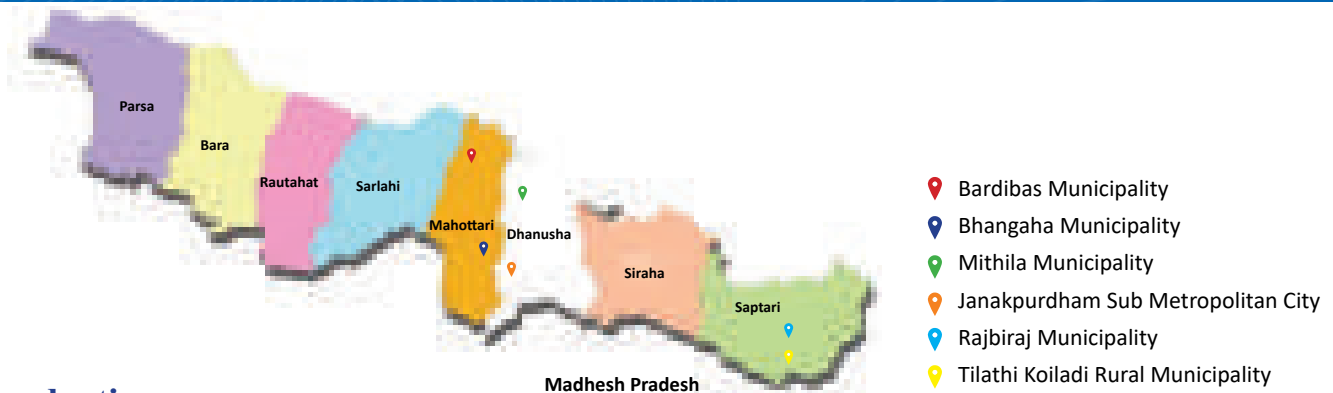


A journey towards creating Green, Resilient and Inclusive value-chain enterprise development in Madhesh Pradesh, creating sustainable future



Working Area



Introduction

The interplay of climate-induced risks and socio-economic conditions in Madhesh Pradesh presents both significant challenges and opportunities. To enhance resilience in the face of water extremes, it is important to implement integrated water management strategies, invest in sustainable agricultural practices, and promote innovative solutions tailored to the needs of local communities. With the right support, Madhesh Pradesh can emerge as a model for sustainable development, fostering resilience among its marginalized community while capitalizing on its agricultural potential to drive economic growth. By addressing the issue of climate change, Madhesh Pradesh not only secures its own future but also contributes to the broader goals of economic transformation and sustainable development in Nepal.

In the context of Madhesh Pradesh, where communities are highly vulnerable to water related challenges-ranging from severe flooding to prolonged drought (often referred as "too much, too little" or TMTL water scenarios)-, implementing value chain and enterprise development interventions is essential for enhancing resilience. By integrating a Green, Resilient, and Inclusive Development (GRID) approach, we can address the multidimensional impacts of climate change on local livelihoods, strengthen adaptive capacities, and promote sustainable economic growth. This approach helps to mitigate climate risks but also fosters social equity and inclusive development, ensuring that vulnerable groups have improved access to resources and opportunities.

Three pillars for alternative livelihood options implemented under the project.

Innovation: Under the innovation, following initiatives were introduced and implemented in the project area.

Kisan Credit Card: To address the challenges in accessing finance from former channels, Kisan Credit Card was introduced. Kisan Credit Card is a digital lending tool providing small holder farmers with access to affordable credit for agricultural related expenses.

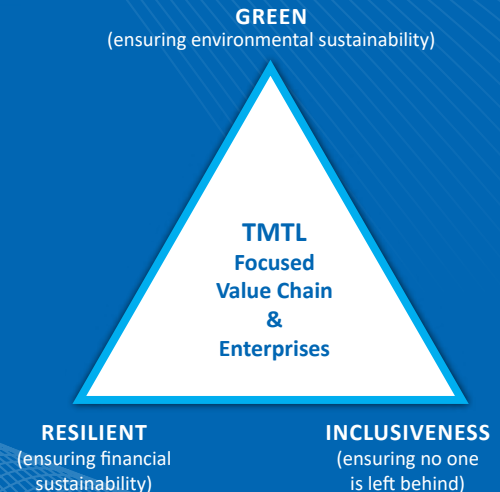
Krish Doot: Krishi Doot, meaning "*Agriculture Ambassador*" is a community-based facilitator who bridges the gap between local farmers and essential agricultural resources, knowledge, and services. These facilitators, typically local entrepreneurs with agricultural experience, act as trusted advisors, providing other farmers with support in crop management, pest control, market access, and financial literacy.

