



Class A Overview:

Types
Uses
Marketing

What are Class A Biosolids?

Pathogens and indicators reduced to background levels



Most processes involve heat

Why produce Class A?

Product can be used without restriction for public contact or type of crop



Where is Class A used?

Gardens, landscapes, parks, vegetable crops, land restoration



How is Class A made?

Biosolids must meet process and monitoring standards



Time and temperature requirements
Consistent results for pathogen/indicator monitoring

Types of Class A



Heat-dried



Compost



Class A blend

Heat-dried biosolids use thermal drying to remove water and kill pathogens

- Temperatures 300 to $> 1000^{\circ}$ F
- Most nutrients retained
- Some products may be dusty



Heat-dried biosolids are nutrient-rich and used as a *fertilizer*

- Lawn and garden fertilizer
- Slow-release agricultural fertilizer
- Rich in N and P, low in K

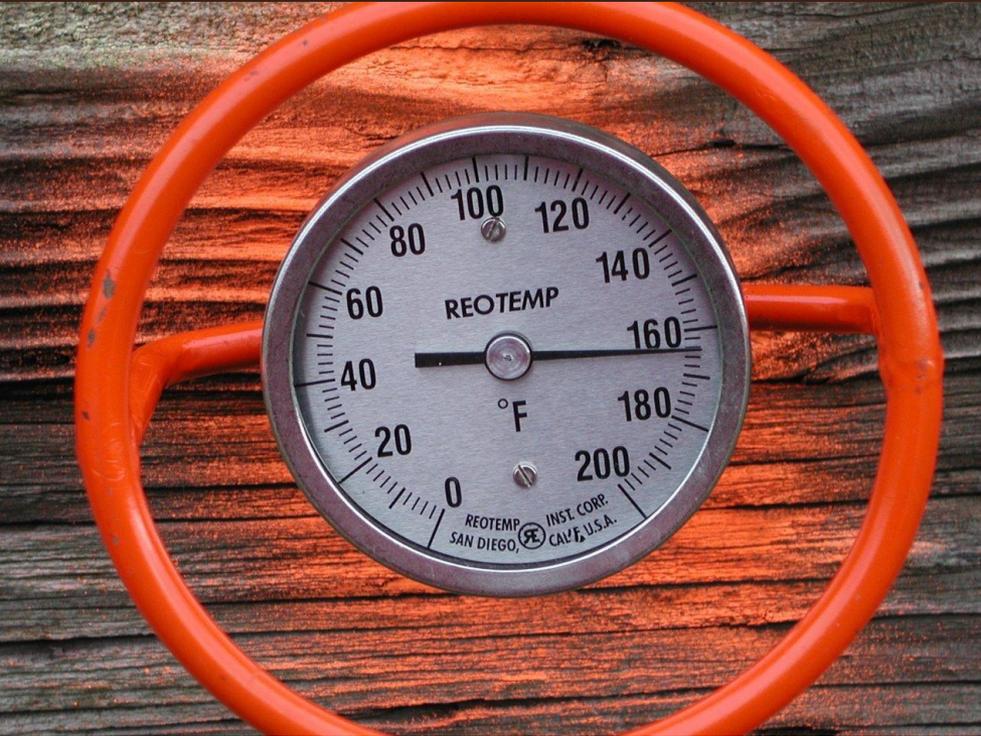


As with any fertilizer, over-application can harm water quality

- Short-term : N
- Long-term: P
- Users need guidance on application rates



Biosolids composts must meet time and temperature requirements specified for the composting process



Aerated static pile:
3 days > 131° F

Turned pile:
15 days > 131° F with 5 turnings

Biosolids are too dense to compost alone:
Mix them with yard debris or wood waste



Biosolids compost is a *soil amendment*, applied at higher rates to build soil

- Low nutrient availability
- Use like other composts, as a soil builder



Biosolids blends start with Class A cake

- Thermophilic digestion produces Class A without further processing
- Not common yet, but growing popularity
- Tacoma, WA; Vancouver, BC



Class A cake is blended with sawdust, wood products, and/or sand to make blends for specific markets

