

# Checklist

## DRAFT Report

### FEAS Slide Deck (Content) - 20 slides

- Prove that coffee grounds is a problem
  - Why is this not being solved right now?
- What can we do with the coffee grounds now?
  - Research on the product & science
- Prove who wants this (target market)
- This is how we're going to execute it (implementation)
- Financial Projections

### Working To Do List (For Tuesday, February 3 @7:30 PM)

- ☐ Product Team (Olivia, Kayvon, Niara)
  - ☐ Make it digestible for non-science audiences!
- ☐ Finance Team (Kabo, Yianni, Karim)
  - ☐ List of assumptions and excel model
- ☐ Pooji - keep working on the packaging designs (and figuring out what it looks like)
  - ☐ On Tuesday - work on the slides and written report

### Checklist

- ☐ Industry/Market Feasibility (
  - ☐ Clearly define and describe the industry in which the business intends to operate.
  - ☐ What does the competitive landscape look like for your industry and how will you compete?
  - ☐ What are the biggest challenges you will face in this industry and how does your strategy help you overcome those challenges?
- ☐ Product/Service Feasibility
  - ☐ Describe the business, including the features of its products and/or services.
  - ☐ Describe how the business will manufacture, source, or create and deliver the product/service.
  - ☐ Describe and justify the target customers.
  - ☐ Identify the biggest challenges you will face with product/service feasibility.
  - ☐ Describe the distribution strategy, pricing strategy, and promotional strategy. How do these strategies help you tackle your biggest challenges?
- ☐ Conclusion and Recommendation
  - ☐ Looking at the challenges you've identified, does your team feel you can overcome these challenges and attempt to establish the business? Why or why not?
  - ☐ Does the business meet the personal and professional goals of the venture and the entrepreneur(s)? Is this business worth pursuing? Why or why not?
- ☐ Written Financial Feasibility
  - ☐ Describe the proposed revenue model. Explain and justify your revenue projections.

- ☐ Identify and justify the variable and fixed costs.
- ☐ Project three years of financial statements with a high and a low scenario: this should include an income statement, cash budget and a balance sheet.
- ☐ What are the most important aspects to your financial success? How likely are those aspects to change? What impact would this have on the overall business?
- ☐ Identify your biggest financial challenge(s). How will you overcome these?
- ☐ Written Financial Feasibility
  - ☐ Absolute maximum length of 2,000 words.
  - ☐ Maximum of 15 pages of exhibits.
  - ☐ One-inch margins, single spaced, Times New Roman, 12 point font.
  - ☐ Endnotes should be used for citations only, using Chicago Style, and will not be included in the word count.
  - ☐ .docx submission.
  - ☐ Word count must be shown on the title page.

#### **Slide Deck**

1- title

**2- problem statement**

**3- market sizing**

**4- target market**

**5- problem solution**

**6- recommendations**

**7- Implementation**

**8- financials**

**Conclusion /**

## **Tuesday, January 27:** Prepare dollar amounts

- Products
  - Ingredients
  - Packaging (volume)
- Logistics
  - Labour (making the product, expert labour as a fixed cost)
  - Warehouse
  - Machine
  - Delivery
- Competition
  - Competitor Pricing
  - Market sizing
  - Impact Assessment
  - Habit of throwing coffee grounds and how to make it safe and effective

## **Friday, January 30:**

Questions we have to answer:

## Target market and competition:

- Olivia, Karim
- **How will you ensure the product is easy for casual balcony gardeners to use, and how do you plan to clearly communicate its value and proper use compared to existing alternatives?**
- **What regulations apply to soil conditioners or gardening additives in the markets you plan to enter, and how will you ensure compliance before selling the product?**
- What is the ratio of coffee grounds to other ingredients in the mixture?
- How effective will this mixture be compared to other competitors?
- In what amounts does the average houseplant need our product? How often?
- Is there more than just the assembly and mixture of ingredients in the manufacturing process?
- Can espresso pods be used? Decaf?

## Product:

- Kayvon, Olivia, Niara
- **How will you ensure the product is easy for casual balcony gardeners to use, and how do you plan to clearly communicate its value and proper use compared to existing alternatives?**
- **What regulations apply to soil conditioners or gardening additives in the markets you plan to enter, and how will you ensure compliance before selling the product?**
- What is the ratio of coffee grounds to other ingredients in the mixture?

