

Tools for Nutrition-Sensitive Agriculture Projects



NUTRITION-SENSITIVE AGRICULTURE

MAINSTREAMING BRIEFS



Brief #3: Livestock – Meat

How to Mainstream Nutrition in Meat Projects



for Regional and Woreda Agricultural Experts in Ethiopia



Strengthening Nutrition-Sensitive Agriculture Capacity in AGP2 Implementing Agencies



Global Affairs Canada



TABLE OF CONTENTS

PREFACE: MAINSTREAMING NUTRITION-SENSITIVE AGRICULTURE

1	STARTING AN NSA ASSESSMENT	1
2	NSA PROGRAMME DESIGN AND PLANNING.....	2
3	IMPLEMENTATION	18
4	MONITORING	21
5	EVALUATION	23

APPENDIX A: BUILDING CAPACITY FOR MAINSTREAMING NSA IN THE MEAT SECTOR

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LIVESTOCK NSA MAINSTREAMING BRIEF WRITE-SHOP**

**In Tigray Region
Wukro
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PREFACE: MAINSTREAMING NUTRITION-SENSITIVE AGRICULTURE

Background

Under Result 2 in the NNSAS (National Nutrition-Sensitive Agriculture Strategy), section 2.2.1, the list of Core Activities calls for a “nutrition-sensitive agriculture implementation brief to facilitate smooth implementation of the nutrition-sensitive agriculture strategy.” The NSA mainstreaming briefs practically show how NSA is integrated in woreda development plans, in all stages in the project cycle, including implementation. There are nine NSA mainstreaming briefs in this series:

1. How to mainstream nutrition in **Dairy** Projects
2. How to mainstream nutrition in **Poultry** Projects
3. How to mainstream nutrition in **Meat** Projects
4. How to mainstream nutrition in **Fish** Projects
5. How to mainstream nutrition in **Head Cabbage** Projects
6. How to mainstream nutrition in **Avocado** Projects
7. How to mainstream nutrition in **Carrot** Projects
8. How to mainstream nutrition in **Orange-Fleshed Sweet Potato** Projects
9. How to mainstream nutrition in **Faba Bean and Pulses** Projects

Purpose

The goal of mainstreaming nutrition-sensitive agriculture (NSA) into production (agronomic crops, horticulture, and livestock) is to contribute to nutritious diets. Development Agents, agricultural and health extension workers, and community-based workers, including NGOs, promote NSA in many ways. This is evident through the various nutrition education materials developed and NSA interventions implemented in Ethiopia over the past years.

Examples of nutrition-sensitive activities include:

- Growing diverse food, such as vegetables and fruits, to eat and to sell
- Raising poultry, goats or sheep to make a contribution to the family diet, especially eggs and milk
- Using good pre- and post-harvest storage and handling practices to preserve food longer.

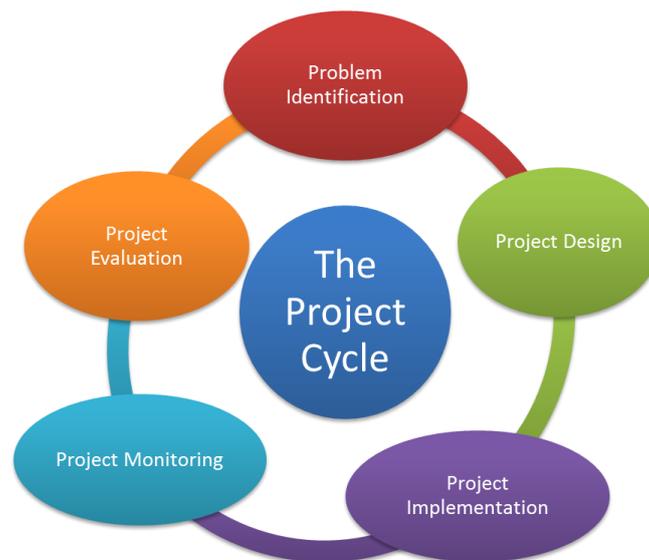
In order to be intentional about mainstreaming NSA, woreda-level agricultural activities should integrate nutrition-sensitive agriculture at every stage of the “project cycle,” beginning with the government’s bottom-up planning processes. The briefs provide stage by stage directions for NSA mainstreaming, accompanied by examples, would assist with improved integration of NSA into AGP programming.

Objectives of the NSA mainstreaming briefs:

Agricultural planning processes begin in communities and kebeles, cumulating to woredas, and resulting in woreda-level agricultural plans. The briefs provide a handy reference to woreda officials and experts who lead annual planning exercises and follow up with monitoring activities.

This brief contains advice on how to mainstream nutrition through the agriculture project cycle:

1. Problem Identification - Name nutrition problems in their communities by identifying gaps related to available foods, income, and social/gender issues that would cause under- or mal-nutrition
2. Project Design - Identify a range of potential activities to meet the gaps and improve nutrition
3. Project Implementation - Plan for effective implementation of activities
4. Project Monitoring - Monitor progress through nutrition-sensitive indicators
5. Project Evaluation - Evaluate the success of nutrition-sensitive interventions through simple checklists and tools.



If NSA implementers and stakeholders use these briefs, planners will have a better understanding of nutrition-sensitive agriculture, how to mainstream it in their agricultural and development plans, and to show that NSA interventions have been successful in improving nutrition in their communities.

You can use these materials to assist you to go through the planning cycle with staff, stakeholders and communities to ensure that nutrition issues are really being addressed by agricultural interventions. Each section contains key questions and examples to assist you to design, implement and monitor NSA projects with stakeholders and communities.

1 STARTING AN NSA ASSESSMENT

Situation analysis of consumption of meat products (from shoats and cattle):

1. Current production (supply) and consumption (demand) patterns of red meat products:
 - Consumption /Demand/ red meat
 - 9kg/capital consumption/year (Source: Addis Ababa CCSA, 2015)
 - Production (Supply) supply trend is Increased quality also promising due to feedlot started, use of potential breeds, concentrated feed uses etc.
 - Consumption (Demand)High demand /increase population/ focused to red meat
 - Price trend: Higher price so as per capital consumption is at lower trend because of majority purchasing power
 - Supply does not meet the demand

2. Red meat products' major contribution to improved nutrition:
 - Animal source foods are rich sources of Minerals, Vitamins, essential amino-acids, and fatty acid
 - Animal source foods can provide a variety of micronutrients not found from plant source
 - Relatively small amounts of these foods added to a crop-based food substantially increase nutrient adequacy
 - Meat is composed of approximately 72–75 % water, 21 % nitrogenous compounds (19 % proteins and 1.5 % non-protein nitrogen compounds which include nucleotides, peptides, creatine, and creatinine), 2.5–5 % lipids, 1 % non-nitrogenous compounds (vitamins) and carbohydrates.
 - Nutritional composition of red meat (Lean red meats are): An excellent source of high biological value protein, vitamin B12, niacin, vitamin B6, iron, zinc and phosphorus. A source of long-chain omega-3 polyunsaturated fats, riboflavin, pantothenic acid, selenium and possibly also vitamin D.

