SAFOSO

Animal Health Matters.
For Safe Food Solutions.

Schweizerische Eidgenossenschaft
Confédération suisse
Confederazione Svizzera
Confederaziun svizra

Swiss Confederation

Federal Department of Economic Affairs,
Education and Research EAER
State Secretariat for Economic Affairs SECO

Dairy farming impact on the environment (e. g., the system of waste management)

Bogdan Andryushchenko, Project's expert

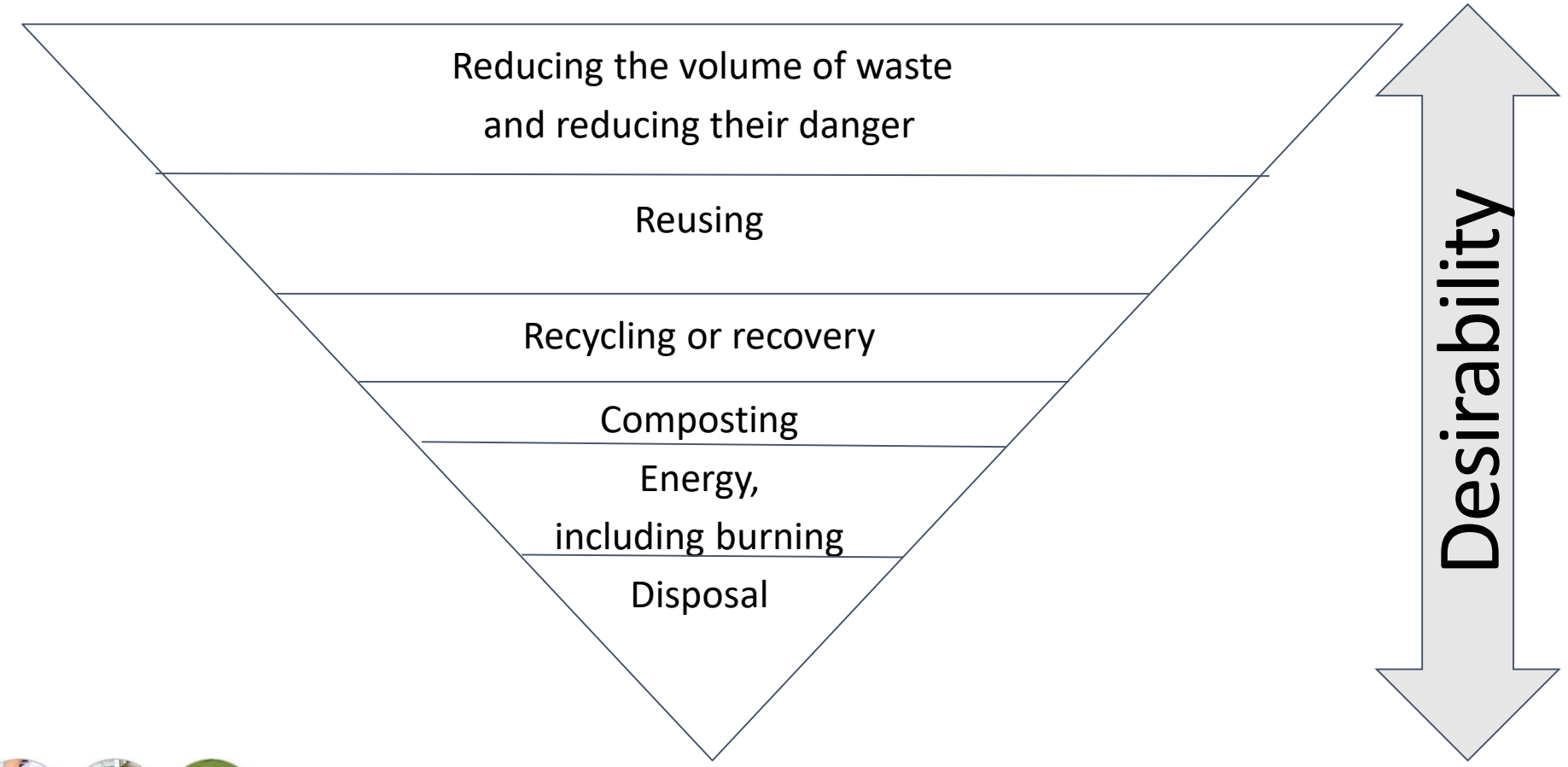
What is waste management?

Waste management - the collection, transport, recovery and disposal of waste, including control over these operations and supervision of waste disposal sites, including operations that perform by sellers and intermediaries.