- How effective will this mixture be compared to other competitors?
- In what amounts does the average houseplant need our product? How often?
- Is there more than just the assembly and mixture of ingredients in the manufacturing process?
- Can espresso pods be used? Decaf?

## Logistics:

- Pooji, Yianni, Kabo
- **How will you source and reliably combine the required inputs at scale, and what contingency plans will you have if ingredient consistency, suppliers, or production processes present challenges?**
  - **What are the ingredients?**
- Do we need a manufacturing facility? What are the costs of the rent?
- Does the equipment we need already exist? How much is it to rent or buy? Is there labor associated?
- How will we get our ingredients?
- If we are shipping directly to customers and farmers' markets, what will our delivery costs be?
- Research costs

## Finance

- **Once we determine all costs associated with the research above, we can start to discuss**

## Guiding Questions (To ensure we cover)

### Feas Work

- How are they selling? Direct to consumer, customer acquisition perspective would be costly, digital marketing
- Basis for projections, customer acquisition cost is x and we think we can get z number of customers
- Supply chain management, where are we sourcing for coffee grounds, incentive for them to give us their coffee grounds,
- If someone else does this today, what their business looks like, right to win
- Market wise- targeting coffee shops, partnerships, CSR
- Revenue - customers a month, how much customers are costing, pick up costs (freight in)
- If the profit doesn't look good in first year, its okay as long as there is a justification for it (so for us online promotion/ marketing/ shipping costs)

Final Product

- Acquire spent coffee grounds from cafes
  - Tims Hortons, McDonalds Starbucks -> spent coffee grounds
  - Options
    - Deliver to us
    - We pick it up
- We vermicompost coffee grounds (introduce worms)
  - Worms fed the coffee grounds and then the worms compost it (removes the caffeine)
    - Works well for leafy greens, very small plants
    - Process: 0.5-1.5 pounds of worms (500-800 red worms)
      - 1 pound: 58.99 (source in Kitchener)
    - We can use bins
    - Start with 20 sqft of fertilizer; bins can be stacked vertically
    - Temperature control: moist (20 degrees celsius)
    - Worms: fixed cost because reproduction
  - Main labour: sourcing the coffee grounds
- There's a product yay!
- Marketing
  - Humanitarian: pet safe, caffeine is lethal to most household pets
  - Sustainability
- Pricing
  - Competition: Competition: \$8-15 / \$13
    - 13mg per packet for \$10-12
- Packaging
  - Coffee bag size (kool aid packet shape)
  - Needs to be small to appeal to our target market (not massive for agriculture enthusiasts)
- Target market is now home gardeners (not reliant on coffee drinkers)
  - Take advantage of the tailwind of vertical growth
- Pilot it in Toronto (year 1), national expansion (year 2 & year 3)

#### Things to do

- ☐ Target Market (bottom up approach for market sizing) - Olivia
- ☐ Yianni - implementation
- ☐ Pooji - figma
- ☐ Niara, Kayvon, Olivia - product

# Target Market



## TAM SAM SOM - PILOT CITY: TORONTO ONLY (YEAR 1)

TAM = TOTAL ADDRESSABLE MARKET

- Main Drivers
  - [Toronto City Council](#) adopted a housing pledge to build 285,000 new homes by 2031 (23% increase in total housing supply over the next decade)
    - 2024 [development pipelines](#) includes hundreds of thousands of residential units → substantial densification continues

Toronto has

- [~1.16 M dwellings](#); approximately 40% of dwellings are apartments/condos that are likely to have balconies or outdoor space
  - Roughly 43% of dwellings are apartments/condos where balcony gardening is possible
  - **SO.... 498800 homes**
    - [Of this, 30-40% do so on balconies](#)
      - **149,664 -199,520**

SAM = Serviceable Available Market

- Not all balcony households are gardeners or would buy a soil additive.
  - Urban gardeners who grow plants regularly (flowers, herbs, veggies, etc.)
  - Residents who value improved plant performance (critical for small pots, often exposed)
  - 30% of balcony gardeners already grow
    - **44899 - 59,856 urban gardeners who would**