3. General objectives related to improved livestock production and consumption?
 - Boosting the availability, affordability desirability and consumption of red meat at household and community level.

4. Target groups for improved production and consumption:
 - Production**
 - Smallholder farmers, Common Interest Groups, Cooperatives, Unions, feedlots etc.
 - Consumption**
 - Priority is given to Smallholder farmers that have PLW and children under two.
 - Other community members will be also the target

2 NSA PROGRAMME DESIGN AND PLANNING

Planning for the appropriate NSA interventions, i.e., meat products:

Livestock Assessment: There are six sections to this questionnaire: Extension Services, Production, Market Value, Family Diet, Food Preparation, and Benefits. This tool is mostly a barrier analysis to the adoption and consumption of new livestock products, but other issues are also embedded in the questions (gender resource mapping, access and control, preferences, time and labor, knowledge and practices, etc.).

Livestock product: Red Meat						
Factor	Yes	No	Enabler	Barrier	Why?	How?
1 Extension Services						
1.1 Are extension personnel knowledgeable about this livestock product and its production conditions?	X		<ul style="list-style-type: none"> Most of the extension workers have knowhow for the subject matter 	<ul style="list-style-type: none"> The young generation lack adequate practical knowledge 	<ul style="list-style-type: none"> young generation Specialize in a certain area of the subject, but at ground it demands for general skill 	<ul style="list-style-type: none"> Need for on job training and additional CB to fill their gap
1.2 Have extension staff trained farmers (women and men) how to produce and manage this livestock product?	X		<ul style="list-style-type: none"> Availability of Training manual and guidelines Structural setup Training on production/management 	<ul style="list-style-type: none"> Inadequate and not need base training Lack of technologies No Pre and post training assessment 	<ul style="list-style-type: none"> b/c they are engaged in other government tasks out of their professions 	<ul style="list-style-type: none"> Need for professional engagement Provision of appropriate technology
1.3 Have there been recent demonstrations on this livestock product (at FTC, at model farmer's plot)?		X	<ul style="list-style-type: none"> There are cooking demonstrations with other product /Dietary diversity/ in the production aspects there are fattening feedlots, shads at farmers and CIGs and market shed in some pocket areas 	<ul style="list-style-type: none"> No Livestock specific demonstrations 	<ul style="list-style-type: none"> Lack of attention and Skill on specific product use and handling 	<ul style="list-style-type: none"> Interlink production, food science and marketing concept capacitate extension workers

Livestock product: Red Meat						
Factor	Yes	No	Enabler	Barrier	Why?	How?
1.4 Is this livestock product being promoted by extension personnel (either agriculture or health)?	X		<ul style="list-style-type: none"> When doing cooking and Dietary diversity demonstration, they promote livestock products Media advocacy 	<ul style="list-style-type: none"> There is limited access to livestock products to promote Focus to fastening demo 	<ul style="list-style-type: none"> Cultural /religious taboos 	<ul style="list-style-type: none"> Implement Package components Training to extension workers on NSA
1.5 Do both men and women have access to the information about this livestock product and how to manage and produce it?		X	<ul style="list-style-type: none"> There is policies and scenarios that promote women to access for any development benefit 	<ul style="list-style-type: none"> Lack for practices due to Biological, cultural and behavior factors 	<ul style="list-style-type: none"> Lack Exposure for external environment /information 	<ul style="list-style-type: none"> Address the problems of both men and women Gender sensitivity practice Introduce supportive technology for household chores
1.6 Is there an extension delivery system?						
FTCs	X		<ul style="list-style-type: none"> They are FTCs staffed with agri-experts and items for demonstration 	<ul style="list-style-type: none"> Lack to fully engage in extension delivery system 	<ul style="list-style-type: none"> - Financial problem - Poor administration Lack of infrastructure e and facility 	<ul style="list-style-type: none"> Fulfilling the required managerial and other required facilities
CIGs	X		<ul style="list-style-type: none"> There are model CIGs in feedlot practices 	<ul style="list-style-type: none"> Sustainability Not fully equipped with required knowledge and skill 	<ul style="list-style-type: none"> No Business Plan Access to permanent shed and credit Market linkages 	<ul style="list-style-type: none"> Capacity development Permit for permanent access to shed
Farmer Groups	X		<ul style="list-style-type: none"> Social norms like Equb, Edir, church 	<ul style="list-style-type: none"> No focus was given to these social norms like Equb and Edir 	<ul style="list-style-type: none"> Focus to the formal one and church 	<ul style="list-style-type: none"> Need to design approaches to work with them