CoolBot Technology: To address the post harvest loss issues of vegetables and mango, coolbot technology has been introduced. CoolBot technology is a game-changer for small-scale producers and businesses that need reliable, affordable cold storage without the high overhead costs of conventional cooling systems.

Digital Inclusion: Digital Profile of the entrepreneurs has been created so that no one is left behind in the digital era.

Capacity Building : Capacity building initiatives focused on equipping selected entrepreneurs to establish sustainable and resilient enterprises by developing value-added products and services. These entrepreneurs received comprehensive training in business plan development, business management, and financial management, empowering them with the skills needed to successfully operate and grow their businesses.

Market Access : This program has established strong market access for products, enabling supply across local, regional, national and international markets. A market assurance mechanism has been implemented in partnership with a major agricultural supply company Agri Vastu Pvt. Ltd., owned by Bhatbhateni, the country's largest supermarket chain. This ensures consistent demand and reliable distribution channels for agricultural products, supporting sustained growth for producers.



Entrepreneurs Creating Sustainable and Resilient Value Chain

Name	Contact	District	Municipality	Organization
Samjhana Dhakal	9844404783	Mahottari	Bardibas	Janamukhi Sana Kisan Krishi Sahakari Sanstha
Binay Adhikari	9819230313	Mahottari	Bhangaha	Vinay Agricultural Farm
Brajesh Pajiyar	9810166720	Mahottari	Bhangaha	
Thir Bhadur Khadka	9827820662	Mahottari	Bardibas	Kamala Krishi Farm
Sushil Dhakal	9849732997	Mahottari	Bardibas	KUSUM Agriculture
Ram Bhajan Mandal	9807682140	Mahottari	Bhangaha	
Hema Bhujel	9869557645	Mahottari	Bardibas	Pragati Samuha
Bal Krishna Devkota	9844076142	Mahottari	Bardibas	
Goma Kumari Susling	9864212225	Mahottari	Bardibas	Pragati Samuha
Anil Kumar Mahato	9815802268	Mahottari	Bardibas	Krishak Samuha
Kashi Mahato	9844106739	Mahottari	Bardibas	
Achinta Kumar Singh	9862431837	Mahottari	Bardibas	Achinta Agriculture and Livestock Industry Pvt. Ltd
Padam Bahadur Shrestha	9843995633	Dhanusha	Mithila	
Shatrudhan Mahato	9804888704	Mahottari	Bardibas	
Birendra Kumar Mahato	9816815215	Dhanusha	Mithila	Namuna Samuha
Dinesh Prasad Yadav		Saptari	Rajbiraj	
Sweeta Kumari Thakur	9864041798	Dhanusha	Janakpur	Dami Arts
Deepa Kumari	9817639065	Dhanusha	Janakpur	Dipa Arts
Sarita Koirala	9812028321	Mahottari	Bardibas	Krishi Farm
Sujit Kumar Mahato	9807255210	Mahottari	Bhangaha	Biz Bhandar
Babita Sina	9817685104	Dhanusha	Janakpur	
Bharat Prasad Yadav	9819687177	Mahottari	Bhangaha	
Mahendra karki	9849959734	Mahottari	lalgadh	
Kajal Kumari Jha	9819868225	Dhanusha	Janakpur	
Pratima Koirala	9844029103	Mahottari	Bardibas	Panchadhura Home Made Achar



Bamboo
Male- 2
Female- 2



Mithila Art
Female- 4



Vegetable
Male- 10



Mango
Male- 4
Female- 3





Pratima's Transformation: From Pickle Maker to Market Innovator

Pratima is a skilled pickle maker who confidently launched her own business, *Panchadhura*, in Bardibas Municipality offering a variety of unique, locally produced pickles. With the support from HI-GRID project supported by Australian Government and implemented by ICIMOD and its project partner R&D Innovative Solution, her products recently made their way to Kathmandu. The experts from the project offered valuable feedback on packaging and guided her through the process of registering with the Department of Food Technology and Control (DFTQC).

