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

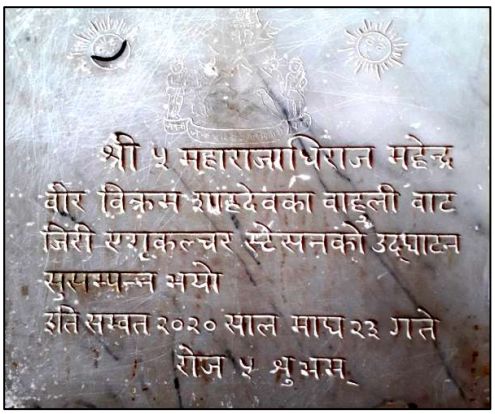


Figure 1: The monument inscription of inauguration ceremony

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 inaugurated by His Majesty King Mahendra Bir Bikram Shahadev. Until this point, the project had been managed and financially supported by the Swiss government, with Jean Munsch and John Muller, Swiss citizens, serving as the project chief. After 2020 BS, the project transitioned to Nepali management, still with continued financial backing from Switzerland.

2.2 Diversifying Development Initiatives by Implementation of JMDP

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 2021 BS (1964 AD) to coordinate and implement various initiatives comprehensively.

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.

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 2027, 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 of Dolakha district, 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 Bhimeshwor 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.

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

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		Re–marks
			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	
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	SeniorLDO	2068/05/23	2069/10/19	
29	Dr. Dharma Raj Giri	LDO	2069/10/20	2069/12/30	
30	Dr. Sudhir Kumar Singh	SeniorLDO	2070/01/02	2072/10/25	
31	Mr. Gana Bahadur Jirel	LDO	2072/10/26	2075/04/22	
32	Mr. Shankar Sah	SeniorLDO	2075 /05/01	2076/09/27	
33	Mr. Shiva Prakash Acharya	SeniorLDO	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.

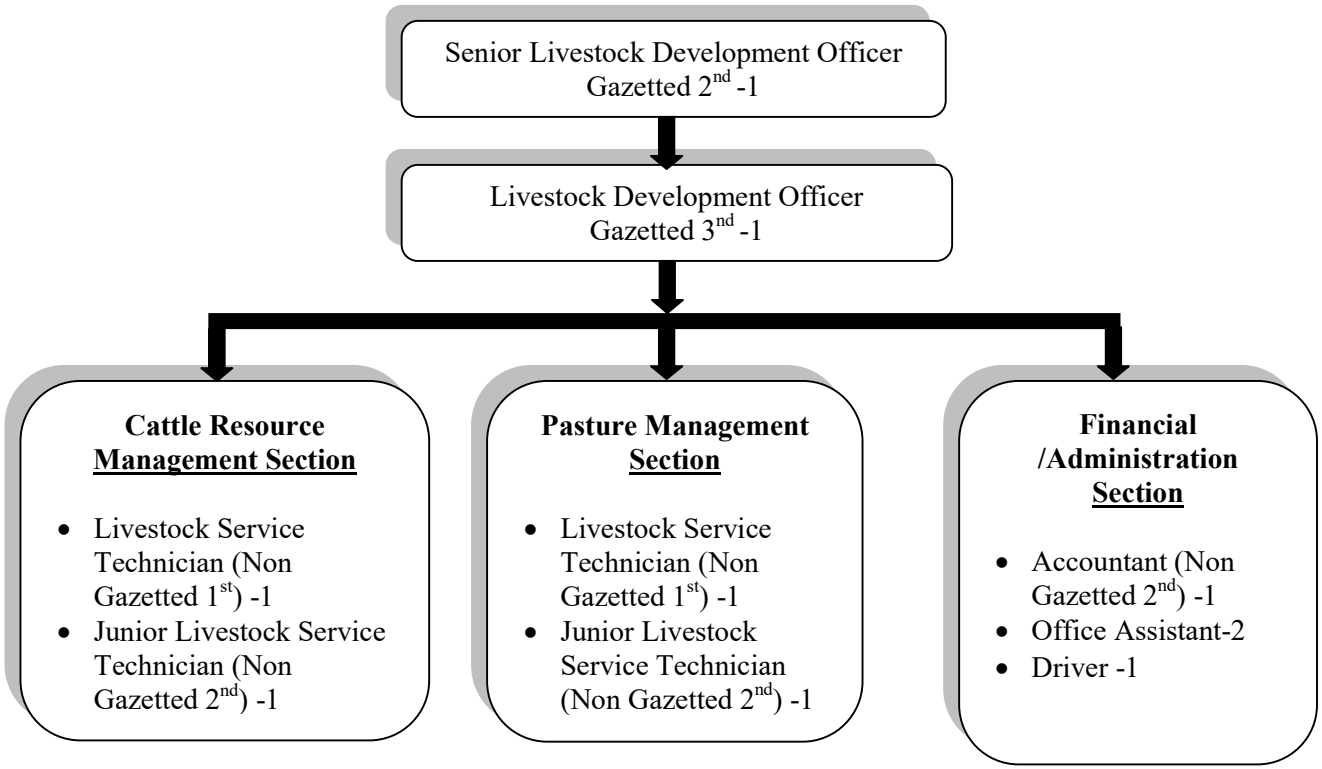
3.1 Objectives

- 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 Section and 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 2080/81, on an average, 131.1 cattle were reared on monthly basis ranging from lowest 118 in Magh and highest 145 in Poush month. 3.5 adult males were reared on monthly basis whose number varied from 3 to 4. Similarly, on an average 75.4 adult female were reared on month basis ranging from 74 to 76. Likewise the number of small male animals (male calves) ranged from 12 to 24 and that of small female animals (female calves) ranged from 25 to 44. The month-wise stock details of cattle at the end of NFY 2080/81 is presented in Table 4.

Table 4: Month wise Stock details of cattle at the end of NFY 2080/81

Month	Large male	Large female	Small male	Small female	Total
Shrawan	3	75	19	36	133
Bhadra	3	75	18	37	133
Aswin	3	75	19	39	136
Kartik	3	75	19	40	136
Marg	3	74	22	43	142
Poush	3	74	24	44	145
Magh	4	77	12	25	118
Falgun	4	76	13	27	120
Chaitra	4	76	13	26	119
Baisakh	4	76	16	28	124
Jestha	4	76	19	31	130
Aashad	4	76	23	34	137
Average	3.5	75.4	18.1	34.2	131.1

The details breed, name, age and parity of cattle reared in CGRC is presented in Table 5. In this Table the cows present from 2080/04/01 to 2081/03/31 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	22097	Rihana	2080/04/20	
2	22098	Hima	2080/05/26	
3	22099	Sarishma	2080/06/04	
4	269485	Urmila	2080/06/21	
5	269496	Toshima	2080/07/28	
6	269235	Krishna	2080/08/02	
7	269304	Sajina	2080/08/06	
8	269453	Rebina	2080/08/11	
9	269177	Sandhya	2080/10/11	
10	269428	Chunmaya	2080/10/18	
II	Between 1 to 2 years old			
1	22041	Rasila	2079/05/22	
2	22042	Samjhali	2079/05/21	

