12	0.08	0.25	12	0.08
2.1.6.1	Telephone expenses	22112	Month	12	0.16	0.50	12	0.16
2.1.6.8	Internet expenses	22112	Month	12	0.17	0.51	12	0.17
2.1.9.1	Postal and courier expenses	22112	Times	12	0.03	0.1	12	0.03
2.2.2.42.3	Fuel expenses for Pickup	22212	Liter	480	0.19	0.59	480	0.19
2.2.2.5	Fuel expenses for monitoring	22212	Liter	1200	0.55	1.67	1200	0.55
2.2.2.11	Fuel expenses for Motorcycle	22212	Liter	600	0.18	0.55	600	0.18
2.2.2.23	Fuel expenses for Tractor	22212	Liter	1800	0.73	2.23	1800	0.73
2.2.2.155	Expenses for Gear and brake oil etc	22212	Liter	84	0.16	0.49	84	0.16
2.3.1.3	Maintenance expenses for two wheelers	22213	No.	5	0.14	0.44	5	0.14
2.3.1.11	Maintenance expensed for four wheeler	22213	No.	1	0.65	1.99	1	0.65
2.9.1.10	Insurance expenses for vehicle and livestock	22214	Times	3	0.33	0.99	3	0.33
2.9.1.20	Insurance fund for farm workers	22214	Times	1	0.16	0.50	1	0.16
2.3.2.1	Expenses for Computer and Laptop	22221	No.	8	0.29	0.89	8	0.29
2.3.2.154	Maintenance expenses for	22221	Times	4	0.86	2.62	4	0.86

LMBIS Code	Program	Budget heading	Unit	Annual				
				Target	Weightage	Budget (Lakh)	Progress	Weightage progress
	hydroponic, tractor and other machinery							
2.3.2.246	Maintenance expenses for CCTV, Photocopy machine, grinder, Chaff cutter and Solar	22221	Times	4	0.55	1.68	4	0.55
2.3.9.148	Maintenance expenses for shed, office building, quarter and others	22231	Times	6	1.59	4.82	6	1.59
2.4.1.37	Stationary for office and miscellaneous expenses	22311	Times	12	0.87	2.65	12	0.87
2.2.3.2	Gas expenses	22314	No.	36	0.16	0.49	36	0.16
2.4.12.61	Annual report publication	22315	No.	100	0.13	0.40	100	0.13
2.4.14.2	Magazine, radio advertisement and notice publication	22315	Times	8	0.14	0.42	8	0.14
2.5.2.373	Work related to Engineering design/estimation of new shed and other infrastructures	22411	No.	1	0.36	1.10	1	0.36
2.5.2.374	Legal advice for the land related issues of the center pending in court	22411	Times	1	0.05	0.16	0	0.00
2.5.4.13	Website renewal and update	22412	Times	1	0.13	0.40	1	0.13
2.5.7.5	Office uniform for recruited staffs	22413	No.	4	0.14	0.44	4	0.14
2.5.7.92	Light vehicle driver	22413	Month	12	0.94	2.86	12	0.94
2.5.8.123	Security personnel	22413	Person	2	1.58	4.80	2	1.58
2.7.18.517	Operation of AI program (Purchase and transport of LN2	22522	Times	12	0.49	1.50	12	0.49
2.8.1.206	Travel allowance for Monitoring of Khimti farm and Outreach resource center	22611	Month	12	0.94	2.85	12	0.94

LMBIS Code	Program	Budget heading	Unit	Annual				
				Target	Weightage	Budget (Lakh)	Progress	Weightage progress
2.8.2.94	Perdiem for Participation in Workshop, training, review meeting	22612	Times	4	0.25	0.75	4	0.25
2.8.2.220	Perdiem for attending meeting organized by DAO as well as budget release work in Charikot	22612	Times	10	0.81	2.45	10	0.81
2.9.6.9	Miscellaneous expenditure for program management	22711	Month	12	0.47	1.42	12	0.47
2.9.6.83	Meeting with members of farm improvement and coordination committee and other stakeholders	22711	Times	4	0.12	0.38	0	0.00
1	Management and promotion of cattle Nucleus herd							
2.7.1.219	Jersey Nucleus herd management	22521	No.	100	24.67	75.0	100	24.67
2.7.1.220	Calves production	22521	No.	25	2.40	7.31	25	2.40
2.7.1.221	Male calves and breeding bull management	22521	No.	30	2.14	6.51	30	2.14
2.7.1.222	Management of cows born through sexed semen	22521	No.	20	3.41	10.38	20	3.41
2.7.1.224	Keeping buffalo and cattle bull in Khimti cattle breeding center	22521	Times	4	0.47	1.44	4	0.47
2.7.1.463	Expansion of perennial grass and fodder tree in Jiri farm	22521	Ha	1	0.16	0.48	1	0.16
2.7.1.464	Expansion of perennial grass and fodder tree in Khimti	22521	Ha	1	0.16	0.48	1	0.16

