



Newsletter

Issue 03 March 2023

About this newsletter

The purpose of the RAISE-FS newsletter is to provide relevant information on the latest developments and current issues in the Ethiopian food system and the project support activities.

In this issue we highlight the major activities that have been taken place between January and March 2023.

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Emerging issues in soya bean marketing: the case of Northwestern Ethiopia

Linked with the expansion of domestic edible oil industry and associated increased demand, soya bean production in Ethiopia has increased dramatically over the last three years. The Amhara region, in particular, has shown a very significant increase in soya bean production, with the area expanding from 46,892 ha in 2019/2020 to 248,573 ha in 2021/2022. It is estimated that over 596,000 tons of soya bean were produced last production season (2022), which is more than double the amount produced the previous year.

A large portion of the area, which was previously known for sesame monocropping has now shifted to

soya bean, which is considered as a game-changer crop for the area. A number of factors contributed to this dramatic production increase, including (i) growing demand from the local and international market, (ii) emergence of domestic agro-processing industries, (iii) the economic incentive soya beans provide compared to sesame linked with higher productivity and total income per unit area, and (iv) the public support through the extension system.

Based on a quick study done by the RAISE-FS project, soya

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Hip of soybean produce at Mirab Armaciho woreda

Emerging issues in soya bean marketing...

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bean farmers are reporting considerable income loss. This despite the increased demand from the domestic agro-processing industry and demand for export and farmers' positive responses in investing for increased production and productivity. These losses are associated with the considerable decline in farmgate price of soya bean along with a huge increase in cost of production associated with production, labour and post-harvest processing costs. Given the observed short period shift from sesame to soya bean production linked with the felt economic incentives, it is expected that farmers will shift back to sesame in the coming production seasons making it very challenging to supply soya bean in the required quantity and quality for the already established agro-processing industries.

The issues identified and options suggested in this quick study are based on the information generated during a national workshop that engaged all relevant actors in soya production and marketing. Primary data generated through key informant interviews related with understanding the drivers of shift from sesame to soya bean production.

Emerging soya bean marketing issues include:

- The 2023 soya bean market price has declined considerably compared to what farmers had anticipated given their experiences in 2022
- Though farmers signed contract agreement at the beginning of the season, parties failed to show up during harvesting
- Farmers have very limited options for selling their soya bean products, thus they

frequently sell their products at a low price to village collectors/traders in the nearby spot market

- There is a belief that there is some sort of sabotage because traders and brokers wanted to purchase their produce at a lower price
- Processing industries claim that while they are performing under their potential due to power problems, they are nevertheless buying at present. They claim that the cost of transportation is currently rising and that they are paying between 3,500-

3,650 ETB per 100 KG.

- Contract farming, with all its challenges, is not benefiting woredas, as the woredas are not allowed to tax those buyers through this system
- Farmers' primary cooperatives and unions' participation in soya bean marketing is quite minimal mainly due to a shortage of marketing credit
- To reduce the impact soya bean marketing challenges, there is a need to design actions that quickly fix the problem and long-term solutions

The study suggested what actions are required to reduce the problem. The suggested solutions are quick fixes that can be done shortly and long-term actions to alleviate the problem sustainably.

Short-term actions /Quick fixes

- Linking farmers with processors - encouraging oil processing firms to purchase from farmers at a reasonable price
- Ministers at the federal level should discuss with the national bank about how to get banks to avail credit service to processors and exporters
- Facilitating marketing credit for farmers, primary cooperatives and unions (with the government guarantee).
- A communication and advertising campaign can help buyers know that a large amount of soya bean production is available
- It is important to quickly assess both the produce that has not yet been sold as well as the demand for all local processing companies and support processors to realize their full potential by facilitating power service
- The soya beans marketing problem needs to get the immediate attention that it deserves both at the federal and regional levels

