



Training Title: Good Husbandry Practices (GHP) in Dairy Sector

Training Duration: 3 Days

Training objectives: By the end of the training the participants will be able to:

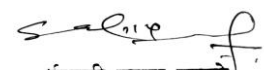
- explain the importance of GHP
- enlist minimum GHP requirement for hygienic and good quality milk production
- explain the various health parameters concerning herd health management
- apply quality feed, forages with sufficient nutritional value in dairy animal nutrition and explain its proper storage
- recommend the required space for dairy animals
- describe the management of farmyard manure
- evaluate the methods of verifying the GHP standards and the method of auditing a dairy farm for certification.

Target group: Officer

Class per day: 3

Class Duration: 90 minutes

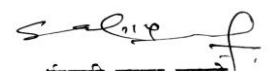
Day	S.N	Session Topic	Sub-topic	Delivery methods	Session	
					Theory	Practical
1	1	Introduction and Objective of the training	<ul style="list-style-type: none"> • Registration and opening of the training • Setting the ground rules • Objectives of the training • Expectation assessment 	Interactive Lecture	1	
	2	Basic Concepts of GHP	<ul style="list-style-type: none"> • Introduction to GHP • Importance of the implementation of GHP in dairy farms • Procedures of GHP implementation and the certification • Role of stakeholders in implementation of GHP 	Interactive Lecture	1	
	3	Quality milk production	<ul style="list-style-type: none"> • Basic concepts of good quality milk production • Sources of milk contamination at the farm • Minimum GHP standard developed for hygienic and good quality milk production 	Interactive Lecture	1	
2	4	Herd Health Management	<ul style="list-style-type: none"> • Essential herd health package in dairy farms • Preventive measures including biosecurity for diseases in dairy farms 	Interactive Lecture	1	


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			• Minimum GHP standard developed for herd health management			
	5	Dairy Animal Nutrition and breeding	<ul style="list-style-type: none"> •Nutrients requirement for the dairy animals •Minimum GHP standard developed for dairy animal nutrition and breeding 	Interactive Lecture	1	
	6	Housing Management, Animal welfare and waste management	<ul style="list-style-type: none"> •Different types of dairy animal housing and space requirements for dairy animals of different ages and physiological stages • Cleaning and disinfection of the dairy house, machinery and equipment • Minimum GHP standard developed for Animal housing and animal welfare 	Interactive Lecture	1	
3	7	Auditing a dairy farm	<ul style="list-style-type: none"> • Introduction to Audit (GHP Audit), Types of Audits and Objectives of Auditing • Audit planning and documentation/record management • Conducting an audit (step wise) 	Lecture & Discussion, Exercise		1
	8	Conducting an audit	<ul style="list-style-type: none"> • Simulation of conducting audit in a dairy farm 			2
			Total classes		6	3

Note: 20% of the session could be modified by authority as per need and demand of the participants as well as training organizer


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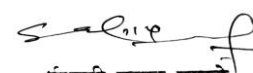
- describe the importance of GHP and list the steps required for GHP Certification
- describe minimum GHP requirement for hygienic and good quality milk production
- describe the various health parameters concerning herd health management
- define quality feed, forages with sufficient nutritional value in dairy animal nutrition and describe its proper storage
- recommend the required space of dairy animals
- describe the management of farmyard manure

Target group: Assistant level

Class per day: 4

Class Duration: 75 minutes

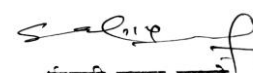
Day	S.N	Session Topic	Sub-topic	Delivery methods	Session	
					Theory	Practical
1	1	Introduction and Objective of the training	<ul style="list-style-type: none"> • Registration and opening of the training • Setting the ground rules • Objectives of the training • Expectation assessment 	Interactive Lecture	1	
	2	Basic Concepts of GHP	<ul style="list-style-type: none"> • Introduction to GHP • Importance of the implementation of GHP in dairy farms • Role of stakeholders in implementation of GHP 	Interactive Lecture	1	
	3	Procedures of GHP implementation and the certification	<ul style="list-style-type: none"> • Introduction to GHP procedures • Checklist/format for GHP in dairy farms, format compilation and dispatch • GHP certification and monitoring process 	Interactive Lecture	1	
	4	Hygienic and quality milk production	<ul style="list-style-type: none"> • Basic concepts of good quality milk production • Sources of milk contamination at the farm • Minimum GHP standard requirements for hygienic and good quality milk production 	Interactive Lecture	1	
2	5	Herd Health Management	<ul style="list-style-type: none"> • Essential herd health package in dairy farms 	Interactive Lecture	1	


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		<ul style="list-style-type: none"> • Common diseases in dairy farms • Vaccination in dairy animals 				
6	Biosecurity in dairy farms	<ul style="list-style-type: none"> • Principle of biosecurity at farm levels • Biosecurity measures to be adopted in dairy farms • Decontamination of dairy farm premises 	Interactive Lecture	1		
7	Dairy Animal Nutrition	<ul style="list-style-type: none"> • Nutrients requirement for the dairy animals • Common feedstuffs and their classification • Storage of feed and forages in a dairy farm 	Interactive Lecture	1		
8	Balanced ration for dairy animals	<ul style="list-style-type: none"> • Standards of dairy animal feed • Thumb rule for dairy animal feeding • Balanced ration formulation 	Lecture & Discussion, Exercise		1	
3	9	Housing Requirement and its Management	<ul style="list-style-type: none"> • Different Types of dairy animal housing • space requirements for dairy animals of different ages and physiological stages • Cleaning and disinfection of the dairy house, machinery and equipment 	Interactive Lecture	1	
	10	Waste management	<ul style="list-style-type: none"> • Different types of wastes produced in dairy farms • Handling and disposal of farmyard manure and other wastes • Odour & Pest management in a dairy farm 	Interactive Lecture	1	
	11	Record keeping	<ul style="list-style-type: none"> • Importance of record keeping • Different types of records in dairy farming • Minimum data elements 	Lecture & Discussion, Exercise		1
	12	Inspection method of the standards	<ul style="list-style-type: none"> • Checklist for GHP implementation in dairy farms • Inspection method for verifying the standards 	Lecture & Discussion, Exercise		1
		Total classes		9	3	

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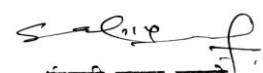
- describe the importance of GHP and list out the steps required for GHP Certification
- practice minimum GHP requirement for hygienic and good quality milk production
- enlist the various health parameters concerning herd health management
- name quality feed, forages with sufficient nutritional value in dairy animal nutrition and perform its proper storage
- identify and demonstrate the required space for dairy animals according to age and physiological stages
- handle farmyard manure

Target group: Farmer level

Class per day: 4

Class Duration: 75 minutes

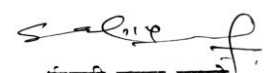
Day	S.N	Session Topic	Sub-topic	Delivery methods	Session	
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1	1	Introduction and Objective of the training	<ul style="list-style-type: none"> • Registration and Opening of the training • Setting the ground rules • Objectives of the training • Expectation Assessment 	Interactive Lecture	1	
	2	Basic Concepts of GHP	<ul style="list-style-type: none"> • Introduction to GHP • Importance of the implementation of GHP in dairy farms • Role of stakeholders in implementation of GHP • Basic concepts of Animal Welfare 	Interactive Lecture	1	
	3	Procedures of GHP implementation and the certification	<ul style="list-style-type: none"> • Introduction to GHP procedures • Checklist/format for GHP in dairy farms, format compilation and dispatch • GHP certification process 	Interactive Lecture	1	
	4	Quality milk production	<ul style="list-style-type: none"> • Basic concepts of good quality milk production • Sources of milk contamination at the farm • Minimum GHP standard requirements for hygienic and good quality milk production 	Interactive Lecture	1	
2	5	Herd Health Management	<ul style="list-style-type: none"> • Essential herd health package in dairy farms • Control of common diseases in dairy farms • Vaccination in dairy animals 	Interactive Lecture	1	


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	6	Biosecurity in dairy farms	<ul style="list-style-type: none"> • Principle of biosecurity at farm levels • Biosecurity measures to be adopted in dairy farms • Decontamination of dairy farm premises 	Interactive Lecture	1	
	7	Dairy Animal Nutrition	<ul style="list-style-type: none"> • Nutrients requirement for the dairy animals • Common feedstuffs, classification with nutritive value • Storage of feed and forages in a dairy farm 	Interactive Lecture	1	
	8	Balanced ration for dairy animals	<ul style="list-style-type: none"> • Standards of dairy animal feed • Thumb rule for dairy animal feeding • Balanced ration formulation 	Lecture & Discussion, Exercise		1
3	9	Housing Requirement and its Management	<ul style="list-style-type: none"> • Different Types of dairy animal housing • Space requirements for dairy animals of different ages and physiological stages • Cleaning and disinfection of the dairy house, equipment and tools 	Interactive Lecture	1	
	10	Waste management	<ul style="list-style-type: none"> • Different Types of wastes produced in dairy farms • Handling and disposal of farmyard manure and other wastes • Odour & pest management in a dairy farm 	Interactive Lecture	1	
	11	Record keeping	<ul style="list-style-type: none"> • Importance of record keeping • Different Types of Records in dairy farming 	Lecture & Discussion, Exercise		1
	12	Inspection method of the standards	<ul style="list-style-type: none"> • Checklist for GHP implementation in dairy Farms • Preparedness for auditing a dairy farm 	Lecture & Discussion, Exercise		1
			Total classes		9	3

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Government of Nepal
Ministry of Agriculture and Livestock Development
Agriculture Information and Training Center
BASIC AGRICULTURE SERVICE ENTRY TRAINING
CURRICULUM

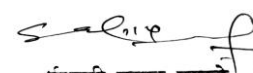
TRAINING OBJECTIVES: Upon the completion of the training, the participants will be able to

- describe the issues, challenges, vulnerabilities and prospects of agriculture sector in Nepal
- explain the policies related to agriculture sector development in Nepal
- conduct the planning process for agriculture sector development in Nepal
- apply the tools for self-development and enhancing personal efficacy
- recognize and explain the civil service conduct and office operations
- identify and use the procurement tools for procurement of goods, services, and works
- carry out research to explore the service delivery performance and agriculture value chain development

Duration: 45 working days

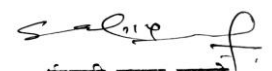
Module 1: Agriculture Sector Development in Nepal

S. N.	Session Topic	Objective	Sub-Content	Delivery Process	Session	
					Theory	Practical
1	Macro-economic situation of Nepal	Enable participants to understand the macro perspective of Nepalese Economy, It's Components, Vulnerabilities and contribution of agriculture sector	Introduction to the Nepalese Economy Components and Vulnerabilities	Lecture and Discussion	1	0
2	Historical Perspective of Agriculture Sector Development in Nepal	Enable participants to understand the history of agriculture sector development initiatives, institutions and major shifts in terms of policy, institutions, programs and their impacts	Policies, Institutions, Programs and their evaluation	Lecture and Discussion	1	0
3	Constitution of Nepal and Provision for Agriculture and Livestock Development	Explain participants about the constitution of Nepal and its provision for agriculture, livestock, animal health, food and farmers	constitutional provision, implications, policy needs	Lecture and Discussion	1	0
4	Institutions, their role and impact on agriculture development in the changed context of federalism	Enable participants about the role of institutions of agriculture research and extension in the changed condition of federalism	Organizational setup and Functions; federalism, and unbundling report	Lecture and Discussion	1	0


