



Developing contaminant removal and screening options for the small-scale compost facility

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BCE Quick Intro

- ▶ Founded 2009 to design and build innovative composting equipment
- ▶ Provide composting technical and management services
- ▶ Founded by Garret Gillespie, an agricultural engineer, background in farming, large-scale industrial agriculture, manufacturing, 25 years + composting experience
- ▶ Focus on developing contaminant separation equipment
- ▶ Based in Whitehorse, Yukon



Early systems

- ▶ Based on existing state of the art i.e. air classification aka vacuums
- ▶ Worked well for a vacuum, but not consistent.... There had to be a better way!



A New Approach

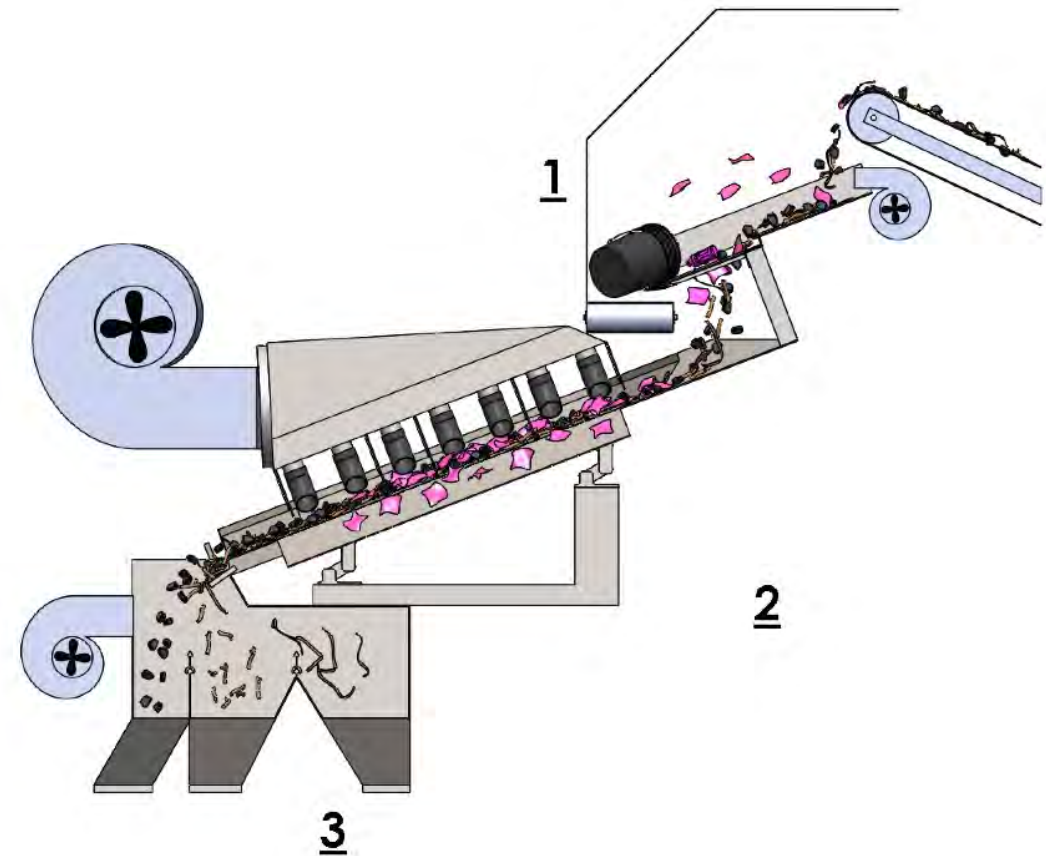
- ▶ Incorporates ancient seed-cleaning and mineral processing technologies
- ▶ Began working with Vermeer in 2012 to develop commercial prototype, licensed in 2017
- ▶ Capacities up to 100 cubic meters/hr. proven so far



HOW IT WORKS

1. Scalping screen & air knife
2. Vibratory separation
3. Hardness separation

Patented process and technology



Small-Scale Compost Facility Challenges

- ▶ Community based - low tolerance for contaminated finished product
- ▶ Smaller sites - typically less than 2000 tpy
- ▶ Challenge finding appropriately scaled equipment
- ▶ Existing screening equipment often too big and expensive
- ▶ Practical contaminant/plastic removal equipment out of reach/non existent
- ▶ Time for a new approach!

In search of a better way

- ▶ 2018 prototype micro “Cleaner-Screener”
- ▶ Removes plastics, other contaminants, and screens in one pass
- ▶ Stationary configuration
- ▶ Throughput <3 cubic yards per hour
- ▶ Simple, affordable, easily repairable if necessary



Research in BC

- ▶ Community sites tested in Creston and Tofino
- ▶ Assessing site needs, contamination levels, desired outputs, compost markets



Next steps

- ▶ Develop machine design - keep cost below \$100K
- ▶ Machine specs include 20 cy/hr (15 cm/hr) throughput, plastic removal and screening in one unit
- ▶ Mobile or stationary configurations
- ▶ Cleans, screens and upgrades finished compost, screening overs
- ▶ Seeking motivated “Beta” customers willing to participate in prototype/product development
- ▶ Working towards Canadian designed and built solution for Canadian facilities in next 1 to 2 years

Questions?

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