Livestock product: Red Meat						
Factor	Yes	No	Enabler	Barrier	Why?	How?
Cooperatives	X		<ul style="list-style-type: none"> institutions setup 	<ul style="list-style-type: none"> Established only to income generate, not from nutrition prospects 	<ul style="list-style-type: none"> Focus on income generation and not aware for nutrition 	<ul style="list-style-type: none"> Capacitate
Other, private individuals	X		<ul style="list-style-type: none"> Use Models for demonstration as center of Excellency 	<ul style="list-style-type: none"> Financial constraint knowledge and skill gap 	<ul style="list-style-type: none"> Low commitment of financial institution 	<ul style="list-style-type: none"> Agri-friendly financial opportunity
1.7 Is the livestock and livestock product environmental / climate change – friendly?		X		<ul style="list-style-type: none"> low productive breeds and many in number 	<ul style="list-style-type: none"> Poor husbandry system / waste management etc. 	<ul style="list-style-type: none"> Genetic improvement technology Modern husbandry
2 Production						
2.1 Does the community/family have experience with this or a similar type of livestock or livestock product?	X		<ul style="list-style-type: none"> Cultural husbandry experience 	<ul style="list-style-type: none"> Traditional and ineffective husbandry practices 	<ul style="list-style-type: none"> Backward production trend 	<ul style="list-style-type: none"> Introduce fattening
2.2 Are neighbors producing this livestock product?						
2.3 Is the cost of production affordable?		X	<ul style="list-style-type: none"> Loan access Vet service 	<ul style="list-style-type: none"> High initial cost (animal and feed purchasing cost) 	<ul style="list-style-type: none"> Availability (animal and feed) Shortage of land for forge development Low access to infrastructure (water and electricity) 	<ul style="list-style-type: none"> Strengthen feed processing plant, watering point
2.4 Are feed, veterinary services and other inputs	X		<ul style="list-style-type: none"> Availability feed processing plant, Agro-dealers, Vet clinics etc. 	<ul style="list-style-type: none"> Lack of consistent supply 	<ul style="list-style-type: none"> Low attention and commitment 	<ul style="list-style-type: none"> Follow-up Standardization Financial facility

Livestock product: Red Meat						
Factor	Yes	No	Enabler	Barrier	Why?	How?
available for this livestock product?				<ul style="list-style-type: none"> poor accessibility and quality Not fulfill the standard staffing, facility etc. 	<ul style="list-style-type: none"> Incur for high initial cost 	
2.5 Do both women and men typically produce this livestock and livestock product?	X		<ul style="list-style-type: none"> Development Strategy Take as income generation activity 	<ul style="list-style-type: none"> Labor, time and capital intensive Working culture Poor 	<ul style="list-style-type: none"> Women are busy with household tasks 	<ul style="list-style-type: none"> Work classification
2.6 Is the livestock product relatively easy to manage around the homestead or on the family plot?	X		<ul style="list-style-type: none"> Experience of the existing practices of the farmer No space problem in rural areas 	<ul style="list-style-type: none"> In urban and prairie urban areas it is difficult to manage 	<ul style="list-style-type: none"> Shortage of agriculture fattening shed/ urban/ 	<ul style="list-style-type: none"> Need to assign permanent fattening shed
2.7 Does the livestock product involve complicated production or management methods?		X	<ul style="list-style-type: none"> It demands good management /not complicated practices. The existing cultural trend of rearing and semi fattening Commitment from gov't and NGOs 	<ul style="list-style-type: none"> Market linkage 		<ul style="list-style-type: none"> Need to lead by BP and market-oriented production
2.8 Does the livestock product need additional inputs for production (equipment, additives, or additional labor)?	X		<ul style="list-style-type: none"> Can manage by members of the household 	<ul style="list-style-type: none"> Feed treatment knowhow and equipment 	<ul style="list-style-type: none"> To register best return it needs for use of quality feed 	<ul style="list-style-type: none"> Training and establishment of Agro-dealers/technology dealers
2.9 Is the entire production cycle of this livestock		X	<ul style="list-style-type: none"> Have the start to fatten both Shat and cattle 	<ul style="list-style-type: none"> Elongated fattening period 	<ul style="list-style-type: none"> Use of poor-quality breed Roughage Feed Focused to number 	<ul style="list-style-type: none"> Introduce good breeds, Awareness to use concentrated feed, and market

Livestock product: Red Meat						
Factor	Yes	No	Enabler	Barrier	Why?	How?
product easy to manage?						
2.10 Is the livestock product produced in enough quantities (on average) for regular household use and consumption?	X		<ul style="list-style-type: none"> Even with low quality in most of the HH there is rearing practices 	<ul style="list-style-type: none"> Use for income generation than nutrition 	<ul style="list-style-type: none"> Breed problem Feed constraint Feeding practice 	<ul style="list-style-type: none"> Awareness nutrition concept
2.11 Is this livestock product produced on a weekly basis?		X	<ul style="list-style-type: none"> Good working culture and Availability of the livestock product/rearing/ 	<ul style="list-style-type: none"> Most of Smallholder farmers eat meat (not considered the quality) for holidays 	<ul style="list-style-type: none"> considered as luxury food 	<ul style="list-style-type: none"> Need to show the importance of eating meat
2.12 Is the livestock product dependent on seasonal changes?	X		<ul style="list-style-type: none"> Good agro-ecology and production culture of livestock 	<ul style="list-style-type: none"> Relatively cheap in fastening 	<ul style="list-style-type: none"> None fastening/holiday food for smallholder farmers 	<ul style="list-style-type: none"> At list lactating mothers and children's have to eat
2.13 Are both women and men able to access all the inputs required for producing this livestock product?		X	<ul style="list-style-type: none"> No prohibition /all have equal right to access 	<ul style="list-style-type: none"> Not accessible to women 	<ul style="list-style-type: none"> Women are Labor poor 	<ul style="list-style-type: none"> Need to establish Agro-dealer near to farmers gate
2.14 Do both women and men have enough time to produce this livestock product, given their daily activity schedule?		X		<ul style="list-style-type: none"> Women do not have enough time 	<ul style="list-style-type: none"> Women are supposed to work productive, reproductive and social 	<ul style="list-style-type: none"> Minimize women burden at home
2.15 Do both women and men have enough labor to		X	<ul style="list-style-type: none"> In some small ruminant production, there are women who can manage good 	<ul style="list-style-type: none"> Most of women headed household have least family size 		<ul style="list-style-type: none"> Focus to small ruminant for women headed HHs

Livestock product: Red Meat						
Factor	Yes	No	Enabler	Barrier	Why?	How?
produce this livestock product, given their labor resources?						
2.16 Are there well-established and effective management practices for this livestock product?		X	<ul style="list-style-type: none"> Traditionally practices 	<ul style="list-style-type: none"> Focus on open grazing 	<ul style="list-style-type: none"> -Technical gap and cultural influence 	<ul style="list-style-type: none"> -Training the management aspect
2.17 Are there effective input (feed, equipment, vet services) supply systems for this livestock product?						
Vet clinic	Not accessible to all /Limited capacity to reach all	Expensive and managed by government	<ul style="list-style-type: none"> Promoting private sector 			
There are institutions like feed processors, input retailers /vet drug and Agro-chemical shops/	Quality, Accessibility consistency	Established at urban areas / not near to the poorer community	<ul style="list-style-type: none"> Establishing distribution center and establish near to farmers gate 			
Availability of the potential	Land use management system	Short-term agreement for fattening	<ul style="list-style-type: none"> Review land use policy for Agri-use 			
3. Market Value						
3.1 Is the livestock product a good seller on the market?	X		<ul style="list-style-type: none"> Good demand for meat specially at non fastening time 	<ul style="list-style-type: none"> Low market-oriented product 	<ul style="list-style-type: none"> Not market oriented production/multi- 	<ul style="list-style-type: none"> Improve the production system

