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2. No part of this entry has previously been entered in competition.
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4. Credit for all secondary research has been given to the original author through the project's bibliography, footnotes or endnotes.
5. All activities or original research procedures described in this entry are accurate depictions of my efforts or, in the case of team projects, the efforts of my team.
6. All activities or original research described in this entry took place between the 2018 Chartered Association Career Development Conference and the 2019 Chartered Association Career Development Conference.
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Independent Business Plan  
Competitive Event

Skyline High School  
School

Washington  
Chartered Association (State/Province)

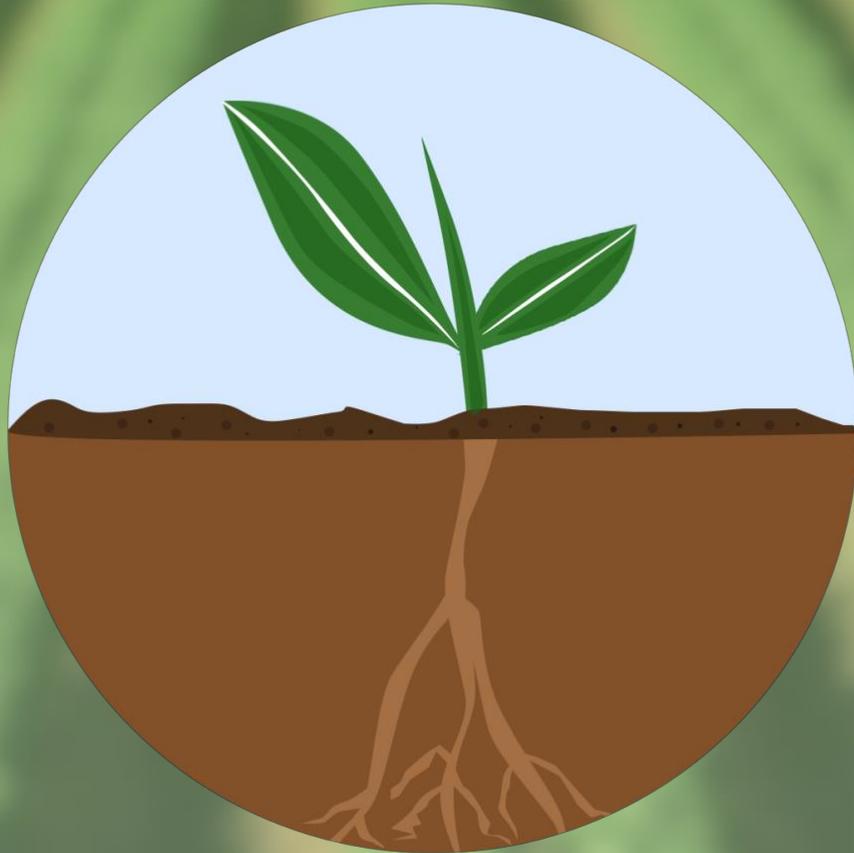
To the best of my knowledge, I verify that the above statements are true and that the student's (students') work does not constitute plagiarism.

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January 2019



# EcoGrow

Independent Business Plan Event  
Skyline DECA

Skyline High School  
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Sammamish, WA 98075



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## I. EXECUTIVE SUMMARY

**Description of the Business:** EcoGrow is a non-traditional fertilizer manufacturer that strives to create low-cost, environmentally-friendly, organic fertilizer. The business is a limited liability corporation (LLC) operating in both California and New York. EcoGrow takes hair waste from hair salons, barber shops, and pet groomers, and turns it into organic fertilizer through science-based, cost-effective processes.

**Business Opportunity:** Every year, over 500 million tons of hair are disposed of in the U.S. This hair contains valuable nitrogen and other nutrients useful to crops. At the same time, the agricultural industry is looking for ways to cut costs and avoid criticism from the environmental lobby. By using hair—which has no monetary value—to create fertilizer, EcoGrow can penetrate and disrupt an established fertilizer industry with low-cost, environmentally-friendly, organic fertilizer.

**Mission Statement:**

“EcoGrow will collect wasted hair from salons, barbers, and pet groomers, and, through a science-based and cost-effective process, turn it into affordable, organic, environmentally-friendly fertilizer, allowing farmers across the country to save money and ultimately curbing the negative environmental impacts of conventional fertilizers.”

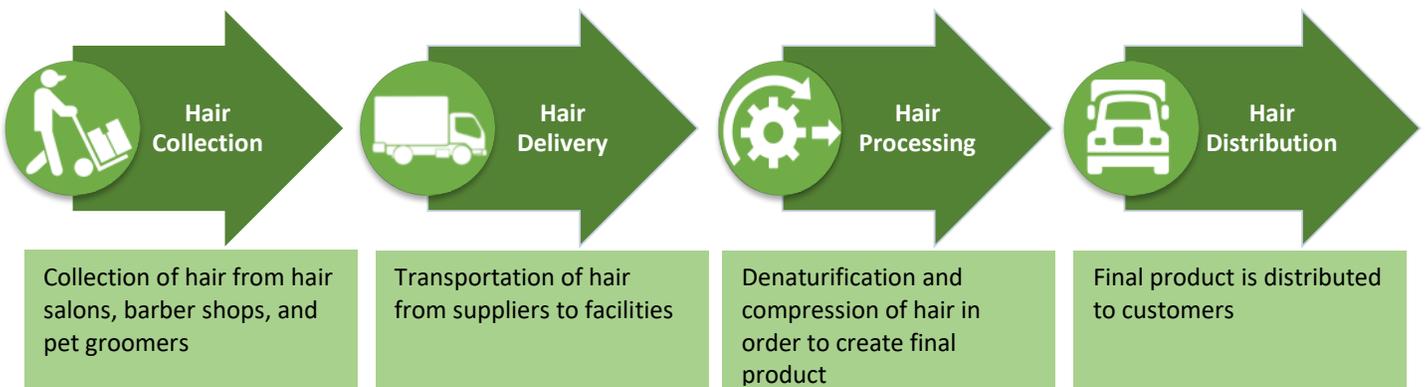
**Problem:** The problems that EcoGrow strives to solve can be summarized as follows:



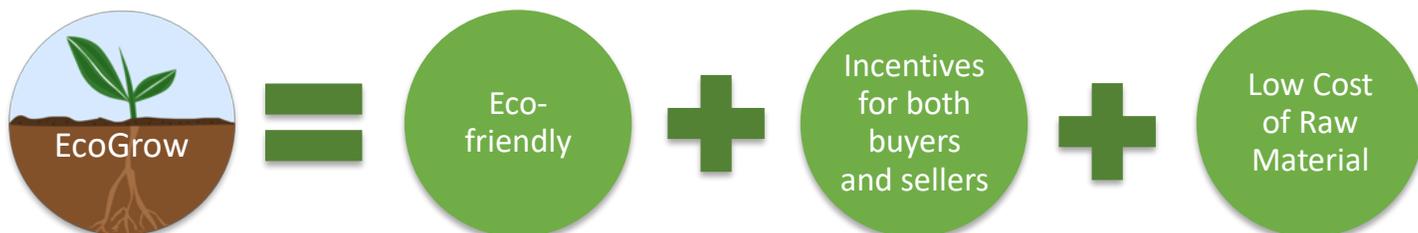
**Target Market:** To acquire the necessary materials to create fertilizer, EcoGrow will target hair salons, barbers and pet groomers. Once the hair has been treated, EcoGrow will target the following segments in order to become a leader in the fertilizer market:

EcoGrow Segmented Target Market			
Target Market	Type	2019 Price	General Needs
Primary	Large Farms	\$500	<ul style="list-style-type: none"> <li>• Less expensive source of nutrients</li> <li>• Response to criticism of environmental lobby</li> <li>• Environmentally-friendly, organic fertilizer</li> </ul>
Secondary	Small Farms	\$500	
Tertiary	Households Gardeners	\$3.25	

**Solution:** In order to address the aforementioned problems, while also creating **low-cost, eco-friendly, hair-based fertilizer**; EcoGrow’s operations consist of the following:



**Unique Value Proposition:** EcoGrow will distinguish itself from existing fertilizers by being **the first one made from hair**. Furthermore, EcoGrow's unique value proposition can be summarized as follows:



**Revenue:** In order to effectively serve all three target markets, EcoGrow will sell two products, both derived from the same production process. Large commercial farms and small local farms will be able to purchase EcoGrow fertilizer by the ton at an initial price of \$500, while household gardeners will be able to buy fertilizer by 10-pound brick units, each priced at \$3.25. EcoGrow will garner high profits by combining two key advantages of its fertilizer:

-  an extremely low cost of goods sold as our raw hair material is seen as waste
-  high projected sales volume as our fertilizer is up to 22% more cost-effective than conventional fertilizers

Fertilizer Savings Projections by Amount of EcoGrow Used					
Company	Annual Fertilizer Needed	Cost Using 100% Conventional Fertilizers	Cost using 90% Conventional and 10% EcoGrow	Cost using 75% Conventional and 25% EcoGrow	Cost using 40% Conventional and 60% EcoGrow
Sample A	200 tons	\$124,600	\$122,140	\$118,450	\$109,840
Sample B	100 tons	\$62,300	\$61,070	\$59,225	\$54,920
Sample C	50 tons	\$31,150	\$30,535	\$29,613	\$27,460
Sample D	25 tons	\$15,575	\$15,268	\$14,806	\$13,730

**Financial Requests:** We (Susheel and Nikhil) will each invest \$100,000 of share capital into EcoGrow. We are requesting a **\$600,000 loan at an 8.0% annual interest rate payable over five years**. A brief summary of the repayment plan is included below:

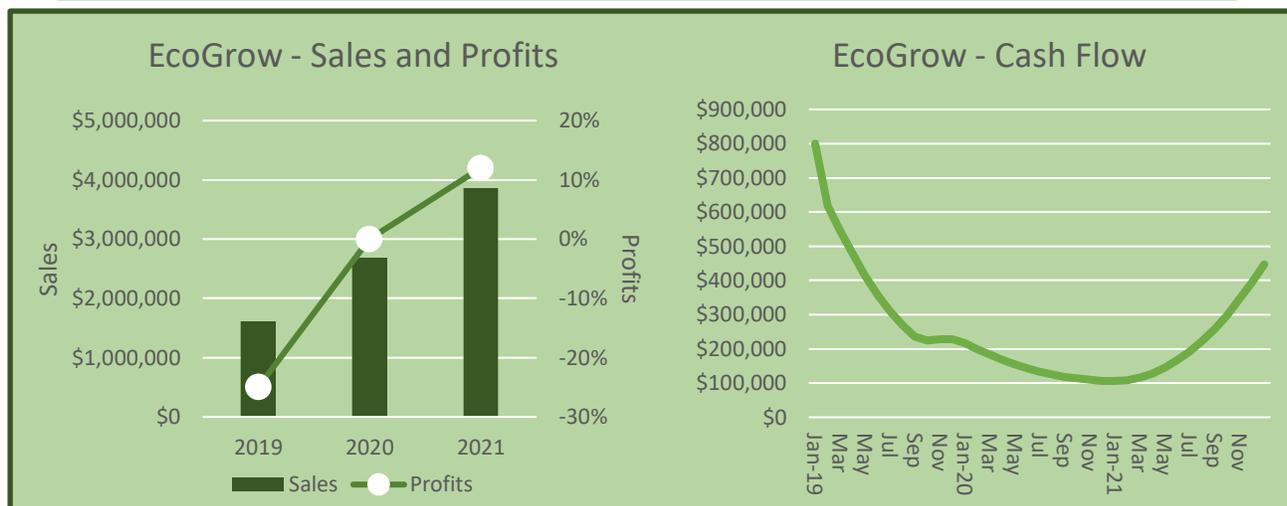
EcoGrow – Amortization Schedule				
Loan Amount	Interest Rate	Term	Start Date	
\$600,000	8%	5 Years	Jan 2019	
Summary of Payments and Interest				
Monthly Payment			\$12,166	
Total Interest Paid over Life of Loan			\$129,950	
Interest Paid in 2019			\$44,326	
Interest Paid in 2020			\$35,888	
Interest Paid in 2021			\$26,749	
EcoGrow Payment Schedule				
Year	Annual Principal Paid	Annual Interest Paid	Total Interest Paid	Loan Balance
Begin	\$0	\$0	\$0	\$600,000
2019	\$101,664	\$44,326	\$44,326	\$498,336
2020	\$110,102	\$35,888	\$80,214	\$388,234
2021	\$119,241	\$26,749	\$106,963	\$268,993
2022	\$129,137	\$16,853	\$123,816	\$139,856
2023	\$139,856	\$6,134	\$129,950	\$0