LMBIS Code	Program	Budget heading	Unit	Annual				
				Target	Weightage	Budget (Lakh)	Progress	Weightage progress
2.7.1.465	Hay production in Jiri	22521	M.T	200	1.56	4.75	200	1.56
2.7.1.466	Hay production in Khimti	22521	M.T	30	0.33	1.00	30	0.33
2.7.1.467	Silage preparation in Jiri	22521	M.T	250	1.32	4.00	250	1.32
2.7.1.468	Silage preparation in Khimti	22521	M.T	75	0.49	1.50	75	0.49
2.7.3.285	Green grass production (Oat/vetch 2.5 ha, Maize/cowpea 2.5 ha) in Jiri	22521	Ha	5	1.32	4.00	5	1.32
2.7.3.286	Green grass production (Oat/vetch 1 ha, Maize/cowpea 1 ha) in Khimti	22521	Ha	2	0.49	1.50	2	0.49
2.7.3.364	Rye grass production in Jiri	22521	Ropani	10	1.64	5.00	10	1.64
2.7.18.194	AI operation in Khimti	22522	Times	4	0.49	1.50	4	0.49
2.7.18.209	Operation of Hydroponic unit for livestock feeding during dry season	22522	Month	7	3.29	10.00	7	3.29
2.7.18.210	Rye grass seed production	22522	Kg	70	0.33	1.00	70	0.33
2.7.18.211	Paspalum seed production	22522	Kg	150	0.49	1.50	150	0.49
7.2.9.24	Drenching, vaccination and medical treatment in cattle	27213	Times	4	0.99	3.00	4	0.99
2	Management and promotion of Swine Nucleus herd							
2.7.1.227	Keeping nucleus herd of swine mothers (feed, other production materials, labor work)	22521	No.	20	5.59	17.00	20	5.59
2.7.1.228	Replacement pig keeping	22521	No.	4	0.48	1.47	4	0.48

LMBIS Code	Program	Budget heading	Unit	Annual				
				Target	Weightage	Budget (Lakh)	Progress	Weightage progress
2.7.1.253	Piglet production	22521	No.	240	2.37	7.2	240	2.37
2.7.3.287	Purchase of replacement stock	22521	No.	4	0.14	0.44	0	0.00
7.2.9.25	Drenching, vaccination and treatment of pigs	27213	Times	4	0.33	1.00	4	0.33
3	Management and promotion of multipliers herds in outreach resource center							
2.7.5.270	Follow up and operation of pig breeder groups in outreach area (Khawa 1, Ramdhuni 1)	22522	Times	2	0.33	1.00	2	0.33
2.7.18.860	Follow up and operation of cow breeder groups (5 no) in outreach area (Grass seed, anthelmintics etc)	22522	Times	10	0.69	2.10	10	0.69
II	**Recurrent Budget sub total**				90.13	274.07		89.58
	Total Budget				100.00	304.07		99.44

Table 30: Weightage Progress Achieved NFY 2079/80

S. N.	Trimester/ Annual	Physical		Recurrent		Weightage Progress %		
		Weightage Target	Weightage progress	Weightage Target	Weightage progress	Physical %	Recurrent %	Total Weightage progress %
1	First Trimester	0	0	26.1	24.3	0	93.2	93.2
2	Second Trimester	2.24	0	23.5	21	0	89.36	81.71
3	Half yearly	2.2	0	49.5	47.6	0	95.95	91.69
4	Third Trimester	4.2	2.57	21.9	20.72	61.54	94.76	89.44
5	Fourth Trimester	3.29	3.29	18.25	18.19	100	99.64	99.69
6	Annual Progress	9.87	9.87	90.13	89.58	100	99.38	99.44