Livestock product: Red Meat						
Factor	Yes	No	Enabler	Barrier	Why?	How?
					purpose - ploughing and fattening	
3.2 Is the livestock product sold more than consumed at home?		X	<ul style="list-style-type: none"> High demand/price 	<ul style="list-style-type: none"> Use for income generation 	<ul style="list-style-type: none"> Good market price and convert to other basic needs 	<ul style="list-style-type: none"> Awareness to home consumption o
3.3 Does the market value of the livestock product change throughout the year?	X		<ul style="list-style-type: none"> High demand and price at religious holiday time 	<ul style="list-style-type: none"> Not promising demand and price at fastening period 	<ul style="list-style-type: none"> Fasting Periods, Production variability, Seasonal feed availability 	
3.4 Is the sales potential for this livestock product adequate to contribute significantly to the family's monthly income?	X		<ul style="list-style-type: none"> Can able to sale anytime as required 	<ul style="list-style-type: none"> Price fluctuation for input and market 	<ul style="list-style-type: none"> Price for feed dramatically increased 	<ul style="list-style-type: none"> Need for Feed treatment
3.5 Are both women and men involved in taking the livestock product to market and selling it?		X	<ul style="list-style-type: none"> Gender awareness 	<ul style="list-style-type: none"> Men dominated 	<ul style="list-style-type: none"> Cultural and managerial barrier 	<ul style="list-style-type: none"> Collective market
3.6 Are both women and men involved in making decisions about how the income from the livestock product is spent?		X		<ul style="list-style-type: none"> Men dominated 	<ul style="list-style-type: none"> Cultural influence 	<ul style="list-style-type: none"> Gender mainstreaming in all aspect

Livestock product: Red Meat						
Factor	Yes	No	Enabler	Barrier	Why?	How?
3.7 Are there existing market linkages?		X		<ul style="list-style-type: none"> No formal market linkage, no shed etc. 	<ul style="list-style-type: none"> Poor infrastructure 	<ul style="list-style-type: none"> Develop market linkage infrastructures
4 Family Diet						
4.1 Is the livestock product part of the traditional diet in this area?	X		<ul style="list-style-type: none"> Cultural and religious experience 	<ul style="list-style-type: none"> Quality, safety and sustainability, accessibility problems 	<ul style="list-style-type: none"> Low production, knowledge gap, lack standard 	<ul style="list-style-type: none"> Capacity development, production package components guidelines
4.2 Is the livestock product already included in most family meals?		X	<ul style="list-style-type: none"> Available livestock 	<ul style="list-style-type: none"> Income low, lack awareness on food diversity 	<ul style="list-style-type: none"> Opportunities of income generation schemes low, lack of nutrition demonstration 	<ul style="list-style-type: none"> Development of d/nt income generation scheme Capacity on nutrition security
4.3 Are families willing to incorporate the livestock product into their diet in new ways (new recipes, processing methods, etc.).		X	<ul style="list-style-type: none"> Traditional thinking and experience 	<ul style="list-style-type: none"> -Facility and skill 	<ul style="list-style-type: none"> Lack wide reliable demonstration practice, unaffordable facility 	<ul style="list-style-type: none"> Simple accessible demonstration way, strengthening agro-dealer to support them
4.4 Do both women and men agree that the livestock product should be incorporated into the family diet?	X		<ul style="list-style-type: none"> Traditional thinking and experience 	<ul style="list-style-type: none"> Income low, accessibility and knowledge gap 	<ul style="list-style-type: none"> Poverty, lack of new way thinking 	<ul style="list-style-type: none"> Develop income generation scheme and capacitation
4.5 Are agencies / organizations promoting this livestock product for improved nutrition and health?	X		<ul style="list-style-type: none"> Cooking demonstration 	<ul style="list-style-type: none"> Limited integration and effort among organizations, sustainability problem 	<ul style="list-style-type: none"> Lack MOU among sectors 	<ul style="list-style-type: none"> MOU settled and programmed

Livestock product: Red Meat						
Factor	Yes	No	Enabler	Barrier	Why?	How?
4.6 Are agencies / organizations using specific nutrition education or SBCCs to promote this livestock product?		X	<ul style="list-style-type: none"> Traditional thinking and exposure There are some promising efforts that have been practiced by some projects 	<ul style="list-style-type: none"> Weak structural setup, integration 	<ul style="list-style-type: none"> No integration b/n Government and projects 	<ul style="list-style-type: none"> Integration, scaling up
5 Food Preparation						
5.1 Does the family have access to information about how to / new ways to process and prepare it?		X	<ul style="list-style-type: none"> Traditional way of processing Media 	<ul style="list-style-type: none"> Lack to have appropriate facility, knowledge gap 	<ul style="list-style-type: none"> Price demanding, and inaccessibility, lack of exposure to new thinking 	<ul style="list-style-type: none"> Accessible agro-dealer, demonstration and capacity
5.2 Does the family know how to:						
5.2.1 Store it?	X		<ul style="list-style-type: none"> Traditional practice in form of "quanta" in some cases fresh meat in refrigerator in urban 	<ul style="list-style-type: none"> New way thinking practice and lack facility 	<ul style="list-style-type: none"> Knowledge gap, lack of facility and income 	<ul style="list-style-type: none"> Capacitating (knowledge and facility)
5.2.2 Process it?	X		Traditional practice "quanta"	"	"	"
5.2.3 Prepare it?	X		"	"	"	"
5.2.4 Serve it?	X		"	"	"	"
5.3 Are appropriate storage facilities available on the homestead/in the community for this livestock product?		X	<ul style="list-style-type: none"> There are some interventions by projects, cooperatives and private (refrigerator) 	<ul style="list-style-type: none"> Low attention and commitment by government/agencies Expensive Availability in local market Producers knowledge is limited 	<ul style="list-style-type: none"> Lack of specific product focus, market inaccessibility(Agro-dealer) Lack sustainability on CD 	<ul style="list-style-type: none"> Strengthen agro-dealer, capacity development and exposure
5.4 Do both women and men have access to the storage		X	<ul style="list-style-type: none"> There are some interventions by projects, cooperatives and private (refrigerator) 	<ul style="list-style-type: none"> Low attention and commitment by government/agencies Expensive 	<ul style="list-style-type: none"> Lack of specific product focus, market inaccessibility(Agro-dealer) 	<ul style="list-style-type: none"> Strengthen agro-dealer, capacity development and exposure