**Financial Statements:** The following condensed financial statements outline our profitability and cash flow:

EcoGrow Forecasted Statement of Cash Flows For the years ended December 31, 2019, 2020, & 2021			
	2019	2020	2021
Beginning Cash Balance	-	217,196	106,116
Cash Inflows:			
Owner	200,000	-	-
Bank	600,000	-	-
Operations	1,616,949	2,684,240	3,862,080
Total Cash Inflows	2,416,949	2,684,240	3,862,080
Cash Outflows:			
Fixed Assets	90,160	-	-
Inventory	80,203	128,412	178,181
Payroll and related	772,675	795,855	819,731
Customer Acquisition	119,380	109,571	112,859
Other	1,137,335	1,761,482	2,409,237
Total Cash Outflows	2,199,753	2,795,320	3,520,008
Net Cash Flow	217,196	(111,080)	342,072
Ending Balance	217,196	106,116	448,188

EcoGrow Forecasted Statement of Income For the years ended December 31, 2019, 2020, & 2021			
	2019	2020	2021
Operating Revenue	1,616,949	2,684,240	3,862,080
Cost of Goods Sold	80,203	128,412	178,181
Gross Profit	1,536,746	2,555,828	3,683,899
	95%	95%	95%
Operating Expenses	1,998,160	2,521,965	3,077,524
Income/Loss Before Tax	(461,414)	33,863	606,375
Interest Expense	44,327	35,888	26,749
Tax Expense	-101,148	-405	115,925
Net Income (Loss)	(404,593)	1,620	463,701
	-25%	0%	12%



To assess our financial performance in the above forecasts, we will utilize **key performance indicators** to track our growth and adjust our operations as needed, such as the ones included in the table below:

EcoGrow – Key Metrics				
Metric	Purpose	Calculation	Benchmark	How to Improve
<b>Gross Profit Margin (%)</b>	Measure profit from sales and ability to cover product expenses	(Rev - COGS) / Rev	Industry: 32% 2021: 95%	<ul style="list-style-type: none"> <li>• Increase sales price/quantity sold</li> <li>• Decrease COGS</li> </ul>
<b>Working Capital Ratio</b>	Indicate if there are enough short-term assets	Current Assets / Current Liabilities	2:1	<ul style="list-style-type: none"> <li>• Increase amount of cash</li> <li>• Pay off short-term loans</li> </ul>
<b>Fertilizer Productivity Rating</b>	Measure productivity of fertilizer using crop yield	(lbs of fertilizer used) / (lbs of crop yielded) X 100	Industry: 55/100 EcoGrow: 65/100	<ul style="list-style-type: none"> <li>• Improve fertilizer quality</li> <li>• Adjust amount of fertilizer used</li> </ul>

*We thank you for reviewing our proposal for our start-up business, EcoGrow, and we look forward to further discussing the opportunity of a bank loan of \$600,000, at 8.0% interest over five years.*

## II. PROBLEM

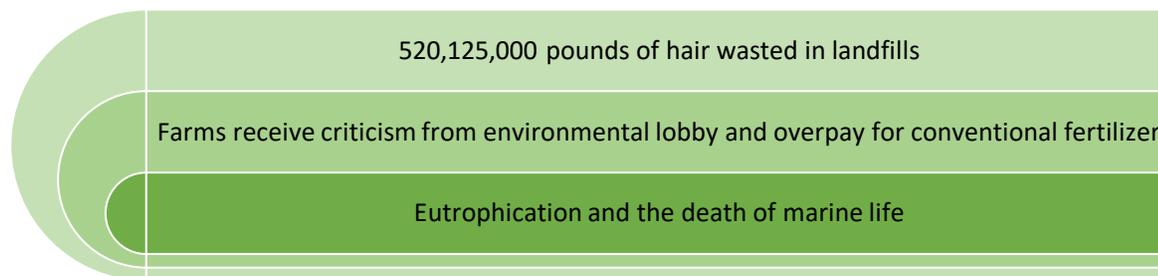
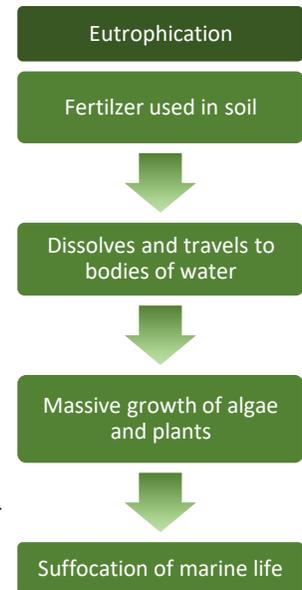
For most people, getting a haircut is a mundane task. They walk in, have their hair cut, pay, and leave. No one thinks to ask: “Where does the hair go after I leave?”

In the U.S. there are over 370,000 hair salons and over 200,000 pet groomers. Each of which, on average, cuts 2.5 pounds of hair or fur per day.<sup>1</sup> That adds up to 1,425,000 pounds of hair daily; 9,975,000 pounds per week; and 520,125,000 pounds per year. Most of this hair **ends up in landfills**; however, research has shown that **hair can help us in unexpected places**.

One of these places is the agricultural industry. An integral part of this industry is the use of fertilizer. It aids in the growth of plants and allows for crop yields to increase. However, using fertilizer has a significant drawback. After being applied to the soil, fertilizer dissolves through the cracks in the soil, leading fertilizer to accumulate in nearby bodies of water. The fertilizer causes massive amounts of algae and plant matter to grow, eventually suffocating all plants and marine life below the surface, and **landing farms in big trouble**. This phenomenon is called **eutrophication**.<sup>2</sup>

Though wasted hair and eutrophication seem unrelated, **they are inextricably linked, providing EcoGrow an interesting opportunity on which to capitalize**. Fertilizer, in its simplest form, is processed nitrogen that is applied to soil, allowing crops to tap into the nitrogen stores and grow quicker. The problem here is the nature of modern fertilizers: they are in the form of a **thin, liquidy substance** that can easily pass through the soil and often, go straight past the crops’ roots. Additionally, these fertilizers are formed from the **expensive burning of fossil fuels** and the destruction of non-renewable resources, such as limestone. Paying for these fertilizers is no easy task for many agricultural operations.

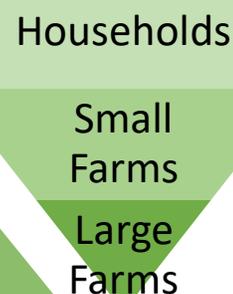
A Mississippi State University study found that hair, on the other hand, is a solid substance that, when clumped together, can decompose into very targeted areas and aid in the growth of crops. The study states that 91% of hair’s composition consists of useful nutrients for crops; of those nutrients, 20% alone is nitrogen.<sup>3</sup> Furthermore, it costs close to nothing to acquire because it is merely thrown in the trash. To EcoGrow, it is a mistake allowing 520,125,000 pounds of this nutrient-rich resource to be wasted yearly. The following graphic points out the problems that EcoGrow aims to address:



## III. CUSTOMER SEGMENTS

**SEGMENTATION:** For a business to intelligently allocate its resources, the division of its customers into market segments is crucial. EcoGrow’s possible customer segments include both Business-to-Business and Business-to-Customer relationships: **household gardeners, small local farms, and large commercial farms**. With the use of a website for processing purchases and the implementation of gradual marketing campaigns for each segment, EcoGrow can effectively target all three segments.

The following inverted pyramid displays the prioritization of Ecogrow’s resources to each of these segments, with segments increasing in priority towards the pyramid’s tip. EcoGrow will first prioritize large commercial farms, as this is the segment currently receiving the most criticism for problems that EcoGrow’s product will fix and has a high cost incentive to buy product; second will be small local farms, as this segment receives less criticism from the environmental lobby, but has a higher cost incentive to buy our product and save money; third will be household gardeners, as this market segment does not have a cost incentive or publicity-improvement incentive for buying our product, but rather will buy it for the sheer fun of gardening.



<sup>1</sup> “Clean Wave – Hair, Fur and Fleece Donations – Matter Of Trust.” *Matter Of Trust*, matteroftrust.org/297/clean-wave-program.

<sup>2</sup> “GCSE Bitesize: Fertilisers.” *BBC*, BBC, www.bbc.co.uk/schools/gcsebitesize/science/ocr\_gateway/chemical\_resources/fertilisers\_cropsrev1.shtml.

<sup>3</sup> Thompson, Andrea. “Human Hair Makes Good Fertilizer.” *LiveScience*, Purch, 5 Jan. 2009, www.livescience.com/5260-human-hair-good-fertilizer.html.

### Household gardeners

For EcoGrow's purposes, households will be classified as any family-household entity; essentially, any EcoGrow customer that is **not a business**. Within households, EcoGrow can target **gardening aficionados**. This segment is often middle or upper-class, and has time and money to invest in **leisure gardening**. They are constantly looking for cheap and unorthodox ways to make gardening more fun; thus, hair-based fertilizer will heavily appeal to this segment. Additionally, 1 in 3 households in the U.S. maintain gardens.<sup>4</sup> Because the product will be listed on our website, we do not need to focus on a certain area of gardeners; instead, future marketing campaigns can focus on the U.S. gardening market segment as a whole. This will be EcoGrow's **tertiary** market segment.

### Small local farms

The USDA classifies small local farms as any agricultural establishment having less than \$350,000 in annual revenue.<sup>5</sup> Cost is a key factor in this market segment's buying decisions. They have less output, and the value of produce is relatively low given the cost of operations for a farm. Additionally, the USDA states that about 90% of all farmland in the U.S. is owned by small local farms, so it would be nonsensical to ignore this segment. According to the National Young Farmers Coalition, **California and New York** are the best states for small local farms due to their desirable property costs and taxes. EcoGrow's low-cost fertilizer will appeal to this segment; hence, **EcoGrow will target small local farms in California and New York**. This will be EcoGrow's **secondary** market segment.

### Large commercial farms

The USDA classifies large commercial farming operations as having more than \$350,000 in annual revenue.<sup>6</sup> According to CNBC, these farms hold 96% of all agricultural market share.<sup>7</sup> Due to eutrophication, this market segment receives considerable criticism from **environmental watchdogs and lobbies**.<sup>8</sup> To use our product would be to use a more environmentally-friendly product, allowing this segment to shake the pressure from watchdogs. A growing movement in the US is also calling on large farms to utilize solely organic soil enhancements, making EcoGrow's fertilizer a prime option for this segment. Additionally, the low-cost fertilizer would decrease the farms' overhead, leading to lower-priced produce. This would make their produce more competitive, making the purchase of EcoGrow's fertilizer an almost necessary event. Since EcoGrow's focus locations for small local farms will be California and New York, **EcoGrow will also target large commercial farms in the same states** as there are considerable numbers of large commercial farms in these states. This will be EcoGrow's **primary** market segment.

**TARGETING:** While EcoGrow will initially target small and large farms in only California and New York to establish a foundational customer base and cut transportation costs early on, EcoGrow aspires to expand to other agricultural economies throughout the US, especially those of Texas, Kansas, and North Carolina.