S.N.	Tag no	Name of cow	Date of Birth	Parity
3	22046	Fuluma	2079/06/01	
4	22048	Tara	2079/06/13	
5	22050	Riya	2079/06/13	1
6	22053	Sangita Kha	2079/07/13	
7	22055	Manushi	2079/07/28	1
8	22060	Lila	2079/09/13	1
9	22061	Sonika	2079/09/29	1
10	22066	Nita	2079/10/25	1
11	22073	Kanchan	2079/11/21	1
12	22075	Lilamaya	2079/12/12	1
13	22074	Khina	2079/12/13	
14	22079	Ranjana	2079/12/10	
15	22081	Tanika	2079/12/27	
16	22083	Rafiya	2080/01/10	
17	22088	Niku	2080/02/20	
18	22094	Mansi	2080/04/01	
III	Greater than 2 years old			
1	22234	Tanki	2072/10/09	5
2	22009	Trishna	2071/12/19	5
3	22603	Kiran	2074/04/21	6
4	22265/21994	Chitra	2073/09/12	5
5	22271	Nabina	2073/10/27	5
6	22498	Ranju	2074/12/26	4
7	71569	Khairi	2074/08/22	5
8	71572/21995	Ramri	2074/11/26	4
9	21906	Laxmi	2074/12/25	4
10	22215	Soniya	2072/06/12	6
11	22628	Uttisa	2074/12/05	5
12	22601	Isha	2074/04/18	5
13	22681	Talina	2076/06/04	3
14	22676	Chameli	2076/04/02	4
15	22679	Safira	2076/05/19	3
16	22685	Sabina	2076/06/12	3
17	22643	Puspa	2075/04/23	3
18	22667	Bipana	2075/10/12	3
19	22669	Fulmali	2075/11/18	3
20	21908	Sumana	2076/11/22	2
21	21911	Krishna Kumari	2076/12/13	3
22	21914	Sonisha	2076/12/19	2

S.N.	Tag no	Name of cow	Date of Birth	Parity
23	21918	Teriya	2077/01/05	3
24	22654	Tari "ka"	2075/11/26	4
25	22659	Sonu	2075/11/12	4
26	21921	Himani	2077/02/06	3
27	21924	Manisha	2077/02/18	2
28	21934	Sarala	2077/04/30	3
29	21938	Sashi	2077/05/17	3
30	21936	Menukala	2077/06/05	3
31	21946	Tashina	2077/09/18	1
32	21949	Chauri		2
33	21951	Kamala	2077/10/24	
34	21957	Karina	2077/11/04	1
35	21966	Sabi	2078/02/01	1
36	21975	Riyasa	2078/04/19	2
37	21981	Mira	2078/05/03	2
38	21982	Bindu	2078/06/01	1
39	21980	Renu	2078/05/31	1
40	21985	Fulmati	2078/07/01	2
41	21993	Lekali	2078/09/22	1
42	22003	Rani	2078/09/27	1
43	22014	Purnima	2078/10/10	1
44	22015	Furi	2078/10/14	1
45	22022	Rama	2078/12/05	1
46	22026	Kamini	2079/01/13	1
47	22028	Lali	2079/01/14	1
48	22030	Samita	2079/01/23	1
49	22031	Kanchhi	2079/01/23	1
B)	Holstein Friesian (HF) Cow			
I	Less than a year old			
1	269510	Naumaya	2080/10/08	
II	Between 1 to 2 year old			
1	22062	Manika	2079/10/03	
2	22076	Sangam	2079/12/16	
III	Greaterthan 2 years old			
1	22401	Tari	2074/09/01	5
2	22407	Sangita	2074/12/18	4
3	2543	Mali	2074/10/21	4
4	22480	Ujeli	2074/11/26	4
5	71574/21992	Nauli	2074/11/21	5

S.N.	Tag no	Name of cow	Date of Birth	Parity
6	21945	Nirjala	2077/05/26	3
7	21941	Prabina	2077/09/17	2
8	21960	Sarina	2077/11/25	1
9	21969	Bibisa	2078/02/24	2
10	21978	Manju	2078/06/01	2
11	21952	Ramu	2077/10/24	2
12	21983	Lolipop	2078/08/20	1
13	22006	Uma	2078/09/21	1
14	002-1741-4738.4	K Queen 1	2079/01/31	1
15	002-1763-3869-3	K Queen 2	2079/03/30	1
16	002-1739-1053-9	Satidevi Korea	2079/02/26	1
17	002-1777-4907-9	K Queen 4	2079/03/08	1
C)	Cross of J and HF (JHF)			
I	Less than a year old			
1	269417	Dicchhya	2080/11/22	
II	1 to 2 years old			
1	22065	Kamiya	2079/10/20	
III	> 2 years old			
1	21999	Maina	2074/12/10	3
2	71575/21998	Nisha	2074/11/09	5
3	21948	Furwadoma	2077/10/06	1
4	21950	Manjila	2077/10/08	1
5	21955	Sanchita	2077/10/25	1
6	21959	Sujana	2077/11/25	2

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 2080/81 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	10	18	49	77	73.3
2	HF	1	2	17	20	19.0
3	JHF	1	1	6	8	7.6
	Total	12	21	72	105	100

5.1.3 Details of Auctioned Cattle

CGRC Jiri carries out auction of animal once annually. During fiscal year 2080/81, the auction program was carried out in 4 Magh 2080 during which altogether 35 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, fertility of animal, calving interval etc. The description of auctioned animal is presented in Table 7. NRs 10,44,000.00 revenue was generated from auction.

Table 7: Description of auctioned animal in NFY 2080/81

Breed	Bull	Adult cow	Male calf	Female calf	Total
Jersey	2	9	15	0	26
Holstein Friesian (HF)	0	2	1	0	3
Jersey XHF	0	5	1	0	6
Total	2	16	17	0	35

5.1.4 Calving status of Cattle

Altogether 55 calvings were recorded during this fiscal year whereas the number during previous fiscal (2079/80) was 61, which indicated 9.8 % decrease in calving rate. 2 cows had still birth in this fiscal year. Out of 53 normal calvings, there were 28 female calves and 25 male calves. Among the animal calved, 34 were matured cow and 21 were heifers. When considering the breed of cow, 71.7 % were Jersey and 20.8 % were Holstein Friesian and 7.5 % 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	22	3	6	16	1	5	38	4	11	53
Male calves born	10	2	4	5	1	3	15	3	7	25
Female calves born	12	1	2	11	0	2	23	1	4	28

5.1.5 Mortality of Calves and adults

During NFY 2080/81, total of 8 animals were died, among which 4 were male and 4 were female animal. When calf less than 6 month old were only 6. When all animal were taken into account the over all mortality in the herd is only 6.1 %. In previous year 17 (8 male and 9 female) calves had been died. In this fiscal year the mortality of calves had decreased from 28.8 to only 11.3 % . 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		2			1		1	2		3
Bhadra			1				1			1
Aswin										
Kartik										
Marg										
Poush					1		1			1
Magh		1						1		1
Falgun	1						1			1
Chaitra		1						1		1
Baisakh										
Jesth										
Aashad										
Total	1	4	1	0	2	0	4	4		8