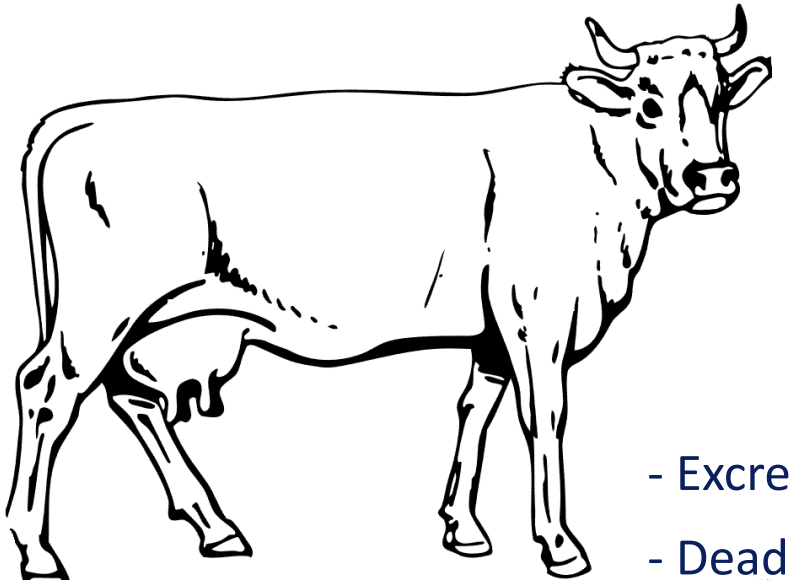
(Directive 2008/98/EC of the European Parliament and of the Council of 19 Nov 2008 on waste and repealing certain Directives)

What is waste management?

The hierarchy of waste management



What is waste from cattle?



Types of waste from cattle:

- Feed and spoiled feed additives
- Waste from cleaning, washing, inc. sewage
- Waste of animal tissues
- Excrement, urine and manure (including bedding)
- Dead animals
- Substandard products (raw milk, semen, etc.)
- Contaminated products (radionuclides, pesticides, chemicals and other dangerous substances)
- Remains of services, including veterinary

What kind of waste should be managed?

According to scientific data, animal products moving only 16.4% of all energy plant feed, 25.6% is spent on digestion and assimilation.

Where going away a large part (58%) of energy feed?

It goes into the manure.

1 adult animal can allocate up to 35 kg of faeces and urine up to 20 liters a day. At the bedding is up to 60 kg of manure per day. Farm for 10 thousand heads of cattle, produces waste comparable to the city which has a population of 500 thousand people

Impact on the environment

Adding manure to the soil:

- enriches it by the various groups of bacteria
- creates an energy source for microorganisms
- activates nitrogen-fixing microorganisms
- increases carbon dioxide content
- reduces acidity
- increases humus content, total nitrogen
- improves structure
- improves water-retaining capacity

What kind of manure does harm the environment?

- That accumulate in a limited area.
- Which gets into surface water.
- Which is not subject of biothermic decontamination.
- Which is contaminated with harmful substances, worms, bacteria.
- Available decomposes under the action of air and moisture.

fmvideo.tv

Impact on the environment

Threats associated with a big amount of manure on industrial farms:

- contamination of surface water
- seepage of nitrates to groundwater
- accumulation of excess nutrients and heavy metals in the soil
- contamination of soil and water by pathogens and bacteria
- degradation of soils due to drainir manure
- occurrence of unpleasant odor in air

http://ciwf.in.ua/?page_id=491 http://pidruchniki.com/70545/ekologiya/vpliv_tvarinnitstva_dovkillya

Impact on the environment

Chemical pollution

Biological contamination

Air

Soil

Water

Harmful effects of manure on the environment

chemical contamination (NH_3, H_2S, amines, mercaptans etc.)

biological contamination (pathogens, seeds, parasites, etc.)

air (greenhouse effect, acid rain, effluvium)

soils (degradation, pollution, pathogens and weeds)

water (reduction of oxygen, destruction of aquatic animals)

