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# **Is it Feasible to Develop an Agribusiness Selling Precision Farming Services to Farmers?**

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## **Is it Feasible to Develop an Agribusiness Selling Precision Farming Services to Farmers?**

Due to recent innovations with the Global Positioning System and its implementation into agriculture, farmers, crop consultants, agronomists, and agricultural engineers, have an increasing interest in the role of precision farming to benefit different sectors of the agricultural community. Farmers can benefit from precision farming by increasing farm profits. These increased returns can be sought through decreased input expenses, increased output, and in some cases both. Crop consultants and agronomists see the benefits through income generated by scouting fields for pests, diseases, and weed management and recommendations for different levels of inputs including chemicals and fertilizers. Finally, agricultural engineers reap the benefits of precision farming through design and production of equipment used in the applications of precision farming, most notably, variable rate technology and global positioning systems (GPS) guidance systems.

Given the increased promotion from “true believers” and skepticism from concerned parties, many questions have been raised about the different facets of precision farming. Seeking an answer to those questions, much research has been completed on the production side of precision farming, with a deep focus on increasing farm profits. Most of this research has shown that precision farming, more specifically site-specific management (SSM), can increase farm profits. With the peeking interest and risk-taking characteristics of many farmers, a market for precision farming services must certainly exist. However, little research has been completed with respect to the business side of precision farming. Thus, the purpose of this paper is to determine if a market for these

services exist and, if so, is it strong enough to support a firm selling precision farming services to farmers.

The focus here is on the business side of precision farming through the development of an agribusiness that sells precision farming services to farmers, the feasibility of operating such a business, and the revenue that can be generated by a business of this nature. The steps that must be taken in considering the feasibility of operating a precision farming firm are to first determine the primary business functions of the firm. Next, it must be determined if there is a sufficient market available to justify operating a precision farming firm. Are there many farmers who would consider utilizing the services offered by the firm? If a market exists, then the business details, including startup capital, employees, equipment, and location must be determined. At this point projections of earnings can begin to be compiled to predict future revenue streams. Finally, after the above steps are completed, decision factors must be analyzed to determine the feasibility of operating a precision farming firm and a decision can be made with respect to the feasibility of startup and operation of a precision farming firm.

### **Primary Business Functions**

Given the uncertainty in demand for precision farming services it would be in the best interest of a potential business owner to enter into this market with the smallest capital outlay possible, but still be able to perform the necessary services. With this in mind, the services that might be offered include soil grid sampling and field mapping, database construction, prescription recommendations, and equipment sales, installation and maintenance. Soil grid sampling and field mapping will consist of mapping the fields into two and one-half acre grids and then collecting four soil samples from each

grid within a field. The samples will then be sent to a laboratory to be tested for phosphorous, potassium and pH levels and the results from the test are considered to be valid for 3 years. Therefore, new soil samples will be taken every three years. Database construction includes recording the results from the soil test and yield monitor data into site-specific field maps. The maps include each grids specific level of pH, phosphorous, potassium and yield throughout the field, which is used to make the prescription recommendations for variable rate applications. The prescription recommendations are calculated based on the levels of nutrients in the soil and yield history of the soil and are used to recommend different combinations of fertilizers, seed, and chemicals according to the location within the field. Precision farming equipment will also be sold, installed, and maintained. Equipment to be sold by the firm includes GPS guidance systems, yield monitor equipment, etc. and installation is included in the purchase price. Maintenance of the equipment is included in the price that farmers pay for the soil testing, database construction, and prescription recommendations, which is an annual contract fee. To perform these services, firms should charge the farmer between \$7.00 and \$8.00 per acre, for this paper \$7.50 per acre was the chosen service fee. Given the law of supply and demand, it is obvious that more farmers would choose to utilize the services at \$7.50 per acre than \$8.00 per acre.

### **Establishing a Market**

According to Morris and Blackmore, farmers who grow more than 250 acres of crops are more likely to choose to utilize precision agriculture because economies of scale play a great role in justifying the cost associated with precision agriculture. Gandonou, Stombaugh, Dillon, and Shearer note that a break-even analysis has shown

that farmers wishing to purchase the appropriate equipment and perform the task of gathering information for field mapping and grid soil sampling would need to operate at the level of 4,981 acres. With this information it is obvious that the market for custom-hire precision farming services of the nature mentioned above exists for farmers between the size of 250 acres and 4,981 acres. Swinton and Lowenberg-DeBoer determined that SSM was profitable on corn some of the time, using this information and data provided by the Kentucky Agricultural Statistics Service it is found that the greatest need for precision farming in Kentucky is in the Purchase (Western Region) and Mid-Western regions of Kentucky. These two regions, which make up roughly one-third of Kentucky's land area, produce nearly 80% of the states corn level annually. According to the 1997 census the 26 counties that comprise these two regions of Kentucky hold well over 1.5 million acres of harvested cropland that is farmed by farmers with more than 250 acres of crops. Given these large numbers it is expected that a precision farming firm could exist in this area of Kentucky given the appropriate sales and marketing techniques.

### **Business Details**

Bill Reinert, part owner of Precision Farming Enterprises located in Davis, California suggested that a precision farming firm that would be offering the services of soil grid sampling and field mapping, database construction, prescription recommendations, and equipment sales, installation and maintenance would require 2 salaried employees with knowledge of GPS, GIS, and precision farming. In the business model used for this paper these employees would be acting as manager and assistant manager of the firm earning \$43,000 and \$37,000 a year, respectively. In addition to the manager and assistant manager 2 salaried assistants and 2 part-time seasonal employees

would be needed. The 2 salaried assistants would act as salespeople and data collectors and the seasonal employees would assist the 2 assistants in data collection. The 2 salaried assistants earn \$30,000 annually and the 2 seasonal employees earn \$7.00 per hour. These salaries are assumptions based on interviews with owners and employees of different precision farming firms across the United States.

For startup, Mr. Reinert recommended 2 computers, 1 desktop and 1 laptop, in order to build the databases and map fields. A laptop could be purchased for approximately \$900.00 (BestBuy.com) and a desktop could be purchased for approximately \$600.00. AgView 2.0 is the recommended software to construct the maps and databases, this software cost about \$2,495.00. Roger Boyd of Ag One Co-op recommended using a Kawasaki Mule as a means of transportation within the fields to map the fields and gather the soil samples. According to a local Kawasaki dealer a Kawasaki Mule of the type that Mr. Boyd recommended would cost \$9,999.00. A Concord soil sampler would cost \$3,995.00 and a GPS receiver would cost roughly \$2,500.00, both of which are to be mounted on the Kawasaki Mule. A PDA, needed to record the information provided by the GPS receiver, could be purchased for \$500.00. The largest capital investment is the land and building where the office will be located. These two investments are projected to cost approximately \$52,500 for a 2-acre parcel and the construction expenses for the office would be about \$65,000. Some additional items, such as desks and chairs, need to be purchased in order to facilitate staff and customers. These items are expected to cost \$798.00 and \$440.00 respectively. The total startup capital needed to open this precision farming firm is projected to be roughly \$139,725.00.