The year-wise trend of calf born and their mortality from the year 2062/63 to 2080/81 is presented in Table 10. The Table reveals that the calf mortality during this Fiscal Year (NFY 2080/81) is 15 % as compared to 28.8 % in the previous fiscal year 2079/80. 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	2079/080	31	28	59	17	28.8
19	2080/081	25	28	53	8	11.3

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 234 AIs were carried out, in which 104 AIs were done in office cows, 121 AI in famers' cows. Only 9 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 41 NI service was provided in cattle of farmers in Jiri. Similarly 35 cattle and 15 buffalo of local farmers of Khimti were provided NI service. The AI service was increased by 2.1 % in this fiscal year 2080/81 as compared to NFY 2079/80. Altogether 91 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	12	13	25		25	3	2	5	1	6
Bhadra	14	19	33	1	34	11	7	18	1	19
Aswin	7	11	18	2	20	4	3	7	2	9
Kartik	4	4	8	2	10	7	4	11	4	15
Marg	14	8	22	1	23	3	2	5	3	8
Poush	7	7	14		14	2	4	6	1	7
Magh	12	9	21		21	2	2	4	1	5
Falgun	4	10	14		14	5	2	7		7
Chaitra	2	6	8		8	1	3	4		4
Baisakh	8	8	16	1	17	2	1	3		3
Jestha	13	14	27	2	29	0	2	2		2
Aasad	7	12	19		19	1	3	4	2	6
Total	104	121	225	9	234	41	35	76	15	91

The year wise AI and NI service carried out by the center since NFY 2071/72 to NFY 2080/81 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	148	4	229	80	33	0
2080/81	104	121	9	234	76	15	2

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 2080/81 due to decreased budget allocation and increased feed price. During this NFY 2080/81 the total milk production is 135.1 MT which is 14.5 % increase than previous fiscal year 2079/80.

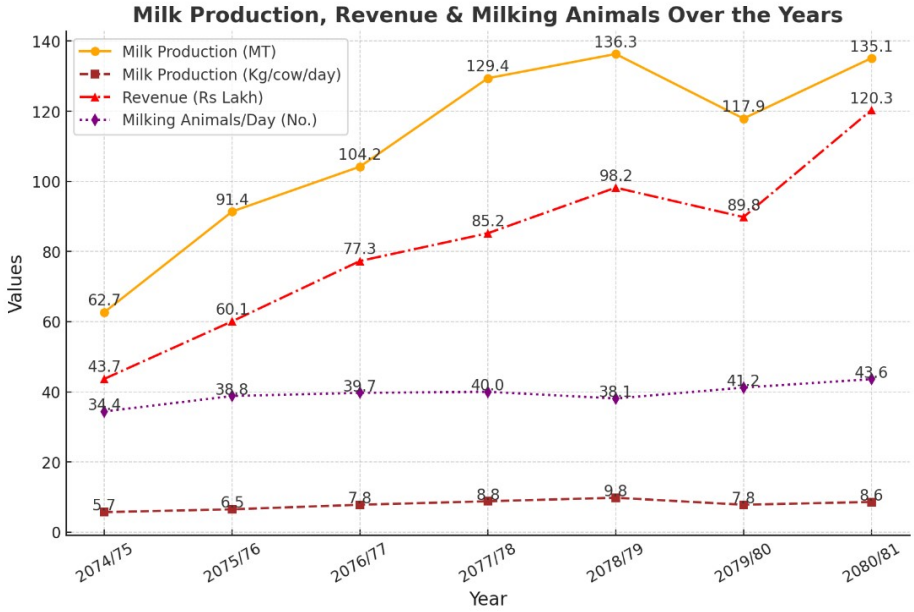


Figure 2: Year wise milk production, revenue and average milk production per cow per day and no of milking cows per day

The productivity of cow has increased to 8.6 Kg/cow/day from 7.8 Kg of previous year (2079/80). Which accounts 10.2 % increase when compared to productivity of cow in last fiscal year 2079/80. The average no of milking cows reared per day in the NFY 2080/81 is 43.6, whose no in the previous year 2079/80 was 41.2. For ease of understanding, the trend of milk production, revenue generation, average productivity of animal and no of milking cows/day 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)	Average no of cow	Average Productivity Kg	Highest productivity in month Kg	Highest yielding cows		
							Tag no	Name	Milk Production Kg /day
Shrawan	12838.9	393.8	417.4	49.0	8.4	8.9	22480	Ujeli	13.0
Bhadra	12206.3	393.8	433	48.3	8.2	8.6	21999	*Maina*	14.0
Aswin	12099.3	403.3	425.8	49.75	8.2	8.5	22480	Ujeli	12.3
Kartik	11209.8	373.7	413.8	48.65	7.7	8.4	22628	Uttisa	11.2
Marg	10904.5	363.5	389.5	47.7	7.6	8.1	21995	Ramri	10.7
Poush	9658.9	333.1	357.4	45.7	7.3	7.6	21960	Sarina	9.7
Magh	8656.1	298.5	353.3	45.0	7.8	8.4	22628	*Uttisa*	10.2
Falgun	10734.1	357.8	383.1	40.9	8.8	9.3	21960	Sarina	12.7
Chaitra	11622.3	387.4	430.4	39.9	9.7	10.6	21998	Nisha	14.6
Baisakh	10313.8	332.7	358.4	34.7	9.6	10.2	21992	*Nauli*	14.0
Jestha	11873.0	371.0	411.4	38.2	9.7	10.3	21991	Satidevi (K)	19.3
Aashad	12947.2	417.7	442.0	40.0	9.7	10.3	21991	Satidevi (K)	19.6
Total/ average	135064.2	368.8		44.0	8.6				

5.1.8 Breed wise lactation yield of Cow

In the fiscal year 2080/81 74 cows came for lactation. Out of which 50 cows were Jersey, 11 HF and 13 cows were JHF (cross Jersey and HF). To calculate the breed wise lactation yields cows with less than 180 days were omitted from the calculation and only greater than 180 days were included into calculation. For the calculation the lactation yield was adjusted to 300 days. From the calculation the the average yield for Jersey was recorded 2356 Kg/lactation where this yield for the NFY 2079/80 was 2160 Kg. Similarly the yield of HF was found as 2613 Kg/lactation. This record for the year 2079/80 was only 2445. The no of cows as only 11. In the same way the

lactation yield for the cross of Jersey and HF (JHF) was 2985 Kg/lactation. The no of cows was only 13. This figure for the HF and JHF in the last fiscal year was only 2445 and 2124 respectively. The herd average of the cow was found to be 2580 Kg milk/lactation.