Table 31: Financial Progress Achieved NFY 2079/80

S.N.	Trimester/ Annual	Budget allocated NRs (Lakh)		Expenditure NRs (Lakh)		Financial Progress %		
		Capital budget	Recurrent Budget	Capital budget	Recurrent Budget	Capital budget %	Recurrent Budget %	Total %
1	First Trimester	0	81.29	0	61.3	0	75.41	75.41
2	Second Trimester	7	73.21	0	80.9	0	110.5	100.86
3	Half yearly	7	154.5	0	142.2	0	92.05	88.06
4	Third Trimester	13	68.18	0.29	48.31	2.23	70.86	59.87
5	Fourth Trimester	10	59.17	9.98	59.17	99.8	99.88	99.87
6	Annual Progress	30	274.07	29.92	271.29	99.76	98.99	99.06

7 Lists of Inventories

The detailed lists of inventories that belong to the center are presented in Table 32. Few of them need to be repaired while others are in good condition.

Table 32 Major tools, equipment and their status

S.N.	Particulars	Unit	Quantity	Condition	Remarks
1	Motorcycle	No.	4	Good	
2	Tata sumo Jeep	No.	1	Repairable	
3	Guest room	No.	1	Good	
4	Staff canteen	No.	1	Repairable	
5	Motor garage	No.	1	Repairable	
6	Silo pit	No.	3		
7	Chaff cutter machine	No.	2	Good	
8	Computer set	No.	7	Good	
9	Power sprayer	No.	1	Good	
10	Metal detector	No.	1	Good	
11	Tractor	No.	2	Good	
12	Generator	No.	2	Good	
13	Milking machine	Set	2	Good	
14	Centrifuge machine	No.	1	Good	
15	Fax machine	No.	1	Good	

S.N.	Particulars	Unit	Quantity	Condition	Remarks
16	Photocopy machine	No.	3	Good	
17	STM phone line	No.	1	Good	
18	Canon Camera	No.	2	Good	
19	Laptop	No.	4	Good	
20	Refrigerator	No.	2	Good	
21	Lacto scan (milk analyzer)	No.	1	Good	
22	LN_2 container	No.	4	Good	
23	Multimedia projector	No.	1	Good	
24	Binocular microscope	No.	2	Good	
25	Field water pump set	No.	1	Good	
26	Digital beam balance	No.	1	Good	
27	Solar water heater	No.	3	Good	
28	Solar light	Set	2	Good	
29	Hydroponic Machine	Set	1	Good	
30	Four wheel Scorpio Pick-up	No.	1	Good	
31	Cowshed with hay store	No.	1	Good	
32	Staff quarter	No.	2	Good	
33	Cow Shed	No.	3	Good	
34	Hay Store	No.	1	Good	
35	Watch men quarter	No.	1	Good	
36	Manual hay binder	No.	1	Good	
37	Back fat thickness meter	No.	1	Good	
38	Pig PD machine	No.	1	Good	
39	Water pump	No.	3	Good	
40	Burdizzo Castrator	No.	2	Good	
41	Gas heater	No.	2	Good	
42	Samsung Mobile J6	No.	1	Good	
43	UPS	No.	4	Good	
44	Power tiller	No.	1	Good	
45	Milking machine	No	1	Good	
46	Milk Chilling Vat (1000 lt)	No.	1	Good	

8 Price of products and goods

In NFY 2079/80, all the milk produced in the center was sold at a rate of NRs 62.50 per Kg, compared to the previous year's rate of NRs 57.30. This pricing was determined through a tender bidding process. S.K. Construction and Suppliers Pvt Ltd of Jiri 4, Dolakha, offered the highest bid and secured the contract. The company collected milk both in the morning and evening on a daily basis, selling it in the local market. Details regarding the prices of commodities offered for sale from the center can be found in Table 33.

Table 33: Price list of the products and goods

S.N.	Particulars	Unit	NRs	Remarks
1	Cow milk	Liter	62.50	
2	Cattle manure	Trailer	4500.00	
3	Pig manure	Sac of 50 Kg	250.00	
4	Piglets (30-45 days)	No.	3500.00	
5	Piglets (46-60 days)	No.	4000.00	
6	Piglets (61-90 days)	No.	4500.00	
7	Culled pig (Male/Female)	Kg	130.00	Live weight
8	Rye grass seed	Kg	350.00	
9	Paspalum grass seed	Kg	300.00	
10	Artificial Insemination in cow and buffalo	Per animal	25.00	
11	Feed Sac	Piece	10.00	

9 Revenue collections

The center generates revenue from various sources, with milk sales being the primary contributor. In NFY 2079/80, milk sales accounted for 82.1% of total revenue, while revenue from cow auctions contributed 8.2%, piglet sales contributed 4%, and other sources contributed 5.6%. The additional revenue sources include the sale of cattle manure, pig manure, grass seeds, sacks of feed, AI services, among others. The breakdown of revenue collection from different commodities during NFY 2079/80 is detailed in Table 34.