In choosing a location for this precision farming firm it is important that the office be located in a central location accessible to all of the counties within the Purchase and Mid-Western regions. Given Caldwell County, Kentucky's proximity to all of the counties in these two regions it is the most appealing location. Christian and Hopkins County, Kentucky border this location and they are two of the biggest corn producers in the state and they also have a great deal of farmers that farm more than 250 acres.

### **Generating Revenue**

A business model was constructed using Microsoft Excel to predict a revenue stream for this precision farming firm. A time period of five years was considered because of the capital investment that is required to start the firm. Chris Petty of Precision Management & Consulting indicated that a business of this nature could expect to operate unprofitably for 2 to 3 years.

Most months would have between 24 to 27 working days. However, it is not feasible for a precision farming to operate full scale during the months between April and August. During the month of April spring planting moves into full gear and for this reason it is unreasonable to assume that field mapping and soil grid sampling can be completed when crops are in the soil, thus it is assumed that in the month of April there would be 12 days in the month when services could be performed. Similarly, during the months of May, June, and July when crops are in the ground services can not be performed at all. However, in August when harvest begins, the firm could resume services as the fields are harvested and yield monitor data is recorded, it is reasonable to assume that services could be performed 13 days in the month of August. The rest of the months are considered to be in full operation on every working day.



The business model is setup is in the form of a cash-flow statement. The model consist of operating revenue, operating expenses, depreciation expenses, operating profit (loss) pre-tax, operating profit (loss) post-tax, and net cash flow (table 1.).

Under operating revenue there is a cell for average acres serviced per month, average acres serviced per day, average charge per acre, and from these three cells total monthly service sales, cost of goods sold, and cost of goods sold as a percentage are calculated. To determine the average number of acres serviced per day, the number of acres serviced per year is divided by the total number of days that services are performed that year. Then that number is multiplied by the number of days services are performed for that particular month to determine the average number of acres serviced that month. To determine total monthly revenue generated by services simply multiply the average acres serviced per month by the charge per acre, which was determined to be \$7.50 per acre.

According to Kansas State University's soil testing laboratory there is a charge of \$6.00 per soil sample. For every 2.5 acre grid four soil samples are taken. However, these samples are combined into one sample to be tested, therefore for every 2.5-acre grid there is a \$6.00 charge for soil testing that the firm must pay. Because soil samples are good for 3 years this cost is spread out over that period. Thus the cost of goods sold is \$2.00 per grid. By determining the number of acres serviced it is possible to determine the number of soil samples that are tested. This is calculated by dividing the number of acres serviced per month by 2.5 (the size of the grid). This number represents the number of soil tests that must be completed at the price of \$2.00 per test. By multiplying these two numbers the cost of goods sold is then present. After finding cost of goods sold,

simply divide that number into total monthly revenue generated by services and cost of goods sold as a percentage is then calculated.

Monthly equipment sales are assumed at \$3,000.00 per month and the cost of goods sold for equipment is 60%. Obviously, if this is the case then \$1,200.00 revenue is generated from equipment sales. To determine total monthly operating revenue add total monthly service sales and total monthly equipment sales together and then deduct cost of goods sold for each of these areas.

Operating expenses is composed of variable expenses that are necessary for the day-to-day operation of the firm. These expenses include the wages of the employees, which were explained earlier, vehicle lease expenses for 2 trucks at \$600.00 per month, vehicle maintenance & operation which is assumed to be 1% of total monthly sales, and ATV maintenance and operation assumed to be 0.35% of total monthly sales. Some of the operating expenses are general utilities that range in a set monthly price from \$25.00 to \$75.00, including electricity, water, telephone, and Internet services. Subscription to data transmission network (DTN) is needed for up to date weather reports. This weather service is \$39.00 a month when an annual contract is signed. The projected cost of insurance is \$800.00 a month and includes insurance for full time employees, for liability purposes, and for property. Each full time employee should be provided with a cellular telephone, thus 4 cellular telephones at \$70.00 a month totals \$280.00 a month. The building and land payment is the biggest operating expense. Total capital borrowed for land and building purposes totaled \$117,500.00 and is considered to be borrowed at 5.5% for a fixed 15-year term.

The depreciation expense column is made up of the items that were listed under business details. To determine depreciation for these items useful life and expected salvage value were designated, all useful life periods and salvage values are assumptions. The straight-line depreciation method was used in determining monthly and annual depreciation expenses. Computers have a useful life of 3 years with a salvage value of \$350.00. To determine monthly depreciation subtract the salvage value from \$1,500.00, the original purchase price, then divided the result by 3. This is the calculated yearly depreciation, to determine the monthly depreciation expense simply divide this number by 12. This same method is applied to all of the items in the depreciation expenses category. The AgView software has a useful life of 10 years and a salvage value of zero. The chairs for the office are expected to last for 6 years with an expected salvage value of \$20.00. The Kawasaki Mule should be suitable for 7 years and will have a salvage value of \$2,000.00. The GPS, PDA, and Concord soil sampler all have salvage values of zero, however their useful lives are 4, 1, and 5 years respectively. The building is expected to be in good condition for 30 years and have a salvage value of \$5,000.00. The land is not listed under depreciation expenses because it is expected to increase in value over time.

After determining operating revenue, operating expenses, and depreciation expenses the operating profit (loss) pre-tax can be found. This is found by deducting total operating expenses and total depreciation expenses from total operating revenue. To determine the amount of taxes that are paid annually, the total annual operating profit is multiplied by a set tax rate of 40%, this amount is then averaged out over the year. The IF function is used to identify years where a loss would occur, in this case there is no tax for that year. After determining the amount of taxes to be paid the operating profit (loss)

post-tax can be found by subtracting the taxes from the operating profit (loss) pre-tax. Factoring in depreciation expenses determines the net cash flow, determined on a monthly and yearly level.

### **Business Model & Decision Factors**

As indicated earlier, the business model was setup for five years given the substantial capital outlay. Based on assumptions and conversations with people in this industry the acres serviced per year rise from 20,000 acres in the first year of business to 55,000 acres in the fifth year of business (tables 1 – 5). The cash-flow statements from these 5 years are used to determine the decision factors including payback, net present value, benefit cost ratio, and the internal rate of return.

The payback period is the amount of time that it takes for a firm to recoup its initial capital outlay. Given the assumed revenue stream and acres serviced per year, it is determined that the payback period for a firm of this nature would be 3 years (table 6.). This is found by dividing the net investment by the average annual net cash flow. Three years is a reasonable amount of time to recoup an investment of \$139,725.00.

In order to determine the net present value, recall that the cost of capital is 5.5%. This is used in calculating the discounted net cash flow for each individual year (table 6.), and the formula that is used is  $NCF \text{ of } n \text{ year} / (1+0.055)^{n^{\text{th}} \text{ year}}$ . After discounted net cash flows are found for the five years of operation, they are then summed to find the net present value. In this case the net present value after five years of operation was \$37,971.29. Accordingly, because the net present value is above zero, this is a worthwhile business venture.