Table 14: Breed wise lactation yield of cow

S.N.	Breed	No of cows	Average milk yield (Kg)
1	Jersey (J)	50	2356
2	Holstein Friesian (HF)	11	2613
3	Cross of J and HF (JHF)	13	2985

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 2075/76 to 2080/81 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 2080/81, 53 calves were born, in which 29 are male and 24 were female. The percentage of Female were 45.2 where as percentage of male was 54.8. When all the 6 Fiscal year were considered, the the male and female percentage is 53.1 and 46.9 % 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 6 years

Month	2075/76		2076/77		2077/78		2078/79		2079/80		2080/81		Total		
	M	F	M	F	M	F	M	F	M	F	M	F	M	F	Total
Shrawan	2	2	0	1	4	2	1	1	0	1	2	2	7	7	14
Bhadra	4	1	4	1	2	2	2	2	1	5	1	1	10	11	21
Aswin	3	0	0	5	2	4	3	2	0	5	2	1	7	17	24
Kartik	2	0	1	0	1	0	2	1	2	3	0	1	6	5	11
Marg	0	0	0	1	0	0	1	1	0	0	3	3	4	5	9
Poush	1	1	2	0	2	1	2	3	2	4	2	2	10	10	20
Magh	2	3	2	2	2	5	9	2	2	4	4	3	19	16	35
Falgun	1	3	5	1	2	3	2	0	2	4	2	2	13	10	23
Chaitra	0	3	5	3	2	0	3	1	2	7	0	0	12	11	23
Baisakh	1	0	1	1	2	1	2	5	4	2	4	2	13	11	24
Jesth	0	2	4	2	1	3	3	0	4	1	4	3	16	9	25
Aashad	0	2	4	2	5	1	2	0	3	1	5	4	19	8	27
Total	16	17	28	19	25	22	32	18	22	37	29	24	136	120	256

5.1.10 Comparison of Age at First Calving and Calving

interval

19 heifers were calved during NFY 2080/81, this number during NFY 2078/79 was 18. From the analysis of these 19 heifers, the *age at first calving* was found to be 935.6 days (31.1.8 Month) as compared to 865.7. days (28.8 month) in NFY 2079/80. It is increase of 70 days (2.3 month) which accounts 8.07% increase in the age at first calving than previous fiscal year (Table 16). There were 6 heifers out of 19 having tag no 21924, 21948 , 21949, 21950, 21966, and 21969 which have more than 1000 days of age at first calving as given in Table 15 which ultimately led to increase in average age at first calving.

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	21924	Manisha	2077/02/18	J	2080/04/01	1138
2	21941	Prabina	2077/09/17	HF	2080/01/25	860
3	21948	Furwajema	2077/10/06	JHF	2081/02/14	1227
4	21949	Chauri	2077/10/03	J	2080/08/10	1042
5	21950	Manjila	2077/10/08	JHF	2081/02/12	1223
6	21960	Sarina	2077/11/25	HF	2080/08/09	988
7	21966	Sabi	2078/02/01	J	2081/02/24	1119
8	21969	Bibisa	2078/02/24	HF	2081/01/30	1071
9	21968	Binita	2078/03/03	J	2080/03/15	743
10	21975	Riyasa	2078/04/19	J	2080/04/20	732
11	21981	Mira	2078/05/03	J	2080/11/09	921
12	21978	Manju	2078/06/01	HF	2080/11/22	905
13	21980	Renu	2078/05/31	J	2080/08/11	803
14	21985	Fulmati	2078/07/01	J	2080/11/24	877
15	22026	Kamini	2079/01/13	J	2081/02/11	760
16	002-1739-1053-9	Satidevi Korea	2079/02/26	HF	2081/02/01	706
17	22015	Furi	2078/10/14		2081/03/02	870
18	21993	Lekali	2078/09/22	J	2081/03/03	893
19	22003	Rani	2078/09/27	J	2081/03/15	900
Average Age at first calving						935.6 Days (31.1months)

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	22009/22202	Trishna	2071/12/19	J	5	2080/10/11	2079/05/22	508
2	21905 (9841)	Kunti	2067/03/06	JHF	8	2080/09/25	2079/10/30	331
3	22603	Kiran	2074/04/21	J	5	2080/10/24	2079/11/21	338
4	21994 (22265)	Chitra	2073/09/12	J	5	2081/01/14	2079/12/14	397
5	22001 (9818)	Karishma	2067/01/10	J	8	2080/06/06	2079/01/23	500
6	22401	Tari	2074/09/01	HF	4	2080/09/12	2079/05/31	470
7	21999	Maina	2074/12/10	JHF	3	2080/04/20	2079/03/28	389
8	22407	Sangita	2074/12/18	HF	4	2081/02/12	2079/12/16	424
9	71569	Khairi	2074/08/22	J	4	2081/01/23	2079/12/13	407
10	21906	Laxmi	2074/12/25	J	4	2081/02/14	2079/12/12	430
11	21998 (71575)	Nisha	2074/11/09	JHF	4	2080/11/21	2079/10/25	393
12	21992 (71574)	Nauli	2074/11/21	HF	4	2080/10/08	2079/10/14	360
13	22215	Soniya	2072/06/12	J	5	2080/04/18	2079/03/16	399
14	22676	Chameli	2076/04/02	J	3	2080/10/18	2079/11/17	336
15	22679	Safira	2076/05/19	J	2	2080/06/04	2079/05/23	378
16	22667	Bipana	2075/10/12	J	3	2081/01/27	2079/10/26	459
17	22669	Fulmali	2075/11/18	J	2	2080/10/05	2079/07/20	443
18	21911	Krishna Kumari	2076/12/13	J	2	2080/08/02	2079/06/23	406
19	21914	Sonisha	2076/12/19	J	2	2081/01/18	2079/09/29	477
20	21918	Teriya	2077/01/05	J	2	2080/07/28	2079/07/11	383
21	22654	Tari "ka"	2075/11/26	J	3	2080/05/03	2079/06/13	325
22	22659	Sonu	2075/11/12	J	3	2081/09/18	2080/10/12	341
23	21921	Himani	2077/02/06	J	2	2080/05/26	2079/05/21	371
24	21934	Sarala	2077/04/31	J	2	2080/08/06	2079/09/12	329
25	21938	Sashi	2077/05/17	J	2	2080/10/15	2079/11/08	342
26	21945	Nirjala	2077/05/26	HF	2	2080/10/01	2079/09/24	373
27	21936	Menukala	2077/06/05	J	2	2080/08/08	2079/07/04	401
28	21940	Tamu	2077/06/05		2	2080/09/17	2079/09/12	371
29	21952	Ramu	2077/10/24	HF	2	2081/02/27	2080/02/17	376
30	22681	Talina	2076/06/04	J	3	2081/03/03	2079/12/27	432
31	2543	Mali	2074/10/21	HF	4	2081/03/07	2079/10/03	521
32	22643	Puspa	2075/04/23	J	3	2081/03/11	2079/12/09	458
33	22601	Isha	2074/04/18		5	2081/03/17	2080/03/28	354
34	22271	Nabina	2073/10/27		5	2081/03/30	2079/07/24	615
	Average Calving interval (Days)							400.8