Initially, Pratima focused solely on pickles. However, with HI-GRID's support, she has now expanded her product line, including other mango-based value added products. Through mentorship, she has gained insights into market demands and diversified her offerings such as patra roti, sutkeri masala, sel roti etc. For capacity building, HI-GRID provided her with networking opportunities and arranged observation sessions at training centers.

This mentorship and continuous feedback have strengthened Pratima's skills, product range and confidence. She's now ready to collaborate with other local agripreneurs, including Krishi Doot a community based agribusiness facilitator to grow her business and reach new markets. Pratima's journey is an inspiring example of how targeted support can empower rural entrepreneurs to create thriving, sustainable businesses.



Pratima Koirala

Before HI-GRID Intervention:

- Focused only on traditional pickle-making for local consumption.
- Lacked proper branding, packaging, and regulatory compliance.
- Limited knowledge of market trends and product diversification opportunities.

After HI-GRID Intervention:

- Diversifying her product range to include mango-based items alongside pickles.
- Improving packaging and branding, meeting market standards.
- Successfully registered her business with the DFTQC.
- Enhancing her skills and confidence through mentorship, training, and networking.
- Collaborating with other community members to scale her business.



"From Homegrown to Market-Ready: Sarita Koirala's Journey to Building a Sustainable Mango Enterprise"



Sarita Koirala, a dynamic woman from Bardibas Municipality, runs a family-based, eco-friendly enterprise with her retired husband. Together, they started a mango farm with local chickens and goats to create a balanced ecosystem. Initially, they shared their harvest with neighbors, but after the HI-GRID intervention last year, Sarita began exploring the economic potential of her farm.

She joined the "Mango Team," in 2024 and learned to make and market Mango Pickle, being part of the Mango Value Addition Team, aiming to bring more mango-based products to market. Through HI-GRID project supported Business and Financial literacy classes she understood the value of her husband's pension as an investment, transforming her farm into an opportunity for growth. Today, Sarita's venture addresses green economy goals by soil conservation and climate resilience practices, and her dream is to expand her business in the mango value chain, at local and national market also if possible in international market too.



Sarita Koirala

Before HI-GRID Intervention:

- Ran a small mango farm with some vegetables and poultry.
- Made mango pickle only for personal use.

After HI-GRID Intervention:

- Enrolling in the Mango Value Addition Team, aiming to create new mango products.
- Sees her farm as an economic opportunity with potential for market expansion.



Building Green Resilience: Achinta's Mission to Empower Farmers Through Finance, Market Access and Sustainable Agriculture with HI-GRID's Support

Achinta Kumar Singh, a young entrepreneur from Bardibas Municipality, is dedicated to empowering over 1,000 farmers through farm mechanization, fertilizer production and a cooperative in his village. Earlier in his career, he struggled to manage his business as he tried addressing multiple issues simultaneously related to seed and bio fertilizer production and distribution. After receiving financial and business literacy training and mentoring through the HI-GRID project, Achinta Kumar gained clarity: he needed to strengthen his business's financial foundation before expanding support to his community. With the projects mentoring, he streamlined his financial systems and explored partnership with a bank to introduce the Kisan Credit Card (Kisan Credit Card is a digital lending tool providing marginalized farmer with access to affordable credit for agricultural related expenses), ensuring farmers have access to quality inputs and reliable market channels. By providing high-quality inputs and technical support, he helps farmers adapt to these challenges.



Achinta Kumar Singh

Before HI-GRID Intervention:

- Struggled to balance business and community resource management.
- Lacked structured financial systems and clear market connections.

After HI-GRID Intervention:

- Streamlined financial systems and partnered with a local bank.
- Introducing the Kisan Credit Card for farmers to access finance.
- Focusing on building agricultural resilience and aligning farming with market demands.

Kashi's Journey: From Social Advocate to Sustainable Farming Innovator



Kashi Mahato



Kashi Mahato has spent his life fighting for social justice and equality as a political leader. His commitment to his community runs deep, and over the years, he's developed practical skills that are now opening new economic opportunities in his area.

Before HI-GRID's intervention, Kashi's farming approach was largely focused on subsistence and experimentation. His groundbreaking work on a unique variety of Brinjal (eggplant) capable of producing crops continuously for three years. Although, his Brinjal variety was promising, he lacked a structured business model and consistent income stream, often sharing his knowledge informally rather than using it to create a sustainable income.