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5	Agricultural Research-Extension-Education Interface	Enable participants to understand the extension-research-education linkages	agriculture education-research-extension institution, their role, linkages	Lecture and Discussion	1	0
6	Crop Sector and it's issues	Enable participants to understand the crop sector of Nepal and its contribution to Nepalese economy	Crop sector, production trends, potentialities, contribution, issues, challenges, prospects	Lecture and Discussion	1	0
7	Horticulture Sector and its issues	Enable participants to understand the horticulture sector of Nepal and its contribution to Nepalese economy	Fruits, Vegetable, Spice crops of Nepal, its contribution to AGDP and GDP, employment, nutrition security	Lecture and Discussion	1	0
8	Commercial Entomology and it's issues	Enable participants to understand the commercial entomology sector of Nepal and i's contribution to Nepalese Economy	Commercial entomology, challenges, issues, prospects and its analysis	Lecture and Discussion	1	0
9	Dairy value chain and it's issues	Enable participants to understand Dairy sector of Nepal and its contribution to Nepalese Economy		Lecture, Discussion, and case studies	1	0
10	Animal Health issues and One Health approach	Enable participants to understand and analyze animal health issues in Nepal	Major animal disease, their socio-economic impacts, national and international implications, one health initiatives	Lecture, Discussion	2	0
11	Meat value chain and it's issues	Enable participants to understand and analyze the meat sector of Nepal	Meat animals and birds, their contribution to economy and nutrition, issues, challenges and prospects	Lecture and Discussion, case studies	1	0
12	Food Safety and regulatory measures	Enable participants to understand about the food processing, food diversity, and food safety issues in Nepal	Food processing, food quality control, food diversity and nutrition	Lecture and Discussion	1	0
13	Fishery value chain and it's issues	Enable participants to understand the fisheries sector in Nepal	Fisheries sector in Nepal; production, distribution, and socio-economic contribution	Lecture and Discussion	1	0
14	Organic Farming and Certification system	• Certification System: Participatory Guarantee System (PGS) & Internal Control System (ICS)- Introduction, Method of Operation and Documentation,	Organic farming, certification system, GAP and GMP processes, Quality control, implication	Lecture and Discussion	1	0

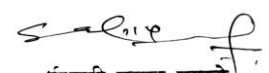

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		•Traceability and Geographical Indication				
15	Good Agriculture Practice/GMP/HACCP	Good Agriculture Practices (GAP) •Good Manufacturing Practice (GMP) •Hazard Analysis and Critical Control Point (HACCP)			1	0
16	Climate Change and its Impact on Agriculture (EIA and IEE-Include)	•Global Climate Change Scenario and Mitigation Initiative •Climate Change in Nepal and its Impact on Agriculture •Climate Change Mitigation and Adaptation Approach in Agriculture: Climate Smart Agriculture	Climate change science, issues, global initiatives, impacts in Nepalese agriculture sector, mitigation, adaptation	Lecture and Discussion	1	0
17	Food and Nutrition Security in Nepal	Enable participants to understand the food and nutrition security situation in Nepal	Food and nutrition security, tools to analyze the food and nutrition security, sectors contributing to the food and nutrition security	Lecture and Discussion	1	0
18	Agriculture Trade and Potentials	Enable participants to understand analyze the agriculture trade	Trade scenario, trade intelligence, trading partners, trade issues	Lecture and Discussion	1	0
19	Wild life Sector in Nepal				1	0
20	Agro-Biodiversity and Animal genetic resources				1	0
Total					21	0

Module 2: Agriculture Policy and Planning

S. N.	Session Topic	Objective	Sub-Content	Delivery Process	Session	
					Theory	Practical
1	Periodic Plans, vision 2100 and SDGs to Agriculture Sector	Enable participants to understand and interpret the existing policies related to agriculture development	Current periodic plan, vision 2100, SDGs relevant to agriculture sector	Lecture and Discussion	1	0
2	Agriculture Development Strategy	Enable participants to understand the agriculture development strategy	Agriculture Development Strategy, Components, Targets, Priorities	Lecture and Discussion	1	0

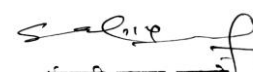

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3	Agriculture Policies of Nepal				1	
4	Development Cooperation and Agriculture Development in Nepal	Enable participants to understand	Development Cooperation policy, agriculture projects, impacts, issues and challenges	Lecture and Discussion	1	0
5	Farmers welfare schemes	Enable participants to understand the policies and programs to improve farmers welfare in Nepal	Insurance, Subsidized loan and services, other subsidies	Lecture and Discussion	1	0
6	Agriculture Planning Processes	Enable participants to undertake agriculture planning process	Agriculture planning process and tolls	Lecture, Discussion and Exercise	2	1
7	Monitoring and Evaluation of Agriculture Programs	Enable participants to understand the monitoring and evaluation system in Nepal	Current Monitoring and Evaluation System Institutions involved in monitoring and evaluation major evaluation tools	Lecture, Discussion and Exercise	2	1
8	Agriculture Extension System		Major Extension Approaches Partnership Contracting Out Double Track System and Impacts	Lecture and Discussion	1	0
9	Gender analysis in Agriculture sector	Enable participants to understand and analyze the gender inclusion in agriculture development	Gender role, gender analysis tools, issues, challenges, gender responsive budgeting	Lecture and Discussion	1	0
10	Quarantine and legal framework				2	
Total					13	2

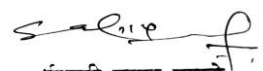
Module 3: Personal Efficacy and Self Development

S. N.	Session Topic	Objective	Sub-Content	Delivery Process	Session	
					Theory	Practical
1	Self-Development	<ul style="list-style-type: none"> • Explain the process of self-development • Diagnose needs of self-development • Prepare self-development plan 	<ul style="list-style-type: none"> • Self-development process • Self-development tools and technique • Process of self-development plan 	Lecture, individual exercise (Self diagnostic instrument) JOHARI window and SWOT analysis	1	0


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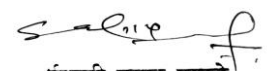


2	Positive Attitude and Motivation	<ul style="list-style-type: none"> Describe three dimensions of positive attitude Identify and apply the skills for developing positive attitude 	<ul style="list-style-type: none"> Three dimensions of attitude-positive thinking, believing and behaving Practical skills needed for developing positive attitude 	Lecture, individual exercise (Self diagnostic instrument)	2	0
3	Managing Interpersonal Relationships	<ul style="list-style-type: none"> Identify barriers of managing relationship Techniques for effective interpersonal relationships 	<ul style="list-style-type: none"> Analyze relationship as transitions Barriers of interpersonal relationships Methods and skills for removing barriers to effective communication and develop interpersonal relationship 	Interactive lecture (IL), exercise	1	0
4	Emotional Intelligence	<ul style="list-style-type: none"> Identify importance of emotions Differentiate positive and negative emotions 	<ul style="list-style-type: none"> Importance of emotions Positive and negative emotions Ways to manage emotions at work place 	Interactive Lecture, Exercise	1	0
5	Decision making	<ul style="list-style-type: none"> Identify key steps of rational decision making and its process Identify the barriers of effective decision making 	<ul style="list-style-type: none"> Decision making as essential managerial function Rational decision-making process Styles and methods of decision making Barriers to effective decision making 	Interactive Lecture, Exercise	1	0
6	Managing Conflicts at workplace	<ul style="list-style-type: none"> Analyze the causes and consequences of conflict Identify conflict handling process and strategies 	<ul style="list-style-type: none"> Causes and consequences of conflict Conflict management process and strategies Conflict as impetus for enhancing performance 	Interactive Lecture, Individual exercise	1	0
7	Negotiation skills	<ul style="list-style-type: none"> Analyze situations for negotiation Apply seven elements of framework to effectively negotiate at workplace 	<ul style="list-style-type: none"> Negotiation as essential function of a manager Communication and relationship skills for negotiation Framework for effective negotiation (e.g. Seven Element Framework) 	Interactive Lecture, Individual exercise	1	0


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8	Performance Appraisal	<ul style="list-style-type: none"> Analyze the issues and challenges of performance appraisal in civil service Use performance appraisal tool Differentiate between performance evaluation and performance appraisal 	<ul style="list-style-type: none"> Performance management Performance appraisal tool and technique Issues and challenges of performance appraisal 	Interactive Lecture, Case study	1	0
9	Grievance Handling	<ul style="list-style-type: none"> Describe grievance handling procedures Apply different techniques of grievance handling in workplace 	<ul style="list-style-type: none"> Nature and causes of grievance Grievance handling procedure Techniques to handle employee grievances (soft vs Hard approach) 	Interactive Lecture, critical incidents, role play, Case study	1	0
10	Team building	<ul style="list-style-type: none"> Recognize the value of diverse workforce and need of team building in workplace Identify the team building process Demonstrate essential skills to be a good team player and to promote teamwork in place 	<ul style="list-style-type: none"> Team and workforce diversity Synergy and key elements of effective team Role of team members for building high performing teams Essential skills of a good team player Ways to fostering teamwork in organization 	Interactive Lecture, Group exercise	1	0
11	Integrity and Ethics	<ul style="list-style-type: none"> Explain the foundations of integrity and ethics in civil service Analyze four factors affecting integrity and ethics in civil service Analyze ethical and unethical behavior Demonstrate integrity and ethical behavior in their workplace 	<ul style="list-style-type: none"> Foundations and elements of integrity and ethics; factors affecting integrity and ethics in civil service Characteristics of ethical and unethical behavior Ways to promote integrity and ethical behavior in professional life 	Interactive lecture	1	0
12	Dining etiquette	<ul style="list-style-type: none"> Demonstrate dining etiquette in real life situation enhance ability to interact with a diverse group of people in social situations associated with the context of dining 	<ul style="list-style-type: none"> Table manners Dinning styles in practice Different meal courses Beverages and drinks Handling difficult foods Socialize with a food at hand 	Interactive Lecture, critical incidents, Demonstration	1	2

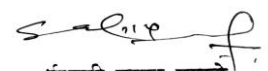

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13	Dress etiquette	<ul style="list-style-type: none"> • Explain the importance of professional appearance in work performance • Distinguish between appropriate and inappropriate business attire • Demonstrate behaviors beyond clothing choices that contributes for positive professional image 	<ul style="list-style-type: none"> • Importance of professional attire • Choosing what is appropriate • Traditional and modern business attire • Beyond clothing choices: developing positive professional image including body language, vocal tones and personal habits 	Interactive Lecture, Critical incidents, Demonstration	1	0
14	Diplomatic etiquette	<ul style="list-style-type: none"> • Recognize the importance of etiquette and behavior in diplomatic setting • Demonstrate diplomatic behaviors that enhance and strengthen country's image and reputation 	<ul style="list-style-type: none"> • Diplomatic etiquette: etiquette beyond borders and culture • Diplomatic protocols in practice • Appropriate behavior in diplomatic work environment • Diplomatic note taking 	Interactive Lecture, Critical incidents, Demonstration	1	0
15	Time Management				1	0
Total					16	2

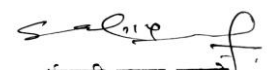
Module 4: Civil Service and Office Administration

S. N.	Session Topic	Objective	Sub-Content	Delivery Process	Session	
					Theory	Practical
1	Civil Service Act and Regulation	Explain the Civil Service Act and Regulation Discuss Civil service provisions and job security	<ul style="list-style-type: none"> • Appointment, Placement, Transfer, Promotion and Retirement • Service Security, Benefit, Provident Fund, Citizen Trust Fund, Reward and Punishment, Health Benefit • Miscellaneous 		2	0


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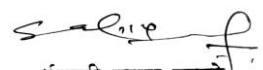