5.1.11 Milk Quality in NFY 2080/81

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	50	4.4	10.6	36.4	3.9	6	6.2	5.3	
2	Bhadra	49	4.3	10.6	36.1	3.9	5.9	6.1	5.4	
3	Aswin	49	4.3	10.7	36.5	3.9	5.9	2.3	5.5	
4	Kartik	50	4.3	10.7	36.5	3.9	5.9	2.3	5.5	
5	Marg	50	4.3	10.6	36.1	3.9	5.9	6.1	5.4	
6	Poush	50	4.2	10.6	36.7	3.9	5.8	6.1	5.3	
7	Magh	50	4.2	10.6	36.7	3.9	5.8	6.1	5.3	
8	Falgun	39	4.1	10.8	37.8	4.1	5.8	6	5.3	
9	Chaitra	43	4.3	10.6	36.1	3.9	5.9	6.1	5.4	
10	Baisakh	44	4.3	10.7	36.1	3.8	5.9	6.2	5.4	
11	Jestha	34	4.3	10.7	36.5	3.9	5.9	2.3	5.5	
12	Aashad	38	4.6	10.9	37.1	4.0	6.0	4.6	5.5	
Annual Average		45.5	4.3	10.7	36.6	3.9	5.9	5.0	5.4	

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 2080/81 there were 17 pigs among which 15 were sows, 1 boar of Landrace, 1 boar of Yorkshire. Among 15 sows, only one female was of Yorkshire breed and rest were of Landrace. There were few

piglets but they were not counted as there are all sold up after one month period. When annual stock details when considered, there were 1 male of landrace, 14.1 female of landrace and 1.6 male of yrkshire and 1 female is of Yorkshire. The average stock of adult pig is 17.7 (Table 20).

Table 20: Stock of pig at the end of NFY 2080/81

S.N.	Month	Landrace		Yorkshire		Total
		Male	Female	Male	Female	
1	Shrawan	1	15	1	1	18
2	Bhadra	1	12	1	1	15
3	Aswin	1	10	1	1	13
4	Kartik	1	15	2	1	19
5	Marg	1	15	2	1	19
6	Poush	1	15	2	1	19
7	Magh	1	15	2	1	19
8	Falgun	1	15	2	1	19
9	Chaitra	1	15	2	1	19
10	Baisakh	1	14	2	1	18
11	Jestha	1	14	1	1	17
12	Aashad	1	14	1	1	17
	Average	1	14.1	1.6	1.0	17.7

5.2.2 Production of piglets and their Mortality before weaning

During Fiscal year 2080/81, total of 128 piglets were born and out of this 11 piglets died before weaning. The overall mortality of piglet during this fiscal year was 11.9 % whereas mortality during previous fiscal year was 14.8 %, lesser than 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 Shrawan and Falgun month. The years wise and month wise production status of piglets and their mortality before weaning is presented in Table 21.

Table 20: Year wise and month wise piglet birth and mortality

Month	2076/77		2077/78		2078/79		2079/80		2080/81		Total		
	Born	Death	Born	Death	Born	Death	Born	Death	Born	Death	Born	Death	Mortality %
Shrawan		0	10	2	59	4	10		19	0	98	6	6.1
Bhadra	27	9	0	0					12	0	39	9	33.3
Aswin	21	8	39	0	8				18	3	86	11	11.8
Kartik	0	0	30	1	20	2	8		11	3	69	6	5.2
Marg	32	1	5	0			22	6			59	7	11.9
Poush	24	3	0	0	19	0	12		19	0	74	3	5.5
Magh	12	3	0	0	21	2	9		8	1	50	6	11.9
Falgun	0	0	55	1	5		24	3	9	3	93	7	4.8
Chaitra	5	0	0	0	19	3			11	0	35	3	12.5
Baisakh	81	14	19	0			11		3		114	14	12.6
Jesth	10	2	23	10	23	3			18	1	74	16	26.8
Aashad	0	0	0	0	17	2	32	10			49	12	24.5
Total	212	40	181	14	191	16	128	19	128	11	840	100	12.5
Mortality %	18.9		7.7		8.4		14.8		8.6		11.9		

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

Table 21: 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
11	2080/81	128	11	156

5.2.3 Age at first farrowing

During NFY 2080/81, 4 gilt were farrowed which were brought from LBO Pokhara. The age at first farrowing was found to be 504.2 (16.8 month) where was same was in 2079/80 was 400.6 days (13.3 Month). The average age at first farrowing in this fiscal year is 25.8 % greater than previous month. This was solely due to late estrus cycle of gilt. The average age at first farrowing in 2080/81is presented in Table 24.

Table 22: Age at first farrowing

S.N.	Tag no	Date of Birth	Breed	Date of farrowing	Age at first Farrowing
1	479	2079/02/16	Y	2080/07/03	503
2	476	2079/02/16	L	2080/05/02	441
3	478	2079/02/16	L	2080/06/09	479
4	499	2079/02/16	L	2080/10/02	594
	Age at first farrowing Month)				504.2 (16.8

5.2.4 Farrowing interval

During NFY 2080/81, 7 sows (other than gilt) farrowed 11 times and their respective farrowing interval was calculated. The average farrowing interval was found to be 179.4 days (5.9 month), which was 172.9 days (5.7 month) in previous year 2079/80. 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 23: Farrowing interval

S.N.	Tag no	Breed	Parity	Farrowing date BS	Date of Preceding Farrowing BS	Farrowing interval
1	887	L	10	2080/09/18	2080/03/28	174
2	483 (19045)	LxY	8	2080/06/10	2080/01/07	155
3	483 (19045)	LxY	9	2080/11/29	2080/06/10	172
4	811	LY	2	2080/04/25	2079/10/27	181
5	811	LY	3	2080/12/18	2080/04/25	237
6	824	LY	2	2080/04/26	2079/11/23	155
7	824	LY	3	2080/09/26	2080/04/26	153
8	824	LY	4	2081/02/24	2080/09/26	151
9	476	L	2	2081/01/21	2080/05/02	264
10	806	L	2	2080/09/21	2080/03/29	176
11	806	L	3	2081/02/24	2080/09/21	156
	Average					179.4 Days (5.9 month)

5.2.5 Major Technical Parameters in Pig

Major technical parameter from pig from year 2073/74 to 2080/81 is presented in Table 26. During NFY 2080/81, 10 sows farrowed 15 times giving 128 live piglets. The overall litter size was 9.1 which is lesser than last year record. 11 piglets died before weaning with mortality 8.6 %, which is lesser than previous year (NFY 2079/80). 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 24 : 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	12.06	366	193.7
3	NFY 2075/76	16	209	13.1	41	19.3	369	219.07
4	NFY 2076/77	14	212	15.1	40	18.9	347.9	157
5	NFY 2077/78	26	181	6.96	15	8.29	410.6	199.4
6	NFY 2078/79	20	191	9.55	16	9.5	NA	187.8
7	NFY 2079/80	13	128	9.8	18	14	400.6	172
8	NFY 2080/81	15	137	9.1	11	8.6	504.2	179.4

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 2080/81, same amount of grass seed as in 2079/80 was produces. i.e. 220 Kg of forage seed of which, Paspalum (*Paspalum dilatatum*) accounts 150 Kg and Ryegrass (*Lolium perenne*) accounts 70 Kg (Table 27).