**POSITIONING:** EcoGrow will effectively target these customer segments with the use of several channels/pathways. The key differences between these three market segments is their economic and social motives for the purchase. **Our primary target for fertilizer, large commercial farms, have a more pressing need for EcoGrow fertilizer**, making them a significant portion of EcoGrow's revenue. Thus, the fertilizer will be positioned as **low-cost, organic, and environmentally-friendly**. The beauty of this positioning strategy is that, by targeting large commercial farms, EcoGrow has effectively targeted small local farms as well, as this market segment receives environmental criticism, but in smaller magnitudes. The cost incentives are desired by both segments. For household gardeners, the fact that the fertilizer is made from hair will be an interest point in itself, and a motive to try out the product on their own garden.

**SUPPLIERS:** EcoGrow is unique in that it must also appeal to its suppliers. EcoGrow pays minimally for its raw material, hair. Salons and barber shops are not putting dollar values on hair after they have collected it; they just throw it away. But at the same time, why would they want to give us their hair?

We answer this question with **green marketing**. Similar to the agricultural industry, the salon industry is guilty of an environmental grievance that environmentalists often gloss over: throwing away 520,125,000 pounds of hair every year. By giving us their waste hair, they open up opportunities for marketing on the basis of helping the environment and being eco-friendly. This marketing advantage is especially useful for salons and groomers in big cities, where populations tend to lean favorably towards protecting the environment. EcoGrow will also furnish hair suppliers with special 'hair bins' for storing their hair, then allowing it to be picked up. Hence, EcoGrow will focus its supply-sourcing efforts in the cities of New York, Philadelphia, Los Angeles, and San Francisco, some of the most populous cities in the US where salons and groomers will have significantly more than 2.5 pounds of hair per day.<sup>9</sup> These cities are also perfect for our customers segments, as they are

<sup>4</sup> Lissy, Marin. "Gardening Boom: 1 in 3 American Households Grow Food." *Farmer Foodshare*, 15 June 2017, [www.farmerfoodshare.org/farmer-foodshare/2017/6/15/gardening-boom-1-in-3-american-households-grow-food](http://www.farmerfoodshare.org/farmer-foodshare/2017/6/15/gardening-boom-1-in-3-american-households-grow-food).

<sup>5</sup> Hoppe, Robert. "U.S. Farms, Large and Small." *USDA*, 13 Jan. 2015, [www.usda.gov/media/blog/2015/01/13/us-farms-large-and-small](http://www.usda.gov/media/blog/2015/01/13/us-farms-large-and-small).

<sup>6</sup> *ibid*

<sup>7</sup> Koba, Mark. "Meet the '4%': Small Number of Farms Dominates US." *CNBC*, 6 May 2014, [www.cnbc.com/2014/05/06/state-of-american-farming-big-producers-dominate-food-production.html](http://www.cnbc.com/2014/05/06/state-of-american-farming-big-producers-dominate-food-production.html).

<sup>8</sup> Wang, Jackie, et al. "Farming Activity Contaminates Water despite Best Practices – Center for Public Integrity." *Center for Public Integrity*, 16 Aug. 2017, [publicintegrity.org/environment/farming-activity-contaminates-water-despite-best-practices/](http://publicintegrity.org/environment/farming-activity-contaminates-water-despite-best-practices/)

<sup>9</sup> "Clean Wave – Hair, Fur and Fleece Donations – Matter Of Trust." *Matter Of Trust*, [matteroftrust.org/297/clean-wave-program](http://matteroftrust.org/297/clean-wave-program).

located in the same state as our target market, ultimately decreasing shipping costs. EcoGrow will also consider additional incentives on a contractual basis. Shown below are just several potential hair suppliers in our cities of operation:



#### IV. UNIOUE VALUE PROPOSITION

EcoGrow fertilizer is the future of eco-friendly fertilizer. It has the potential to revolutionize the fertilizer market. EcoGrow offers three unique aspects to differentiate itself from competitors.

-  Eco-friendly
-  Incentives for both buyers and sellers
-  Low Cost of Raw Material

With these characteristics, EcoGrow brings numerous distinctions to distance itself from ordinary competition. By using hair to produce fertilizer instead of fossil fuel, EcoGrow aligns itself with two movements that are often unfortunately opposed to each other: the movement to save the environment, and the movement to feed an ever-growing population. Furthermore, this hair-based fertilizer will be cheaper than other popular fertilizers as its only ingredient is sourced for close to no cost; the real value of the product is how we form the fertilizer, including the cleaning, forming, and packing process. Following an analysis of EcoGrow’s unique value proposition, the following strengths have been pinpointed:

**Economical:** Provides an economic method of disposing of hair. Millions of pounds of hair will not go to waste.

**Demand:** As the world population continues to grow, showing no signs of stopping, the demand for food will rise. Fertilizer, allowing for faster and larger growth, is the method of feeding the ever-growing world population.

**Price:** EcoGrow’s end product has a price that is more competitive in the fertilizer market, and could be wildly attractive to farmers that are looking to cut costs.

**Environmental:** EcoGrow is not made with non-renewable resources and helps curb the negative effects of eutrophication.

**Strengths**

#### V. SOLUTION

EcoGrow’s operations will include sourcing, processing, and shipping; but they can all be united under one common goal: **creating low-cost, eco-friendly, hair-based fertilizer**. EcoGrow will enter a fertilizer industry currently driven by high prices, destructive processes, and non-ethical goals. Our company will capitalize on this opportunity by creating and marketing a product with three key features that address the problems discussed in Section II and our target markets’ problems discussed in Section III. The features are as follows:

- **Low-cost**
- **Completely organic**
- **Environmentally-friendly**

With these features comes the overall solution, described in detail below and summarized by the graphic to the right:





**Hair Collection:** EcoGrow will supply each of its participating hair suppliers with a special ‘hair bin’. The employees of each establishment will be directed to place all hair into this bin, instead of the usual dumpster. It is important to note that employees will be instructed to exclude dyed, bleached, and gelled hair as it is far too expensive and inefficient to remove these chemicals from hair without the use of additional harmful chemicals that would ultimately compromise the quality of the fertilizer.



**Hair Delivery:** Using a **contracted truck pickup system**, hair would be picked up from each hair supplier weekly, allowing the hair to accumulate in the bin. Since each supplier is located in one of the most populous cities in the US, each one will provide a much greater amount of hair than the average 2.5 pounds of hair per day that the average American salon would produce. The hair would be delivered to the city’s respective EcoGrow processing facility; **one for the East Coast and one for the West Coast.**



**Hair-Processing:** Upon reception into an EcoGrow facility, the hair will need to undergo several processes before it is ready to ship out: cleaning, denaturification, compression, weighing, and packaging.

## Hair Processing

### Cleaning/ Denaturification:

These two processes are performed in one step. The hair will be boiled in water reaching about 212°F. This will perform two functions: it will rid the hair of any coarse or fine dirt particles, and it will begin to **denature** the hair.<sup>10</sup> This means that it will break apart the hydrogen bonds that keep the hair together, thus beginning the decomposition process before the fertilizer even reaches our customers.



### Compression/ Weighing

After boiling, the hair will be compressed into bricks, each weighing ten pounds, using a process called **compression molding**.<sup>11</sup> Using a brick-shaped metal mold, enough hair will fall into a cavity with a scale beneath it. As soon as the scale indicates that ten pounds of hair is in the cavity, a metal plug will push down on the hair with enough force to push it into a brick shape. After settling, the plug will lift up, allowing the brick to advance onto the packaging and shipping stages.

Two products will then be derived from this finished fertilizer: the EcoTon and the EcoBrick. The EcoTon, meant for our large farm and small farm market segments, will consist of 200 10-pound bricks all packaged and shipped together, while the EcoBrick will be a single 10-pound brick meant for household gardeners.

## VI. CHANNELS

### Channel Selection:

To capitalize on these market opportunities, EcoGrow will employ several online promotional tactics. Key elements of our online channel marketing will include a website, **Search Engine Optimization (SEO)**, and the use of **Google PPC Advertising**. Search Engine Optimization will ensure that EcoGrow appears at the top of search results when searches related to fertilizer are performed, while Google PPC Advertising will find potential customers and display EcoGrow ads to them based on their search history. This strategy cuts out excess advertising costs by targeting potential customers more efficiently and without excessive spending. Furthermore, EcoGrow plans on engaging in **heavy networking** within the New York and California agricultural industries, using channels such as a Facebook and Twitter Pages, and a Google+ Business Account. The table below summarizes EcoGrow’s online marketing forms and their benefits:

<sup>10</sup> “What Temperature Does Water Boil At? Boiling Point & Elevation.” *Compound Interest*, Compound Interest, 22 Mar. 2016, [www.compoundchem.com/2016/03/22/boiling-point/](http://www.compoundchem.com/2016/03/22/boiling-point/).

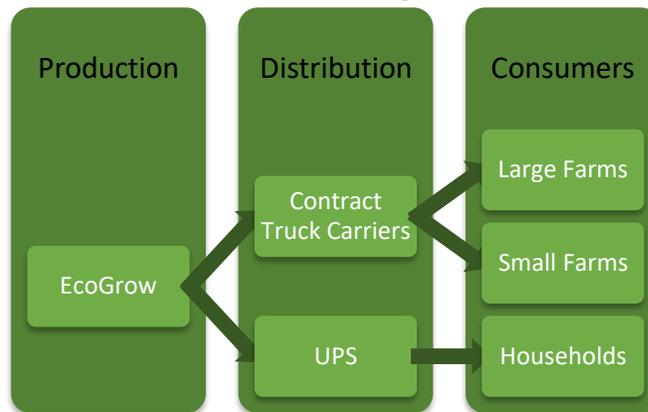
<sup>11</sup> Carruthers, Joe. “What Is Compression Moulding?” *Coventive Composites*, 19 July 2018, [coventivecomposites.com/explainers/compression-moulding/](http://coventivecomposites.com/explainers/compression-moulding/).

### EcoGrow's Main Forms of Online Channel Marketing<sup>12</sup>

Form	Description	Benefit
Website	<ul style="list-style-type: none"> <li>Provides basic product and purchasing information</li> </ul>	<ul style="list-style-type: none"> <li>Easy reference point for potential customers</li> </ul>
Facebook/ Twitter Pages	<ul style="list-style-type: none"> <li>Provides basic product and purchasing information</li> <li>Automatically connects page with other users</li> </ul>	<ul style="list-style-type: none"> <li>Easy reference point for potential customers</li> <li>Access to advertising within each platform</li> </ul>
Google+/ LinkedIn Business Accounts	<ul style="list-style-type: none"> <li>Contains detailed company information</li> <li>Built-in feature that recommends business page during searches</li> </ul>	<ul style="list-style-type: none"> <li>Recommended page feature targets potential customers</li> </ul>
Google PPC Ads	<ul style="list-style-type: none"> <li>Tracks visitors to website and Google+ Business Account</li> <li>Displays Internet ads to tracked website visitor for 30 days</li> </ul>	<ul style="list-style-type: none"> <li>Cuts out excess ad costs</li> <li>Follows-up on site visits/interest</li> </ul>
Search Engine Optimization	<ul style="list-style-type: none"> <li>Ensures that EcoGrow appears high on list of results returned by search engine</li> </ul>	<ul style="list-style-type: none"> <li>Maximizes number of visitors to EcoGrow website</li> </ul>

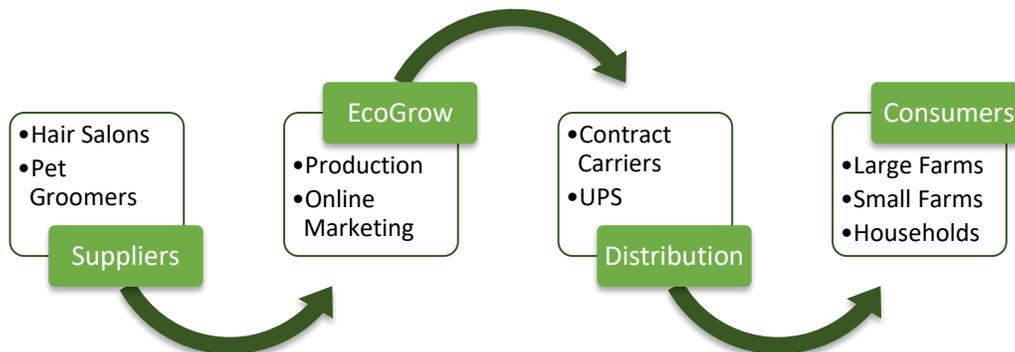
#### Distribution Intensity:

EcoGrow will employ an **exclusive distribution intensity** for large commercial farms and small local farms, and a simple **e-commerce** system for household gardeners. This will allow the larger amounts of fertilizer that farms purchase to be distributed most effectively, and the smaller amounts of fertilizer that gardeners purchase to be distributed most quickly. EcoGrow will act as the producer of the product within its distribution chain, while utilizing **indirect distribution** through the use of **contract truck carriers for farms** and **UPS Small Business Shipping for household gardeners**. Communication will occur between EcoGrow and the final consumer, whether it is between a household gardener and our website, or it is between a farm and our in-house sales force. Below is a visual representation of our distribution chain:



#### Channel Integration:

EcoGrow's channel structure will resemble a **contractual vertical marketing system (VMS)**, where members of the channel maintain independence while adhering to specific obligations under contracts. A contractual VMS is especially important for EcoGrow's suppliers and distributors, as a contract will allow EcoGrow to specify certain requirements that hair must meet to be put in the 'hair bin', and state obligations that the contract truck carriers must meet when fulfilling farm deliveries. As EcoGrow has minimal oversight into the operations of hair suppliers or contract carriers, contracts will be an integral function within their distribution chain. Thus, the channel structure's contractual VMS is summarized in the graphic seen below:



<sup>12</sup> Lobaugh, Kasey, et al. "Navigating the New Digital Divide." *Deloitte United States*, 2 Aug. 2018, [www2.deloitte.com/us/en/pages/consumer-business/articles/navigating-the-new-digital-divide-retail.html](http://www2.deloitte.com/us/en/pages/consumer-business/articles/navigating-the-new-digital-divide-retail.html).

## VII. REVENUE STRAMS

### A. What is the revenue model?

EcoGrow’s pricing objectives are based on the tenets of **value-based pricing**; a strategy focused around providing customers with a greater value than competitors’ products. This strategy will be augmented with the use of **penetration pricing**—where a firm uses a low initial price to appeal to its target markets, while still providing superior value in quality. EcoGrow will introduce these pricing strategies through a two-phase method utilizing **dynamic pricing** for farms, a strategy that alters the price depending on market demand, and **fixed pricing** for households, where the price of the good remains constant. Overarching this two-phase method will be **volume-based pricing**, as farms purchase EcoGrow in much higher quantities than households; therefore, farms will be acquiring the same amount of fertilizer for less than households can, enticing them to make bigger purchases. For EcoGrow’s first year of sales in 2019, we will use lower prices to generate higher bulk sales. High initial expenses (see Section IX) will necessitate immediate returns, and thus we will focus on the quantity of units sold and total revenue, instead of individual profit margins. From then on, EcoGrow will maximize its gross profit margins (see Section VIII, D) by **increasing prices by 4% annually until 2022**, while still maintaining lower prices than competitors. The following chart outlines our pricing based on these objectives:

EcoGrow 3 Year Pricing Model				
Product	2019 Pricing	2020 Pricing	2021 Pricing	3 Year Pricing Increase (%)
EcoBrick	\$3.25	\$3.25	\$3.25	0%
EcoTon	\$500	\$520	\$540	8%
Average one ton conventional fertilizer <sup>13</sup>	\$623	\$660	\$698	16%

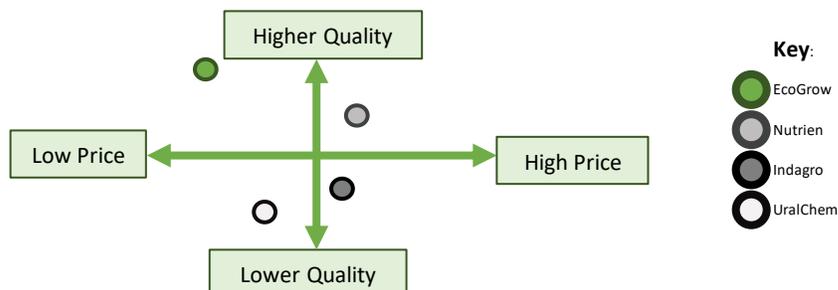
The above chart also details the expected price per product segment for each revenue stream. Because of the nature of our raw material, the hair itself costs nothing; however, the processing includes boiling the hair and compressing it. Thus, **our cost of goods sold for one EcoTon is \$25, leading to our base price of \$500 for 2019. Our cost of goods sold for one EcoBrick of hair is \$0.13, making its base price \$3.25 plus any shipping costs.** This allows EcoGrow to maintain a sustainable gross profit, while staying cheaper than the competition (see Section VIII, D).

Our pricing model demonstrates the price difference between EcoGrow and conventional fertilizer. One ton of our fertilizer is significantly less than the competitions’, with **average savings between \$100 to \$200**, depending on the current growing season and price of fossil fuels. For farmers, this can be **14% to 22% more cost effective**. The model below summarizes savings projections by purchasing EcoGrow instead of conventional fertilizers:

Fertilizer Savings Projections by Amount of EcoGrow Used					
Company	Annual Fertilizer Needed	Cost Using 100% Conventional Fertilizers	Cost using 90% Conventional and 10% EcoGrow	Cost using 75% Conventional and 25% EcoGrow	Cost using 40% Conventional and 60% EcoGrow
Sample A	200 tons	\$124,600	\$122,140	\$118,450	\$109,840
Sample B	100 tons	\$62,300	\$61,070	\$59,225	\$54,920
Sample C	50 tons	\$31,150	\$30,535	\$29,613	\$27,460
Sample D	25 tons	\$15,575	\$15,268	\$14,806	\$13,730

These sample calculations clearly show how much a farm could save by purchasing EcoGrow. One must note that it is unlikely for a company to switch to 100% EcoGrow immediately; it would rather be a gradual process due to consumer skepticism and our initial production capabilities. Therefore, we reflected the savings above by substituting 10%-60% of a farm’s overall fertilizer with EcoGrow. We chose different amounts of fertilizer to represent the scope of savings that will be seen across the agricultural industry. More prominent savings are seen for larger farms, as **\$2,460 is saved by using just 10% EcoGrow if 200 tons of fertilizer are needed**. It is important to note that our initial customers are likely to be in the 25-100-ton range; however, these customers are likely more willing to switch to a higher percentage of EcoGrow because, as stated in Section III, cost is a key factor in small farms’ buying decisions. Establishing support from small local farms will be an integral step in securing a customer base for EcoGrow.

The base price of \$500 may slightly fluctuate based off of production efficiency or shipping destinations. As illustrated in the positioning map below, EcoGrow effectively combines a high-quality product with a low price when compared to other fertilizer manufacturers, due to our **streamlined contractual production process** and our **remarkably low-cost raw material**.



<sup>13</sup> “Fertilizer Use and Price.” *USDA ERS - Food Environment Atlas*, 21 Feb. 2018, [www.ers.usda.gov/data-products/fertilizer-use-and-price.aspx](http://www.ers.usda.gov/data-products/fertilizer-use-and-price.aspx).

## B. What are the life time values?

Lifetime Values (LTV) are a benchmark that projects how much revenue a firm can expect from an average customer segment. It assists the business in balancing its advertising costs and the maintenance of a healthy cash flow. To calculate the LTV, we must utilize several relevant factors, including customer lifespan, sale value, repeat transactions, and profit margins. To account for these, we will use the standard formula of  $LTV = (T \times S \times C \times P)$ , as shown below:

EcoGrow LTV Variables					
Variable	Description	Equation Application	Small Local Farms	Large Commercial Farms	Household Gardeners
T	Average customer lifespan	(Projected long-term trade value) / (transactional value)	30.5 years	23.6 years	11.2 years
S	Average Sale Value	(Current price of fertilizer) x (number of units purchased)	\$23,835	\$208,335	\$6.38
C	Annual number of transactions	(Annual fertilizer usage) / (average sale value)	5.1	2.8	4.6
P	Profit Margin per customer	(Gross profit) / (sales revenue) x 100%	95.00%	95.00%	96.00%

After substituting the above values in the LTV equation for each market segment, our calculations showed that **the projected LTV for the large farms was \$13,078,438**. For small local farms it was **\$3,522,158**, and for household gardeners it was **\$316**. This data reveals that our most profitable customer segment is large commercial farms, by \$9,556,280. However, small local farms are easier to retain as customers, as their customer lifespan is 6.9 years longer. Since customer retention costs are cheaper than customer acquisition costs, small farms present a more attractive business priority in the short-term. Additionally, that market is easier to penetrate quickly because of the segment's lack of bureaucracy and its more pressing need to cut costs where possible when compared to large farms. However, due to the large farms' much higher LTV, this segment will need to be a priority as soon as a foothold is established in the small local farm segment. As stated in Section III, a promotional plan can effectively target both of these segments as they both share environmental and cost problems. EcoGrow will target both its primary and secondary market segments by marketing and selling to small farms, while networking and forming relationships with larger farms simultaneously.

## C. What is the revenue?

Operational selling and production will begin in January 2019. Thus, our sales will be lower in January and February, but will increase as our production grows and as our sales force builds a clientele. Additionally, **many farmers in the US tend to buy fertilizer mostly in the fall**.<sup>14</sup> This is because the costs of conventional fertilizer tend to be lowest in the fall as there are less in-season crops. For this reason, many farmers save up money to spend it on large amounts of fertilizer in the fall that they can stockpile and use later on in the year. Household gardeners are a less complex segment than farms; it includes people that keep gardens, as well as indoor potted plants. They plant flowers, fruits, and veggies during all months of the year.

With these considerations in mind, we modeled a three-year sales forecast that models monthly projections for 2019 and annual projections for 2020 and 2021. Our sales revenue is projected to **increase from \$1,616,948 in 2019 to \$3,862,080 by 2021**. We have spikes of sales in "EcoTons sold" in the months of September, October, and November to reflect farmers buying fertilizer in the fall. Our sales force will have accumulated customers throughout the year, but the farms will have more capital to buy fertilizer with in the fall. These demands from the spikes will be fulfilled with unused surpluses of hair that has been stockpiled throughout the year. EcoTons account for the vast majority of our sales in 2019, comprising 96% of our revenue. The American marketplace is often a very unpredictable place to do business, especially for a start-up, and financial projects are subsequently speculative. Hence, we used a **bottom-up** and **data-driven** approach, leading to realistic sales forecast values, as seen below:

Three Year Sales Forecast													EcoGrow		Fiscal Year Begins Jan-19	
	12-month Sales Forecast for 2019												Annual Sales Forecast			
	Jan-00	Feb-00	Mar-00	Apr-00	May-00	Jun-00	Jul-00	Aug-00	Sep-00	Oct-00	Nov-00	Dec-00	Annual Totals	2020	2021	
EcoTons sold	55	85	105	115	165	205	255	295	425	500	480	420	3105	5010	6970	
Sale price @ unit	500.00	500.00	500.00	500.00	500.00	500.00	500.00	500.00	500.00	500.00	500.00	500.00		520.00	540.00	
<b>EcoTon TOTAL</b>	<b>27,500</b>	<b>42,500</b>	<b>52,500</b>	<b>57,500</b>	<b>82,500</b>	<b>102,500</b>	<b>127,500</b>	<b>147,500</b>	<b>212,500</b>	<b>250,000</b>	<b>240,000</b>	<b>210,000</b>	<b>1,552,500</b>	<b>2,605,200</b>	<b>3,763,800</b>	
EcoBricks sold	300	640	810	1100	1440	1660	1810	1940	2230	2500	2600	2800	19830	24320	30240	
Sale price @ unit	3.25	3.25	3.25	3.25	3.25	3.25	3.25	3.25	3.25	3.25	3.25	3.25		3.25	3.25	
<b>EcoBrick TOTAL</b>	<b>975</b>	<b>2,080</b>	<b>2,633</b>	<b>3,575</b>	<b>4,680</b>	<b>5,395</b>	<b>5,883</b>	<b>6,305</b>	<b>7,248</b>	<b>8,125</b>	<b>8,450</b>	<b>9,100</b>	<b>64,448</b>	<b>79,040</b>	<b>98,280</b>	
<b>Monthly Totals: All Categories</b>	<b>28,475</b>	<b>44,580</b>	<b>55,133</b>	<b>61,075</b>	<b>87,180</b>	<b>107,895</b>	<b>133,383</b>	<b>153,805</b>	<b>219,748</b>	<b>258,125</b>	<b>248,450</b>	<b>219,100</b>	<b>1,616,948</b>	<b>2,684,240</b>	<b>3,862,080</b>	

## D. What is the gross margin?

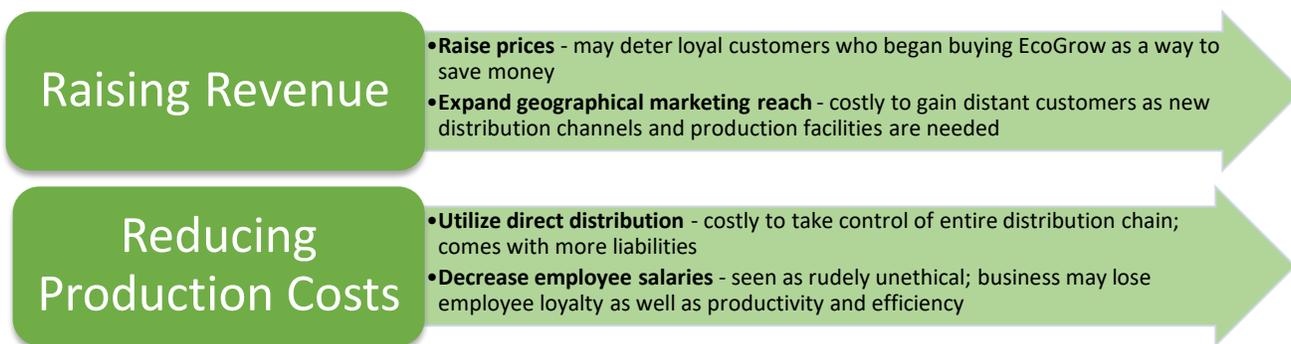
Gross margin (GPM) is the difference between the net revenue and cost of goods sold (COGS) divided by revenue, shown as a percentage. **EcoGrow's projected gross margin for 2019 is about 95%**. In comparison to a major competitor within the fertilizer industry, EcoGrow is strong. One of the premier producers of fertilizer for the US market, Agrium,

<sup>14</sup> "What to Plant Now." *Urban Farmer*, 2019, <https://www.ufseeds.com/learning/what-to-plant-now/>

garnered a gross margin of 30.6% in 2016; significantly less than EcoGrow. Additionally, EcoGrow is subject to far fewer taxes and regulations due to its more environmentally-friendly production process, while Agrium has seen three lawsuits brought against it by the US government in the last 15 years, ranging from the destruction of local ecosystems to monopolization concerns, gaining Agrium considerable public opposition. With EcoGrow's penetration of the fertilizer industry, companies like Agrium will have an environmentally-friendly and cost-effective competitor.

EcoGrow Conservative Product Mix For the Year Ending 2019							
Product Lines	Forecasted Units	Units		Total			
		Sales Price	Cost <sup>15</sup>	Sales	COGS	GP \$	GP %
EcoTons	3105	\$500	\$25	\$1,552,500	\$77,625	\$1,474,875	95%
EcoBricks	19830	\$3.25	\$0.13	\$64,448	\$2,578	\$61,871	96%
			<b>Totals</b>	\$1,616,948	\$80,203	\$1,536,746	95%

As EcoGrow continues to expand throughout New York and California, one of our major goals is to increase our gross margin, freeing up capital to reinvest in the business. EcoGrow will pinpoint two major objectives to meet this goal. The first is to acquire higher amounts of revenue; the second is to reduce production costs. The graphic below outlines strategies we can pursue to fulfil these objectives, and meet our goal.



## VIII. COST STRUCTURE

### A. What are the customer acquisition costs?

Before beginning to pursue our three target markets, EcoGrow will have to acquire a sufficient number of hair suppliers to adequately serve each of our operational regions. As the average output of hair per supplier is 2.5 pounds per day, the output from each of our suppliers within the cities of Los Angeles, San Francisco, New York City, and Philadelphia will have a much higher output, as these cities are among the most populous in the nation. Our suppliers will be targeted through a promotional plan including networking and direct email. As our suppliers are not searching up keywords related to our product, we cannot utilize our online channel marketing strategies with this segment. Thus, **networking will be the most crucial portion of our supplier acquisition process.**

To target our customer segments, EcoGrow will utilize online channel marketing, networking, and direct mail. As seen in Section VII, B, our large farm segment is much more profitable in the long-term than small farms; however, small farms are critical to gaining a consistent source of revenue early on. For these reasons, EcoGrow will implement a promotional plan focused on establishing the company in the marketplace early on **with networking, as it fuels early demand and connects us with larger potential customers.** EcoGrow will first concentrate on networking with small farms, while simultaneously starting our online channel marketing plan. After a solid foothold in the marketplace is gained, we will shift our focus to networking with large farms, while continuing our online channel marketing plan. Networking costs will come from sending sales agents to agricultural and farming conventions within the California and New York regions, such as the California Farm Conference and the New York Farm Bureau Annual Convention, both of which hosted over 500+ farms in 2016.<sup>16, 17</sup> It is important to note that while networking is a customer acquisition cost, we will move it into our human resource costs as part of our sales agent salaries, as there is no direct ad cost from networking.

EcoGrow's online channel marketing plan will primarily target our small farm and household gardener segments, due to those segments' lack of a bureaucracy that can specialize in cutting costs, unlike large commercial farms. This plan will consist of Google PPC Ads, and Search Engine Optimization (SEO). Using these services will assist EcoGrow in reducing online ad spending in the long-term. The first table below details advertising costs, while the second table focuses on web promotional costs with longer lifespans. These are not ads, but rather have development and maintenance costs.

<sup>15</sup> "What Does It Cost To Heat Your Water?" *ScaleSafe*, ScaleSafe Energy, 1 Aug. 2013.

<sup>16</sup> "American Farm Bureau Annual Convention." *New York Agriculture*, New York Farm Bureau, www.nyfb.org/events.

<sup>17</sup> "The Conference." *California Small Farm Conference*, www.californiafarmconference.com/.

EcoGrow will employ lean budgeting techniques to leverage greater sales returns, stimulating the growth of hair-based fertilizer to create new opportunities and open up new marketing channels.

EcoGrow Promotion Plan – Advertising Costs <sup>18</sup>							
Activity	Time Frame	Development Cost	Single Ad Cost	Monthly Ads	Monthly Cost	Annual Cost	3-Year Cost
Direct Email	2019-23	\$600	\$0.25	1,000	\$250	\$3,000	\$9,600
SEO <sup>19</sup>	2019-23	\$1,800	N/A	N/A	\$600	\$7,200	\$23,400
Google PPC <sup>20</sup>	2019-23	\$2,600	\$1.50	4,000	\$6,000	\$72,000	\$218,600
<b>Totals</b>	2019-23	\$5,000	N/A	N/A	\$7,600	\$82,200	\$251,600

EcoGrow Promotional Plan – Web Design and Maintenance Promotion Costs						
Activity	Time Frame	Development Cost	Monthly Maintenance Cost	Annual Maintenance Cost	3-Year Cost	
Facebook/Twitter Page	2019-23	\$70	\$50	\$600	\$1,870	
Google+/LinkedIn	2019-23	\$90	\$85	\$1,020	\$3,150	
Website	2019-23	\$13,000	\$700	\$8,400	\$38,200	
<b>Totals</b>	2019-23	\$13,160	\$835	\$10,020	\$43,220	

EcoGrow’s total promotion plan budget is \$251,600 over three years, a significant investment in customer acquisition. While taking risks is often a must in business, evaluating the success of investments as they progress is equally important. To achieve this, we will continuously calculate each activity’s CPM, which measures the cost of promotion per one thousand views. The table below outlines our initial findings:

EcoGrow Promotional Plan – Measurement of Effectiveness			
Activity	Time Frame	Monthly Scope/Circulation	CPM
Direct Email	2019-23	1,000 recipients	\$250
SEO	2019-23	9,000 impressions	\$67
Google PPC	2019-23	4,000 impressions	\$1,500
Facebook/Twitter Page	2019-23	1,700 impressions	\$29
Google+/LinkedIn	2019-23	1,850 impressions	\$551
Website	2019-23	15,950 impressions	\$527

The most cost-effective forms of marketing are our Facebook/Twitter pages, SEO, and Direct Email; which will spearhead EcoGrow’s online marketing plan.

#### B. What are the distribution costs?

EcoGrow – Distribution Costs <sup>21</sup>						
Activity	Cost Description	Cost per Ton	2019 Projected # of Tons Transported	Average Miles Traveled	2019 Cost	3-Year Cost
Transportation to Facility	Collecting and transporting hair from suppliers to EcoGrow facilities using contract truck carriers	\$0.80 per mile	3,204	119	\$305,035	\$1,471,502
Hair Handling	Cost of loading trailers with tons of fertilizer	\$0.60	3,204	N/A	\$1,922	\$9,274
Customer Distribution	Transportation from facilities to customers using contract truck carriers	\$0.90 per mile	3,204	171	\$493,119	\$2,378,825
<b>Totals</b>	N/A	\$2.30	3,204	290	\$800,076	\$3,859,601

As mentioned in Sections V and VI, EcoGrow will have three main activities going into distribution costs: hair collection and transportation, hair processing, and distribution to consumers. We will measure these costs by ton of fertilizer transported, with each ton weighing 2,000 pounds. We are expecting an increase in the number of tons transported each year due to our increase in sales. Over the first three years of our business, we are projecting a total distribution cost of \$3,859,601.

#### C. What are the human resource costs?

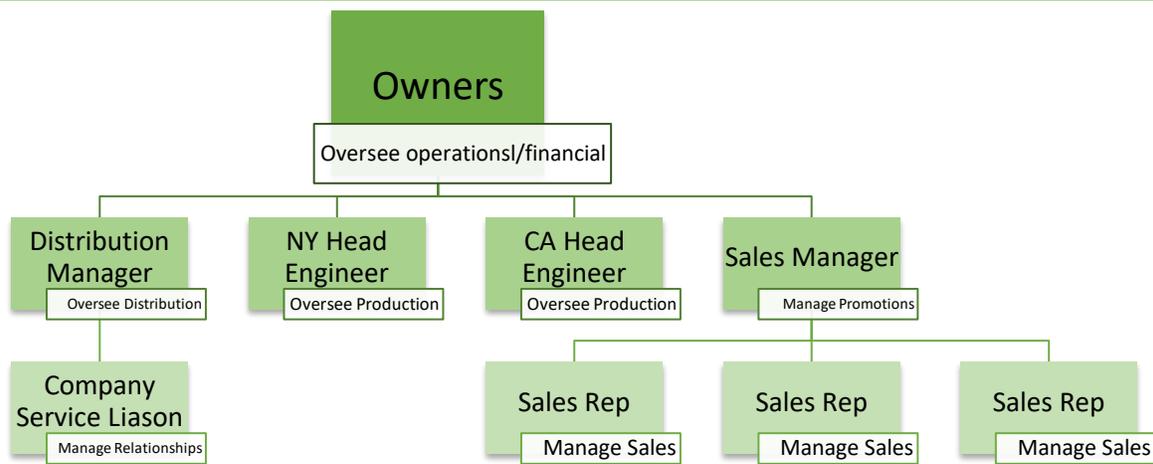
EcoPower will have a centralized organizational structure, with the owners making the final decision over all major operational and financial management. By retaining control within the company and not expanding our organizational structure significantly, we will minimize costs without losing productivity. However, it is likely that EcoGrow will need to expand its organizational structure in the future as we expand the scope of our business. The following chart gives an overview of the organizational structure and briefly describes each position.