- Soil amendment
- “Topsoil” product
- Potting mix
- Slow-release fertilizer



Tagro potting soil was developed through controlled greenhouse experiments



Over/HighN



Over/LowN

Peat



Sub/HighN



Sub/LowN



Over/HighN



Over/LowN

TAGB



Sub/HighN



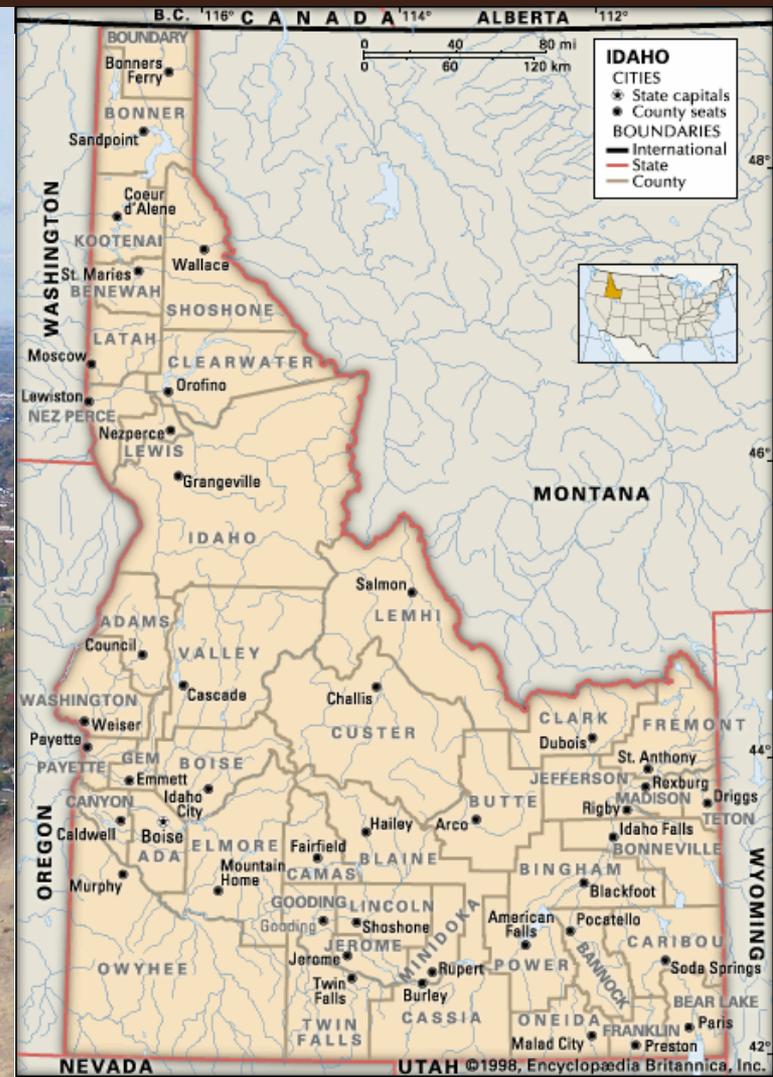
Sub/LowN

Making good biosolids blends is an art

- Blended product must be easy and pleasant to use.
- Blending sticky cake can be tricky



Class A makes the most sense in urban areas, and Idaho has a fast-growing urban population



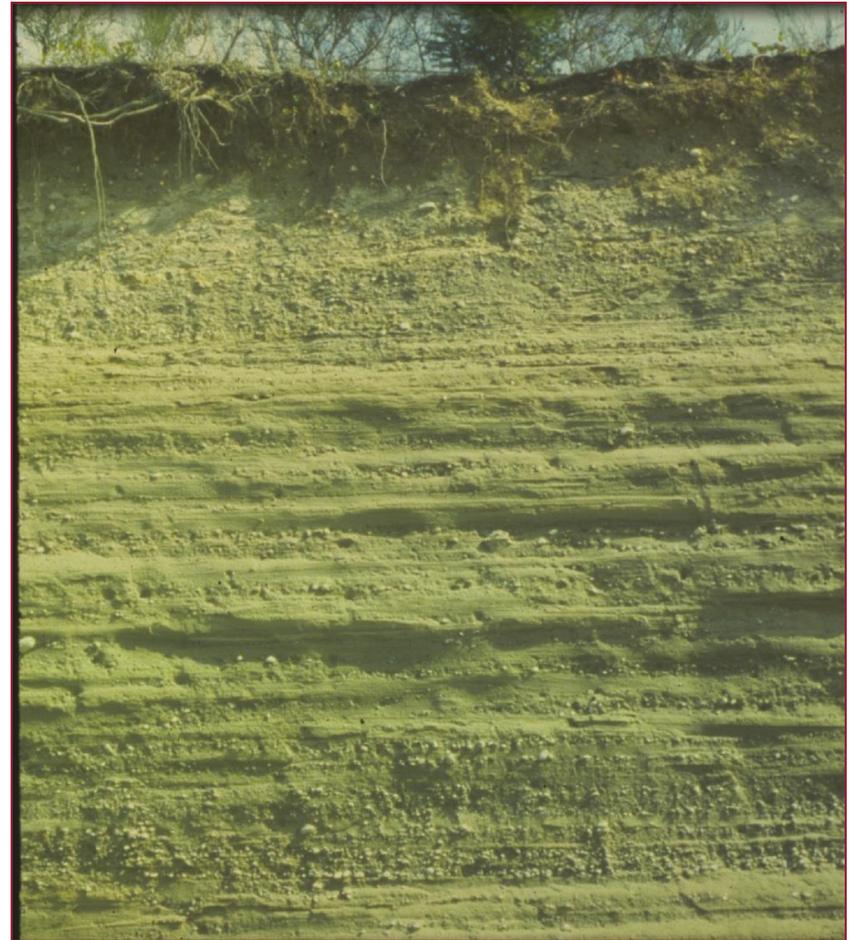
Urban and suburban soils are often:

Cut, compacted, and filled

Depleted in organic matter

Have increased risk of runoff

Poor environment for plant growth



Urban soils, plants, and the environment will benefit from biosolids applications

- Build soil organic matter
- Improve soil structure and root environment
- Improve infiltration
- Sequester carbon
- Slow-release nutrients



The Key to Class A success is good marketing



**IDAHO
MASTER GARDENER**
UNIVERSITY OF IDAHO EXTENSION



Match your product with local markets

- Parks and city property
- Landscaping
- Home gardens
- Community gardens
- Nursery/greenhouse
- Roadside beautification



Begin with the end in mind

- Know your customer
- Make a product they want
- Take pride in your product
- Educate, demonstrate, and get involved

