

From Rake to Riches

Composting Yard Waste into Topsoil Gold

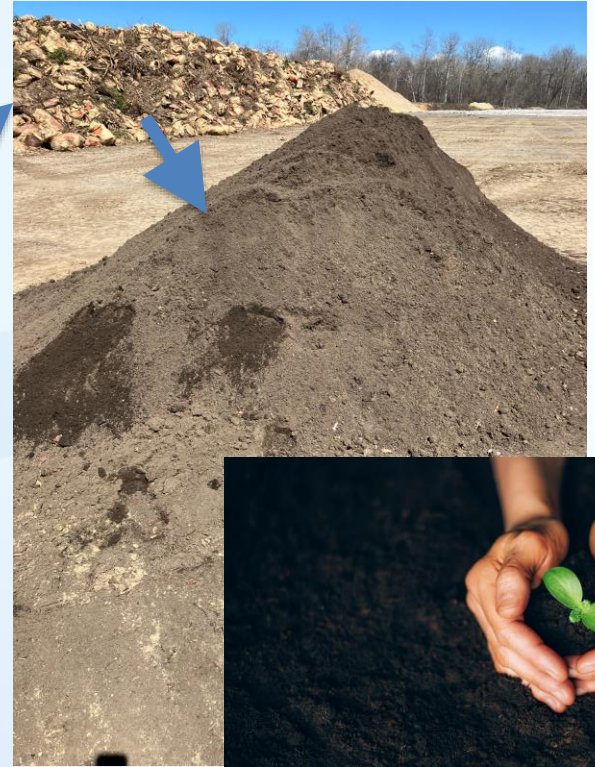
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Exploring the Challenges and Successes of Managing Leaf and Yard Waste

- Composting Process
- Topsoil Opportunity
- Pilot Project
- Challenges
- Successes
- Opportunities



Composting Process

- Managed under Ontario Regulation 101/94: Recycling and Composting of Municipal Waste
- Leaf and yard waste received spring and fall on 16 hectare prepared pad
- 15,000 to 20,000 cubic metres each year
- Composting process takes approximately nine to ten months





Composting Process



- Grinder is contracted out to size reduce the material.
- Temperatures taken daily, then weekly as required by O.Reg 101/94.
- Material must achieve 55 degrees Celsius and then is turned.
- Cure 6 months.
- Screen the material with a trommel.

Topsoil Test

September 2023



October 2023



Pilot Project

Pulled together our team:

- Operators
- Mechanic
- Supervisor
- Technician
- Technologist
- Engineer



Pilot Project

Determine what equipment was needed:

- Grinder (contracted out initially)
- Windrow turner (owned)
- Trommel (rented for the season)
- Two loaders (one owned, one rented)
- Scalping plant (screener) (owned)