SOM = Serviceable Obtainable Market

- The portion of SAM you could reasonably capture in your first 12–18 months
  - Startups typically aim for 1–5% penetration in a pilot city with organic channels (social, cafes, buildings, small retailers).
  - $44899 - 59,856 \times 2-5\% \approx 840-2,750$  first-year customers in Toronto
- Capturing 2-5% of SAM is typical of first-year startup estimates
  - $44899 - 59,856 \times 2-5\% = 898-1197$  (low) and 2245-2993 early customers in Toronto
  - Revenue Example:
    - If each customer buys ~3 packs/year at **~\$7 average**
      - 840 customers → ~\$18,858 annual revenue
      - 2,750 customers → ~\$62,853 annual revenue (priced at \$7)

## TAM SAM SOM (Y2, Y3)

- Scaling Toronto
  - [Toronto is 15-18% of Canada's total condo/dense multi-residential stock](#)
    - So, low scenario: 280,600
    - High scenario: 374,100

Year	Geography	SOM (Low)	SOM (High)
1	Toronto	~450	~900 ( <i>implied pilot</i> )
2	Canada	~5.6k	~7.5k
3	Canada	~8.4k	~18.7k

Based on a \$15 product used twice annually, our Toronto pilot supports \$40–55K in Year-1 revenue at a 3% SOM, with expansion to major Canadian cities driving \$160–320K annually as vertical condo growth accelerates^^6 this is priced at 15 though

**- How will you ensure the product is easy for casual balcony gardeners to use, and how do you plan to clearly communicate its value and proper use compared to existing alternatives?**

In communicating ease of use for casual balcony gardeners...

- Product design should be simple and feel like a low-risk “upgrade” to the potting mix already used
- Format and instructions:
  - Sold as pre-measured pods or small sachets sized to common pot sizes
    - E.g. 1 pod for a 10-12 inch pot or 203 smaller houseplants
  - Front of pack:
    - Single, plain-language e.g. “mix into the top 2-5cm of potting soil every 6-8 weeks, then water as usual”
      - <https://laidbackgardener.blog/2025/04/26/which-potting-soil-for-containers-on-the-balcony/>
      - ^ Julie Boudreau is a horticulturist who trained at the Institut de technologie agroalimentaire in Saint-Hyacinthe, Québec. She’s been working with plants for more than 25 years
        - We should probably try and talk to her lol?
  - Icons showing balcony rail boxes, 10-12 inch pots, and a relatively simple 3 step sequence (open → mix → water kinda like on ramen packs) to make it visually obvious
- Communicating VALUE:
  - Positioning:
    - A soil optimizer for shallow, exposed balcony containers where regular potting soil and fertilizers dry out and leach quickly
    - <https://centralbiotech.in/tag/balcony-garden-problems/#:~:text=When%20you're%20growing%20plants,wrong%20crops%20for%20shallow%20roots.>
  - DIFFERENT FROM:
    - FERTILIZERS

- Fertilizers mainly add nutrients vs our product which is supposed to improve moisture retention, soil structure, and microbial support so the nutrients STAY available in shallow pots
- RAW COFFEE GROUNDS
  - Unprocessed grounds can mat, affect pH, tie up nitrogen vs our additive (pre-processed and dosed specifically for balcony containers and small pots)
- “Water less often!”

**- What regulations apply to soil conditioners or gardening additives in the markets you plan to enter, and how will you ensure compliance before selling the product?**

- REGULATORY
  - Positioned as a soil conditioner/amendment NOT a fertilizer
    - This avoids the stricter Canadian Food Inspection Agency fertilizer as long as we don't have
      - Nutrient guarantees
      - No plant growth or yield claims
      - Claims focus on soil structure, moisture retention, microbial support
    - <http://inspection.canada.ca/en/plant-health/fertilizers/registration-overview>
      - Our product is best classified as a “supplement”: a substance, other than a fertilizer, sold or represented for improving the physical condition of soils or aiding plant growth
        - Because we claim benefits like improved water retention, pH stabilization, and microbial support, we fall into the “supplement” category rather than an unregulated consumer good^^^
    - When registration is required
      - Submit an inquiry to CFIA that describes the formulation ,etc.
      - Once required
      - Provide a full ingredient list, conduct contaminant testing, etc.
- COMPLIANCE
  - Labeling aligned with CFIA guidance;:
    - Ingredient disclosure (by category not exact formulation)
    - Clear use directions
    - Safety and disposal
- SAFETY
  - Ensure all ingredients
    - Are non toxic
    - Have precedent in consumer soil conditions

