Final Report

on

Annual (Year 6) Outcome Survey of Food and Nutrition Security Enhancement Project (FANSEP)

RFP No.: NP-MOAD-409196-CS-CQS-ANNUAL_SURVEY

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ACRONOMYS

ADS	Agriculture Development Strategy
AGDP	Agricultural Gross Domestic Product
AKC	Agriculture Knowledge Center
AOS	Annual Outcome Survey
BFI	Bright Future International Pvt. Ltd.
BS	Baseline Survey/ Status
CAFÉ	Computer Assisted Field Entry
CAPI	Computer Adaptive Personal Interviewing
CBOs	Community Based Organizations
CBS	Central Bureau of Statistics (of Nepal)
COVID-19	Corona Vires Disease 2019
CR	Climate Resilience
CSA	Climate Smart Agriculture
CSAT	Climate Smart Agriculture Technology
DoLS	Department of Livestock Services
DoA	Department of Agriculture
FANSEP	Food and Nutrition Security Enhancement Project
FAO	Food and Agriculture Organization
FBC	Full-Bright Consultancy Pvt. Ltd.
FGD	Focus Group Discussion
FIES	Food Insecurity Experience Scale
FNS	Food and Nutrition Security
FFS	Farmers Field School
FYM	Farm Yard Manure
G.	Gram
GAFSP	Global Agriculture and Food Security Program
GDP	Gross Domestic Product
GoN	Government of Nepal
GPS	Global Positioning System
Ha.	Hectare
HDD	Household Dietary Diversity
HHs	Households
HNG	Home Nutrition Garden
IDA	International Development Agency
IRT	Item Response Theory
JV	Joint Venture
Kg.	Kilogram
KII	Key Informants' Interview
LG	Local Government
Ltr.	Litre
MAD	Minimum Acceptable Diet
MDD	Minimum Dietary Diversity
MDDW	Minimum Dietary Diversity for Women
MDGs	Millennium Development Goals
M&E	Monitoring and Evaluation

MoALD	Ministry of Agriculture and Livestock Development
M/RM	Municipality/ Rural Municipality
MS	Midline Survey
MSP	Multi-Stakeholder Platform
Mt	Metric Ton
N	Number
NFS	Nutrition Field School
NGO	Non-Governmental Organization
NPR/NRs.	Nepalese Rupees
OPD	Office of the Project Director
PDO	Project Development Objective
PAD	Project Appraisal Document
PG	Producer Group
PMIS	Project Management Information System
PMU	Project Management Unit
POs	Producer Organizations
PSC	Project Steering Committee
QAP	Quality Assurance Plan
RM	Rural Municipality
SDGs	Sustainable Development Goals
SP	Sub-Project
Sq.	Square
SRR	Seed Replacement Rate
STATA	Statistical Software for Data Science
ToR	Terms of Reference
WB	World Bank
Yr	Year

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EXECUTIVE SUMMARY

Food and Nutrition Security Enhancement Project (FANSEP) has received a grant of US $22.7 million from the Global Agriculture and Food Security Program (GAFSP) where Government of Nepal contributes US$ 6 million making total project budget of US $28.7 million. World Bank (IDA/WB) is the supervising entity for this project. The Ministry of Agriculture and Livestock Development (MoALD) is acting as the implementing agency for the project. FANSEP has been designed to enhance climate resilience, improve agricultural productivity and nutrition practices of targeted smallholder communities in selected areas of Nepal. It is supposed to increase the resilience and reduce the environmental footprint of production by mainstreaming Climate Smart Agriculture (CSA) practices through project activities. Climate resilience of the project beneficiaries or their abilities to withstand and recover from climatic shocks, particularly droughts and rainfall are to be achieved through the application of CSA practices, diversification towards high value and nutritious crops and generation of additional incomes. Nutrition security would be realized through crop and animal productivity, increased household income, improvement in score on food insecurity experience scale and improved dietary intake for pregnant and nursing mothers and children between 6-24 months.

The Annual Outcome Survey (AOS) for the 6th year of FANSEP implementation was conducted to evaluate the performance of the FANSEP against the expected results as articulated in the Results Framework in 2024. The primary information was collected from randomly selected 1600 beneficiary households from all 16 municipalities of the 8 project districts. The information was collected online by using Computer Assisted Personal Interview (CAPI) tools from 910 crop production related group of farmers, 523 livestock related group of farmers, and 167 nutrition related group of farmers through structured questionnaires which were developed in Survey Solution.

Out of the 1600 households surveyed, there were 69% male-headed and 31% female-headed households, with highest number of female-headed household in Pipara RM (75%), followed by Ekdara RM (62%) and least in Gajuri RM and Indrawati RM (15% each). There were 51% male and 49% female members and average family size per household was 4.8 in the surveyed households. Highest family size per household was in Bariyarpatti RM (6.6), followed by Ekdara RM (6.1), and least in Tamakoshi RM (2.9). Among all members in the surveyed households, 53 % members were between the age of 15 and 49 years, 19% were in between 5 and 15 years, 16.5% were in between 50 and 69 years, showing larger number of members are economically active. Of the total members in the family, maximum i.e. nearly 36 % of them had no any formal education, about 24 % of them had primary level of education, while very lesser number of members were university graduate.

Nearly 91 per cent of farm households surveyed were found cultivating the crops in their own and rented in land, rest 9% of them were found not cultivating crops. Average land holding per household was 0.5 Ha.

About 95 per cent of the farm households were found raising livestock including poultry. A livestock farm used to own about 3.78 cattle per farm household, for those who have owned cattle. Likewise, a livestock farm used to own average of 2.48 number of buffalo per farm household, for those who have owned buffalo. In case of goat, a goat farm used to own 7.9 number of all types of goat per farm household, for those who have owned goat. A farm household, who was rearing poultry birds in the project area used to own 11.28 number of all types of poultry birds, excluding broilers, per farm household, for those who have owned poultry birds.

Nearly 91% of crop and livestock producing households in all used to apply Climate Smart Agriculture Technologies (CSATs) during the project implementation of 6th year where the women applied percentage is 31%. There is about 92% of adoption of improved agricultural technologies including Climate Smart Agriculture Technologies (CSATs) among the FANSEP benefitted crop producing farm households during the 6th year of FANSEP intervention, which was 89% during the midline (2022). In case of livestock farms, there was 88.3% of adoption of improved technology during the sixth year, which was 65.3% during the midline.

The productivity of cereals which was 2.43 Mt/Ha during the baseline (2021), increased to 2.99 Mt/Ha during the 6th year with increment of about 23% as compared to the baseline productivity. Similarly, the productivity of vegetables, which was 6.75 Mt/Ha during the baseline, increased to 19.47 Mt/Ha during the 6th year of FANSEP implementation, with increment of about 188% as compared to the baseline productivity. The productivity of cash crops (potato) which was 10.97 Mt/Ha during midline, increased to 11.35 Mt/Ha during 6th year. During the same years, the productivity of pulse crops increased from 0.72 to 0.79 Mt/Ha, oil-seed crops from 0.64 to 1.07 Mt/Ha, and spice crops from 8.29 to 11.83 Mt/Ha.

Likewise, the productivity of goat meat which was 21.79 Kg per live goat during the baseline (2021), increased to 28.05 Kg per live goat during the last year of the project implementation, with about 29% of increment. However, the chicken productivity was increased nominally by 19.56% from baseline (2.3 Kg) to sixth year (2.75 Kg). There was considerable increment in the milk productivity (100%), which was 652.29 litre of milk production per milking animal (both cow and buffalo) per year during the baseline period (2021), which increased to 1305.27 litre per milking animal per year during the end year of the FANSP implementation (2024). The cow and buffalo milk productivities per year per milking animal during the end year of the FANSEP were 1377.09 litre and 1269.62 litre respectively. There was on an average 5.5 litre of milk production per day per milking animal (cow and buffalo both) during the lactation period, with 5.7 litre for milking cow and 5.4 litre for milking buffalo.

The significant increase in the overall average net household income among FANSEP-benefited households is a remarkable achievement of the project. The overall average net household income, which was Rs. 233,620.00 during the baseline year (2021), increased to Rs. 302,916.00 during the midline (2022), which reached to Rs. 375,931.00 during the 6th year, with increment of 61% in the last year of FANSEP implementation as compared to the baseline year (2021) income, and with 24% increment as compared to the midline year (2022) income. Segregating the all income to farm income and off-farm income, the average net farm income, which was Rs. 44,114.00 during the baseline, increased to Rs. 58,449.00 during the 6th year, with 32.5% of increment as compared to baseline farm income. Whereas, off-farm income increased from Rs. 189,506.00 to Rs. 267,315.00 during midline, and again increased to Rs. 317,482.00 during the 6th year of project implementation, with 67.53% of increment as compared to the baseline average off-farm income, and nearly 19% as compared to the midline average off-farm income. Net average household income among the female headed households, which was Rs. 237,506.00 during the baseline (2021), increased to Rs. 302,375.00 during the midline (2022), and ultimately increased to Rs. 367,136.00 during the 6th year of project implementation, with increment of nearly 55% as compared to the baseline income and by 21.4% as compared to the midline income. Whereas, the average household income among the male headed households, which was Rs. 214,513.00 during the baseline (2021), increased to Rs. 303,499.00 during the midline (2022), and finally reached to Rs. 379,906.00 during the 6th year of FANSEP implementation, with increment of 77% as compared to baseline income, and by 25% as compared to midline income. This indicates that there are substantial economic progresses among the households who were involved in the program. Due to such increase in household income, the beneficiary

households have enhanced their livelihood agriculture practices to commercial agriculture, and eventually have improved their economic conditions.

The overall Food Insecurity Experience Scale (FIES) score for all households, which was -8.58 during the baseline (2021), reached to -9.12 during the 6th year of project implementation, showing the food insecurity situation at the household level has been reduced, or in other words, the food security situation at the household level has been increased. The FIES score among female members, which was -7.96 during the baseline reached to -9.03 and among the male, which was -8.71 in the baseline that reached to -9.21 during the sixth year (2024) indicating that the food security situation among the male and female members have also been increased. The Naïve food insecurity score, which was 1.2 during the baseline year (2021) reached to 3.49, showing increased food security among the beneficiary households at the end of the project period.

The project has made substantial progress on the dietary intake among the pregnant and nursing woman, women of aged 15 to 49 years, and children of aged 6 to 24 months, measured in minimum dietary diversity (MDD) score and minimum acceptable diet (MAD) score. There were 41% pregnant and nursing women who had MDD score (i.e. at least 5 out of 10 food items) during the baseline year (2021), which increased to nearly 88% during the 6th year of FANSEP implementation, with increment of 114.6%, showing impressive results on the dietary intake among the pregnant and nursing women. Similarly, the MDD score for all women aged between 15 to 49 years, which was 47% during the baseline, increased to 74% in the 6th year, with increment of 58% as compared to the baseline MDD score, which also shows that there is very positive impact of the project among such woman groups in the FANSEP command areas. The MDD score for children aged 6 to 24 years, which was 17% during the baseline (2021), increased to nearly 50% during the 6th year of the project implementation, with increment of about 194%. Similarly, there were 20% children of aged 6 to 24 months who had fulfilled the score of Minimum Acceptable Diet (MAD) during the baseline year (2021), such share was increased to nearly 43% at the end of the project period (2024). These MDD and MAD scores on the children of aged between 6 to 24 months, have clearly indicated that the project has also made tremendous nutritional impact on the children as well.

The Household Dietary Diversity (HDD) Score for 1000 days mother, which was 6.82 during the baseline year (2021), increased to 8.8 during the 6th year of the FANSEP implementation, with 29% increment as compared to the baseline score, showing good impact of the project on the daily dietary intake among the pregnant and nursing women. The HDD score for all women between the age of 15 and 49 years, which was 7.2 during the baseline year (2021) that increased to 8.2 during the sixth year of project implementation, showing good impact on this group of women. However, the HDD score for children between the age of 6 and 24 months, was just 9% more during the sixth year (4.8) than the baseline year (4.4).

There is significant increase in seed replacement rate (SRR) for all the cereals as observed during the sixth year of project intervention, which have exceeded the target of SRR increment (20%) at the project level. The SRR, which was 25% for all cereals, including potato, during the baseline (2021) increased to 41.64% during the sixth year of the FANSEP implementation, with increment of 66.56%. This 66.56% increase in SRR reflects substantial improvements in agricultural practices among the beneficiary households. Comparing the SRR among the cereals during the sixth year, highest SRR was observed in maize 48.05%, followed by wheat 42.67%, and then paddy 39.23%, and least in potato 30.10%. Whereas, the per cent increment on the SRR was observed highest in wheat (137%), followed by maize (100%), potato (88.13%) and then paddy (26.54%). The SRR of these crops in total during 2024 increased by 26.18% as compared to the midline SRR.

Of the total 1600 farm households surveyed, 1191 farm households (74.4%) were found having home nutrition garden (HNG), whereas, 25.6% of farm households were not having the nutrition garden. On the other hand, out of total 167 households associated with the nutrition groups, only 126 households were found having nutrition garden. The purpose of the home nutrition garden (HNG) was for the home consumption; however, it was observed that about 9 % of farm households also used to sell the surplus vegetables. Of the total farm households who were having home nutrition garden (HNG), maximum of them (48%) used to grow cowpea in their home nutrition garden, followed by Bottle-gourd (28%), Bitter-gourd (27%). Nearly 79% of the farm households, who were having home nutrition garden (HNG), reported that they are getting diverse food from own nutrition garden, 12 % reported that the HNG has helped for household income generation, 5 % have not succeeded from the HNG as expected, and nearly 5 % reported that HNG's benefits are same as before.

The FANSEP has demonstrated its significant impact on the project beneficiaries in adopting new and improved technologies, enhancing productivities, increasing household income, enhancing household nutrition and reducing food insecurity. Moreover, the results of the present survey has indicated that the project has effectively implemented its activities by focusing on the actual needs of the beneficiaries, which enabled the project to achieve the intended results within the project period. However, it is suggested to focus, in upcoming second phase of the project, to invest on the development of value chain infrastructures and agribusiness development activities in the rural municipalities where there are lesser food-insecurity situation. It is also suggested to involve private sectors on the marketing aspect for well-functioning of the Multi-Stakeholders' Platform (MSP) and building a mechanism that the project beneficiaries would get follow-up supports from the respective municipalities even after closure of the project.

CHAPTER 1: BACKGROUND

1.1. Context and the FANSEP Project

1.1.1 Introduction

Nepal has diverse ecological zones which make it suitable for agriculture production year-round. Nepal can produce various types of vegetables, livestock products, fruits, and non-timber forest products at the same time during the year. Developed North-south corridors have another additional diversified ecology which is very favorable for agriculture production and marketing. In the present time, opportunities also exist in agriculture due to priority sector of local government, increased GoN investment, involving private sector, formation of agriculture policies and plans etc. The agriculture sector contributed 23.95% (2022) where 60% work force involved. Despite this significant dependence in agriculture, Nepal remains a food deficit country. It is well-recognized that without major improvements in the agriculture sector, economic growth, poverty reduction and improvements in livelihoods will remain distant possibilities.

Food and Nutrition Security Enhancement Project (FANSEP) has received a grant of US $22.7 million from the Global Agriculture and Food Security Program (GAFSP) where Government of Nepal contributes US$ 6 million making total project budget US $28.7 million. World Bank (IDA/WB) is the supervising entity for this project. The Ministry of Agriculture and Livestock Development is acting as the implementing agency for the project. FANSEP has been designed to enhance climate resilience, improve agricultural productivity and nutrition practices of targeted smallholder communities in selected areas of Nepal. It is supposed to increase the resilience and reduce the environmental footprint of production by mainstreaming Climate Smart Agriculture (CSA) practices through project activities. Climate resilience of the project beneficiaries or their abilities to withstand and recover from climatic shocks, particularly droughts and rainfall would be achieved through the application of CSA practices, diversification towards high value and nutritious crops and generation of additional incomes. Nutrition security would be realized through crop and animal productivity, increased household income, improvement in score on food insecurity experience scale and improved dietary intake for pregnant and nursing mothers and children between 6-24 months.

1.1.2 Geographic Coverage and Beneficiaries

The project has been implemented in eight districts (four in mid-hills and four in Terai) and 16 rural municipalities (two municipalities in each district), which were selected based on the following criteria: (a) earthquake affected (losses), (b) climate change vulnerability ranking, (c) HDI ranking, (d) incidence of malnutrition, (e) food security status, and (f) poverty status. Project implemented districts and rural municipalities are as below (Table 1) and presented in the figure below (Figure 1).

Table 1: FANSEP Project Districts and Municipalities

Province	District	Rural Municipality
Gandaki	Gorkha	Gandaki
		Barpak Sulikot
Bagmati	Dhading	Gajuri
		Benighat Rorang
	Sindhupalchowk	Lisankhu Pakhar
		Indrawati
	Dolakha	Tamakoshi
		Kalinchowk
Madesh	Saptari	Rajgadh
		Bishnupur
	Siraha	Aurahi
		Bariyarpatti
	Dhanusa	Mukhiyapatti Musharniya
		Dhanauji
	Mahottrai	Ekdara
		Pipara
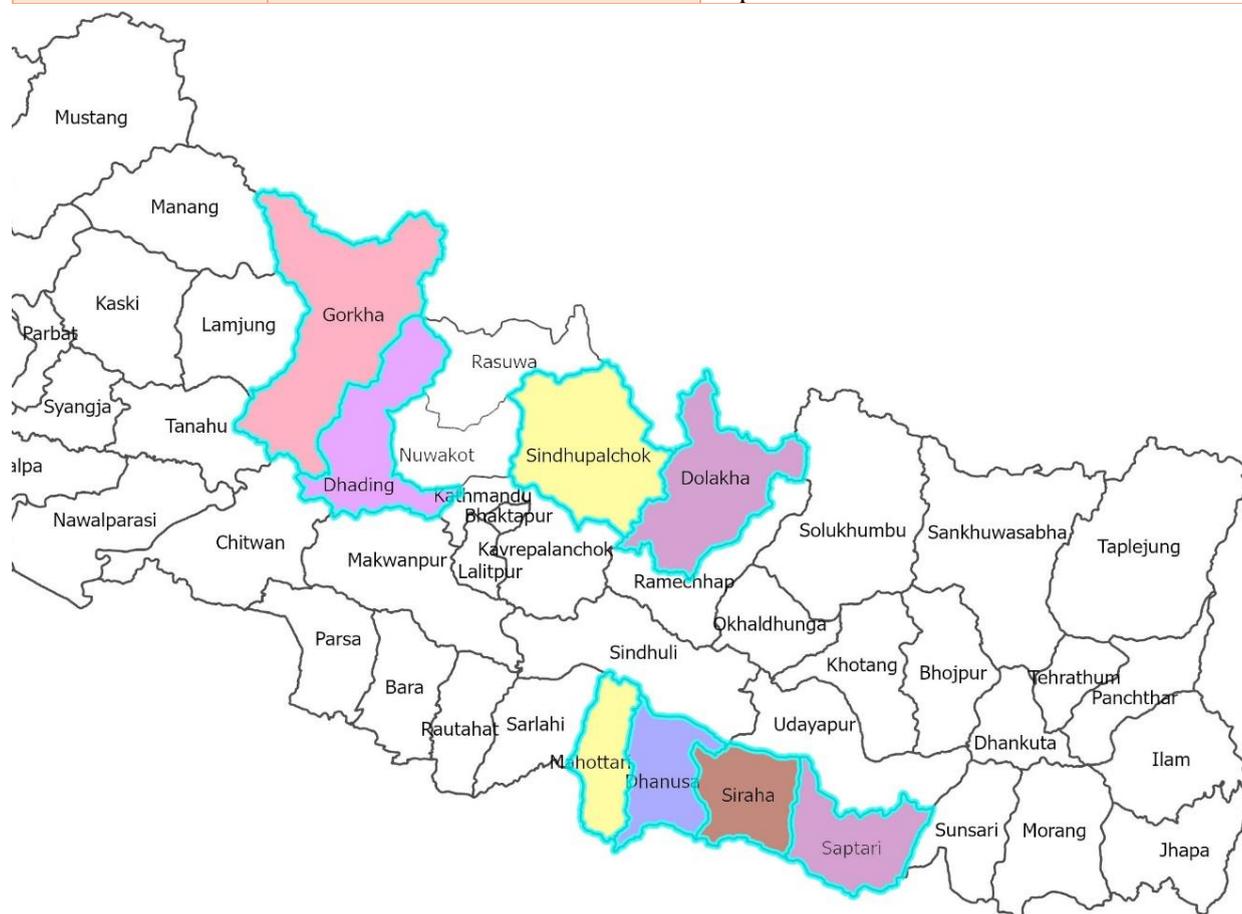
Figure 1: FANSEP Project Districts (Survey Areas)

Project beneficiaries: Primary or direct project beneficiaries (65,000) are vulnerable (earthquake affected, acute food insecure, disadvantaged, marginalized, and women headed) households. These include smallholder and marginal farmers, landless and agricultural laborers who would benefit from skill training and nutrition interventions. As of 15 January 2024, around 59,000 beneficiaries have already been benefited from the FANSEP intervention.

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Furthermore, households with young children, adolescent girls, and pregnant and lactating women would be primarily targeted for nutrition interventions. Overall, 22,000 people are expected to benefit from improved nutrition interventions. As of 15 January 2024, more than 20,000 members of the nutrition group have already been benefited from the FANSEP intervention.

1.1.3 Objectives of the FANSEP

The overall objective (PDO) of FANSEP is to enhance climate resilience, improve agricultural productivity and nutrition practices of targeted smallholder farming communities in selected areas of Nepal. The Project is expected to deliver (i) sustainable increase in productivity and farm incomes (food security), (ii) enhanced resilience to impacts of climate change and variability (adaptation), and (iii) reduced greenhouse gas (GHG) emissions per unit of product and increased carbon sequestration (mitigation).

1.1.4 The FANSEP's Project Implementation Arrangement

The executive agency of the FANSEP is the Ministry of Agriculture Livestock Development (MoALD) where the Food and Agriculture Organization (FAO) has provided technical assistance and implementation support. The World Bank has played the supervisory role in the project. The project head office is located in the Lalitpur district. The project has implemented its activities through four cluster offices covering two project districts in each cluster office.

1.1.5 The FANSEP's Project Intervention and Expected Results

The Project is designed to deliver its intended outcome and impact through 4 well connected components which are presented below:

- Climate and Nutrition Smart Agriculture Technology Adaptation and Dissemination – the objective of this component to improve productivity and postharvest management of crops and livestock. The objective is expected to achieve by (i) technology adoption and testing (sub-component A.1) and (ii) technology dissemination and farmers' skill development (sub-component A.2).
- Income Generation and Diversification - diversify and enhance the income generation capacity of targeted beneficiaries. The objective is expected to achieve by (i) strengthening producers' groups (sub-component B.1), and (ii) market linkages through productive alliances.
- Improving Nutrition Security – aims to address the underlying causes of malnutrition. Such objective will be fulfilled by (i) institutional capacity strengthening (sub-component C.1), (ii) nutrition field school and home nutrition gardens (sub-component C.2).
- Project management communication, and M&E – the component will ensure effective strategy and operational planning, implementation, and M&E of the project activities.
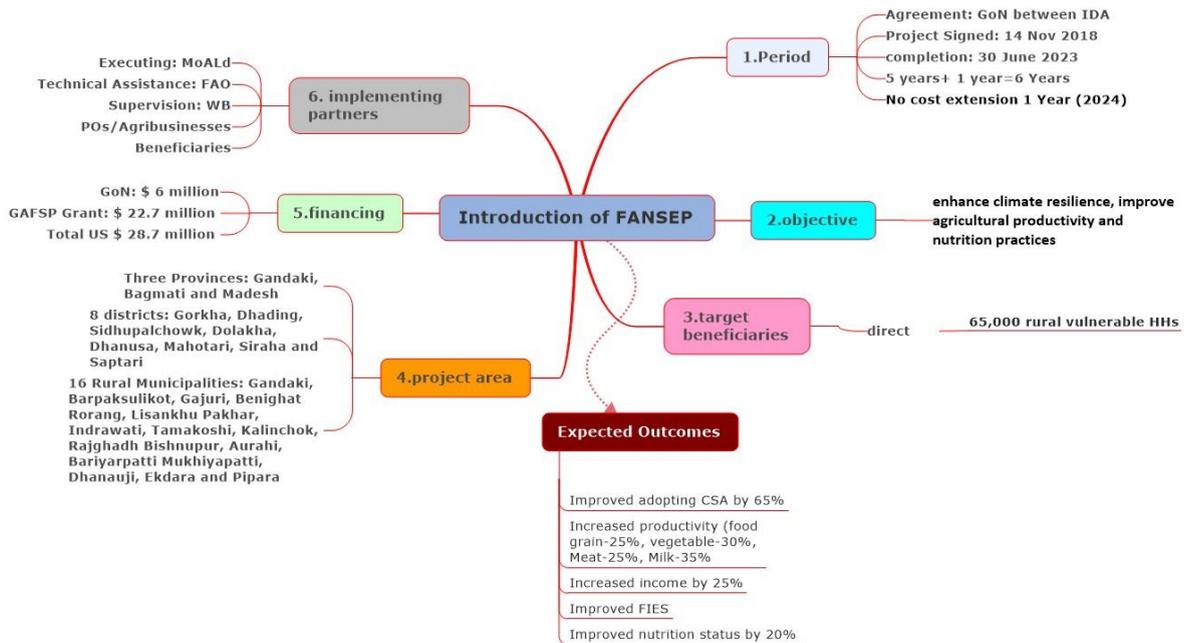
Figure 2: Introduction to FANSEP

The project has expected to achieve the following results (impact) by intervening activities through the four components as explained above.

- Farmers adopting improved agricultural technologies (including CSA) with at least 65% of female participation.
- Increased crop and animal productivity by direct beneficiaries (Food grain 25%, Vegetables 30%, Meat 25%, and Milk 35%)
- Increased household income (By 25%)
- Improved score on the Food Insecurity Experience Scale (FIES)
- Improved nutrition status and dietary intake of pregnant & lactating women and children between 6-24 months by 20%

1.2. Present Assignment of the FANSEP Annual Outcome Survey

1.2.1 Rationale of the FANSEP Annual Outcome Survey

The project has been implemented for 5 years, and thus the project has already conducted the end-line survey during the 5th year (2023). As the project has been extended for the 6th year (no-cost extension), it was imperative to assess the outcomes of the 6th year's project interventions and compare with the baseline and midline results, and thus the annual outcome survey for sixth year has been conducted.

