



**Netherlands East African
Dairy Partnership**

Improving manure management

**Module 6.
Advising farmers on manure management**

Learning objectives of Module 6

1. Recommend proper manure management practices by assessing farm-specific needs:
 - Checklist of evaluating the current state of the farm and manure management practices
 - Checklist of economic aspects
2. Highlight considerations for decision-making about which manure management options to recommend to a farm

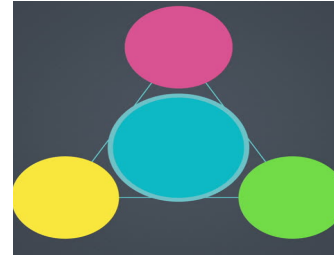
Recommend manure management practices

Purpose of advice and procedure



Purpose

To develop customized advice for a farmer on manure management

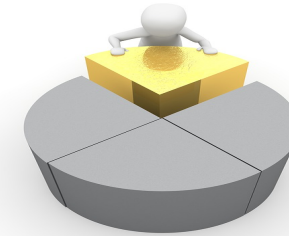


Customized advice is:

Based on evaluation of the farm and management and discussions with the farmer.

Propose improvements that are:

- Feasible and economic to implement
- Reduce nutrient losses and negative environmental effects



Results of an evaluation of farm and management should support:

The discussion with the farmer

Transfer of information on improved manure management

Selection of feasible and economic improvement to apply by the farmer

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Checklist: Evaluation farm and manure management (1)



Farmer/farm:

Resources: poor/medium/rich
 Full-time or part-time farmer
 Location of the farm
 Total farm size



Farming system/farm:

Landless (peri-urban)
 Mixed crop-livestock
 Specialised livestock system:
 Low/medium/high input system



Land and land use

Soil fertility status: poor/medium/high
 Area forage crops
 Area food crops (specify)
 Cash crops

Checklist of evaluation farm and manure management (2)

Livestock/dairy cattle:

- System of dairy cow management: free range, cows tethered, zero-grazing, semi zero-grazing
- Number of cows, young stock and other animals
- Average milk production per cow

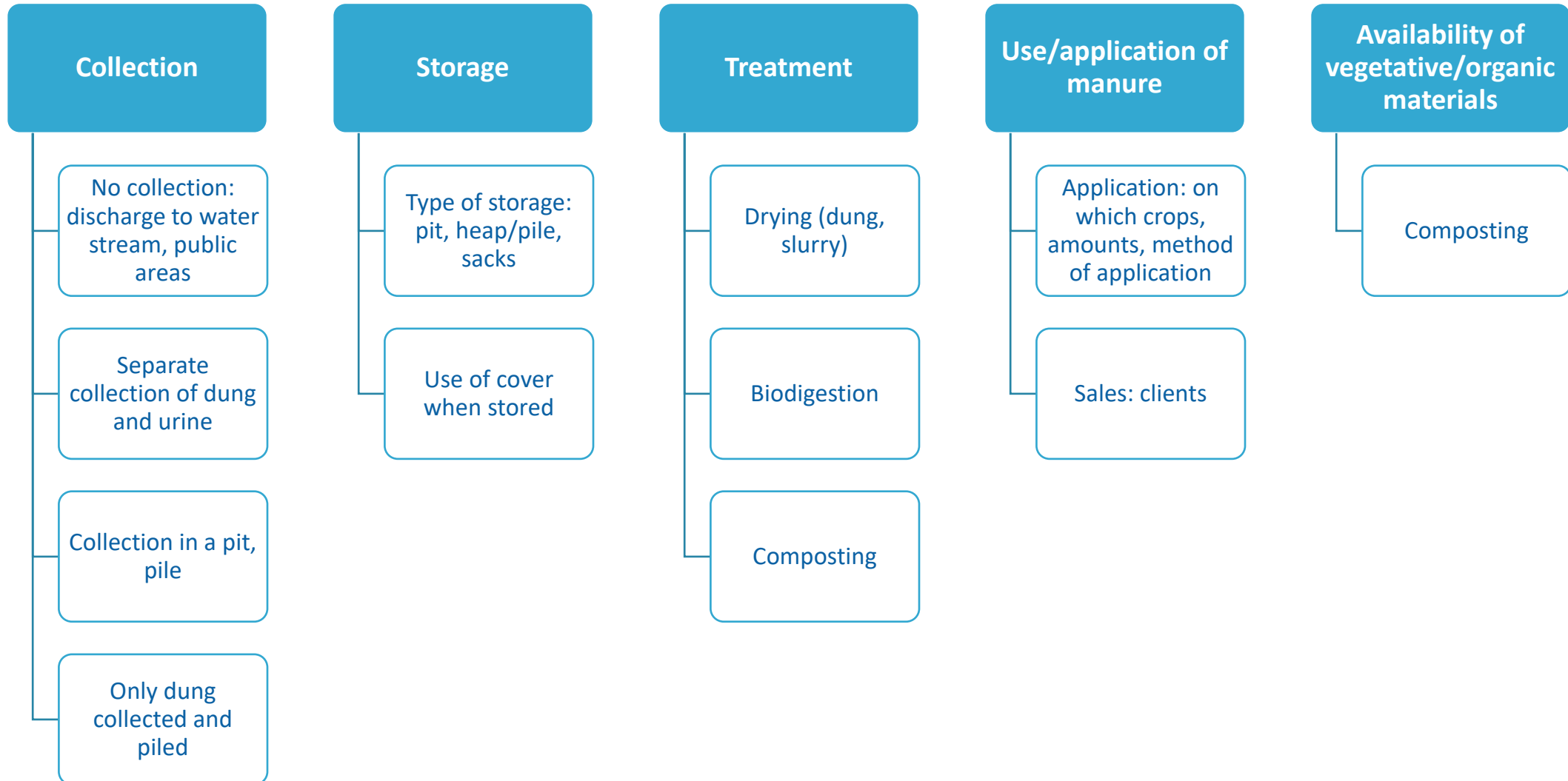
Inputs feeds/fertilizer:

- Fodder, concentrates, minerals,
- Synthetic fertilizer, manure

Housing of dairy cattle:

- Zero-grazing unit with or without concrete floor
- Shed with earthen floor
- 'Boma' : open, shed

Checklist evaluation of manure management (3)



Checklist evaluation economic farm situation (4)

- ❑ **Investments** of farmer on manure management

- ❑ **Sources of income** of the farmer:
 - milk
 - crop produce
 - other income

- ❑ **Labour** availability:
 - family labour
 - paid labour

Considerations for decision-making

Some considerations when selecting options

- **Resources of the farmer:** A resource-poor farmer has few opportunities to invest. Cheap, simple improvements are needed such as better collection and use of simple covers
- **Labour availability:** Some options like composting require extra labour
- **Stocking rate:** If high, e.g. 5 cows per ha land available, manure load is most likely too much and manure has to be sold or made into a saleable product like compost
- **Availability of (dry/green) vegetative materials** which could be used for making compost
- **Market** for surplus manure and/or compost

Steps to advise on improved manure management

Make an **inventory of options** to improve manure management

Discuss and select options with the farmer

Prioritize options and agree with the farmer which options to implement

Prepare together with the farmer a **plan and time schedule** for implementation

Follow up on the implementation and collect **farmer's opinions**

- Collection: improvements on the housing system
- Storage: improvements on the storage: manure pit, covers
- Treatment: drying? composting?
- Use and application of manure: fertilization plan for the crop, method of application