- Biochar
  - Minerals
  - Microbial support
- What is the ratio of coffee grounds to other ingredients in the mixture?
  - 10-20% (higher levels risk matting, etc. )
  - Remainder;
    - Ph buffering materials
    - Water holding and structure improving components (mineral, fibrous amendments)
    - Optional microbial support ingredients
- How effective will this mixture be compared to other competitors?
  - Current options fall short bc
    - Common balcony potting soils are designed to be light and free draining which is good for handling and root health but in shallow, exposed containers they dry out vv quickly + experience strong temp swings and lose nutrients through leaching
    - Standard fertilizers INCREASE nutrient availability but do little for water retent or soil structure
    - Coffee enriched organic matter can improve soil porosity and moisture retention
      - <https://www.sciencedirect.com/science/article/abs/pii/S0378377419303828>
      - <https://link.springer.com/article/10.1007/s44290-025-00352-3>
      - <https://pmc.ncbi.nlm.nih.gov/articles/PMC11241280/>
  - Substantiate effectiveness
    - Controlled balcony trials
    - Outperform bc balcony conditions
- In what amounts does the average houseplant need our product? How often?
  - For a 10-12inch balcony pot, ,1 pod(or like 1 tablespoon) mixed into top 2-5cm every 6-8 wks
  - Small indoor pots: ½ pod per pot, or 1 pod between 2-3 pots, same time interval
- Is there more than just the assembly and mixture of ingredients in the manufacturing process?
  - Pre conditioning inputs
    - Drying coffee derived and other organic materials to a consistent moisture level
    - Ph control
    - QA
- Can espresso pods be used? Decaf?
  - Scg are closer to neutral ph than fresh coffee
  - Decaf is also suitable bc decaffeination occurs before brewing and residual caffeine in used grounds is not the main driver of soil performance
    - Grounds ONLY tho
    - No plastic or foil

Product

- **How will you ensure the product is easy for casual balcony gardeners to use, and how do you plan to clearly communicate its value and proper use compared to existing alternatives?**
- **What regulations apply to soil conditioners or gardening additives in the markets you plan to enter, and how will you ensure compliance before selling the product?**
- What is the ratio of coffee grounds to other ingredients in the mixture?
- How effective will this mixture be compared to other competitors?
- In what amounts does the average houseplant need our product? How often?
- Is there more than just the assembly and mixture of ingredients in the manufacturing process?
- Can espresso pods be used? Decaf? - **Yes they can**

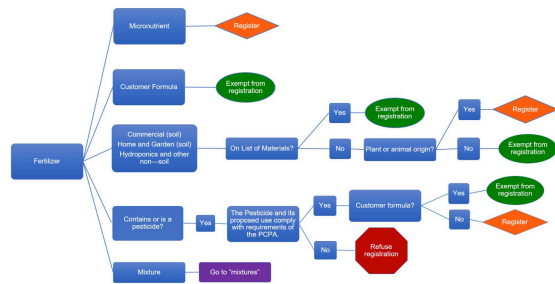
#### Topic Submission Question and Answer

Q: What regulations apply to soil conditioners or gardening additives in the markets you plan to enter, and how will you ensure compliance before selling the product?

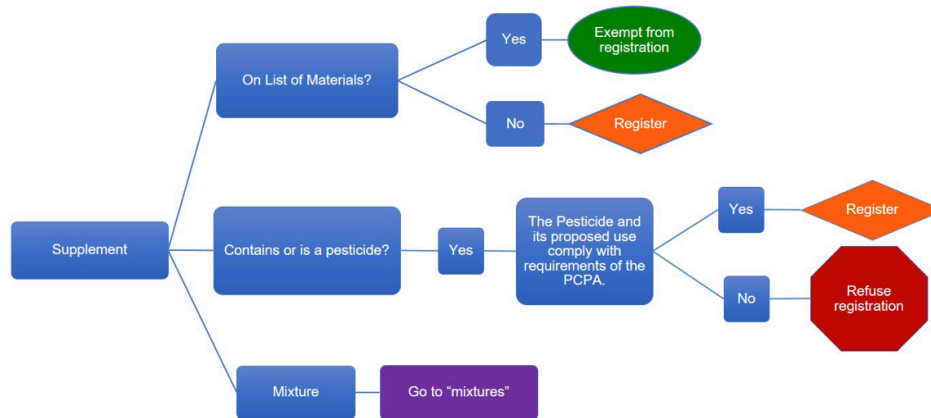
Answer:

- Must comply with the fertilizers act by the CFIA
  - Definition of fertilizers: A **fertilizer** is defined in the *Fertilizers Act* as any substance or mixture of substances, containing nitrogen, phosphorus, potassium or other plant food, manufactured, sold or represented for use as a plant nutrient  
**Biochar and coffee fall under this category**
  - Definition of supplement: A **supplement** is defined as any substance or mixture of substances, other than a fertilizer, that is manufactured, sold or represented for use in the improvement of the physical condition of soils or to aid plant growth or crop yields
- *Our product would be classified as a supplement since spent coffee grounds chemical make up include nitrogen, phosphorus, and potassium (this is under the assumption that we add in coffee ourselves...) but OUR INTENT is to aid to plant growth/yields*
  - Must be safe for environment, humans, animals, plants
- *Registration steps for fertilizers*
  - *Pre-market assessment and registration are two separate steps*
  - *Assessment:* inspections, product sampling and analysis, and marketplace label verification (link 4 - fertilizers)
  - *Registration:*

## Registration requirements for fertilizers



## Registration requirements for supplements



## Primary ingredients

- biochar: adsorbs phytotoxins in SCG (caffeine, tannins, phenolins) but takes several weeks for phytotoxins to be removed with biochar alone
  - Definition of biochar: Biochar is an organic, carbon rich material made up of organic residues and wood waste  
<https://agriculture.canada.ca/en/science/story-agricultural-science/scientific-achievements-agriculture/biochar-can-turn-plant-waste-healthy-soils-and-improve-environment>
  - how to source the biochar?
- microbial compost: expedites process of removing phytotoxins (by how much is a mystery right now) (exact required microbiology is also a mystery right now); adding more microbes to break them down
  - [https://www.mdpi.com/2304-8158/14/15/2606?utm\\_source=chatgpt.com](https://www.mdpi.com/2304-8158/14/15/2606?utm_source=chatgpt.com) (P. putida for caffeine)

- Creating a custom microbial cocktail may not be feasible
- 
- nitrogen source
  - urea? — most N% but dosage must be perfect or will mess up pH and there is also risk of ammonia volatilization
  - protein hydrolysates? — immediately available to microbes but expensive
- pH buffer

#### Secondary Ingredients

- deodorizer?
- vermicomposting the biochar?

^^ this is all obsolete for the most part

#### Packaging

- <https://mtpak.coffee/go-green-coffee-packaging/#materials>
- 

#### PEOPLE TO CALL/TALK TO/EMAIL

- ☐ Starbucks
  - ☐ Where do u put ur spent coffee grounds
- ☐ Tim hortons
- ☐ Airex Energy (Canada)
- ☐ Uncle Jim's Worm Farm
  - ☐ (800) 373-0555 (they use vermicomposting for coffee..easy to get a more accurate timeline for process and how long it takes, conditions the worms need, etc)
- ☐ Canadian AgriChar
  - ☐ [https://canadianagrچار.ca/product-biochar/#:~:text=BioChar%20is%20a%20soil%20amendment%20that%20can,rich%20in%20nutrients%20\\*%20Water%2Dsoluble%20garden%20fertilizers](https://canadianagrچار.ca/product-biochar/#:~:text=BioChar%20is%20a%20soil%20amendment%20that%20can,rich%20in%20nutrients%20*%20Water%2Dsoluble%20garden%20fertilizers)
  - ☐ 604 476 0244
- ☐ Ms straz
- ☐ Starbucks
  - ☐ Ask if they would be willing to dedicate a bin or container to place the coffee grounds in part of a green initiative....costs associated
- ☐ <https://en.wikipedia.org/wiki/Bio-bean>
  - ☐ Bio bean
- ☐ <https://www.envar.co.uk/coffee-grounds-recycling/>
  - ☐ UK competitor
    - ☐ developing bio-fertilizer pellets from SCGs for the horticultural, agricultural, and viticultural markets
- ☐ [Vijay.Thakur@sruc.ac.uk](mailto:Vijay.Thakur@sruc.ac.uk)