The benefit cost ratio, also known as the profitability index, is found by adding the discounted net cash flows for the five years and then dividing by the net investment of \$139,725.00. This provides the measure of dollar benefit per dollar of cost and in this case the benefit cost ratio is 1.27. The decision factor in this case is to go ahead with the project if the benefit cost ratio is greater than 1.

The last measure used to determine the feasibility of this project is the internal rate of return (IRR) and the IRR is what interest rate would be required to make the net present value equivalent to zero. The difference between the internal rate of return and the other three measures is that there is no specific formula to find the internal rate of return. Rather, it is a process of trial and error in determining what interest rate capital would have to be borrowed in order to make the net present value equal to the net investment. However, Microsoft Excel has a function that automatically figures the internal rate of return, this function is found under the insert tab. After clicking on insert go to function, then financial, then IRR. After clicking on IRR, highlight the cells in which the internal rate of return is to be found. This provides the IRR without having to use the trial and error process. For this precision farming firm the IRR was found to be 11%. Since the cost of capital is assumed to be 5.5% and the internal rate of return is 11%, this is a project that should be undertaken.

### **Conclusion**

The global positioning system has introduced a new approach in precision agriculture in the last decade. Farmers, as always, have been skeptical about the adoption of precision farming, specifically site-specific management. However, with continued research and beneficial results, a positive sign exist for the increased level of adoption of

precision farming, thus introducing a greater market for custom-hire precision farming firms given the appropriate marketing and promotion strategies.

The high levels of corn production and acreage in the Purchase and Mid-western regions of Kentucky indicate a potential market suitable for the services offered by a precision farming firm. A firm centrally located in these regions would be likely to survive.

In constructing a business model of projected revenue for 5 years the results indicate that a precision farming firm could operate successfully. With a payback period of 3 years, a net present value of \$37,971, a benefit cost ratio of 1.27, and an internal rate of return of 11%, this business venture seems to be highly feasible and a great opportunity for someone interested in this field of agriculture.

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**Table 1. Year 1 Monthly Cash-flow Analysis**