Long term actions

- Contract farming should be handled properly; there should be a system that can prevent defaulters from participating in contract farming
- Linking Farmer Cooperative Unions with processing companies - facilitating legally bound contract farming approaches
- Soya bean should not be produced for export only, either row or processed. Instead, efforts should be made to integrate soya bean into our food system
- Important to work on reducing the cost of production, especially the threshing cost i.e. introducing threshing machines
- Starting a warehouse receipt system can help farmers not to lose much
- Banks need to follow up on whether their clients from the agricultural sector-traders are really spending the credit for the purpose
- Strengthening the collaboration between and among

Promoting gender-sensitive approach to improve household nutrition

Gender-sensitive nutrition promotion approach help to enhance women's role in household decision making, which can positively affect food choices, dietary diversity and child feeding practices.

Gender and nutrition can be considered as two sides of the same coin and are a priority intervention area of the RAISE-FS project. We employ a gender-sensitive approach to promote nutrition, which acknowledges the important role that women have in nutrition outcomes, as well as the need to better support them to improve varied diets at household level. It not only seeks to empower women to take control over nutrition-relevant resources and decision making, but also provide nutrition education to men so that they can take on a supportive role to household nutrition improvement.

The RAISE-FS project jointly with Melkassa Agricultural Research Centre (MARC), organized a cooking demonstration and training on gender sensitization and nutrition sensitive agriculture at Sire woreda in Ibseta Huduga kebele in the Farmer's Training Centre. The theoretical part of the training focused on key nutrition concepts, gender and nutrition sensitive agriculture. The practical session focused on preparation and demonstration of different recipes. The training was opened by Mr. Tsegaye Dinku, woreda agricultural office head. Dr. Tesfaye Letta, a liaison team for Oromia of the RAISE-FS project,

introduced the RAISE FS project and objectives of the event.

The objectives of the cooking demonstration were to enable the farmers to gain new food preparation knowledge and skills for vegetables, common bean and mung bean; raise their awareness on food diversification and a balanced diet; and to create awareness on food hygiene and safety. The training on gender and nutrition was aimed at raising awareness on gender and role of gender in nutrition sensitive agriculture.

Cooking demonstration: adding nutritional value to a traditional dish

The cooking demonstration focused on demonstrating the for preparation of different recipes from farmers produce and locally available nutrient dense food crops at community level. It included demonstrations on how to process ingredients into tasty meals, nutritious recipes that can be cooked from ingredients farm households have on their farm, and cooking techniques to make the most of their ingredients. The trainees were selected from the two kebeles, Ibseta Huduga and Koloba Bika of Sire woreda, who participated home gardening for year-round vegetable

production, common bean and mung bean evaluation experiments.

MARC has developed different food recipes from vegetables, common bean and mung bean. Among the recipes demonstrated were cooked leafy vegetables (pak choi, kale, Chinese cabbage, amaranth), sprouted mung bean dishes, common bean shiro, common bean soup, sambussa, mung bean wot (sauce) and cookies were the major ones. Nutrition experts who facilitated the training explained the basic nutrition concepts, good nutrition practices, and food safety best practices to fight against all forms of malnutrition especially for women of reproductive age and children to participants while aiding cooking demonstration. Besides, they promoted the healthy and essential practices such as water, sanitation, and hygiene. Then, the recipes prepared by each group were consumed by the participants at the end of the training to evaluate the taste and flavour of each recipe.

Participant's reflection

Participants praised the organization of the event saying they found it to be useful and delivered in such an easy way to learn nutrition, recipe preparation and food safety. They expressed their concern that to ensure sustainability of the activities, there has to be continuous capacity building, more awareness creation and better accessibility of ingredients (vegetables and common and mung bean production).

Finally, the woreda agricul-



Male farmers actively participating in recipe preparation

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Consultative workshop on the pesticide life cycle in Ethiopia

To enhance sustainable agricultural production in the country, there should be a safe and sound pesticide life cycle. To this end, RAISE-FS conducted a consultative workshop on the pesticide life cycle in Ethiopia. The objective of the workshop was to jointly identify the challenges, opportunities and jointly propose course of action and share responsibilities.