The center has different sources for revenue generation. Milk sale is the major source for revenue collection. In NFY 2079/80, milk contributed 82.1 %, cow auction contributed 8.2 %, piglet sale contributed 4 % and other sources contributed 5.6 % of total revenue. Other sources of revenue include sale of cattle manure, pig manure, grass seeds, sacks of feed, AI services and so on.

The share of revenue collection during NFY 2079/80 from different commodities is presented in Table 34.

During NFY 2079/80, the center collected a total revenue of NRs

89,82,090.00 (Eighty-nine lakh, eighty-two thousand ninety), representing a decrease of 8.5% compared to the previous NFY 2078/79 when revenue amounted to NRs 98,19,400.00. Additionally, Table 35 presents the year-wise revenue generated from NFY 2070/71 to 2079/80.

Table 34 Share of revenue collection

S.N.	Commodities	NRs	% Share
1	Milk sale	7370380	82.1
2	Cow auction	739000	8.2
3	Piglet sale	359000	4
4	Manure sale	191000	2.1
5	Cow/pig insurance	54000	0.6
6	Tender document	35000	0.4
7	Pig culling	143845	1.6
8	Feed sack sale	12710	0.1
9	AI/NI	6725	0.1
10	Grass sale	38168	0.4
11	Grass seed sale	11750	0.1
12	Others	20512	0.2
	Total	8982090	100

Table 35: Details of yearly revenue collection from NFY 2070/71 to 2079/80 (NRs in Lakh)

NFYs	Revenue in Lakh				
	Milk sale	Piglet sale	Cow Auction	Others	Total
2070/71					31.7
2071/72					36.0
2072/73					42.7
2073/74	19.9	6.4		5.8	32.2
2074/75	31.2	6.0		6.5	43.8
2075/76	45.2	5.1		9.8	60.1
2076/77	56.4	5.9		15.0	77.3
2077/78	71.4	8.9		5.0	85.2
2078/79	78.3	4.9	8.5	6.4	98.2
2079/80	73.7	3.6	7.4	3.2	89.8

Here "other" indicates the AI/NI charge, feed sack sale, manure sale, grass seed sale, tender document sale, price received as Insurance money against cattle and pig from insurance company and so on.

10 Approved posts and their status

The center has been allotted 10 permanent positions. In NFY 2079/80, 9 out of these 10 positions were filled. Details regarding the allotted positions and their status during NFY 2079/80 are outlined in Table 36.

Table 36: Approved posts and status in NFY 2079/80

S.N.	Designation	Class	Status			Remarks
			Approved	Fulfilled	Vacant	
1	Senior Livestock Development Officer	G II	1	1	0	
2	Livestock Development Officer	G III	1	1	0	
3	Livestock Service Technician	NG I	2	1	1	
4	Assistant Livestock Service Technician	NG II	2	2	0	
5	Assistant accountant	NG II	1	1	0	
6	Driver		1	1	0	Karar
7	Office Assistant		2	2	0	
	Total		10	9	1	

11 Details of Employees

11.1 Permanent employees

The details of permanent employees working in the center are presented in Table 37.

Table 37: Description of employees working in center

S.N.	Designation	Name of employee	Date of Joining CGRC	Permanent Address	Remarks
1	Senior Livestock Development Officer	Dr. Gopal Giri	2078/01/06	Pokhara Metropolitan-7, Kaski	
2	Livestock Development Officer	Mr, Gana Jirel	2078/10/15	Jiri Municipality-6, Dolakha	
3	Livestock Service Technician	Mr, Pasang Rinji Sherpa	2076/05/12	Jiri 1, Dolakha	Working in Khimti office
5	Junior Livestock Service Technician	Mrs Dhana Maya Magar	2076/04/22	Siiddicharan municipality -6, Okhaldhunga	
6	Junior Livestock Service	Mr, Bal Kumar Dahal	2074/11/03	Kanchanrup municipality-12, Saptari	