Livestock product: Red Meat						
Factor	Yes	No	Enabler	Barrier	Why?	How?
facilities for this livestock product?				<ul style="list-style-type: none"> • Availability in local market • Producers knowledge is limited 	<ul style="list-style-type: none"> • Lack sustainability on CD 	
5.5 Are appropriate processing facilities available on the homestead/in the community for this livestock product?		X	<ul style="list-style-type: none"> • Traditional practices 	<ul style="list-style-type: none"> • Low attention and commitment by Government • Expensive • availability in local market • producer's knowledge is limited 	<ul style="list-style-type: none"> • Lack of specific product focus, market inaccessibility(Agro dealer) • Lack sustainability on CD 	<ul style="list-style-type: none"> • Strengthen agro dealer, capacity development and exposure
5.6 Do both women and men have access to the processing facilities for this livestock product?		X	<ul style="list-style-type: none"> • Traditional practices 	<ul style="list-style-type: none"> • Low attention and commitment by Government. • Expensive • Availability in local market • Producers knowledge is limited 	<ul style="list-style-type: none"> • Lack of specific product focus, market inaccessibility (Agro-dealer) • Lack sustainability on CD 	<ul style="list-style-type: none"> • Strengthen agro dealer, capacity development and exposure
5.7 Are appropriate cooking facilities available on the homestead/in the community for this livestock product?	X		<ul style="list-style-type: none"> • Tradition cooking facility 	<ul style="list-style-type: none"> • It is not modern 	<ul style="list-style-type: none"> • Expansive utensils and cooking materials and not demonstrated 	<ul style="list-style-type: none"> • Strengthen existing suppliers, demonstrating materials
5.8 Do both women and men have access to the cooking facilities for this livestock product?	X		<ul style="list-style-type: none"> • Tradition cooking facility 	<ul style="list-style-type: none"> • It is not modern 	<ul style="list-style-type: none"> • Expansive utensils and cooking materials and not demonstrated 	<ul style="list-style-type: none"> • Strengthen existing suppliers, demonstrating materials
5.9 Are appropriate recipes available / demonstrated for		X	<ul style="list-style-type: none"> • Traditional way of preparing 	<ul style="list-style-type: none"> • Lack of documented 	<ul style="list-style-type: none"> • Lack of focus and sustainability and 	<ul style="list-style-type: none"> • Government and agencies concerned and committed

Livestock product: Red Meat						
Factor	Yes	No	Enabler	Barrier	Why?	How?
this livestock product?				guideline and manuals	information, skill of expertise	
5.10 Have both women and men been trained on recipes for this livestock product?		X	<ul style="list-style-type: none"> Traditional way of preparing 	<ul style="list-style-type: none"> Lack of documented guideline and manuals 	<ul style="list-style-type: none"> Lack of focus and sustainability and information, skill of expertise 	<ul style="list-style-type: none"> Government and agencies concerned and commitment
5.11 Are there different ways to process and prepare the livestock product for different types of meals and recipes?	X		<ul style="list-style-type: none"> Traditional practices 	<ul style="list-style-type: none"> Lacks quality and safety 	<ul style="list-style-type: none"> Lack Knowledge, skill and new thinking 	<ul style="list-style-type: none"> Exposure, experience sharing
5.12 When the livestock product is processed and prepared as a food, is it easily incorporated into meals?	X		<ul style="list-style-type: none"> Traditional experience 	<ul style="list-style-type: none"> lack facility and procedures 	<ul style="list-style-type: none"> Price and availability of facilities, knowledge gap 	<ul style="list-style-type: none"> Guideline and manual, strengthening suppliers
5.13 Is it easy to process and prepare the livestock product as a food for children?	X		<ul style="list-style-type: none"> HE and AE workers demonstrate 	<ul style="list-style-type: none"> Awareness problem 	<ul style="list-style-type: none"> Lack of sustainable demonstration practices 	<ul style="list-style-type: none"> Guideline and manual and CD
5.14 Is it easy to process and prepare the livestock product as a food for adults?	X		<ul style="list-style-type: none"> HE and AE workers demonstrate 	<ul style="list-style-type: none"> Awareness problem 	<ul style="list-style-type: none"> There is no difference in preparing foods for individual specific food preparation(no experience) 	<ul style="list-style-type: none"> Exposure visit and demonstration
5.15 Does the family understand the implications of		X	<ul style="list-style-type: none"> Some projects initiation on awareness creation 	<ul style="list-style-type: none"> Knowledge and information gap 	<ul style="list-style-type: none"> Lack of focus and information by 	<ul style="list-style-type: none"> Media exposure, emphasis should be given

Livestock product: Red Meat						
Factor	Yes	No	Enabler	Barrier	Why?	How?
combinations and portion sizes for consuming this livestock product?					Government and agencies	
6 Benefits						
6.1 Will this livestock product make a difference to the health of children and family members if consumed according to the recommended amounts?	X		<ul style="list-style-type: none"> • There is practice and adequate varied livestock products 	<ul style="list-style-type: none"> • Knowledge gap on recommended use and implication on health 	<ul style="list-style-type: none"> • Lack of information and capacity 	<ul style="list-style-type: none"> • Media coverage, continuous capacity development
6.2 Will this livestock product make a difference to women's sense of empowerment if they have both access and control over it?	X		<ul style="list-style-type: none"> • Project and government's commitment 	<ul style="list-style-type: none"> • Implementation and follow up problem 	<ul style="list-style-type: none"> • Lack of continuous follow up monitoring and evaluation 	<ul style="list-style-type: none"> • Multi-sectorial and Programmed M and E
6.3 Will this livestock product make a difference in how meals are enjoyed by family members?	X		<ul style="list-style-type: none"> • Traditional practice 	<ul style="list-style-type: none"> • It lacks recipe 	<ul style="list-style-type: none"> • Lack of new thinking and experience 	<ul style="list-style-type: none"> • Capacity development and education