The workshop was started by Dr. Mulugeta Diro, the deputy project manager of the RAISE-FS project, who also provided a brief overview of SWR Ethiopia. After that, Ato Dejene Abesha, RED&FS Secretariat Coordinator, MoA, made the opening remarks. Overview of pesticide life cycle in Ethiopia was presented by Dr. Irene Koomen from WUR.

The use and misuse of pesticides is a common phenomenon in agricultural practices of Ethiopia. This might vary from utilizing the wrong products and dosage, using highly hazardous pesticides, to using counterfeit pesticides and disposing of them improperly. Pesticide registration in Ethiopia is governed by law, and the Agricultural Regulatory Authority is in charge of regulating pesticide use. The Agricultural input and output Marketing System Development Technical Committee (part of the RED&FS Sector Working group) has identified the challenges of the pesticide life cycle namely importation of poor-quality chemicals, local adulteration, misuse by end users, existence of huge amount of expired agro-chemicals and weak and unclear policy in taking measures.

Representatives from public sector, private sector and

development partner presented their mandates and activities in the pesticide life cycle, and the opportunities and challenges in pesticide management.

Following the presentation, participants discussed in groups on the seven pillars of the pesticide life cycle; 1) Registration 2) Formulation and import 3) Marketing 4) Transport and storage 5) Use 6) Disposal 7) Human health & environment.

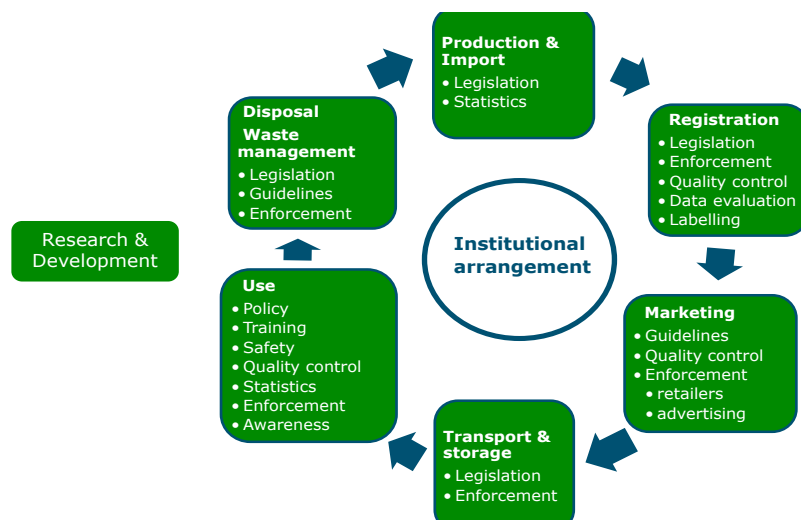
Major challenges to the pesticide life cycle that the groups identified include: a lack of directives and guidelines, a limited supply of active ingredients, access to foreign currency, counterfeits products contraband, a lack of high-quality bulk and satellite storage, limited supplier awareness of pesticide use, a lack of safe means of pesticide transportation, a lack of empty pesticide container management and obsolete pesticide disposal, and a lack of environmental protection. The groups also recommended potential courses of action to tackle those challenges and responsible entities.

Participants consented that every challenge brought up is a

true reflection of the pesticide life cycle. They also mentioned that there are several documentations done so far on opportunities and challenges of pesticide. Consensus had been reached to establish a core group that will harmonize the identified challenges with priorities solutions for each pillar. The core group includes representatives from MoA, EAA, FAO, EIAR and SWR.

The closing remark was given by Dr. Irene Koomen. She appreciated the ideas raised by the participants and suggested to prepare a policy issue paper to convince the policymakers. Finally, she thanked the participants for coming and active participation.