		January	February	March	April	May	June	July	August	September	October	November	December	Totals/Averages	# of Acres Serviced/Year
	Number of Days Open	27	24	27	25	27	26	26	27	25	27	25	25	311	20000
	Number of Days Services Performed	27	24	27	12	0	0	0	13	25	27	25	25	205	
<b>Operating Revenue</b>	Average Acres Serviced Per Month	2634	2341	2634	1171	0	0	0	1268	2439	2634	2439	2439	1667	
	Average Acres Serviced Per Day	98	98	98	98	0	0	0	98	98	98	98	98	98	
	Average Charge Per Acre	\$7.50	\$7.50	\$7.50	\$7.50	\$7.50	\$7.50	\$7.50	\$7.50	\$7.50	\$7.50	\$7.50	\$7.50	\$7.50	
	Total Monthly Service Sales	\$19,756.10	\$17,560.98	\$19,756.10	\$8,780.49	\$0.00	\$0.00	\$0.00	\$9,512.20	\$18,292.68	\$19,756.10	\$18,292.68	\$18,292.68	\$150,000.00	
	Cost of Goods Sold	\$2,107.32	\$1,873.17	\$2,107.32	\$936.59	\$0.00	\$0.00	\$0.00	\$1,014.63	\$1,951.22	\$2,107.32	\$1,951.22	\$1,951.22	\$16,000.00	
	Cost of Goods Sold as %	10.67%	10.67%	10.67%	10.67%	0.00%	0.00%	0.00%	10.67%	10.67%	10.67%	10.67%	10.67%	10.67%	
	Total Monthly Equipment Sales	\$3,000.00	\$3,000.00	\$3,000.00	\$3,000.00	\$3,000.00	\$3,000.00	\$3,000.00	\$3,000.00	\$3,000.00	\$3,000.00	\$3,000.00	\$3,000.00	\$36,000.00	
	Cost of Goods Sold	\$1,800.00	\$1,800.00	\$1,800.00	\$1,800.00	\$1,800.00	\$1,800.00	\$1,800.00	\$1,800.00	\$1,800.00	\$1,800.00	\$1,800.00	\$1,800.00	\$21,600.00	
	Cost of Goods Sold as %	60%	60%	60%	60%	60%	60%	60%	60%	60%	60%	60%	60%	60%	
	<b>Total Operating Revenue</b>	\$18,848.78	\$16,887.80	\$18,848.78	\$9,043.90	\$1,200.00	\$1,200.00	\$1,200.00	\$9,697.56	\$17,541.46	\$18,848.78	\$17,541.46	\$17,541.46	\$148,400.00	
<b>Operating Expenses</b>	Wages (Salary Experienced Emp.)	\$6,666.67	\$6,666.67	\$6,666.67	\$6,666.67	\$6,666.67	\$6,666.67	\$6,666.67	\$6,666.67	\$6,666.67	\$6,666.67	\$6,666.67	\$6,666.67	\$80,000.00	
	Wages (Salary Assistant Emp.)	\$5,000.00	\$5,000.00	\$5,000.00	\$5,000.00	\$5,000.00	\$5,000.00	\$5,000.00	\$5,000.00	\$5,000.00	\$5,000.00	\$5,000.00	\$5,000.00	\$60,000.00	
	Wages (2 Emp. Hourly at \$7.00/hr.)	\$983.41	\$874.15	\$983.41	\$437.07	\$0.00	\$0.00	\$0.00	\$473.50	\$910.57	\$983.41	\$910.57	\$910.57	\$7,466.67	
	Vehicle Lease Payment (2 at \$300/mo.)	\$600.00	\$600.00	\$600.00	\$600.00	\$600.00	\$600.00	\$600.00	\$600.00	\$600.00	\$600.00	\$600.00	\$600.00	\$7,200.00	
	Vehicle Maintenance & Operation	1.5%	\$296.34	\$263.41	\$296.34	\$131.71	\$200.00	\$200.00	\$200.00	\$142.68	\$274.39	\$296.34	\$274.39	\$2,850.00	
	ATV Maintenance & Operation	0.35%	\$69.15	\$61.46	\$69.15	\$30.73	\$0.00	\$0.00	\$33.29	\$64.02	\$69.15	\$64.02	\$64.02	\$525.00	
	Office Supplies	1%	\$197.56	\$175.61	\$197.56	\$87.80	\$100.00	\$100.00	\$100.00	\$95.12	\$182.93	\$197.56	\$182.93	\$1,800.00	
	Electricity	\$35.00	\$35.00	\$35.00	\$35.00	\$35.00	\$35.00	\$35.00	\$35.00	\$35.00	\$35.00	\$35.00	\$35.00	\$420.00	
	Water	\$25.00	\$25.00	\$25.00	\$25.00	\$25.00	\$25.00	\$25.00	\$25.00	\$25.00	\$25.00	\$25.00	\$25.00	\$300.00	
	Telephone	\$60.00	\$60.00	\$60.00	\$60.00	\$60.00	\$60.00	\$60.00	\$60.00	\$60.00	\$60.00	\$60.00	\$60.00	\$720.00	
	Broadband Internet	\$75.00	\$75.00	\$75.00	\$75.00	\$75.00	\$75.00	\$75.00	\$75.00	\$75.00	\$75.00	\$75.00	\$75.00	\$900.00	
	DTN	\$39.00	\$39.00	\$39.00	\$39.00	\$39.00	\$39.00	\$39.00	\$39.00	\$39.00	\$39.00	\$39.00	\$39.00	\$468.00	
	Insurance	\$800.00	\$800.00	\$800.00	\$800.00	\$800.00	\$800.00	\$800.00	\$800.00	\$800.00	\$800.00	\$800.00	\$800.00	\$9,600.00	
	Cellular Phones	4	\$280.00	\$280.00	\$280.00	\$280.00	\$280.00	\$280.00	\$280.00	\$280.00	\$280.00	\$280.00	\$280.00	\$3,360.00	
	Building & Land Payment	\$929.00	\$929.00	\$929.00	\$929.00	\$929.00	\$929.00	\$929.00	\$929.00	\$929.00	\$929.00	\$929.00	\$929.00	\$11,148.00	
	<b>Total Operating Expenses</b>	\$16,056.13	\$15,884.30	\$16,056.13	\$15,196.98	\$14,809.67	\$14,809.67	\$14,809.67	\$15,254.26	\$15,941.58	\$16,056.13	\$15,941.58	\$15,941.58	\$186,757.67	
<b>Depreciation Expenses</b>	Computers	\$1,500.00	\$31.94	\$31.94	\$31.94	\$31.94	\$31.94	\$31.94	\$31.94	\$31.94	\$31.94	\$31.94	\$31.94	\$383.33	
	AgView Software	\$2,495.00	\$20.79	\$20.79	\$20.79	\$20.79	\$20.79	\$20.79	\$20.79	\$20.79	\$20.79	\$20.79	\$20.79	\$249.50	
	Desks	\$798.00	\$5.82	\$5.82	\$5.82	\$5.82	\$5.82	\$5.82	\$5.82	\$5.82	\$5.82	\$5.82	\$5.82	\$69.80	
	Desk Chairs	\$240.00	\$3.06	\$3.06	\$3.06	\$3.06	\$3.06	\$3.06	\$3.06	\$3.06	\$3.06	\$3.06	\$3.06	\$36.67	
	Office Chairs	\$200.00	\$2.50	\$2.50	\$2.50	\$2.50	\$2.50	\$2.50	\$2.50	\$2.50	\$2.50	\$2.50	\$2.50	\$30.00	
	Kawasaki Mule	\$9,999.00	\$95.23	\$95.23	\$95.23	\$95.23	\$95.23	\$95.23	\$95.23	\$95.23	\$95.23	\$95.23	\$95.23	\$1,142.71	
	GPS	\$2,500.00	\$52.08	\$52.08	\$52.08	\$52.08	\$52.08	\$52.08	\$52.08	\$52.08	\$52.08	\$52.08	\$52.08	\$625.00	
	PDA	\$500.00	\$41.67	\$41.67	\$41.67	\$41.67	\$41.67	\$41.67	\$41.67	\$41.67	\$41.67	\$41.67	\$41.67	\$500.00	
	Concord Soil Sampler	\$3,995.00	\$66.58	\$66.58	\$66.58	\$66.58	\$66.58	\$66.58	\$66.58	\$66.58	\$66.58	\$66.58	\$66.58	\$799.00	
	Building Depreciation	\$65,000.00	\$166.67	\$166.67	\$166.67	\$166.67	\$166.67	\$166.67	\$166.67	\$166.67	\$166.67	\$166.67	\$166.67	\$2,000.00	
	<b>Total Depreciation Expenses</b>	\$486.33	\$486.33	\$486.33	\$486.33	\$486.33	\$486.33	\$486.33	\$486.33	\$486.33	\$486.33	\$486.33	\$486.33	\$5,836.01	
<b>Operating Profit (Loss) Pre-Tax</b>		\$2,306.32	\$517.17	\$2,306.32	(\$6,639.42)	(\$14,096.00)	(\$14,096.00)	(\$14,096.00)	(\$6,043.03)	\$1,113.55	\$2,306.32	\$1,113.55	\$1,113.55	(\$44,193.68)	
	<b>Less Taxes</b>	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	
<b>Operating Profit (Loss) Post-Tax</b>		\$2,306.32	\$517.17	\$2,306.32	(\$6,639.42)	(\$14,096.00)	(\$14,096.00)	(\$14,096.00)	(\$6,043.03)	\$1,113.55	\$2,306.32	\$1,113.55	\$1,113.55	(\$44,193.68)	
	<b>Plus Depreciation Expense</b>	\$486.33	\$486.33	\$486.33	\$486.33	\$486.33	\$486.33	\$486.33	\$486.33	\$486.33	\$486.33	\$486.33	\$486.33	\$5,836.01	
<b>Net Cash Flow (NCF)</b>		\$2,792.65	\$1,003.50	\$2,792.65	(\$6,153.08)	(\$13,609.67)	(\$13,609.67)	(\$13,609.67)	(\$5,556.70)	\$1,599.89	\$2,792.65	\$1,599.89	\$1,599.89	(\$38,357.67)	



