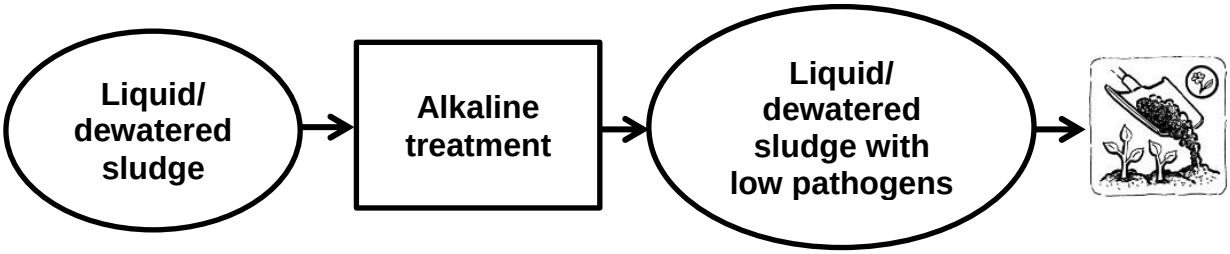
Alkaline Treatment

Lime is a white mineral powder (Credit: www.limetradeturkey.com)

- **Design:** Alkaline treatment increases the pH of faecal sludge and inactivates pathogens, if correctly dosed and mixed. Adding alkaline chemicals is also used to reduce smells, moisture, and flies.
- **Operation:** Alkaline treatment is usually done in batches. A recommended dosage of alkaline chemicals, such as lime or ash, are added to the faecal sludge and mixed. Dosing depends on the alkaline chemical, sludge water content, and quantity of sludge.
- **Time and energy required:** Faecal sludge and alkaline chemicals are mixed for a required period of time. Alkaline treatment needs low amounts of energy.

Last Update: July 2016

Treatment Technology Description



Treatment Objectives	Pathogen Inactivation	**High**
	Dewatering	
	Stabilization/Nutrient Management	**No**
Pathogen Inactivation		• Lime increases the pH of faecal sludge, which kills pathogens. • Dosing depends on the alkaline chemical, sludge water content, and quantity of sludge. • Pathogen regrowth can be a concern, so dosages are dependent on the use.
Level of Development		• Lime treatment is being transferred from wastewater treatment. • There is moderate experience in design, operation, and maintenance for faecal sludge lime treatment (for example, in the Philippines).

References

Strande, L., Ronteltap, M. & Brdjanovic, D. (2014). *Faecal sludge management: Systems approach for implementation and operation*. London, UK: IWA Publishing. Retrieved from www.sandec.ch/fsm_book