- ☐ Author of paper to ask what to put in composting

## SOURCES

[https://pubs.acs.org/doi/10.1021/acssusresmg.5c00083#:~:text=\(48\)%20Cervera%2DMata%20et,utility%20in%20the%20agriculture%20field](https://pubs.acs.org/doi/10.1021/acssusresmg.5c00083#:~:text=(48)%20Cervera%2DMata%20et,utility%20in%20the%20agriculture%20field). → phytotoxin removal

<https://www.sciencedirect.com/science/article/pii/S2589004224027512>

<https://link.springer.com/article/10.1007/s44378-025-00041-8>

<https://www.frontiersin.org/journals/environmental-science/articles/10.3389/fenvs.2023.1324533/full>

<https://www.sciencedirect.com/science/article/pii/S0960852420316783> (vermicomposting + biochar)

<https://agriculture.canada.ca/en/science/story-agricultural-science/scientific-achievements-agriculture/biochar-can-turn-plant-waste-healthy-soils-and-improve-environment>

<https://inspection.canada.ca/en/plant-health/fertilizers/overview/fertilizers-and-supplements> (diagrams and definitions)

Niara's Research - Note: ill fix this up later so the people doing the report

## Ingredients:

- Primary ingredient is fine biochar (to bind the toxicity products and caffeine)
  - Biochar is an organic, carbon rich material made up of organic residues and wood waste
  - (<https://agriculture.canada.ca/en/science/story-agricultural-science/scientific-achievements-agriculture/biochar-can-turn-plant-waste-healthy-soils-and-improve-environment>)
  - Beneficial for shallow potted plants (nurseries, greenhouses) Link 10 (<https://pmc.ncbi.nlm.nih.gov/articles/PMC10415017/>)
- Secondary is a source of nitrogen (since biochar will bind the nitrogen in the coffee)
- Microbes to expedite the process (which will also remove nitrogen)
- Nitrogen source (urea?)

## Key Considerations:

- How to get this product for everyday usage?
- Caffeine hurts doggies

## Target Market considerations

- Top consumed drink is coffee → viable need to remove the excess waste (statistical source)
- Two million kilograms a day of coffee grinds waste, vast majority is discarded ([bioenterprise.ca](http://bioenterprise.ca))
- Caffeine is harmful for dogs and other household pets (<https://pmc.ncbi.nlm.nih.gov/articles/PMC3550263/>)

## Vermicomposting

SCGs contain significant amounts of bioactive compounds, such as polyphenols, caffeine, and tannins, which may represent an environmental hazard when the fresh waste material is applied to soils as an amendment. Vermicomposting of SCGs is a rapid solution to reduce the toxicity of these compounds, and yields revalorized SCG-derived products rich in nutrients, microorganisms, and extracellular enzymes with beneficial effects on soil quality and plant health. (science direct chap 12)

- According to U of Maryland, scg are great for vermicompositing, boosts nutrients and growth rate when applied to soil
- 2.2 sq ft can handle 2-3 pounds, so
- Half a pound per square foot (wormgear)

## Pricing and unit volume

- Average competitor costs are between 7-20 dollars (lets lowball for 7, we can play around with a high low - high being like 10, low being 7)
- Find out the milligram basis (since were aiming for around 30 per packet)

Worms per bin:

- **Bins would be the most ideal to go with (based on openresearch <https://openresearch.okstate.edu/server/api/core/bitstreams/6bfa271d-4727-4720-b9c6-e4aa5728f836/content>) since it would be easy to remove the scg compost when its done**
- **range of 1/2 to 1 1/2 pounds per square foot, which is between 800-+1000 red worms (uncle Jims)**
- **A pound is 58.99 from motherworms, 9.99 for active bedding, combined is 77.95\$ (five litres of active bedding - they in kitchener so it would be somewhat locally sourced**
  - To calculate how square footage of bin (rectangular/ square) : width x length (in inches) / 144

<https://www.wormgear.com/how-do-you-calculate-input-and-output/#:~:text=modules%20are%20%E2%80%B2%20x%204,to%20remember%20and%20work%20with.> (worm dimensions)