1.2.2 Objective of the FANSEP Annual Outcome Survey

The main objective of the Annual Outcome Survey for Year-6 was to evaluate the performance of the FANSEP against the expected results as articulated in the Results Framework. It assesses the continued relevance of project interventions and measures the progress made towards achieving

its PDOs against the baseline on various project indicators. The Year-6 survey provides an opportunity to make necessary modifications in upcoming phase two project and ensures the achievement of project objectives within the lifetime of the project. The results of the Year 6 survey will constitute a key input to monitor the implementation status of the project and to update the Results Framework of the project as well.

1.2.3 Limitations of the FANSEP Annual Outcome Survey

During the execution of the field survey, the following limitations and challenges were faced by the survey team.

- Short period of time was one of the limitations of the annual outcome survey and that was the biggest challenge to accomplish the survey in time.
- Due to scattered sample households, it took long time in data collection.
- As the data collection was started in the Rainy season, which made difficulties in timely data collection.

CHAPTER 2: ANNUAL OUTCOME SURVEY METHODOLOGY

2.1. Survey Design and Methodology

This study employed a mixed-methods approach, collecting data from primary and secondary sources, using both quantitative and qualitative research methods. Primary data were collected through a household survey of beneficiary households. Secondary data were collected by reviewing relevant project documents. Specifically, the outcome study followed the following methodologies:

- Review of project documents for secondary data collection
- Consultations with FANSEP and other concerned stakeholders
- Application of quantitative and qualitative data collection tools for primary data collection.

2.1.1 Sample Design

The sampling plan as designed by the FANSEP project was used. The project applied a simple random sampling design to select the sample households. As recommended, a sample size of 1600 HHs was used, in which the sample HHs mainly from the baseline survey were repeated also supplementing deficit sample first from the midline and then endline surveys of this project.

2.1.2 Sampling of Households

The FANSEP provided a list of selected 1600 beneficiary households for the interview. The project has selected those households by using simple random sampling method from the producers' organizations: crop, livestock and nutrition. A total of 100 households were selected in each rural municipality. During the field survey, as some households were found repeated in the sample list and some households were not available for the survey, a total of 235 households were replaced which was provided by the project. The detail sample households is detailed in Table 2 below.

Table 2: Number of Sample Households Interviewed

Rural Municipalities	Crop	Livestock	Nutrition	Total	Replacement HHs
Gandaki	54	34	12	100	19
Barpak Sulikot	46	42	12	100	8
Gajuri	87	10	3	100	5
Benighat Rorang	37	52	11	100	2
Lisankhu Pakhar	49	46	5	100	19
Indrawati	33	53	14	100	8
Tamakoshi	81	18	1	100	17
Kalinchok	59	17	24	100	9
Rajgadh	80	13	7	100	23
Bishnupur	67	15	18	100	10
Aurahi	65	26	9	100	25
Bariyarpatti	41	44	15	100	35
Mukhiyapatti Musharniya	55	39	6	100	3
Dhanauji	66	27	7	100	26
Ekdara	56	33	11	100	23
Pipara	34	54	12	100	3
Total	**910**	**523**	**167**	**1600**	**235**
Percentage	**56.9**	**32.7**	**10.4**	**100.0**	**15**

Source: FANSEP Annual Outcome Survey, 2024

2.2. Design of Survey Tools and Data Collection

2.2.1 The Survey Tools

A set of questionnaires was developed to collect the primary data from the three types of project groups: crop, livestock and nutrition. The questionnaire used for data collection has been given in the Annex 12.

2.2.2 Development of Online Form

The online form was developed in Survey Solutions to collect the data from the field.

2.2.3 Organizing Training for Enumerators and Supervisors

A four days training was organized to train enumerators and online data checkers from 27 to 30 May, 2024 at FANSEP training hall at Hariharbhawan, Lalitpur. The objectives of the training were (i) to make the participants acquainted with the project background, objectives and interventions, (ii) to orient the enumerators and supervisors with the various module of questionnaires, and (iii) to make familiar with the software (Survey solutions) for data collection. There were 32 enumerators and 2 data checkers as participants and most of them were from the agriculture and related educational background. During the training they practiced the questionnaires for household survey in the survey solutions in the tablets. The participants were able to understand the FANSEP, its working modalities, major development indicators, agriculture and livestock related terminologies, and so on. They were able to enter the responses as they practiced the mock interview. The training was facilitated by the experts of the consulting firm, FANSEP officials, and representative of the World Bank. The training schedule has been included in the Annex 10.

2.2.4 Development of Online Data Tracking Mechanism

A mechanism for online tracking of data was designed to ensure high-quality data collection process. The data management expert supervised the overall data tracking process, and four data checkers reviewed the data daily after the enumerators synchronized them from the field. Project staff, including the Project Management Unit (PMU), Cluster Offices, and the World Bank also had access to view the data collection processes. Figure 3 below shows the details of the online data collection tracking mechanism, which was applied for quality assurance of data and its collection process.

Online Data Collection Tracking Mechanism
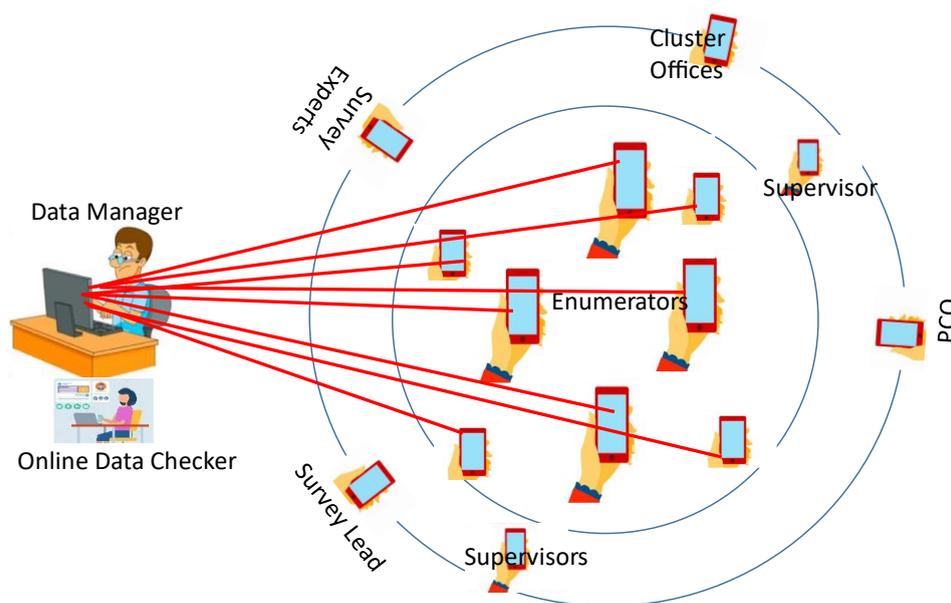
Figure 3: Online Data Collection Tracking Mechanism

2.2.5 Quality Assurance Mechanism of Survey

Proficient staff members (enumerators and online data checkers) were deployed to collect initial data from the households. The structured questionnaires were coded in the Survey Solutions. The survey questionnaires were designed in English, which were then translated to Nepali language in the Survey Solutions. However, the enumerators and online checkers could also use English version, wherever needed. The following steps were taken to ensure reliable data collection during the survey:

- Developed a questionnaire in English and translation to Nepali language;
- The structured questionnaires were uploaded into Android tablets, which were used by enumerators and supervisors;
- The questionnaires were tested in the field;
- Four-day orientation sessions were conducted to familiarize enumerators with the project objectives and data collection tools;
- Peer practice sessions held to ensure that enumerators are familiar with digital data collection procedures;
- A one-day field practice was conducted to check the survey questionnaires and gain a better understanding of field scenarios under similar conditions;
- The questionnaires were then updated, based on the comments and suggestions received from the field practice session, and used for the final survey;
- The enumerators collected data from the field and uploaded into the system on the same day, whenever possible;

- At the central level, a data manager, reviewed each uploaded data daily. If there were any confusion or mistake, the online data checkers clarified the issues or corrected immediately, or ordered for a resurvey of the households, if necessary;
- An expert team also visited the field during the survey to cross-check the survey process conducted by the enumerators in the sites. They also provided suggestions and instructions to the enumerators;

The following additional actions were carried out to make the quality survey.

2.2.5.1 Deployment of Qualified Statistician

A highly qualified statistician was deployed to ascertain the statistical validity of the data who has best knowledge on online survey solutions and other statistical tools.

2.2.5.2 Field Test of Questionnaires

The questionnaire was field tested during the enumerators' training. The feedbacks and comments were incorporated in final version of the Survey Solutions. During the field test of the questionnaires some errors in translation, terminologies, local languages etc. were identified and corrected in the questionnaires.

2.2.5.3 Deployed Online Data Checkers

Four online data checkers were deployed for online data checking purpose. Each of the enumerators were provided with feedback and comments at every moment when they had any confusion or faced any problems during the data collection by these data checkers. The online data checkers received the data from the enumerators once they synchronized the data from the field. Upon receiving the data from enumerators, the online data checkers instantly reviewed the data and provided the feedback to the enumerators.

2.2.5.4 Evaluation of Surveyed Data

During the data collection of a certain number of households, the consulting firm and project staff sat together and reviewed the status of data collection and their flow of directions so that corrective actions would be taken for the quality data collection, wherever needed.

2.2.6 Team Mobilization for Field Activities

A team of 32 enumerators and four experts' team was mobilized in the field to collect and monitor the data collection activities. The list of the field team who were mobilized for data collection, data checking and monitoring of field activities, have been listed in the Annex 9.

2.3 Data Analysis and Interpretation

2.3.1 Analysis of Primary Data and Information

The analytical tools used for the analysis of the primary data and information have been presented in the Annex 1.

2.3.2 Analysis of Secondary Data and Information

The survey team reviewed the project documents: Project Appraisal Document (PAD), baseline report, ~~annual outcome survey report~~, and mid-line survey report.

2.4 Submission of Draft Report

After analysis of the data, a draft report of the Annual Outcome Survey (Year-6) was submitted and presented to the FANSEP.

2.5 Submission of Final Report

After incorporating the comments and suggestions from the FANSEP and concerned stakeholders on the draft report, final report was prepared and submitted to the FANSEP. The raw data sets were also delivered to the project.

CHAPTER 3: ANNUAL OUTCOME SURVEY RESULTS AND DISCUSSION

3.1. Socio-economic Characteristics of the Sample Households

In this section, the major socio-economic characteristics of the sample households have been presented and discussed as follow:

3.1.1. Male and Female headed households

Out of the total 1600 households surveyed during the year 6 (2024) of the project implementation, nearly 69 per cent of households were male-headed and 31 per cent households were female-headed households. Among the 16 rural municipalities, highest number and per cent of female headed households was in Pipara RM (75%), followed by Ekdara RM (62%) and least in Gajuri RM and Indrawati RM, 15% each. The detail on the gender-based households is presented in the following table (Table 3).

Table 3: Number of Male and Female Headed Households in the Rural Municipalities Surveyed during Sixth Year (2024)

Rural Municipalities	Male	Female	Total
Gandaki	72	28	100
Barpak Sulikot	69	31	100
Gajuri	85	15	100
Benighat Rorang	83	17	100
Lisankhu Pakhar	71	29	100
Indrawati	85	15	100
Tamakoshi	59	41	100
Kalinchok	76	24	100
Rajgadh	81	19	100
Bishnupur	84	16	100
Aurahi	49	51	100
Bariyarpatti	75	25	100
Mukhiyapatti Musharniya	73	27	100
Dhanauji	77	23	100
Ekdara	38	62	100
Pipara	25	75	100
Total	**1102**	**498**	**1600**
Percentage	**68.9**	**31.1**	**100.0**

Source: FANSEP Annual Outcome Survey, 2024

3.1.2. Gender-wise Members and Family Size in the Surveyed Households in the Sixth Year (2024)

Out of the total 7722 members in the 1600 surveyed households, there were 51% male and 49% female members and average family size per household was 4.8. Highest family size per household was seen in Bariyarpatti RM (6.6), followed by Ekdara RM (6.1), and least in Tamakoshi RM (2.9). The detail on the gender-wise members and family size in the surveyed municipalities during the sixth year of the FANSEP implementation, has been presented in the following table (Table 4).

Table 4: Gender-wise Members and Family Size in the Surveyed Households in the Sixth Year (2024)

Rural Municipalities	HHS	Gender			Family Size
		Male	Female	Total	
Gandaki	100	251	234	485	4.9
Barpak Sulikot	100	149	199	348	3.5
Gajuri	100	249	201	450	4.5
Benighat Rorang	100	218	213	431	4.3
Lisankhu Pakhar	100	257	237	494	4.9
Indrawati	100	279	245	524	5.2
Tamakoshi	100	134	151	285	2.9
Kalinchok	100	155	172	327	3.3
Rajgadh	100	226	269	495	5.0
Bishnupur	100	275	294	569	5.7
Aurahi	100	254	248	502	5.0
Bariyarpatti	100	355	300	655	6.6
Mukhiyapatti Musharniya	100	285	220	505	5.1
Dhanauji	100	217	250	467	4.7
Ekdara	100	311	294	605	6.1
Pipara	100	293	287	580	5.8
Total	**1600**	**3908**	**3814**	**7722**	**4.8**
Percentage		**50.6**	**49.4**	**100.0**	

Source: FANSEP Annual Outcome Survey, 2024

3.1.3. Age-wise Members in the Surveyed Households in the Sixth Year (2024)

Out of the total 7722 members in the 1600 surveyed households, maximum i.e. 53 % members were between the age of 15 and 49 years, 19% were in between 5 and 15 years, 16.5% were in between 50 and 69 years, showing larger number of members are economically active. The detail on the age-wise members in the surveyed municipalities during the sixth year of the FANSEP implementation, has been presented in the following table (Table 5).

Table 5: Age-wise Members in the Surveyed Households in the Sixth Year (2024)

Rural Municipalities	Less than 5 Year	5 to 15 Year	15 to 49 Year	50-69 Year	More than 70 Year	Total
Gandaki	18	59	276	97	35	485
Barpak Sulikot	24	62	155	89	18	348
Gajuri	15	69	298	46	22	450
Benighat Rorang	29	75	244	64	19	431
Lisankhu Pakhar	5	58	300	98	33	494
Indrawati	25	76	333	70	20	524
Tamakoshi	10	37	114	94	30	285
Kalinchok	24	70	128	76	29	327
Rajgadh	66	113	213	79	24	495
Bishnupur	45	117	285	94	28	569
Aurahi	63	119	254	57	9	502
Bariyarpatti	56	134	372	79	14	655
Mukhiyapatti Musharniya	23	103	273	96	10	505
Dhanauji	33	97	238	82	17	467

Rural Municipalities	Less than 5 Year	5 to 15 Year	15 to 49 Year	50-69 Year	More than 70 Year	Total
Ekdara	42	146	313	82	22	605
Pipara	64	127	306	69	14	580
Total	**542**	**1462**	**4102**	**1272**	**344**	**7722**
Percentage	**7.0**	**18.9**	**53.1**	**16.5**	**4.5**	**100.0**

Source: FANSEP Annual Outcome Survey, 2024

3.1.4. Education Levels among the Members in the Surveyed Households in the Sixth Year (2024)

Out of the total 7722 members in the 1600 surveyed households, maximum i.e. nearly 36 % of them had no any formal education, about 24 % of them had primary level of education, while very lesser number of members were university graduate, i.e. 1.6% were running graduate level and only 1.6% have already been graduated. The detail on the education levels among the members in the surveyed municipalities during the 6th year of the project implementation, has been presented in the following table (Table 6).

Table 6: Education Levels among the Members in the Surveyed Households in the Sixth Year (2024)

Rural Municipalities	No any formal education	Primary level	Basic level Education (up to grade 8)	Secondary level (grade 9-12)	Passed grade 12	Bachelor running	passed Bachelor and above	Total
Gandaki	119	96	85	61	91	23	10	485
Barpak Sulikot	104	97	63	64	12	4	4	348
Gajuri	125	124	43	75	67	9	7	450
Benighat Rorang	124	148	45	44	51	10	9	431
Lisankhu Pakhar	135	103	81	26	112	14	23	494
Indrawati	99	121	114	39	118	14	19	524
Tamakoshi	117	58	32	49	19	4	6	285
Kalinchok	114	94	46	54	12	2	5	327
Rajgadh	228	148	57	43	18	1	0	495
Bishnupur	226	104	69	119	39	5	7	569
Aurahi	270	95	53	55	18	4	7	502
Bariyarpatti	237	142	90	144	27	4	11	655
Mukhiyapatti Musharniya	124	175	89	50	58	7	2	505
Dhanauji	160	108	82	86	15	14	2	467
Ekdara	277	121	79	87	30	6	5	605
Pipara	309	102	64	85	13	2	5	580
Total	**2768**	**1836**	**1092**	**1081**	**700**	**123**	**122**	**7722**
Percentage	**35.8**	**23.8**	**14.1**	**14.0**	**9.1**	**1.6**	**1.6**	**100.0**

Source: FANSEP Annual Outcome Survey, 2024

3.1.5. Type of Group Members in the Surveyed Households in the Sixth Year (2024)

Out of the total 1600 surveyed households, 910 households (57%) were from crop groups, 523 (33%) were from livestock groups, and 167 (10%) were from nutrition groups. The municipality wise crop, livestock and nutrition groups' members, who were surveyed during the 6th year of the project implementation, has been presented in the following table (Table 7).

Table 7: Types of Group Members in the Surveyed Households in the Sixth Year (2024)

Rural Municipalities	Crop Groups	Livestock Groups	Nutrition Groups	Total HHs
Gandaki	54	34	12	100
Barpak Sulikot	46	42	12	100
Gajuri	87	10	3	100
Benighat Rorang	37	52	11	100
Lisankhu Pakhar	49	46	5	100
Indrawati	33	53	14	100
Tamakoshi	81	18	1	100
Kalinchok	59	17	24	100
Rajgadh	80	13	7	100
Bishnupur	67	15	18	100
Aurahi	65	26	9	100
Bariyarpatti	41	44	15	100
Mukhiyapatti Musharniya	55	39	6	100
Dhanauji	66	27	7	100
Ekdara	56	33	11	100
Pipara	34	54	12	100
Total	**910**	**523**	**167**	**1600**
Percentage	**56.9**	**32.7**	**10.4**	**100.0**

Source: FANSEP Annual Outcome Survey, 2024

3.2. Land Holding and Crop Production System

In this section, land holding scenario and status of the crop production system among the crop producing farm households have been presented and discussed as follow:

3.2.1. Types of Land Holding

Out of the total 910 crop producing households surveyed during the year 6 (2024) of the project implementation, nearly 91 per cent of farm households were found cultivating the crops in own and rented in land, whereas, about 9% of them were found not cultivating crops. The detail on the municipality wise land holding as observed during the year six of the project implementation, is presented in the following table (Table 8).

Table 8: Number of Households Cultivating Land in Sixth Year (2024)

Rural Municipality	No. of HHs cultivating land	No. of HHs not cultivating land	Total HHs involved in Crop production groups
Gandaki	42	12	54
Barpak Sulikot	46	0	46
Gajuri	85	2	87
Benighat Rorang	34	3	37
Lisankhu Pakhar	44	5	49
Indrawati	33	0	33
Tamakoshi	78	3	81
Kalinchok	55	4	59
Rajgadh	67	13	80
Bishnupur	62	5	67
Aurahi	61	4	65
Bariyarpatti	39	2	41
Mukhiyapatti Musharniya	55	0	55
Dhanauji	54	12	66
Ekdara	51	5	56
Pipara	25	9	34
Total	**831**	**79**	**910**
Percentage	**91.32**	**8.68**	**100**

Source: FANSEP Annual Outcome Survey, 2024

The farm households who were reporting not cultivating land during the year 2024, were asked for the reasons for not cultivating crops, and details on the reasons for not cultivating crops are presented in the following table. Out of the total 79 farm households who were not cultivating land, 9 of them sold out land, 23 rented out land, 5 gave to others as share-cropping, 42 reported not cultivating due to some other reasons. The detail on this, is presented in the following table (Table 9).

Table 9: Reasons for not cultivating land within Crop Production Groups in 2024

Rural Municipality	Sold out land	Rented out land	Given for share cropping	Other reasons	Total HHs of Crop Groups not cultivating
Gandaki	2	5	4	1	**12**
Gajuri	1	1	0	0	**2**
Benighat Rorang	0	3	0	0	**3**
Lisankhu Pakhar	2	2	0	1	**5**
Tamakoshi	0	3	0	0	**3**
Kalinchok	0	1	1	2	**4**

Rural Municipality	Sold out land	Rented out land	Given for share cropping	Other reasons	Total HHs of Crop Groups not cultivating
Rajgadh	0	6	0	7	**13**
Bishnupur	0	2	0	3	**5**
Aurahi	0	0	0	4	**4**
Bariyarpatti	0	0	0	2	**2**
Dhanauji	2	0	0	10	**12**
Ekdara	0	0	0	5	**5**
Pipara	2	0	0	7	**9**
Total	**9**	**23**	**5**	**42**	**79**
Percentage	**11.4**	**29.1**	**6.3**	**53.2**	**100.0**

Source: FANSEP Annual Outcome Survey, 2024

3.2.2. Average Land Holding Size

Average land holding per household in the all 1600 farm households surveyed was observed as 0.5 Ha, with highest in Barpak Sulikot RM (0.86 Ha), followed by Bariyarpatti and Pipara RMs (0.74 Ha each), and least in Mukhiyapatti Musharniya RM (0.29 Ha). Municipality wise average land holding per farm household in the surveyed households as observed during the year six of the project implementation, is presented in the following table (Table 10).

Table 10: Average Land (Ha) in the Surveyed Households in the Sixth Year (2024)

Rural Municipalities	No. of HHs	Average land holding (Ha) Per HH
Gandaki	100	0.37
Barpak Sulikot	100	0.86
Gajuri	100	0.62
Benighat Rorang	100	0.52
Lisankhu Pakhar	100	0.36
Indrawati	100	0.38
Tamakoshi	100	0.38
Kalinchok	100	0.30
Rajgadh	100	0.58
Bishnupur	100	0.57
Aurahi	100	0.50
Bariyarpatti	100	0.74
Mukhiyapatti Musharniya	100	0.29
Dhanauji	100	0.35
Ekdara	100	0.50
Pipara	100	0.74
Average	**1600**	**0.50**

Source: FANSEP Annual Outcome Survey, 2024

3.2.3. FANSEP's Major Interventions in Crop Production System

Major supports from FANSEP were distribution of cereal seeds, vegetable seeds, garden tools, plastic tunnels for vegetable cultivation, small irrigation supports, machinery supports (ex Mini-tiller, corn seller), matching grant supports, fertilizer and other supports.

3.3. Livestock Production System

In this section, livestock population and their herd/flock composition among the livestock farm households are presented and discussed.

3.3.1. Number of Farm Households Rearing Livestock

About 95 per cent of the total 523 livestock group member respondent households (i.e. 497 HHs) were found raising livestock including poultry during the survey year-2024, with highest in Indrawati RM (53 HHs), followed by Benighat Roran RM (52 HHs), and least in Gajuri and Raigadh RMs (10 HHs each). The number of farm households rearing livestock including poultry in the surveyed households as observed during the year six of the project implementation, is presented in the following table (Table 11).

Table 11: Number of Farm Households Rearing Livestock including Poultry in the Surveyed Households in the Sixth Year (2024)

Municipalities	Yes	No	Total
Gandaki	32	2	34
Barpak Sulikot	42	0	42
Gajuri	10	0	10
Benighat Rorang	52	0	52
Lisankhu Pakhar	43	3	46
Indrawati	53	0	53
Tamakoshi	17	1	18
Kalinchok	17	0	17
Rajgadh	10	3	13
Bishnupur	14	1	15
Aurahi	26	0	26
Bariyarpatti	44	0	44
Mukhiyapatti Musharniya	37	2	39
Dhanauji	22	5	27
Ekdara	30	3	33
Pipara	48	6	54
Total	**497**	**26**	**523**
Percentage	**95.03**	**4.97**	**100.00**

Source: FANSEP Annual Outcome Survey, 2024

3.3.2. Cattle Herd Composition

There were 184 households who were involved in cattle farming during the year 2024, rearing a total of 696 units of cattle. A livestock farm used to own about 3.78 cattle per farm household, for those who have owned cattle. A livestock farm used to purchase 0.28 units of cattle and sell 0.25 units during the year six (2024). The herd composition of cattle, number of animal purchased and sold, as observed during the year six of the project implementation, is presented in the following table (Table 12).

Table 12: Herd Composition, Purchase and Sale of Cattle in the Livestock Farms in the Sixth Year (2024)[1]

Cattle	Number of HHs Rearing	Number of Currently owned in 2024	Number of Animal Purchased in 2024	Number of Animal Sold in 2024
Adult milking cow	184	196	17	12
Adult dry cow	112	134	4	10
Heifer	94	100	4	4
Male calf/ bull	166	266	27	20
Total	**184**	**696**	**52**	**46**
Per HH		**3.78**	**0.28**	**0.25**

Source: FANSEP Annual Outcome Survey, 2024

3.3.3. Buffalo Herd Composition

In case of buffalo, there were a total of 372 households rearing 923 number of all types of buffalo, from calves to adult. It was found that a livestock farm used to own average of 2.48 number of buffalo per farm household, for those who have owned buffalo. A livestock farm household who were rearing buffalo used to purchase about 0.19 and sell 0.24 number of all types of buffalo in the year 2024. The herd composition of buffalo, number of buffalo purchased and sold, as observed during the year six of the project implementation, is presented in the following table (Table 13).

Table 13: Herd Composition, Purchase and Sale of Buffalo in the Livestock Farms in the Sixth Year (2024)[2]

Buffalo	Number of HHs Rearing	Number of Currently owned in 2024	Number of Animal Purchased in 2024	Number of Animal Sold in 2024
Adult milking buffalo	372	399	34	18
Adult dry buffalo	189	191	10	18
Heifer	171	174	20	35
Male buffalo calf/bull	155	159	6	20
Total Number per HH	**372**	**923**	**70**	**91**
Per HH		**2.48**	**0.19**	**0.24**

Source: FANSEP Annual Outcome Survey, 2024

3.3.4. Goat Herd Composition

In case of goat, it was found that a goat farm in the project area used to own nearly 7.9 number of all types of goats per farm household, for those who have owned goat. A goat farm used to purchase about 0.6 and sell 0.39 number of all types of goats per year. The average weight of buck (Boka) and castrated male (Khasi) during the time of selling were recorded to be 34 Kg and 22 Kg

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[1] The figures in this table represent the total number or average of those farm households only who are presently having animal in their farms.
[2] The figures in this table represent the total number or average of those farm households only who are presently having animal in their farms.

respectively. The herd composition of goat, number of goat purchased and sold, as observed during the year six of the project implementation, is presented in the following table (Table 14).

