Synergies of Animal Welfare and Agroforestry in Ethiopia (SAWA)

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Traditional and agroforestry system

What is the difference between traditional and agroforestry?

Traditional system
Primarily based on pasture-only system
Can be at risk of a heavy consumption of natural resources

a process of consistent degradation
Why agroforestry/Silvopasture?

• Farm or pastoral production systems that incorporate trees

• Having benefits for animal welfare, the environment and farmer livelihoods

• Livestock systems that utilise trees to generate benefits => One Welfare
Agroforestry and livestock integration for both benefits

### Synergies
- **Environmental benefits**
  - Nutrient cycling
  - Biodiversity
  - Carbon sequestration
  - Reduce soil degradation
  - Weed & Paste control

### Trade offs
- **Environmental risks**
  - Over-exploitation of resources
  - Deforestation
  - Environmental degradation
  - Air pollution
  - GHG emission

### Animals
- **Animal benefits**
  - Source of feed
  - Living habitat
  - Reduce disease and mortality
  - Medicinal plant
  - Improve animal welfare
- **Animal risks**
  - Extra labor and time
  - Special health care & skills
  - May need supplementation of feed & water

### Environment
- **animal welfare and agroforestry**
Project aim

• To evaluate and demonstrate the benefits of agroforestry-livestock systems in Ethiopia for three domains:
  ➢ Animal welfare,
  ➢ Livelihoods
  ➢ The environment
Highlights about the project sites

Compare

• tree-based production systems

• with traditional mixed crop-livestock systems
Districts
- Dugda
- Humbo

Village selection base
- Good tree access (GTA)
- Less tree access (LTA)

Figure 1. Map of Ethiopia with study sites
Study population

Participants =>
- 40 farmers from good tree access
- 40 farmers from less tree access

Observed livestock => 358
- 171 cattle
- 55 sheep
- 100 goats and 32 donkeys
Evidence from the study result

Evidence from Shubi Gamo village

Evidence from Bossa Wanche village
A case from good tree access
Farmer from Bossa Wanche village

He produces livestock
He planted different tree species—Mango, Avocado, Banana, Enset (false banana), Root crops and some vegetables
He commonly gives food tree residue to the livestock and uses tree as shade
Animal based indicators

- Improved body condition
- Create thermal comfort

Resource based indicators

- Source of feed and Water
- Shade & shelter

Welfare benefits from the agroforestry system
Some evidences from the survey

Tree-based systems benefits

▪ had fewer skinny livestock compared to traditional farming

▪ There is better feed and water access for livestock herd
Farmers’ Attitude, Knowledge and Practice

Farmers in Good tree access

- Averagely better knowledge and practice
Result summary

- Vegetable residue
- Root crops
- Grains/concentrates
- Straws/crop residue
- Hay
- Natural...
- Improved forages

Legend:
- Good access
- Limited access

%
Tree-based systems challenges

- Pesticide/chemical use in areas with vegetables and trees
- Challenges
  ✓ in managing young trees, plants
  ✓ related infrastructure
  ✓ Animal grazing;
  ✓ Veterinary support services
Survey and observational study showed

Less tree access

- Disease and mortality
- Housing problem observed
- Poor handling
Conclusion

The difference is visible
- Understanding the benefits and the trade-offs are actionable steps
- and we planned to extend through participatory training
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