SELECT ETHIOPIA VALUE CHAINS SUMMARY

Mercy Corps AgriFin

AgriFin Digital Farmer (ADF) Program

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EXECUTIVE SUMMARY

BACKGROUND

• Globally, more than 1 billion people are employed in agriculture. Most are small-scale farmers in developing countries.
• Smallholders face complex challenges that include lack of access to markets and quality services, competition over land, over-reliance on rain-fed agriculture, lack of water for irrigation, massive urban migration, and shocks caused by climate change, including floods and drought.

AGRIFIN PROGRAM APPROACH

• AgriFin is leveraging the power, convenience, and prevalence of mobile phones to help smallholder farmers boost their harvests and incomes.
• AgriFin employs a market facilitation model to drive scalable, commercial innovations for smallholders with agricultural ecosystem partners who include mobile network operators, financial institutions, service providers, farmer networks, technology innovators, agriculture value chain players, policy makers and other stakeholders.
• The core problem we seek to address is the inclusion gap for smallholder farmers (SHF) who lack access to affordable, accessible, demand-driven financial products and services that drive higher productivity and income for their households.
**EXECUTIVE SUMMARY**

### RESEARCH APPROACH

- The research is based on desk review (90%) and interviews (10%) from experts at Ethiopia Agricultural Transformation Agency (ATA), Mercy Corps Ethiopia, Fair & Sustainable Ethiopia, and local agricultural consultants.
- Figures on **production volumes and production values are all based on (FAOSTAT 2016)**.
- The research focuses on **a few pre-selected select value chains**, that Mercy Corps AgriFin may focus on with future engagements. This analysis does not cover all value chains in Ethiopia.
- Pre-selection of VC’s for analysis was driven by the potential for **digital financial and digital information interventions**.
- All production values are **net** (national production gross value minus seed/fertilizer).

### KEY FINDINGS

- Deficits between domestic demand and production in multiple value chains (i.e. wheat, barley, etc.) indicate **good investment potential driven by domestic demand**.
- Cattle beef and dairy, poultry, maize and wheat are large value chains, representing large production volumes and values (indicating strong finance potential), however termed as unstructured - semi-structured, due to weak market linkages, weak to non-functional farmer unions among others.
- Cash crops such as sesame and coffee are more structured, whereas staple crops are less structured (in line with other country ecosystem studies).
- **Good digitization/finance potential to address pain points in semi-structured value chains**, complimenting ongoing voucher, e-extension and information services.
Agriculture value chains are influenced by different characteristics, such as size and level of structure.

**Legend**
- Size of the bubble represents Net Production Value in US$ in 2016
- Unstructured
- Semi-structured
- Structured

**Value chain Mapping**

- **Maize**
- **Livestock (cattle meat)**
- **Dairy (cattle milk)**
- **Poultry (meat)**
- **Poultry (eggs)**
- **Wheat**
- **Barley**
- **Liverstock (sheep, camel & goat meat)**
- **Dairy (sheep, camel & goat milk)**
- **Honey (natural) & beeswax**
- **Sesame**
- **Coffee (green)**

**Note:** The goat, sheep, and camel value chains have 322,468, 355,861 and 395,000 SHF respectively. Source: FAOSTAT 2016 [http://www.fao.org/faostat/en/#data/QV](http://www.fao.org/faostat/en/#data/QV)
Maize: A staple crop grown by around 8.7M SHF’s and a source of food security.

- **8.7 M** Smallholder Farmers
- **7.85M** Annual production (MT)
- **$1B** Production value (USD)

**Main Production Zones**
- Amhara (20%)
- Oromia (61%)
- Southern Nations, Nationalities, and Peoples’ Region (16%)

Why look at the maize sector?

- **Maize is one of Ethiopia’s staple crops** - of the 16M hectares (ha) under farming, 2.2M ha is Maize. FAO (2018) states approximately 80% is consumed on farm, with the balance sold, used as feed or seed.
- Approximately **95%** of the marketed quantity comes from smallholders, and the rest from state/commercial farms.
- Maize features in Ethiopia’s **Growth Transformation Plan GTP I (2010-2015) & GTP II (2014-2020) and considered as food security.** The plan projects an average productivity increase on stalk cereals to 42.64 quintals/ha (4.3 tons/ha) by end 2020 from 29 quintals/ha (2.9 tons/ha) in 2014.
- Maize is also traded on the Ethiopian Commodity Exchange (ECX) platform.
- Maize value chain has a **high** involvement of women and youth, in the production, harvesting and storage stages.