The workshop was attended by 23 representatives from the MoA, Ethiopia Agricultural Authority, EIAR, Federal Cooperative Commission, Hawassa University, Standard Authority, Environmental Protection Commission, Adami Tulu pesticides processing share company, Lions International Trading Pvt, Markos Plc Limited Company, EPOSPEA, SNV, World vegetable center, FAO, RED&FS, and SWR Ethiopia.



Adapted from van den Berg et al., 2011

Brief highlights from RAISE-FS baseline survey

The RAISE-FS project conducted a baseline survey in its intervention areas in the three regions. The major objective of the survey was to collect information on the outcome areas of the project so as to provide an information base against which to monitor and assess the project progress.

Methodology

Multistage sampling approach was followed to identify sample respondents with probability and non-probability sampling techniques. In the first stage, sample 18 kebeles were selected from the nine RAISE FS intervention woredas in Amhara, Oromia, SNNPR and Sidama purposively and 924 sample households were selected randomly from the list of households prepared at kebele level with a proportion of 25% youth (50% male, 50% Female), 75% adults. Among the interviewed adults 30% were female headed household (FHH), 20% were married women from male headed households and the remaining were male headed households.

The baseline data collected focused on household demography, agronomic practices, productivity of crops, irrigation practice, storage practices, home gardening, households' productive capital and women and youth decision making on production and income generating activities, farmers' access to services, group membership, food security, Food Consumption Score (FCS), Individual Quality Dietary Diversity (QDD), and time allocation for different activities for analysis of women and men workload. A summary of findings is presented below.

Study area

A sample of three woredas are selected from each region and one woreda for each food system. These are:

- Angot (food insecure), Yilmana Densa (high potential), and West Armacho (commercial) in Amhara
- Boloso Bombe (food insecure), Gumer (high potential) and Hawassa Zuria (commercial) in SNNPR+ Sidama
- Babile (food insecure), Wolmera (high potential), and Ada'a (commercial), in Oromia

Women Empowerment in Agriculture Index

The survey employed the Women Empowerment in Agriculture Index which is a survey-based index designed to measure the empowerment, agency, and inclusion of women in the agricultural sector, to measure the empowerment of women in agriculture in the intervention area. This tool seeks to identify obstacles and constraints that prevent women from fully participating in agricultural

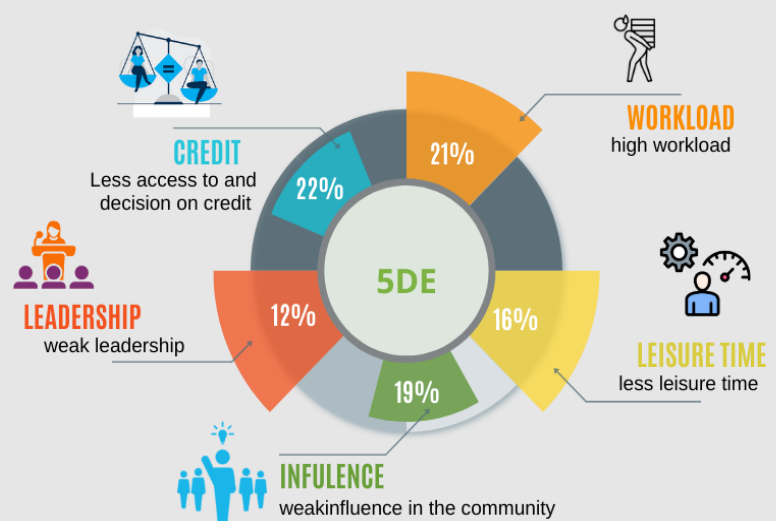
activities and can be used to track gender equality and measure empowerment, agency, and women's inclusion in the agricultural sector. To measure the empowerment of women in agriculture the survey employed the individual level computed five domains of empowerment in agriculture: production, resource, income, leadership and time use (5DE).