Table 14: Herd Composition, Purchase and Sale of Goat in the Livestock Farms in the Sixth Year (2024)

Goat	Number of HHs Rearing	Number of Currently owned in 2024	Number of Animal Purchased in 2024	Number of Animal Sold in 2024
Doe (Mau Bakhra)	126	390	38	65
Buck (Boka)	217	383	17	0
Female goat below one year	308	912	74	29
Male castrated (Khasi)	123	272	15	0
Kids (Patha/Pathi)	227	724	59	37
Total	**340**	**2681**	**203**	**131**
Per HH		**7.89**	**0.6**	**0.39**

Source: FANSEP Annual Outcome Survey, 2024

3.3.5. Poultry Flock Composition

There were 287 households within the livestock groups, who were rearing 3237 number of poultry birds. The average poultry birds per farm household, who were rearing poultry birds in the project area used to own 11.28 number of all types of poultry birds (excluding broilers) per farm household, for those who have owned poultry birds. Similarly, a poultry rearing household used to purchase 2.57 number of birds, and sell 2.11 number of birds, as observed in 2024. Average weight of cocks and hen were 2.9 Kg and 2.6 Kg during selling time, respectively. The composition of poultry birds, number of poultry birds purchased and sold, as observed during the year six of the project implementation, is presented in the following table (Table 15).

Table 15: Poultry Birds' Flock Composition, Purchase and Sale of Poultry Birds in the Livestock Farms in the Sixth Year (2024)

Poultry	Number of HHs Rearing	Number of Currently owned in 2024	Number of Animal Purchased in 2024	Number of Animal Sold in 2024
Cocks	237	715	234	242
Hens	279	959	127	210
Chicks	204	1563	378	154
Total	2873	**3237**	**739**	**606**
Per HH		**11.28**	**2.57**	**2.11**

Source: FANSEP Annual Outcome Survey, 2024

3.3.6. FANSEP's Major Interventions for Livestock Production

The FANEP's major supports for livestock production were reported as distribution of 50% Boer bucks, chicks/chickens, ducklings, medicines for livestock, fodder seeds, Burdizzo castrator for castration of male animals, improved sheds, matching grants, and other supports to the livestock rearing farmers

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[3] This includes the number HHs who were engaged in rearing broilers also

3.4. Progress on PDO Indicators (Baseline Vs Final Year's Outcome Survey)

In this section, the progress on the PDO indicators of the FANSEP, has been presented and the results obtained during the 6th year of project intervention, and compared with the baseline and midline, have been discussed.

3.4.1 Farmers Adopting Improved Agriculture Technologies Including CSATs

The FANSEP has supported with various improved agricultural technologies including climate smart agriculture technology (CSAT) to the beneficiary farm households. The 90.6% of respondent households who were benefited from crop and livestock interventions were applying at least one CSATs during the project implementation of 6th year where the women applied percentage is 31%. The results on the adoption of the improved agricultural technologies including CSAT: among the agriculture and livestock producing farm households (represented through the following respondent HHs), as obtained during the sixth year of project implementation, and compared with the baseline are discussed in this sub-section.

Table 16: Number and Percentage of Farmers adopting CSATs in the Sixth Year (2024)

Sectors	Interviewed HHs	Actual HHs Involved in production	Number of Respondent HHs who used at least one technology	% of Respondent HHs who used at least one Technology
Crop	910	831	764	91.93
Livestock	523	497	439	88.32
Total	**1433**	**1328**	**1203**	**90.58**

Source: FANSEP Annual Outcome Survey, 2024

3.4.1.1. Adoption of CSAT in Crop Production

There is about 92% of adoption of improved agricultural technologies including CSA among the FANSEP benefitted farm households during the 6th year of FANSEP intervention, which was 89% during the midline (2022). Out of the total 15 improved agricultural technologies used by the FANSEP benefited farmers, maximum of farmers (70.5%) were found using Farm Yard Manure (FYM) and Animal Urine, followed by the use of machines, by 60% of farmers, whereas 34% of crop producing farmers used to use machines in 2021. Due to non-availability of results on the adoption of CSAT during the baseline period, comparison with the Year sixth results could not be made. However, the number of farmers who used the improved agricultural technologies including CSA during the year six, and compared with the baseline (2021) has been presented in the following table (Table 17).

Table 17: Adoption of CSAT in Crop Production during Baseline (2021) and 6th Year (2024)

SN	Technologies	Baseline (2021)		6th Year (2024)	
		N	HHs %	N	HHs %
1	Mulching	-	-	32	3.9
2	Row cropping	-	-	93	11.2
3	Relay cropping	-	-	97	11.7
4	Conservation tillage	-	-	66	7.9
5	Storing seeds in metal bins/super-bags	-	-	86	10.3
6	High-Yielding Varieties	-	-	267	32.1

SN	Technologies	Baseline (2021)		6th Year (2024)	
		N	HHs %	N	HHs %
7	Bio-pesticides	-	-	25	3.0
8	Farmyard manure improvement/animal urine collection and use	-	-	585	70.4
9	Use of compost/ Liquid compost	57	6.26	20	2.4
10	Plastic tunnels/plastic house	22	2.41	38	4.6
11	Insect traps	-	-	13	1.6
12	Machines	309	33.92	498	59.9
13	Use of varieties tolerant to drought or waterlogged conditions	-	-	6	0.7
14	Broadcasting method of rice	-	-	35	4.2
15	Green manuring	-	-	27	3.2
	Total	**911**	**100**	**831**	**100**

Source: FANSEP Annual Outcome Survey, 2024

As there were no results on the number of technologies used for crop production, as mentioned above, during the baseline (2021), the comparison has been made with the midline results. As such, almost 92% of crop producing farmers during the sixth year (2024), used to use at least one improved technology including CSAT, which was only 89% during the midline (2022). The percentage of crop producing farmers who were not using any of the 15 technologies during midline year (2022) were nearly 11%, reduced to 8% during the 6th year of project implementation. The adoption of number of CSATs in crop production during the 6th year and compared with the midline results, have been presented in the following table (Table 18).

Table 18: Adoption of Number of CSATs in Crop Production during Midline (2022) and Sixth Year

Number of Technology Adopted	Midline (2022)		Sixth Year (2024)	
	No. of HHs Adopted CSAT	% of HHs Adopted CSAT	No. of HHs Adopted CSAT	% of HHs Adopted CSAT
One technology	596	41.33	243	29.2
Two technologies	285	19.76	206	24.8
Three technologies	183	12.69	150	18.1
Four technologies	122	8.46	93	11.2
Five technologies	58	4.02	40	4.8
Six technologies	25	1.73	16	1.9
Seven technologies	15	1.04	13	1.6
Eight and more technologies	2	0.14	3	0.4
No Technologies Adopted	156	10.82	67	8.1
Number and % of HHs who used at least one technology	1286	89.18	764	91.93
Total	**1442**	**100.00**	**831**	**100.0**

Source: FANSEP Annual Outcome Survey, 2024

The per cent of crop producing households using number of CSATs at cluster levels are presented in the Annex 2.

3.4.1.2. Adoption of CSAT in Livestock Production

Among the livestock rearing farmers, there was 88.3% of adoption of improved technologies in the FANSEP program area during the year sixth of the project implementation, which was 65% during the

midline (2022), and this result could not be compared with the baseline, because of non-availability of the results. Out of the 18 improved livestock technologies, most of the farmers (62%) were found using compound and concentrate feed, which about 54.6% of farmers used this technology during baseline (2021). The second important CSAT in livestock production was deworming and internal parasite control, for which about 53% of farmers used this technology during sixth year, which about 63% of farmers used to use this technology during the baseline year (2021). The number of farmers who used improved livestock production technologies during the year-6, and compared with the baseline numbers, has been presented in the following table (Table 19).

Table 19: Adoption of CSAT in Livestock Production during Baseline (2021) and Sixth Year (2024)

S.N.	Technologies	Baseline (2021)		6th Year (2024)	
		N	HHs %	N	HHs %
1	Feed (including compounded / concentrate)	498	54.67	309	62.17
2	Vaccination against infectious diseases	77	8.45	190	38.23
3	Veterinary services	189	20.75	205	41.25
4	Livestock insurance	50	5.49	18	3.62
5	Deworming/internal parasite treatment	572	62.79	265	53.32
6	Stall feeding	154	16.90	91	18.31
7	Dipping/drenching practices for external parasites	265	29.09	87	17.51
8	Artificial insemination	22	2.41	4	0.80
9	Shed improvement	-	-	109	21.93
10	Feed animals improved variety of fodder	33	3.62	81	16.30
11	Feeding with Urea Molasses Mineral Block	-	-	17	3.42
12	Use of clean milk production techniques	-	-	40	8.05
13	Forage conservation (for dry season or l	34	3.73	26	5.23
14	Colostrum feeding for infants	-	-	209	42.05
15	Feeding more nutritious feed during breeding	-	-	26	5.23
16	Feeding more nutritious feed (1-2 months of breeding)	-	-	114	22.94
17	Preventing inbreeding	144	15.81	104	20.93
18	Hired labor to assist with the management	-	-	27	5.43
	Total	**911**	**100.00**	**497**	**100.00**

Source: FANSEP Annual Outcome Survey, 2024

As discussed above, as there were no results on the number of technologies used in the livestock production during the baseline year (2021), the comparison on the number of improved livestock production technologies has been made with the midline results. As per the following table, 88.3% of livestock producing farmers during the sixth year (2024), used to use at least one improved technology including CSAT, which was only 65.3% during the midline (2022). The percentage of livestock producing farmers who were not using any of the 18 technologies during midline year (2022) were nearly 35%, reduced to around 12% during the 6th year of project implementation. The adoption of

number of CSATs in livestock production during the 6th year and compared with the midline results, have been presented in the following table (Table 20).

Table 20: Adoption of Number of CSATs in Livestock Production during Midline (2022) and Sixth Year (2024)

Number of Technology Adopted	Midline (2022)		Sixth Year (2024)	
	No. of HH Adopted	% of HH Adopted CSAT	No. of HH Adopted	% of HH Adopted CSAT
One technology	354	24.67	81	16.30
Two technologies	231	16.10	69	13.88
Three technologies	125	8.71	54	10.87
Four technologies	85	5.92	49	9.86
Five technologies	53	3.69	45	9.05
Six technologies	41	2.86	32	6.44
Seven technologies	27	1.88	39	7.85
Eight technologies	16	1.11	35	7.04
Nine technologies	2	0.14	10	2.01
Ten and more than 10 technologies	3	0.21	25	5.03
No Technologies Adopted	498	34.70	58	11.67
No. of HHs adopted at least one CSAT	**937**	**65.3**	**439**	**88.33**
Total	**1435**	**100.00**	**497**	**100.0**

Source: FANSEP Annual Outcome Survey, 2024

The per cent of livestock producing households using number of CSATs at cluster levels are presented in the Annex 3.

3.4.2 Productivity Increased

The productivity of cereals which was 2.43 Mt/Ha during the baseline (2021), increased to 2.99 Mt/Ha during the 6th year, with increment of about 23.05% as compared to the baseline productivity. Similarly, the productivity of vegetables, which was 6.75 Mt/Ha during the baseline, increased to 19.47 Mt/Ha during the 6th year of FANSEP implementation, with increment of about 188% as compared to the baseline productivity as recorded in 2021.

The productivity of meat was increased by 44% during the sixth year of FANSEP implementation as compared to the baseline (2021), which increased from 10.7 Kg per animal (goat and chicken), on an average, to 15.37 Kg per animal. Where, goat meat productivity, which was 21.79 Kg per live goat during the baseline (2021), increased to 28.05 Kg per live goat during the last year of project implementation, with nearly 29 % of increment. However, the chicken productivity was increased by nearly 20% from baseline (2.3 Kg) to sixth year (2.75 Kg).

There was considerable increment in the milk productivity (100%), which was 652.29 liter of milk production per milking animal (both cow and buffalo) per year during the baseline period (2021), which increased to 1305.27 liter per milking animal (both cow and buffalo) per year during the end year of the FANSP implementation (2024). The cow and buffalo milk productivity during the end year of the FANSEP were recorded to be 1377.09 liter and 1269.62 liter per year per milking animal respectively. However, these productivities of cow and buffalo could not be compared separately with the baseline productivity.

The crop and livestock productivity as recorded during the sixth year (2024) and base year (2021) of the FANSEP, are presented in the following table (Table 21).

Table 21: Crop and Livestock Productivity during Baseline (2021) and Sixth Year (2024)

| S. N. | Indicators | No. of HHs (2024) | Unit | Productivity | | Increased Percent |
				Baseline (2021)	6th Year (2024)	
1	**Crop**					
1.1	Cereals	831	Mt/Ha	2.43	2.99	23.05
1.2	Vegetable	146	Mt/Ha	6.75	19.47	188.44
1.3	Potato	135	Mt/Ha	-	11.35	-
2	**Meat**		Kg/Animal	**10.7**	**15.40**	**43.92**
2.1	Goat	340	Kg/Goat/Yr	21.79	28.05	28.72
2.2	Chicken	287	Kg/Hen/Yr	2.3	2.75	19.56
3	**Milk**			**652.29**	**1,305.27**	**100.11**
3.1	Cow Milk	184	Ltr/Milking Animal/Yr	-	1377.09	-
3.2	Buffalo Milk	372	Ltr/Milking Animal/Yr	-	1269.62	-

Source: FANSEP Annual Outcome Survey, 2024

3.4.2.1 Productivity of Cereals (Target 25%)

There was 2.99 Mt/Ha of overall productivity of cereals recorded during the 6th year of FANSEP implementation, of which 3.816 Mt/Ha for Paddy, 2.134 Mt/Ha for Maize, and 2.4 Mt/Ha for Wheat. These crop wise productivities could not be compared with the baseline, but these could be compared with the midline (2022) results, and have been presented in the following table (Table 22).

Table 22: Productivity of Cereals in Baseline (2021), Midline (2022) and Year-6 (2024)

S. N.	Cereal Crops	No. of HHs (2024)	Productivity (Mt/Ha)			% Increased in 6th Year as Compared to	
			Baseline[4] (2021)	Midline (2022)	Year 6 (2024)	Baseline	Midline
1	Paddy	649	-	3.28	3.816	-	16.34
2	Maize	348	-	1.37	2.134	-	55.77
3	Wheat	450	-	1.77	2.400	-	35.59
	Cereal Total	**831**	**2.43**	**2.36**	**2.99**	**23.05**	**26.69**

Source: FANSEP Annual Outcome Survey, 2024

It can be seen from above table that overall productivity of cereals which was 2.43 Mt/Ha during the baseline year (2021), increased to 2.99 Mt/Ha, with increment of 23.05% as compared to baseline productivity, and increased by 26.69% as compared to midline productivity (2.36 Mt/Ha). The productivity of paddy, which was 3.28 Mt/Ha during the midline year (2022), increased to 3.816 Mt/Ha during the year-6 (2024) with increment of 16.34%. The productivity of maize was increased by nearly 56% during the year-6 as compared to the productivity recorded during the midline year (2022). Similarly, productivities of wheat was increased by 35.59% during the sixth year, as compared to the productivity during the midline year (2022).

3.4.2.2 Production, Sales and Consumption of Cereals crops

There were a total of 831 households who cultivated cereal crops in 2024. Per household area under cereal crops was 0.65 Ha. There were 1604 Mt of cereal production by the cereal producing farmers, who sold 410 Mt and 1194 Mt were home consumed, which accounted for 74% of the total production. Due to the reason of the food security limited quantity (26%) of the cereals production were sold. The scenario of cereal production, consumption and sales, among the cereal producing farmers, in the FANSEP project area, as observed in 2024, have been presented in the following table (Table 23).

Table 23: Production, Sales and Consumption of Cereals crops in 2024

Name of Cereal Crops	No. of HHs cultivating	Area (Ha)	Production (Mt)	Yield (Mt/Ha)	Sales (Mt)	Consumption (Mt)	% of Consumption
Spring Paddy (Chaite)	15	3.61	15.70	4.34	5.07	10.63	67.71
Main Paddy (Barkhe)	642	255.05	973.63	3.82	267.03	706.60	72.57
Upland Paddy (Ghaiya)	7	1.01	1.65	1.64	0.39	1.26	76.39
Wheat	450	162.41	389.78	2.40	123.47	266.31	68.32
Spring / Winter Maize (Hiunde)	125	34.29	69.60	2.03	5.02	64.58	92.78
Summer Maize (Barkhe)	240	48.53	107.14	2.21	3.02	104.12	97.18
Millet	177	31.34	45.84	1.46	5.97	225.22	86.97
Barley / Naked barley	1	0.25	0.28	1.08	0.00	275.00	100.00
Total/Average	**831**	**536.49**	**1603.61**	**2.99**	**409.98**	**1193.63**	**74.43**

Source: FANSEP Annual Outcome Survey, 2024

3.4.2.3 Productivity of Vegetables (Target 30%)

The productivity of almost all vegetables during the sixth year of FANSEP intervention (2024) was estimated to be 19.47 Mt/Ha, which was 6.75 Mt/Ha during the baseline (2021), and 9.88 Mt/Ha during

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[4] As per Result Framework of FANSEP

the midline (2022), which increased by 188.44% during the sixth year as compared to the baseline (2021), and by 97% as compared to the midline (2022). Among the vegetables, highest productivity was observed in Cabbage (40.38 Mt/Ha), followed by Tomato (35.15Mt/Ha), and least in Broad bean (1.96 Mt/Ha) during the 6th year of the project implementation. However, these individual vegetable productivities could not be compared with the baseline and midline productivities. The detail on the productivities of the major vegetables as recorded during the sixth year of FANSEP implementation, have been presented in the following table (Table 24).

Table 24: Productivity by Types of Vegetables during Sixth Year (2024)

S.N.	Types of Vegetables	Productivity during 6th Year (Mt/Ha)
1	Bitter gourd करेला Karela	13.54
2	Broad bean ठुलो सिमी Thulo Simi	1.96
3	Cabbage बन्दा Banda	40.38
4	Cauliflower काउली	29.67
5	Chilli pepper खुर्सानी Khursani	4.09
6	Cucumber काक्रो Kaakro	12.88
7	Eggplant भान्टा Bhanta	13.34
8	French Bean घिउ सिमी Ghu Simi	3.36
9	Green Rayo रायोको साग Rayoko Saag	3.19
10	Okra भिंडी Bindi Ramtoriya	13.33
11	Pea केराउ Keraau	8.86
12	Radish मुला Mulaa	10.46
13	Tomato Open गोलभेडा खुल्लाको Golveda	35.15
14	Other Vegetables	6.88
	All Vegetables	**19.47**

Source: FANSEP Annual Outcome Survey, 2024

3.4.2.4 Production, Sales and Consumption of Vegetables in 2024

There were 146 farmers involved in vegetable cultivation among the crop producing households, who produced a total of 208 Mt of vegetables and sold 181 Mt (87% of total production) and only about 13% were home consumed. As the project area is moving towards commercial production, large quantity of vegetables were found being sold. The vegetable crop wise cultivated area, production, productivity, sales and home consumption, as observed in 2024, have been presented in the following table (Table 25).

Table 25: Production, Sales and Consumption of Vegetable crops in 2024

Name of Vegetables	No of cultivating HHs	Area (In Ha.)	Production (In Mt)	Yield (Mt/Ha)	Sales (Mt)	Home consumption (Mt)
Bitter gourd करेला Karela	26	2.33	31.52	13.54	29.93	34
Broad bean ठुलो सिमी Thulo Simi	8	0.74	1.46	1.96	1.20	11
Cabbage बन्दा Banda	13	0.86	34.71	40.38	33.40	12
Cauliflower काउली	27	1.60	47.47	29.67	36.86	38
Chilli pepper खुर्सानी Khursani	4	0.13	0.52	4.09	0.44	3
Cucumber काक्रो Kaakro	21	1.64	21.07	12.88	19.75	23
Eggplant भान्टा Bhanta	5	0.15	1.95	13.34	1.75	9
French Bean घिउ सिमी Ghu Simi	12	0.92	3.10	3.36	2.79	15
Green Rayo रायोको साग Rayoko Saag	2	0.04	0.14	3.19	0.07	7
Okra भिंडी Bindi Ramtoriya	5	0.31	4.18	13.33	3.39	10
Pea केराउ Keraau	1	0.00	0.02	8.86	-	5
Radish मुला Mulaa	2	0.05	0.55	10.46	0.47	6
Tomato Open गोलभेडा खुल्लाको Golveda	37	1.70	59.91	35.15	50.13	59
Other Vegetables	3	0.20	1.40	6.88	1.10	4
Over all Vegetables		**10.68**	**207.98**	**19.47**	**181.25**	**236**

Source: FANSEP Annual Outcome Survey, 2024

3.4.2.5 Productivity of Cash Crop, Pulse Crop, Oil Seeds, and Fruits

As there were no any data on the productivities of cash crops, pulse/leguminous crops, oil seed, and spice crops during the baseline period, the productivities of these crops recorded during the sixth year of the FANSEP implementation could not be compared with the baseline. Because of this, the productivities of these crops have been compared with the midline productivities. During the sixth year (2024), maximum increment over the midline was observed in oil-seed's productivity (67%), followed by spice crops (22.7%). The least increment was observed in cash crop (potato: 3.46%). The results on the productivities of the cash crops (only for potato), pulse/leguminous crops, oil-seeds, and spice crops as estimated during the sixth year (2024), compared with the results during the midline (2022), have been presented in the following table (Table 26).

Table 26: Productivity of Cash Crop, Pulse Crop, Oil Seeds and Spices

S.N.	Types of Crops	Productivity (Mt/Ha)		% Increased
		Midline (2022)	Year 6 (2024)	
1	Cash Crop (Potato)	10.97	11.35	3.46
2	Pulse/Legume crop	0.72	0.79	9.72
3	Oil seeds	0.64	1.07	67.19
4	Spice crops	8.29	11.83	42.70

Source: FANSEP Annual Outcome Survey, 2024

3.4.2.6 Production, Sales and Consumption of Cash Crops

There were all total 137 households cultivating cash crops, of which only potato producing households were 135, who produced nearly 143 Mt and sold about 60 Mt (42% of production), and 58% of total production were home consumed during the year 2024. The figures on the area cultivated, production, productivity, sales and home consumption of cash crops (potato and colocacia), as observed during the 6th year of FANSEP implementation are presented in the following table (Table 27).

Table 27: Production, Sales and Consumption of Cash Crops in 2024

Name of Cash Crops	No of HHs	Area (Ha)	Production (Mt)	Yield (Mt/Ha)	Sales (Mt)	Consumption (Mt)	% of Consumption
Winter Potato	120	10.84	130.43	12.03	57.56	72.87	55.87
Summer Potato	15	1.09	12.25	11.27	2.25	10.00	81.64
Colocasia	2	0.02	0.17	9.07	-	0.17	100.00
All Tuber (cash) crops	**137**	**11.95**	**142.86**	**11.95**	**59.81**	**83.05**	**58.13**

Source: FANSEP Annual Outcome Survey, 2024

3.4.2.7 Production, Sales and Consumption of Pulse crops (Legumes)

There were 212 households who were involved in pulse crops (legumes) production, who produced 37.4 Mt, of which about 56% were home consumed and 44% were sold during the year 2024. Average productivity of leguminous crops were observed as 0.79 Mt/Ha. The figures on the area cultivated, production, productivity, sales and home consumption of pulse crops (legumes) as observed during the 6th year of FANSEP implementation are presented in the following table (Table 28).

Table 28: Production, Sales and Consumption of Pulse Crops (Legumes) in 2024

Name of Pulse Crops (Legumes)	No of HHs	Area (Ha)	Production (Mt)	Yield (Mt/Ha)	Sales (Mt)	Consumption (Mt)	% of Consumption
Soybeans	24	1.59	2.42	1.52	0.12	2.30	95.03
Black Gram	9	0.68	0.40	0.58	0.00	0.40	100.00
Red Gram	6	1.52	1.28	0.84	0.38	0.90	70.27
Grass Pea	23	3.40	4.20	1.23	2.04	2.16	51.39
Lentil	118	27.00	13.80	0.51	4.47	9.32	67.57
Gram	9	1.59	0.97	0.61	0.00	0.97	100.00
Pea	2	0.22	0.24	1.09	0.22	0.02	8.33
Green Gram	22	5.76	6.97	1.21	4.23	2.74	39.33
Coarse Gram	1	0.05	0.05	0.98	0.00	0.05	100.00
Cow Pea	47	5.12	6.99	1.37	5.08	1.90	27.23
Kidney bean	1	0.10	0.06	0.59	0.00	0.06	100.00

Name of Pulse Crops (Legumes)	No of HHs	Area (Ha)	Production (Mt)	Yield (Mt/Ha)	Sales (Mt)	Consumption (Mt)	% of Consumption
Over all Legumes	**212**	**47.04**	**37.37**	**0.79**	**16.55**	**20.82**	**55.71**

Source: FANSEP Annual Outcome Survey, 2024

3.4.2.8 Production, Sales and Consumption of Oil seed crops

There were 50 farm households who were involved in production of oil seed crops, who produced 8.76 Mt, of which around 93 % was home consumed and very limited (7%) were sold during 2024. The average productivity of oil seed crops were observed as 1.08 Mt/Ha. The figures on the area cultivated, production, productivity, sales and home consumption of oil-seed crops, as observed during the 6th year of FANSEP implementation are presented in the in the following table (Table 29).

Table 29: Production, Sales and Consumption of Oil seed Crops in 2024

Name of Oil Seed Crops	No of HHs	Area (Ha)	Production (Mt)	Yield (Mt/Ha)	Sales (Mt)	Consumption (Mt)	% of Consumption
Mustard	42	6.43	7.08	1.10	0.15	6.94	97.95
Groundnut	1	0.27	0.60	2.21	0.50	0.10	16.67
Linseed	9	1.44	1.08	0.75	0.00	1.08	100.00
All Oil-seed crops	**50**	**8.14**	**8.76**	**1.08**	**0.65**	**8.11**	**92.63**

Source: FANSEP Annual Outcome Survey, 2024

3.4.2.9 Production, Sales and Consumption of Spice crops

There were 42 spice crops producing households, who produced a total of around 25 Mt of spice crops, of which 31% were home consumed and 69% of the production were sold during 2024. The average productivity of spice crops was observed as 11.83 Mt/Ha. The figures on the area cultivated, production, productivity, sales and home consumption of spice crops, as observed during the 6th year of FANSEP implementation are presented in the in the following table (Table 30).