2. FAOSTAT 2016  
3. Demeke, M. Analysis of incentives and disincentives for maize in Ethiopia 2012  
6. FAO 2018
The Maize value chain is semi-structured with informal market linkages, but has high women & youth participation

**Pre-Production**
- Fertilizers are provided are subsidized. Delays can affect planting times.
- Seeds are provided through research institutes (e.g. Ethiopian Institute of Agricultural Research (EIAR, CIMMYT)).
- Cooperatives largely exist to supply inputs, less marketing (about 3.6%) and suffer organizational issues.

**Production**
- SHFs are the main producers (95%).
- Uptake of improved hybrid seeds is high (around 50-60%). More needs to be done to avail quality seeds countrywide, due to high demand.
- Traditional farming methods used (such as oxen drawn ploughs), as mechanization is expensive, plus SHFs lack the capital.

**Post-Production & Markets**
- Market linkages are informal & weak - locally consumed or sold to local traders / wholesalers) and coops.
- Modern storage facilities and processing is limited, leading to postharvest losses.
- Importing and exporting is inhibited by: (i) high transport costs, (ii) volatile prices and; (iii) dispersed production zones.

**Challenges**
- High input costs and low quality.
- Pests and diseases such as The Fall Army Worm.
- Limited access to capital.
- Lack of proper storage facilities.
- Price Volatility during bumper harvests especially.
- Inconsistent supply of produce downstream to the markets.

**Digital & Non-Digital Services**
- Digital Financial Services (DFS): None.
- Non-DFS: e.g. ATA has the input voucher system giving farmers access to quality inputs.
- Digital Information Services (DIS): e.g. ATA’S IVR system give, agronomic information; ECX send texts on maize market prices.
- Non-DIS: Extension and trainings done by e.g. Ministry of Agric., ATA

**Donor and Development Agencies**
- USAID- Advanced Maize Seed Adoption Program.
- World Bank-Lowlands Resilience Program
- ATA- Provide extension trainings, research and advisory.
- BMGF- Fund research work to improve the value chain.
- Technoserve-Work with Maize cooperatives

**Wheat:** A staple crop, grown by about 4.7M SHFs, with domestic demand higher than supply

- **4.7 M** Smallholder Farmers
- **4.5M** Annual production (MT)
- **$700M** Production value (USD)

**Main Production Zones**

- **Amhara (13-29%)**
- **Oromia (59-75%)**
- **Southern Nations, Nationalities, and Peoples’ Region (2%)**

**Why look at the Wheat Sector?**

- Wheat is a **staple crop**; Ethiopia is the **largest wheat producer in the Sub-Saharan Africa**, after South Africa. Most humanitarian food aid takes the form of wheat.
- The major types of wheat grown in Ethiopia consist of: Bread wheat, Durum wheat and Emmer wheat.
- Despite the national yield having doubled in two decades, there is still a **deficit of ~20%** which is met through imports. Ethiopia imports most of its wheat from **Russia (42%)**, **USA (26%)**, and **Italy (11%)**.
- Subsidized imported wheat affects local market prices.

The Wheat value chain is semi-structured, involves approximately 4.7 M SHFs with better access to formal markets

### Pre-Production
- **Seeds** are produced and distributed by Ethiopian Seed Enterprise (ESE).
- **Fertilizers & Pesticides** are received from cooperatives and farmer unions, although reportedly there are issues with supply and quality. Local traders do sell fertilizers too.

### Production
- SHFs are the main producers (about 80%).
- **Women** involved in weeding and crop storage, while the men are heavily involved in planting.
- Traditional farming methods apply, as mechanization is still expensive for the SHFs.
- Irrigation challenges, especially during drought.