2	Recent Development in Public Management in Nepal and Inclusive Governance	<ul style="list-style-type: none"> • Explain the importance of inclusive governance in Nepal • Define four components of inclusive governance- GESI, accountability, responsiveness, integrity (GESI+ARI) • Identify factors that promote IG and factors that constrain IG • Describe basic approaches to gender equality and social inclusion • Explain GESI analysis in context of public service design and delivery • Analyze the existing policy and institutional framework for GESI mainstreaming • Develop a GESI friendly planning and mainstreaming strategy 	<ul style="list-style-type: none"> • Inclusive governance: perspective and need • Perspective of inclusive governance and need of IG in Nepal • Components of inclusive governance: accountability, responsiveness, integrity and ethics and GESI • Factors promoting /constraining IG • Approaches to gender equality and social inclusion • GESI analysis in public service design and delivery • Policy frameworks and institutional mechanisms for GESI mainstreaming • GESI friendly planning and strategy: Gender Responsive Budgeting practices in Nepal 	Interactive lecture	2	0
3	Accountability and Responsiveness: Approaches and Tools	<ul style="list-style-type: none"> • Explain three reasons why accountability is important • Analyze three approaches of accountability • Create linkages between accountability and public service delivery • Explain how accountability enhances responsiveness and trust of public sector • Identify and apply range of special accountability tools in practice 	<ul style="list-style-type: none"> • Importance and implication of accountability • Approaches to (individual, collective and institutional) accountability • How accountability improves public service delivery? • Responsiveness and trust building through accountability • Tools of accountability: major social accountability tools in practice Public hearing, social audit 	Interactive lecture	2	0


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4	Right to Information (RTI)	<ul style="list-style-type: none"> • Explain RTI and its importance as an accountability tool • Identify ways to implement RTI in the areas of their responsibilities as accountability tools for effective service delivery 	<ul style="list-style-type: none"> • Right to information: An accountability tool • RTI: Basic principles and Constitutional provisions • RTI Implementation: Process, Techniques and considerations 	Interactive lecture	1	0
5	E-Governance	<ul style="list-style-type: none"> • Describe the concepts of e-governance • Identify state of e-government applications in Nepal • Use social media applications appropriately at workplace 	<ul style="list-style-type: none"> • E-Governance: concepts and applications • Implementation of e-government applications in public service • Use of social media in government organization and service delivery 	Interactive lecture	1	0
6	Office correspondence	<ul style="list-style-type: none"> • Identify structure and components of official letter • Write official letters precisely with greater degree of professionalism • Register and dispatch letters 	<ul style="list-style-type: none"> • Types of letter • Structure and components of letter • Letter writing • Registration and dispatch and process thereof 	Interactive Lecture, Practical exercise	1	1
7	Memo (Tippani) writing	<ul style="list-style-type: none"> • Recognize memo (Tippani) as a decision-making tool in practice • Identify structure and components of the memo • Write memo effectively 	<ul style="list-style-type: none"> • Importance of memo as a decision-making tool • Structure and components of memo • Memo writing technique and skills 	Interactive Lecture, Individual exercise (practical skill instruction)	1	1
8	Record Management	<ul style="list-style-type: none"> • Explain record management procedure • Identify filing and indexing techniques • Apply ways to manage digital records 	<ul style="list-style-type: none"> • Record management procedure • Filing and indexing system and techniques • Techniques of managing digital records 	Interactive Lecture, exercise	2	

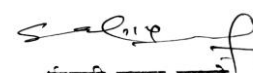

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9	Meeting management	<ul style="list-style-type: none"> •Prepare agenda •Conduct meeting •Prepare minutes •Identify key considerations in managing meetings 	<ul style="list-style-type: none"> •Preparation of meeting and agenda setting •Communication for meeting •Conducting meeting •Note taking and minute writing •Key considerations •Post meeting considerations Event management 	Interactive Lecture, Group exercise, Role play	1	1
10	Management Audit and Technical Audit				2	
					15	3

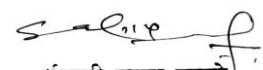
Module 5: Public Procurement Management

S.N.	Session Topic	Objective	Sub-Content	Delivery Process	Session	
					Theory	Practical
1	Public Finance Management and Financial Accountability	Introduce Public Finance Management in Nepal Orient on financial management procedures Explain financial accountability policy and procedures	Public Finance Law, Accounting, Financial Accountability	Lecture, Discussion	2	0
2	Public Procurement Laws and Regulation,	Explain Public Procurement laws and regulation	Explain public procurement laws and rules for procurement of goods, works, and services		1	0
3	Procurement Plan: Preparation Practice and Classroom Exercise, Technical Specification, Slicing, Packaging and Cost Estimation of Goods, works and Other Service (Legal)	Develop conceptual skills to the participant in preparing procurement plan relating it with program and budget of entity Enable participants to develop understanding of the process, contents and factors of considerations in the process of technical specification, estimates, slicing and packaging of goods, works and other services	<ul style="list-style-type: none"> •Preparation of master and/or annual procurement plan • Case presentation for preparation of procurement plan •Exercise of preparation of procurement plan by participants •Technical Specification: Meaning and factors to be considered in preparing technical specification of goods/works •Slicing and Packaging: Meaning, process and basis, importance, relationship with procurement qualification and evaluation; availability and ability of bidders •Cost Estimation of Goods, Works & other Services: 	Lecture, Discussion	1	1


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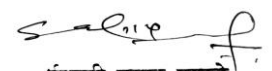


			Legal provisions, bases and norms, process and cost estimation formats			
	Contract models and Procurement Methods				1	
4	Bidding Procedures in public Procurement: Goods/Works /other Services	The participants will be able to describe the bidding procedures and sequencing of bidding activities and familiarize with e-procurement and process as per PPMO guidelines and practice	<ul style="list-style-type: none"> •Steps and preconditions for bidding procedures •Opportunity publication, pre-bid meeting and response, bid opening, evaluation and complain handling, contract management •E-procurement system and its environment •E-procurement threshold •Steps for e-procurement •Document verification and evaluation in e-procurement •Case related with e-procurement •Do's and Don'ts in e-procurement •Points to consider in e-procurement •E-procurement portal demonstrations from website of PPMO 	Lecture, Discussion	1	
5	Procurement of Goods- Bid Document Preparation and Evaluation	Familiarize the participants about the standard of bid document structure of goods and preparation of bid document Enable participants to prepare the bid document for the procurement of goods Enable participants to prepare the bid document for the procurement of works	<ul style="list-style-type: none"> •Preparation of bid notice • ITB, bid data sheet, EQC, bidding forms, schedule of requirement, GCC and SCC •INCOTERMS in ICB contracts •Data sheet, EQC, BoQ/Price schedule, Schedule of requirement and SCC (Group exercise) •TOR, ITC, SCC-time based and lumpsum contract •Data sheet, EQC, BoQ/Price schedule, Schedule of requirement and SCC (Group exercise) •TOR, ITC, SCC-time based and lumpsum contract 	Lecture, Discussion	1	1


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6	Procurement of Works-Bid Document Preparation and Evaluation	Familiarize the participants about the standard bid document structure of works and preparation of bid document	<ul style="list-style-type: none"> •Preparation of bid notice for 1S1E/1S2E •ITB, bid data sheet, EQC, BoQ, GCC and SCC 	Lecture, Discussion	1	1
7	Procurement of Consulting Services (TOR, Estimation and EOI Document Preparation)	Enable to describe the procedures and method and selection method of consulting service procurement	<ul style="list-style-type: none"> •Definition and conditio of consultancy procurement •Steps in consulting procurement •Preparation of terms of reference (TOR) •Cost estimation: methods of selection and types of consulting contract 	Lecture, Discussion	1	0
8	Procurement of Consulting Services (EOI, RFP, Evaluation, Negotiation, and Contract Award)	Enable participants to prepare EOI and short listing of consultant and issuance of RFP for consulting services procurement Enable the participants to know the process of technical and financial proposal under different selection methods and negotiation in consulting contracts	<ul style="list-style-type: none"> •EOI document preparation •Short listing/ Evaluation criteria RFP preparation (Consideration of provision for ITC and SCC for RFP preparation, qualification and major issues in RFP preparation) and issuance of RFP •Aspect of marking and scoring of technical proposal •Preparation of technical evaluation report •Opening of financial proposal •Negotiation and its aspect •Case study 	Lecture, Discussion	1	0
9	Contract Management: Goods/Works / Consulting Services/Other Services	Enable to act as the contract administrator and understand about the stages/ circumstances of contract administration.	<ul style="list-style-type: none"> •Elements of contract •Procedures of contract administration •Formation of task force/team •Work schedule/Delivery Schedule •Management meetings and regular monitoring and supervision •Record of major events •Progress/Final payments 	Lecture, Discussion	2	0
10	Overview of development partner's Procurement Framework	Familiarize new procurement framework of major development partner	<ul style="list-style-type: none"> •procurement framework of WB/ADB •Similarities and differences between government and development partner's procurement provisions •Technical terms used in 	Lecture, Discussion	1	0

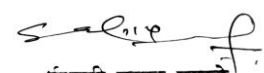

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			donors' procurement systems			
11	Account Auditing and performance audit	Explain financial control (Internal and External system in Nepal) Enable participants to understand the audit rules and procures	Auditor General Office, Roles and Responsibilities Auditing Rules and Procedure, Timeline	Lecture, Discussion	1	0
12	Issues and Challenges in Public Procurement Procedures and Roles of Oversight Agencies	Enable participants to understand issues and challenges of public procurement and Roles of oversight agencies in public procurement	<ul style="list-style-type: none"> •Roles of PPMO, CIAA, OAG, PPRC in public procurement •Sought advice in public procurement process from PPMO •Complain handling through PPRC •Investigation process in CIAA and major issues in case handling by CIAA 	Lecture, Discussion	1	0
Total					15	3

Module 6: Research and Development

S.N.	Session Topic	Objective	Sub-Content	Delivery Process	Session	
					Theory	Practical
1	Agriculture Value Chain Analysis and Value Chain Financing	Enable participants to understand the concept of agriculture value chain value chain financing	Value Chain Concepts, Stakeholder, enabler, value creation, value chain financing, issues and challenges with case studies	Lecture, Discussion and Exercise	1	1
2	SWOT Analysis and Stakeholder Analysis	Enable participants to undertake a swot analysis for strategic planning	SWOT, strategic planning, stakeholder analysis	Lecture, Discussion and Exercise	2	2
3	Preparation of Project Concept Note and Proposal Writing (PCN)	To be able to prepare the PCN	Concept and importance of PCN Common format of PCN Need for preparing a Research / Study proposal Common format of a Research/ Study proposal	Lecture and Discussion	2	0
4	Logical Framework				1	


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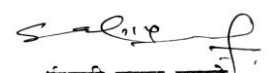
5	Data management Processing and Analysis	To develop capacity in research data analysis	Data collection, triangulation, cleaning, validation, coding and tabulation Data analysis (use of major statistics and computer application) and Interpretation of results Statistical Tests & Inferences	Lecture, Discussion and Exercise	1	1
6	Report Writing and Presentation Skills	To develop capacity in report writing and presentation skills	Report Writing Skills Presentation Skill Preparation of Research/ Study Proposal for Field Work	Lecture and Discussion	1	0
7	Geographical Information System	Enable Participants to understand and use Geographical Information System	GIS, Theory and Practice	Lecture, Discussion and Exercise	2	4
Total					10	8

Module 6: Research and Development

S.N.	Session Topic	Objective	Sub-Content	Delivery Process	Session
1	Field Study	Enable participants to undertake field study on service delivery, operations, value chain	Service Deliver, Institutions, Role Responsibility, Value Chain Analysis	Filed Study	18

Module 7: Reporting and Evaluation

S.N.	Session Topic	Objective	Sub-Content	Delivery Process	Session	
					Theory	Practical
1	Report Writing	Enable participants to write a field report	report drafting, analysis, discussion, and report writing	Assignment	0	6
2	Presentation	Enable participants to present field study	presentation preparation, delivery of presentation	Evaluation	0	3


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Training Title: IPM FFS Facilitator's Refresher Training

Training Duration: 6 working Days

Training Objectives: By the end of the training the participants will be able to

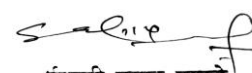
1. To share the experiences of IPM Farmers Field School among the participation
2. To update the IPM Facilitators on various aspects of FFS operation
3. To impart the latest knowledge/technology on the Integrated Pest Management
4. To identify problems related to crop diseases and insects
5. To assist in the operation of IPM Farmer School