Table 30: Production, Sales and Consumption of Spice Crops in 2024

Name of Spice Crops	No of HHs	Area (Ha)	Production (Mt)	Yield (Mt/Ha)	Sales (Mt)	Consumption (Mt)	% of Consumption
Chillies	16	0.74	4.74	6.38	3.86	0.88	18.59
Onions	23	0.84	15.03	17.80	10.81	4.22	28.05
Garlic	8	0.17	1.28	7.52	0.44	0.85	65.94
Ginger	4	0.09	1.94	20.98	1.49	0.45	23.26
Turmeric	9	0.14	1.52	10.91	0.15	1.37	90.13
Coriander Seed	3	0.11	0.32	2.90	0.31	0.01	3.77
All spices	**42**	**2.10**	**24.82**	**11.83**	**17.04**	**7.77**	**31.32**

Source: FANSEP Annual Outcome Survey, 2024

3.4.2.10 Productivity of Meat (Target 25%)

The overall productivity of meat (goat and chicken) during the baseline year (2021) was 10.7 Kg per animal per year, which increased to 11.63 Kg per animal per year during the midline (2022), finally increased to 15.40 Kg per animal per year during the sixth year of the FANSEP

intervention, with increment of 32.42 % as compared to midline results, and 43.92% as compared to the baseline (2021). Whereas, goat meat productivity which was 21.79 Kg per goat per year during the baseline, increased to 21.13 Kg per goat per year during midline, and again increased to 28.05 Kg per goat per year during the sixth year of project implementation, with nearly 29% increment as compared to baseline result, and nearly 33 % as compared to the midline result. The productivity of chicken (excluding broiler) per hen per year, which was 2.3 Kg during the baseline, same productivity during midline, and increased to 2.75 Kg during the 6th year of the implementation, with nearly 20% of increment during the end (6th) year as compared to both baseline and midline results. The results on the productivities of meat for goat and chicken, as recorded in the sixth year, and compared with the baseline and midline productivities, have been presented in the following table (Table 31).

Table 31: Productivity of Meat during Baseline (2021), Midline (2022) and Sixth Year (2024)

S. N.	Meat Items	Productivity (Kg/Animal)			% Increased/Decreased in 6th Year as Compared to	
		Baseline (2021)	Midline (2022)	6th Year (2024)	Baseline	Midline
1	Goat	21.79	21.13	28.05	28.72	32.74
2	Chicken	2.3	2.3	2.75	19.56	19.56
	Total	**10.7**	**11.63**	**15.40**	**43.92**	**32.42**

Source: FANSEP Annual Outcome Survey, 2024

3.4.2.11 Productivity of Milk (Target 35%)

The productivity of cow and buffalo milk during the 6th of FANSEP intervention, were estimated to be 1377.09 and 1269.62 Ltr/Year/animal respectively, giving overall productivity of 1305.27 liter per year per milking animal (cow and buffalo), which increased by about 100% as compared to the baseline (2021) and by 37% as compared to the midline (2022) productivity. The overall milk productivity is the weighted average. The productivity of cow and buffalo milk which was recorded during the 6th year of FANSEP implementation, and compared with the baseline (2021) and midline (2022), have been presented in the following table (Table 33).

Table 32: Productivity of Milk during Baseline (2021), Midline (2022) and Sixth Year (2024)

S. N.	Milk Items	No. of HHs (2024)	Productivity (Litre/Milking Animal/Year)			% Increased/Decreased in 6th Year as Compared to	
			Baseline (2021)	Midline (2022)	6th Year (2024)	Baseline	Midline
1	Cow Milk	184	-	-	1377.09	-	-
2	Buffalo Milk	372	-	-	1269.62	-	-
	All Milk		**652.29**	**953.88**	**1,305.27**	**100.11**	**36.84**

Source: FANSEP Annual Outcome Survey, 2024

3.4.2.12 Milk Production, Lactation Period, and Milk Productivity

The average lactation period for milking cow and buffalo was estimated to be 236 days, with 243 days for cow and 233 days for buffalo. The milk production per day during the lactation period was recorded to be 5.5 liter per lactating animal (cow and buffalo), with 5.7 liter for lactating cow

and 5.4 liter for lactating buffalo. The number of milking animals, total milk production in a year, lactation length, per milking animal milk production per year and per day during the lactation period, as observed during the year 2024, have been presented in the following table (Table 34).

Table 33: Number of Milking Animals, Milk Production, Lactation Length, Milk Productivity in 2024

Animal	Number of HHs rearing	Number of Milking Animal	Total Milk Production (litre)	Average Lactation Period (days)	Milk Production (Litre / Animal)	Milk Production (Litre/Animal /Day during Lactation period)
Cow	184	211	290,565	243	1,377.1	5.7
Buffalo	372	425	539,589	233	1,269.6	5.4
Milking Animal		**636**	**830,154**	**236**	**1,305.3**	**5.5**

Source: FANSEP Annual Outcome Survey, 2024

The detail on the productivities of major crops at the cluster and municipal levels in 2024 have been presented in the Annex 4; household consumption, gift, and sale of goat and poultry birds at cluster levels (2024) is presented in the Annex-5; and cluster wise milk production and productivities have been presented in the Annex 6.

3.4.3 Increased Household Income

Household income is one of the major indicators of the FANSEP to assess the impact of the project. In this section, overall household income, farm income and off-farm income, gender-based household income, and source-wise household income, as obtained during the annual outcome survey conducted in the 6th year of project implementation and compared with the baseline and midline results, have been presented and discussed as below.

3.4.3.1. Overall HH Income by Farm and Off-Farm Income Category

The overall average net household income, which was Rs. 233,620 per year, during the baseline year (2021), increased to Rs. 302,916.00 during the midline (2022), which ultimately increased to Rs. 375,931.00 during the 6th year, with increment of 61% in the last year of FANSEP implementation as compared to the baseline year (2021) income, and with 24% increment as compared to the midline year (2022) income. Segregating the all income to farm income and off-farm income, the average net farm income, which was Rs. 44,114.00 during the baseline, decreased to Rs. 35,601.00 during midline, and then increased to Rs. 58,449.00 during the 6th year, with 32.5% of increment as compared to baseline and by 64% as compared to midline average net farm income. Whereas, off-farm income increased from Rs. 189,506.00 to Rs. 267,315.00 during midline, and again increased to Rs. 317,482.00 during the 6th year of project implementation, with 67.53% of increment as compared to the baseline average off-farm income, and nearly 19% as compared to the midline average off-farm income. Such increment in household incomes were due to effect of (i) Farmers' Field Schools (FFSs), (ii) farmers applied modern farming technologies, (iii) improved breeds and seeds at farms, (iv) use of machinery and tools, (v) grant supports from the project, and (vi) increased awareness on nutrition, as reported by the respondents. These figures on the farm and off-farm income as recorded during the baseline year (2021), midline year (2022) and the 6th year of project intervention, have been presented in the following table (Table 35).

Table 34: Overall Average HH Income by Farm and Off-Farm Income

Sources of Income	Baseline (2021)	Midline (2022)	6th Year (2024)	% Increased in 2024 as compared to	
	(N=911)	(N=1599)	(N=1600)	Baseline	Midline
Average Farm Income per HH	44114	35601	58,449	32.50	64.18
Average Off-farm Income per HH	189506	267315	317,482	67.53	18.77
Average Total HH Income	**233620**	**302916**	**375,931**	**60.92**	**24.10**

Source: FANSEP Annual Outcome Survey, 2024

From the above table, it can also be seen that, although the overall average net farm income has been increased from baseline to 6th year by 32.5%, the share of farm income in the total household income in the sixth year has been decreased, i.e. from 19% to 16%, but the share which was decreased during the midline (12%) rose up making 16% during the sixth year. The share of farm income and off-farm income during baseline, midline and sixth year, has been presented in the following figures (Figure 5).
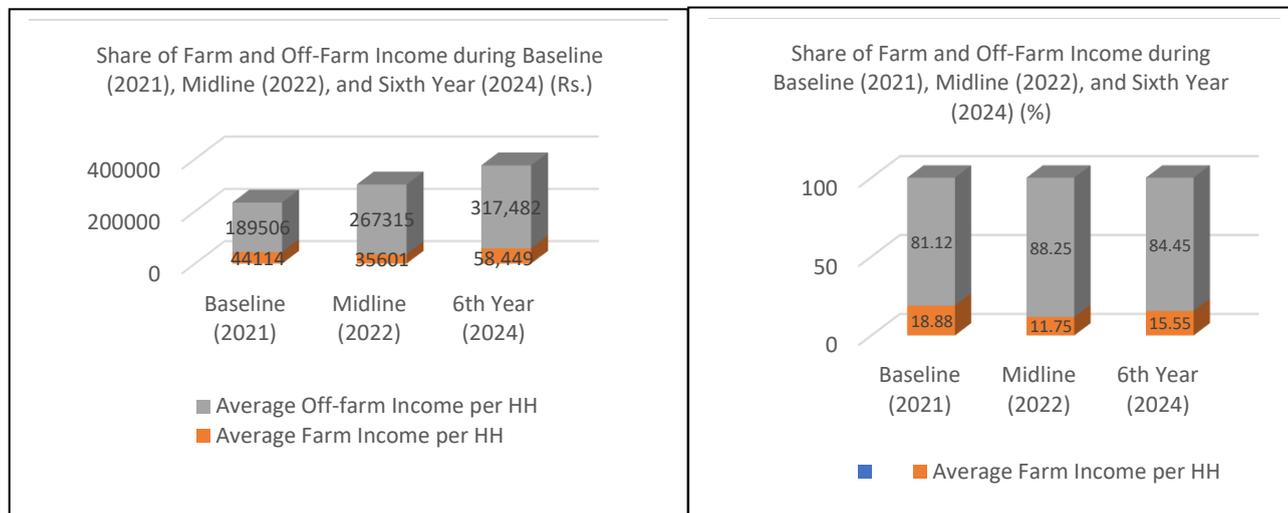
Figure 4: Share of Farm and Off-Farm Income during Baseline, Midline and Sixth year

3.4.3.2. Source Wise Farm and Off-Farm Income

Within the farm income, average net crop income per household which was Rs. 23,269.00 during the baseline (2021), increased to Rs. 27,001.00 during the midline (2022) that decreased to Rs. 24,500.00 during the sixth year. The net crop income per household during year 6 increased as compared to the baseline but decreased as compared to the midline due to the reason that nearly 9% of crop group households during 2024 did not cultivate the land, because of this area of barren land increased. Other reasons of reduction of crop income during 2024 were that income from remittance significantly increased due to migration of the young HH members who were engaged in the farming activities.

The average net livestock farm income, which was Rs. 20,845.00 during the baseline, decreased to Rs. 8600.00 during the midline, and substantially increased to Rs. 33,949.00 during the 6th year of FANSEP implementation, with increment of nearly 63% as compared to the baseline. The income from livestock was more than crops due to sell of livestock products such as milk, goat (buck and he-goat), and poultry including eggs. Among the off-farm income, highest income was recorded from Remittances, i.e. Rs. 167,353.00 during the 6th year, which was Rs. 45,041.00 during the year 2021, and Rs. 75,182.00 during midline, with increment of 272% as compared to baseline and by 123% as compared to the midline remittances. These results show that the off-farm income is being the major source of household income, and within the off-farm income, the major source has been observed as the remittances. This scenario has also indicated that major agricultural labour forces have gone out of the country and particularly from the project area making scarcity of agricultural labour. On the contrary, off-farm income from interest, rents, sale of land, pension, business, and wages were decreased during the 6th year as compared to the baseline (2021) and midline (2022). The detail on the farm and off-farm income as recorded during

the 6th year of FANSEP implementation, and compared with the baseline (2021) and midline (2022), have been presented in the following table (Table 36).

Table 35: Source Wise Farm and Off-Farm Income in Baseline (2021), Midline (2022), and Sixth Year (2024)

S. N.	Income Heads	Household Income (NRs)			% Increased in Sixth Year (2024) as compared to	
		Baseline (N=911)	Midline (N=1599)	6th Year (N=1600)	Baseline (2021)	Midline (2022)
1	**Farm Income**	**44114**	**35601**	**58,449**	**32.50**	**64.18**
1.1	Crop Income	23269	27001	24,500	5.29	-9.26
1.2	Livestock Income	20845	8600	33,949	62.86	294.76
2	**Off-farm Income**	**189506**	**267315**	**317,482**	**67.53**	**18.77**
2.1	Interest	1426	1453	1,237	-13.27	-14.88
2.2	Gifts	1719	2785	3,163	84.00	13.57
2.3	Rents	4092	3324	2,652	-35.19	-20.21
2.4	Sale of land	13893	13858	3,016	-78.29	-78.24
2.5	Pension	18946	20487	17,826	-5.91	-12.99
2.6	Business	38172	43861	37,444	-1.91	-14.63
2.7	Remittances	45041	75182	167,353	271.56	122.60
2.8	Wages	65202	98341	32,505	-50.15	-66.95
2.9	Agri. subsidies	-	-	1,592	-	-
2.10	Services	-	-	50,694	-	-
2.11	Other Sources	1015	8024	-	-	-
Average Income of All HHs		**233620**	**302916[5]**	**375,931**	**60.92**	**24.10**
Average Income of Female Headed HHs		**237506**	**302375[6]**	**367,136**	**54.58**	**21.42**
Average Income of Male Headed HHs		**214513**	**303499[7]**	**379,906**	**77.10**	**25.18**

Source: FANSEP Annual Outcome Survey, 2024

From the above table, it can also be seen that net average household income among the female headed households, which was Rs. 237,506.00 during the baseline (2021), increased to Rs. 302,375.00 during the midline (2022), and ultimately increased to Rs. 367,136.00 during the 6th year of project implementation, with increment of nearly 55% as compared to the baseline income and by 21.4% as compared to the midline income. Whereas, the average household income among the male headed households, which was Rs. 214,513.00 during the baseline (2021), increased to Rs. 303,499.00 during the midline (2022), and finally reached to Rs. 379,906.00 during the 6th year of FANSEP implementation, with increment of 77% as compared to baseline income, and by 25% as compared to midline income.

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[5] This income figure has been presented here after re-addition of the individual item of average household income as presented in the Midline Report (2022) (Table:4; Page:19)

[6] This income figure has been adjusted based on the proportion of household income among female headed and male headed households, as presented in the Midline Report (2022) (Table:26; Page:47)

[7] ibid

3.4.3.3. Comparison of HH Income among Cluster Levels

While comparing the household income among the cluster levels, the highest increment was observed in the Sindhupalchowk cluster (81.5%), i.e. the average HH income rose from Rs. 222,130.00 in the baseline year (2021) to Rs. 403,171.00 during the sixth year. Highest increment of the average HH income of female headed households was seen in the Gorkha cluster, which was Rs. 235,223.00 during the baseline, increased to Rs. 402,830.00 during the sixth year, with increment of 71%. Whereas, among the male-headed households, highest increment on the average HH income was observed in Sindhupalchowk cluster, for which the average HH income which was Rs. 190,902.00 during the baseline (2021) that increased to Rs. 412,377.00 during the sixth year with increment of 116%. The results on the cluster wise overall average household income, average HH income earned by female and male headed households, during the 6th year of the FANSEP implementation and compared with the baseline household income, have been presented in the following table (Table 37).

Table 36: Comparison of HH Income among Cluster Levels in Baseline (2021) and Sixth Year (2024)

Survey	HH Head	Gorkha Cluster	Sindhupalchok Cluster	Dhanusha Cluster	Saptari Cluster	Total
Baseline (2021)	Female Headed HHs	235,223	232,288	216,101	261,959	**237,506**
	Male Headed HHs	227,326	190,902	235,754	218,535	**214,513**
	All HHs	**233,859**	**222,130**	**223,639**	**255,174**	**233,620**
Sixth Year (2024)	Female Headed HHs	402,830	378,592	356,016	345,359	**367,136**
	Male Headed HHs	341,980	412,377	343,742	414,414	**379,906**
	All HHs	**355,823**	**403,171**	**349,480**	**395,251**	**375,931**
% Change	Female Headed HHs	71.25	62.98	64.75	31.84	**54.58**
	Male Headed HHs	50.44	116.02	45.81	89.63	**77.10**
	All HHs	**52.15**	**81.50**	**56.27**	**54.89**	**60.92**

Source: FANSEP Annual Outcome Survey, 2024

The detail on the income at the clusters compared between baseline and sixth year's household income, have been presented in the Annex 7.

3.4.4 Improved Food Insecurity Experience Scale (FIES) Score

The score on the Food Insecurity Experience Scale (FIES), which is the major PDO indicator of the FANSEP to assess to what extent the food insecurity at the household level has been reduced, or in other words, to what extent the food security has been increased. The FIES scores have been analyzed by applying Item Response Theory (IRT) to FIES, which is known as the Rasch Model. According to this model, the FIES score ranges from 0 to 10, for which negative sign is assigned, and interpreted as higher the score (irrespective of sign) higher is the food secured. The FIES scores so obtained during the 6th year of project implementation, are compared with the FIES scores at baseline period (2021), and are presented and discussed in this section as follows.

3.4.4.1 Overall Food Insecurity Experience Scale (FIES) Score

The overall Food Insecurity Experience Scale (FIES) score for all households, which was -8.58 during the baseline (2021), observed as -9.12 during the 6th year of project implementation, showing the food insecurity situation at the household level has been reduced, or in other words, the food security situation at the household level has been increased by 0.54 score or 6.29 % increment, as compared to the baseline FIES. The FIES score among female, which was -7.96 during the baseline that reached to -9.03 during the sixth year of the project implementation by increasing 1.07 score, and by nearly 13.44% increment as compared to the baseline score, indicating that the food insecurity situation among the women in the project area, has been reduced or the food security situation has been enhanced. Whereas, the FIES score among the male was increased to 9.21 during the sixth year (2024) from 8.71 in the baseline (2021), with increment of 0.5 score and increased by 5.74% as compared to baseline score, indicating that the food security situation among the male members within the project area, has been increased by 5.5% as compared to the baseline. The Naïve food insecurity score on the other hand, which was 1.2 during the baseline year (2021) has been reached to 3.49, showing increased food security among the beneficiary households at the end of the project period. The FIES scores so obtained during the 6th year of project implementation and compared with the baseline FIES scores, have been presented in the following table (Table 38).

Table 37: Overall Food Insecurity Experience Scale (FIES) Score in Baseline (2021) and Sixth Year (2024)

Variables	Baseline Score	6th Year Score	% Increased
FIES score- All HH	-8.58	-9.12	6.29
FIES score - female HH	-7.96	-9.03	13.44
FIES score - male HH	-8.71	-9.21	5.74
Naive food insecurity score	1.2	3.49	190.83

Source: FANSEP Annual Outcome Survey, 2024

3.4.4.2 Food Insecurity Experience Scale (FIES) Scores at Cluster Levels

The overall FIES for all households among the four cluster in the sixth year of the FANSEP implementation was observed as highest in Dhanusha cluster (-9.89), which was -8 during the baseline (2021), followed by Gorkha cluster (-9.19), which was -8.5 during baseline, and least in Sindhupalchowk (-8.67). The FIES among the female households was again highest in Dhanusha cluster (-9.87), followed by Gorkha cluster (-9.13), and least in Saptari cluster (-8.56). Similarly, the FIES among the male households was again highest in Dhanusha cluster (-9.91), followed by Gorkha cluster (-9.26), and least in Sindhupalchowk (-8.74). The FIES scores for all households, female and

male households during the 6th year were decreased in 3 clusters (Gorkha, Dhanusha and Saptari), but increased in Sindhupalchowk cluster.

The Naïve food insecurity score was highest in Sindhupalchowk cluster (5.33), followed by Saptari cluster (4.99), and least in Dhanusha cluster (0.44). The Naïve food insecurity score were increased in 3 clusters except in Dhanusha cluster. The FIES and Naïve food insecurity scores at the cluster levels, as obtained during the 6th year of project implementation, and compared with the baseline scores, have been presented in the following table (Table 39).

Table 38: Food Insecurity Experience Scale (FIES) Score at Cluster Levels in Baseline (2021) and Sixth Year (2024)

Variables	Gorkha Cluster		Sindhupalchowk Cluster		Dhanusha Cluster		Saptari Cluster	
	Baseline (2021)	6th Year (2024)	Baseline (2021)	6th Year (2024)	Baseline (2021)	6th Year (2024)	Baseline (2021)	6th Year (2024)
FIES score (All HHs)	-8.5	-9.19	-9.3	-8.67	-8	-9.89	-7.7	-8.75
FIES score - female HHs	-8.3	-9.13	-9	-8.6	-7.6	-9.87	-4.5	-8.56
FIES score - male HHs	-8.5	-9.26	-9.4	-8.74	-8.2	-9.91	-8.3	-8.94
Naive food insecurity score	1.2	3.24	0.6	5.33	1.6	0.44	1.8	4.99

Source: FANSEP Annual Outcome Survey, 2024

3.4.5 Improved Dietary Intake

Minimum Dietary Diversity (MDD) and Minimum Acceptable Diet (MAD), are the two major indicators to assess the improvement in the dietary intake among the beneficiary households, and the results so obtained during the 6th year of FANSEP implementation and compared with the baseline and midline results, are presented and discussed in this section.

3.4.5.1 Improved overall dietary intake of direct beneficiaries (Target 20%)

There were 41% pregnant and nursing women who had minimum dietary diversity (MDD) score (at least 5 out of 10 food items) during the baseline year (2021), that share increased to nearly 87.8% during the 6th year of FANSEP implementation, with increment of 114.14%, showing impressive results on the dietary intake among the pregnant and nursing women in the project area.

The MDD score for all women aged between 15 to 49, which was 47% during the baseline increased to 65% during midline, and again increased to 74% in the 6th year, with increment of 58% as compared to the baseline MDD score, which also shows that there is very positive impact of the project among such woman groups in the FANSEP command areas.

Though MDD scores for children aged 6 to 24 years, were lesser than that of the woman, in all the survey years, this score, which was 17% during the baseline (2021), increased to 41% during the midline (2022), and again reached to 49.6% during the 6th year of the project implementation, with increment of about 191.76% as compared to the baseline MDD score, and by 21% increment as compared to the midline MDD score.

Similarly, there were 20% children of aged 6 to 24 months who had fulfilled the score of Minimum Acceptable Diet (MAD) during the baseline year (2021), such share was increased to 27% during the midline (2022), and finally reached to nearly 43% at the end of the project period (2024).

These MDD and MAD scores on the children of aged between 6 to 24 months, as observed during the project implementation period, have clearly indicated that the project has made substantial impact on the nutrition aspects at the beneficiary household levels.

The MDD and MAD scores, so obtained during the 6th year's annual outcome survey, and compared with the baseline and midline scores, have been presented in the following table (Table 40).

Table 39: Minimum Dietary Diversity (MDD) Score in Baseline (2021), Midline (2022) and Sixth Year (2024)

Variables	MDD and MAD (%)			% Increased / Decreased as compared to	
	Baseline (2021)	Midline (2022)	Year 6 (2024)	Baseline	Midline
Minimum Dietary Diversity (MDD) Score for Pregnant and Nursing Women	41	58	87.8	114.14	51.38
Minimum Dietary Diversity (MDD) Score for all women aged 15-49	47	65	74.4	58.30	14.46
Minimum Dietary Diversity (MDD) Score for Children aged 6-24 months Old	17	41	49.6	191.76	20.97
Minimum Acceptable Diet Score for Children aged 6-24 months Old	20	27	42.6	113	57.77

Source: FANSEP Annual Outcome Survey, 2024

3.4.5.2 Improved dietary intake of direct beneficiaries at Cluster Levels

An attempt has also been made to analyze the MDD and MAD scores at the cluster levels, and have been presented in the following table (Table 20). The table below shows that, among the 4 clusters, the MDD scores for pregnant and nursing woman was observed highest in Dhanusha cluster (94%), followed by Saptari cluster (92%), and least in Sindhupalchowk cluster (73%). The MDD scores for all women aged 15 to 49 were observed highest again in Dhanusha cluster (86%), followed by Saptari cluster (73%), and least in Sindhupalchowk cluster (68%). These MDD scores for pregnant, nursing and all women aged between 15-49 years, were higher in Terai clusters than in the Hill clusters, indicating that the Terai women have more access to nutrition than that of the Hill women.

In case of children aged between 6 to 24 months, the MDD score was observed highest in Dhanusha Cluster (56%), followed by Sindhupalchowk cluster (53%), and least in Saptari cluster (46%). The MAD score for the children (6-24 months) was observed highest again in Dhanusha cluster (50%), followed by Gorkha cluster (45%), and least in Sindhupalchowk cluster (33%).

In all cases, comparing among the clusters, with regard to the nutrition for women (pregnant, nursing and age of 15-49 years) and children (6-24 months of age), Dhanusha cluster has shown good impact than other clusters, whereas, Gorkha and Saptari have shown medium impact and Sindhupalchowk cluster has shown the least impact among the other 3 clusters. The MDD and MAD scores so obtained during the sixth year of the project implementation have been presented in the following table (Table 41).

Table 40: Minimum Dietary Diversity (MDD) and Minimum Acceptable Diet (MAD) Scores at Cluster Levels

Variables	Gorkha Cluster	Sindhupalchowk Cluster	Dhanusha Cluster	Saptari Cluster	Total
Minimum Dietary Diversity (MDD) Score for Pregnant and Nursing Women	84.2	73.3	93.8	91.8	**87.8**
Minimum Dietary Diversity (MDD) Score for all women aged 15-49	68.8	67.6	86.4	72.7	**74.4**
Minimum Dietary Diversity (MDD) Score for Children aged 6-24 months Old	50.0	52.9	56.0	45.5	**49.6**
Minimum Acceptable Diet Score for Children aged 6-24 months Old	45.0	33.3	50.0	41.4	**42.6**

Source: FANSEP Annual Outcome Survey, 2024

3.4.6 Improved Household Dietary Diversity Score including 1000 days mother (Target 20%)

The household dietary diversities have been assessed among (i) pregnant woman or nursing woman who has child of 6 to 24 months of age (i.e. 1000 days mother), (ii) all women within the age of 15 to 49 years of age, and (iii) children within the age of 6 to 24 months. As mentioned in the methodology section, the **Household Dietary Diversity (HDD) score** for **woman having children (1000 days mother)** is estimated by taking average of the average number of food items (out of 14 defined food items) consumed by mother and the average number of food items (out of 12 defined food items) consumed by child. The **HDD score** for **woman not having children** (15-49 years of age) is estimated by taking the average number of food items consumed out of 14 defined food items. Whereas, the **HDD score** for **children (6-24 months of age)** is estimated by taking average number of food items consumed out of 12 defined food items. The results on HDD scores so obtained in the sixth year of the project implementation, and compared with the HDD scores obtained during the baseline survey (2021) and midline survey (2022), have been presented and discussed in the successive sub-sections.