### Post-Production & Markets
- Marketing is dominated by men.
- Wheat trades as a commodity at the ECX.
- Formal Market access better than Maize, includes local consumers, bakeries, millers, wholesalers, processors and Farmer cooperatives unions.
- Ethiopia Food Security Reserve Administration (EFSRA) for use in emergencies (puts 60% of wheat stocks)

### Challenges
- **Unreliable grading systems**, affects quality of produce.
- **Diseases** such as wheat rust, including pests, soil fertility and weeds
- Lack of **market information**, leads to uncontrolled prices, broker influence
- **Poor quality** inputs
- Lack of proper and adequate **crop training**
- Limited access to **credit**
- Poor **storage** facilities-Postharvest loss

### Digital & Non-Digital Services
- **Digital Information** access through for example: ATA IVR platform on agronomic issues
- SHFs have **access to credit**, though still limited via Cooperatives, and regional MFIs, but **not digital**. ATA input voucher system available
- SHFs can access **crop insurance** i.e. Oromia Insurance, however low uptake and **not digital**.
- **Extension services** (non-digital): By Ministry of Ag., ATA; however more training needed.

### Donor and Development Agencies
- **BMGF**- Fund research
- **USAID**- Fund Research, Feed The Future Strategy
- **ATA**- Provide extension trainings, research and advisory.
- **World Bank**- Fund research, Resilience programs
- **Ethio-Italy/IAO**- Industrial park project for wheat and Tomato
- **TechnoServe**- Cooperatives training
- **CGIAR (CIMMYT and ICARDA)**- Research grants

Barley: A dual purpose crop, both staple and cash, a growing value chain with approximately 4.5M SHFs.

- Ethiopia produces two varieties: **Food Barley (Staple Crop)** and **Malt Barley (Cash Crop)**
- Ethiopia is the 2nd largest Barley producer in Africa, after Morocco, contributing about 25% of the continent’s barley production.
- Food Barley is consumed locally by SHFs (above 60%) while Malt Barley is fully dependent on the evolving growing brewery sector and demand for beer.
- Barley deficits fulfilled with imports
- It is reportedly a male dominated value chain, however women and youth heavily involved in production.

**Main Production Zones**

- **Amhara** (30%)
- **Oromia** (53%)
- **Southern Nations, Nationalities, and Peoples’ Region** (8%)
- **Tigray** (9%)
The Barley value chain is semi-structured, with most marketing reportedly dominated by men.

### Pre-Production

**Fertilizers and Seeds:**
- MFIs and cooperative unions supply inputs, low capacity affect efficiency at coops/farmer unions;
- Government led organizations supply inputs such as: **Agricultural Inputs Supply Enterprise (AISCE)** and the **Ethiopian Seed Enterprise (ESE)**

### Production

- SHFs are the main producers of the ~90% of the marketed barley.
- Women and Youth involved heavily in the production process.
- Traditional methods of farming practiced (animal drawn carts)
- Barley can grow in dry areas (1400-4000m above sea level), thus increases importance in drought-prone areas.
- Men dominate the value chain, especially in marketing and sales.
- **Malt Barley** is sold to various actors:—Breweries such as Heineken, Diageo, BGI Castel and Dashen.
  - Ethiopian Grain Trade Enterprise (EGTE) which manages urban barley supply. The Ethiopia Food Security Reserve Administration (EFSRA) keeps the grain stock for emergency relief.

### Challenges

- Lack of adequate inputs: seeds, fertilizers (shortages, expired, high costs).
- Lack of mechanization
- Poor product quality due to poor crop husbandry and illiteracy
- Side-selling due to price volatility
- Lack of adequate storage facilities

### Digital & Non-Digital Services

- **Digital Information Services** through ATA’s IVR system.
- Credit access available through regional MFI’s but limited. **ATA input voucher** system available, however non-digital. No DFS available
- Non-Digital Extension services and trainings: offered by Ministry of Ag, ATA, Heineken(to its contracted SHFs on correct seed, and proper crop husbandry).

### Donor and Development Agencies

- IFC (World Bank)
- Ministry of Foreign Affairs of Netherlands (due to Dutch company’s investing such as Heineken]
- USAID-Cooperative Development Project
- ATA- Provide extension trainings, research and advisory.

Sesame: Major cash crop, which is mainly produced as an export crop, and a growing value chain.

Why look at the Sesame Sector?

- Next to coffee, sesame seed is the **second largest** agricultural export earner for Ethiopia.
- Sesame is traded as a commodity at the Ethiopian Commodity Exchange (ECX).
- The **Humera, Gondor and Wollega** sesame seed type are well known in the world markets, with Humera and Gondor used in bakeries, confectionaries; and Wollega used in edible oil making.
- As a **growing value chain**, the sesame sector has the potential to involve more smallholders under its production, hence one way of empowering them is linking them to domestic and international markets.
- Sesame features in the GTP I & II of Ethiopia’s growth strategy, under the non-stalk cereals, which projects average production to grow by 2020 from **21.1 quintals/ha (2.1 tonne/ha)** in 2014/15 to **31 quintals/ha (3.1 tonne/ha)** in 2019/20.