<https://extension.umd.edu/resource/indoor-worm-composting-or-vermicomposting/> (marlyand uni on vermi)

<https://unclejimswormfarm.com/how-many-worms-do-i-need-for-my-composting-bin/?srsltid=AfmBOoohpjShWqNVhIDg8VnPLdl56VeoMM8I8BpxbyU8AjhiTqKjXzek> (someone in the business)

<https://www.motherworms.ca/collections/red-wiggler-compost-worms> (canadian based in kitchener, not too much freight associated, does online shipping)

<https://books.google.ca/books?id=0ldxDwAAQBAJ&lpg=PA1&ots=WRdB6NZIRP&dq=how%20many%20worms%20do%20you%20need%20for%20vermicomposting&lr&pg=PP1#v=onepage&q&f=false> (vermicomposting)

<https://openresearch.okstate.edu/server/api/core/bitstreams/6bfa271d-4727-4720-b9c6-e4aa5728f836/content> (vermicomposting and different options of bins, beds, windrows)

<https://www.sciencedirect.com/science/chapter/edited-volume/pii/B9780128112908000128> (vermicomposting being effective for coffee grounds Chap 12)

Links:

1. <https://www.ontario.ca/page/ontario-compost-quality-standards>
2. <https://inspection.canada.ca/en/plant-health/fertilizers> (inspection policy)
3. <https://www.sciencedirect.com/science/article/pii/S1618866716300103> (proving direct additive reduces plant growth)
4. <https://inspection.canada.ca/en/plant-health/fertilizers/overview/fertilizers-and-supplements> (diagram, definitions)

5. <https://www.mdpi.com/2073-4441/17/6/881> (caffeine being removed from spent coffee ground water)
6. <https://bioenterprise.ca/success-stories/rfine-biomass-solutions/> (Coffee grounds per day)
7. [https://www.jstor.org/stable/pdf/resrep70200.25.pdf?refreqid=fastly-default%3A0d3d244ec7afb279f7b661939b463ead&ab\\_segments=0%2Fbasic\\_search\\_gsv2%2Fcontrol&initiator=&acceptTC=1](https://www.jstor.org/stable/pdf/resrep70200.25.pdf?refreqid=fastly-default%3A0d3d244ec7afb279f7b661939b463ead&ab_segments=0%2Fbasic_search_gsv2%2Fcontrol&initiator=&acceptTC=1) (proving that coffee can be used in fertilizer)
8. <https://agriculture.canada.ca/en/science/story-agricultural-science/scientific-achievements-agriculture/biochar-can-turn-plant-waste-healthy-soils-and-improve-environment> (biochar definition and how its environmentally friendly)
9. [https://www.statista.com/forecasts/874574/most-popular-beverages-canada/?srsId=AfmBOooAEyMNQ9JUr3aylXhadHmlVfXPzHDQIqq1NwgA65q1tfAqL\\_2I](https://www.statista.com/forecasts/874574/most-popular-beverages-canada/?srsId=AfmBOooAEyMNQ9JUr3aylXhadHmlVfXPzHDQIqq1NwgA65q1tfAqL_2I) (statistics of beverages in canada)

Yu, Ping et al. "Alleviate environmental concerns with biochar as a container substrate: a review." *Frontiers in plant science* vol. 14 1176646. 27 Jul. 2023, doi:10.3389/fpls.2023.1176646

10. <https://pmc.ncbi.nlm.nih.gov/articles/PMC10415017/>

170 L capacity <https://vers-lavenir.ca/en/products/worm-hotel:>

<https://www.canada.ca/en/revenue-agency/services/forms-publications/publications/gi-048/fertilizer-pesticides.html> (compliance with hst tax, no special tax on fertilizers, we wouldn't be zero proof)

<https://www.uaf.edu/ces/publications/database/gardening/composting-with-worms.php> (worms production and output of waste/bins capacity)

## Summary of Findings (For Slides purposes)

Product: Coffee Ground Fertilizer (without Caffeine)

Overview:

- Classifies as a supplement in accordance with agriculture Canada's definition
  - Must comply with the fertilizers act by the CFIA
    - Definition of supplement: A **supplement** is defined as any substance or mixture of substances, other than a fertilizer, that is manufactured, sold or represented for use in the improvement of the physical condition of soils or to aid plant growth or crop yields
- *Our product would be classified as a supplement since spent coffee grounds chemical make up include nitrogen, phosphorus, and potassium (this is under the assumption that we add in coffee ourselves...) but OUR INTENT is to aid to plant growth/yields*