Table 2. Year 2 Monthly Cash-flow Analysis

		January	February	March	April	May	June	July	August	September	October	November	December	Totals/Averages	# of Acres Serviced/Year
	Number of Days Open	27	24	27	25	27	26	26	27	25	27	25	25	311	3000
	Number of Days Services Performed	27	24	27	12	0	0	0	13	25	27	25	25	205	
<b>Operating Revenue</b>	Average Acres Serviced Per Month	3951	3512	3951	1756	0	0	0	1902	3659	3951	3659	3659	2500	
	Average Acres Serviced Per Day	146	146	146	146	0	0	0	146	146	146	146	146	146	
	Average Charge Per Acre	\$7.50	\$7.50	\$7.50	\$7.50	\$7.50	\$7.50	\$7.50	\$7.50	\$7.50	\$7.50	\$7.50	\$7.50	\$7.50	
	Total Monthly Sales	\$29,634.15	\$26,341.46	\$29,634.15	\$13,170.73	\$0.00	\$0.00	\$0.00	\$14,268.29	\$27,439.02	\$29,634.15	\$27,439.02	\$27,439.02	\$225,000.00	
	Cost of Goods Sold	\$3,160.98	\$2,809.76	\$3,160.98	\$1,404.88	\$0.00	\$0.00	\$0.00	\$1,521.95	\$2,926.83	\$3,160.98	\$2,926.83	\$2,926.83	\$24,000.00	
	Cost of Goods Sold as %	10.67%	10.67%	10.67%	10.67%	0.00%	0.00%	0.00%	10.67%	10.67%	10.67%	10.67%	10.67%	10.67%	
	Total Monthly Equipment Sales	\$3,000.00	\$3,000.00	\$3,000.00	\$3,000.00	\$3,000.00	\$3,000.00	\$3,000.00	\$3,000.00	\$3,000.00	\$3,000.00	\$3,000.00	\$3,000.00	\$36,000.00	
	Cost of Goods Sold	\$1,800.00	\$1,800.00	\$1,800.00	\$1,800.00	\$1,800.00	\$1,800.00	\$1,800.00	\$1,800.00	\$1,800.00	\$1,800.00	\$1,800.00	\$1,800.00	\$21,600.00	
<b>Operating Expenses</b>	Cost of Goods Sold as %	60%	60%	60%	60%	60%	60%	60%	60%	60%	60%	60%	60%	60%	
	<b>Total Operating Revenue</b>	\$27,673.17	\$24,731.71	\$27,673.17	\$12,965.85	\$1,200.00	\$1,200.00	\$1,200.00	\$13,946.34	\$25,712.20	\$27,673.17	\$25,712.20	\$25,712.20	\$215,400.00	
	Wages (Salary Experienced Emp.)	\$6,666.67	\$6,666.67	\$6,666.67	\$6,666.67	\$6,666.67	\$6,666.67	\$6,666.67	\$6,666.67	\$6,666.67	\$6,666.67	\$6,666.67	\$6,666.67	\$80,000.00	
	Wages (Salary Assistant Emp.)	\$5,000.00	\$5,000.00	\$5,000.00	\$5,000.00	\$5,000.00	\$5,000.00	\$5,000.00	\$5,000.00	\$5,000.00	\$5,000.00	\$5,000.00	\$5,000.00	\$60,000.00	
	Wages (2 Emp. Hourly at \$7.00/hr.)	\$1,475.12	\$1,311.22	\$1,475.12	\$655.61	\$0.00	\$0.00	\$0.00	\$710.24	\$1,365.85	\$1,475.12	\$1,365.85	\$1,365.85	\$11,200.00	
	Vehicle Lease Payment (2 at \$300/mo.)	\$600.00	\$600.00	\$600.00	\$600.00	\$600.00	\$600.00	\$600.00	\$600.00	\$600.00	\$600.00	\$600.00	\$600.00	\$7,200.00	
	Vehicle Maintenance & Operation	1.5%	\$444.51	\$395.12	\$444.51	\$197.56	\$200.00	\$200.00	\$200.00	\$214.02	\$411.59	\$444.51	\$411.59	\$411.59	\$3,975.00
	ATV Maintenance & Operation	0.35%	\$103.72	\$92.20	\$103.72	\$46.10	\$0.00	\$0.00	\$49.94	\$96.04	\$103.72	\$96.04	\$96.04	\$787.50	
	Office Supplies	1%	\$296.34	\$263.41	\$296.34	\$131.71	\$100.00	\$100.00	\$142.68	\$274.39	\$296.34	\$274.39	\$274.39	\$2,550.00	
	Electricity	\$35.00	\$35.00	\$35.00	\$35.00	\$35.00	\$35.00	\$35.00	\$35.00	\$35.00	\$35.00	\$35.00	\$35.00	\$420.00	
	Water	\$25.00	\$25.00	\$25.00	\$25.00	\$25.00	\$25.00	\$25.00	\$25.00	\$25.00	\$25.00	\$25.00	\$25.00	\$300.00	
	Telephone	\$60.00	\$60.00	\$60.00	\$60.00	\$60.00	\$60.00	\$60.00	\$60.00	\$60.00	\$60.00	\$60.00	\$60.00	\$720.00	