Analysis and Planning

1. What are the major enablers and the reasons why they are enabling?

- The knowledge among extension workers is a prerequisite and helpful to improve the current production conditions of the red meat
- The existing government structure gives an opportunity to assign livestock experts at ground level
- Training on production has been given to farmers that make the farmers aware how to produce
- The separate livestock and Dietary diversity or cooking demonstration training manual help to conduct trainings
- There have been cooking demonstrations for other source of foods, which will be a good experience to demonstrate livestock source foods by community health workers
- From production perspectives, there are good start red meat fattening cattle and shoats at FTCs. If there is production, it will be easy to work on other aspects of the livestock
- The established market sheds (like Dansha) and collection centers (Abergele slaughterhouse) are good havens to process the products further and present in different forms
- Focus of government on fattening scheme working principles and regulations encouragements
- The fattening program event will be an opportunity to promote the red meat products and its products to reach the community
- The government policies and strategies encouraging women from accessing livestock production
- The existing FTCs are going to be good center of excellence for red meat development, processing and storing, because the centers are staffed with livestock experts.
- There are model institutions like that of cooperatives, CIGs, unions and privates, micro and small enterprise from production up to consumption and processing which ultimately guaranties the consumption of meat and meat products by the community
- The Genetic improvement technologies and practices will improve the productivity of the of meat red meat
- There are good start food processing industry park and quarantine sites for provision of feedlot animal's safety and handling of meat
- There is a qualified and assured export abattoir/Abergele Slaughterhouse /
- Qualified professional animal product inspectors
- Effective feed development strategies availability of model feed processing plants will solve the feed problem and at the end boosts the meat production
- There is animal husbandry experience among the farmers that demands an effort to improvement
- Access to finance, AI and Vet service is encouraging farmers to participate in livestock fattening practices

2. What types of activities can be designed based on these enablers?

- Training on meat value chain and NSA to Extension workers at all level with special emphasis to woreda and Kebele Level
- Improving the training manuals to NSA or to have both handling and cooking demonstration in local language
- Training on how to Mainstream NSA interventions into woreda plan

- Training on meat handling and management and use to farmers
- Development of business plan from production to household consumption and marketing
- System strengthening/focus/ for the livestock sector
- Conduct meat and meat product food demonstration
- Meat day celebration on regular basis
- Development of different capacity building strategies (practical, seminar
- Strengthen Feed development and treatment activities
- Promote and supply of red meat post -harvest handling technologies to and model farmers, cooperatives, CIG and unions micro and small enterprises
- Strengthening FTCs and model farmers, cooperatives, CIG and unions in fattening packages

3. What are the major barriers and the reasons why they are constraints?

- The young Extension workers lack adequate knowledge because of Specialize in a certain area of the subject.
- Multi profession merged extension service was practiced system due to lack of manpower
- lack of technologies results in poor meat and meat handing and usage due to lack of supply and government focus
- Poor Pre and post training assessment by expert's b/c they are engaged in other professions and resulted in poor training design, follow up and technical backup
- No Livestock specific demonstrations limited the exposure of the community in production and management of meat due to lack of focus and finance
- In accessibility of meat handling technologies due to low income of producers and users
- Culture of the community inhibits production and consumption of meat
- There is no surplus production in the sector, which created poor access to livestock products even they have they sale all and change to other basic needs
- Development practitioners lack to address the problems of both men and women that become a bottleneck to address the need of women due to lack of awareness on gender sensitive and physiological and age status of household members
- Gender sensitivity problem which affects provision of technologies that are labor and time saving for women
- Weak Integration between Health and Agriculture Extension Workers that caused poor meat product demonstration due to lack of structural make up and MOU
- Financial constraint and that make the poor to not engage in red meat fattening program
- Livestock producers are established only to generate income from market that affects nutrition of the community and their household
- low productive breeds and traditional and ineffective practices are significant for low quality and productivity
- High feed cost hinders individuals to enter the meat production

4. What types of activities can be designed to address the barriers?

- Training on NSA monitoring and Evaluation
- Developing SBCC materials and using in social and cultural and religious meeting opportunity
- Provision of high yielding breeds or improving the existing breeds brought from research
- Training on Gender and NSA in a sustainable and regular basis
- Loan provision and equipped with infrastructure and facility
- Improve multi- sectoral integration at all levels and developing joint plan and MOU

- Link the poor to healthy and sustainable market
 - Practical training on modern husbandry, consumption and Marketing practices.
 - Training on feed preparation, handling and safety
 - Encourage the establishment/strengthening of feed and meat processing
 - Food science experts should also be incorporated
5. **Do regional and woreda plans include explicit NSA objectives related to livestock production and consumption of livestock products? For example, “X woreda will increase household production and consumption diversity in line with the National Nutrition Program (NNP II) and the AGPII Development Objective.”**
- There are promising moves at regional bureau of agriculture but not satisfactory.
6. **What can you do to ensure that NSA objectives related to livestock products are included in plans?**
- Make policy makers aware of the need to give direction for planners to review plan from NSA perspective
 - Assist during planning
 - Training on NSA mainstreaming
 - Developing training manual and training guideline which includes management and nutrition component
 - Plan review in the eyes of NSA
7. **Do regional and woreda plans include explicit NSA objectives related to increasing livestock production?**
- The Bureau of Agriculture plan focused on production and income diversification and Health Bureau address the Cooking demonstration, but all not NSA targeted
8. **What can you do to ensure that NSA objectives related to increasing livestock production are included in plans?**
- Existing plans have good experience/no major gap/ on production it lacks Nutrition concept
9. **Do regional and woreda plans include explicit NSA objectives related to livestock products’ market access and opportunities to improve smallholder income (especially women)?**
- Yes, but It is not well described the back and forth market linkage
 - Need to assess to improve the production trend using business plan
10. **What can you do to ensure that NSA objectives related to livestock products’ market access and opportunities to improve smallholder income (especially women) are included in plans?**
- Assist during planning (supplier’s identification, market gap understanding, client identification)
 - Assist to improve the production trend using business plan
11. **Do the regional and woreda plans include activities and related budget lines or a section for NSA activities, to promote livestock production and diet diversity?**
- There is separate plan /Bureau of Health/ for Dietary diversity from focused to Pregnant and lactating mothers and children under two but not comprehensive.