### Main Production Zones

- Amhara (37%)
- Oromia (30%)
- Tigray (16%)
- Benishangul Gumuz (10%)
- Southern Nations, Nationalities, and Peoples' Region (7%)

**Source:**
3. ATA Expert Interview- Dr.. Desawi Hdr. 4. FAOSTAT (201)
The Sesame value chain is structured, however has long and traditional marketing channels and poor market infrastructure

**Pre-Production**
- **Seeds**: Sourced from research centers such as EIAR (Ethiopian Institute of Agricultural Research), RARI (Regional agricultural research institutes), National Agricultural Research System (NARS).
- **Fertilizers**: Imported by Agricultural Input Supply Enterprise (AISE), and Cooperatives and Unions distribute fertilizers to members, though the systems are weak.

**Production**
- **Women**: are involved at smallholder level, in planting, weeding, threshing, while the men largely in selling. However in **commercial farms majority of labour is male dominated (95%)** and contractual, hence good for **youth employment**.
- **Mechanization is expensive** for smallholders, so traditional methods of farming used (Oxen drawn ploughs)

**Post-Production & Markets**
- **SHFs** depend on intermediaries due to the small quantities to be sold and lack of efficient market information system.
- **International importers**: China (largest); Turkey, Israel, Germany, Netherlands, UK, Poland :- Exports Raw Sesame [97%]
- **Other market actors** include the Ethiopian Pulses, Oilseeds and Spices Processors Exporters Association (EPOSPEA); wholesalers, oil millers
- Djibouti and Sudan are the export routes.
- National Bank of Ethiopia (NBE) regulates forex and pushes for exports

**Challenges**
- Lack of improved **cultivars/seed varieties.**
- Lack of **market information.**
- **Low productivity** due to poor crop husbandry and agro-information.
- **Pests** like moths in poor storage facilities, webworm, seed-bug.
- **Risk of Shattering** of the plant if harvested late, leads to harvest loss.
- **Credit access** still **expensive.**
- **High transport costs** to warehouses and ports of Sudan and Djibouti.

**Digital & Non-Digital Services**
- **Digital Information Services** through ATA’s IVR system for agronomy advice. Market Information digitally available from ECX is still a challenge due to network coverage issues.
- **Credit access** available through regional MFI’s but limited and non-digital. ATA input voucher system available. **No DFS available**
- **Extension services and trainings**: Non Digital offered by Ministry of Ag, ATA, NGOs like AgriTerra aid in capacity building programs, training of trainers (TOT)

**Donor and Development Agencies**
- **Sesame Business Network (SBN)**: links cooperatives to European importers.
- **2SCALE**: Dutch program building agribusiness clusters, includes sesame
- **ENTAG**(Ethiopia-Netherlands Trade for Agricultural Growth)
- **AgriTerra**: Offer Cooperative capacity building.
- **SITA**: support trade promotion from East Africa to India & the world.
- **USAID-Feed the Future program**
- **ATA-** Provide extension trainings, research and advisory.

Coffee: Accounts for 34% of the country’s commodity exports (2017/18), Africa’s leading producer of Arabica

- Ethiopia is Africa’s leading producer and exporter of Arabica coffee (34% of country’s commodity exports) & in 2018/19 ranked 10th in the world’s largest exporter contributing about 4.2% of total world coffee production.

- 4 ways of coffee production, grown mostly by SHFs:
  - Forest Coffee [basically free growing wild trees (covers 10%)]
  - Semi-Forest Coffee [claimed trees but cared for (covers 35%)]
  - Garden Coffee – [grown in backyards, use organic fertilizers (covers 45%)]
  - Plantation Coffee – [grown on commercial farms (covers 10%)]

- Ethiopia has a system of traceability of coffee traded at the Ethiopian Commodity Exchange (ECX) by providing a digital passport to the coffee (ensuring quality & transparency on origins).