<sup>18</sup> Lobaugh, Kasey, et al. “Navigating the New Digital Divide.” *Deloitte United States*, 2 Aug. 2018, [www2.deloitte.com/us/en/pages/consumer-business/articles/navigating-the-new-digital-divide-retail.html](http://www2.deloitte.com/us/en/pages/consumer-business/articles/navigating-the-new-digital-divide-retail.html).

<sup>19</sup> “How Much Does SEO Cost?” RankPay, RankPay, [www.rankpay.com/seo-cost/](http://www.rankpay.com/seo-cost/).

<sup>20</sup> Shewan, Dan. “How Much Does Google Ads Cost?” *Online Advertising: Learn About Advertising Online*, 8 Nov. 2018, [www.wordstream.com/blog/ws/2015/05/21/how-much-does-adwords-cost](http://www.wordstream.com/blog/ws/2015/05/21/how-much-does-adwords-cost).

<sup>21</sup> Ashe, Ari. “Contract Pricing Power of US Truckload Carriers Seen Easing.” *Study Finds Wide Range in DC Operating Costs*, 21 Nov. 2018, [www.joc.com/trucking-logistics/contract-pricing-power-us-truckload-carriers-seen-easing\\_20181121.html](http://www.joc.com/trucking-logistics/contract-pricing-power-us-truckload-carriers-seen-easing_20181121.html).



EcoGrow’s organizational structure anticipates having an annual payroll expense of \$587,500 and a total salary burden of \$185,175, when including cumulative payroll taxes and benefits.

EcoGrow Organizational Salaries				
Position	Hourly Rate	Hours per Month	Monthly Payroll Expense	Annual Payroll Expense
Owner (C-suite)	N/A	N/A	\$6,666	\$80,000
Owner (C-suite)	N/A	N/A	\$6,666	\$80,000
Distribution Manager	\$34.31	170	\$5,833	\$70,000
CA Head Engineer	\$31.86	170	\$5,417	\$65,000
NY Head Engineer	\$31.86	170	\$5,417	\$65,000
Sales Manager	\$34.31	170	\$5,833	\$70,000
Company Service Liason	\$23.44	160	\$3,750	\$45,000
Sales Rep #1	\$20.83	150	\$3,125	\$37,500
Sales Rep #2	\$20.83	150	\$3,125	\$37,500
Sales Rep #3	\$20.83	150	\$3,125	\$37,500
<b>Totals</b>	N/A	N/A	\$48,958	\$587,500

EcoGrow Organizational Payroll Tax and Benefits				
Position	Annual Payroll	Cumulative Payroll Tax <sup>22, 23</sup>	Cumulative Benefits Rate	Total Salary Burden
Owner (C-suite)	\$80,000	11.75%	22%	\$27,000
Owner (C-suite)	\$80,000	11.75%	22%	\$27,000
Distribution Manager	\$70,000	11.75%	20%	\$22,225
CA Head Engineer	\$65,000	11.75%	20%	\$20,638
NY Head Engineer	\$65,000	9.62%	20%	\$19,253
Sales Manager	\$70,000	11.75%	20%	\$22,225
Company Service Liason	\$45,000	11.75%	19%	\$13,838
Sales Rep #1	\$37,500	11.75%	19%	\$11,530
Sales Rep #2	\$37,500	9.62%	19%	\$10,733
Sales Rep #3	\$37,500	9.62%	19%	\$10,733
<b>Totals</b>	\$587,500	N/A	N/A	\$185,175

#### D. Additional costs?

EcoGrow will purchase certain assets to manage daily operations, along with leasing two factory facilities; one in New York and one in California. Each factory facility will store raw material hair, process the hair into fertilizer, and store the finished product. Each factory will also have a separate office space within the same building to cut down on initial costs. Leasing these buildings on three-year renewable leases gives EcoGrow the most preferable payment terms and flexibility in obtaining this space. In New York state, a 34,000-square foot industrial facility with an attached 970 square foot office goes for \$2.88 per square foot per year, which would be \$8,393 per month. On a three-year renewable lease, this would be \$100,715 per year.<sup>24</sup> Similarly, in California, a 33,200-square foot industrial facility with an attached 1,125 square foot office goes for \$3.00 per square foot per year, which would be \$8,581 per month. This would be \$102,975 per year on a three-year renewable lease.<sup>25</sup>

<sup>22</sup> 2018 Federal and State Payroll Taxes. California Employment Development Department.

<sup>23</sup> Mino, Igor. “New York State Tax Information.” *Federal Deposit Rules - Semi-Weekly* | *Payroll-Taxes.com* | *Payroll Taxes*, www.payroll-taxes.com/state-tax/new-york.

<sup>24</sup> “120 Barlow St, Canastota, NY, 13032 - Warehouse Property For Lease on LoopNet.com.” *LoopNet*, www.loopnet.com/Listing/120-Barlow-St-Canastota-NY/9431531/.

<sup>25</sup> “16333-16335 Avenue 24 1/2, Chowchilla, CA, 93610 - Food Processing Property For Lease on LoopNet.com.” *LoopNet*, www.loopnet.com/Listing/16333-16335-Avenue-24-1-2-Chowchilla-CA/13870535/.

EcoGrow will also need to purchase several standard fixed assets for our office spaces. These will be owned for more than three years. These include tables, chairs, storage, computers, printers, and copiers. The following model outlines the costs of these fixed assets, as well as their expected depreciation and salvage values.

EcoGrow Fixed Asset and Depreciation Schedule For the Period Beginning January 2019								
Fixed Assets			Acquisition		Life in Years	Salvage Value	Annual Straight-Line Depreciation	
Number	Class	Description	Date	Cost			Value	Expense
1	Fixtures	Storage Racks	12/29/18	\$2,200	4	\$300	\$1,900	\$475
2	Furniture	5 8' x 3' Tables	12/28/18	\$1,880	7	\$375	\$1,505	\$215
3	Furniture	10 Chairs	12/27/18	\$1,000	7	\$400	\$600	\$86
<b>Total Fixtures and Furniture</b>				<b>\$5,080</b>			<b>\$3,005</b>	<b>\$776</b>
4	Office Equipment	2 HP LaserJet Enterprise printers	12/25/18	\$7,000	5	\$1,000	\$6,000	\$1,200
5	Office Equipment	3 HP Pavillion computers	12/30/18	\$2,580	3	\$600	\$1,980	\$660
<b>Total Office Equipment</b>				<b>\$9,580</b>			<b>\$7,980</b>	<b>\$1,860</b>
6	Production Equipment	2 Boilers <sup>26</sup>	12/26/18	\$16,000	7	\$1,800	\$14,200	\$2,029
7	Production Equipment	4 Compression Molders <sup>27</sup>	12/27/18	\$59,500	6	\$5,800	\$53,700	\$8,950
<b>Total Production Equipment</b>				<b>\$75,500</b>			<b>\$67,900</b>	<b>\$10,979</b>
<b>Total All Fixed Assets</b>				<b>\$90,160</b>				<b>\$13,614</b>

## IX. DETAILED FINANCIALS

### A. Projected Income and Expenses

#### 1. Projected income statements by month for the first year's operation

EcoGrow Forecasted Statement of Income For the years ended December 31, 2019, 2020 & 2021															
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	2019	2020	2021
<b>Operating Revenue</b>	\$ 27,500	\$ 42,500	\$ 52,500	\$ 57,500	\$ 82,500	\$ 102,500	\$ 127,500	\$ 147,500	\$ 212,500	\$ 250,000	\$ 240,000	\$ 210,000	\$ 1,552,500	\$ 2,605,200	\$ 3,763,800
EcoTons	975	2,080	2,633	3,575	4,680	5,395	5,883	6,305	7,248	8,125	8,450	9,100	64,449	79,040	98,280
<b>Total Operating Revenue</b>	<b>28,475</b>	<b>44,580</b>	<b>55,133</b>	<b>61,075</b>	<b>87,180</b>	<b>107,895</b>	<b>133,383</b>	<b>153,805</b>	<b>219,748</b>	<b>258,125</b>	<b>248,450</b>	<b>219,100</b>	<b>1,616,949</b>	<b>2,684,240</b>	<b>3,862,080</b>
<b>Cost of Goods Sold:</b>															
EcoTons	1,375	2,125	2,625	2,875	4,125	5,125	6,375	7,375	10,625	12,500	12,000	10,500	77,625	\$ 125,250	\$ 174,250
EcoBricks	39	83	105	143	187	216	235	252	290	325	338	365	2,578	3,162	3,931
<b>Total Cost of Goods Sold</b>	<b>1,414</b>	<b>2,208</b>	<b>2,730</b>	<b>3,018</b>	<b>4,312</b>	<b>5,341</b>	<b>6,610</b>	<b>7,627</b>	<b>10,915</b>	<b>12,825</b>	<b>12,338</b>	<b>10,865</b>	<b>80,203</b>	<b>128,412</b>	<b>178,181</b>
<b>Gross Profit:</b>															
EcoTons	26,125	40,375	49,875	54,625	78,375	97,375	121,125	140,125	201,875	237,500	228,000	199,500	1,474,875	2,479,950	3,589,550
EcoBricks	936	1,997	2,528	3,432	4,493	5,179	5,648	6,053	7,800	8,112	8,735	6,187	61,871	75,878	94,349
<b>Total Gross Profit</b>	<b>27,061</b>	<b>42,372</b>	<b>52,403</b>	<b>58,057</b>	<b>82,868</b>	<b>102,554</b>	<b>126,773</b>	<b>146,178</b>	<b>208,833</b>	<b>245,300</b>	<b>236,112</b>	<b>208,235</b>	<b>1,536,746</b>	<b>2,555,828</b>	<b>3,683,899</b>
	95%	95%	95%	95%	95%	95%	95%	95%	95%	95%	95%	95%	95%	95%	95%
<b>Operating Expenses</b>															
Payroll	\$48,958	\$48,958	\$48,958	\$48,958	\$48,958	\$48,958	\$48,958	\$48,958	\$48,959	\$48,959	\$48,959	\$48,959	587,500	605,125	623,279
Payroll taxes and benefits	15,431	15,431	15,431	15,431	15,431	15,431	15,431	15,431	15,431	15,432	15,432	15,432	185,175	190,730	196,452
Lease/ Triple net fees	18,007	18,007	18,007	18,007	18,007	18,007	18,007	18,007	18,007	18,007	18,007	18,007	216,084	222,567	229,244
Interest Expense	4,000	3,946	3,891	3,836	3,780	3,724	3,668	3,611	3,554	3,497	3,439	3,381	44,327	35,888	26,749
Taxes and Licensing	570	892	1,103	1,222	1,744	2,158	2,668	3,076	4,395	5,163	4,969	4,382	32,339	53,685	77,242
Depreciation	1,134	1,134	1,134	1,134	1,134	1,134	1,135	1,135	1,135	1,135	1,135	1,135	13,614	13,614	13,614
Insurance	741	741	741	741	741	741	741	741	741	741	741	741	8,892	9,159	9,434
Office Supplies	230	230	230	230	230	230	230	230	230	230	230	230	2,760	2,843	2,928
Utilities	2,420	2,420	2,420	2,420	2,420	2,420	2,420	2,420	2,420	2,420	2,420	2,420	29,040	29,911	30,809
Advertising	12,895	7,735	7,735	7,735	7,735	7,735	7,735	7,735	7,735	7,735	7,735	7,735	97,980	100,919	103,947
Web design and maintenance	13,700	700	700	700	700	700	700	700	700	700	700	700	21,400	8,652	8,912
Repairs	65	65	65	65	65	65	65	65	65	65	65	65	780	803	828
Professional Fees	14,108	22,024	27,230	30,089	42,998	53,261	65,933	76,084	108,907	127,971	123,102	108,369	800,076	1,281,361	1,778,164
Miscellaneous	210	210	210	210	210	210	210	210	210	210	210	210	2,520	2,596	2,673
<b>Total Operating Expenses</b>	<b>132,469</b>	<b>122,493</b>	<b>127,855</b>	<b>130,778</b>	<b>144,153</b>	<b>164,774</b>	<b>167,901</b>	<b>178,403</b>	<b>212,489</b>	<b>232,265</b>	<b>237,144</b>	<b>211,766</b>	<b>2,042,487</b>	<b>2,557,853</b>	<b>3,104,273</b>
<b>Income/ Loss before tax</b>	<b>(105,408)</b>	<b>(80,121)</b>	<b>(75,452)</b>	<b>(72,721)</b>	<b>(61,285)</b>	<b>(52,220)</b>	<b>(41,128)</b>	<b>(32,225)</b>	<b>(3,656)</b>	<b>13,036</b>	<b>8,968</b>	<b>(3,531)</b>	<b>(505,741)</b>	<b>(2,025)</b>	<b>579,626</b>
<b>Tax Expense</b>	(21,082)	(16,024)	(15,090)	(14,544)	(12,257)	(10,444)	(8,226)	(6,445)	(731)	2,607	1,794	(706)	(101,148)	(405)	115,925
<b>Net Income (Loss)</b>	<b>\$ (84,326)</b>	<b>\$ (64,096)</b>	<b>\$ (60,361)</b>	<b>\$ (58,176)</b>	<b>\$ (49,028)</b>	<b>\$ (41,776)</b>	<b>\$ (32,902)</b>	<b>\$ (25,780)</b>	<b>\$ (2,925)</b>	<b>\$ 10,428</b>	<b>\$ 7,174</b>	<b>\$ (2,825)</b>	<b>\$ (404,593)</b>	<b>\$ (1,620)</b>	<b>\$ 463,701</b>
	-296%	-144%	-109%	-95%	-56%	-39%	-25%	-17%	-1%	4%	3%	-1%	-25%	0%	12%