The results for 5DE in the study areas showed that 20.1 percent of women are empowered. Among the 79.9 percent of women who are not yet empowered have, on average, they have inadequate achievements in 26.2 percent of domains.

Indicators of domains that contribute most to youth disempowerment in the study areas are weak decisions on control over use of income (20%), have less inputs on production decisions (19%), weak leadership and influence in the community (18% and 10% respectively).

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Indicators of domains that contribute most to women's disempowerment



Improving the Innovation Recommendation Mapping: for evidence based decision support

Innovation Recommendation Mapping (IRM) is a process that helps to identify and prioritize innovations that are most likely to succeed in a given context. It is a tool that can be used to help guide the development of agricultural innovations and ensure that they are effective and sustainable

Efficient agricultural planning and informed decision making are key elements for sustainability and resilience of agricultural production. To support this process Innovation Recommendation Mapping (IRM) was developed by Wageningen University & Research and experts from Ethiopia (mainly from the Ministry of Agriculture and Mekelle University) under the BENEFIT projects. IRM allows users to generate maps that show in which locations 'best fit innovations' can be scaled and what is needed to scale the innovations. IRM supports users to inform food security related decision making. In addition, IRM can support local level development planning, provide agricultural advisory services, and provide insights regarding priority setting for investments for local economic develop-

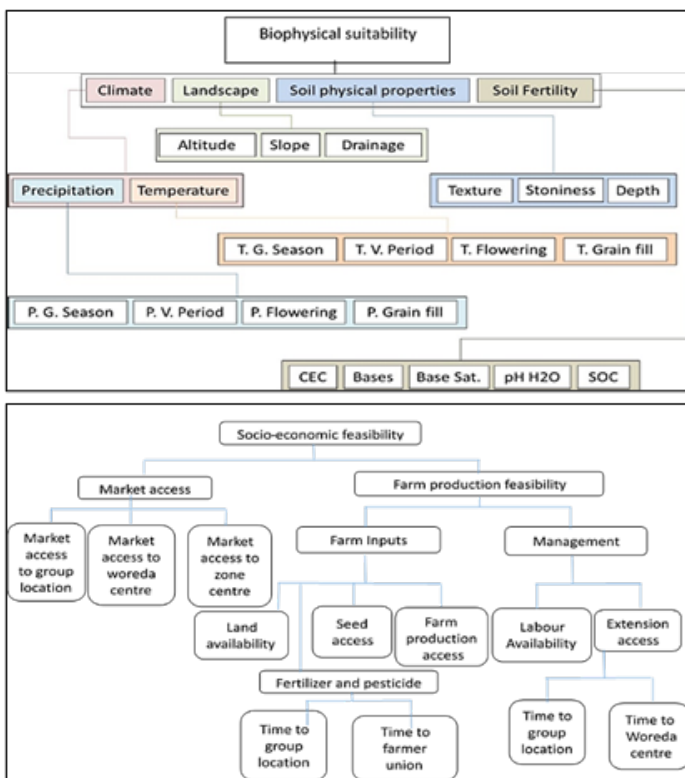
ment. In complement, IRM can support monitoring and evaluation.

How does IRM work?