Table 25: 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

S.N.	NFY	Production (Kg)	Distribution (Kg)
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
11	2080/81	220	14

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.

In this fiscal year of 2080/81, 2.5 metric ton of mollasses was purchased from Indushankar Sugar mill situated in Hariaun municipality of Sarlahi which was fed to cattle during cold month of Marg to Baisakh. The molasse contributed 10 % more milk in daily milk amount.

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 2080/81, the Hydroponic unit produced 315 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.

5.4.1.1 Details of cattle outreach group

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 26: 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.

5.4.1.2 Details of income in breeder groups

Farmers from breeder groups have raised Jersey, Holstein Friesian, and their crossbred cattle. They sell calves, heifers, oxen, and adult milking cows within their groups or to neighboring villages. Additionally, they supply milk daily to local dairy shops and milk collection centers operated either by local cooperatives or the Dolakha Dairy Udhyog in Charikot. Details of the income generated by these breeder groups are presented in Table 29.

Table 27: Details of income in breeder groups from livestock and milk sale

S. N.	Name of Group	Address	Adult cow no	Milking cow no	Heifer no	Ox no	Income from sale of cow and ox in Lakh	Annual milk production in MT	Milk sale in MT	Income from Milk in Lakh	Total income in Lakh
1	Setidevi cattle breeder group	Dhunge, Jiri	59	29	18	5	3.7		0.71	42.8	46.54
2	Jireswory cattle breeder group	Kune, Jiri 4, Dolakha	34	27	25	2	0.82		0.61	36.72	37.54
3	Mathillo Sikri Tatha Chepte cattle breeder group	Sikri, Jiri 6 and 7									
4	Hariyali Dhaule cattle breeder group	Gokulganga 1, Garjyang Ramechhap	37	28	17	11	2.35	31.87	0.11	6.66	9.01
5	Tamakoshi cattle breeder group	Tamakoshi 3, Jafe Dolakha									
	Total		130	84	60	18	6.92		1.44	86.18	93.15

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 2080/81.

6 Major annual activities and progress in NFY 2080/81

In Fiscal Year 2080/81, the center allocated NRs 30 Lakh for recurrent expenses and NRs 94.2 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 28: 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								
11.1.2.655	Construction of trellises with roofs in Khimti and Jiri 31112 No. Construction of trellises with roofs in Khimti and Jiri	31112	Number	2	2.17	9.5	2	2.17
11.1.2.656	Reconstruction of old pig sheds damaged by earthquakes	31112	Quantity	1	10.29	45	1	10.29
11.3.10.609	Purchase of tractor-operated high-speed chaff cutter with 25 HP motor installation	31122	Quantity	1	1.09	4.75	1	1.09
11.3.22.749	Purchase of machine for making feed from National Innovation Center	31122	Quantity	1	0.19	0.85	1	0.19
11.4.15.158	Expansion of pipe network in under-construction sprinkler irrigation structures	31155	Times	1	2.88	12.6	1	2.88
11.4.22.900	Repair of sloping yard and replacement of roofs of old dairy cow sheds and milk collection buildings damaged by rain	31159	Times	1	4.92	21.5	1	4.92
a) Total capital expenditure programs:					21.54	94.2		21.54
B) Recurrent Budget								
1.1.1.4	Gazetted 2nd class	21111	Person	1	1.98	8.65	1	1.98
1.1.1.5	Gazetted 3rd class	21111	Person	1	1.77	7.74	1	1.77
1.1.1.6	Non Gazetted first class	21111	Person	2	3.18	13.9	1	1.59
1.1.1.7	Non Gazetted 2nd class (Administration)	21111	Person	1	1.19	5.2	2	2.38
1.1.1.30	Office assistant 5th grade	21111	Person	2	2.42	10.59	2	2.42
1.1.1.93	Non Gazetted 2nd class (Technician)	21111	Person	2	2.54	11.11	2	2.54
1.3.1.3	Clothing allowance for permanent employees	21121	Person	9	0.21	0.9	7	0.1633333
1.2.1.12	Local allowance for permanent employees	21131	Person	9	0.33	1.46	7	0.25666667
1.2.2.1	Dearness allowance for permanent employees	21132	Person	9	0.49	2.16	7	0.38111111
1.2.8.6	Other allowances (including auction arrangements for animals)	21139	Times	3	0.1	0.45	3	0.1

LMBIS Code	Program	Budget heading	Unit	Annual				
				Target	Weightage	Budget (Lakh)	Progress	Weightage progress
1.2.9.7	Other allowances for meetings, shifts, guards, etc.	21139	Times	5	0.11	0.5	5	0.11
1.6.4.1	Insurance fund expenditure based on employee contribution	21213	Person	9	0.1	0.44	7	0.07777778
2.1.2.3	Electricity charges	22111	Month	1.04	0.34	1.5	1.04	0.34
2.1.2.6	Operation of machines and other equipment (electricity charges)	22111	Month	12.5	0.34	1.5	12.5	0.34
2.1.3.5	Water charges	22111	Month	0.8	0.06	0.28	0.8	0.06
2.1.6.1	Telephone charges	22112	Month	4	0.11	0.5	4	0.11
2.1.6.8	Internet charges	22112	Month	5.36	0.15	0.65	5.36	0.15
2.1.9.1	Postal/courier expenses	22112	Times	1	0.02	0.1	1	0.02
2.2.2.42.3	Fuel for pickup (fuel for vehicles)	22212	Liter	480	0.2	0.87	480	0.2
2.2.2.5	Fuel for vehicles used in monitoring	22212	Liter	1200	0.5	2.18	1200	0.5
2.2.2.11	Petrol for motorcycles	22212	Liter	600	0.25	1.11	600	0.25
2.2.2.23	Fuel for tractors	22212	Liter	1308	0.54	2.37	1308	0.54
2.2.2.389	Fuel for generators	22212	Liter	480	0.2	0.87	480	0.2
2.3.1.3	Repair expenses for two-wheeled vehicles	22213	Unit	5	0.13	0.55	5	0.13
2.3.1.11	Repair expenses for four-wheeled vehicles	22213	Unit	4	0.39	1.7	4	0.39
2.3.1.209	Tractor repairs	22213	Times	4	0.33	1.46	4	0.33
2.3.1.210	Purchase of tires for four-wheeled vehicles	22213	Quantity	4	0.1	0.44	4	0.1
2.9.1.10	Insurance for vehicles and livestock	22214	Times	5	0.38	1.65	5	0.38
2.3.2.1	Computer/laptop repair expenses	22221	Unit	4	0.21	0.92	4	0.21
2.3.2.306	Repair of tractor-operated high-speed chaff cutter	22221	Times	4	0.17	0.76	4	0.17
2.3.2.307	Wiring repair of hydroponic unit and generator repair	22221	Times	4	0.41	1.8	4	0.41
2.3.2.308	Repair of CCTV, photocopy machines, grinders, solar equipment	22221	Times	4	0.43	1.88	4	0.43