<sup>26</sup> "How Much Does A Boiler Cost?" *ImproveNet*, CraftJack, [www.improvenet.com/r/costs-and-prices/boiler-installation-cost-estimator](http://www.improvenet.com/r/costs-and-prices/boiler-installation-cost-estimator).

<sup>27</sup> Elite Metal Tools. "Dake 25-Ton Laboratory, 2 Platen Press 44-225." *Elite Metal Tools*, Elite Metal Tools, 5 June 2018, [www.elitemetaltools.com/tool-shop/products/dake-25-ton-laboratory-2-platen-press-44-225?sku=44-225&gclid=EAIaIQobChMI\\_azAmYYPV3wIVA8ZkCh2FWQgbEAQYAiABEGJupPD\\_BwE](http://www.elitemetaltools.com/tool-shop/products/dake-25-ton-laboratory-2-platen-press-44-225?sku=44-225&gclid=EAIaIQobChMI_azAmYYPV3wIVA8ZkCh2FWQgbEAQYAiABEGJupPD_BwE).

## 2. Projected cash flow for the year

EcoGrow Forecasted Statement of Cash Flows For the years ended December 31, 2019, 2020 & 2021														
	2019												Annual	
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	2020	2021
<b>Beginning Cash Balance</b>	\$ -	\$ 618,482	\$ 547,300	\$ 479,797	\$ 414,425	\$ 358,145	\$ 309,061	\$ 268,796	\$ 235,596	\$ 225,194	\$ 228,089	\$ 227,671	\$ 217,196	\$ 106,116
<b>Cash Inflows:</b>														
Owner Funds	200,000													
Loan Proceeds	600,000													
Sales	28,475	44,580	55,133	61,075	87,180	107,895	133,383	153,805	219,748	258,125	248,450	219,100	2,684,240	3,862,080
<b>Total Cash Inflows</b>	<b>828,475</b>	<b>44,580</b>	<b>55,133</b>	<b>61,075</b>	<b>87,180</b>	<b>107,895</b>	<b>133,383</b>	<b>153,805</b>	<b>219,748</b>	<b>258,125</b>	<b>248,450</b>	<b>219,100</b>	<b>2,684,240</b>	<b>3,862,080</b>
<b>Available Cash Balance</b>	<b>828,475</b>	<b>663,062</b>	<b>602,433</b>	<b>540,872</b>	<b>501,605</b>	<b>466,040</b>	<b>442,444</b>	<b>422,601</b>	<b>455,344</b>	<b>483,319</b>	<b>476,539</b>	<b>446,771</b>	<b>2,901,436</b>	<b>3,968,196</b>
<b>Cash Outflows:</b>														
Equipment Purchases	5,080													
Furniture and Fixtures	85,080													
Inventory Purchases	1,414	2,208	2,730	3,018	4,312	5,341	6,610	7,627	10,915	12,825	12,338	10,865	128,412	178,181
Payroll	48,958	48,958	48,958	48,958	48,958	48,958	48,958	48,958	48,959	48,959	48,959	48,959	605,125	623,279
Payroll taxes and benefits	15,431	15,431	15,431	15,431	15,431	15,431	15,431	15,431	15,431	15,432	15,432	15,432	190,730	196,452
Lease/Trip net fees	18,007	18,007	18,007	18,007	18,007	18,007	18,007	18,007	18,007	18,007	18,007	18,007	222,567	229,244
Taxes and Licenses	570	892	1,103	1,222	1,744	2,158	2,668	3,076	4,395	5,163	4,969	4,382	53,685	77,242
Insurance	741	741	741	741	741	741	741	741	741	741	741	741	9,159	9,434
Office Supplies	230	230	230	230	230	230	230	230	230	230	230	230	2,843	2,928
Utilities	2,420	2,420	2,420	2,420	2,420	2,420	2,420	2,420	2,420	2,420	2,420	2,420	29,911	30,809
Advertising	12,895	7,735	7,735	7,735	7,735	7,735	7,735	7,735	7,735	7,735	7,735	7,735	100,919	103,947
Web design and maintenance	13,700	700	700	700	700	700	700	700	700	700	700	700	8,652	8,912
Repairs	65	65	65	65	65	65	65	65	65	65	65	65	803	828
Professional Fees	14,108	22,024	27,230	30,089	42,998	53,261	65,933	76,084	108,907	127,971	123,102	108,369	1,281,361	1,778,164
Miscellaneous	210	210	210	210	210	210	210	210	210	210	210	210	2,596	2,673
Tax Expense	(21,024)	(16,024)	(15,090)	(14,544)	(12,257)	(10,444)	(8,226)	(6,445)	(731)	2,607	1,794	(706)	(405)	115,925
<b>Subtotal</b>	<b>197,827</b>	<b>103,596</b>	<b>110,469</b>	<b>114,281</b>	<b>131,294</b>	<b>144,813</b>	<b>161,482</b>	<b>174,839</b>	<b>217,984</b>	<b>243,065</b>	<b>236,702</b>	<b>217,409</b>	<b>2,636,358</b>	<b>3,358,016</b>
<b>Other Cash Outflows:</b>														
Loan Principal	8,166	8,220	8,275	8,330	8,386	8,442	8,498	8,555	8,612	8,669	8,727	8,785	110,102	119,241
Loan Interest	4,000	3,946	3,891	3,836	3,780	3,724	3,668	3,611	3,554	3,497	3,439	3,381	48,860	42,751
<b>Subtotal</b>	<b>12,166</b>	<b>158,962</b>	<b>161,992</b>											
<b>Total Cash Outflows</b>	<b>209,993</b>	<b>115,762</b>	<b>122,635</b>	<b>126,447</b>	<b>143,460</b>	<b>156,979</b>	<b>173,648</b>	<b>187,005</b>	<b>230,150</b>	<b>255,231</b>	<b>248,868</b>	<b>229,575</b>	<b>2,795,320</b>	<b>3,520,008</b>
<b>Ending Cash Balance</b>	<b>\$ 618,482</b>	<b>\$ 547,300</b>	<b>\$ 479,797</b>	<b>\$ 414,425</b>	<b>\$ 358,145</b>	<b>\$ 309,061</b>	<b>\$ 268,796</b>	<b>\$ 235,596</b>	<b>\$ 225,194</b>	<b>\$ 228,089</b>	<b>\$ 227,671</b>	<b>\$ 217,196</b>	<b>\$ 106,116</b>	<b>\$ 448,188</b>

## 3. Projected cash flow by month for the first year's operation

The cash flow statement included above (Section 9, A, 2) shows EcoGrow's cash flow for the first three years of business as well as an in-depth look at the monthly cash flow for 2019, our first year of operations.

## 4. Projected balance sheet, end of first year

EcoGrow Balance Sheet As of 12/31/2016	
<b>Assets</b>	<b>Liabilities</b>
<b>Current Assets:</b>	<b>Current Liabilities:</b>
Cash	217,196
Accounts Receivable	103,750
Inventory	10,865
Other Current Assets	326
<b>Total Current Assets</b>	<b>332,137</b>
<b>Fixed Assets</b>	<b>90,160</b>
Less: Accumulated Depreciation	(13,614)
<b>Net Fixed Assets</b>	<b>76,546</b>
	<b>Long Term Loans</b>
	498,336
	<b>Total Liabilities</b>
	<b>613,276</b>
	<b>Equity:</b>
	Share Capital
	200,000
	Retained Earnings
	(404,593)
	<b>Total Equity</b>
	<b>(204,593)</b>
<b>Total Assets</b>	<b>\$ 408,683</b>
<b>Total Liabilities and Equity</b>	<b>\$ 408,683</b>

## 5. Projected three-year plan

See Section XIV, Appendix B for our detailed three-year plan, summarizing key financial data.

## 6. A brief narrative description of the planned growth of the proposed business, including financial resources and needs

As EcoGrow achieves its financial needs, it will begin to see several financial trends. We anticipate an increase in net profit from **-25% (-\$404,593) in 2019 to 12% (\$463,701) to 2021**. This stable growth is symbolic of the agricultural industry's growing demand for ways to cut costs and curb its negative environmental impact, with EcoGrow meeting that demand. In our first year of operations, EcoGrow is forecasted to sell 3,105 EcoTons, mostly from our small farms customer segment, and 19,830 EcoBrick, primarily from our household gardener segment. As EcoTons make up a majority of our sales, at 96%, we expect it to continue to do so at 97% of our total sales by 2021. Our EcoBricks, while comprising 2% of 2021 sales, will still contribute \$98,280 to the business's revenue, a significant number. Both products will have a gross margin of 95%, meaning EcoGrow's gross profit margin for 2021 will be 95%.

In order to fulfill its planned profit objectives, EcoGrow will follow the promotion plan described in Section VIII, A. The plan represents our initial focus on gaining a foothold within our industry with small local farms, then pursuing larger

customers. We expect our 2019 sales to consist mainly of small local farms due to their more pressing need to cut costs and willingness to interact with salesmen one-on-one. Our targeted online advertising will gradually build up a solid base of household gardeners that buys the EcoBrick, while our customer networking strategy will attract bigger, more profitable large commercial farms. **While our operating expenses and costs of goods sold will maintain a steady growth over the first three years, EcoGrow will need an initial investment of capital to meet its needs.** This initial investment will include our own funds, as well as external finance. This capital will help EcoGrow maintain financial stability as we begin operations.

## B. Projected plan to meet capital needs

### 1. Personal and internal sources

As the owners of this business, we will collectively invest \$200,000 into the business, with both of us contributing \$100,000 each. These funds will consist solely of personal assets.