Impact on the environment

Джерела: how.in.ua ВолиньPost

Impact on the environment

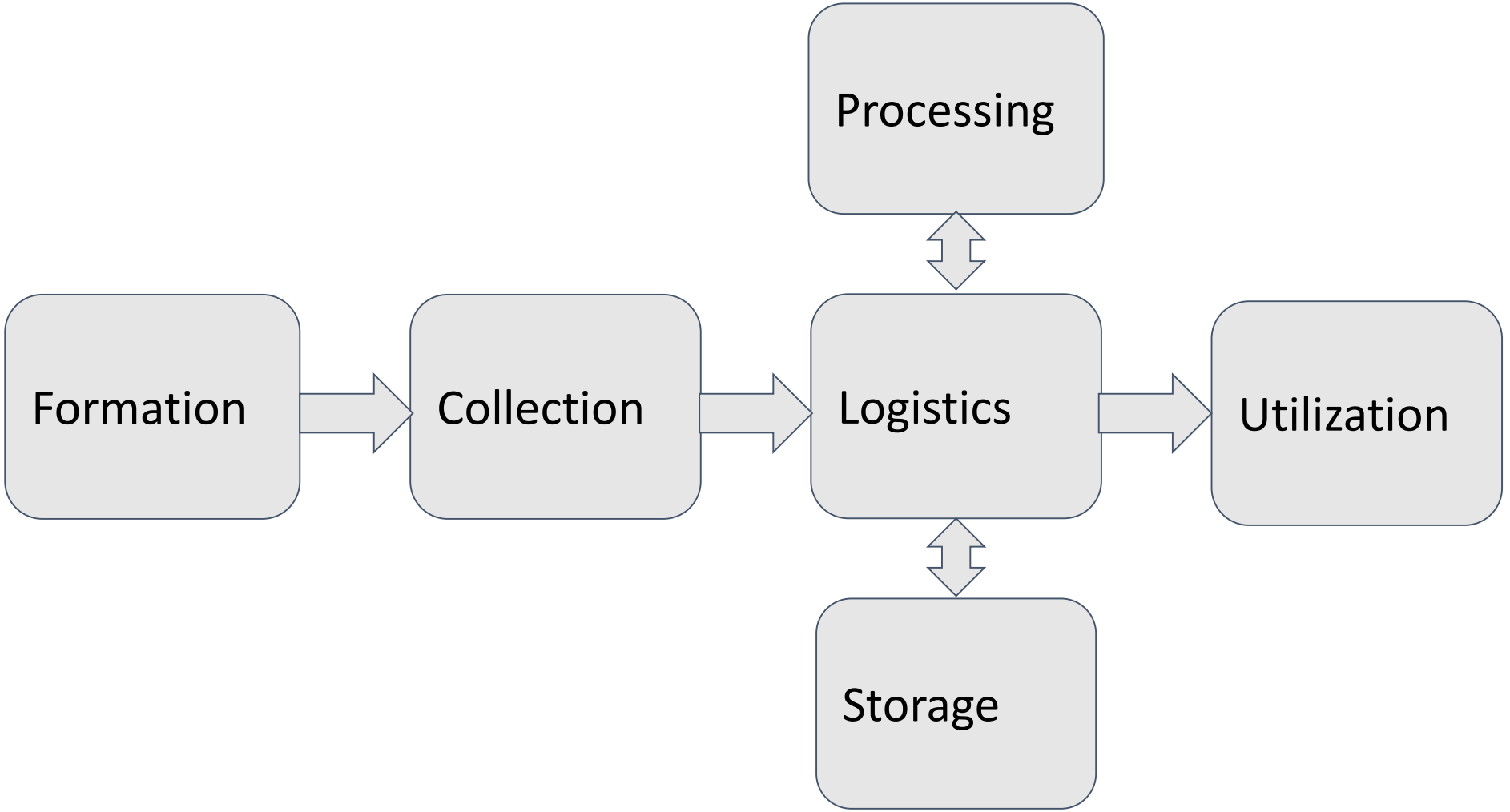
What are the sources of air pollution?

- manure store
- ponds-stores of sewage
- biological ponds
- filtration fields
- irrigation fields
- fattening sites

http://molferma.com/sozdanie_mol_fermi/

http://www.udau.edu.ua/assets/files/zbirniki/conference/ekologiya/Filipchak.pdf

Waste Management Scheme



How should we manage waste?

1. Change attitudes and approaches to the basic processes: formation - collection - disposal.
2. Rate the possibility of reducing formation.
3. If you reduce the already impossible - to choose a way to convert waste into secondary raw materials.
4. Use recycled materials in the most appropriate way.

Economic efficiency of waste management

=

Profits from the sale of secondary raw material / product
Losses on the formation and storage of waste

System of waste management

Implementation of acceptable system of waste treatment and disposal provides:

- complete preservation of nitrogen fertilizer
- loss of germination of weed seeds
- deactivation of:
  - pathogens
  - helminth eggs
  - another biological hazards
- water heating, biogas and electricity

http://www.udau.edu.ua/assets/files/zbirniki/conference/ekologiya/Filipchak.pdf

System of waste management

Appliance of ecologically clean technologies in dairy farming

The general state of milk production should provide:

obtainment of high-quality products

clean environment

What should be done

Avoid!

Impact on the environment (e.g. system of waste management)

SAFOSO

Animal Health Matters.
For Safe Food Solutions.

Schweizerische Eidgenossenschaft
Confédération suisse
Confederazione Svizzera
Confederaziun svizra

Swiss Confederation

Federal Department of Economic Affairs,
Education and Research EAER
State Secretariat for Economic Affairs SECO

Thank you for the attention!