LMBIS Code	Program	Budget heading	Unit	Annual				
				Target	Weightage	Budget (Lakh)	Progress	Weightage progress
2.3.9.382	Repair and maintenance of 2 cattle sheds in Khimti	22231	Quantity	2	0.26	1.15	2	0.26
2.4.1.230	Purchase of photocopy paper and toner refills	22311	Times	4	0.22	0.96	4	0.22
2.4.1.231	Purchase of stationery items like pens, record files, index files, etc.	22311	Times	4	0.44	1.92	4	0.44
2.2.3.127	Provision of daily hot water for calves (requirement of 1 gas cylinder every 5 days)	22314	Quantity	50	0.14	0.63	50	0.14
2.2.3.129	Purchase of firewood for providing hot water and feed to all cows in the morning (daily 5 loads of firewood, 150 kg at Rs. 7.5 per kg)	22314	Metric Ton	50	0.48	2.1	50	0.48
2.4.12.61	Publication of annual progress book	22315	Quantity	100	0.11	0.5	100	0.11
2.4.14.2	Advertisement and information publication in newspapers, radio	22315	Times/Quantity	8	0.1	0.44	8	0.1
2.5.2.373	Engineering design and estimate-related work for new sheds, pens, and other physical structures	22411	Quantity	1	0.34	1.5	1	0.34
2.5.2.374	Legal consultation regarding land under court consideration	22411	Times	1	0.08	0.37	0	0
2.5.4.13	Website renewal and updates	22412	Times	1	0.11	0.5	1	0.11
2.5.7.5	Clothing expenses for contract service employees	22413	Quantity	1	0.11	0.49	1	0.11
2.5.7.92	Light vehicle drivers	22413	Month	1	0.82	3.6	1	0.82
2.5.8.123	Security guards	22413	Person	2	1	4.38	2	1
2.6.4.1248	Driving training	22512	Person	1	0.08	0.35	1	0.08
2.7.1.889	Purchase of mineral mixture and calcium for newly calved and pregnant cows and calves	22521	Times	4	0.55	2.41	4	0.55
2.7.1.890	Distribution of jackets, gum boots, raincoats, and aprons to 14 cattle herders (12 cow herders and 2 pig herders)	22521	Times	1	0.11	0.5	1	0.11

LMBIS Code	Program	Budget heading	Unit	Annual				
				Target	Weightage	Budget (Lakh)	Progress	Weightage progress
2.7.1.891	Monthly distribution of soap, surf, sanitizer to cattle herders	22521	Times	12	0.28	1.22	12	0.28
2.7.1.894	Purchase of iron needles, medicines, and services for deworming, vaccination, and treatment of pigs	22521	Times	4	0.12	0.54	4	0.12
2.7.2.588	Provision of straw for 70 adult milking and pregnant cows at 3 kg per cow daily for 6 months (Rs. 25 per kg)	22521	Metric Ton	63.875	3.29	14.37	63.875	3.29
2.7.2.590	Provision of straw for 30 heifers at 3 kg daily for 180 days (Rs. 25 per kg)	22521	Metric Ton	16.2	0.84	3.65	16.2	0.84
2.7.2.594	Purchase of silage for 90 cows (70 adult and 30 heifers) at 3 kg daily for 6 months (Rs. 20 per kg, prepared on the farm)	22521	Metric Ton	48.6	2	8.75	48.6	2
2.7.2.595	Purchase of liver tonic and multivitamins for cows and calves to prevent cold stress in winter	22521	Times	4	0.41	1.8	4	0.41
2.7.2.596	Purchase of tools for cattle farming like sickles, baskets, ropes, shovels, wheelbarrows, milk buckets, calf milk feeding bottles	22521	Times	4	0.25	1.08	4	0.25
2.7.2.616	Purchase of maize for feeding 50 calves at 300 gm daily (Rs. 56 per kg)	22521	Metric Ton	5.475	0.63	2.76	5.475	0.63
2.7.2.630	Purchase of feed for 4 replacement pigs at 4 kg per animal daily (Rs. 64 per kg)	22521	Metric Ton	5.84	0.77	3.37	5.84	0.77
2.7.2.632	Purchase of feed for piglets (average 25 kg per piglet)	22521	Metric Ton	6	0.79	3.46	6	0.79
2.7.2.633	Provision of feed for 70 adult milking and pregnant cows at 4.8 kg per cow daily for 365 days (Rs. 63 per kg)	22521	Metric Ton	122.64	14.65	64.03	122.64	14.65

LMBIS Code	Program	Budget heading	Unit	Annual				
				Target	Weightage	Budget (Lakh)	Progress	Weightage progress
2.7.2.634	Provision of feed for 30 heifers at 3.5 kg daily for 365 days	22521	Metric Ton	38.325	4.74	20.7	38.325	4.74
2.7.2.635	Provision of feed for 4 breeding bulls at Khimti Cattle Breeding Center at 4 kg daily for 365 days	22521	Metric Ton	5.84	0.69	3	5.84	0.69
2.7.2.636	Purchase of feed for 20 sows at 6 kg daily (annual average distribution of 240 piglets)	22521	Metric Ton	43.8	5.41	23.65	43.8	5.41
2.7.2.637	Provision of 500 gm maize per animal daily for 70 cows and 30 heifers with hot water in the morning	22521	Metric Ton	18.25	1.88	8.22	18.25	1.88
2.7.3.522	Daily wages for 10 cattle farming laborers at Rs. 600 per day	22521	Person	10	4.12	18	10	4.12
2.7.3.523	Daily wages for 2 pig farming laborers at Rs. 600 per day for 365 days	22521	Person	2	0.9	3.94	2	0.9
2.7.3.537	Green grass production in Jiri (Jai/Bech 2.5 ha, maize/cowpea 2.5 ha)	22521	Hectare	5	0.51	2.25	5	0.51
2.7.3.538	Green grass production in Khimti (Jai/Bech 1 ha, maize/cowpea 1 ha)	22521	Hectare	2	0.31	1.35	2	0.31
2.7.3.539	Rye grass production in Jiri (including seeds, manure, irrigation, and other management)	22521	Ropani	10	0.82	3.6	10	0.82
2.7.18.1779	Purchase of replacement pigs (including transportation)	22522	Quantity	4	0.18	0.8	4	0.18
2.7.1.228	Replacement pig keeping	22521	No.	4	0.48	1.47	4	0.48
2.7.18.1788	Silage production in Khimti	22522	Metric Ton	75	0.34	1.5	75	0.34
2.7.18.1787	Silage production in Jiri	22522	Metric Ton	250	0.92	4	250	0.92
2.7.18.1786	Hay production in Khimti	22522	Metric Ton	200	0.92	4	200	0.92