Target Group: Assistant level

Class Duration: 1hr 30mins

Class per Day: 4

Day	S. No	Session Topic	Sub content	Delivery methods	Theory	Practical
1		Inauguration & Introduction	Registration, Inaugural ceremony, Distribution of stationeries to the participants, Welcome speech; Novel concepts and approach and objectives of IPM Program	Banner opening/Torching/ Distribution, Lecture/ Brochure distribution/ success history		
		Pre-test	Knowledge on IPM, FFS, and Facilitation skills	Objective /Multiple choice questions		
	1	Expectation matching and Norms setting	Facilitation, technical, Logistic, Managerial, Formation of sub groups	Participatory discussion and exercise		1
	2	SWOT Analysis of IPM-FFS in Nepal	Experience sharing, strength, weakness and suggestion for improvement	Participatory discussion, group and work presentation		1
	3	FFS- Preparatory meetings	Preparatory meetings-3, Participants selection, Site and Venue Selection, Crop Selection, FFS planning-Improvement, Suggestions, GAM, Resource mapping	Participatory discussion, Group work and presentation and synthesis	1	
	4	Cropping calendar	Cropping calendar preparation of different crops for FFS	Lecture, Participatory discussion, Group work and presentation	1	
2	5. 6	Field trail design in FFS	Need identification, Type of trials in IPM FFS (Simulation trials, comparative studies, problems related trials, Trail design randomization and replication, layout	Participatory discussion, Exercise	1	1
	7	Major Activities of FFS with timeline	General format of FFS, Major steps of FFS, Mandatory activities of FFS	Participatory discussion, Group work and presentation	1	


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	8	Agroecosystem analysis (AESAs)	Concept of AESA, Collection, processing and presentation of data, Decision making process, Major parameters for different major vegetables and rice; Observation, Preparation and Presentation, Improvement, Suggestion,	Participatory discussion, questioning; Sub group observation in field, preparation of AESA, presentation in big group, Participatory discussion with leading question	1	
3	9	Safe food production (GAP, Organic, IPM etc) on FFS	Introduction, importance and comparison between GAP, Organic and IPM, Relevance and effectiveness of GAP, Organic and IPM on FFS	Participatory discussion, group work and presentation	1	
	10	Nursery management	Nursery management with respect to pest management, Type, importance, method, soil treatment, Off season management, care take etc.	Participatory discussion, group work and presentation	1	
	11	Cultivation Practices & IPM packages of major cereal crops	Soil, nutrient requirement, spacing, variety, fertigation, interculture, pest management, harvesting and other management practices	Participatory discussion, group work and presentation	1	
	12	Cultivation Practices & IPM packages of major vegetables	Soil, nutrient requirement, spacing, variety, fertigation, interculture, pest management, harvesting and other management practices	Participatory discussion, group work and presentation	1	
4	13	Natural enemies of pest	Types, role, habitat, conservation and importance in IPM	Participatory discussion and Audio visual, Collection of Natural enemies and insect pests	1	
	14	Classification of pesticides and its effect on Insect pest and Natural enemies	mode of action, type, waiting period, LD 50, chemical nature, WHO classification, colour band, toxicity, harmful effect of pesticide; Effects of pesticides on IPs and Nes	Participatory discussion with leading question, group work, Collection of Natural enemies and insect pests	1	
	15, 16	Market Survey (pesticide monitoring)	Introduction, importance, method, reporting; Survey of Biopesticides, Organic fertilizer and different categories of Pesticides	Field visit and presentation	1	1
5	17	Use of Botanicals, biopesticides and traps	Pheromones/ Lures, major biopesticides, botanicals, mode of action, doses,	Participatory discussion, group work and presentation	1	

		efficacy, traps and other innovative methods			
18	Harvesting and post-harvest management	Harvesting and post-harvest handling of perishable and non-perishable crops	Participatory discussion with leading question & Special Class	1	
19	Plant Clinic in context of pest management	General introduction and its importance in pest management, process of plant clinic conduction	Participatory discussion with leading question & Special Class	1	
20	Plant Clinic and its operation in Nepal	Process of plant clinic conduction	Field exercise		1
6	21	IPM product marketing	Marketing linkages, advocacy, value chain	Participatory discussion with leading question	1
	22	Soil fertility management	Soil physical, biological and chemical properties (Soil OM (hydrogen peroxide), soil pH, water holding capacity, soil infiltration rate, soil sampling)	Group work, participatory discussion processing and presentation; Practical exercises	1
	23	Monitoring, evaluation and report preparation of FFS	Major component of report, M & E checklist	Lecture, Participatory discussion, group work and presentation	1
	24	Farmers field day and next season planning	Advocate and disseminate benefits the IPM FFS and lesson learnt, follow up activities	Lecture, Participatory discussion, group work and presentation	1
		Post test	Knowledge on IPM, FFS, and Facilitation skills	Objective Questions/Multiple choice	
		Training sums up and feedback	Remind and evaluation	participatory discussion	
		Graduation and closing ceremony			
	Total			19	5



Training Title: IPM FFS Facilitator's Refresher Training

Training Duration: 11 working Days

Training Objectives: By the end of the training the participants will be able to

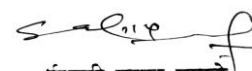
1. To share the experiences of IPM Farmers Field School among the participation
2. To update the IPM Facilitators on various aspects of FFS operation
3. To impart the latest knowledge/technology on the Integrated Pest Management
4. To identify problems related to crop diseases and insects
5. To assist in the operation of IPM Farmer School

Target Group: **Officers level**

Class Duration: 1hr 30mins

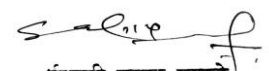
Class per Day: 4

Day	S N.	Session Topic	Sub content	Delivery Methods	Theory	Practical
1		Inauguration & Introduction	Registration, Inaugural ceremony, Distribution of stationeries to the participants, Welcome speech; Novel concepts and approach and objectives of IPM Program	Banner opening/Torching/ Distribution, Lecture/ Brochure distribution/ success history		
		Pre-test	Knowledge on IPM, FFS, and Facilitation skills	Objective /Multiple choice questions		
	1	Expectation matching and Norms setting	Facilitation, technical, Logistic, Managerial, Formation of sub groups	Participatory discussion and exercise	1	
	2	SWOT Analysis of IPM-FFS in Nepal	Experience sharing, strength, weakness and suggestion for improvement	Participatory discussion, group and work presentation	1	
	3	Adult learning	Adult learning, experiential learning cycle, concept of NFE	Participatory discussion, group and work presentation	1	
	4	Facilitation Skills and methods of facilitation	Why, how, skills, do and don'ts by the facilitator, difference with trainer, characteristics of good facilitators	Participatory discussion, group work and presentation	1	
2	5	Comprehensive Planning of FFS	Concept of yearly and seasonal FFS, Village level planning, situation analysis, resource mapping, cropping pattern optimization and intensity, Current cultivation practices and gap identification	Group work participatory discussion processing and presentation	1	


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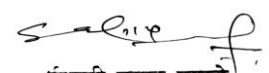


	6	FFS-Preparatory meetings	Preparatory meetings-3, Participants selection, Site and Venue Selection, Crop Selection, FFS planning-Improvement, Suggestions, GAM, Resource mapping	Participatory discussion, Group work and presentation and synthesis		1
	7	Major steps on FFS and cropping calendar	mandatory activities of FFS, outlines of FFS, Objectives importance of Growth stage analysis and preparation of cropping calendar (tomato, Potato, Maize, cauli, cucumber, Pumpkin etc) & Fruit crops	Participatory discussion, Group work and presentation and synthesis		1
	8	Cropping calendar preparation contd...	Objectives importance of Growth stage analysis and preparation of cropping calendar (tomato, Potato, Maize, cauli, cucumber, Pumpkin etc) & Fruit crops	Participatory discussion, Group work and presentation and synthesis		1
3	9	Field trail design in FFS	Need identification, Type of trials in IPM FFS (Simulation trials, comparative studies, problems related trials, Trail design randomization and replication, layout	Participatory discussion, Group work and presentation		1
	10	Field trail design in FFS	Need identification, Type of trials in IPM FFS (Simulation trials, comparative studies, problems related trials, Trail design randomization and replication, layout	Field work/exercise		1
	11	Soil fertility management	Soil texture and structure, water and nutrient holding capacity, living soil and soil microorganisms, green manuring; Soil OM (hydrogen peroxide), soil pH, water holding capacity, soil infiltration rate, soil sampling	Group work participatory discussion processing and presentation; Practical exercises		1
	12	Soil nutrient management	Fertilizer type, nutrient content, identification, dose calculation, IPNS, roles, nutrient deficiency symptoms	Lecture	1	
4	13	Safe food production (GAP, Organic, IPM etc) on FFS	Introduction, importance and comparison between GAP, Organic and IPM, Relevance and effectiveness of GAP, Organic and IPM on FFS	Participatory discussion, group work and presentation	1	
	14	Ecological Agriculture and	Introduction, Principles, Practices of Ecological Agriculture; Ecological Pest Management	PD	1	


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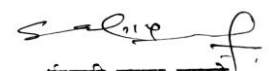


		crop pest management				
	15,16	Case study (GAP /Organic/ IPM Field)	Introduction, importance, method, reporting	Field visit and presentation		2
5	17	Agroecosystem analysis (AESA)	Concept of AESA, Collection, processing and presentation of data, Decision making process, Major parameters for different major vegetables and rice; Observation, Preparation and Presentation, Improvement, Suggestion,	Participatory discussion, Group work and presentation	1	
	18	Agroecosystem analysis (AESA)	Observation, Preparation and Presentation, Improvement Suggestion	Sub group observation in field, preparation of AESA, presentation in big group, Participatory discussion with leading question		1
	19	Nursery management	Nursery management with respect to pest management, Type, importance, method, soil treatment, Off season management, care take etc.	Participatory discussion, group work and presentation	1	
	20	Crop water requirement and irrigation schedule of major crops	critical stages of crops, irrigation systems, low-cost irrigation technologies	Lecture and participatory discussion	1	
6	21	Quality seed	Concept and importance, Seed quality, certification, labeling, hybrid and OP variety, seed treatment; Seed germination test, seed treatment	Lecture and participatory discussion	1	
	22	Seed test exercise	Concept and importance, Seed quality, certification, labeling, hybrid and OP variety, seed treatment Seed germination test, seed treatment	Group work/ Practical exercise		1
	23	Cultivation Practices & IPM packages of major cereals	Soil, nutrient requirement, spacing, variety, fertigation, interculture, pest management, harvesting and other management practices	Participatory discussion, group work and presentation	1	


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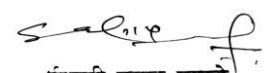


	24	Cultivation Practices & IPM packages of major Cole crops	Soil, nutrient requirement, spacing, variety, fertigation, interculture, pest management, harvesting and other management practices	Participatory discussion, group work and presentation	1	
7		Cultivation Practices & IPM packages of major cucurbits	Soil, nutrient requirement, spacing, variety, fertigation, interculture, pest management, harvesting and other management practices	Participatory discussion, group work and presentation	1	
		Cultivation Practices & IPM packages of major solanaceous crops	Soil, nutrient requirement, spacing, variety, fertigation, interculture, pest management, harvesting and other management practices	Participatory discussion, group work and presentation	1	
		Natural enemies of crop pest	Types, role, habitat, conservation and importance in IPM	Participatory discussion and Audio visual, Collection of Natural enemies and insect pests		1
		Insect Zoo and cup study	concept, important, handling, preparation	Participatory discussion and exercise	1	
8		Botanical and biopesticides and their importance	Major biopesticides, botanicals, mode of action, doses, efficacy,	Participatory discussion, group work and presentation	1	
		Classification of pesticides and its effect on insect pest and natural enemies	Mode of action, types, waiting period, LD 50, chemical nature, WHO classification, colour band, toxicity, harmful effect of pesticide; Effects of pesticides on IPs and Nes	Participatory discussion with leading question, Group work,	1	
		Market Survey (pesticide monitoring)	Introduction, importance, method, reporting; Survey of Biopesticides, Organic fertilizer and different categories of Pesticides	Field visit and presentation		2
9		Pesticide monologue/self-surveillance	Mode of entry, pesticide exposure, safety measures, pesticide poisoning	Exercise		1
		Root and vessel exercise	nutrient and pesticide uptake, importance of weed, effect of sunlight	Exercise		1
		Plant Clinic in context of pest management	General introduction and its importance in pest management, process of plant clinic conduction	Participatory discussion with leading question & Special Class	1	