	Broadband Internet	\$75.00	\$75.00	\$75.00	\$75.00	\$75.00	\$75.00	\$75.00	\$75.00	\$75.00	\$75.00	\$75.00	\$75.00	\$900.00	
	DTN	\$39.00	\$39.00	\$39.00	\$39.00	\$39.00	\$39.00	\$39.00	\$39.00	\$39.00	\$39.00	\$39.00	\$39.00	\$468.00	
	Insurance	\$800.00	\$800.00	\$800.00	\$800.00	\$800.00	\$800.00	\$800.00	\$800.00	\$800.00	\$800.00	\$800.00	\$800.00	\$9,600.00	
<b>Depreciation Expenses</b>	Cellular Phones	4	\$280.00	\$280.00	\$280.00	\$280.00	\$280.00	\$280.00	\$280.00	\$280.00	\$280.00	\$280.00	\$280.00	\$3,360.00	
	Building & Land Payment	\$929.00	\$929.00	\$929.00	\$929.00	\$929.00	\$929.00	\$929.00	\$929.00	\$929.00	\$929.00	\$929.00	\$929.00	\$11,148.00	
	<b>Total Operating Expenses</b>	\$16,829.36	\$16,571.62	\$16,829.36	\$15,540.64	\$14,809.67	\$14,809.67	\$14,809.67	\$15,626.56	\$16,657.53	\$16,829.36	\$16,657.53	\$16,657.53	\$192,628.50	
	Computers	\$1,500.00	\$31.94	\$31.94	\$31.94	\$31.94	\$31.94	\$31.94	\$31.94	\$31.94	\$31.94	\$31.94	\$31.94	\$383.33	
	AgView Software	\$2,495.00	\$20.79	\$20.79	\$20.79	\$20.79	\$20.79	\$20.79	\$20.79	\$20.79	\$20.79	\$20.79	\$20.79	\$249.50	
	Desks	\$798.00	\$5.82	\$5.82	\$5.82	\$5.82	\$5.82	\$5.82	\$5.82	\$5.82	\$5.82	\$5.82	\$5.82	\$69.80	
	Desk Chairs	\$240.00	\$3.06	\$3.06	\$3.06	\$3.06	\$3.06	\$3.06	\$3.06	\$3.06	\$3.06	\$3.06	\$3.06	\$36.67	
	Office Chairs	\$200.00	\$2.50	\$2.50	\$2.50	\$2.50	\$2.50	\$2.50	\$2.50	\$2.50	\$2.50	\$2.50	\$2.50	\$30.00	
	Kawasaki Mule	\$9,999.00	\$95.23	\$95.23	\$95.23	\$95.23	\$95.23	\$95.23	\$95.23	\$95.23	\$95.23	\$95.23	\$95.23	\$1,142.71	
	GPS	\$2,500.00	\$52.08	\$52.08	\$52.08	\$52.08	\$52.08	\$52.08	\$52.08	\$52.08	\$52.08	\$52.08	\$52.08	\$625.00	
	PDA	\$500.00	\$41.67	\$41.67	\$41.67	\$41.67	\$41.67	\$41.67	\$41.67	\$41.67	\$41.67	\$41.67	\$41.67	\$500.00	
	Concord Soil Sampler	\$3,995.00	\$66.58	\$66.58	\$66.58	\$66.58	\$66.58	\$66.58	\$66.58	\$66.58	\$66.58	\$66.58	\$66.58	\$799.00	
	Building Depreciation	\$65,000.00	\$166.67	\$166.67	\$166.67	\$166.67	\$166.67	\$166.67	\$166.67	\$166.67	\$166.67	\$166.67	\$166.67	\$2,000.00	
	<b>Total Depreciation Expenses</b>	\$486.33	\$486.33	\$486.33	\$486.33	\$486.33	\$486.33	\$486.33	\$486.33	\$486.33	\$486.33	\$486.33	\$486.33	\$5,836.01	
<b>Operating Profit (Loss) Pre-Tax</b>		\$10,357.47	\$7,673.75	\$10,357.47	(\$3,061.12)	(\$14,096.00)	(\$14,096.00)	(\$14,096.00)	(\$2,166.55)	\$8,568.33	\$10,357.47	\$8,568.33	\$8,568.33	\$16,935.49	
	<b>Less Taxes</b>	\$564.52	\$564.52	\$564.52	\$564.52	\$564.52	\$564.52	\$564.52	\$564.52	\$564.52	\$564.52	\$564.52	\$564.52	\$6,774.19	
<b>Operating Profit (Loss) Post-Tax</b>		\$9,792.96	\$7,109.24	\$9,792.96	(\$3,625.64)	(\$14,660.52)	(\$14,660.52)	(\$14,660.52)	(\$2,731.07)	\$8,003.81	\$9,792.96	\$8,003.81	\$8,003.81	\$10,161.29	
	<b>Plus Depreciation Expense</b>	\$486.33	\$486.33	\$486.33	\$486.33	\$486.33	\$486.33	\$486.33	\$486.33	\$486.33	\$486.33	\$486.33	\$486.33	\$5,836.01	
<b>Net Cash Flow (NCF)</b>		\$10,279.29	\$7,595.57	\$10,279.29	(\$3,139.30)	(\$14,174.18)	(\$14,174.18)	(\$14,174.18)	(\$2,244.73)	\$8,490.15	\$10,279.29	\$8,490.15	\$8,490.15	\$15,997.31	