- Certifications of Ethiopian coffee include Fairtrade, Organic coffee, Bird-friendly, UTZ and Global Forest Alliance

- Coffee features under the GTP II of Ethiopia’s growth transformation plan with total production is projected to increase from 420 thousand tons in 2014/15 to 1045.05 thousand tons by 2019/20.

The Coffee value chain is highly-structured, with strong market linkages and structured cooperative unions.

**Pre-Production**
- **Seedlings** are acquired from research centers, commercial farms, cooperatives or local farmers.
- **Fertilizers**: Most SHFs don’t add fertilizers, in comparison to the cereal sector. Incentives of premium prices provided Organic Certified Farmer.
- Climate Change has affected **soil moisture**, linked to yield and high productivity.

**Production**
- 95% SHFs producers, 5% commercial.
- Women (75%) involved in sorting, drying and cleanup process *[sundried or wet-washed]*, being source of income to the women. Men dominate in sales.
- Coffee plant produces first crop at **5 year old** and remains productive for **15 years**. A perennial crop thriving in tropical climates.
- Renowned varieties of coffee are **Sidama**, **Yirgacheffe**, **Jimma** and **Harar**

**Post-Production & Markets**
- **Exporters**: 86% of the total coffee exports destined for Germany, Saudi Arabia, Japan, USA, Belgium, Sudan, South Korea. Ethiopian Coffee Exporters Association *(ECEA)* also buy from SHFs/Cooperatives
- **Other actors**: Primary Collectors sell to Coops; Cooperatives Unions(collect, clean, sort, package coffee and export to international buyers); licensed wholesalers, ECX traders, local consumers(35%)
- Storage facilities/warehouse info shared by ECX, though still limited.

**Challenges**
- **Access to training and market info.**
- **Crop competitiveness**: Farmers are replacing coffee trees with Khat that’s drought resistant and profitable.
- **Diseases**: Coffee Berry Disease, **Pests** Coffee Borer
- **Infrastructure**: High transport costs, limited storage, poor roads networks
- **Low quality**: SHFs prefer sundried berries to spread income but are low in quality in comparison to wet-washed berries
- **Lack of improved seedling variety**

**Digital & Non-Digital Services**
- **No DFS existing.**
- **Credit is accessed through regional MFIs and Cooperative unions.**
- **Digital Information** on market prices shared via SMS by ECX. Coffee is also given a digital passport for traceability & quality. ECX has an **IVR platform** for farmers to call in for market info. & warehouse availability.
- **Extension Services** (non-digital) provided by MoA, NGOs like TechnoServe, Oxfam, SNV

**Donor and Development Agencies**
- **Techno Serve, SNV, Oxfam** - Provide trainings on business, market linkages, support female headed coffee growers, capacity building
- **USAID**: Funded FINTRAC that works in the coffee value chain.
- **Solidaridad**: Women empowerment programs in the coffee value chain.
- **JICA**: Technical support on projects on forest coffee management; pesticide usage management

Honey: A staple crop in Ethiopia, with about 6.5 M beehives, but low production and largely informal.

Why look at the Honey Sector?

- Honey is a **staple crop**, that requires low investment in cash and time.
- It is **growing value chain and potentially of high value/income to smallholders**. For example: In Southwest Ethiopia, production from honey can reach 100-200 kg per year with a price per kg of 8-10 Birr. Thus, the potential annual income from honey can reach 800-2000 Birr.
- Contributes to environmental conservation and sustainability through forest management and bees pollination.
- SHFs have an average of 12 hives per household
- There has been a short supply of honey and honey products in Ethiopia and global market, due to poor apiculture practices, pests and diseases.
- Honey and Beeswax production features in the **GTP II (2014-2020)**, with honey projected to increase from 60.7 tons to 123.9 thousand tons; and beeswax projected to increase from 5.7 thousand tons to 8.6 thousand tons by 2020.

Main Production Zones

- Tigray (7%)
- Amhara (26%)
- Oromia (38%)
- Southern Nations, Nationalities, and Peoples' Region (18%)

The Honey value chain is highly-structured, with strong market linkages and structured cooperative unions

**Pre-Production**
- **Inputs: Beehives and Equipment**
  - Local youth get some employment through carpentry work of making beehives.
  - Local Cooperatives give credit to SHFs to buy equipment, however more is needed to be done.