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		Plant Clinic and its operation in Nepal	Process of plant clinic conduction	Field exercise		1
10		Use of traps & lures and their efficacy	Pheromone, lures and traps for various pests and other innovative methods	Participatory discussion, group work and presentation	1	
		FFS Group management and cooperative concept	Group formation procedure, Group constitution, Role and responsibility of executive members, Procedures for group meetings, decision making process, fund raising, account and record keeping, coordination with district-based offices and other farmers group/s	Participatory discussion & Special class	1	
		Harvesting and post-harvest management of major crops	Harvesting and post-harvest handling of perishable and non-perishable crops contd	Participatory discussion with leading question & Special Class	1	
		Agricultural market and IPM product marketing	Marketing linkages, advocacy, value chain	Participatory discussion with leading question	1	
11		Benefits cost analysis and business plan	Cost of cultivation, benefits from output and B/C ratio and other financial and economic analysis	Participatory discussion and group work	1	
		Monitoring, evaluation and report preparation of FFS	Major component of report, M & E checklist	Lecture, Participatory discussion, group work and presentation	1	
		Farmers field day and next season planning	Advocate and disseminate benefits the IPM FFS and lesson learnt, follow up activities	Participatory discussion	1	
		Post test	Knowledge on IPM, FFS, and Facilitation skills	Objective Questions/Multiple choice		1
		Graduation and closing ceremony	Revision and evaluation Training sum up and feedback Closing ceremony	Participatory discussion		
		Total			27	17


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Training Title: TOT for Mushroom Production

Training Duration: 15 working Days

Training Objectives: By the end of the training the participants will be able to

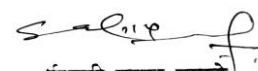
1. Apply Knowledge about Training of Trainers (ToT)
2. Explain different types of mushrooms produced in Nepal.
3. Describe knowledge and skills on mushroom spawn production techniques.
4. Present knowledge and skills on different types of mushroom production technologies.
5. Deliver knowledge on proper handling of mushroom with post-harvest technology.
6. Elucidate different techniques of commercial mushroom production and marketing.

Target Group: Agriculture Technician (JT/JTA)

Class Duration: 1hr 15mins

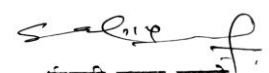
Class per Day: 4

S.N.	Day	Session Topic	Sub- content	Delivery Methods	Session	
					Theory	Practical
1	1	Opening Session	<ul style="list-style-type: none"> • Opening • Introduction • Expectation Collection • Pre- Test • Norms Setting 	Interaction	1	
2		Training Cycle	<ul style="list-style-type: none"> • Concept and Meaning of ToT • ToT Element • Training Need Assessment • Team building • Training Methods • Key Steps in Training Design • Structure of the Training Course • Lesson planning • Group presentation 	Lecture & Discussion	2	1
3						
4						
5 6	2	Skill Development	<ul style="list-style-type: none"> • Platform Skill • Facilitation Skill • Teaching Skill 	Lecture & Discussion	1	1
7		Introduction of Mushroom	<ul style="list-style-type: none"> • Definition and biology of Mushroom • History of Mushroom cultivation in Nepal • Nutritional Value of Mushroom • Medicinal Properties of Mushroom • Economic value of mushroom 	Lecture & Discussion	1	
8		Mushroom Spawn Preparation, production and preservation	<ul style="list-style-type: none"> • Basic concepts 	Lecture, Discussion	1	
9	3		<ul style="list-style-type: none"> • Preparation of Culture Media 	Practical		4


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10			<ul style="list-style-type: none"> • Pure culture 			
11			<ul style="list-style-type: none"> • Mother culture 			
12		Mushroom Spawn Preparation, production and preservation	<ul style="list-style-type: none"> • Substrate preparation • Production of commercial spawn • Storage/Transportation of Spawn 			
13	4	Oyster Mushroom (<i>Pleurotus spp</i>) Production Technology	<ul style="list-style-type: none"> • Climatic Requirement 	Lecture, Discussion & Practical	1	3
14			<ul style="list-style-type: none"> • Tools & Equipment • Substrate and its Preparation 			
15			<ul style="list-style-type: none"> • Spawning • Incubation • Care and Handling of Balls 			
16			<ul style="list-style-type: none"> • Harvesting and Postharvest Handling • Reuse and Recycling of wastes 			
17	5	Construction of Mushroom Growing Unit/Tunnel/House	Site Selection	Lecture, Discussion & Practical	1	3
18			Layout of Tunnel			
19			Cutting of Bamboo as Scaling			
20			Tunnel Making			
			Preparation of Straw mats			
			Hanging of Bulbs			
			Bed Preparation			
			Construction of Racks			
			•Traditional structures			
			•Modern structure			
			•Construction of different structures			
			•Advantages and constraints of different structures			
21	6	Button Mushroom Production Technology	<ul style="list-style-type: none"> • Climatic Requirement 	Lecture, Discussion & Practical	2	2
22			<ul style="list-style-type: none"> • Tools and Materials 			
23			<ul style="list-style-type: none"> • Bed Preparation & Management 			
24			<ul style="list-style-type: none"> • Preparation of Compost (Short method and long method) • Casing material preparation • Spawning • Casing • Harvesting and Postharvest Handling • Reuse and Recycling of wastes 			
25	7	Shiitake Mushroom Production Technology	<ul style="list-style-type: none"> • Climatic Requirements 	Lecture, Discussion & Practical	2	2
26			<ul style="list-style-type: none"> • Selection & Preparation of Logs 			
27			<ul style="list-style-type: none"> • Process of drilling 			


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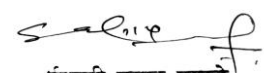


28			<ul style="list-style-type: none"> • Inoculation (Spawning) • Management of Logs • Harvesting and Postharvest Handling 			
29	8	Ganoderma Mushroom Production/ Milky mushroom/ Paddy Straw mushroom	<ul style="list-style-type: none"> • Climatic Requirement • Tools & Equipment 	Lecture, Discussion & Practical	2	2
30			<ul style="list-style-type: none"> • Substrate Preparation (wooden disk and saw dust) • Spawning and incubation • Care & Management • Harvesting & storing 			
31 32						
33	9	Value Addition Of Mushroom	<ul style="list-style-type: none"> • Mushroom Processing • Mushroom Drying • Mushroom Canning • Value added recipes Preparation • Quality Assurance • Packing & Packaging • Market Opportunities 	Lecture, Discussion & Practical	1	3
34						
35						
36						
37	10	Plant Protection	<ul style="list-style-type: none"> • Insect/Pest Management • Diseases Management 	Lecture & Discussion	1	1
38						
39		Edible and Poisonous Mushroom	<ul style="list-style-type: none"> • Edible Mushroom • Poisonous Mushroom • Wild Mushroom 	Lecture & Discussion	1	
40						
		Introduction to other economically important and medicinal mushroom found in Nepal	<ul style="list-style-type: none"> • Introduction and identification of various useful native mushroom (Cordyceps, Guchhi mushroom, etc) 	Lecture & Discussion	1	
41	11	Technologies and trends in commercial mushroom production	<ul style="list-style-type: none"> • Technologies around the world • Transfer of technologies • Trends of commercialization in mushroom in world and Nepal 	Lecture & Discussion	2	
42						
43						
44		Business Plan Preparation	<ul style="list-style-type: none"> • Plan Format • How to ascertain initial viability of a business proposal • Enlisting technical, financial, marketing and commercial aspects of business • Profitability 	Lecture & Discussion	2	
45	12	Field Trip	<ul style="list-style-type: none"> • Field visit to different mushroom farms 	Field visit		4
46						
47						
48						


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49	13	Case Studies	<ul style="list-style-type: none"> • Case study of one mushroom firm individually 	Presentation & Discussion	4	
50			<ul style="list-style-type: none"> • Success and Failure (due to spawn, substrate, time management, market etc.) 			
51			<ul style="list-style-type: none"> • Internal & External factors 			
52			<ul style="list-style-type: none"> • Organize data and information • Preparation of presentation • Presentation 			
53	14	Marketing & Production trends of Mushroom Cultivation	<ul style="list-style-type: none"> • Market trend • Production trend • Technology trend • Feasibility of mushroom production business 	Lecture & Discussion	2	
55		Different policies of mushroom production in context of Nepal.	<ul style="list-style-type: none"> • Government policies & program for mushroom • Policy necessary • Supportive programs 	Lecture & Discussion	2	
57	15	Business Plan Preparation	<ul style="list-style-type: none"> • Plan Format • How to ascertain initial viability of a business proposal • Enlisting technical, financial, marketing and commercial aspects of business Profitability 	Practical	2	
59		Concept of Mushroom Resource Centre	<ul style="list-style-type: none"> • Concept of resource center • Minimum requirement • Prospects in Nepal 	Lecture & Discussion	1	
60		Closing Ceremony	<ul style="list-style-type: none"> • Post test • Reporting • Feedback collection • Certificate distribution • Closing 	Interaction	1	
					28	32


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Training Title: Training on Laboratory Techniques

Training Duration: 12 Days

Training objectives: By the end of the training the participants will be able to

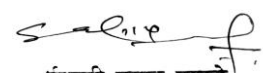
- apply biosafety and biosecurity measures in laboratory
- collect, preserve and dispatch appropriate samples for laboratory diagnosis.
- perform basic laboratory procedures (Microbiological, Pathological, Hematological, Serological, Parasitological)

Target group: Assistant level

Class per day: 4

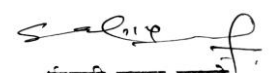
Class Duration: 75 minutes

S.N	Day	Session Topic	Sub-topic	Delivery methods	Session	
					Theory	Practical
1	1	Importance of Laboratory Diagnosis	Importance of Laboratory Diagnosis, Current diagnostic network and facilities	Lecture & Discussion	1	
2		Biosecurity and Biosafety	Introduction to biosecurity and biosafety in Laboratory, Biosafety levels, Biosecurity and biosafety measures	Lecture & Discussion	1	
3, 4		Laboratory Equipment and Reagents	Identification, handling, maintenance, and storage of different lab equipment (microscope, autoclave, centrifuge, water bath, pH meter, weighing balance, refrigerator, etc) and reagents	Lecture Discussion & Practical	1	1
5, 6	2	Sterilization	Cleaning and Sterilization of glassware, Use of Autoclave and Hot Air Oven	Lecture & Practical	1	1
7, 8		Sample collection and transportation for laboratory	Collection of blood, milk, serum, feces, skin scrapping, tissue, swab etc.; Sample coding, packaging and dispatch Demo: blood, serum, swab	Lecture Discussion & Practical	1	1
9-11	3	Post mortem procedures	Large animal, small animal & poultry	Lecture & Practical	1	2
12		Sample collection and dispatch for diagnosis of Rabies	Sample collection and preservation, dispatch, procedure and interpretation of Rapid Test	Practical		1
13, 14	4	Hematological test	Blood smear preparation and staining techniques, Blood parasite identification	Lecture & Practical	1	1
15, 16			Complete Blood Count, Total Leucocyte Count, Differential leucocyte count	Lecture & Practical	1	1
17	5	Hematological test	Hemoglobin, PCV, Erythrocyte Sedimentation Rate	Practical		1
18, 19		Biochemistry Test	Estimation of Calcium, Phosphorus	Lecture & Practical	1	1