3.4.6.1 Overall Household Dietary Diversity (HDD) Improved

The Household Dietary Diversity (HDD) Score for 1000 days mother, which was 6.82 during the baseline year (2021), increased to 7.37 during midline, and again reached to 8.8 during the 6th year of the FANSEP implementation, with 29% increment as compared to the baseline score, and 19% increase as compared to the midline score. This indicated that 1000 days women (including children of aged 6 to 24 months) who used to eat about 7 food items daily during baseline year, they increased additional 2 food items daily and reaching to nearly 9 items daily during the sixth year, showing good impact of the project on the daily dietary intake among the pregnant and nursing women.

The HDD score for all women between the age of 15 and 49 years, irrespective of pregnant and/or nursing women, which was 7.2 during the baseline year (2021) that increased to 7.48 during the midline year (2022), eventually reached to 8.2 during the sixth year of project implementation. This shows that the all women aged of 15-49 years were able to consume one more food item in their daily diets than that in the baseline year (2021), which is about 14% more consumption during the sixth year, as compared to the baseline average diets.

However, the HDD score for children between the age of 6 and 24 months, was just 9% more during the sixth year (4.8) than the baseline year (4.4), though there was 5.6 HDD score for children during the midline year (2022).

The HDD score for 1000 days mother, all women between the age of 15-49 year, and children between the age of 6-24 months, as obtained during the 6th year of project implementation, and compared with the baseline and midline HDDs, have been presented in the following table (Table 42) and figure (Figure 7).

Table 41: Household Dietary Diversity (HDD) Score in Baseline (2021), Midline (2022), and Sixth Year (2024)

Variables	HDD Score			% Increased/Decreased as Compared to	
	Baseline (2021)	Midline (2022)	Year 6 (2024)	Baseline	Midline
Household Dietary Diversity (HDD) Score of 1000 days Mother	6.82	7.37	8.8	29.03	19.40
Household Dietary Diversity (HDD) Score of Women aged 15-49 year	7.2	7.48	8.2	13.89	9.63
Household Dietary Diversity (HDD) Score of Children aged 6-24 months	4.4	5.6	4.8	9.09	-14.29

Source: FANSEP Annual Outcome Survey, 2024

3.4.6.2 Household Dietary Diversity (HDD) Scores at Cluster Levels

Comparing the Household Dietary Diversity (HDD) scores of 1000 days mothers among the clusters, Dhanusha cluster has the highest HDD (9.5), followed by Gorkha and Sindhupalchowk clusters (9.0 each), and least in Saptari cluster (8.5). Similarly, the HDD score for women aged 15 to 49 years, was observed as the highest again in Dhanusha cluster (9.7), followed by Gorkha cluster (7.7), and least in Sindhupalchowk cluster (7.5). Whereas, the HDD score for children aged between 6 and 24 months, was highest in Gorkha cluster (5.5), followed by Sindhupalchowk (5.35), and least in Dhanusha cluster (4.5). The results on the HDD scores so obtained during the sixth year of project implementation in the four clusters of the FANSEP, have been presented in the following table (Table 43).

Table 42: Household Dietary Diversity (HDD) Score at Cluster Levels in Sixth year (2024)

Variables	Gorkha cluster	Sindhupalchowk cluster	Dhanusha cluster	Saptari cluster	Overall
Household Dietary Diversity (HDD) Score of 1000 days Mother	9.0	9.0	9.5	8.5	8.8
Household Dietary Diversity (HDD) Score of Women aged 15-49 year	7.7	7.5	9.7	7.6	8.2
Household Dietary Diversity (HDD) Score of Children aged 6-24 months	5.5	5.35	4.5	4.6	4.8

Source: FANSEP Annual Outcome Survey, 2024

An attempt has also been made to segregate the HDD scores among the women category as, (i) nursing mother with child under 24 months, (ii) pregnant woman, (iii) woman of age between 15 to 49 years, (iv) all women, and (v) children of age between 6 to 24 months; and the results have been presented in the following table (Table 44).

Table 43: Household Dietary Diversity (HDD) Score at Cluster Levels in Sixth year (2024)

Variables	Household Dietary Diversity (HDD) Score				
	Gorkha Cluster	Sindhupalchowk Cluster	Dhanusha Cluster	Saptari Cluster	Overall
HDD of Nursing Mother with child under 24 months	9.3	8.9	9.4	8.2	**8.7**
HDD of Pregnant Woman	7.8	9.7	9.5	9.0	**8.9**
HDD of all Woman aged 15-49 years	7.7	7.5	9.7	7.6	**8.2**
HDD of all Woman	7.8	7.59	9.7	7.8	**8.3**
HDD of Children aged 6 to 24 months	5.5	5.35	4.5	4.6	**4.8**

Source: FANSEP Annual Outcome Survey, 2024

From above table, we can see that the HDD score for nursing mother with child under 24 months during the 6th year of project implementation was 8.7 in total, with highest in Dhanusha cluster (9.4), followed by Gorkha cluster (9.3), and least in Saptari cluster (8.2). The HDD for pregnant woman during the 6th year was 8.9 in total, with highest in Sindhupalchowk cluster (9.7), followed by Dhanusha cluster (9.5), and least in Gorkha cluster (7.8). The HDD for all women, irrespective of age, pregnancy and nursing, in the last year of project implementation (2024), was observed as 8.3 in overall, with highest in Dhanusha cluster (9.7), followed by Gorkha and Sapatari clusters (7.8 each), and least in Sindhupalchowk cluster (7.59).

3.4.7 Improved Seed Replacement Rate (SRR)

Seed Replacement Rate (SRR) is one of the major indicators to assess the adoption of improved technology particularly the adoption of the improved varieties. The SRRs for major cereals (paddy, maize and wheat), and cash crop (potato) were estimated during the baseline, and so have been estimated during the sixth year of the FANSEP intervention. The SRRs were estimated as percentage of the area covered by improved seeds over the total cropped area of the specific crops among the crop producing farmers during the accounting period. The results so obtained on the SRRs during the 6th year of the project implementation, and compared with the baseline (and midline also) SRR value, have been presented and discussed in the following sub-sections.

3.4.7.1 Seed Replacement Rate (SRR) of Cereals

The overall seed replacement rate (SRR), which was 25% for all cereals, including potato, during the baseline (2021) increased to 33% during the midline, and again increased to 41.64%) during the sixth year of the FANSEP implementation, with increment of 66.56 % as compared to the baseline SRR, and by about 26% as compared to the midline SRR. Comparing the SRRs among the cereals during the sixth year, highest SRR was observed in maize 48%, followed by wheat 43%, and then paddy 39%, and least in potato 30%. The per cent increment on the SRR was observed highest in wheat (137%), followed by maize (100%), potato (88%) and then paddy (26.5%). The results on the crop wise SRR could not be compared with the midline, as there were no crop wise results presented. The SRR for all the cereals as observed during the sixth year have exceeded the target of SRR increment (20%). The SRR observed during the sixth year of project implementation and compared with the baseline and midline SRR, have been presented in the following table (Table 45).

Table 44: Seed Replacement Rate (SRR) in Baseline (2021), Midline (2022) and 6th Year (2024)

Crops	Baseline (2021)		Midline (2022)		6th Year (2024)		% Increased as Compared to	
	N	SRR[8] (%)	N	SRR[9] (%)	N	SRR (%)	Baseline	Midline
Paddy	438	31	-	33	1,028	39.23	26.54	-
Maize	529	24	-	30	621	48.05	100.2	-
Wheat	232	18	-	37	688	42.67	137.05	-
Potato	154	16	-	15	213	30.10	88.13	-
Seed Replacement Rate (All Cereals)		**25**	**-**	**33**		**41.64**	**66.56**	**26.18**

Source: FANSEP Annual Outcome Survey, 2024

3.4.7.2 Seed Replacement Rate (SRR) of Cereals at Cluster Levels

Observing the SRR of cereals at the cluster levels, Sindhupalchowk cluster has the highest SRR (52.86%), followed by the Saptari cluster (43.65%), Gorkha cluster (42.52%, and Dhanusha cluster (31.11%). Among all clusters and types of cereals, highest SRR was observed in Paddy in Sindhupalchowk cluster (68.82%), followed by Wheat in Saptari cluster (58.82%), and least in Wheat in Gorkha cluster (10.46%). The detail on the SRR by clusters and by types of cereals, as observed during the Annual Outcome Survey (AOS) for the 6th year of the project intervention, have been presented in the following table (Table 46).

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[8] SRRs as per updated Result Framework of FANSEP
[9] ibid

Table 45: Seed Replacement Rate (SRR) at Cluster Levels by Types of Cereals in Sixth Year (2024)

Cluster	Crop	Crop Cultivated Area		Area covered by Improved Seed		SRR (%)
		HHs	Area	HHs	Area	
Gorkha Cluster	Paddy	180	491,311	91	196,849	40.07
	Maize	326	939,643	159	437,056	46.51
	Wheat	46	87,545	6	9,157	10.46
	Potato	51	26,868	28	14,086	52.43
	All Cereals	**603**	**1,545,367**	**284**	**657,148**	**42.52**
Sindhupalchok Cluster	Paddy	224	559,007	179	384,726	68.82
	Maize	295	504,057	129	256,658	50.92
	Wheat	86	132,466	10	15,516	11.71
	Potato	73	88,965	17	22,130	24.88
	All Cereals	**678**	**1,284,495**	**335**	**679,031**	**52.86**
Dhanusha Cluster	Paddy	288	1,105,913	100	371,453	33.59
	Maize	-	-	-	-	-
	Wheat	264	962,100	82	273,340	28.41
	Potato	16	28,360	10	7,365	25.97
	All Cereals	**568**	**2,096,373**	**192**	**652,158**	**31.11**
Saptari Cluster	Paddy	336	1,800,861	234	599,213	33.27
	Maize	-	-	-	-	-
	Wheat	292	1,278,243	167	751,858	58.82
	Potato	73	50,084	21	14,900	29.75
	All Cereals	**701**	**3,129,188**	**422**	**1,365,971**	**43.65**
Over All	**Paddy**	**1,028**	**3,957,091**	**604**	**1,552,242**	**39.23**
	Maize	**621**	**1,443,700**	**288**	**693,713**	**48.05**
	Wheat	**688**	**2,460,354**	**265**	**1,049,871**	**42.67**
	Potato	**213**	**194,277**	**76**	**58,481**	**30.10**
	All Cereals	**2,550**	**8,055,422**	**1,233**	**3,354,308**	**41.64**

Source: FANSEP Annual Outcome Survey, 2024

3.4.8 Home Nutrition Garden (HNG)

Home nutrition garden (HNG) is an important program under the FANSEP, to reduce the food-insecurity situation and side by side improve the household nutrition security among the beneficiary households. The major supports from the project for home nutrition garden were-distribution of seeds, fencing of nutrition garden, garden tools, plastic tunnels, chicks, ducklings, simple machines for drudgery reduction, and small grants. The results obtained during the 6th year of the project implementation on the HNG program, have been presented and discussed in the sub-sections below.

3.4.8.1 Number of Farm Households having Home Nutrition Garden (HNG)

Of the total 1600 farm households surveyed, 1191 farm households (74.44%) were found having home nutrition garden (HNG), whereas, 25.56% of farm households were not having the nutrition garden. Under the nutrition supported households, 126 households (75.4%) out of 167 households have developed and continued nutrition garden, however 74.44% of total crop and livestock households also established and continued the nutrition garden, which is due to the spillover effects of the nutrition activities as well as effect of nutrition awareness program of the project.

The number of farm households having home nutrition garden (HNG) at the municipality levels, as observed in the year 2024, have been presented in the following table (Table 47).

Table 46: Number of Farm Households having Home Nutrition Garden (HNG) in 2024

Municipalities	Total Interviewed Households	Number of Nutrition Supported Households interviewed	Number of Households having Nutrition Gardens		
			Nutrition Groups	Non-Nutrition Groups	Total
Gandaki	100	12	9	65	74
Barpak Sulikot	100	12	10	86	96
Gajuri	100	3	3	89	92
Benighat Rorang	100	11	11	82	93
Lisankhu Pakhar	100	5	5	85	90
Indrawati	100	14	14	86	100
Tamakoshi	100	1	1	98	99
Kalinchok	100	24	21	67	88
Rajgadh	100	7	2	42	44
Bishnupur	100	18	13	70	83
Aurahi	100	9	6	68	74
Bariyarpatti	100	15	10	40	50
Mukhiyapatti Musharni	100	6	3	45	48
Dhanauji	100	7	1	19	20
Ekdara	100	11	9	69	78
PIpara	100	12	8	54	62
Total	**1600**	**167**	**126**	**1065**	**1191**
Percent			**75.45**		**74.44**

Source: FANSEP Annual Outcome Survey, 2024

3.4.8.2 Types of Crops Grown in Home Nutrition Garden (HNG)

Of the total 1191 farm households who having home nutrition garden (HNG), maximum of them (48%) used to grow cowpea in their home nutrition garden. The second important crop was Bottle-gourd (28%), followed by Bitter-gourd (27%). The major crops grown (grown by more than 5% of

households) in the nutrition garden in the FANSEP area, as observed in the year 2024, have been presented in the following table (Table 48), and detail list of crops grown in the HNG is presented in the Annex 8.

Table 47: Major Crops Grown in Home Nutrition Garden (HNG) in 2024

Name of Crops Grown in HNG	Number of Farmers Growing Crops in HNG	% of Farmers Growing
Cowpea	570	47.86
Bottle gourd	330	27.71
Bitter gourd	323	27.12
Onion	289	24.27
Maize (Summer)	283	23.76
Chillies	278	23.34
Winter Potato	268	22.50
Cucumber	262	22.00
Green Rayo	235	19.73
Pumpkin	212	17.80
Sponge gourd	202	16.96
Cauliflower	174	14.61
Garlic	165	13.85
Pea	136	11.42
Okra / Ladies-finger	128	10.75
Other tubers	113	9.49
Cabbage	109	9.15
French bean	109	9.15
Other vegetables	81	6.80
Tomato (open field)	78	6.55
Eggplant/Brinjal	70	5.88
Coriander seed	63	5.29
Colocasia	61	5.12
Total	**1191**	**100.00**

Source: FANSEP Annual Outcome Survey, 2024

3.4.8.3 Purpose of Home Nutrition Garden (HNG)

The primary purpose of the home nutrition garden (HNG) is for the home consumption. However, it was observed that about 9 % of farm households also used to sell the surplus vegetables. The number of farm households having home nutrition garden (HNG) who also used to sell the surplus vegetables, as observed in the year 2024, have been presented in the following table (Table 49).

Table 48: Purpose of Home Nutrition Garden (HNG) in 2024

Rural Municipalities	Self-consumption	Sale Also
Gandaki	74	2
Barpak Sulikot	96	7
Gajuri	92	19
Benighat Rorang	93	11
Lisankhu Pakhar	90	3
Indrawati	100	13
Tamakoshi	99	6
Kalinchok	88	9
Rajgadh	44	3
Bishnupur	83	6
Aurahi	74	0

Rural Municipalities	Self-consumption	Sale Also
Bariyarpatti	50	7
Mukhiyapatti Musharniya	48	15
Dhanauji	20	1
Ekdara	78	0
Pipara	62	1
Total	**1191**	**103**
Percentage	**100**	**8.65**

Source: FANSEP Annual Outcome Survey, 2024

3.4.8.4 Benefits of Home Nutrition Garden (HNG)

The farm households who were having home nutrition garden (HNG) were asked on to what extent the HNG has benefitted to the household members. The answers reported from the farm households have been presented in the following table (Table 50).

Table 49: Benefits of Home Nutrition Garden (HNG)

Rural Municipalities	Getting diverse food from own nutrition garden	Helped in income generation	HNG Not succeeded	No significant difference from the previous situation	Total
Gandaki	74	2	11	1	88
Barpak Sulikot	96	7	1	0	104
Gajuri	91	20	1	1	113
Benighat Rorang	93	11	0	0	104
Lisankhu Pakhar	48	48	32	40	168
Indrawati	100	13	0	0	113
Tamakoshi	88	4	15	8	115
Kalinchok	86	16	1	1	104
Rajgadh	39	8	1	2	50
Bishnupur	69	7	8	10	94
Aurahi	72	6	2	3	83
Bariyarpatti	50	8	0	0	58
Mukhiyapatti Musharniya	48	15	0	1	64
Dhanauji	20	1	0	0	21
Ekdara	78	0	0	0	78
Pipara	62	1	0	0	63
Total	1114	167	72	67	1420
Percentage	**78.5**	**11.8**	**5.1**	**4.7**	**100.0**

Source: FANSEP Annual Outcome Survey, 2024

From above table, it can be seen that nearly 79% of the farm households, who were having home nutrition garden (HNG), reported that they are getting diverse food from own nutrition garden. About 12 % of them reported that the HNG has helped for household income generation, 5 % of them have not succeeded from the HNG, and nearly 5 % reported that HNG's benefits are same as before.

3.5 Overall Impact of the Project

The project has successfully met its goals and impacted the intended beneficiaries positively. It has brought about favorable changes and benefits for those directly affected by the project's initiative, which can be summarized as follows:

- Production and productivities of major crops and livestock increased
- Household income of beneficiaries increased
- Majority of farmers adopted improved agricultural technologies including CSATs
- Food insecurity at household levels decreased
- Beneficiaries' awareness on nutrition increased
- Nutritional status of the women and children increased
- Home Nutrition Garden (HNG) has made positive impact on the household nutrition.
- Productive Alliances between farmers and agribusinesses are established and functioning well

The project has effectively implemented its activities by focusing on the needs of the beneficiaries, enabled to achieve the intended results within the project period. The annual outcome survey showed that the project interventions were relevant, need-based and implemented effectively and has thus met the targets of all the PDO indicators.

During the field visits and interactions with the local leaders, farmers and some traders, it was noticed that the project has done well in reducing the food insecurity through the programs such as nutrition garden, inputs and technological supports for increasing production and productivities. However, very less efforts were made for value chain linkages, value chain based infrastructure supports, marketing supports and facilitation. It was also reported that the beneficiary farmers' groups are closing their groups due to burden of the annual renewal process with tax and fines. These groups need to be supported with follow-up technical and marketing supports for which the local government can take over such activities. Multi-Stakeholder Platform as formed by the project have been observed lesser market-oriented, due to poor focus on the private sector. The involvement of private sector in such MSPs would be more important for market-led commercial production and value chain linkages.

CHAPTER 4: CONCLUSION, KEY ISSUES, LESSON LEARNED AND RECOMMENDATIONS

4.1. Conclusion

Despite of the impact of the COVID-19, the project has successfully achieved its intended results. It has produced inspiring outcomes in various area, including

- Increased productivity of the agriculture and livestock commodities
- Enhanced household income
- Decreased household food insecurity
- Improved nutritional status of the pregnant women and children aged 6-24 months
- Application of climate-smart and nutrition-smart technologies in the farms
- Increased awareness of nutrition among the community people
- Business linkages has established with private traders

4.2. Key Issues and Challenges

- Many beneficiary groups are being closed due to burden of tax for renewal process
- Those groups which were supported at the end of project period, need follow up and technical backstopping
- There is still risk of discontinuation of activities at the community levels
- Hence, the beneficiaries are to be supported by the local government for sustainability of modern agricultural practices that were initiated by the project

4.3. Lesson Learned

About 78 per cent project beneficiary households have developed nutrition garden and growing 77 varieties of vegetables, crops and fruits that have significantly contributed to the household food security and nutrition. The diversity of produces ensure the household members to have access to a broad range of nutrients, which can improve overall health and well-being. Improved nutritional intake, food security, economic benefits, environmental impact, community resilience, education and skill are the benefits of the nutrition garden. The nutrition garden initiative as promoted by the project, has a positive impact on health and economic status of the beneficiary households, which can be replicated to other parts of the country.

4.4. Recommendations

1. **Value Chain Infrastructure Development:** The FANSEP interventions primarily focus on enhancing the nutrition status and food security of the beneficiaries by increasing the production of the agriculture value chain commodities and thereby boosting household income. As partnerships with private sectors have just started in the project area, it is suggested to invest more in value chain development structures such as agricultural road for connectivity from production pockets to markets, post-harvest losses reduction technologies, such as cold storage and necessary machinery and equipment supports, infrastructural supports such as irrigation etc. in the upcoming second phase of the project.

2. **Functioning of Multi-stakeholders' Platform (MSP):** Agribusinesses, producers and service providers come together in a multi-stakeholder's platform to discuss their problems, challenges and find solutions. It is suggested, based on the interactions with stakeholders, to lead on the coordination aspect by the municipality chair, but leading the marketing aspects by private sector, to ensure this forum be effective, commercial, market-led and results oriented.

3. **Follow-up support by Local Government:** To sustain the project's results in its command areas (municipalities), it is suggested, based on the interactions with the beneficiaries and concerned stakeholders, to build a mechanism so that the beneficiaries of the FANSEP will get follow-up support, to be provided by the concerned municipalities, even after closing of the project.

4. **Project should be focus on overall value chain establishment:** The FIES score as per baseline (-8.6) indicated that the beginning of the project, there was already a relatively low level of food insecurity, only very few households were experiencing food insecurity. In next the phase, it is suggested to focus on agriculture businesses along with the nutrition related interventions in the areas where there are low level of food insecurity. Continuous efforts in this direction along with complementary interventions and policy support can further strengthen food security and economic resilience in the project area.

ANNEXES

Annex 1: Analytical Tools for Primary Data and Information

The collected data of the 1600 households were analyzed by using statistical tool-STATA. The formula and process of estimation for each indicator for Year-6 as per the ToR are as follows:

PDO 1: Farmers adopting improved agricultural technologies (including CSA) of which female (CRI)

This indicator is the Product of

(i)   the share of PG members adopting at least one improved technology and

(ii)   the number of PG members provided with access to improved agricultural technologies. The first part was captured through the project survey. The adoption rate was captured based on the technologies promoted by the project. The list of technology was provided by the project. The formula for estimating the Adoption rate of improved agricultural technologies is:

$$\text{Adoption rate} = \frac{\text{Number of farmers adopted at least one improved technology}}{\text{Total number of farmers surveyed}} \times 100$$

PDO 2: Increased crop and animal productivity by direct beneficiaries (disaggregated by crop and animal species)

(i) Crop Productivity (ton/ha)

Crop yield was calculated as Production (Mt per hectare). For each crop the amount produced is calculated in Mt (1 Mt = 1,000 Kg) per unit of land (hectare).

$$\text{Crop Yield} = \frac{\text{Amount of crop produced in Mt}}{\text{Total area of crop in hectares}}$$

PDO: 2.a. Productivity of cereals: Improvements in production (Mt.) per Ha was measured stating average quantity of production and percentage of increment in unit of production of the major cereals by taking the weightage means of yields for the paddy, maize and wheat.

PDO: 2.b. Productivity of vegetables: Improvements in production (Mt.) per Ha was measured stating average quantity of production and percentage of increment in unit of production of the vegetables promoted by the project (Tomato, Cauliflower, Bitter-gourd, Cucumber, Long bean, Okra, French bean, Chilli, Cabbage, Garden pea, Radish, Carrot, Broad leaf mustard, Brinjal).

PDO: 2.c. Productivity of potato: Improvements in production (Mt.) per Ha was measured stating average quantity of production and percentage of increment in unit of production of the Potato.

(ii) Animal Productivity (Meat and Milk)

PDO: 2.d. Meat Productivity: Improvements in meat production (kg/animal) was measured stating average quantity of production and percentage of increment in unit of production. The Project has focused to measure meat productivity of goat. The value for this indicator was calculated by calculating

average live weight of goats (adult doe, adult buck, female hogget and male hogget) regardless of breed and type.

PDO: 2.e. Milk Productivity: Improvements in production (Ltr./animal) was measured stating average quantity of milk production and percentage of increment in unit of production. The Project has focused to measure milk productivity of cattle and buffalo. The value for this indicator was calculated by 1) calculating average amount of milk produced per milking cow regardless of breed, 2) calculating average amount of milk produced per milking buffalo regardless of breed. 3) And finally calculating the mean value of 1) and 2) giving equal weights to both numbers for comparability to previous studies. This was calculated also giving proportional weight to the production of milk from cow and buffalo.

$$\text{Milk Productivity} = \frac{\text{Average productivity of cow milk} + \text{Average productivity of buffalo milk}}{2}$$

PDO 3: Increased household income (farm and off-farm) disaggregated by gender:

Household income has been accounted in a production-based approach (i.e., revenue minus cost), and home-produced food that was not sold but consumed at home has been valued as income. Therefore, this indicator was calculated by adding income from all sources of the household, additionally the value of household's self-cultivated and self-consumed crops were imputed by multiplying the amount of crop produced by average sale price of same crop at household/RM/district levels. The household income was measured as: Total HH income, HH income of male headed HHS, HH income of female headed HHS. HH income was also disaggregated into farm income and non-farm income. For crop income and livestock income, costs of production such as cost of inputs, labor, and veterinary services were subtracted from the total sales revenue of crops and livestock.

HH income = Average Income from all Sources

PDO 4: Improved score on the Food Insecurity Experience Scale (FIES) by direct beneficiaries (gender disaggregated):

The FIES was measured maintaining consistency with baseline methods, where FIES was calculated using Rasch model. The approach used to analyze Food Insecurity Experience Scale (FIES) data came from Item Response Theory (IRT), a branch of statistics that permits the measurement of unobservable traits through analysis of responses to surveys and tests. As food security itself is an inherently unobservable characteristic, such as attitude or intelligence, it can be measured only by examining its observable manifestations. The specific IRT model applied to FIES data is the Rasch model, which is widely used in health, education, and psychology. The FIES module is a set of 8 yes or no questions, as:

1. In the past 12 months, did you worry about not having enough food to eat because of a lack of money or other resources?
2. In the past 12 months was there a time when you were unable to eat healthy and nutritious food because of a lack of money or other resources?
3. 1n the past 12 months was there a time when you ate only a few kinds of foods due to a lack of money or other resources?

4. In the past 12 months did you have to skip a meal because there was not enough money of other resources to get food?

5. In the past 12 months was there a time when you ate less than you thought you should because of a lack of money or other resources?

6. In the past 12 months was there a time when your household ran out of food because of a lack of money or resources?

7. In the past 12 months was there a time when you were hungry but did not eat because there was not enough money or other resources for food?