When the HI-GRID project supported by the Australian government and implemented by ICIMOD and its project partners started working in Bardibas, he was invited to join a business development services training program. Initially unable to attend, he joined later and received weekly mentoring that reshaped his vision. With HI-GRID's guidance, Kashi began to see his work not only as a social mission but also as a viable business. He realized the importance of consistent income and the need for a central sales point to support his farm and family. Motivated by these insights, he has planned to open a shop in Bardibas to sell his unique brinjal plants and provide resources and advice to local farmers.

Today, Kashi's work is expanding, reaching 300 farmers who are adopting sustainable practices, further building community resilience. His dream is for his daughter, now studying in Kathmandu, to intern with R&D Innovative Solution, acquire relevant skills, and join him in growing the family business. Through HI-GRID's support, Kashi's journey has evolved from social advocacy to pioneering sustainable farming, creating a lasting impact on his community and family.

Before HI-GRID Intervention:

- Primarily focused on subsistence farming and community advocacy.
- Developed a climate-resilient brinjal variety but lacked a formal business plan.
- Operated without a steady income stream or a dedicated sales center.

After HI-GRID Intervention:

- Shifting to a business-oriented approach, opening a shop in Bardibas.
- Gaining insights into financial sustainability and planning to establish a market outlet.
- Expanding his impact by supporting 300 local farmers in adopting sustainable vegetable farming practices.



Empowering Tradition: Deepa Kumari's Journey of Resilience and Growth through development support



Deepa Kumari's journey embodies resilience and the transformative power of cultural heritage in fostering local entrepreneurship in Jankpurdham. Born in India and married to Nepal citizen, Deepa faced the challenge for access to finance. However, her connection to Mithila art became her anchor, enabling her to open an art gallery in Janakpur. She creates custom designs on sarees, paper printing, bedsheets and pottery while providing training and job opportunities for local women, blending cultural preservation with economic empowerment. With the support from HI-GRID project supported by Australian Government and implemented by ICIMOD and its project partner R&D Innovative Solution, Deepa participated in a business and finance workshop that transformed her approach to sustainable business. Realizing the financial burden of renting her gallery space, she decided to secure a bank loan to build a gallery on her own land, turning her business into a lasting investment. With support from the project, she identified her best-selling products, refined packaging and established market linkages with specialty stores like Ekadeshma. This partnership will bring her Mithila-inspired products to national and international markets, sharing Nepali craftsmanship with the world. Deepa's story showcases how development initiatives can empower entrepreneurs to build resilient, sustainable enterprises while preserving cultural traditions.



Deepa Kumari

Before HI-GRID Intervention:

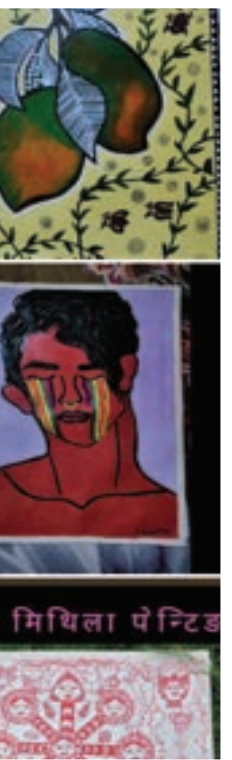
- Operated her gallery in a rented space with high costs, limiting long-term growth.
- Lacked structured market linkages to scale her business.
- Focused solely on local sales, with no pathway to larger markets.

After HI-GRID Intervention:

- Improving financial sustainability by planning to construct a gallery on her own land.
- Gaining business insights through workshops, enabling better product selection and market targeting.
- Establishing partnerships with specialty stores in Kathmandu, connecting her products to wider markets.



Empowering Tradition: How Kajal is bringing green business to life through Mithila art



Kajal's journey took a transformative turn with the support of the HI-GRID project, which provided her mentorship, business planning skills and eco-friendly business insights. With the support from HI-GRID project supported by Australian Government and implemented by ICIMOD and its project partner R&D Innovative Solution, Kajal crafted her business plan and teamed up with her friend Sweeta to expand Dami Arts, a venture that blends traditional Mithila art with modern and sustainable practices. Starting with wall paintings, they quickly diversified into custom products such as T-shirt, gift boxes and *Khada*.