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20		Urine Analysis	Routine Examination, Microscopic Examination, Dip Stick Test	Practical		1	
21, 22	6	Media Preparation	Types of media; Preparation of primary, selective and enrichment media; Sterility test	Lecture & Practical	1	1	
23, 24		California Mastitis Test	Milk sample collection; CMT reagent preparation; Test procedure performance and interpretation	Lecture & Practical	1	1	
25, 26	7	Bacterial Culture	Different methods of culture; streaking, stabbing, lawn culture	Lecture & Practical	1	1	
27		Preparation for Parasitological study	Reagents/Chemicals preparation	Practical		1	
28		Skin scrapping	Skin scrapping techniques	Practical		1	
29, 30	8	Bacterial identification	Colony morphology, Gram staining, Catalase, Oxidase	Lecture & Practical	1	1	
31			Antibiotic Sensitivity Test	Practical		1	
32			Biochemical Techniques (Citrate, TSI, SIM, Urease, etc.	Practical		1	
33-35	9	Parasitological Techniques	Sedimentation, Flootation and EPG count	Lecture & Practical	1	2	
36		Bacterial test interpretation	Interpretation of AST and biochemical test	Practical		1	
37, 38	10	Laboratory diagnosis of FMD	Lesion Aging; Sample collection, preservation, dispatch and diagnostic techniques	Discussion & Demo	1	1	
39, 40		Serological Techniques	Plate Agglutination Test (Brucella, Salmonella, Mycoplasma)	Lecture & Practical	1	1	
41-44	11	Serological Techniques	ELISA, Pen side Test	Lecture & Practical	1	3	
45	12	Molecular Techniques in Lab	Introduction to Molecular Techniques in Lab	Lecture & Discussion	1		
46		Laboratory Waste Management	Identification, Segregation and disposal	Lecture & Discussion	1		
47		Laboratory Record Management	Laboratory Record keeping, documentation and reporting	Lecture & Discussion	1		
48		Training evaluation and certificate distribution					1
Total classes						20	28


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शिर्षक: दुग्ध व्यवसायीको लागी दुग्ध प्रशोधन तथा विविधिकरण तालिम

तालिम अवधि: ६ कार्यदिन

तालिमको उद्देश्य: तालिम पश्चात सहभागीहरूले

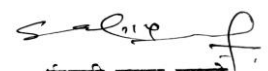
- दुग्धको भैतिक तथा रासायनिक गुणको बारेमा भन्न सक्षम हुनेछन्
- दुग्धको गुणस्तर विभिन्न विधिद्वारा परीक्षण गर्न सक्षम हुनेछन्
- कम्तीमा ७ प्रकारका दुग्धजन्य परिकार बनाउन सक्षम हुनेछन्
- साना तथा मझौला दुग्ध उद्योगहरूको scheme तयार गर्न सक्षम हुनेछन्

सहभागी: दुग्ध व्यवसायी (कृषकस्तर)

कक्षा प्रति दिन: ४

कक्षा समय: ९० मिनेट

क्रसं	दिन	शिर्षक	उप शिर्षक	विधि	कक्षा	
					सैद्धान्तिक	प्रयोगात्मक
१	१	रजिष्ट्रेसन, अपेक्षा संकलन, पूर्व परीक्षा, तालिमको उद्देश्य	रजिष्ट्रेसन, अपेक्षा संकलन, पूर्व परीक्षा, तालिमको उद्देश्य	छलफल		१
२		दुग्धको बनावट, चारित्रिक गुण तथा यसको महत्त्व	दुग्धको परिभाषा, बनावट र चारित्रिक गुणहरू	छलफल	१	
३		सफा दुग्ध उत्पादन, सङ्कलन तथा बजार व्यवस्थापन	सफा दुग्ध उत्पादन, सङ्कलन, बजार व्यवस्थापन	छलफल	१	
४		गुणस्तर मापदण्ड र मिसावट परिक्षण प्रविधि	दुग्ध तथा दुग्ध पदार्थहरूको न्युनतम गुणस्तर मापदण्ड; मिसावट र गुणस्तर मापन गर्ने विधि र आवश्यक सामग्री	छलफल, प्रयोगात्मक		१
५	२	असल दुग्ध उत्पादन अभ्यास (GHP)	गाईभैसी फार्महरूमा असल दुग्ध उत्पादन अभ्यास (GHP) सँग सम्बन्धित कार्यप्रक्रिया (Protocol), मापदण्ड र चेकलिष्ट बारे जानकारी; दुग्ध तथा दुग्ध पदार्थबाट सर्ने रोगहरू र जनस्वास्थ्यमा पर्ने असरहरू	छलफल	१	
६		दुग्धको क्रिम सेपेरेसन र पास्चराइजेसन	दुग्धको क्रिम सेपेरेसन, होमोजिनाइजेसन, पास्चराइजेसन तथा प्याकेजिङ	प्रयोगात्मक		१
७		डेरी उपकरणहरूको सरसफाई र निर्मलीकरण	डेरी उपकरण तथा मेसिनहरूको चिनारी; उपकरण सरसफाईको महत्त्व, सरसफाई गर्ने विधि र प्रयोग हुने सामग्री	छलफल	१	
८		दुग्ध उद्योगको लागी Scheme तयारी र व्यवहारिक संहिता	साना तथा मझौला दुग्ध उद्योगहरूको scheme तयार गर्ने (लगानी, खर्च	छलफल	१	


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			व्यवस्थापन, लाभ लागत, जैनशक्ति, अभिलेखिकारण आदि); दुग्ध उद्योगको लागी प्रचलित व्यवहारिक संहिता			
९		दुधको मुल्य निर्धारण विधि	Fat, SNF र TS को आधारमा दुधको मुल्य निर्धारण प्रक्रिया	छलफल, प्रयोगात्मक		१
१०-१२	३	दुग्धजन्य परिकार तयारी	खुवा, दही, पनिर, पेडा, आइसक्रिम, छुर्पी, लस्सी, जिरा मही आदि (कम्तिमा पाँच परिकार)	छलफल	३	
१३-१६	४	दुग्धजन्य परिकार तयारी	खुवा, दही, पनिर, पेडा, आइसक्रिम, छुर्पी, लस्सी, जिरा मही आदि (कम्तिमा पाँच परिकार)	प्रयोगात्मक		४
१७-२०	५	निजी, सहकारी डेरी उद्योगको अवलोकन भ्रमण	निजी डेरी अवलोकन	प्रयोगात्मक		४
२१-२३		दुग्धजन्य परिकार	गुदपाक पुष्टकारी वर्फी चिज आदि	छलफल, प्रयोगात्मक	२	१
२४	६	तालिमको मुल्याङ्कन तथा समापन				१
		जम्मा कक्षा संख्या			१०	१४



Basic In-Service Training for Officer 6th level on Livestock/Fisheries Planning and Management

Training Duration: 30 working days

Training Objectives: Upon the completion of the training, the participants will be able to

- describe the issues, challenges, vulnerabilities and prospects of Livestock/Fisheries sector in Nepal
- explain the policies related to Livestock/Fisheries sector development in Nepal
- conduct the planning process for Livestock/Fisheries sector development in Nepal
- apply the tools for self-development and enhancing personal efficacy
- recognize and explain the civil service conduct and office operations
- identify and use the procurement tools for procurement of goods, services, and works
- carry out research to explore the service delivery performance

Total number of classes: 90

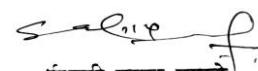
Session per day: 3

Session duration: 90 minutes

Total number of classes: (Theory-57, Practical-33)

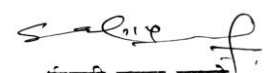
Module I: Managing Self & Interpersonal Skills

S.N.	Title	Content Outline	Methodology	Session	
				Theory	Practical
1	Managing Self	<ul style="list-style-type: none"> •Concept of self •Self-awareness •Self-management 	Lecture, Discussion & Exercise	1	0
2	Developing Positive Attitude at Work	<ul style="list-style-type: none"> •Features of positive attitude •Dimensions of positive attitude •Ways to develop positive attitude 	Lecture, Discussion	1	0
3	Managing Time and Priority	<ul style="list-style-type: none"> •Importance of Time •Time and priority (urgent and importance) •Effective time management skill 	Lecture, Discussion & Exercise	1	0
4	Stress management	<ul style="list-style-type: none"> •Causes, symptoms of stress •Impacts of stress in organization and individual •Methods of managing stress 	Lecture, Discussion & Exercise	1	0
5	Motivation Skills	<ul style="list-style-type: none"> •Concept and theories of work motivation •Motivating factors •Work motivation practices in Nepal 	Lecture, Discussion & Exercise	1	0
6	Emotional Intelligence	<ul style="list-style-type: none"> •Importance of emotions •Positive and negative emotions •Ways to manage emotions at work place 	Lecture, Discussion & Exercise	1	0
7	Decision Making Skills	<ul style="list-style-type: none"> •Concepts •Identifying different alternative/option •Selecting best alternative •Decision making practices in Nepal 	Lecture, Discussion & Exercise	1	0
8	Effective Managerial Leadership	<ul style="list-style-type: none"> •Concepts, characteristics of a good leader •Differentiation between manager and leader •Effective leadership styles 	Lecture, Discussion & Exercise	1	0
9	Interpersonal Relationship	<ul style="list-style-type: none"> •Concepts of interpersonal relationship •Managing ego state (child, adult, parent) 	Lecture, Discussion & Exercise	1	0


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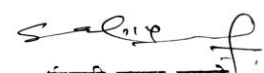


		•Maintaining effective interpersonal relationship			
10	Team building	•Importance of team and group •Stages of team process •Managing team and service quality in the organization (TQM)	Lecture, Discussion, Game	1	0
11	Managing Conflict	•Understanding conflict at work place •Conflict management strategies •Behavioral guidelines for managing conflict	Lecture, Discussion, Case Study	1	0
12	Negotiating Effectively	•Importance of negotiation skills •Steps of negotiation •Techniques of effective negotiation	Lecture, Discussion, Case, Role Play	1	0
13	Delegation of Authority	•Importance of delegation of authority •Process of delegating authority •Benefits of authority delegation •Techniques of authority delegation	Lecture, Discussion, Case Study	1	0
14	Living Spiritual Life	•Meaning of spirituality •Human relationship with spiritual being •Benefit of spiritual life	Lecture, Discussion, Practice	1	0
15	Integrity and Ethics	•Foundations and elements of integrity and ethics; factors affecting integrity and ethics in civil service •Characteristics of ethical and unethical behavior •Ways to promote integrity and ethical behavior in professional life		1	
			Total	15	0
Module II: Livestock/Fisheries and related Sectoral Policies and Strategies					
16	Historical Perspectives of Livestock/Fisheries Development	•Overview of Nepalese Livestock/Fisheries sector and contemporary issues •Priorities and major programs in various periodic plans •Technology development (Research) and extension approaches and models in Nepal.	Lecture, Discussion	1	0
17	Current Periodic Plan	Current National Periodic Plan relevant to Livestock/Fisheries Sector Provincial Periodic Plan,	Lecture, Discussion	1	0
18	An overview of Livestock/Fisheries related Acts and Rules	•Main features of some important acts and rules •Implementation status and weakness •Suggestive approaches for effective implementation	Lecture, Discussion	1	0
19	Livestock/Fisheries Policies and Strategies of Nepal	•Policies Related to Livestock/Fisheries Development	Lecture, Discussion	1	0


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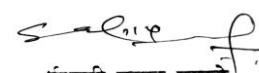