8. In the past 12 months was there a time when you went without eating for a whole day because of a lack of money or other resources?

PDO 5: Improved dietary intake for:

5. a). Pregnant & nursing women

This indicator was restricted to women who were currently pregnant or nursing children, as stated in the Results Framework. The outcome variable of Minimum Dietary Diversity (MDD), which takes value of 1 if the woman consumed 5 out of 10 food groups, as specified by FAO, the previous day or night of interview. The indicator was calculated as a share of women that meet MDD in the numerator, divided by total number of pregnant or nursing women in the sample. This was then multiplied by 100 to get the percentage.

$$\text{MDD (W)} = \frac{\text{The number of pregnant and nursing women, who consumed foods and beverages from at least five food groups during the previous day}}{\text{Total number of pregnant and nursing women surveyed}} \times 100$$

The 10 food groups are:

1. grains, white roots and tubers
2. pulses (beans, peas and lentils)
3. nuts and seeds
4. dairy
5. meat, poultry and fish
6. eggs
7. dark green leafy vegetables
8. other vitamin A-rich fruits and vegetables
9. other vegetables
10. other fruits

5. b). MAD score for Children between 6 & 24 months:

This indicator was only calculated for children that are aged over 6 months and under 24 months old. Children aged 24 months and 1 day or above are excluded according to FAO definition. The Minimum Acceptable Diet (MAD) outcome was calculated by combining information on breastfed and non-breastfed children. Outcome takes value of 1 if any of the following conditions are met:

➢ Child received solid, semi-solid, or soft food yesterday at least 2 times. Child is aged 6-8 months old. Child was breastfed. Child consumed 4 or more food groups.

➢ Child received solid, semi-solid, or soft food yesterday at least 3 times. Child is aged 9-23 months old. Child was breastfed. Child consumed 4 or more food groups.

➢ Child received solid, semi-solid, or soft food (including formula, canned milk or yogurt) yesterday at least 4 times. Child is aged 6-23 months old. Child not breastfed. Child consumed 4 or more food groups.

The indicator was calculated as share of children who met MAD in numerator, divided by total number of children aged 6-23. The final number is multiplied by 100 to get the percentage.

Key intermediate result indicators, which were assessed during Year-6 study are:

1. **Improved Seed Replacement Rate (SRR):** SRR is calculated using the formula

$$SRR = \frac{\text{Area under improved seed}}{\text{Total area under crop}} \times 100$$

Area under improved seed is defined as area planted with hybrid or improved seed. Improved seeds are defined as truthfully labelled or certified seeds. Seeds distributed from Government Agency, Agro-vets, or purchased from seed cooperatives were considered as improved. Area was calculated in hectares in both numerator and denominator. The final indicator was calculated as the average value of SRR across major crops: paddy, maize, and wheat.

2. **Household dietary diversity score including nursing mothers and children under two years (1,000 days' mother target):**

Dietary diversity is a qualitative measure of food consumption that reflects household access to a variety of foods and is also a proxy for nutrient adequacy of the diet of individuals. This indicator was calculated as the average number of food categories consumed by women and children in the same household, if the latter existed. Or just the average number of food groups consumed by women aged 15-49 in household if there was no child under 2 years old.

$$\text{HDD score (If women and child)} = \frac{\text{Average number of Food Groups Women} + \text{Average number of Food Groups Child}}{2}$$

HDD Score (If no child) = Average number of Food Groups Women

Women's dietary diversity is based on the following 14 food groups:

1. Grains, white roots and tubers
2. Pulses
3. Nuts and seeds
4. Dairy
5. Meat, poultry and fish
6. Eggs

7. Dark green leafy vegetables

8. Other vitamin a-rich fruits and vegetables

9. Other vegetables

10. Other fruits

11. Insect, snails, and other small protein foods

12. Oils and fats

13. Spices, condiments, and seasoning

14. Other foods and beverages

For children aged 6-23 the following 12 food categories are used:

1. Mother's milk
2. Grains, roots, and tubers
3. Legumes, pulses and nuts
4. Dairy products
5. Flesh foods (meat, fish, poultry, organs)
6. Eggs
7. Vitamin a rich fruits and vegetables
8. Other fruits and vegetables
9. Insects, snails, and other small protein foods ,
10. Oils and fats
11. Spices, condiments and seasoning
12. Other food and beverages

Annex 2: Percent of Crop Producing Households using number of CSATs at cluster levels

Number of CSATs	% of HHs using CSAT at least				
	Gorkha Cluster	Sindhupalchowk Cluster	Dhanusha Cluster	Saptari Cluster	All
One Technology	95.4	97.9	68.7	98.8	91.9
Two Technologies	27.4	81.7	31.7	89.5	58.4
Three Technologies	12.0	51.6	13.3	66.7	36.5
Four Technologies	6.5	28.8	4.3	35.7	19.3
Five Technologies	3.0	14.6	2.3	10.2	7.8
Six Technologies	1.6	8.7	1.7	0.3	3.2
Seven Technologies	0.8	4.0	1.0	0.0	1.5
Eight Technologies	0.0	1.1	0.0	0.0	0.3
Nine and more Technologies	0	0.3	0	0	0.1

Annex 3: Percent of Livestock Producing Households using number of CSATs at cluster levels

Number of CSATs	% of HHs using CSAT at least				
	Gorkha Cluster	Sindhupalchowk Cluster	Dhanusha Cluster	Saptari Cluster	All
One technology	77.4	96.5	85.4	86.0	88.3
Two technologies	58.7	90.4	65.9	74.2	72.5
Three technologies	47.3	83.7	42.2	62.4	59.6
Four technologies	41.6	73.9	22.7	50.0	48.1
Five technologies	36.4	59.5	11.7	35.4	36.9
Six technologies	29.9	48.3	3.6	22.5	27.2
Seven technologies	22.3	40.0	1.9	12.4	20.1
Eight technologies	16.4	26.4	1.3	6.5	13.3
Nine technologies	11.4	16.3	1.0	2.2	8.1
Ten and more than 10 technologies	6.0	10.9	0.6	0.8	4.8

Annex 4: Productivities of major crops at cluster and municipal levels (Mt/Ha)

Annex 4.a. Productivities of Major crops at cluster levels

Crops	Gorkha Cluster	Sidhupalchok Cluster	Dhanusha Cluster	Saptari Cluster	Total
Cereals	2.3	2.3	3.4	3.3	2.99
Pulses and Legumes	1.3	0.9	0.7	0.7	0.79
Potato	14.4	11.8	10.4	12.1	11.35
Oil Seed Crops	1.0	0.9	0.7	1.4	1.07
Spice Crops	10.1	10.4	12.2	13.9	11.83
Vegetables	15.5	18.2	22.1	13.8	19.07

Annex 4.b. Productivities of cereal crops at Municipality levels

Rural Municipalities	Paddy	Maize	Wheat	Millet	Barley	Pulses
Gandaki	2.4	2.2	2.2	1.2	-	1
Barpak Sulikot	2.7	2.2	2.6	1.3	-	1.1
Gajuri	4.4	2	0.5	3.2	-	1.1
Benighat Rorang	4	2	1.3	1.5	1.3	2.7
Lisankhu Pakhar	2.2	2.2	1.8	1.3	-	0.7
Indrawati	2.6	2	1.6	1.1	1.1	1.2
Tamakoshi	4.1	1.9	1.5	1.8	-	1.4
Kalinchok	2.5	2.5	2.8	1.7	-	0.8
Rajgadh	3.3	-	1.9	-	-	1.1
Bishnupur	3.7	-	2.2	-	-	1.3
Aurahi	3	-	2.7	-	-	0.3
Bariyarpatti	5.2	-	2.8	-	-	1
Mukhiyapatti Musharniya	3.8	-	2.9	0.1	-	1.6
Dhanauji	3.8	-	2.8	-	-	0.8
Ekdara	4.5	-	2.6	-	-	0.5
Pipara	4.2	-	2.6	-	-	0.5

Annex 4.c. Productivities of Cash crops (potato), Oil-seed crops, Spice crops, and Vegetables at Municipality levels

Rural Municipalities	Cash crop (potato)	Oil seed crops	Spice crops	Vegetables
Gandaki	14.6	1	9.6	13.1
Barpak Sulikot	14.2	1	10.4	20.9
Gajuri	12.5	-	10.4	15.8
Benighat Rorang	17.7	0.9	-	15.4
Lisankhu Pakhar	11.6	1	10.2	3.2
Indrawati	9.8	0.8	8.4	41
Tamakoshi	13.4	0.8	5.9	4.6
Kalinchok	12.5	1.2	13.3	16.4
Rajgadh	4.6	0.2	0.9	2.5
Bishnupur	12.5	1.6	18.1	20.3
Aurahi	17.1	1.8	15.4	19
Bariyarpatti	12.4	-	7.7	11.8
Mukhiyapatti Musharniya	9.9	0.5	14.8	11.4
Dhanauji	10.9	0.9	12.1	25.6
Ekdara	-	-	-	-
Pipara	13.3	-	-	20.2

Annex 5: Household Consumption, Gift, and Sale of Goat and Poultry birds at cluster levels (2024)

Clusters	Types of Goat and Poultry Birds	Consumed Number	Gifted Number	Sold Number	Sales Amount (Rs.)	Average Weight per animal during selling	Selling Price/Kg
Gorkha Cluster	Goat - Adult buck	27	0	157	27199.7	30.49	892.1
	Goat - Male hogget	16	0	104	14123	23.06	612.4
	Cocks	190	1	94	1221.25	2.64	4.9
	Hens	106	0	54	749.5		
	Broiler	116	2	1081	7889.75	2.5	2.9
Sindhupalchok Cluster	Goat - Adult buck	69	14	233	44180	38.94	1134.6
	Goat - Male hogget	38	6	16	2840	29.22	97.2
	Cocks	90	0	148	2295	2.61	5.9
	Hens	69	6	156	2316		
	Broiler	100	1	2256	13385.5	2.5	2.4
Dhanusa Cluster	Goat - Adult buck	8	0	177	21586.5	38.86	555.5
	Goat - Male hogget	0	0	1	162.5	25	6.5
	Cocks						
	Hens	4	0	0	0		
	Broiler						
Saptari Cluster	Goat - Adult buck	19	7	59	7299	17	429.4
	Goat - Male hogget	2	0	21	2190	16.06	136.4
	Cocks	0	0	0	0		
	Hens						
	Broiler	100	0	7300	55000	2.5	3.0

Annex 6: Production and Productivities of Milk at cluster levels

Cluster	Milking Animal	Number of HHs	Number of Animal	Total Milk Production (Liter)	Milk Productivity (Liter/Animal/Lactation period)	Average Lactation Period (Days)	Milk Productivity (Liter/Animal /Day during lactation period)
Gorkha Cluster	Cattle	45	53	65,645	1,238.6	229	5.41
	Buffalo	88	100	118,410	1,184.1	228	5.19
	Total Milking Animal		**153**	**184055**	**1,203.0**	**229**	**5.26**
Sindhupalchok Cluster	Cattle	56	68	112,435	1,653.5	258	6.41
	Buffalo	106	120	167,179	1,393.2	237	5.88
	Total Milking Animal		**188**	**279614**	**1,487.3**	**248**	**6.01**
Dhanusa Cluster	Cattle	41	44	64,040	1,455.5	263	5.53
	Buffalo	67	76	119,705	1,575.1	251	6.28
	Total Milking Animal		**120**	**183745**	**1,531.2**	**257**	**5.96**
Saptari Cluster	Cattle	42	46	48,445	1,053.2	219	4.81
	Buffalo	111	129	134,295	1,041.0	221	4.71
	Total Milking Animal		**175**	**182740**	**1,044.2**	**220**	**4.75**
Over all	Cattle	184	211	290,565	1,377.1	243	5.67
	Buffalo	372	425	539,589	1,269.6	233	5.45
	Total Milking Animal		**636**	**830154**	**1,305.3**	**238**	**5.48**

Annex 7: Household Income at Cluster Levels

Annex 7.a. Gorkha Cluster

Income source:	HH Income at Gorkha Cluster (Rs.)		
	Baseline (2021)	Sixth Year (2024)	Change %
Farm Income	**64,299**	**43,593**	**-32.20**
Net Crop Income	36,461	16,334	-55.20
Net Livestock Income	27,838	27,259	-2.08
Off- Farm Income	**170,036**	**312,231**	**83.63**
Business	33,828	37,725	11.52
Rents	4,287	2,835	-33.87
Sale of land	10,345	3,725	-63.99
Remittances	42,110	156,470	271.57
Interests and Dividends	1,140	1,138	-0.22
Pension and Allowances	23,557	28,781	22.18
Gifts	1,799	7,878	337.88
Wages	52,726	16,156	-69.36
Agri. Subsidies	-	2250	-
Services	-	55273	-
Other incomes	244	-	-
Total Net HH Income	**234,335**	**355,823**	**51.84**
Female Headed HHs	**235,223**	**402,830**	**71.25**
Male Headed HHs	**227,326**	**341,980**	**50.44**

Source: FANSEP Annual Outcome Survey, 2024

Annex 7.b. Sindhupalchowk Cluster

Income source:	HH Income at Sindhupalchowk Cluster (Rs.)		
	Baseline (2021)	Sixth Year (2024)	Change %
Farm Income	**28,248**	**70,475**	**149.49**
Net Crop Income	10,552	20,764	96.78
Net Livestock Income	17,696	49,711	180.92
Off- Farm Income	**195,777**	**332,696**	**69.94**
Business	35,374	55,891	58.00
Rents	4,759	1,663	-65.07
Sale of land	25,009	1,225	-95.10
Remittances	23,241	120,859	420.02
Interests and Dividends	1,019	1,828	79.34
Pension and Allowances	18,905	17,975	-4.92
Gifts	2,636	2,544	-3.50
Wages	81,989	38,870	-52.59
Agri. Subsidy	-	2579	-
Services	-	89264	-
Other incomes	2,845	-	3128.21
Total Net HH Income	**224,025**	**403,171**	**79.97**
Female Headed HHs	**232,288**	**378,592**	**62.98**
Male Headed HHs	**190,902**	**412,377**	**116.02**

Source: FANSEP Annual Outcome Survey, 2024

Annex 7.c. Dhanusha Cluster

Income source:	HH Income at Dhanusha Cluster (Rs.)		
	Baseline (2021)	Sixth Year (2024)	Change %
Farm Income	**13,975**	**55,597**	**297.83**
Net Crop Income	5,459	26,208	380.09
Net Livestock Income	8,516	29,389	245.11
Off- Farm Income	**209,691**	**293,883**	**40.15**
Business	33,655	26,208	-22.13
Rents	247	4	-98.48
Sale of land	5,479	4,063	-25.85
Remittances	90,849	174,563	92.15
Interests and Dividends	-	360	-
Pension and Allowances	8,441	10,287	21.87
Gifts	219	1,150	425.11
Wages	70,637	52,356	-25.88
Agri. Subsidy	-	566	-
Services	-	24328	-
Other incomes	164	-	-
Total Net HH Income	**223,666**	**349,480**	**56.25**
Female Headed HHs	**216,101**	**356,016**	**64.75**
Male Headed HHs	**235,754**	**343,742**	**45.81**

Source: FANSEP Annual Outcome Survey, 2024

Annex 7.d. Saptari Cluster

Income source:	HH Income at Saptari Cluster (Rs.)		
	Baseline (2021)	Sixth Year (2024)	Change %
Farm Income	**21,198**	**64,132**	**202.54**
Net Crop Income	12,276	34,695	182.62
Net Livestock Income	8,922	29,437	229.94
Off- Farm Income	**234,292**	**331,119**	**41.33**
Business	60,931	29,953	-50.84
Rents	3,798	6,108	60.81
Sale of land	7,000	3,050	-56.43
Remittances	79,181	217,520	174.71
Interests and Dividends	3,903	1,623	-58.43
Pension and Allowances	7,973	14,261	78.86
Gifts	239	1,080	351.99
Wages	70,984	22,638	-68.11
Agri. Subsidy	-	973	-
Services	-	33915	-
Other incomes	283	-	-
Total Net HH Income	**255,490**	**395,251**	**54.70**
Female Headed HHs	**261,959**	**345,359**	**31.84**
Male Headed HHs	**218,535**	**414,414**	**89.63**

Source: FANSEP Annual Outcome Survey, 2024

Annex 8: Types of Crops Grown in Home Nutrition Garden (HNG) in 2024

Name of Crops Grown in HNG	Number of Farmers Growing Crops in HNG	% of Farmers Growing
Cow Pea	570	47.86
Bottle Gourd लौका Lauka	330	27.71
Bitter gourd करेला Karela	323	27.12
Onions	289	24.27
Summer Maize	283	23.76
Chillies	278	23.34
Winter Potato	268	22.50
Cucumber काक्रो Kaakro	262	22.00
Green Rayo रायोको साग Rayoko Saag	235	19.73
Pumpkin फर्सी Farsi	212	17.80
Sponge gourd घिरौंला Giroula	202	16.96
Cauliflower काउली	174	14.61
Garlic	165	13.85
Pea	136	11.42
Okra भिंडी Bindi RaMtoriya	128	10.75
Other tubers	113	9.49
Cabbage बन्दा Banda	109	9.15
French Bean घिउ सिमी Ghu Simi	109	9.15
Other Vegetables	81	6.80
Tomato Open गोलभेडा खुल्लाको Golveda	78	6.55
Eggplant भान्टा Bhanta	70	5.88
Coriander Seed	63	5.29
Colocasia	61	5.12
Onion प्याज Pyaz	58	4.87
Radish मुला Mulaa	53	4.45
Garlic Green हरियो लसुन Hariyo lasun	51	4.28
Other legumes	47	3.95
Chilli pepper खुर्सानी Khursani	41	3.44
Chayote इस्कुस Iskus	40	3.36
Coriander leaf धनिया Dhaniya	39	3.27
Soybeans	38	3.19
SpringWInter Maize	35	2.94
Knolrobi (gath cobi) गाथ कोबी	31	2.60
Mustard	30	2.52
Gram	27	2.27
Summer Potato	26	2.18
Zucchini/Squash फर्सी जुकिनी Farsi Juk	24	2.02
Grass Pea	22	1.85
Carrot गाजर Gajar	22	1.85
Ginger	20	1.68
Mango	20	1.68
Lettuces जिरिको साग Jiriko Saag	19	1.60
Lentil	18	1.51
Coarse Gram	16	1.34
Lemon	16	1.34

Name of Crops Grown in HNG	Number of Farmers Growing Crops in HNG	% of Farmers Growing
Tomato Tunnel गोलभेडा टनेलको Golveda	15	1.26
Banana	14	1.18
Orange	13	1.09
Tumeric	12	1.01
Broad bean ठुलो सिमी Thulo Simi	12	1.01
Green Gram	11	0.92
Kidney bean	11	0.92
Pointed gourd (Pariwal) परिवल	11	0.92
Snake gourd (Chichido) चिचिन्डो	11	0.92
Spinach पालुंगोको साग Paalungo Saag	11	0.92
Pea केराउ Keraau	9	0.76
Bakula बकुल्ला	8	0.67
Other Fruits	8	0.67
Lichee	7	0.59
Black Gram	6	0.50
Green Capsicum भेँडै खुर्सानी Bhede Khu	6	0.50
Red Gram	5	0.42
Fenugreek Green मेथी साग Methi Saag	5	0.42
Garden chess (Chamsur) चम्सुरको साग	5	0.42
Coffee	5	0.42
Sugarcane	4	0.34
Asparagus कुरिलो Kurilo	4	0.34
Guava	4	0.34
Papaya	4	0.34
Bell pepper (color) भेँडै खुर्सानी (रात	3	0.25
Peach	3	0.25
Balsam Apple बरेला	2	0.17
Turnip सलगम Salgam	2	0.17
Jack Fruit	2	0.17
Sweet Potato	1	0.08
Groundnut	1	0.08
Linseed	1	0.08
Broccoli ब्रो काउली	1	0.08
Green Rajma	1	0.08
Lime	1	0.08
Pomegranate	1	0.08
Other fruit	1	0.08
Bamboo	1	0.08
	1191	100.00

Annex 9: Field Team Mobilized for the Field Survey

District	Palika	Enumerators	Contact Number	HHs		
				Crop	Livestock	Nutrition
Gorkha	Gandaki	MANOJ BOGOTI	9851233919	54	31	15
		GOPAL BAHADUR BUDHA	9848414181			
	Barpak Sulikot	DEV RAJ DHAKAL	9849489253	47	40	13
		JUMMA DIN MIYA	9821512121			
Dhading	Gajuri	BIDHIKA BASNET	9866022241	85	8	7
		REEMA GURUNG	9804138891			
	Benighat Rorang	ANUP DHAKAL	9865509262	36	53	11
		ANUJ DHAKAL	9860939866			
Sindhupalchowk	Lisankhu Pakhar	JIVAN PARAJULI	9761803722	44	44	12
		SUJAN NEPAL	9748266269			
	Indrawati	PRABIN GAULI	9861822291	29	59	12
		KUSHAL CHAUREL	9860981720			
Dolakha	Tamakoshi	RAMESH PRASAD DULAL	9819794593	83	11	6
		PRABIN PRASAD OLI	9860811858			
	Kalinchowk	ANIL SHRESTHAN	9827172075	54	23	23
		ANISH KHATIWADA	9849655098			
Saptari	Rajgadh	SUDHA SHAH	9804256734	82	13	5
		MAMATA CHOUDHARY	9861523510			
	Bishnupur	SAROJ PARAJULI	9849342761	71	15	14
		DEV KUMAR CHOUDHARY	9848089182			
Siraha	Aurahi	GYANENDRA KUMAR PRAJAPATI	9845451765	60	29	11
		RAJ KUMAR DAS	9863742290			
	Bariyarpatti	SUJAL NAPIT	9869001201	43	40	17
		MANDEEP SHARMA	9843461078			
Dhanusha	Mukhiyapatti Musharniya	RAMESH DHUNGANA	9841431064	60	34	6
		RAKESH KARMACHARYA	9802712012			
	Dhanauji	BIWASH BASTOLA	9812344644	62	32	6
		BADAL SHRESTHA	9860811858			
Mahottrai	Ekdara	VIJAY WAGLE	9840053846	55	33	12
		SHREETI SHRESTHA	9860675476			
	Pipara	USHA KHATARI	9851317329	36	48	16
		PRADEEP RAJ KAPADI	9849800800			
Total Sample				901	513	186

Annex 10: Training Schedule for Enumerators' and Supervisors' Training

Date	Day	Time	Activities	Responsibility
27/05/2024 (Day-I)	Monday	10: 00 – 10:30	Attendance and Break-fast	
		10: 30 – 10:45	Inauguration Session	
		10: 45 – 12:00	Presentation on about Annual Outcome Survey	FBC/BFI
		12: 00 – 12:30	Presentation on about the FANSEP Project	FANSEP
		12:30-13:00	**Tea Break**	
		13:00-14:30	Orientation on Paper-based questionnaires	FBC/BFI, Data Management Expert and Technical Expert
		14:30-15:00	**Snacks Break**	
		15:00-16:30	Orientation on Paper-based questionnaires (Contd.)	FBC/BFI, Data Management Expert and Technical Expert
		16:30-17:00	Summarization and wrap up of the First day	FBC/BFI
28/05/2024 (Day-II)	Tuesday	10: 00 – 10:30	Attendance and Break-fast	
		10: 30 – 10:45	Review of earlier day	
		10: 45 – 12:00	Practical Exercise in Survey Solution of HH survey Questionnaire (Introduction and Agriculture Section part 1)	FBC/BFI, Data Management Expert and Technical Expert
		12:00-12:30	**Tea Break**	
		12:30-14:30	Practical Exercise in Survey Solution of HH survey Questionnaire (Introduction and Agriculture Section, part 2&3)	FBC/BFI, Data Management Expert and Technical Expert
		14:30-15:00	**Snacks Break**	
		15:00-16:30	Practical Exercise in Survey Solution of HH survey Questionnaire (Introduction and Agriculture Section, technology and inputs)	FBC/BFI, Data Management Expert and Technical Expert
		16:30-17:00	Summarization of the Second day	FBC/BFI
29/05/2024 (Day-III)	Wednesday	10: 00 – 10:30	Attendance and Break-fast	
		10: 30 – 10:45	Review of earlier day	
		10: 45 – 12:00	Practical Exercise in Survey Solution of Livestock Section	FBC/BFI, Data Management Expert and Technical Expert
		12:00-12:30	**Tea Break**	
		12:30-14:30	Practical Exercise in Survey Solution of Nutrition Section	FBC/BFI, Data Management Expert and Technical Expert
		14:30-15:00	**Snacks Break**	
		15:00-16:30	Mock Interview	FBC/BFI, Data Management Expert and Technical Expert
		16:30-17:00	Summarization of the Third day	FBC/BFI
30/05/2024 (Day-IV)	Thursday	10: 00 – 10:30	Attendance and Break-fast	
		10: 30 – 10:45	Review of earlier day	
		10: 45 – 12:00	Practical Exercise in Survey Solution of Livestock Section	FBC/BFI, Data Management Expert and Technical Expert

Annual (Year 6) Outcome Survey of Food and Nutrition Security Enhancement Project (FANSEP)

Date	Day	Time	Activities	Responsibility
		12:00-12:30	**Tea Break**	
		12:30-14:30	Practical Exercise in Survey Solution of Nutrition Section	FBC/BFI, Data Management Expert and Technical Expert
		14:30-15:00	**Snacks Break**	
		15:00-16:30	Mock interview	FBC/BFI, Data Management Expert and Technical Expert
		16:30-17:00	Summarization of the 4th day, Field and logistics Management	FBC/BFI

Annex 11: Photographs

Glimpses of Training Session

Training Pictures, Hariharbhawan, Lalitpur

Pictures During the field study and survey

Pictures During the field study and survey

FANSEP Beneficiaries

FANSEP Beneficiaries

Cow Shade in Lisankupakhar, Sindhupalchwok

Goat Rearing, Indrawati Sindhupalchwok

FANSEP Beneficiaries at Lisankupakhar, Sindhupalchwok

Poltry rearing at Household level, Sindhupalchwok

House hold Survey at Indrawati RM, SINDHUPALCHWOK

FANSEP Beneficiaries at Kalinchowk RM, Dolakha

Beneficiary household at Kalinchwok RM-Dolkha

Farmer in his Field at Kalinchowk RM, Dolakha

Report Presentation and Discussion at FANSEP Office, Hariharbhawan, Lalitpur

Map FANSEP Project Districts (Survey Areas)

Annex 12: Survey Tools used in Annual (Year-6) Outcome Survey (2024)