**Production**
- SHFs are majority traditional beekeepers.
- Honey production system techniques is in 3 ways: **traditional, transitional and modern beekeeping.**
- Honey bee pests (birds, ants, wasps) and diseases such as chalk brood [attack larvae], amoeba – do affect bees productivity.

**Post-Production & Markets**
- Market actors entail: **Honey Collectors**: collect from villages; **Processors**: Refine and package then send to retail or exports; **Retailers**: sell to consumers; **Cooperatives** help to aggregate and sale local consumed honey for members.
- There is still **high cost in packaging** of honey, especially acquiring glass jars for exports to countries like USA, Sudan, Norway, UK, Japan, Yemen

**Challenges**
- **Shortage of input supply** such as modern hives, honey handling equipment-smokers, excluders, body protection, packaging materials etc.
- **Low productivity** per hive due to honey pest and disease.
- **Lack of financial resources & market information**
- **Shortage of bee forage** during drought lowers both the quantity and quality
- **Environmental pollution** due to pesticides and deforestation.

**Digital & Non-Digital Services**
- **No DFS products**
- **Non Digital Financing**: Through MFIs such as Oromia MFI; Cooperatives also extend credit for equipment, though credit lines are still limited.
- **Digital Information Services exist** through ATA’s IVR system for agronomy advice.
- **Non-Digital Information** services: Exists through extension by Ministry of livestock; NGOs such as ACDI VOCA, SNV, CARE

**Donor and Development Agencies**
- **ACDI VOCA, SNV, CARE**: Work in apiculture value chain upgrading projects
- **GIZ**: Livelihood resilience and sustainability projects
- **ATA**: Honey is a focus cluster, give advisory and extension services
- **USAID**: Beekeepers program on improved

Source:
Livestock Sector: Set to transform the economy, Cattle is a priority sector due to scale and production value

- The Livestock sector is large and set to transform Ethiopia’s economy, with its contribution of about **45 percent** to agricultural GDP (cattle being the most important generator, hence a priority)

- Ethiopia Livestock Master Plan (LMP) was undertaken by the newly established Livestock Resources Development Sector (LRDS) or Livestock State Ministry (LSM), and Ministry of Agriculture (MoA), with objectives to contribute to the Growth Transformation Plan GTP II 2015-2020

- During GTP I (2010-2015), reports indicate unsatisfactory progress in the livestock sector, hence GTP II (2015-2020) has set targets for:
  
  (i) **Total Meat production (cattle, goat, camel, poultry)** to increase from 1,321 thousand tons to 2,103 thousand tons by 2020

  (ii) **Total Milk production (cow, goat, camel)** to increase from **5,304M** litres to **9,418M litres** by 2020.

Why look at the livestock sector?

- **Cattle**
- **Goats**
- **Camel**
- **Sheep**
- **Poultry**

Cattle: Beef is both a cash (exports) and staple product, with approximately 13 million smallholder households.

- **Smallholder Farmers**: 13 M
- **Annual production (MT)** (cattle beef): 0.4 M
- **Production value (USD)** (cattle beef): $980 M

**Production Zones**
- Peri-urban small-scale system [around Addis]
- Commercial Feedlot system [Oromia]
- Pastoral livestock system [Afar, Somali]
- Mixed Crop System

**Why look at the Cattle Beef sector?**

- Beef is a dual product (cash) and staple, with indigenous breeds of cattle being the majority.
- No specialized beef production system in Ethiopia, however fattening of cattle and small ruminants are lucrative.
- There are four types of beef production system for cattle in Ethiopia: the commercial feedlot system; peri-urban small-scale fattening; backyard fattening in the mixed crop-livestock system; and the pastoral/agro-pastoral livestock production system.
- The average carcass weight for cattle is 110 Kg.
- Live Cattle and beef are also exported through formal set routes, however it's reported that majority trade through informal routes/informal trade. Some reasons for this trade: challenges accessing formal markets.

The Cattle Beef value chain is large, semi-structured, with weak informal market linkages.

### Production

- **Commercial Feedlots**: Av. herd size of 100 animals fattened, mainly Borana breeds.
- **Periurban small-scale fattening**: Av. Herd size of 5-8 animals fattened, mainly Zebu breeds.
- **Mixed crop-livestock**: Backyard fattening, around 9.6 M farms practice this, average herd size of 1-4 animals fattened at a time, mainly Zebu breeds.
- **Pastoral/agro-pastoral**: Av. herd of 10-20 or >200 in large scale, animals fattened in a rangeland system, mainly indigenous breeds.