		•Agricultural Development Strategy (2015-2035)			
20	Farmers welfare and support policies/ programme of Government of Nepal	•Farmers welfare, subsidy and support policies/programme of Government of Nepal in agriculture sector	Lecture, Discussion	1	0
21	Livestock/Fisheries Research-Extension-Education Interface in Nepal	•Introduction to NARC, Departments and Agriculture Universities. •Government Policy regarding Agriculture Research •Research-Extension-Education Interface Mechanism •Current Issues in Research-Extension Education Interface	Lecture, Discussion	1	0
22, 23	Regulatory Framework in Livestock/Fisheries Sector	• Milk, Meat, Egg, Fish, Feed, Quarantine, Diseases, etc	Lecture, Discussion	2	0
24	Local Governance Operation Act 2074	•Provisions related to Livestock and Fisheries sector	Lecture, Discussion	1	0
			Total	9	0
Module III: Livestock/ Fisheries Program Planning: Tools and Techniques					
25,26	Overview of Livestock/Fisheries Planning Process	•Planning and Budgeting cycle •Planning process of Federal, Provincial and Local levels •Linkage of three tiers of government in planning process •Some tips for realistic planning and budgeting	Lecture, Discussion	1	1
27	Overview of Project and Project Cycle	•Concept of Project and Project Cycle •Different aspects of project preparation, Construction of problem tree, objective tree and solution tree •Case study from our completed or ongoing Projects regarding Project and Project Cycle	Lecture, Discussion, Case Study	1	0
28	Strength Weakness, Opportunity and Threat (SWOT) analysis	•Strength Weakness, Opportunity and Threat (SWOT) analysis of Rural Agriculture Enterprises with exercises	Exercise	0	1
29,30	Logical Framework Approach (LFA) of Project Formulation	•Basic principle and importance of LFA •Process of LFA •Theory of Change •Result Chain •Component of Log Frame Matrix •Group Exercise on Constructing Log Frame Matrix	Lecture, Discussion, Group Exercise	1	1


 ईश्वरी प्रसाद पाण्डे
 प्रमुख

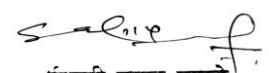


31,32	Monitoring and Evaluation of program and projects	<ul style="list-style-type: none"> • Concept of Monitoring and Evaluation • Benefit Monitoring & Evaluation (BME) • Participatory Monitoring and Evaluation (PME) • Input and output monitoring • Characteristics of good indicators of monitoring and evaluation • Major Weakness and Strengths of Existing M and E system Program reporting	Lecture, Discussion	1	1	
33	Public Private Partnership In Agricultural Development Program/Activities	<ul style="list-style-type: none"> •Concept of PPP in Agriculture • Legal framework of PPP in Agriculture •Need of partnership and contracting out, outsourcing in Agriculture programmes •Different Partnership models used in Agriculture sector, Process of Partnership and Contract Out •Challenge and future Prospects 	Lecture, Discussion	1	0	
34	Roles and responsibilities of Livestock Service Section	<ul style="list-style-type: none"> •Registration of livestock/fisheries farms and enterprises •Inspection and monitoring format development 		1	0	
				6	4	
Module IV: Governance and Service Delivery						
35,36	Governance	<ul style="list-style-type: none"> •Evolution of good governance •Good Governance and its features •Government efforts being undertaken to ensure Good Governance •Inclusive Governance 	Lecture, Discussion	2	0	
37	Agricultural Governance in Federal context	<ul style="list-style-type: none"> •Constitutional Provisions •Structure and Functions •Resource Mobilization for Agriculture Development in Federal Framework •Issues and Suggestions for improving coordination between three tiers of government in Nepal 	Lecture, Discussion	1	0	
38	Financial Administration	<ul style="list-style-type: none"> •Main features of fiscal administration act & regulation •Common arrears in fiscal administration •Fiduciary risk and ways to overcome •Problems & challenges 	Lecture, Discussion	1	0	
39,40	Management of Public Procurement	<ul style="list-style-type: none"> •Bidding process •Analyzing and selecting bidder •Contract awarding •Procurement management in agriculture sector 	Lecture, Discussion	2	0	
				Total	6	0
Module V: Livestock/Fisheries Commercialization and Enterprise Development						


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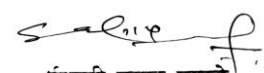


41	Livestock/Fish-Entrepreneurship Development	<ul style="list-style-type: none"> • Start-up Livestock/Fish business and its Prospects in Nepal • Concept of Livestock/Fish business Incubation and its application in Nepal 	Lecture, Discussion	1	0
42	Livestock/Fish Market and Marketing Management	<ul style="list-style-type: none"> • Trade; Trade rules, issues • Status of Livestock/Fish market and marketing management in Nepal • Agriculture price policies, market monitoring and Consumer protection • Issues and constraints • New approaches in agricultural marketing 	Lecture, Discussion	1	0
43	Agriculture modernization	<ul style="list-style-type: none"> • Concept • Major drivers and constraints of agriculture modernization (commercialization and mechanization) 	Lecture, Discussion	1	0
44	Food and Nutrition Security	<ul style="list-style-type: none"> • Concept of Food and Nutrition Security • Livestock and Fishery sector contribution in Food and Nutrition Security • Policy, Strategy and Programs for Food and Nutrition Security 	Lecture, Discussion	1	0
45	Livestock/Fish Insurance	<ul style="list-style-type: none"> • Insurance Policy and Provisions • Issues and Challenges 	Lecture, Discussion	1	0
46	Value Chain Development in Livestock/Fish	<ul style="list-style-type: none"> • Concept, Value Chain Governance, Value Chain Financing • Issues 	Lecture, Discussion	1	0
			Total	6	0
Module VI: Cross-Cutting Areas/Emerging Trends in Agriculture					
47	Gender and Social Inclusion (GESI)	<ul style="list-style-type: none"> • Gender analysis in agriculture planning • Mainstreaming gender equity in agriculture • Gender Responsive Budgeting and Audit (Practices) • Social inclusion analysis in agriculture planning • Workplace Harassment 	Lecture, Discussion	1	0
48	Livestock, Fish and Milk Cooperatives in Nepal	<ul style="list-style-type: none"> • Genesis, Present Status, Problems and Opportunity of Livestock, Fish and Milk Cooperatives in Nepal • Role of Cooperatives in Agriculture Development 	Lecture, Discussion	1	0
49	Climate Change issues in Livestock/Fisheries	<ul style="list-style-type: none"> • Impact, Mitigation and Adaptation Strategies of Climate Change 	Lecture, Discussion	1	0
50	Biosecurity & Good Husbandry Practice (GHP)	<ul style="list-style-type: none"> • Concept and features of GHP and Biosecurity • Requirements and Procedures for GHP certification 	Lecture, Discussion	1	0
51	Role of local government in	<ul style="list-style-type: none"> • Disease control and reporting • Antimicrobial Resistance and Drug 	Lecture, Discussion	1	0


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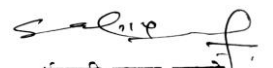
	Livestock and Veterinary issues	residue •Database management			
52	Modern Information and Communication Technologies for Agricultural Development	•Review of conventional ICTs in Livestock/Fisheries •Digital agriculture (Application of eNAM, eCHOPAL etc.) •Farmer Call Center •Use of social media in Livestock/Fisheries	Lecture, Discussion	1	0
53,54	Farm Business plan preparation	•Concept, Principle and Components • Farm Business Plan Preparation (Exercise)	Exercise	0	2
55,56	Preparation of implementation procedures	Preparation of working procedures, directives, SOP, COP, protocols, standards		1	1
57	Right to Information	• Conceptual and Legislative Framework	Lecture, Discussion	1	0
			Total	8	3
Module VII: Project Work					
58	Preparation of Project Concept Note (PCN)	•Concept and importance of PCN •Common format of PCN	Lecture, Discussion	1	0
59	Common Tools for Field Survey	• Knowledge, Attitude and Practice Test • Problem Census and Problem Solving (PC/PS) • Participatory Rural Appraisal Tools and Techniques		1	0
60	Research Methods in Livestock/ Fisheries Development	• Research needs of Livestock/Fisheries Development • Research as employed in Livestock/Fisheries extension and training •Participatory Technology Development	Lecture, Discussion	1	0
61	Research/ Proposal Writing	•Need for preparing a Research / Study proposal •Common format of a Research/ Study proposal •Introduction to Field Study/ Project work	Lecture, Discussion	1	0
62	Data Processing and Analysis	• Data coding and tabulation • Data analysis (use of major statistics and computer application) • Interpretation of results • Statistical Tests & Inferences	Lecture, Discussion	1	0
63	Report Writing Skills		Discussion	1	0
64	Presentation Skills		Discussion	1	0
65	Preparation for Field work		Discussion	0	1
66-80	Field work			0	15
81-86	Report Preparation			0	6


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87-89	Report Presentation			0	3
90	Individual assignments submission & Written Examination			0	1
			Total	7	26
			Grand Total	57	33

10% OF TOTAL SESSION CAN BE ALTERED ACCORDING TO TRAINEE'S EXPECTATION


इश्वरी प्रसाद पाण्डे
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Title: Training on Clean, Green and Ethical Livestock Production

Training Duration: 5 Days

Training objectives: By the end of the training the participants will be able to

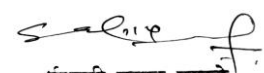
- explain the concept of clean and green livestock production through good hygiene and management for sustainability
- describe the biosecurity and biosafety measures along with climate smart practices in livestock production
- explain the concept of animal welfare for ethical animal production

Target group: Officer

Class per day: 3

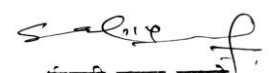
Class Duration: 90 minutes

S. N	Day	Session Topic	Sub-topic	Delivery methods	Session	
					Theory	Practical
1	1	Status of livestock and poultry production in Nepal	<ul style="list-style-type: none"> •Status of Livestock and Poultry production in Nepal •Opportunities and challenges of animal/poultry production at local level •Principles and practices of sustainable animal/poultry production 	Lecture & Discussion	1	
2		Clean livestock production system	<ul style="list-style-type: none"> •Code of practices for Hygienic livestock production •Minimizing uses of chemicals, drugs and hormones 	Lecture & Discussion	1	
3		Biosecurity	<ul style="list-style-type: none"> •Introduction, importance and application in animal agriculture 	Lecture & Discussion	1	
4	2	Concept of Antimicrobial Resistance	<ul style="list-style-type: none"> •Introduction and impacts on animal production and public health 	Lecture & Discussion	1	
5		Withdrawal period of different animal product after medicine use	<ul style="list-style-type: none"> •Drug, hormone and pesticide residues; Implications on animal/poultry production. 	Lecture & Discussion	1	
6		Act/regulations related to animal/poultry production.	<ul style="list-style-type: none"> •Introduction to the provisions of environment protection act/regulations related to animal/poultry production. 	Lecture & Discussion	1	
7	3	Waste management practices for CGE Animal product.	<ul style="list-style-type: none"> •Sustainable waste management practices in animal/poultry production premises. 	Lecture & Discussion	1	
8		Green animal production	<ul style="list-style-type: none"> •Tips for reduction of negative impacts on environment and greenhouse gas emissions. 	Lecture & Discussion	1	


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9		Climate change and its impact of Animal Product.	<ul style="list-style-type: none"> •Climate change; Issues and impacts in animal agriculture. •Climate Smart Practices in Livestock Production 	Lecture & Discussion	1	
10	4	Antimicrobial Uses	•Judicious use of antimicrobials in animal agriculture.	Lecture & Discussion	1	
11		Ethno veterinary Medicine Practice	•Ethno veterinary practices for control of parasites and infections in animals	Lecture & Discussion	1	
12		Biosecurity and Biosafety	•Demonstration of Biosecurity and Biosafety practices at farms and municipal livestock service centers	Lecture & Discussion	1	
13	5	Greenhouse gas emission control strategy	•Code of practices for minimizing emissions of livestock /poultry farms waste	Lecture & Discussion	1	
14		Legal provisions on Animal Welfare	<ul style="list-style-type: none"> •Ethical animal/poultry production with the focus on five freedoms •Ensuring animal welfare through optimal animal health, productivity •Animal welfare standards/ guidelines in Nepal 	Lecture & Discussion	1	
15		Slaughter house management	•Common practices for ensuring animal welfare at farms and slaughter houses	Lecture & Discussion	1	
Total technical classes					15	0


 ईश्वरी प्रसाद पाण्डे
 प्रमुख



Title: Training on agriculture/livestock extension services in Federalism

Training Duration: 6 Days

Training objectives: By the end of the training the participants will be able to

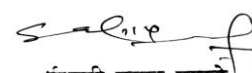
- explain roles and responsibilities of three tiers of government in agriculture & livestock extension.
- identify the gaps and needs of extension services in provincial and local levels.