Table 3. Year 3 Monthly Cash-flow Analysis

		January	February	March	April	May	June	July	August	September	October	November	December	Totals/Averages	# of Acres Serviced/Year
	Number of Days Open	27	24	27	25	27	26	26	27	25	27	25	25	311	4000
	Number of Days Services Performed	27	24	27	12	0	0	0	13	25	27	25	25	205	
<b>Operating Revenue</b>	Average Acres Serviced Per Month	5268	4683	5268	2341	0	0	0	2537	4878	5268	4878	4878	3333	
	Average Acres Serviced Per Day	195	195	195	195	0	0	0	195	195	195	195	195	195	
	Average Charge Per Acre	\$7.50	\$7.50	\$7.50	\$7.50	\$7.50	\$7.50	\$7.50	\$7.50	\$7.50	\$7.50	\$7.50	\$7.50	\$7.50	
	Total Monthly Sales	\$39,512.20	\$35,121.95	\$39,512.20	\$17,560.98	\$0.00	\$0.00	\$0.00	\$19,024.39	\$36,585.37	\$39,512.20	\$36,585.37	\$36,585.37	\$300,000.00	
	Cost of Goods Sold	\$4,214.63	\$3,746.34	\$4,214.63	\$1,873.17	\$0.00	\$0.00	\$0.00	\$2,029.27	\$3,902.44	\$4,214.63	\$3,902.44	\$3,902.44	\$32,000.00	
	Cost of Goods Sold as %	10.67%	10.67%	10.67%	10.67%	0.00%	0.00%	0.00%	10.67%	10.67%	10.67%	10.67%	10.67%	10.67%	
	Total Monthly Equipment Sales	\$3,000.00	\$3,000.00	\$3,000.00	\$3,000.00	\$3,000.00	\$3,000.00	\$3,000.00	\$3,000.00	\$3,000.00	\$3,000.00	\$3,000.00	\$3,000.00	\$36,000.00	
	Cost of Goods Sold	\$1,800.00	\$1,800.00	\$1,800.00	\$1,800.00	\$1,800.00	\$1,800.00	\$1,800.00	\$1,800.00	\$1,800.00	\$1,800.00	\$1,800.00	\$1,800.00	\$21,600.00	
<b>Operating Expenses</b>	Cost of Goods Sold as %	60%	60%	60%	60%	60%	60%	60%	60%	60%	60%	60%	60%	60%	
	<b>Total Operating Revenue</b>	\$36,497.56	\$32,575.61	\$36,497.56	\$16,887.80	\$1,200.00	\$1,200.00	\$1,200.00	\$18,195.12	\$33,882.93	\$36,497.56	\$33,882.93	\$33,882.93	\$282,400.00	
	Wages (Salary Experienced Emp.)	\$6,666.67	\$6,666.67	\$6,666.67	\$6,666.67	\$6,666.67	\$6,666.67	\$6,666.67	\$6,666.67	\$6,666.67	\$6,666.67	\$6,666.67	\$6,666.67	\$80,000.00	
	Wages (Salary Assistant Emp.)	\$5,000.00	\$5,000.00	\$5,000.00	\$5,000.00	\$5,000.00	\$5,000.00	\$5,000.00	\$5,000.00	\$5,000.00	\$5,000.00	\$5,000.00	\$5,000.00	\$60,000.00	
	Wages (2 Emp. Hourly at \$7.00/hr.)	\$1,966.83	\$1,748.29	\$1,966.83	\$874.15	\$0.00	\$0.00	\$0.00	\$946.99	\$1,821.14	\$1,966.83	\$1,821.14	\$1,821.14	\$14,933.33	
	Vehicle Lease Payment (2 at \$300/mo.)	\$600.00	\$600.00	\$600.00	\$600.00	\$600.00	\$600.00	\$600.00	\$600.00	\$600.00	\$600.00	\$600.00	\$600.00	\$7,200.00	
	Vehicle Maintenance & Operation	1.5%	\$592.68	\$526.83	\$592.68	\$263.41	\$200.00	\$200.00	\$285.37	\$548.78	\$592.68	\$548.78	\$548.78	\$5,100.00	
	ATV Maintenance & Operation	0.35%	\$138.29	\$122.93	\$138.29	\$61.46	\$0.00	\$0.00	\$66.59	\$128.05	\$138.29	\$128.05	\$128.05	\$1,050.00	
	Office Supplies	1%	\$395.12	\$351.22	\$395.12	\$175.61	\$100.00	\$100.00	\$190.24	\$365.85	\$395.12	\$365.85	\$365.85	\$3,300.00	
	Electricity	\$35.00	\$35.00	\$35.00	\$35.00	\$35.00	\$35.00	\$35.00	\$35.00	\$35.00	\$35.00	\$35.00	\$35.00	\$420.00	
	Water	\$25.00	\$25.00	\$25.00	\$25.00	\$25.00	\$25.00	\$25.00	\$25.00	\$25.00	\$25.00	\$25.00	\$25.00	\$300.00	
	Telephone	\$60.00	\$60.00	\$60.00	\$60.00	\$60.00	\$60.00	\$60.00	\$60.00	\$60.00	\$60.00	\$60.00	\$60.00	\$720.00	
	Broadband Internet	\$75.00	\$75.00	\$75.00	\$75.00	\$75.00	\$75.00	\$75.00	\$75.00	\$75.00	\$75.00	\$75.00	\$75.00	\$900.00	
	DTN	\$39.00	\$39.00	\$39.00	\$39.00	\$39.00	\$39.00	\$39.00	\$39.00	\$39.00	\$39.00	\$39.00	\$39.00	\$468.00	
	Insurance	\$800.00	\$800.00	\$800.00	\$800.00	\$800.00	\$800.00	\$800.00	\$800.00	\$800.00	\$800.00	\$800.00	\$800.00	\$9,600.00	
<b>Depreciation Expenses</b>	Cellular Phones	4	\$280.00	\$280.00	\$280.00	\$280.00	\$280.00	\$280.00	\$280.00	\$280.00	\$280.00	\$280.00	\$280.00	\$3,360.00	
	Building & Land Payment	\$929.00	\$929.00	\$929.00	\$929.00	\$929.00	\$929.00	\$929.00	\$929.00	\$929.00	\$929.00	\$929.00	\$929.00	\$11,148.00	
	<b>Total Operating Expenses</b>	\$17,602.59	\$17,258.93	\$17,602.59	\$15,884.30	\$14,809.67	\$14,809.67	\$14,809.67	\$15,998.85	\$17,373.49	\$17,602.59	\$17,373.49	\$17,373.49	\$198,499.33	
	Computers	\$1,500.00	\$31.94	\$31.94	\$31.94	\$31.94	\$31.94	\$31.94	\$31.94	\$31.94	\$31.94	\$31.94	\$31.94	\$383.33	
	AgView Software	\$2,495.00	\$20.79	\$20.79	\$20.79	\$20.79	\$20.79	\$20.79	\$20.79	\$20.79	\$20.79	\$20.79	\$20.79	\$249.50	
	Desks	\$798.00	\$5.82	\$5.82	\$5.82	\$5.82	\$5.82	\$5.82	\$5.82	\$5.82	\$5.82	\$5.82	\$5.82	\$69.80	
	Desk Chairs	\$240.00	\$3.06	\$3.06	\$3.06	\$3.06	\$3.06	\$3.06	\$3.06	\$3.06	\$3.06	\$3.06	\$3.06	\$36.67	
	Office Chairs	\$200.00	\$2.50	\$2.50	\$2.50	\$2.50	\$2.50	\$2.50	\$2.50	\$2.50	\$2.50	\$2.50	\$2.50	\$30.00	
	Kawasaki Mule	\$9,999.00	\$95.23	\$95.23	\$95.23	\$95.23	\$95.23	\$95.23	\$95.23	\$95.23	\$95.23	\$95.23	\$95.23	\$1,142.71	
	GPS	\$2,500.00	\$52.08	\$52.08	\$52.08	\$52.08	\$52.08	\$52.08	\$52.08	\$52.08	\$52.08	\$52.08	\$52.08	\$625.00	
	PDA	\$500.00	\$41.67	\$41.67	\$41.67	\$41.67	\$41.67	\$41.67	\$41.67	\$41.67	\$41.67	\$41.67	\$41.67	\$500.00	
	Concord Soil Sampler	\$3,995.00	\$66.58	\$66.58	\$66.58	\$66.58	\$66.58	\$66.58	\$66.58	\$66.58	\$66.58	\$66.58	\$66.58	\$799.00	
	Building Depreciation	\$65,000.00	\$166.67	\$166.67	\$166.67	\$166.67	\$166.67	\$166.67	\$166.67	\$166.67	\$166.67	\$166.67	\$166.67	\$2,000.00	
	<b>Total Depreciation Expenses</b>	\$486.33	\$486.33	\$486.33	\$486.33	\$486.33	\$486.33	\$486.33	\$486.33	\$486.33	\$486.33	\$486.33	\$486.33	\$5,836.01	
<b>Operating Profit (Loss) Pre-Tax</b>		\$18,408.63	\$14,830.34	\$18,408.63	\$517.17	(\$14,096.00)	(\$14,096.00)	(\$14,096.00)	\$1,709.93	\$16,023.10	\$18,408.63	\$16,023.10	\$16,023.10	\$78,064.65	
	Less Taxes	\$2,602.16	\$2,602.16	\$2,602.16	\$2,602.16	\$2,602.16	\$2,602.16	\$2,602.16	\$2,602.16	\$2,602.16	\$2,602.16	\$2,602.16	\$2,602.16	\$31,225.86	
<b>Operating Profit (Loss) Post-Tax</b>		\$15,806.48	\$12,228.19	\$15,806.48	(\$2,084.99)	(\$16,698.16)	(\$16,698.16)	(\$16,698.16)	(\$892.22)	\$13,420.95	\$15,806.48	\$13,420.95	\$13,420.95	\$46,838.79	
	Plus Depreciation Expense	\$486.33	\$486.33	\$486.33	\$486.33	\$486.33	\$486.33	\$486.33	\$486.33	\$486.33	\$486.33	\$486.33	\$486.33	\$5,836.01	
<b>Net Cash Flow (NCF)</b>		\$16,292.81	\$12,714.52	\$16,292.81	(\$1,598.65)	(\$16,211.82)	(\$16,211.82)	(\$16,211.82)	(\$405.89)	\$13,907.28	\$16,292.81	\$13,907.28	\$13,907.28	\$52,674.81	