### Commercialization

- **Market actors**: In the beef & live animal value chain include Producers, Brokers, Collectors, Feedlot operators, Abattoirs, Importers, & Exporters.
- **Informal exports** are a channel to sell live animals (75-80%), happens cross-border unregulated, while formal exports use a designed strict route with slaughterhouses in Addis Ababa.
- **Major importer** of Ethiopian beef is the Middle East Countries.

### Challenges

- **High transport costs**
- **Price fluctuations**
- **Informal routes** and trade brings unfair competition to those who trade in the formal routes.
- **Animal health**: Limited access to vaccines; Veterinaries.
- **Animal Genetics**: Crossbreeding is encouraged to get hybrids, more extension needed.
- **Insufficient animal feed/grazing land**

### Digital & Non-Digital Services

- **Extension and trainings**: offered by ILRI, ATA Livestock Unit, Ministry of Livestock, Vet. Officers
- **Digital Info. Services (DIS)**: ATA has the IVR system for SHFs to call in for agro-info.
- **Credit access** is limited. PRIME project has introduced sharia micro-finance in Somali region, (more to be done).
- **Index-based livestock insurance (IBLI)** exists, e.g in Borana region in 2017 farmers got compensated due to drought.

### Donor and Development Agencies

- **BMGF-Funded Livestock Master Plan**
- **USAID & Mercy Corps Ethiopia**: (PRIME project)
- **CIDA**: Markets access program
- **World Bank- Pastoral Development Program**
- **ATA**: Advisory and extension
- **ACDI/VOCA- The Feed Enhancement for Ethiopian Development (FEED) project**
- **IFAD**: Pro-poor sheep& goat program

Dairy: Cattle is the largest contributor for total national annual milk output in Ethiopia.

13 M Smallholder Farmers

Annual production (MT) (cattle milk)

3.1M

Production value (USD) (cattle milk)

$980M

Production Zones

Commercial system

Urban-Periurban (around Addis Ababa)

Mixed Crop livestock

Pastoral/agropastoral

Why look at the Livestock Dairy sector?

- Dairy is a staple product in Ethiopia, mainly depends on indigenous livestock resources, **cattle contributing the largest of the total national annual milk output at (81.2%)**, followed by goats (7.9%), camels (6.3%) and sheep (4.6%).
- Women involvement is high in the dairy value chain, from the production, milk processing which is carried out at home-level, to marketing, which is key in providing economic empowerment.
- Out of the 59M cattle (about 6.7- 7M are dairy cattle)
- There are 4 major dairy production systems: 
  - Commercial; 
  - urban/peri-urban; 
  - mixed crop-livestock; and 
  - pastoral/agro-pastoral.
- The mixed crop livestock system is key in dairy production, with about 65% of the total milking cows, and produce about 72% percent of the national annual milk output.

Source: 1. CSA Agricultural Sample Survey 2014/15  
2. Interview: Dr. Yoseph Mekasha, ATA Livestock Unit Expert and Advisor, March 2019  
3. FAOSTAT 2016  
4. FAO. Africa Sustainable Livestock 2050: Livestock production systems spotlight- Ethiopia Cattle Sector 2018
The Dairy value chain is fragmented in supply, but has high women involvement with a high growth potential.

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**Production**

- **Main inputs:** Feeds, artificial insemination & animal health products (vaccines, de-wormers, pesticides)
- (i) **Commercial dairy:** large scale >100 cows, medium 30-50 cows, small scale <30 cows, mainly crossbred breed, yield 15-20 Litres;
- (ii) **Peri-urban dairy:** Av. herd size 1-5 cows, crossbred breeds, yield 10-15 Litres;
- (iii) **Mixed Crop:** Largest system with SHFs, Av. herd size 4 cows; mainly indigenous breed; yield 1.9 Liters;
- (iv) **Pastoral:** Av. Herd size 10-20 cows, large herds >200 cows, yield 1.5 Litres, mainly indigenous breeds.

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**Commercialization**

- Key actors in the dairy value chain include Producers, Traders, Cooperatives, Dairies, and Retailers.
- **Women are highly involved in the value chain (Production, processing to sales).**
- Large processors operate at 50% capacity due to fragmented milk supply.
- Raw milk (50%) is sold directly by producers in the neighborhood and to dealers at farm gates, pasteurized milk (71%) sold through retail shops and about 15% through supermarkets.