Target group: Officer level

Class per day: 3

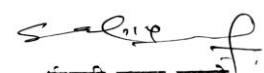
Class Duration: 90 minutes

S.N	Day	Session Topic	Sub-topic	Delivery methods	Session	
					Theory	Practical
1	1	Roles and responsibilities of three tiers of governments in agriculture/livestock extension services delivery	<ul style="list-style-type: none"> • Roles and responsibilities of federal, provincial and local governments in agriculture/livestock extension services • Constitutional provision • Provisions on Local government implementation Act 2074 Policies on Agriculture Extension and Development at provincial and local levels 	Lecture & Discussion	1	
2		Agriculture/Livestock Extension system in Nepal and international practices	<ul style="list-style-type: none"> • History, Approaches, Coverage and Status of agriculture/livestock extension system in Nepal • Recent practices in extension services in south asian countries having federal structure 	Lecture & Discussion	1	
3		Extension Linkage and coordination.	<ul style="list-style-type: none"> • Linkage and coordination among research, extension, education and producers in agriculture/livestock production in federal context • Linkage between 3 tiers of government for effective agriculture service delivery 	Lecture & Discussion	1	
4	2	Agriculture Extension approaches	<ul style="list-style-type: none"> • Agriculture/livestock extension through group approach; Concept, History, Importance and Scope, shortcomings • Importance of training and capacity building activities in agriculture/livestock extension service delivery, concept of pluralistic approach and privatization of agriculture extension 	Lecture & Discussion	1	
5		Agriculture Extension methods and Transfer of Technology (ToT) in agriculture	<ul style="list-style-type: none"> • Agriculture/livestock technology extension methods (Mini-kits, Result Demonstration, Production demonstration, Process demonstration etc), Concept of ToT in Agri extension 	Lecture & Discussion	1	


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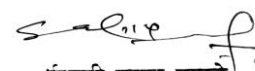


6		Agriculture Development Strategy & extension service delivery.	<ul style="list-style-type: none"> • An overview of Agriculture Development Strategy with the focus on agriculture/livestock extension service delivery • Major provisions in provincial ADS, • Concept and implementation modality of Community agriculture extension service centers (CAESC) its challenges and way forward 	Lecture & Discussion	1	
7		Livestock/fishery extension delivery system in context of Nepal and international practices	<ul style="list-style-type: none"> • History, current status and future prospects of livestock/fishery extension delivery system in context of Nepal, short comings • International relevant practices on Livestock/fishery extension delivery system and way forward 	Lecture & Discussion	1	
8	3	Participatory agriculture extension Service	<ul style="list-style-type: none"> • Participatory agriculture extension: principle, Strengths, weakness, opportunities and strategies) 	Lecture & Discussion	1	
9		ICT in Agriculture Extension	<ul style="list-style-type: none"> • Review of conventional ICTs in Agriculture extension • Digital agriculture (Application of INAM, ICHOPAL etc.) • Farmer Call Center • Use of social media in Agriculture extension 	Lecture & Discussion	1	
10		Private public partnership role in extension services.	<ul style="list-style-type: none"> • Private public partnership in agriculture/livestock extension services; Concept, needs, process, opportunities and challenges. • Concept of privatization in agriculture extension, role of private sector in agri extension, opportunities, challenges and way forward 	Lecture & Discussion	1	
11	4	Program Planning in Agriculture/ Livestock Extension	<ul style="list-style-type: none"> • Program Planning in Agriculture/ Livestock Extension at provincial and local level, steps of program formulation and approval at local and provincial level 	Lecture & Discussion	1	
12		Monitoring & Evaluation in Extension System.	<ul style="list-style-type: none"> • Introduction to monitoring, types of monitoring, importance and practices for monitoring of agriculture programs/projects • Evaluation, its types and mechanism at different tiers of government for effective monitoring and evaluations of in agriculture/livestock development programs/projects. 	Lecture & Discussion	1	


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13	5	Role and Responsibility of Different offices in Extension services.	<ul style="list-style-type: none"> • Current status and potential interventions of Department of Agriculture, Department of Livestock and Nepal Agriculture Research Council for effective extension service delivery in context of federalism 	Lecture & Discussion	1	
14 15		Norms and guidelines on Agriculture/ Livestock extension	<ul style="list-style-type: none"> • Framework for preparation of Norms, Standard, Working Procedure, Guidelines for implementation of agri/livestock extension programs at local and provincial level • Prevailing norms and guidelines for program implementation at local and provincial level 	Lecture Discussion & Exercise	1	1
16	6	Farmers database and its application	<ul style="list-style-type: none"> • Introduction and Application of web-based Farmers Registration Management System of GoN • Importance, uses, challenges and way forward 	Lecture & Discussion	1	
17		Different tools of agriculture communication	<ul style="list-style-type: none"> • Introduction and application of different tools of agriculture communication in modern area. 	Lecture & Discussion	1	
18		Gender and social inclusion in agriculture/livestock extension.	<ul style="list-style-type: none"> • Gender and social inclusion, concept of WID, WAD, GAD, gender role in agriculture extension and development • Issues, challenges on gender and social inclusion in Nepalese agriculture 	Lecture & Discussion	1	
Total technical classes					17	1


 इन्द्रवरी प्रसाद पाण्डे
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Title: Training on Integrated Pest Management

Training Duration: 6 Days

Training objectives: By the end of the training the participants will be able to

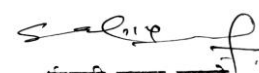
- explain concept of Integrated Pest Management (IPM)
- apply safe handling and use of pesticides
- explain concept of One health approach on Pests management
- describe legal provisions related to plant protection

Target group: Officer level

Class per day: 3

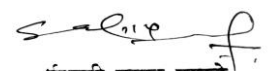
Class Duration: 90 minutes

S.N	Day	Session Topic	Sub-topic	Delivery methods	Session	
					Theory	Practical
1, 2		Concept of Integrated Pest Management (IPM)	• Principles, Concepts, Benefits, Status, Challenges and Opportunities for promoting IPM	Lecture & Discussion	2	
3		Concept of Ecosystem and Agro Ecosystem	• Food Chain, Food Web, Insect Pest and Natural Enemies	Lecture & Discussion	1	
4	2	Disease management in Vegetable	• Major diseases of vegetable and their management	Lecture & Discussion	1	
5		Disease management in Crop	• Major diseases of cereal crop and their management	Lecture & Discussion	1	
6		Insect & Pests Management in Vegetable	Major insect pests of vegetables and their management	Lecture & Discussion	1	
7		Insect Pests Management in Crops	• Major insect pests of cereal crops and their management	Lecture & Discussion	1	
8		Weed Management	• Types of Weeds, Mode of Propagation and Management	Lecture & Discussion	1	
9		Farmer Field School Concept	• Principles & characteristic of FFS – Overview	Lecture & Discussion	1	
10	4	Agroecosystem Analysis (AESA)	• Data collection - Parameters - Processing – Drawing	Lecture & Discussion		1
11		4. Legal provisions on Pesticides	• Pesticides Act 2076 and Regulation 2051 • Plant Quarantine and Protection Act 2064 and regulation 2066	Lecture & Discussion	1	
12		Pesticide and its classification	• Pesticide Classification; target pest, application, formulation, toxicity and chemical nature	Lecture & Discussion	1	


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13	5	Pesticide and its mode of action	• Pesticides and mode of entry, mode of action and its use of insect resistance management	Lecture & Discussion	1	
14		Pesticide and one health relationship	• Effects of pesticides on human health, non-target organism and environment	Lecture & Discussion	1	
15		Natural enemies of crops and its role in Agroecosystem	• Predators, Parasitoids, Microbials; Conservation	Lecture & Discussion	1	
16	6	Waiting Periods of Pesticides	• Waiting periods/Re-entry intervals of pesticides	Lecture & Discussion	1	
17		Safe handling of Pesticides	• Proper handling, storage and disposal of pesticides	Lecture & Discussion	1	
18		Alternatives of chemical Pesticides	• Alternatives of chemical pesticides; Commercially available lures, traps, botanical and Biological Control Agents	Lecture & Discussion	1	
Total technical classes					17	1


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Training Title: Animal Feed Analysis and Quality Control

Training Duration: 6 Days

Training objectives: By the end of the training the participants will be able to

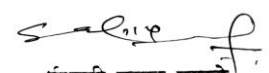
- describe the common methods to estimate the major nutrients in the feed
- explain the common procedures for laboratory safety
- perform the common testing methods for proximate analysis of the animal feed
- state the basic elements of the quality control procedures in an animal feed lab

Target group: Officer

Class per day: 3

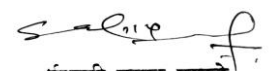
Class Duration: 90 minutes

S.N	Day	Session Topic	Sub-topic	Delivery methods	Session	
					Theory	Practical
1	1	Quality of Feed and its ingredients	<ul style="list-style-type: none"> •Quality of Feed and Feed raw materials. •Existing Provisions for the regulation of Feed Quality •Ingredients commonly used in Animal Feed (Raw materials/ supplement/Additives) 	Lecture/ Group discussion	1	
2		Quality assessment of Feed ingredients	<ul style="list-style-type: none"> •Quantitative Analysis, •Qualitative Analysis, •Chemical Analysis, •Biological Analysis •Anti-nutritional Factors, 	Lecture/ Group discussion	1	
3		Commonly used Laboratory Equipment in Animal Feed Lab	<ul style="list-style-type: none"> •Proper Use, Handling and Maintenance of Laboratory Equipment for the analysis of Dry matter, CP, CF, Total Fat and Energy. 	Lecture	1	
4,5	2	Preparation of Laboratory solutions	<ul style="list-style-type: none"> •Preparations of Laboratory solutions of different concentration and their standardization 		1	1
6		Estimation of Dry Matter in Animal Feed/ Feed ingredients	<ul style="list-style-type: none"> •Principle and Procedure 	Practice		1
7	3	Estimation of Crude Protein in Animal Feed/ Feed ingredients (Digestion)	<ul style="list-style-type: none"> •Principle and Procedure 	Practice		1
8		Estimation of Total Fat/Energy in Animal Feed/ Feed ingredients	<ul style="list-style-type: none"> •Principle and Procedure 	Practice		1
9		Estimation of Total Ash/ Acid Insoluble Ash in Animal Feed/ Feed Ingredients	<ul style="list-style-type: none"> •Principle and Procedure 	Practice		1


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10		Estimation of Crude Protein in Animal Feed/ Feed ingredients (Distillation and Titration)	•Principle and Procedure	Practice		1
11	4	Estimation of Total Ash and Acid Insoluble Ash in Animal Feed/ Feed ingredients	•Observation, Measurement and Calculation	Practice		1
12		Estimation of Total Fat/Energy in Animal Feed/ Feed ingredients	•Observation, Measurement and Calculation	Practice		1
13		Estimation of Crude Fiber in Animal Feed /Feed ingredients	•Principle and Procedure	Practice		1
14	5	Estimation of Calcium in Animal Feed /Feed ingredients (Distillation and Titration)	•Principle and Procedure	Practice		1
15		Demonstration of Near Infra-Red Spectrophotometry (NIRS)	•Principle and Procedure	Practice		1
16, 17	6	Introduction on Quality Management System	•Importance of Laboratory Accreditation •Prerequisites for Laboratory Accreditation	Lecture	2	
18		Training Evaluation, Closing and Certification			1	
Total technical classes					7	11


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