LMBIS Code	Program	Budget heading	Unit	Annual				
				Target	Weightage	Budget (Lakh)	Progress	Weightage progress
2.7.18.1785	Hay production in Jiri	22522	Metric Ton	200	0.92	4	200	0.92
2.7.18.1784	Expansion of perennial and Fodder tree grass in Khimti farm	22522	Times	1	0.14	0.6	1	0.14
2.7.18.1783	Expansion of perennial and Fodder tree grass in Jiri farm	22522	Times	1	0.14	0.6	1	0.14
2.7.18.1780	Purchase of replacement pigs (including transportation)	22522	Quantity	40	0.73	3.2	0	0
2.7.18.1781	Artificial insemination service in Jiri (including purchase and transportation of nitrogen-frozen semen and internal visits)	22522	Times	8	0.46	2	8	0.46
2.7.18.1782	Operation of cattle breeding center in Khimti (including AI inseminators)	22522	Times	4	0.27	1.2	2	0.135
2.7.18.1798	Production and display of technology extension-related display boards (flex prints and other display materials)	22522	Times	2	0.21	0.9	2	0.21
2.7.18.1797	Coordination with Dolakha Dairy for marketing milk produced by farmers, establishment of milk collection centers in Dhuwakot, Sikri, Khawa, Mainapokhari, and Namdum with miscellaneous expenses	22522	Times	5	0.51	2.25	1	0.102
2.7.18.1794	Cleaning and repair of sub-surface drainage in sheds and pens	22522	Times	1	0.67	2.91	1	0.67
2.7.18.1793	Seed production of Paspalum grass (collection, processing, storage)	22522	Kg	150	0.34	1.5	150	0.34
2.7.18.1792	Seed production of rye grass (collection, processing, storage)	22522	Kg	70	0.24	1.05	70	0.24
2.7.18.1791	Removal of thorny, toxic, and unwanted plants in grazing areas of Jiri and Khimti and planting of grass	22522	Times	1	0.67	2.91	1	0.67

LMBIS Code	Program	Budget heading	Unit	Annual				
				Target	Weightage	Budget (Lakh)	Progress	Weightage progress
2.7.18.1800	Celebration of Farm Day	22522	Times	1	0.11	0.5	0	0
2.8.1.206	Monitoring visits for external source programs and Khimti farm	22611	Month	12	0.56	2.45	12	0.56
2.8.2.94	Participation in workshops, training, and review meetings (including transfers, internal travel expenses)	22612	Times	6	0.16	0.68	6	0.16
2.8.2.220	Participation in meetings of office heads and travel to headquarters in Charikot for allowance withdrawal	22612	Times	10	0.56	2.45	10	0.56
2.9.6.9	Miscellaneous expenses for program management	22711	Month	12	0.11	0.48	12	0.11
2.9.6.83	Center improvement and coordination committee discussions with stakeholders	22711	Times	4	0.09	0.38	0	0
2.9.8.15	Hospitality expenses for visiting officials/representatives from ministries, departments, and stakeholder agencies for office monitoring	22711	Times	4	0.19	0.83	4	0.19
7.2.9.43	Deworming, vaccination, and medicinal treatment services for pigs	27213	Times	4	0.23	1	4	0.23
7.2.12.1	Deworming, vaccination, and medicinal treatment services for cows	27213	Times	4	0.69	3	4	0.69
II	**Recurrent Budget sub total**				78.4	342.9		76.2
	Total Budget				100	437.1		97.7

Table 29: Weightage Progress Achieved NFY 2080/81

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	22.3	21.7	0	97.6	97.6
2	Second Trimester	11.02	11.02	20.2	19.23	100	95.1	96.8
3	Half yearly	11.0	8.9	42.8	39.9	80.2	94.1	91.3
4	Third Trimester	1.9	1.9	17.6	17.3	61.54	100	97.8
5	Fourth Trimester	8.6	8.6	18.3	17.7	100	97.0	97.9
6	Annual Progress	21.5	21.5	78.5	76.2	100	97.1	98.0

Table 30: Financial Progress Achieved NFY 2080/81

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	97.26	0	94.9	0	97.6	97.6
2	Second Trimester	48.2	88.42	0.85	80.1	1.8	90.6	59.3
3	Half yearly	48.2	185.7	0.85	175.02	1.76	94.26	75.2
4	Third Trimester	8.5	77.16	36.02	74.66	423.8	96.77	129.2
5	Fourth Trimester	37.5	80.17	50.9	74.7	135.7	93.2	106.7
6	Annual Progress	94.2	342.92	87.76	324.4	99.76	93.2	94.29

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 31Major 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	High power 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	
16	Photocopy machine	No.	3	Good	
17	STM phone line	No.	1	Good	
18	Canon Camera	No.	2	Good	
19	Laptop	No.	5	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	

S.N.	Particulars	Unit	Quantity	Condition	Remarks
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	
47	Khuwa Making machine	No.	1	Good	
48	Deep Fridge	No.	1	Good	

8 Price of products and goods

In NFY 2080/81, all the milk produced in the center was sold at a rate of NRs 75.56 compared to the previous year's rate of NRs 62.50. This pricing was determined through a tender bidding process. Charchit Gaurshankar Krishi Udhyog, Pvt, Ltd Charikot, Dolakha. offered the highest bid and secured the contract. The company collected milk produced in the farm and 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 32 Price list of the products and goods

S.N.	Particulars	Unit	NRs	Remarks
1	Cow milk	Liter	75.56	
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 2080/81, milk sales accounted for 83.75 % of total revenue. This figure in the previous year was 82.1%. Revenue from cow auctions contributed 7.08 %, piglet sales contributed 4.54 %, and other sources contributed 4.63%. The additional revenue sources include the sale of cattle manure, pig manure, grass seeds, sacks of feed, AI services etc. The breakdown of revenue collection from different commodities during NFY 2080/81 is detailed in Table 34.

During NFY 2080/81, the center collected a total revenue of NRs 12026441.6 (one crore, twenty lakh, twenty six thousand four hundred fourty one and 60 Paisa), representing a increase of 33.9 % compared to the previous NFY 2079/80. Table 35 presents the year-wise revenue generated from NFY 2070/71 to 2080/81.

Table 33 Share of revenue collection

S.N.	Commodities	NRs	% Share
1	Milk	10071805.6	83.75
2	Cattle auction	851000	7.08
3	Piglets	546000	4.54
4	Cow and Swind dung	288150	2.4
5	Culled pig	148231	1.23
6	Grass sale	44250	0.37
7	Insurance from cattle and pig	27000	0.22
8	E-bidding	22000	0.18
9	Sack of feed	11255	0.09
10	Bid document sale	9000	0.07
11	Miscellaneous	7750	0.06
	Total	12026441.60	100.0

Table 34: 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
2080/81	100.7	5.5	8.5	5.6	120.3

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 received 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 2080/81 are outlined in Table 36.

Table 35: Approved posts and status

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 36: 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	

S. N.	Designation	Name of employee	Date of Joining CGRC	Permanent Address	Remarks
6	Junior Livestock Service Technician	Mr, Bal Kumar Dahal	2074/11/03	Kanchanrup municipality-12, Saptari	
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 37: 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	Rudra Bahadur Karki	Gokulganga VDC Ramechhap	"	

12. The challenges

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