Taking to the Air



Pilot Project



Screening sand

Pilot Project



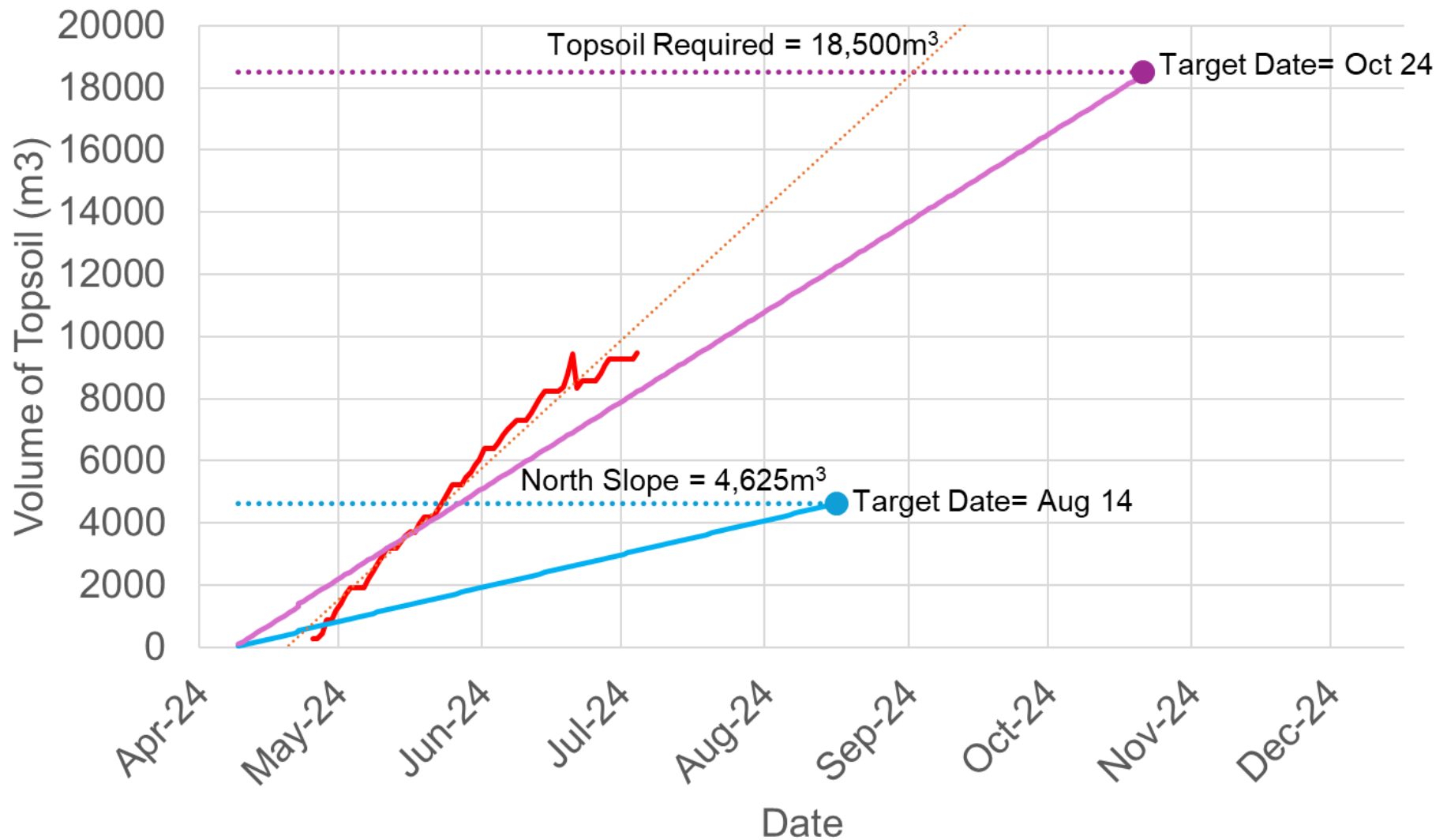
Adding sand to the potting soil

Pilot Project



Trommel screening the topsoil

Topsoil Production



— Actual Topsoil Volume Produced
— Total Topsoil Required

— Topsoil Required for North slope
- - - Trendline

Final Product



Final Product



Challenges - Machinery

Windrow Turner



Challenges - Machinery

Grinder



Trommel



Challenges

Space Limitations

- 16 hectare pad
- Material from 2022 and more coming
- Finished product needs space
- Testing windrow spacing



Challenges - Learning

Plastic



Weeds



Opportunities

Community Gardens

We provide 300 cubic metres of free potting soil to local community gardens each spring.

Sale to Residents

\$9/load (flat rate under 200 kilogram) or \$45/tonne



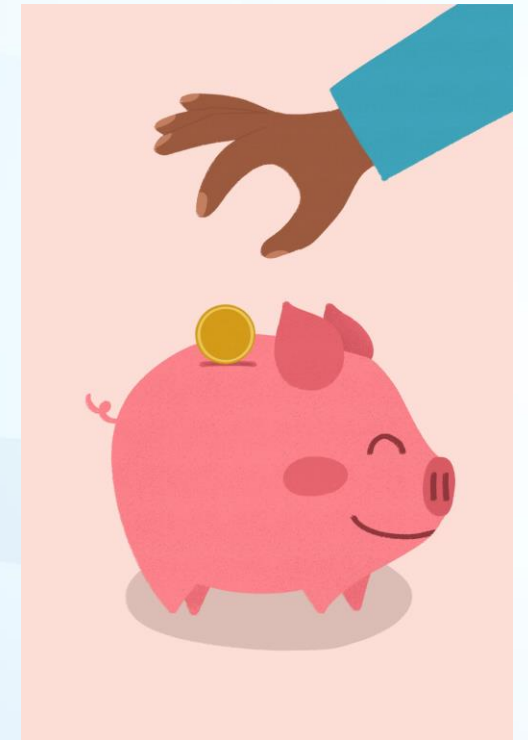
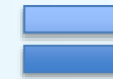
Opportunities

- Capital infrastructure projects
- Right-of-way repairs
- Sports field top dressing
- General marketing



Conclusions

- A great way to contribute to the circular economy
- Potential to save over \$6 million in the coming years
- Requires investment into space, equipment and staff
- Team needs to be flexible to changing conditions and able to face unknown challenges.



Thank You

Questions?

