

Sewage sludge in agriculture in the Netherlands

Herman Walthaus,

Ministry of Infrastructure and water management

Harm Smit,

Ministry of Agriculture, Nature and Food Quality



Conditions for using sewage sludge in NL

Legislation:

- Pathogens hygienisation: thermal, chemical, biological
- >50% organic matter
- Conditions for use on the soil (agriculture)
- Limits for heavy metals (soil, groundwater, prevention of diffuse soil contamination)

Result: only incineration in NL



Limits for sewage sludge

in mg per kg dm

Cd (Cadmium) 1,25 mg/kg ds

Cr (Chroom) 75 mg/kg ds

Cu (Koper) 75 mg/kg ds

Hg (Kwik) 0,75 mg/kg ds

Ni (Nikkel) 30 mg/kg ds

Pb (Lood) 100 mg/kg ds

Zn (Zink) 300 mg/kg ds

As (Arseen) 15 mg/kg ds



Additional potential concerns

Other substances:

- Micro plastics
- Pharmaceuticals (metabolites)
- Antibiotics resistance

 Not only direct risks: also <u>Prevention of</u> <u>Accumulation</u> into soil and groundwater



Usefull links

- Harm Smit: <u>h.j.smit@minez.nl</u>
- Herman Walthaus: herman.walthaus@minienm.nl