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**Challenges**

- Weak extension services
- Limited access to Vets, Vaccines
- Limited animal feed and water
- Climate Change: Droughts Diseases: e.g. East Coast Fever
- Milk Quality: lack of good storage facilities (cold chain)
- High transport costs
- Poor road networks
- Animal genetics

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**Digital & Non-Digital Services**

- No Digital Financial Services available. ATA IVR system, provides digital information service
- **Extension and training services:** Offered by Community based workers, ILRI, ATA, NGOs: SNV, Mercy Corps Ethiopia (however more to be done)
- **Credit access** is limited. Oromia MFI gives credit, but limited
- **Index-based livestock insurance (IBLI), but low uptake and limited.**

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**Donor and Development Agencies**

- **Mercy Corps Ethiopia:** PRIME project in the lowlands
- **ATA:** Supports training, provides advisory and extension services
- **World Bank:** Livelihoods resilience program & major donor
- **BMGF:** Funds research and donor
- **DFID:** Donor, goat dairy program, Private enterprise program
- **SNV:** EDGET program-focus on dairy sector growth

Poultry: Large value chain with low production due to high poultry mortality rates.

- **Smallholder Households**: 7M
- **Annual production (MT) (Eggs)**: 54,400
- **Annual production (MT) (Poultry Meat)**: 13,200
- **Production value (USD) (Eggs)**: $43M
- **Production value (USD) (Poultry Meat)**: $88M

**Why look at the Poultry sector?**

- Poultry keeping is common in rural households due its **low input requirements**, and fast income generator, good source of nutrition and asset-building capital.
- It's estimated out of every ten (10) households, six (6) keep poultry. Majority of households keep poultry, mostly of indigenous breed. Poultry sector has shown to economically empower women and youth.
- Poultry farming is also a risky business. Most households have as many as 40 chickens at the beginning of the year, but may end up with only **10 adult chickens** due to high rates of mortality.
- Poultry features in the GTP II: ‘total meat production (cattle, goat, camel and poultry) is projected to increase from 1,321 thousand tons in 2014/15 to 2,103 thousand tons by the end of the plan period’.”

**Production Zones**

- Amhara (32%)
- Oromia (34%)
- Southern Nations, Nationalities, and Peoples’ Region (19%)
- Tigray (12%)

Source: 1. Interview with Mercy Corps Ethiopia- Dr. Numery Abdulhamid and Zelalem Belayneh, March 2019, Addis Ababa  
2. FAOSTAT 2016  
The Poultry value chain however unstructured, is empowering women & youth as an easy income generator.

**Production**
- SHFs practice backyard poultry rearing.
- **Inputs of production:** Feed (commercial, scavenging residues); Day-old chicks, hatching eggs, improved cockerels and pullets, water & feed equipment, vaccines and drugs.
- **Vaccines:** The National Veterinary Institute of Ethiopia.
- **Suppliers:** e.g. Ethiochicken (day old chicks) Alema farms (poultry feed, day old chicks)

**Challenges**
- **Feed:** Improved feeds are expensive
- **Vaccines:** Limited and uptake is low
- **Diseases:** Newcastle disease (ND) is a major cause of mortality in village poultry
- **Weak extension services,** poultry husbandry training is insufficient.
- **Bird genetics:** Local breeds still dominate the improved breeds.

**Commercialization**
- Key actors involve producers, suppliers (feed, chicks), retailers, traders (hotels, supermarkets), bakeries, local consumers.
- Women and youth involved in poultry husbandry to the sales. Most sold at the farm gate and in the neighbourhood.
- Indigenous meat and eggs highly preferred by locals.

**Digital & Non-Digital Services**
- No Digital Financial or Information Services (DFS /DIS) available.
- Credit access is limited. Women borrow in their small groups.
- Extension; Provided by Development agents (DA) in the Peasant association (PA) groups; Vet. Officers, Farmer Training Centres.
- No insurance available for poultry.

**Donor and Development Agencies**
- **FINTRAC:** Poultry value chain development
- **USAID:** Funds NGOs in poultry sector
- **World Bank:** Supports public sector engagement in Poultry

Thank You!

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