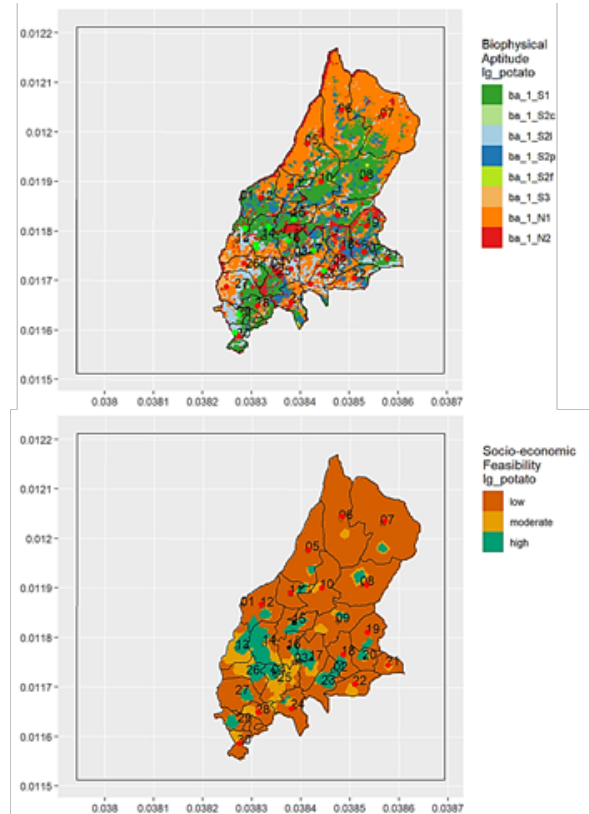
IRM is a modelling approach for geospatial, evidence-based decision support in agriculture, that can play a fundamental role in enhancing participation and guiding planning to make informed decisions and scaling of innovations to suitable niches. The IRM tool runs a GIS based multi-criteria evaluation that builds on the suitability of each innovation by matching agricultural innovations including their appropriate support packages with important biophysical, demographic, economic and infrastructural conditions related to specific geographical locations. The figure shows an example on how IRM was used in a particular area (locations in Table 1)

to understand how biophysical factors affected the suitability for potato production and, in addition, how socio-economic factors affected the feasibility of potato production. The different colour coding in the biophysical aptitude map that IRM generates, indicate different limitations that affect the suitability of the area for potato, and provide suggestions regarding interventions that could address these issues. The socio-economic feasibility map, on the other hand, provides an indication on how access to market, farm inputs, extension services and labour affects the feasibility of potato in this specific area.

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Bio-physical suitability map



Brief highlights from RAISE-FS baseline survey ...

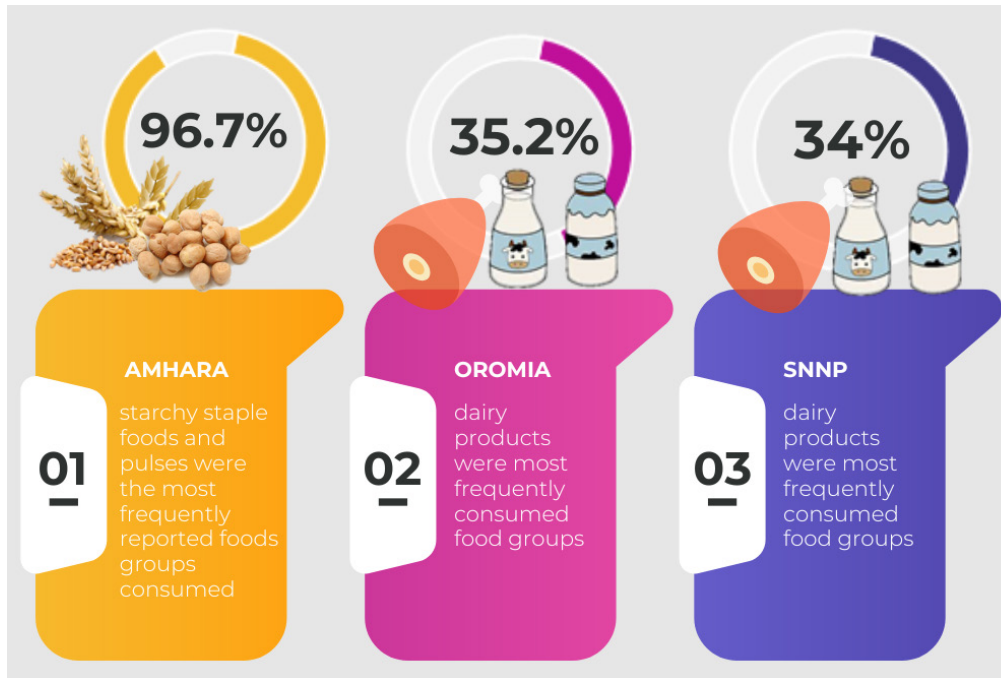
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Food and nutrition