#	Label	Question	Code	Response options	Question routing	Notes for consultant/ enumerator	Additional notes
Section A. Household Identification							
Part 1:	**Address (To be filled in before interview)**						
1.1	UNIQUE ID	Unique id					
1.2	TYPE	Type					
1.3	DISTRICT	District					
1.4	RURAL MUNICIPALITY	Gaupalika					
1.5	WARD NUMBER	Ward					
1.6	VILLAGE ID	Village id					
1.7	VILLAGE NAME	Village name					
1.8	NAME OF HOUSEHOLD HEAD\	Household Head					
1.9	LANGUAGE	Language					
1.10	PHONE NUMBER	Phone number					
1.11	LAND OWNERSHIP	Land area owned					
1.12	HHID	Household ID (District+Rural Municipality+Ward+Household Identification No)					
Part 2: Verification							
2.1	HHID	Household ID					
2.2	ENUMERATOR'S CODE	Enumerator Code					
2.3	SUPERVISOR'S CODE	Supervisor Code					
Part 3: Date and Time of Interview							

ENUMERATOR INSTRUCTIONS: READ TO RESPONDENT AT THE START OF THE VISIT: Namaskar, I am [NAME]. I am part of a team of researchers from Full Bright Consultancy Pvt. Ltd. / Bright Future International Pvt. Ltd. (Joint Venture) which is conducting a research study about Agriculture and nutrition in eight districts of Nepal under the Ministry of Agriculture Development. I will be asking you some detailed questions about your agriculture production, food security, household background, nutrition of mother and child, savings, and involvement in groups. We are going to use a GPS machine to record the geographic location of your household. This information will be kept confidential. No personally identifying information will be published or shared with anyone outside the project team. There are no risks to you or your family in answering these questions. Your participation is completely voluntary and you may stop participating at any time. If you have any questions about the study or the survey at a later date, you may contact Full Bright Consultancy Pvt. Ltd. / Bright Future International Pvt. Ltd. (Joint Venture New in the phone number .... or Sr. Monitoring and Evaluation Officer of the FANSEP Dr. Tapendra Bahadur Shah (Contact number- 9841418318).							
3.1		Do you agree to participate?	1	Yes			
			2	No	Please terminate if responded 'No'		
3.2		Date of First Visit	1	2024			
			2	Month			
			3	Day			
3.3		Start Time of Interview 1 (Use 24hr time format)	1	Hour			
			2	Minute			
3.4		End Time of Interview 1	1	Hour			
			2	Minute			
3.5		Date of Second Visit (if not completed in first time)	1	२०२४ साल			
			2	महिना			
			3	गते			
3.6		Start Time of Interview 2	1	Hour			
			2	Minute			
3.7		End Time of Interview 2	1	Hour			
			2	Minute			
3.8		Form status	1	Completed			
			2	No respondents encountered	End the interview		

			3	Not interested for interview			
Section B: Individual Identification							
READ ALOUD: In this section I will ask for some information about the members of your household.							
Part 1: (Household Member Identification)							
ENUMERATOR INSTRUCTIONS: FIRST: List HEAD OF HH followed by SPOUSE and CHILDREN. If several wives, record in order of marriage. SECOND: List other HH members related to the head of household or his spouse(s). THIRD: List other HH members NOT related to the head of household or his spouse.							
4.1		How many members does this household have?					
4.1.1		Total female members					
4.1.2		Total male members					
4.1.3		Number of Golden 1000 days women					
4.2		(Please first ask details of the household head and then of other members) (First make the roster). Please take information of all the members.					
4.2.1		**Name of the household members**					
4.2.1.1		Age (if the age is above 95 years, write 95, if less than 2 years write 00 and if unkown write -98)		**Please repeat 4.21 to 4.2.1.2 for all the HH members in the roster and 4.2.1.3 for the HH head and mentioned members only.**			
4.2.1.2		Sex	1	Male			
			2	Female			
			3	Third Gender			

4.2.1.3		What is the Upper Education level which is completed? Ask for Household Head, Respondent and mother having children 2 year)	1	No any formal education			
			2	Primary level			
			3	Basic level Education (up to grade 8)			
			4	Secondary level (grade 9-12)			
			5	Passed grade 12			
			6	Bachelor running			
			7	passed Bachelor and above			
Section B; Part 2: Information about the target Respondent							
		Select the respondent who is the decision maker specially in agriculture and livestock related activity and is above 18 years age.					
5.1		Name and line number of respondent (Name as per the citizenship and common name in brackets)		Name			
				Line number			
5.4		What is the household's primary spoken language?	1	Nepali			
			2	Maithili			
			3	Tamang			
			4	Dunuwar			
			5	Thami			
			6	Bhojpuri			
			7	Chepang			
			96	Others (Specify)			
5.5		Phone/ Mobile Numbers of household Members (for follow-up)- Upto 3 members	Owner's name	Phome number			

		Owner's name	Phome number				
		Owner's name	Phome number				
	Section B	**Group Membership**					
		READ ALOUD: In this section I will ask you about agriculture, crop, and nutrition groups you or people in your household were members of in the past 6 years.					
7		Are you or anyone else in this household members of a farmer's group or nutrition group?	1	Yes	Go to 7.2		
			2	No	Reconfirm and if not a member, End the Survey		
7.2		How many total farmers and/or nutrition groups are people in this HH involved with?					
7.3		Which household member belongs to this group? **(Ask 7.31 to 7.5 for all the member involved in FG)**					
7.3.1		Select name from roster					
7.5		Name of group					
7.8.5		Since when has [HH member] been part of this group?		month			
				year			
7.4		What type of group is this?	1	Crop	1= Crop --> 7.6		
			2	Livestock	2= Livestock --> C.2.7		
			3	Nutrition	3 = Nutrition --> C.2.8		

	Section C.1	**Crop Group**		**If response to 7.4 is 1**			
7.6		What type of crop group is it?	1	Farmer Field School (FFS)			
			2	Crop Promotion			
			3	Seed production			
			96	Other (specify)			
7.6.1		Which of the following did you receive at the GROUP level as part of this crop group? **(select all that apply)**		1= cereal seeds			
				2= vegetable seeds			
				3= garden tools			
				4= plastic tunnels			
				5= small irrigation			
				6= machines (ex. Mini-tiller, corn sheller)			
				7= matching grant			
				8= fertilizer			
				96= Other (specify)			
				0= Nothing			
7.6.2		Which of the following did you receive at the INDIVIDUAL level as part of this crop group?		1= cereal seeds			
		(select all that apply)		2= vegetable seeds			
				3= Agricultural Tools and equipments			
				96= Other (specify)			
				0= Nothing			
7.6.3		If your household received cereal seeds, which specific crop(s) were they for?	1	Rice			
			2	Wheat			
			3	Maize			
7.6.4			4	Potato			

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			5	Finger miller			
			6	Barley			
			7	Buckwheat			
			96	other grains (specify)			
7.6.5		If your household received vegetable seeds, which specific crop(s) were they for?	1	**Beans, cowpea**			
			2	Bitter gourd			
			3	bottle gourd			
			4	cabbage			
			5	capsicum			
			6	carrot			
			7	cauliflower			
			8	chilly			
			9	cucumber			
			10	brinjal			
			11	garlic green			
			12	green leafy vegetable			
			13	okra			
			14	onion green			
			15	pumpkin, jukini			
			16	sponge gourd			
			17	tomato			
			18	amaranths leaf			
			19	turnip			
			20	radish			
			21	mustard leaf			
			९६	other vegetable (specify)			
7.6.6		What type of tools or equipment did your household receive as part of this group?		1= shovel			
				2= storage bins			
				3= plastic tunnels			

				4= fencing			
				5= buckets			
				96 = other (specify)			
		After finishing this crop group section, please go to section D - Agriculture					
	Section C.2	**Livestock Group**		**If response to 7.4 is 2**			
7.7		What type of livestock group is it? (select one)	1	1= Goat FFS			
			2	Goat promotion			
			3	Poultry FFS			
			4	Poultry Promotion			
			5	Dairy FFS			
			6	Dairy Promotion			
			96	Other (specify)			
7.7.1		Which of the following did you receive at the GROUP level as part of this livestock group? (select multiple)	1	50% Boer bucks			
			2	Chicks/chickens			
			3	Ducklings			
			4	Animal medicine			
			5	Fodder seeds			
			6	Burdizo castrator			
			7	Improved shed			
			8	Matching grant			
			96	Other(specify)			

7.7.2			Which of the following did you receive at the INDIVIDUAL level as part of this livestock group? (select multiple)	1	50% Boer bucks	5= fodder seeds 6= burdizo castrator 7= money for improved shed 96= Other(specify)		
				2	Chicks/chickens			
				3	Ducklings			
				4	Animal medicine			
				5	Fodder seeds			
				6	Burdizo castrator			
				7	money for improved shed			
				96	Other(specify)			
				0	Got nothing			
7.7.3			Which type of livestock-related technology/practices did you learn about in this group through demonstrations or trainings?		Select multiple from preloaded livestock technologies promoted by the project			
			After finishing this Livestock group section, please go to section I - Livestock and Poultry					
	Section C.3		**Nutrition Group**		**If response to 7.4 is 3**			
7.8			What type of nutrition group is this?	1	Home Nutrition Garden group	**All**		
				2	Nutrition Field School			
				96	Other (specify)			
7.8.1			Which of the following did you receive at the GROUP level as	1	seeds			

		part of this nutrition group? (Select multiple)					
			2	wire fencing			
			3	garden tools			
			4	plastic tunnels			
			5	chicks/chickens			
			6	ducklings			
			7	drudgery reduction machines (ex. corn sheller, grinder)			
			8	small grant			
			96	Other (specify)			
7.8.2		Which of the following did you receive at the INDIVIDUAL level as part of this nutrition group? (Select multiple)	1	Cereal seeds			
			2	Vegetable seeds			
			3	Garden tools			
			4	Plastic tunnels			
			5	Chicks/ chicken/ duckling			
			6	Machines (ex. Mini-tiller, corn sheller)			
			7	Fruit saplings			
			96	Other (specify)			
	Section C.3.1	**Home Nutrition Garden**					
		Please fill in information from the past 12 months					
6.3		Does you HH have a home nutrition garden?	1	Yes	Go to 6.3.1		
			2	No	Go to section M onwards - Nutrition		

6.3.1			Which crops did you grow in the home nutrition garden during the past 12 months?		Please use crop code list			
			(Multiple Responses Allowed. Have to be selected from the dropdown menu of crop categories)					
6.3.2			What was the purpose of the crops grown in the kitchen garden during the past 12 months?	1	Self-consumption			
				2	Sale			
				3	Both Self-consumption and Sale			
				96	Other (specify)			
6.3.3			How you benefitted from the Home Nutrition Garden (HNG)	1	We are eating diverse food from own garden			
				2	Helped in income generation			
				3	We did not succeed in the HNG			
				4	No significant difference from the previous situation			
				96	Other (specify)			
			After finishing this Nutrition group section, please go to section M onwards - Nutrition					
	Section D. Agriculture							
			Please refer separate sheets- ag1, ag2, ag3, ag tech, agri input for the ariculture related questions/forms					
			After finishing this group section, please go to section G and onwards					

		Section I. Livestock					
		Please refer separate sheets-Livestock and Livestock tech in this Excel					
		After finishing this section, please continue to all the remaining sections below					
	SECTION G: Assets, Income, Loan and Savings)						
					For all the households		
	PART 1: HOUSEHOLD INCOME FROM DIFFERENT SOURCES						
	Enumerator Instructions: Record income from past 12 months. Write 0 if No income from a source. Record INCOME not PROFIT. ***This includes income for everyone in this household.***						
		Income of last 12 months from …………		Amount in Rupees			
G.2.1		Non-farm own businesses (Retail, tailor, petty trade, sale of phone credit)					
G.2.2		Income from agriculture not reported in Section D (for example if more than 7 plots)					
G.2.3		Income from livestock not reported in Section I (ex. Animal manure)					
G.2.4		Renting Land or House (include in-kind payments, for example value of crops paid for sharecropping)					
G.2.5		Sale of Land					
G.2.6		Remittances					

G.2.6a		If you received remittances, how many members are sending?		Number			
G.2.6b		Which country was the HH member sending money from?	1	Nepal			
			2	India			
			3	Qatar			
			4	Saudi Arabia			
			5	Malaysia			
			6	United Arab Emirates			
			7	Kuwait			
			8	Republic of Korea			
			9	Oman			
			10	Bahrain			
			11	Japan			
			96	Other (Specify)			
G.2.7		Interests and dividends					
G.2.8		Pension, Allowances					
G.2.9		Gifts/Help (if not rupees, estimate value)					
G.2.10		Agricultural subsidies					
G.2.11		Other Sources (specify):					
G.2.12		How you feel? Has **the agricultural income improved** after FANSEP project is implemented?	1	Yes	Go to G.2.13		
			2	No	Go to G.2.14		
G.2.13		If yes, how much it improved?	1	Slightly increased	Go to G.2.15		
			2	Somewhat increased	Go to G.2.15		
			3	Moderately increased	Go to G.2.15		
			4	Highly increased	Go to G.2.15		
G.2.14		If No, how much it decreased?		Remained same			
				Slightly decreased	Go to G.2.16		
				Somewhat decreased	Go to G.2.16		

				Moderately decreased	Go to G.2.16		
				Highly decreased	Go to G.2.16		
G.2.15		Reasons for increase in agricultural income		Open ended			
G.2.16		Reasons for decrease in income		Open ended			
		Summary of Preparation					
	Section M. Women's Nutrition						
		Please refer separate sheet- Section M Women Nutrition in this Excel			**For all the households**		
	Section N. Child Nutrition						
		Please refer separate sheet- Child Nutrition 1 and Child Nutrition 2 in this Excel			**For all the households**		
	Section L. Food Security						
		Please refer separate sheet- Food Security in this Excel			**For all the households**		
	Section WF. Outcome of the Interview						
WF.6.1		Outcome of the interview	1	Completed	**For all the households**		
			2	Respondent not home/temporarily unavailable			
			3	Respondent not home/ extended absence			
			4	Refused			

			5	Could not locate respondent			
			6	Respondent to ill to respond/cognitively impaired			
			96	Other (Specify)			
WF.6.2		Ability to be interviewed alone?	1	Alone			
			2	With adult females present			
			3	With adult males present			
			4	With mixed sex adults present			
			5	With children present			
			6	With mixed sex adults and children present			
			98	N/A			

Section Z.1 GPS Measurement						
Please refer Sheet 'GPS' in this Excel				**For all the households**		
	Section Z.2 Back Check Survey					
		Back Check Survey				
		THIS SURVEY HAS BEEN RANDOMLY SELECTED FOR A BACK-CHECK, INFORM YOUR QUALITY CHECK SUPERVISOR.				
		THE FOLLOWING QUESTIONS MUST ONLY BE ADMINISTERED BY THE QUALITY CHECK SUPERVISOR				
		Code of SUPERVISOR				
BC1		Have you been interviewed by someone from FB/BF about crops, livestock and other topics recently?				
		BACKCHECK STARTED				
BC2		What is the name of the person who was interviewed?				
		ONLY START THE INTERVIEW WITH (BC2) {HH_name}. BACK CHECK MUST BE CONDUCTED ON THE SAME PERSON AS THE ACTUAL SURVEY.				
BC3		IS THE CORRECT RESPONDENT AVAILABLE FOR INTERVIEW?				
		Select the household head				

BC4		How many members does this household have?					
BC5		Number of agricultural plots that you have cultivated in last 12 months.					
BC6		How many crops did you grow on your largest plot in the past 12 months?					
BC7		Did you use Chemical pesticides in any plots?					
BC8		Have you used green manure in any of your plots?					
BC9		Have you used mulching in any of your plots?					
BC10		How many such farmer groups are you a member of?					
BC11		Non-farm own businesses (Retail, tailor, petty trade, sale of phone credit)					
BC12		How many goats do you own at this time? (total: Female goats+Adult buck/castrated goat)					
BC13		Were there any months, in the past 12 months, in which you did not have enough food to meet your family's needs? This includes any kind of food from any source, such as own production, purchase or exchange, food aid, or borrowing.					
BC14		Was the interviewer polite and courteous?					
		Explain why					

SECTION Z: GPS measurements

Enumerator instructions: Measure the two most important plots (by production or income) reported by the respondent according to the instructions in the manual. Only measure plots that are less than 30 minutes walking distance from the home.

Plot 1			
Z.1.1	Select plot to be measured	Select plot from list of plots reported in section D.	|__|
Z.1.2	Measure GPS using app in tablet		
Plot 2			
Z.1.1	Select plot to be measured	Select plot from list of plots reported in section D.	|__|
Z.1.2	Measure GPS using app in tablet		
GPS of House			
Z.1.5	Record GPS		
A.3.8	Form status	1 = Form completed 2 = Incomplete due to absence of respondent. 3 = Refused interview	|__|

	SECTION D: AGRICULTURE			
	READ ALOUD: In this section I am going to ask you about the agricultural plots that you have cultivated during the past 12 months. **Please tell me only about the plots and crops cultivated during this period.**		-	
	Part 1A: Plot ID			
	Enumerator Instruction: Write about the main 7 cultivable plots of land cultivated in the last 12 months (regardless of ownership). Do not include leased or rented plots. Include seasonal and biennial cultivated plots. Do not include karesabari plots, this is asked in the next section.			
QN	Questions	Coding	Go to	
D.1.0	**Did you or any of your household members cultivate any land in the past 12 months?** (Does not have to be respondents own land- ownership asked in D1.5) *Instruction: Plot is a piece of land where crops are grown as sole crop or intercrop. Include the crop land other than the land rented to others.*	1=Yes 2=No	**If 2 -->D.1.1a**	
D.1.1	How many plots did this household cultivate seasonal or fixed crops on during the last 12 months?	|__|__|	**continue to D.1.2**	
D1.0a	If no, why have you not cultivated any crops in the past 12 months?	1= Sold my land 2= Rented out my land 3= Defaulted on laon 4= Share cropping arrangement ended 96= Others (specify)	**--> Section I**	
D.1.1a	Not counting any of the plots that you mentioned, do you own any land that you rented out to others in the past 12 months?	1=Yes 2=No	**If 2 -->D.1.1c**	
	If yes, what is the area of rented land?			

Area of rented land		If other local unit, what is it and what is the area?		If there is any other local unit, you should write the approximate area of the plot in ropani or bigha.		
Unit	Area	halko melo 1	unit	Area		
Ropani 1		mana beuko melo 2				
Bigha 2		pathi beuko melo 3	ropani 1			

Other local unit 3				dharni beuko melo 4	bigha 2					
	ropani/bigha	aana/kaththa	paisa/dhur	other (specify) 96		ropani/bigha	aana/kaththa	paisa/dhur		
				_____						
				—						

D.1.1b	In the last 12 months, is there any land that you have kept fallow, apart from the plots that you have cultivated seasonally or annually, or the land that you have leased to others?	Yes 1	
		No 2	D.1.2 →

If yes, what is the area of fallow land?

area of fallow land		If other local unit, what is it and what is the area?		If there is any other local unit, you should write the approximate area of the plot in ropani or bigha.
Unit		halko melo 1	unit	
Ropani 1	Area	mana beuko melo 2	-	Area
Bigha 2		pathi beuko melo 3	ropani 1	
Other local unit 3		dharni beuko melo 4	bigha 2	

	ropani/bigha	aana/kaththa	paisa/dhur	other (specify) 96		ropani/bigha	aana/kaththa		paisa/dhur
				—					

Plot ID	D.1.2 Plot Description	D.1.3 Self-reported/ KItta Plot Size	D.1.3a If plot size is reported in a local unit, specify which unit:	D.1.3b **If area was originally reported in local units, also ask respondent the plot size in units of Ropani or Bigha?**	D.1.5 Current Operational Status	D.1.8a _In which season(s) did you cultivate any crops on this plot? (Multiple responses possible)

		Write description that will not change in the next five years. For example, landmarks, depth, plot name. At the end of the survey, GPS readings will be taken of the two most important/largest plots. List all plots in D.1.2 first. Then complete D.1.3 - D.1.8a for each plot.	Unit	Area			Local Unit	Unit	Area			1 = Own	1 = Summer
			1 = Ropani				1 = Halko melo	1 = Ropani				2 = Rent	2 = Winter
			2 = Bigha				2 = Mana biuko melo	2 = Bigha				3 = Mortgage	3 = Spring
			3 = Other local unit				3 = Pathi biu ko melo					4 = Joint Ownership	
			एकाई = 3				4 = Dharni biuko melo					5 = Sharecropping	
							96 = Other (specify)					96 = Other (specify)	
				ropani/ bigha	aana/ kaththa	paisa/ dhur			ropani/ bigha	aana/ kaththa	paisa/ dhur		
1													
2													
3													
4													

							—						–	
5							—						–	
6							—						–	
7							—						–	

Crop related detail									
		D.1.9	D.1.12	D.1.13	D.1.14		D.1.14a	D.1.14b	D.1.14c	D.1.14d
Plot ID		List up to 4 main crops planted on this plot during the past [SEASON].	What was the type of seed used for …crop on … Plot: in ….. Season?	What was the source of the seed you used for [CROP ID] in [SEASON] on [PLOT ID]? (select all applicable)	On how much of this ... Plot did you cultivate this …. crop in ….. Season?		If area is reported in a local unit, specify which unit:?	**If area was originally reported in local units, estimate how much area of this ... Plot you cultivated … crop in units of Ropani or Bigha?**	**Of this area, how much was covered with quality seeds (bought/received within past 2 years)?**	If area is reported in a local unit, specify which unit:?
	Season	*Write the name of the crop and the CROP CODE next to the appropriate season as given in D.1.7b. Use a separate line for each crop. In the case of permanent crops, include crops that may*	Certified/ Hybrid =1	1 = Own production	Unit		1 = Halko melo	Unit	Unit	1 = Halko melo
			Local= 2	2 = Agrovet/private company	Ropani = 1	Area	2 = Mana biuko melo	Ropani = 1	Ropani = 1	2 = Mana biuko melo
			Unkown = 98	3 = Received/exchanged with other farmers	Bigha= 2		3 = Pathi biu ko melo	Bigha a= 2	Bigha a= 2	3 = Pathi biu ko melo
				4 = Local market/shop	D1.14c		4 = Dharni biuko melo	Area	D1.14c	4 = Dharni biuko melo
			(select all applicable- may be more than one)	5 = Government (agent from NARC,Ag service center, Ag knowledge center)	Local unit= 3		96 = Other (specify)		Local unit= 3	96 = Other (specify)
				6 = NGOs/INGOs					Area	

		have been planted previous year but continue to be harvested.		7= Bought from seed cooperatives/seed production group							___=96		ropani/bigha	aana/kaththa	paisa/dhur		ropa ni/ bigh a	aana/ katht ha	pais a/ dhu r	**Loc al unit**	
				8 = private company		ropa ni/ bigh a	aana/ katht ha	pais a/ dhu r	**Loc al unit**												
1																					
1	Sum mer																				
1																					
1																					
1	Winter																				
1																					

1																				
1																				
1																				
1	Spring																			
1																				
1																				

		D.1.14.g	D.1.14e	D.1.17	D.1.18a	D.1.18b	D.1.19	D.1.20		D.1.22	D.1.23	D.1.23a	D.1.24	D.1.25
Plot ID		Is this crop under sole cropping or intercropping?	If you bought seeds for this crop, how much did you spend on seeds? (Mention in Rupees). Mention "00" if no cash was spent. Mention "00" if received free of charge.	What was the labor cost?	For how many days the male members (from the roster) were involved in farming of…..crop….in …plot in …season?	For how many days the female members (from the roster) were involved in farming of…..crop….in …plot in …season?	For how many days did others helpd during farming of … crop in … plot in … season?	What was the production of …crop in last season from …, plot? **There is additional question on this- production of green crops and dry crops**		**Is the land rented as Adhiya ?** **Check D.1.5**	What percentage of the ___ crop produced by you in ____ season should be given to the landowner?	Had any event affected your crop?	How much did you earn by selling… crop ? **(In Rupees)** **(There are additional questions like- कुन वाली बिक्रि गर्नु भयो? हरियो कति? सुकेको कति?**	How much percent of the harvested crop is for household consumption? Green and dry form???
	Season	Sole crop = 1 Intercrop= 2		**(In Rupees)**				**Unit** Mana=1, Pathi=2, Muri=3 Man=4, Muthi=5, Kilo=6 Quintal=7, Paseri=8, Bisauli=9, Adhaiya=10, Adhaman=11, Sher=12, Doko=13, Bhari/Bojha=14, Bora=15, Crate=16, Other (Specify)____=96 Not produced =95	Quantity	**How much kgs is in ….amount?**	**Yes (D.1.5=5) = 1** **No (D.1.5=1-4, 96) = 2** D.1.23a	Percentage	Drought=1, Flood=2, Unseasonal rain=3, Pests and disease=4, Increase in agri-inputs (eg. fertilizer)= 5 Landslide=6, Hailstone=7, Severe wind=8, Cold wave =9, Other (specify))=96,	**(Mention as "00" if not sold)**	0 = 0 1-25% = 1 26-50% = 2 51-75% = 3 76-99% = 4 100% = 5 *After asking this question, go for the next crop.*

												Not affected=-98,		
1		1 2		————				——						
1	Summer	1 2		————				——						
1		1 2		————				——						
1		1 2		————				——						
1		1 2		————				——						
1	Winter	1 2		————				——						
1		1 2		————				——						
1		1 2		————				——						
1		1 2		————				——						
1	Spring	1 2		————				——						
1		1 2		————				——						
1		1 2		————				——						

READ ALOUD: Now I am going to ask you about the agricultural technologies you have used in your plots. Please tell me about <u>ALL</u> plots you cultivated, not just the ones we talked about in the previous part.								
Enumerator Checkpoint: How many parcels did the respondent report in D.1.1?			|__|__|			--> **Ask for all these plots**	
	D.3.1	**D.3.1a**	**D.3.1b**	D.3.2	D.3.2a	D.3.2b	D.3.3	D.3.4
Name of Technology	Did you use this technology/service on any crop on any plot in the past 12 months?	Have you EVER used this technology/service before?	If you EVER used this technology, then since when did you use it?	On which Plot did you use this? (Select Plot IDs)	For which crops on this plot did you use this technology/service?	How much did you spend on [Technology Name] during the past 12 months?	What was the source of knowledge/information about this technology/service? (Select all that apply)	Since when did you first start using it?
	1 = Yes 2 = No --> D.3.1a	1 = Yes 2 = No --> next technology/service	1 = Before last year in the FANSEP project	If plot not listed in D.1.2 of Part 1, write "96"	Select from crops entered in question D.1.9 for every plot mentioned in D.3.2		*1 = Farmer group or cooperative meetings*	1 = Since the past 12 months
	1 --> D.3.2	**1 --> D.3.1b**	**2 = Before FANSEP Project**				2 = Government extension agents	**2 = Since the past 3 years**
			98 = Don't know				3 = Agrovets or other private sector entity	**3 = Since last 5.5 years**
								4 = Before FANSEP Project
							4 = Media	98 = Don't know
							5 = Not from elsewhere- my own knowledge	
							6 = friends/neighbour	
							7= NGO/INGO	
							98 = Don't know	
						↘		
1. Crop insurance	1 2					_____		