S.N.	Designation	Name of employee	Date of Joining CGRC	Permanent Address	Rema rks
	Technician				
4	Accountant	Mr. Sista Prasad Chaulagain	2079/08/01	Tatopani-5, Jumla	
7	Office Assistant	Mr, Chet Bahadur Shrestha	2061/09/09	Jiri Municipality-6, Dolakha	
8	Office Assistant	Mr, Ibaram Jirel	2050/12/30	Jiri Municipality-6, Dolakha	
9	Driver	Mr. Prabin Jirel	2078/04/01	Jiri Municipality-6, Dolakha	Karar

11.2 Temporary employees

A total of 14 employees are engaged on a daily wage basis at the center. Among them, 8 employees are dedicated to cow management in Jiri, while 2 work in Khimti. Additionally, 2 employees are assigned to the pig unit, and 2 serve as watchmen—one for daytime and the other for nighttime. These hired workers undertake various daily tasks such as feeding, cleaning, milking, grazing of animals, cut-and-carry of grasses, and general livestock care (for both cows and pigs) in both Jiri and Khimti. Further details regarding the daily wage workers are provided in Table 38.

Table 38: Description of daily wage workers

S.N.	Name of employee	Permanent Address	Responsibility	Remarks
1	Mandhowj Jirel	Jiri 7, Dolakha	Watchman	
2	Indra Bahadur Jirel	Jiri 4, Dolakha	Care and management of pig	
3	Karna Bahadur Jirel	Jiri 4, Dolakha	"	
4	Biresh Jirel	Jiri 6, Dolakha	Care and management of cow	
5	Saidhowj Jirel	Jiri 5, Dolakha	"	
6	Ran Bahadur Jirel	Jiri 7, Dolakha	"	
7	Bina Sherpa	Jiri 7, Dolakha	"	
8	Buddha Sherpa	Jiri 7, Dolakha	"	
9	Purna Bahadur Jirel	Jiri 5, Dolakha	Pasture land	
10	Prem Jirel	Jiri 7, Dolakha	"	
11	Showat Bahadur Karki	Jiri 6, Dolakha	Cattle grazing	
12	Lalita Jirel	Jiri 6, Dolakha	"	
13	Gyan Bahadur Khatri	Gokulganga, VDC, Ramechhap	Breeding office Khimti	
14	Kul Bahadur Basnet	Gokulganga VDC Ramechhap	"	

12 Problems and Challenges

The major problem faced by the center is the gradual decrease in budget allocation each fiscal year. Despite the center's efforts to increase cow productivity, milk quantity, and revenue generation annually, the budget provided by Government has been diminishing over time. This budget reduction has forced the farm to cut back the quantity of feed offered to animals to half of its original amount in Fiscal Year 2079/80. Further details regarding the budget allocation and the price of feed in different years are outlined in Table 39.

Table 39: Comparisons of budget, productivity, revenue and feed price in different years

NFY	Capital Budget (Lakh)	Recurrent Budget (Lakh)	Revenue (Lakh)	Milk Production (MT)	Milk Productivity (Kg/cow/ day)	DDC Price of feed/Kg (NRs) (Excluding transport cost)
2075/76	89.8	310.90	60.1	91.4	5.1	35
2076/77	40.3	272.70	77.3	104.2	6.7	36
2077/78	240.0	297.10	85.3	129.4	8.7	36-38
2078/79	155.0	286.80	98.2	136.3	9.7	41.5
2079/80	30.0	274.07	89.8	117.9	7.8	58.0

The challenges faced by the center include

1. **Lack of Training facilities**: There is no dedicated training hall for conducting training programs and workshops. As a result, these activities are conducted in open fields, which may not provide optimal learning environments.
2. **Encroachment of Farmlands**: Local people and institutions, including local bodies, have encroached upon farmland adjoining the farm areas specially in Khimti.
3. **Inadequate Fencing**: Proper fencing around the land boundary in Jiri and Khimti is lacking, leaving the farm vulnerable to unauthorized entry, trespassing, and damage to crops.
4. **Shelter Shortage**: There is a shortage of permanent shelters for staff and workers.
5. **Poor Drainage systems**: Old drainage systems in the pasture land are not functioning properly, leading to potential flooding, soil erosion, and degradation of pasture quality.

6. **Lack of Incentives**: Staff and daily-wage employees lack incentives for their work. Despite the need for round-the-clock involvement in farm activities, there are no provisions for additional compensation or incentives.

Addressing these challenges will require concerted efforts and resources to improve infrastructure, land management practices, and support systems for staff and workers at the center.

The End



A prolific sow



Chopping of maize for silage making



Construction of water tank having 50000 liter capacity for drinking and sprinkle irrigation



Cows are grazing in pasture land