Among surveyed households in the implementation area respectively 91%, 65% and 70% of the respondents from Amhara, Oromia and SNNP/Sidama consumed less than four recommended food groups for quality dietary diversity within a day. There were regional differences in the percentage of women that achieved the minimum dietary diversity (>= 5); 1.6%, 14.8%, and 13.0% respectively from Amhara, Oromia, and SNNP/Sidama. There were minimal differences in dietary diversity scores between regions and also between male and female respondents.

Access to finance and type of financial institutions.

Most of the households were able to get and borrow in cash and/in kind from friends and relatives implying that informal finance sources are more accessible than formal sources. In all



regions FHH households have less access to finance compared to their male counterparts.

Improved farming practices

Most households had limited experience with improved agronomic practices. Intercropping is more common in SNNP and

less practiced in Amhara region. Though commonly farmers rotate cereals after cereal, a practice which is common in Oromia (77%) and Amhara (71%) region. FHH in the study areas practice of improved agricultural practices less than their male counterparts.

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Existing experience with the application of IRM

Use case	What type of application	Location
case 1	Biophysical aptitude for sweet potato (Hawassa 09 and Adu varieties)	Arsi and East Hararghe zones, Oromia
case 2	Biophysical aptitude for maize (BH546 variety) and common bean (Hawassa Dume variety) intercropping	Silte zone, SNNP
case 3	Suitability for wheat-faba bean rotation	Ofla, Endamekhoni and Alaje woredas, Tigray
Use case 4	Suitability for Irish potato (Belete variety)	Lay Gayint Wereda, Amhara

Use cases 1 & 2 are based on biophysical analysis, whereas use cases 3 & 4 are based on full IRM involving both biophysical analysis and socioeconomic feasibility.

IRM within RAISE-FS

Efficient and sustainable agricultural production is one of the outcome areas within RAISE-FS project. In this outcome area RAISE FS is working on exploring and promoting evidence-based innovations on sustainable agricultural practices, improved functioning of input supply chains and strategic planning for agricultural development. As part of the innovations to improve strategic planning and create better enabling environment, RAISE-FS is working on improving IRM in various stages of pilots in 2023 and beyond.

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Promoting gender-sensitive approach ...

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tural office head, Mr. Tsegaye Dinku, appreciated the training and cooking demonstration. He remarked that the event helped participants to acquire new knowledge and raise their awareness on gender role in nutrition, the well-balanced diet and how to prepare nutritious meals from locally available foods or items grown in home gardens and farm fields.

A total number of 40 farmers (both husbands and wives per household), woreda office of



Different recipes prepared from locally produced vegetables, common bean and mung bean

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Improving the Innovation Recommendation Mapping (IRM) ...

The table below provides an overview of the pilots where IRM will be utilized:

Plot	Description of IRM Pilot
Pilot 1	IRM for planning and scaling (suitability) on the ground of already developed sweet potato, and intercropping of Maize & haricot bean technologies and practices
Pilot 2	IRM application for mapping of socio-economic and climate related vulnerabilities (frost, pest and disease) in specific geographical areas
Pilot 3	IRM development for new crop (soyabean) and generation of advisory support within commercial food systems (for example tracking of the quality and quantity of production; planning logistics (inputs and outputs) and assessment of agro-climatological risks.
Pilot 4	IRM for bottom-up Woreda planning (assessment and quantification of fertilizer demand and development of user friendly dashboard for visualisation of decision making impact)

The continuous development of IRM applications involves multi-stakeholder engagement including the RAISE-FS team in Ethiopia, Wageningen University and Research, local team in Ethiopia (MoA, EIAR).

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