2. Mulching	1　　2					———		
3. Row cropping	1　　2					———		
4. Relay cropping	1　　2					———		
5. Conservation tillage	1　　2					———		
6. Storing seeds in metal bins/superbags	1　　2					———		
7. High-Yielding Varieties	1　　2					———		
8. Biopesticides	1　　2					———		
9. Farmyard manure improvement/animal urine collection and use	1　　2					———		

10. Use of compost/ Liquid compost	1 2					———		
11. Plastic tunnels/plastic house	1 2					———		
12. Insect traps (ex. pheromone/food/chemical)	1 2					———		
13. Machines (ex. power tiller or tractor)	1 2					———		
14. Use of varieties tolerant to drought or waterlogged conditions	1 2					———		
Broadcasting method of rice	1 2					———		
Green Manuring	1 2							

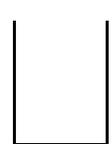|		**READ ALOUD: In this section I will ask you about irrigation and the inputs you used in your plots reported in Part 1 for the past 12 months.**									
		Enumerator Checkpoint: How mant plots did the respondent report in D.1.2?									
		D.2.1	D.2.1a	D.2.2	D.2.3	D.2.7	D.2.7a	**D.2.7 b**	D.2.8	D.2.9	D.2.10
Plot ID		Did you irrigate this [CROP] on [PLOT ID] during [SEASON]?	What was the main source(s) of water for irrigation on this [CROP ID] on [PLOT ID] in [SEASON]? Multiple responses possible	What was the method of irrigation for this [CROP ID] on [PLOT ID] during [SEASON]? Multiple responses possible	How much did you spend on irrigation for this [CROP ID] on [plot ID] in [SEASON]?	Did you apply any chemical fertilizers like Urea/DAP/Potash/NPK to this [CROP ID] on [plot ID] in [SEASON]?	If yes, which did you apply? (Select all that apply)	How much of these did you use?	How much did you spend on chemical fertilizers like Urea/DAP/Potash/NPK for this [CROP ID] on [plot ID] in [SEASON]?	Did you apply any Pesticides/Insecticides/herbicides to this [CROP ID] on [plot ID] in [SEASON]?	How much did you spend on Pesticides/Insecticides/herbicides for this [CROP ID] on [plot ID] in [SEASON]?
								number (kg)			
	Season	Yes= 1	1 = ground water using Tubewell, Boring, treadle pump (dhiki)	1 = Flow canal (Kulo)	*In rupees (if not spent, "00")*	Yes= 1	1= Urea		*In rupees*	Yes= 1	
		No (rainfed only)= 2	2 = collection of water from stream/river/snow	2 = drip irrigation		No= 2	2 = DAP			No= 2	
			3 = roof/rain-water harvesting into drum/tank	3 = Sprinkler Irrigation			3 = Potash				*(In rupees, if not known "-98")*
		If 2, D.2.7	4 = roof/rain/run-off water harvesting into plastic pond	4 = furrow irrigation			96 = Other (specify)			*If 2 go to next crop*	
			96 = Other (Specify)	5 = flood irrigation							

				96 = Other (Specify)						
1	Summer	1 2				1 2			1 2	
	Winter			———————— ———						
	Spring									
2	Summer	1 2				1 2			1 2	
	Winter			———————— ———						
	Spring									
3	Summer	1 2				1 2			1 2	
	Winter			———————— ———						
	Spring									
4	Summer	1 2				1 2			1 2	
	Winter			———————— ———						
	Spring									
5	Summer	1 2				1 2			1 2	
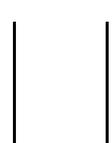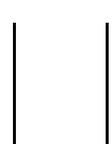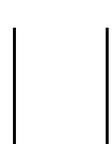
	Winter								
	Spring								
6	Summer	1 2				1 2			1 2
	Winter								
	Spring								
7	Summer	1 2				1 2			1 2
	Winter								
	Spring								

Section I: Livestock, Poultry																	
READ ALOUD: In this section I am going to ask you about the management and production of livestock and poultry.																	
Part 1:	पशु/पंक्षी पालन तथा उत्पादन																
प्र.नं.	**Questions**	**Coding**	मा जाने														
I.1.0	In last 12 months, does your household managed any poultry or livestock?	Yes 1															
		No 2	Section G														
	I.1.1	I.1.2	I.1.3	I.1.3a	I.1.3b	I.1.4	I.1.7	I.1.8	I.1.9	I.1.10	I.1.11	I.1.11a	I.1.12	I.1.13	I.1.14	I.1.15	I.1.15a	I.1.15b
Live stock / Poultry	How many [LIVESTOCK NAME] did you own at	How many [LIVESTOCK NAME] do you own at	What breed is your currently owned [LIVESTOCK NAME]	If local breed, please select whic h	If improved breed or crossbreed, what is(are) the breed(s)? Multiple responses possible	How many of [LIVESTOCK NAME] did you	How many [LIVESTOCK NAME] did you purcha	How much did you spend on the total purchase of [LIVES	How many [LIVESTOCK NAME] did you sell	How much did you earn from the sale of live [LIVE STOC		During the past 12 months, how much milk/meat/ eggs did [LIVESTOCK NAME]	How much did your HH consume	How much did your HH giv	How much did your household sell?	Total value of the sale	What was the average age at sale of the [LIVE STOC K	What was the average weight of the [LIVE STOC K

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any time in the past 12 months?	this time?	Multiple Responses Possible	breed(s). Multiple response possible			lose to disease or other accidental mortality during the past 12 months? Do not include butchering for consumption. If there is not, mention as "0".	se alive during the past 12 months?	TOCK NAME] during the past 12 months?	alive during the past 12 months?	K NAME]during the past 12 months?	In the past 12 months which of the following did [LIVESTOCK NAME] produce? **Multiple responses possible**	produce? (Select all applicable)		or use?	e to others (for free)?			NAME] for slaughter? **(For goat, cock, hen meat only)**	NAME] at the time of selling for slaughter?
									(बाख्रा र कुखुराको लागि: यदि काट्नको लागि बेचेको भए समावेश नगर्नुहोस्)		(बाख्रा र कुखुराको लागि: यदि काट्नको लागि बेचेको भए सामबेश गर्नुहोस्)				**(If 0, ask for the next livestock)**				
Number	Number											**(If 0, ask for the next livestock)**							
	If none, write 0	1 = Local	**Goat**	**Cows**	**Goats**		Number		If none, write 0		1 = milk	Unit				परिमाण	(रुपैं या मा ले ख्नु होस् I)	Number (in months)	Number (KG)
	If "0" go to I.1.4	2 = Improved/cross	1= Khari	1 = Haryana	1 = Boer	*Number*		*In Rupees*		*In Rupees*	2 = meat	1= kg 2 = L 3 = Number	परि मा ण	Number	परि माण				
		98 = Don't know	2 = Sinhal	2 = Jersey	2 = Jamunapari		If none, write 0				3 = eggs								

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					3 = Chyangra	3 = Holstein	3 = Barberi				If "0" --> I.1.11	4 = N/A								
				if 1 --> 1.1.3a	4 = Terai	4 =Brown Swiss	4 = Sirohi	**If "0" --> I.1.9**												
				if 2--> I.1.3b	98 = Don't know		5 = Saanen													
				if 98--> I.1.4	**Cows**	**Buffalo**	6 = Beetal													
					Terai cattle =02	1 = Murrah	96= Other (Specify)													
					Pahadi cattle =03															
					Yak, Nak, Chauri=04	**Chicken**														
					Don't know = 98	1 = New Hampshire 2 = Black Australorp														
					Buffalo	96= Other (Specify)														
					Lime =1															
					Parkote=2															

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				Don't know = 98											
				Chicken											
				Shakini=1											
				Pwakh ulte=2											
				Ghanti khuile=3											
				Don't know = 98											
1=Adult milking cattle										Litre					
Adult dry cow															
Heifer (not yet pregnant)															
Male calf/ bull															

Adult milking buffalo											Litre						
Adult dry buffalo											KG						
Female buffalo calf (not yet pregnant)																	
Male buffalo calf/ bull											KG						
Goat - adult doe											KG						
Goat - adult buck											KG						
Goat - female hogget											KG						

Goat - male hogget					———							KG						
Goat kids					———							KG						
Cocks					———							KG						
Hens					———							KG/N umber						
Chicks					———													
Broiler					———													
Other livestock					———	———												

Part 2: Expenses on Livestock services and technologies

		I.2.1		I.2.2	I.2.3	I.3.2	I.3.3
Ask about the following services in the last twelve months		Have you used [Technology Name/Service] for your livestock in the past 12 months?		Which livestock did you use it for? Multiple responses possible	How much did you spend on the [Technology Name/Service] during the past 12 months?	Since when have you used this technology/service?	What was the source of knowledge/information about this technology? (Select all that apply)
		1 = Yes		1 = Cows		**1 = Since the 12 months**	1 = Farmer group or cooperative meetings
		2 = No	*if 2, ask next tecchnology*	2 = Buffalo		*2 = Since the past 3 years*	2 = Government extension agents
				3 = Goat		3 = More than 3 years ago	3 = Agrovets or other private sector entity
				4= Chicken	*in Rupees*	98 = Don't know	4 = Media
				96= Other (Specify)			5 = Not from elsewhere- my own knowledge
							6 = friends/neighbour
							96= Other (Specify)
							98 = Don't know
0A	Hired labor to assist with the management/care of livestock	1	2				
0B	Feed (including compounded/concentrated feed, oilseed cakes, wheat bran, rice polish, corn flour etc)	1	2				
1	Vaccination against infectious diseases (ex. PPR goats, Khoret cattle, Ranikhet chickens)	1	2				

2	Veterinary services	1	2				
2a	Livestock insurance	1	2				
3	Deworming/internal parasite treatment	1	2				
(Climate smart and nutrition smart technologies)							
5	Stall feeding	1	2				
6	Dipping/drenching practices for external parasites	1	2				
7	Artificial insemination	1	2				
8	Shed improvement	1	2				
9	Feed animals improved variety of fodder and dale grass	1	2				
10	Feeding with Urea Molasses Mineral Blocks (UMMB)	1	2				
11	Use of clean milk production techniques	1	2				
12	Forage conservation (for dry season or lack of food)	1	2				

13	Colostrum feeding for infants	1	2				
14	Feeding more nutritious food during breeding season	1	2				
15	Feeding more nutritious food 1-2 months before breeding	1	2				
16	Preventing inbreeding	1	2				

	SECTION L: FOOD SECURITY			
	READ ALOUD: In this section I am going to ask you some questions about food during the past 30 days and the past 12 months.			
	PART 1: FOOD INSECURITY EXPERIENCE SCALE			
	Enumerator: As this section for one male respondent and one female respondent in each household			
L.0	Is this respondent male or female?	1= male 2 = female		
L.1	Who is the respondent for FIES?	Select from HH Roster		
	Repeat FIES questions below for one male and one female member of HH			
L.1.1	In the past 30 days, did you worry about not having **enough** food to eat because of a lack of money or other resources?	1=Yes 0 = No 98 = Don't Know 99 = Refused		
L.1.2	In the past 30 days was there a time when you were unable to eat **healthy and nutritious food** because of a lack of money or other resources?	1=Yes 0 = No 98 = Don't Know 99 = Refused		
L.1.3	In the past 30 days, was there a time when you ate only a **few kinds** of foods due to a lack of money or other resources?	1=Yes 0 = No 98 = Don't Know 99 = Refused		
L.1.4	In the past 30 days did you have to **skip a meal** because there was not enough money of other resources to get food?	1=Yes 0 = No 98 = Don't Know 99 = Refused		
L.1.5	In the past 30 days, was there a time when you **ate less than you thought you should** because of a lack of money or other resources?	1=Yes 0 = No 98 = Don't Know 99 = Refused		

L.1.6	In the past 30 days, was there a time when your household **ran out of food** because of a lack of money or resources?	1=Yes 0 = No 98 = Don't Know 99 = Refused		
L.1.7	In the past 30 days was there a time when you were **hungry but did not eat** because there was not enough money or other resources for food?	1=Yes 0 = No 98 = Don't Know 99 = Refused		
L.1.8	In the past 30 days, was there a time when you went without eating for a whole day because of a lack of money or other resources?	1=Yes 0 = No 98 = Don't Know 99 = Refused		
Next, ask the same respondent about FIES for the PAST 12 MONTHS				
L.2.1	In the past 12 months, did you worry about not having **enough** food to eat because of a lack of money or other resources?	1=Yes 0 = No 98 = Don't Know 99 = Refused		
L.2.2	In the past 12 months was there a time when you were unable to eat **healthy and nutritious food** because of a lack of money or other resources?	1=Yes 0 = No 98 = Don't Know 99 = Refused		
L.2.3	In the past 12 months, was there a time when you ate only a **few kinds** of foods due to a lack of money or other resources?	1=Yes 0 = No 98 = Don't Know 99 = Refused		
L.2.4	In the past 12 months did you have to **skip a meal** because there was not enough money of other resources to get food?	1=Yes 0 = No 98 = Don't Know 99 = Refused		

L.2.5	In the past 12 months, was there a time when you **ate less than you thought you should** because of a lack of money or other resources?	1=Yes 0 = No 98 = Don't Know 99 = Refused		
L.2.6	In the past 12 months, was there a time when your household **ran out of food** because of a lack of money or resources?	1=Yes 0 = No 98 = Don't Know 99 = Refused		
L.2.7	In the past 12 months was there a time when you were **hungry but did not eat** because there was not enough money or other resources for food?	1=Yes 0 = No 98 = Don't Know 99 = Refused		
L.2.8	In the past 12 months, was there a time when you went without eating for a whole day because of a lack of money or other resources?	1=Yes 0 = No 98 = Don't Know 99 = Refused		

SECTION M: WOMEN NUTRITION

Part 1: In this section I am going to ask about the health and nutrition of pregnant women, mothers, women of reproductive age, and children.						
M.1.1	What kind of female respondent is available for an interview in this household?	1	Mother with child under 24 months	Complete Section M and N and end the interview		
		2	Pregnant woman	Complete Section M and end the interview		
		3	Other female household member of reproductive age (15-49)	Complete Section M and if no child, end the interview. If this woman is caretaker of child, go to section N.		
		4	No female available	Section W Decision Making Module		
M.1.2	Respondent Name and ID					

SECTION M: WOMEN'S NUTRITION

PART 2: WOMEN'S MINIMUM DIETARY DIVERSITY

M.2.1	Was yesterday a special day, like a celebration or feast day or a fast day where you ate special foods or more or less than usual or did not eat because of fasting?	1 = Yes 2 = No		If "2" -->M.2.3
M.2.2	Was the day before yesterday a special day, like a celebration or feast day or a fast day where you ate special foods or more or less than usual or did not eat because of fasting?	1 = Yes 2 = No		If "1" --> Ask about yesterday If "2" --> Ask about the day before yesterday
M.2.3	How many meals did you eat yesterday (or the day before if yesterday was unusual)?	Times		

Enumerator Instructions: Ask the mother or woman of reproductive age (15-49) respondent to describe the foods (meals and snacks) she ate or drank yesterday during the day and night, whether are home or outside the home. Start with the first food or drink of the morning. Write down all foods and drinks mentioned. When composite dishes (like porridge, sauce or stew) are mentioned, ask for the list of ingredients. When the respondent has finished, please probe for meals and snacks not mentioned.

Breakfast		*Snack*	*Lunch*	*Snack*	*Dinner*	*Snack*
					M.2.4	
Food Group			**Examples**		**Response 1=Yes, 2= No**	

Food Group	Examples	Response 1=Yes, 2= No	
1. GRAINS, WHITE ROOTS AND TUBERS	Rice, wheat, maize, sorghum, millet, barley, Roti, Bread, Noodles and other foods made of grains	1 2	
2. White roots and tubers	Any potatoes, yams, manioc, cassava or any other foods made from roots or tubers	1 2	
3. PULSES	Beans, peas, lentils (daal), soy products, chickpeas.	1 2	
4. NUTS and SEEDS	Peanuts, tree nuts (ex. almonds, walnuts), pumpkin seeds, sesame seeds	1 2	
5. DAIRY	Milk, Cheese, Yogurt or other milk products (does not include butter, ghee, ice cream)	1 2	
6. MEAT, POULTRY	Goat, buff, chicken, pigeon, pork, duck	1 2	
7. Fish or shellfish?	Any fresh or dried fish or shellfish?	1 2	
8. EGGS	Eggs from Chicken, Duck, or any other bird	1 2	
9. DARK GREEN LEAFY VEGETABLES	Including wild forms (ex. nettle/shishnu) + locally available vitamin A rich leaves such as spinach, pumpkin leaves, kale, chinese cabbage	1 2	
10. OTHER VITAMIN A-RICH FRUITS AND VEGETABLES	Pumpkin, Carrot, Squash, or Sweet Potato, persimmon, ripe mango or papaya that are orange inside + other locally available vitamin A rich vegetables and fruits	1 2	
11. OTHER VEGETABLES	Other vegetables (e.g. Tomato, Onion, Eggplant, Green beans, Cauliflower, okra)	1 2	
12. OTHER FRUITS	Other fruits, including wild fruits and 100% fruit juice made from these	1 2	
13. INSECT, SNAILS, and OTHER SMALL PROTEIN FOODS	Snails, insect larvae/grubs, fish eggs	1 2	
14. OILS AND FATS	Ghee, butter, vegetable oil added to food or used for cooking including oil extracted from nuts	1 2	
15. Sugary foods	Any Sugars, Jaggery, wheats or honey	1 2	
16. SPICES, CONDIMENTS, and SEASONING	Spices (Black Pepper, Salt, cumin), Condiments (Ketchup), flavoring pastes used in small amounts (ginger, garlic, tomato)	1 2	
17. other foods, sweets and beverages	Salty, spicy foods like potato chips, samosa, tea, coffee, soup, pickle, sweets, biscuits, chocolates, cold drinks, soda	1 2	

Section : Food security and nutrition - Household Dietary Diversity Score (HDDS)

Introductory text: "Now I would like to ask you about the types of foods that you or anyone else in your household ate during the last 24 hours. In the last 24 hrs did you or any of your household members eat….		**M.2.4**	
Food Group	**Examples**	**Response 1=Yes, 2= No**	

1. GRAINS, WHITE ROOTS AND TUBERS	Rice, wheat, maize, sorghum, millet, barley, Roti, Bread, Noodles and other foods made of grains	1	2	
2. White roots and tubers	Any potatoes, yams, manioc, cassava or any other foods made from roots or tubers	1	2	
3. PULSES	Beans, peas, lentils (daal), soy products, chickpeas.	1	2	
4. NUTS and SEEDS	Peanuts, tree nuts (ex. almonds, walnuts), pumpkin seeds, sesame seeds	1	2	
5. DAIRY	Milk, Cheese, Yogurt or other milk products (does not include butter, ghee, ice cream)	1	2	
6. MEAT, POULTRY	Goat, buff, chicken, pigeon, pork, duck	1	2	
7. Fish or shellfish?	Any fresh or dried fish or shellfish?	1	2	
8. EGGS	Eggs from Chicken, Duck, or any other bird	1	2	
9. DARK GREEN LEAFY VEGETABLES	Including wild forms (ex. nettle/shishnu) + locally available vitamin A rich leaves such as spinach, pumpkin leaves, kale, chinese cabbage	1	2	
10. OTHER VITAMIN A-RICH FRUITS AND VEGETABLES	Pumpkin, Carrot, Squash, or Sweet Potato, persimmon, ripe mango or papaya that are orange inside + other locally available vitamin A rich vegetables and fruits	1	2	
11. OTHER VEGETABLES	Other vegetables (e.g. Tomato, Onion, Eggplant, Green beans, Cauliflower, okra)	1	2	
12. OTHER FRUITS	Other fruits, including wild fruits and 100% fruit juice made from these	1	2	
13. INSECT, SNAILS, and OTHER SMALL PROTEIN FOODS	Snails, insect larvae/grubs, fish eggs	1	2	
14. OILS AND FATS	Ghee, butter, vegetable oil added to food or used for cooking including oil extracted from nuts	1	2	
15. Sugary foods	Any Sugars, Jaggery, wheats or honey	1	2	
16. SPICES, CONDIMENTS, and SEASONING	Spices (Black Pepper, Salt, cumin), Condiments (Ketchup), flavoring pastes used in small amounts (ginger, garlic, tomato)	1	2	
17. other foods, sweets and beverages	Salty, spicy foods like potato chips, samosa, tea, coffee, soup, pickle, sweets, biscuits, chocolates,cold drinks,soda	1	2	

SECTION N: CHILD NUTRITION (children<24 months)				
READ ALOUD: In this section I am going to ask you about your child's nutrition.				
PART 1: BREASTFEEDING HISTORY AND DIETARY DIVERSITY OF CHILD				
N.1.1	Child Name and ID	From household roster	_____|__|__|	
N.1.2	Date of birth of child (nepali date)	DD/MM/YYYY		
N.1.3	Was [CHILD] ever breastfed?	1 = Yes 2 = No		
N.1.4	Was anything fed to [CHILD] other than breastmilk, including anything placed inside [CHILD]'s mouth immediately after birth?	1 = Yes 2 = No		**If 2/98 --> N.1.6**
N.1.5	If so, what was given to [CHILD] other than breastmilk? (Record up to two items)	1 = Honey 2 = Plain sugar water 3 = Tea/coffee/other mixture 4 = Gripe water 5 = Fruits juice 6 = Milk from animals 7 = Infant formula 96 = Other(specify) 98 = Don't know		
Enumerator Checkpoint: Check Question No N.1.3 *If "1" --> N.1.6* *If "2" --> N.1.10*				
N.1.6	How soon after birth did you put this child to the breast for the first time?	1 = Within 1 hour 2 = 1st day, after 1 hour 3 = After 2 or more days		
N.1.7	Did you give the child colostrum, which is the thick, yellowish milk secreted as the 'first milk"?	1 = Yes 2 = No		
N.1.9	What age was the child when you stopped breastfeeding [NAME]?	Age in months 94= Still breastfeeding 95 = Temporarily stopped		**if 94--> N.1.13**
N.1.10	Why did you stop breastfeeding [NAME]?	1 = Due to illness or weakness of mother 2 = Due to illness or weakness of child 3 = Problem in breast 4 = Not enough milk secretion 5 = Work load of mothers 6 = Child did not want 96 = Other (specify)		

SECTION N: CHILD NUTRITION				
PART 1: BREASTFEEDING HISTORY AND DIETARY DIVERSITY OF CHILD (0-23 months)				
N.1.13	Did [CHILD] take any solid, semi solid or soft food yesterday during the day or night?	1 = Yes 2 = No 3= No respondent availble who can report what child ate in previous day/night	if "2 " go to N.1.15 if "3" --> Section M	
N.1.14	If yes, how many times?	………… Times 98 = don't know		

Enumerator Instructions: Read the questions below. Read the list of liquids one by one and mark yes or no, accordingly.

	N.1.15		**N.1.16**	
I would like to ask you about some liquids that (NAME OF CHILD) may have had yesterday during the day or at night. Did (NAME OF CHILD) have any (ITEM FROM LIST)?	1=Yes 2=No		If yes, how many times? Write number of times consumed. 98 = don't know how many times	
	If "2" --> Next item			
1. Plain Water				
2. Infant formula such as (Insert local example)				
3. Milk such as tinned, powdered, or fresh animal milk?				
4. Juice				
5. Clear broth				
6. Yogurt				
7. Thin porridge				
8. Any other liquids such as [list other water-based liquids available in the local setting]				
9. breastmilk				
10. Any other liquids?				

Enumerator Instructions: Ask the respondent to describe the foods (meals and snacks) [CHILD] ate or drank yesterday during the day and night, whether are home or outside the home. Start with the first food or drink of the morning. Write down all foods and drinks mentioned. When composite dishes (like porridge, sauce or stew) are mentioned, ask for the list of ingredients. When the respondent has finished, please probe for meals and snacks not mentioned.					
Breakfast	*Snack*	*Lunch*	*Snack*	*Dinner*	*Snack*
Enumerator Instructions: When the respondent has recalled all meals, please fill in the table of food groups below. Mark "1" if any item belonging to the food group appears above. After finishing, probe for any food groups not mentioned, ask the respondent if any food item from this food group was consumed. Be sure to use examples!					

		N.1.17	
Food Group	**Examples**	**Response**	
1. BREAST MILK		1=Yes 2=No	
2. GRAINS, ROOTS, and TUBERS	Rice, maize, millet, buckwheat, bread, potato	1=Yes 2=No	
3. LEGUMES, PULSES and NUTS	Beans, pulses, lentils (daal), peas, peanuts, tree-nuts	1=Yes 2=No	
4. DAIRY PRODUCTS	Milk, Cheese, Yogurt (not including ghee, butter, or ice cream)	1=Yes 2=No	
5. FLESH FOODS (MEAT, FISH, POULTRY, ORGANS)	Goat, buff, chicken, pigeon, pork, duck, dried or fresh fish	1=Yes 2=No	
6. EGGS	Eggs from Chicken, Duck, or any other bird	1=Yes 2=No	
7. VITAMIN A RICH FRUITS and VEGETABLES	Dark leafy greens (spinach, nettle, pumpkin leaves), orange flesh fruit and veg (Ex. pumpkin, carrot, squash, or sweet potato, ripe mango, ripe papaya, persimmon)	1=Yes 2=No	
8. OTHER FRUITS and VEGETABLES	Other fruits, including wild fruits and 100% fruit juice made from these	1=Yes 2=No	
9. INSECTS, SNAILS, and other SMALL PROTEIN FOODS	Snails, insect larvae/grubs, fish eggs	1=Yes 2=No	
12. OTHER FOOD and BEVERAGES	Savory and fried snacks (crisps, samosa), Tea, coffee, thin broth or soup, pickles (achar), sugary snacks (ex. biscuits, candy, chocolate, sweetened beverages like juice and soda)	1=Yes 2=No	