Though they initially struggled with limited marketing knowledge, Kajal and Sweeta were determined. Kajal utilized her social media skills to grow their audience, gaining notable recognition when her mango-themed Mithila painting was chosen as the logo for the first ever Mango Symposium held at ICIMOD in collaboration with Ministry of Agriculture and Livestock Development, R&D and ICIMOD. The painting was presented to Agriculture Minister.

Now, as self-taught artists and entrepreneurs, Kajal and Sweeta balance their studies with running Dami Arts. They are committed to bringing eco-friendly, culturally inspired products from Madhesh to broader markets. Their story exemplifies how targeted support can help young innovators turn their passions into sustainable businesses that celebrate heritage while embracing change.



Kajal Kumari Jha

Before HI-GRID Intervention:

- Focused solely on traditional wall paintings with limited product diversification.
- Lacked structured marketing skills and struggled with funding and resources.
- Operated without a clear business plan or market linkage.

After HI-GRID Intervention:

- Improving marketing strategies through mentorship, leveraging social media to grow their audience.
- Gaining national recognition with a Mithila art logo presented to the Agriculture Minister.
- Building a foundation for scaling their business to broader markets.



From Farm to Market: Binay Adhikari's journey to strengthen the mango value chain for sustainable growth



Binay Adhikari, a young and energetic farmer Bhangaha Municipality, has always been passionate about making a difference in agriculture. Initially working part-time on his family farm, he recently decided to fully commit to farming, recognizing its potential to uplift his community. His focus turned to mango farming, a promising yet challenging crop due to its poor market linkage and high post harvest loss.

During a workshop organized through the HI-GRID project, Binay identified that the major obstacles for mango farmers extended beyond production. The real challenges lay in securing fair market connections and managing post-harvest losses. Inspired by the workshop, Binay shifted his focus to strengthening the mango value chain. He explored innovative solutions like CoolBot technology for affordable cold storage, which can reduce waste and ensure a steady market supply.

Now, Binay is working to build stronger market linkages and adopt improved storage practices. His vision extends beyond his own farm, aiming to empower his community's farmers to achieve fair prices and sustainable incomes.



Binaya Adhikari

Before HI-GRID Intervention:

- Worked part-time on his family farm with limited focus on mango farming.
- Struggled with challenges in market connections and post-harvest storage solutions.
- Lacked awareness of innovative technologies to reduce waste and improve supply stability.

After HI-GRID Intervention:

- Transitioning to full-time mango farming with a focus on sustainable practices.
- Gained knowledge about CoolBot technology to address post-harvest losses.
- Building stronger market linkages to secure fair prices for farmers.
- Expanding his vision to include community-wide benefits through value chain improvements.



From Engineer to Agripreneur: Brajesh's journey with HI-GRID



Brajesh Pajiyar, an engineer by profession from Bhangaha Municipality, often felt disheartened seeing his ancestral land lie unused. Determined to revive its potential, he decided to pursue part-time farming alongside his career, involving his family in vegetable farming.

However, his lack of business and financial knowledge led to losses in farming venture. With the support from HI-GRID project supported by Australian Government and implemented by ICIMOD and its project partner R&D Innovative Solution, Brajesh joined the business and financial literacy program he learned essential skills like business planning, financial forecasting, budgeting and market-driven farming approach. With this knowledge, he registered the farm under his mother's name and revamped his approach, turning his farm in to a integrated farm business.

Today his journey is leading to the path for a most beautiful integrated farm inspiring others in his community, showing how knowledge and determination can turn challenges into opportunities.



Brajesh Pajiyar

Before HI-GRID Intervention:

- Despite a modern setup, Brajesh's farm faced several challenges.
- Poor business & financial planning limited the farm's profitability.
- Struggled to unlock the farm's full potential.
- Balancing engineering career and farming responsibilities proved difficult.

After HI-GRID Intervention:

- Developed a proper business and financial plan to ensure farm's profitability.
- Implementing multiple revenue generation model through the integrated farm.
- Planning to adopt climate smart practices, to improve sustainability and productivity.



Padam Bahadur Shrestha: Transforming challenges into opportunities with HI-GRID

Padam Bahadur Shrestha, a passionate organic farmer from Mithila Municipality, has been practicing permaculture in his village of 140 farming families. Balancing water challenges between farmland and residential areas, he manages his vegetable farm with buffaloes, goats, and a small rice mill. He also produces bio-pesticides and vermicompost, training others to reduce chemical use and adopt organic practices while growing organic vegetables. He has been engaged in making his community aware to use bio-pesticides rather than chemical fertilizers.

