KHEA
Knowledge Hub for Organic Agriculture in Eastern Africa

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Knowledge Centre for Organic Agriculture in Africa

Integration of livestock in the Agroecological setting

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objective

Reflection on organic agriculture principles in relation to needs of farm animals and their role in the food system.

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Important livestock in EA

shoats ,rabbits,poultry,fish culture,beekeeping
cattle,
donkey/horses
camel

Livestock functions in the livelivelihoods of smallholders

- Cultural/social functions ;dowery,sacrifices ,multiple ceremonies,aesthetics-pets,hobby
- Economic – market product/raw materials;milk..meat, crafts,skins,feathers,ploughing, transportation
- Environmental -source of recycling materials, renewable energy-biogas

Challenges affecting livestock integration in EA

- Drought /pasture management
- Overstocking
- Pest and disease management
- Low knowledge and skills on integration
- security
- Disconnect on service provision-extension

Integration systems

Small-scale mixed systems

- **crops, trees, livestock in the same land holding/farm**

large scale -ranches

- Agrocivilculture-animal pasture, fodder and tree management,free range ,rotational grazing.
- Agrocivil pastoralism-animals, trees, crops same land

Factors affecting choice of livestock integration systems

- carrying capacity of land-
- animal characteristics and behavioural needs
- feeds availability
- knowledge and use of the animals/stock being raised

environmental functions of livestock in Ecological agriculture

- waste recycling,composting [output input relations to other farm elements
- pollination -diversity maintenance
- farm power,carbon footprint-low emissions

examples of integration systems
Beekeeping

- Traditional methods-log hives,pot hives,wild harvests in forests and wild areas,caves etc
- New methods-Kenya top bar hives,langstroth hives,permanent apiary units
- Wild areas-Natural community and government forest areas; protected reserves
- On farm integrated spaces-planned local and specific trees and flowers for bee foraging

Hives

traditional log hive

Kenya top bar

langstroth hive

Challenges /harmful environmental affecting beekeeping

- Use of synthetics[organophosphates]-non selective kills all insects
- Bush clearing and burning-habitat destruction for animal ,plant interactions
- Monoculture-destroys natural habitats and plant species diversity
- Poor harvesting methods-burning kills colonies, reduces bee population

Poultry

- free range systems
- cage systems
- deep litter systems

main challenge

low quality feeds,pests and dises control,poor housing structures,security,hormonal commercial feed rations

Shoats/rabbits

- shoats
- free range and intensive systems ,tethering
- raised housing -easy to collect manure

- rabbits
- hutch systems
- morant systems
- main challenges-inbreeding control,disease and pest control,poor feeds,security

Fish farming

- onfarm water harvesting and recycling
- wetland utilization /habitat maintanance with natural fertility
- main challenges -droughts,security,use of pesticides/poisons

Cattle

most common

- intensive system-zero grazing
- semi intensive -
- extensive

Donkey /horses

- farm power
- transportation,hilly terrain
- main challenges -poor equipment,poor attitude /regard for farm animals

Ornamental/other livestock

- pigions,quails,guinea fowls,ducks,turkey,geese,pea cock,guinea pigs
- main challenge-low knowledge,poor housing/habitat management.

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Thanks for your attention

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