Sheep Production in Ethiopia

By

Belay Duguma

Jimma university, Ethiopia

Overview of Ethiopian Agriculture

- Ethiopia's economy is based on agriculture
- Accounting for 55% of the national GDP
- 60-85% of exports
- 85% of total employment
- sector suffers low productivity per unit of input
- high risk due to predominantly rain-fed
- Smallholder farmers grow different crops and raise multiple species of livestock

Major agricultural products

Crops: cereals, pulses, coffee, oilseed, sugarcane, potatoes

Livestock: cattle, sheep, goats, Camel, Equines, Bees

Recently, floriculture has emerged as an important sector targeting the export trade.

The Livestock Resource Base (population in millions)

Type	Population
Cattle	44.3
Sheep	23.6
Goats	23.3
Equines	6.10
Chickens	58.00
Bee colony	10 million

SHEEP PRODUCTION in Ethiopia

- sheep are reared mainly by smallholder farmers
- Population - 23.6 million (CSA, 2004)
- The second largest in Africa (FAO, 2004)

Distribution

- Diverse production system
  - 75% the cool climate of the highlands
  - 25% the semi-arid and arid pastoral areas of the lowlands

Economic Importance

- **Sources of cash income**
  - **In the mixed crop-livestock 22-63% to the net cash income**
- **Mutton**
  - **The annual mutton production of the country is estimated at 78000MT**
  - **sheep provide 15% of the domestic meat consumption**
  - **in mixed farming system sheep provide 19-23% to the food subsistence value derived from livestock production**

Cont…

- manure
- skins and coarse wool
    - 50% of the domestic wool requirements
    - about 40% of fresh skins
    - 82% of the value of semi-processed skins export trade
- Sources of security-risk mitigation
- monetary saving (live bank) and investment
- Social and cultural functions

Breeds of sheep

6 Breed groups

1. Short-fat-tailed (sub-alpine)

2. Long-fat-tailed (sub-humid HL)

3. Thin-tailed (sub-humid LL)

4. Fat-rumped (arid & semi-arid lowland)

5. Washera

6. Bonga

The four morphotypes (tail types)

Breeds

- 9 Breeds
- Simien & Sub-alpine
- Horro & Arsi-Bale
- Gumz
- Blackhead Ogaden & Afar/Adal
- Washera
- Bonga

Some sheep breeds

Blackheaded Ogaden/Somali

Cont…

Bonga Breed

Cont…

Horro sheep

Cont…

Menz sheep

Cont…

Arsi-Bale sheep

Productivity

- The annual off-take rate is estimated at 33%
- Average carcass weight is about 10 kg
- the second lowest amongst SSA (FAO, 2004)
- O.5 kg wool/annum
- Late age at first lambing

Cont...

Breed	Birth weight (kg)	365 d wt. (kg)
Afar	2.5	25.8
BHS	2.7	24.8
Horro	2.2-2.9	33.0
Menz	1.9-2.7	23.4

Cont..

- **Low fertility**
- **Low prolificacy**
- **Low weaning rate**
- **a very low post-weaning average daily gain**
- Mature body wt (30 – 40 kg)

Sheep production systems

1. **The traditional (Extensive)**
2. **private commercial**
3. **Government breeding and multiplication centers**

Characterization and improvement of sheep genetic resources

- efforts have been limited to characterize and evaluate the genotypes
- No national sheep improvement policy
- No breed associations
- No recording system
- Limited characterization

Crossbreeding

- In 1944 Merino breed was introduced from Italy
- to improve growth and wool of indigenous sheep
- but the detection of maedi-visna in the flock resulted with a complete closure of the program
- In late 1960s:
  - Rambouillet
  - Romney
  - Corriedale
  - Hampshire
- were crossbred with the indigenous Menz sheep

Cont…

- however, unaccepted by the farmers due to their phenotypic unlikeness to the indigenous sheep
- due to assumed phenotypic similarity to the local sheep the Awassi breed was imported in 1980, 1984 and 1994
- The crosses of Awassi- Menz have been well accepted farmers
- 75% Awassi × 25% Menz
- 50% Awassi × 50% Menz

Cont…

- **with increasing levels of Awassi blood an increase in**
  - **Mean weight at birth**
  - **weaning, and annual greasy wool weights**

  reported

Major problems of the crossbreeding programme

- lack of clear vision where to bring an impact
- lack of recording at all levels, especially at smallholder farms
- High age of crosses at first lambing
- low fertility in pure Awassi and its crosses as compared to the indigenous sheep

Marketing of sheep

Type of market	Main seller	Main buyer
Primary collection market	producer	other producers, local small butchers and small traders
Secondary distribution markets	Traders	Local butchers, traders
Terminal markets	Traders	Local slaughter houses, traders for export

Challenges of sheep production

- Scarcity of feed (quantity and quality)
- Diseases and parasites
  - loss of 14-16% national sheep
  - high lamb losses (8 to 50%)
- Low genetic potential for higher production
- Lack of infrastructures in rural areas

Cont…

- **Lack of market information and price policy**
- Poor link between research & Extension
- Inadequate capital for investment
- **Shortage of trained manpower**

What should be done?

- Selection
- Characterization
- Breeding policy
- record keeping & registration for genetic evaluation and improvement
- Cross breeding (Tropical/temperate)

Thank you!