### 2. Earnings, short-term and long-term borrowing, long-term equity

EcoGrow will use two main sources of finance for its first three years of operations. The first will be internal owners' funds, due to their lack of external liabilities and accessibility. The second source will be an external bank loan. A bank loan presented itself as the most cost-effective and manageable of the possible external sources of finance. With a loan, we are able to maintain full control over our business, rather than having to share it with investors; we also gain better protection over our personal assets. To effectively repay the loan, it will need constant auditing and analysis as EcoGrow operates to best allocate business resources.

### 3. External sources

From our previous financial analysis, we are requesting a \$600,000 bank loan to be repaid over a 5-year period with 8% interest, beginning in January 2019. This will be EcoGrow's main source of capital. The comprehensive promotional plan paired with data-driven financial forecasts makes us confident that we will be able to repay the loan in a timely manner.

### 4. Repayment plans

Despite significant investments in the business, we will not be pursuing a repayment plan for ourselves. We will instead use our yearly salaries to cover these investments. As the owners, we would rather EcoGrow's finances go towards more pressing business-oriented needs. We value our company's success and profitability as this in the long-run will yield higher dividends for us than immediate reimbursements. We hope to instill this company-first belief system into our organizational structure at all levels of the operation.

### 5. Plan to repay borrowed funds or provide return on investment to equity funds

EcoGrow will pay its loan back timely and consistently with monthly payments of \$12,166, lasting from January 2019 to January 2023. Our repayment will include \$129,950 in total interest paid over the 5-year span, with an immediate 3-year return on investment of \$108,757 for you, the bank. The amount of principal paid annually will increase from \$101,665 in 2019 to \$119,241 in 2021. The following tables outline our amortization and payment schedules:

EcoGrow – Amortization Schedule				
Loan Amount	Interest Rate	Term	Start Date	
\$600,000	8%	5 Years	Jan 2019	
Summary of Payments and Interest				
Monthly Payment			\$12,166	
Total Interest Paid over Life of Loan			\$129,950	
Interest Paid in 2019			\$44,326	
Interest Paid in 2020			\$35,888	
Interest Paid in 2021			\$26,749	
EcoGrow Payment Schedule				
Year	Annual Principal Paid	Annual Interest Paid	Total Interest Paid	Loan Balance
Begin	\$0	\$0	\$0	\$600,000
2019	\$101,664	\$44,326	\$44,326	\$498,336
2020	\$110,102	\$35,888	\$80,214	\$388,234
2021	\$119,241	\$26,749	\$106,963	\$268,993
2022	\$129,137	\$16,853	\$123,816	\$139,856
2023	\$139,856	\$6,134	\$129,950	\$0

By contributing relatively low monthly payments of \$12,166 to our loan repayment schedule, EcoGrow will be able to remain financially stable while maintaining healthy cash flow. Furthermore, our projected sales forecasts reflect the EcoGrow's reliability in repaying the loan.

## X. KEY METRICS

To ensure that EcoGrow is attaining its financial goals, we will maintain the following series of metrics to assess our operations, finances, and industry position. These ratios and percentages will be based off our monthly financial statements to have a constant and consistent framework for evaluation and action.

EcoGrow – Financial Metrics				
Metrics	Purpose	Calculation	Benchmark	How to Improve
<b>Profitability (Income Statement)</b>				
Revenue	Monitor market acceptance and market share	SP x quantity sold	2021: \$3,862,080	<ul style="list-style-type: none"> <li>Evaluate customer acquisitions strategies</li> </ul>
Gross Profit Margin (%)	Measure profit from sales and ability to cover product expenses	(Rev - COGS) / Rev	2021: 95% Industry: 32%	<ul style="list-style-type: none"> <li>Increase sales price/quantity sold</li> <li>Decrease COGS</li> </ul>
Net Profit	Measure overall performance including operating expenses	GP - expenses - interest - tax	2021: \$463,701	<ul style="list-style-type: none"> <li>Increase gross profit</li> <li>Decrease expenses</li> </ul>
<b>Efficiency (Balance Sheet)</b>				
Return on Capital Employed	Measure efficiency of capital invested in business	Net profit / (LT Debt + Equity)	Industry: 25%	<ul style="list-style-type: none"> <li>Increase profitability</li> <li>Pay off debt</li> </ul>
Inventory Turns	Measure how fast inventory is being sold	COGS / Average stock	Industry: 5.5 days	<ul style="list-style-type: none"> <li>Increase sales frequency</li> <li>Carry less inventory</li> </ul>
<b>Liquidity</b>				
Working Capital Ratio	Indicate if there are enough short-term assets	Current Assets / Current Liabilities	2:1	<ul style="list-style-type: none"> <li>Increase amount of cash</li> <li>Pay off short-term loans</li> </ul>
Acid Ratio	Measure ability to use quick assets to pay current liabilities immediately	(CA - Stock) / CL	1:1	<ul style="list-style-type: none"> <li>Increase amount of cash</li> <li>Pay of short-term loans</li> </ul>
Net Cash Flow	Difference between cash inflows and outflows	Cash in - cash out	2021: \$342,072	<ul style="list-style-type: none"> <li>Increase revenue</li> <li>Decrease expenses</li> </ul>
<b>EcoGrow – Operating Metrics</b>				
Metrics	Purpose	Calculation	Benchmark	How to Improve
<b>Customer</b>				
Lifetime Value	Projects lifetime revenue of a customer	See Section VII, B	Primary segment: \$13,078,438	<ul style="list-style-type: none"> <li>Increase repeated transactions</li> <li>Augment brand loyalty</li> </ul>
Acquisition Cost	Indicate expected cost of acquiring one customer	See Section VIII, A	\$4,500	<ul style="list-style-type: none"> <li>Increase targeted advertising</li> <li>Decrease advertising costs</li> </ul>
Satisfaction Score	Reveal satisfaction with product	Sated Customers / Starting Customers	>90%	<ul style="list-style-type: none"> <li>Improve customer service</li> <li>Improve product quality</li> </ul>
<b>Employees</b>				
Satisfaction Score	Reveal satisfaction with working environment	Sated Employees / Starting Employees	>90%	<ul style="list-style-type: none"> <li>Increase benefits</li> <li>Prioritize employee satisfaction</li> </ul>
Staff Cost Ratio	Measure cost of staff relative to sales	(PR + PR Tax) / Sales	2021: 21% Industry: 14%	<ul style="list-style-type: none"> <li>Increase sales</li> <li>Decrease salaries</li> </ul>
<b>EcoGrow – Industry Specific Metrics</b>				
Metrics	Purpose	Calculation	Benchmark	How to Improve
Fertilizer Productivity Rating	Measure productivity of fertilizer using crop yield	(lbs of fertilizer used) / (lbs of crop yielded) X 100	Industry: 55/100 EcoGrow: 65/100	<ul style="list-style-type: none"> <li>Improve fertilizer quality</li> <li>Adjust amount of fertilizer used</li> </ul>
Fertilizer-Emissions Ratio	Compare amount of fertilizer produced to amount of emissions released	(lbs of fertilizer produced) / (lbs of carbon dioxide released) X 100	Industry: 50% EcoGrow: 10%	<ul style="list-style-type: none"> <li>Burn less natural gas</li> <li>Buy efficient machinery</li> </ul>

## XI. COMPETITIVE ADVANTAGE

EcoGrow distinguishes itself from the rest of the fertilizer market with its unique product mix and its nuanced approach to solving the age-old problem of growing food efficiently. In this way, EcoGrow follows the precepts of the **“Disruptive Innovation” business model**, which creates a new market—fertilizer from hair—and displaces an existing market; in this case, the conventional fertilizer market. EcoGrow, unlike any other fertilizer manufacturer, takes waste material from the grooming industry and uses it to create a needed product for the agricultural industry. Since hair is merely thrown away, it costs close to nothing, meaning the costs of our raw material is minimal. This, in the end, allows EcoGrow to enter the fertilizer market with an extremely low-priced, organic, environmentally-friendly, and nutrient-rich fertilizer. EcoGrow is the first to take advantage of this market opportunity, meaning a major disruption will occur within the fertilizer



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## XIV. APPENDIX

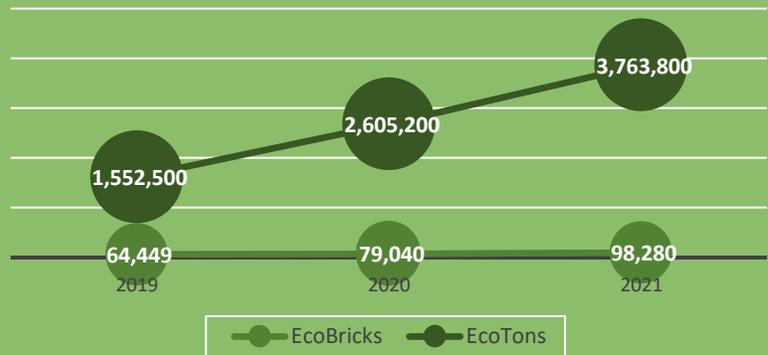
### Appendix A: SWOT Analysis with PRIMOF AND PESTLE elements

SWOT Analysis for EcoGrow Operations	
Strengths	Weaknesses
<b>People</b> -Streamlined organization structure promotes efficiency -Driven by company-first mindset	<b>People</b> -Sales team may get bogged down in fall due to influx in sales
<b>Resources</b> -Use of hair waste as raw material keeps COGS low -Use of waste material puts environmental focus at forefront	<b>Resources</b> -Hair is not generated at a constant rate
<b>Innovation and Ideas</b> -Processing of hair driven by science-based research -Product built with customers in mind	<b>Innovation and Ideas</b> -Still forced to use minimal natural gas in boiling process – will convert to biofuel later on
<b>Marketing</b> -Use of targeted online media cuts costs -Customer networking improves brand loyalty and customer service	<b>Marketing</b> -Networking is less time-efficient -General public knowledge of EcoGrow will initially be low
<b>Operations</b> -Outsourced distribution cuts costs -Keeping offices in same building as production cuts costs	<b>Operations</b> -Less control over distribution -Offices may hear a lot of noise, creating distractions for employees
<b>Finance</b> -Offers much lower prices than competition -Outsourced distribution increases net profit	<b>Finance</b> -Small second-year does not allow for extensive expansion
Opportunities	Threats
<b>Political</b> -CA and NY governments support pro-environment businesses, benefitting EcoGrow’s operations	<b>Political</b> -Policies affecting organic waste may affect EcoGrow’s ability to attain hair
<b>Economic</b> -Based in two economically stable states -Pro-environment may give tax incentives for environmental firms	<b>Economic</b> -High tax rates in CA and NY may take away from EcoGrow profit -High minimum wages may restrict new hiring
<b>Social</b> -Pro-environment regions of operations ensure public support for EcoGrow’s products -Social media initiatives increase outreach	<b>Social</b> -People that question the ethics of using people’s hair will initially dislike EcoGrow—public transparency initiatives later on can address this
<b>Technological</b> -Price of high-tech machinery used in processing is relatively cheap	<b>Technological</b> -New type of process—more efficient processing solutions may exist
<b>Legal</b> -EcoGrow as an LLC protects owners from losing personal assets	<b>Legal</b> -Large fertilizer companies may sue EcoGrow for price skimming
<b>Environmental</b> -Decrease in eutrophication will garner support from environmental lobby	<b>Environmental</b> -Possible unknown negative factors of hair in soil may hurt EcoGrow

# EcoGrow Three Year Plan

EcoGrow expects to see significant growth in our profitability over the first three years. With relatively low costs, a unique product, and lack of an environmental competitor, EcoGrow will emerge as the premier eco-friendly fertilizer company for farms and households.

## Sales Revenue by Product



## 2021 Income Statement Percentages



- COGS (5%)
- Operating Expenses (80%)
- Tax Expenses (3%)
- Net Profit (12%)

## Income Statement Forecasts