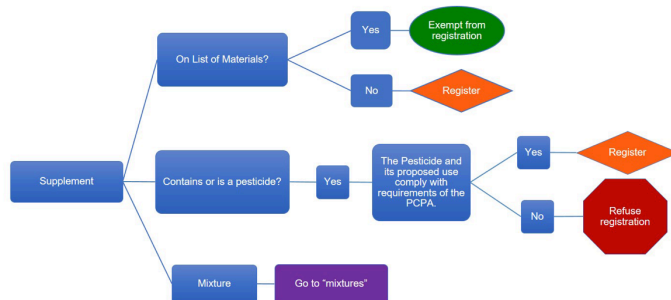
Product Makeup (Grounds)

- Coffee Grounds are made from

Registration Process (Policy, Legal Fees)

- Check to make sure our materials are on the list (i think they are, if not we reference a mixture)

### Registration requirements for supplements



Equipment (Bins, Worms, Bedding, Moisture/Humider Kits)



# Logistics

- **How will you source and reliably combine the required inputs at scale, and what contingency plans will you have if ingredient consistency, suppliers, or production processes present challenges?**
  - **What are the ingredients?**
- Do we need a manufacturing facility? What are the costs of the rent?
- Does the equipment we need already exist? How much is it to rent or buy? Is there labor associated?
- How will we get our ingredients?
- If we are shipping directly to customers and farmers' markets, what will our delivery costs be?
- Sourcing coffee grounds
- Policy POV: product classified as a fertilizer? Vs. a supplement?
  - Submit an inquiry either way (with ingredients, hopefully it gets approved fast)
- Sell additive
- Ship directly to end consumer (no need for shelf space)
- Small warehouse space
- For business phone + internet
- <https://business.bell.ca/shop/small-business/phone/packages>

#### Pooji's Notes from Sunday Meeting:

##### Supply Chain / Logistics

- Buy biochar (\$13 for 4 L bags) and ship to warehouse
  - Easy to get biochar (pine chips)
  - Could partner with companies (usually they give it away for free)
  - Show multiple scenarios and project financial costs
- Grind up biochar (tool: grinder used by one person)
- Small pod-like packaging
- Ship to customers
- Advertising

##### Pricing Strategy

- How often do you have to buy our product?
- How often do your houseplants need to be fertilized?
  - 2-4 weeks (once a month)
- 1:10 ratio for additive:coffee grounds
- Think about the Canadian growing season; economics of scale (partnerships with condos?)
  - We need a strong impact assessment to prove sustainability (understand household waste)



Legal:

Category	Item	Purpose	Initial Investment Cost (CAD)
Incorporation	Articles of Incorporation	Legally create the corporation	300
Incorporation	NUANS Name Search	Reserve business name	8–26
Corporate Records	Minute Book (DIY / Online)	Required corporate governance	0–300
Government Registration	CRA Business Number	Corporate tax registration	0
Government Registration	GST/HST Registration	Enables tax collection	0
Municipal Compliance	Business Licence (initial)	Permission to operate in city	100–800
Land Use Compliance	Zoning Review / Clearance	Confirms composting allowed	0–300
Land Use Compliance	Zoning Variance (if required)	Approval for location use	500–3,000
Environmental Compliance	Environmental Compliance Approval (ECA)	Waste/compost processing	0–5,000
Environmental Compliance	Environmental Consultant (optional)	Navigate MECP rules	1,500–10,000
Product Compliance	CFIA Fertilizer Registration	If marketed as fertilizer	0–2,000
Product Compliance	Product Labeling Setup	Required product labels	100–500
Legal Setup	Contract Drafting	Supplier & building agreements	0–5,000
Accounting Setup	Accounting System Setup	Initial bookkeeping structure	500–2,000

Workplace Safety	Health & Safety Setup	PPE, training, signage	200–1,000
------------------	-----------------------	---------------------------	-----------

# Questions for Zach

- What do we put on the report? (Is it just financials?)
-

# Random Info

- Monthly cycle
  - The product does not expire (vermicomposting every month)
  - Sourcing and