12. What can you do to ensure that regional and woreda plans include livestock production and related budget lines?

- Advocacy at all level specially for policy makers
- Awareness raising and Introducing the concept of NSA activities, outcomes and strategies

13. What types of cross-cutting activities, including food security, nutrition education, extension, water sources, working with men and women, women's empowerment, food hygiene and storage, climate change, and biodiversity, etc., should be included in order to increase enabling factors and decrease the barriers?

- WASH (water and hygiene Sanitation) interventions
- Gender mainstreaming
- Climate Smart Agriculture practices
- Introducing labor and energy saving technologies

3 IMPLEMENTATION

1. Mainstreaming NSA

Here is an example of a red meat project that mainstreams NSA:

NAME OF PROJECT

Youth and Women Cattle Fattening in South East Zone, Tigray

IMPLEMENTING AGENCY / ORGANIZATION

Bureau of Agriculture, USAID supported projects, UNDP

LOCATION

Enderta, S/samre, H/wejerat, D/tembien Woredas and Mekelle Zone

FEATURED LIVESTOCK PRODUCT

- ✓ Red Meat

BENEFICIARIES

- ✓ Direct: Youth and Women CIGs
- ✓ Indirect: Cooperatives, unions, Slaughterhouses

OBJECTIVES

- ✓ Increase meat production
- ✓ Increase meat consumption at household level
- ✓ Improve meat quality and safety management

NUTRITIONAL BENEFITS

- ✓ Meat is composed of approximately 72–75% water, 21% nitrogenous compounds (19% proteins and 1.5 % non-protein nitrogen compounds which include nucleotides, peptides, creatine, and creatinine), 2.5–5% lipids, 1% non-nitrogenous compounds (vitamins) and carbohydrates.
- ✓ Nutritional composition of red meat (Lean red meats are): An excellent source of high biological value protein, vitamin B12, niacin, vitamin B6, iron, zinc and phosphorus. A source of long-chain omega-3 polyunsaturated fats, riboflavin, pantothenic acid, selenium and possibly also vitamin D.

INTERVENTION

- ✓ Introducing improved cattle breeds (Begait, Raya/Harmo)
- ✓ Access to quality and safety feed
- ✓ Provide appropriate vet Services
- ✓ Practice on the modern cattle fattening husbandry practices
- ✓ SBCC
- ✓ Demonstration activities at FTCs and model farmers
- ✓ Celebrate meat day with the community
- ✓ Strengthening market linkage with slaughterhouses
- ✓ Training on NSA to youth and women CIGs, cooperatives, unions
- ✓ Training on Meat quality and safety management to youth and women CIGs, cooperatives, unions and slaughterhouses
- ✓ Regular M&E activities

RESULTS

- ✓ Increase Meat productivity (Carcass weight) from 115 kilogram to 150 kilograms
- ✓ Increase the dietary diversity of the households by 2 (meat and meat products)
- ✓ Increase women empowerment
- ✓ Boosting the income of youth and women

2. Best Practices

Here is an example of a best practice of mainstreaming NSA in the meat sector:

Best Practice: Maasho Tsigie Cattle Fattening: - found at T/koraro woreda Haftom Kebele



Maasho Tsigie Cattle Fattening is established in 1996 to increase his income and food security.

This practice is needed to improve husbandry practices (housing, feed and water troughs, and other management activities):

- Use fully improved local breeds (Begait and Medenes)
- Feed his cattle improved feeds (concentrated feed, industrial by-products, quality hay and treated crop by-products) by using proper feeding techniques.
- Introduce consistent and proper health services (Vaccinations and Treatments)

How is the best practice different from business as usual?

- He can able to have and manage high yield meat cattle (Cattle live weight ranges from 300-360 Kilograms)
- Improve household meat daily consumption because he has butchery house in shire town that involve all members of the family
- Deliver some of the fattened cattle to other butchery houses, cooperatives, unions, traders in shire town and exporters through contractual base and negotiation.



Kisanet meat and live animal producer in K/Humera woreda

3. Sustainability and Scaling-Up

Here is an example of a project that used best practices to scale up NSA mainstreaming in the livestock sector:

Scalable Best Practice: Maasho Tsigie Cattle fattening: - found at T/koraro woreda Haftom Kebele

Successes: Maasho Tsigie Cattle Fattening is established in 1996 E.C to increase HH income, and nutrition and food security

Sustainability,

- He can able to have and manage high yield meat cattle (Cattle live weight ranges from 300-360 Kilograms) and currently he can manage about 20 cattle per term and abled to fatten up to 3 times a year
- Improve household meat daily consumption because he has butchery house in shire town that involve all members of the family
- Deliver some of the fattened cattle to other butchery houses, cooperatives, unions, traders in shire town and exporters through contractual base and negotiation.
- Able to improve his income and household food security

Scaling-Up

- Since he has good performance and improvement in income level, He intended to establish intensive Begait breed cattle and sheep fattening farm as a form of investment in shire town to supply properly fattened cattle and sheep to the existing exporters.
- He serves as center of Excellency in the locality and Extension workers abled to provide practical training in his farm.

About 20 farmers can able to introduce similar fattening interventions. Personally, he supports one poor household to have and manage two cattle for fattening program

4 MONITORING

Project Monitoring

1. What are the key indicators related to livestock products production and diet diversity?
 - a. **AGP2**
 - i. No HHs who increased livestock production and productivity
 - ii. No of HHs who increased livestock market access
 - iii. No of HHs their dietary diversity
 - b. **NNSAS**
 - i. Increase production of animal source foods
 - ii. Reduce postharvest loss and improved food safety
 - iii. Increase capacity of FTCs to carry out livestock demonstrations
 - c. **NNP Indicators**
 - i. Proportion of households consumed animal source foods
 - ii. Proportion of woredas with at least one Live animal collection and marketing center supported
 - iii. Number of food processing technologies/practices identified and introduced
 - iv. % of FTCs with nutrition corner
 - v. Number of woreda with women group engaged in local production of complementary food
 - vi. Number of women's groups engaged in agricultural income generating activities related to fattening
 - d. **National Nutrition Strategy**
 - i. Increasing nutritional status of women
 - ii. Increasing nutritional status of children
 - iii. Improving care and nutritional status of people living with HIV/AIDS
2. **What you can do to promote monitoring of meat products and their adoption:**
 - The development agent living in the district has a reporting schedule on monthly, quarter and annual basis which is collected with direct supervision from the community. The report includes which livestock product is mostly adopted by the community. Moreover, scheduled woreda-level assessment and supervision to kebele are conducted on a regular basis.
3. **What you can do to promote monitoring of income resulting from meat products production:**
 - DAs in every kebele send a report on HH income increment to woreda on quarter and annual basis. The woreda and region team have done ground assessment and crosschecked the reliability to fill the gap.
4. **What you can do to plan and monitor improvements in women's empowerment (e.g., control over household resources, engaging in economic activities, greater confidence because of improved personal health and health of children) as a result of increased livestock products production, sales and consumption:**

- Most of the development strategies / indicators/ says that women beneficiaries should be given priority to engage in income generating activities.