Despite his efforts, Padam faced challenges with perishable vegetables and fluctuating markets, sparking his interest in other value-added products too. Joining the HI-GRID project supported by Australian Government and implemented by ICIMOD and its project partner R&D Innovative Solution, proved transformative. The workshops enhanced his financial literacy and business planning, inspiring him to explore innovative solutions.

Now, Padam is planning to open a shop for agricultural inputs, fertilizers, organic manures, and expand vermicompost production. “Agriculture is my passion,” he says, “and with support, I can cultivate a prosperous future for myself and my community.”



Padam Bahadur Shrestha

Before HI-GRID Intervention:

- Limited access to stable markets for his organic vegetables, leading to wastage and inconsistent income.
- Lack of financial literacy and business planning skills restricted the scale and sustainability of his operations.
- Challenges in exploring value-added products due to limited technical knowledge and support.

After HI-GRID Intervention:

- Gained financial literacy and business planning skills, enabling better decision-making and long-term strategies.
- Expanding into vermicompost production and developed plans to open a shop for agricultural inputs, including organic manures and fertilizers in his village.
- Establishing stronger market linkages and introduced value-added products, ensuring sustainable income and community empowerment.



From Health to Harvest: Satrudhan Mahato and his wife's journey with HI-GRID



Satrudhan Mahato and his wife from Bardibas Municipality are health professionals. Apart from running their Ayurvedic medicine shop they run a diversified farm producing mushrooms, lemon and turmeric.

With the support from HI-GRID project supported by Australian Government and implemented by ICIMOD and its project partner R&D Innovative Solution, they participated in the business and financial literacy training which enabled them for proper business and financial plan. They have set a clear goal of expanding mushroom production by building a new mushroom production house and even encouraging community members to produce mushroom. They have a clear plan to provide training and necessary mushroom production kit to community member and a buy back scheme for better market access. Satrudhan's wife leads their agricultural enterprise, collaborating with organizations to train local women in mushroom farming, creating employment and empowering minorities.



Satrudhan Mahato

Before HI-GRID Intervention:

- Managed their business without income calculations or financial planning.
- Worked individually with no collaboration or training initiatives.
- Limited awareness of financial tools and growth opportunities.

After HI-GRID Intervention:

- Introduced financial planning and set goals for growth.
- Expanding operations through collaboration with community members.
- Ensuring market access for the mushroom produced by community members too.

Mango Symposium 2024



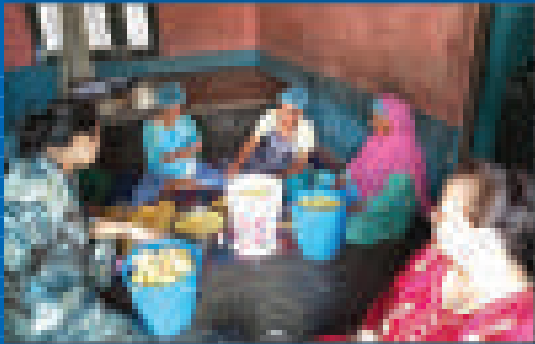
The Mango Symposium 2024 organized for the first time in Nepal brought together scientists, industry leaders, farmers and policymakers to exchange knowledge and discuss advancements in mango cultivation and valuechain development with the goal of strengthening Nepal's mango sector for enhanced economic and environmental impact.

Glimpse of Capacity Building Events

Business and Financial Literacy



Mango by products developed under HI-GRID's intervention



HI-GRID, project “Building capabilities for green, climate resilient and inclusive development in the Lower Koshi River Basin” supported by the Australian Government, Department of Foreign Affairs and Trade (DFAT) and implemented by International Centre for Integrated Mountain Development (ICIMOD), local government and project partners to enhance resilience towards TMTL in the Lower Koshi River Basin (LKRB) in Nepal.

R&D Innovative Solution Pvt. Ltd. is an agritech company working in transforming Nepal’s agricultural sector through research-driven, sustainable innovations. With a focus on empowering farming communities and enhancing productivity, the company addresses critical gaps in Nepal’s agricultural value chains. By leveraging the country’s agro-climatic diversity, R&D Innovative Solution supports farmers from “soil-to-sale,” fostering an inclusive and resilient agricultural ecosystem that drives economic growth and sustainability .