5. What you can do to monitor and evaluate the impact of NSA activities related to meat production:

- Standard NSA impact monitor and evaluation Checklist /guideline supported with training should be conducted- Accordingly
- Community level interview should be conducted at regular basis
- Focus group discussion containing different community members should be conducted

6. What you can do to ensure that the regional / woreda budget includes resources for monitoring improvements in household diversity production and consumption of meat products:

- There are allocated resources for monitoring and evaluation regarding production and productivity of overall agricultural activity. However, there is no specific budget allocated to monitor improvements in household production and consumption in the areas of NSA and diet diversity. AGP has some start-ups on allocating budget for monitoring improvement in household diversity production and consumption of livestock products. There are many partners dedicated to NSA interventions and those partners should work together by ensure greater coverage of NSA interventions.

5 EVALUATION

Project Evaluation

Develop a set of simple monitoring tools and checklists to determine whether NSA livestock interventions have been a success.

Some ideas:

- **Production / Dietary Diversification survey (household, community)**
 - How many households involved in red meat development in the kebele?
 - How many fattened animals are there in the kebele?
 - What is the average meat production in the kebele?
 - Do they have a knowledge and practice to include meat in their dietary diversity?
 - How much of the product consumed at household level (%)?
 - Do you have Record keeping book for your production status?

- **Household Survey Questionnaire (behavioral change)**
 - Do you have animals maintained for red meat consumption (Yes / No)? If yes, type and how? If No, why not?
 - How much of often do you consume with your family?
 - Did you have NSA know how (Yes / No). If yes, how and who informed you? If No, why not?
 - What kind of capacity development did you take?
 - Has NSA promotion and demonstration been undertaken in your community?
 - Do have a knowledge incorporating meat in dietary diversity for children and women in the eye of NSA?

- **Gender Analysis tools (decision-making, resources access and control)**
 - How much of the women in this kebele have their own fattened animals?
 - Do women have equal access and control over owning meat animals?
 - Who decides the resource control (fattened animals to consume and/or to sell)?

- **Group Discussion Guide (women's production groups)**
 - Are you all owners of feed lot or fattened animals?
 - Have got benefits being owners of feed lots and / shoats?
 - How much of the meat produced utilized for household consumption?
 - How many of you have children under age 5?
 - Did the children consume meat how often?
 - What is your economic status since you started engaging in fattening of meat for production purposes?

- **Observation Guide (fattening farm)**
 - Shed construction quality (type of house) for animal fattening?
 - Number of animals in the shed (by breed)?

- Husbandry system (sanitation, feed trap, feed, health aspects, handling and management)?
 - Body condition status and Geographical flow of produce?
 - Meat consumption habit?
 - Number of children?
 - Availability of infrastructure (water, electric power, road, tele communication etc.)?
 - Accessibility of facility (feeder, waterier, machinery)?
 - Record keeping book (farm statues record and financial)?
- **Key Informant Interview (DAs, community leaders, HEWs, woreda-level planners)**
 - How many fattening packages are there in your kebele?
 - How many fattening beneficiaries are there?
 - How many fattening animals purposely maintained for meat production in your kebele?
 - Health service status
 - Production status
 - Meat Consumption status at HH level
 - Technical support of experts
 - Availability of development partners engaged in NSA
 - Status of NSA interventions
 - meat day celebration
 - Food and or meat cooking demonstration
 - Feed availability in your community
 - Extension support number of follow-ups
 - Integrations among HEW, AEW, community and woreda smallholders
 - How often did you evaluate the implementation modality of NSA?

APPENDIX A: BUILDING CAPACITY FOR MAINSTREAMING NSA IN THE MEAT SECTOR

Different types of Capacity Development opportunities for NSA:

S.N	Levels	Opportunity/initiatives	Recommendations
1	Federal Level	<ul style="list-style-type: none"> • AGPIII nutrition indicators • NNSAS • NNP indicators • National Nutrition Strategy • Food policy • NSA planning guideline 	<ul style="list-style-type: none"> • Follow-up for the implementation of the strategies, police guideline
2	At regional Level	<ul style="list-style-type: none"> • Forum Established /Nutrition/ BOA, BOH, BOE etc. • NSA planning guideline • SBCC material developed • Nutrition manual • NSA monitoring tool • NSA implementers map • Nutrition expert at BOA • NSA plan mainstreamed 	<ul style="list-style-type: none"> • Need for Strong commitment to make it happened • Materials should be cascaded to kebele level • Awareness for different tools have to be mainstreamed at all level • Nutrition case team have to be established • TOT on NSA for all case team • NSA planning material for all experts
3	At Woreda level	<ul style="list-style-type: none"> • NSA experts at woredas • NSA awareness • Availability of training material 	<ul style="list-style-type: none"> • Forum Established /Nutrition/ • Have to capable for the position • Training material • NSA monitoring tool • NSA implementers map • Training of NSA for all case team
4	At Kebele Level	<ul style="list-style-type: none"> • HEW and AEW have taken NSA training • NSA Local language training material • Dietary diversity training started 	<ul style="list-style-type: none"> • Integration b/n Health and Agri - Extension workers should be strengthened • In Dietary Diversity training - Animal source especially milk is not considered
5	At Community Level	<ul style="list-style-type: none"> • Availability of animal source food • Feeding culture is promising 	<ul style="list-style-type: none"> • Lack of NSA concept - need shift from production oriented to NSA concept – integrated approach with focus on consumption • Lack of awareness on dietary diversity