Table 4. Year 4 Monthly Cash-flow Analysis

		January	February	March	April	May	June	July	August	September	October	November	December	Totals/Averages	# of Acres Serviced/Year
	Number of Days Open	27	24	27	25	27	26	26	27	25	27	25	25	311	5000
	Number of Days Services Performed	27	24	27	12	0	0	0	13	25	27	25	25	205	
<b>Operating Revenue</b>	Average Acres Serviced Per Month	6585	5854	6585	2927	0	0	0	3171	6098	6585	6098	6098	4167	
	Average Acres Serviced Per Day	244	244	244	244	0	0	0	244	244	244	244	244	244	
	Average Charge Per Acre	\$7.50	\$7.50	\$7.50	\$7.50	\$7.50	\$7.50	\$7.50	\$7.50	\$7.50	\$7.50	\$7.50	\$7.50	\$7.50	
	Total Monthly Sales	\$49,390.24	\$43,902.44	\$49,390.24	\$21,951.22	\$0.00	\$0.00	\$0.00	\$23,780.49	\$45,731.71	\$49,390.24	\$45,731.71	\$45,731.71	\$375,000.00	
	Cost of Goods Sold	\$5,268.29	\$4,682.93	\$5,268.29	\$2,341.46	\$0.00	\$0.00	\$0.00	\$2,536.59	\$4,878.05	\$5,268.29	\$4,878.05	\$4,878.05	\$40,000.00	
	Cost of Goods Sold as %	10.67%	10.67%	10.67%	10.67%	0.00%	0.00%	0.00%	10.67%	10.67%	10.67%	10.67%	10.67%	10.67%	
	Total Monthly Equipment Sales	\$3,000.00	\$3,000.00	\$3,000.00	\$3,000.00	\$3,000.00	\$3,000.00	\$3,000.00	\$3,000.00	\$3,000.00	\$3,000.00	\$3,000.00	\$3,000.00	\$36,000.00	
	Cost of Goods Sold	\$1,800.00	\$1,800.00	\$1,800.00	\$1,800.00	\$1,800.00	\$1,800.00	\$1,800.00	\$1,800.00	\$1,800.00	\$1,800.00	\$1,800.00	\$1,800.00	\$21,600.00	
<b>Operating Expenses</b>	Cost of Goods Sold as %	60%	60%	60%	60%	60%	60%	60%	60%	60%	60%	60%	60%	60%	
	<b>Total Operating Revenue</b>	\$45,321.95	\$40,419.51	\$45,321.95	\$20,809.76	\$1,200.00	\$1,200.00	\$1,200.00	\$22,443.90	\$42,053.66	\$45,321.95	\$42,053.66	\$42,053.66	\$349,400.00	
	Wages (Salary Experienced Emp.)	\$6,666.67	\$6,666.67	\$6,666.67	\$6,666.67	\$6,666.67	\$6,666.67	\$6,666.67	\$6,666.67	\$6,666.67	\$6,666.67	\$6,666.67	\$6,666.67	\$80,000.00	
	Wages (Salary Assistant Emp.)	\$5,000.00	\$5,000.00	\$5,000.00	\$5,000.00	\$5,000.00	\$5,000.00	\$5,000.00	\$5,000.00	\$5,000.00	\$5,000.00	\$5,000.00	\$5,000.00	\$60,000.00	
	Wages (2 Emp. Hourly at \$7.00/hr.)	\$2,458.54	\$2,185.37	\$2,458.54	\$1,092.68	\$0.00	\$0.00	\$0.00	\$1,183.74	\$2,276.42	\$2,458.54	\$2,276.42	\$2,276.42	\$18,666.67	
	Vehicle Lease Payment (2 at \$300/mo.)	\$600.00	\$600.00	\$600.00	\$600.00	\$600.00	\$600.00	\$600.00	\$600.00	\$600.00	\$600.00	\$600.00	\$600.00	\$7,200.00	
	Vehicle Maintenance & Operation	1.5%	\$740.85	\$658.54	\$740.85	\$329.27	\$200.00	\$200.00	\$356.71	\$685.98	\$740.85	\$685.98	\$685.98	\$6,225.00	
	ATV Maintenance & Operation	0.35%	\$172.87	\$153.66	\$172.87	\$76.83	\$0.00	\$0.00	\$83.23	\$160.06	\$172.87	\$160.06	\$160.06	\$1,312.50	
	Office Supplies	1%	\$493.90	\$439.02	\$493.90	\$219.51	\$100.00	\$100.00	\$237.80	\$457.32	\$493.90	\$457.32	\$457.32	\$4,050.00	
	Electricity	\$35.00	\$35.00	\$35.00	\$35.00	\$35.00	\$35.00	\$35.00	\$35.00	\$35.00	\$35.00	\$35.00	\$35.00	\$420.00	
	Water	\$25.00	\$25.00	\$25.00	\$25.00	\$25.00	\$25.00	\$25.00	\$25.00	\$25.00	\$25.00	\$25.00	\$25.00	\$300.00	
	Telephone	\$60.00	\$60.00	\$60.00	\$60.00	\$60.00	\$60.00	\$60.00	\$60.00	\$60.00	\$60.00	\$60.00	\$60.00	\$720.00	
	Broadband Internet	\$75.00	\$75.00	\$75.00	\$75.00	\$75.00	\$75.00	\$75.00	\$75.00	\$75.00	\$75.00	\$75.00	\$75.00	\$900.00	
	DTN	\$39.00	\$39.00	\$39.00	\$39.00	\$39.00	\$39.00	\$39.00	\$39.00	\$39.00	\$39.00	\$39.00	\$39.00	\$468.00	
	Insurance	\$800.00	\$800.00	\$800.00	\$800.00	\$800.00	\$800.00	\$800.00	\$800.00	\$800.00	\$800.00	\$800.00	\$800.00	\$9,600.00	
<b>Depreciation Expenses</b>	Cellular Phones	4	\$280.00	\$280.00	\$280.00	\$280.00	\$280.00	\$280.00	\$280.00	\$280.00	\$280.00	\$280.00	\$280.00	\$3,360.00	
	Building & Land Payment	\$929.00	\$929.00	\$929.00	\$929.00	\$929.00	\$929.00	\$929.00	\$929.00	\$929.00	\$929.00	\$929.00	\$929.00	\$11,148.00	
	<b>Total Operating Expenses</b>	\$18,375.83	\$17,946.25	\$18,375.83	\$16,227.96	\$14,809.67	\$14,809.67	\$14,809.67	\$16,371.15	\$18,089.44	\$18,375.83	\$18,089.44	\$18,089.44	\$204,370.17	
	Computers	\$1,500.00	\$31.94	\$31.94	\$31.94	\$31.94	\$31.94	\$31.94	\$31.94	\$31.94	\$31.94	\$31.94	\$31.94	\$383.33	
	AgView Software	\$2,495.00	\$20.79	\$20.79	\$20.79	\$20.79	\$20.79	\$20.79	\$20.79	\$20.79	\$20.79	\$20.79	\$20.79	\$249.50	
	Desks	\$798.00	\$5.82	\$5.82	\$5.82	\$5.82	\$5.82	\$5.82	\$5.82	\$5.82	\$5.82	\$5.82	\$5.82	\$69.80	
	Desk Chairs	\$240.00	\$3.06	\$3.06	\$3.06	\$3.06	\$3.06	\$3.06	\$3.06	\$3.06	\$3.06	\$3.06	\$3.06	\$36.67	
	Office Chairs	\$200.00	\$2.50	\$2.50	\$2.50	\$2.50	\$2.50	\$2.50	\$2.50	\$2.50	\$2.50	\$2.50	\$2.50	\$30.00	
	Kawasaki Mule	\$9,999.00	\$95.23	\$95.23	\$95.23	\$95.23	\$95.23	\$95.23	\$95.23	\$95.23	\$95.23	\$95.23	\$95.23	\$1,142.71	
	GPS	\$2,500.00	\$52.08	\$52.08	\$52.08	\$52.08	\$52.08	\$52.08	\$52.08	\$52.08	\$52.08	\$52.08	\$52.08	\$625.00	
	PDA	\$500.00	\$41.67	\$41.67	\$41.67	\$41.67	\$41.67	\$41.67	\$41.67	\$41.67	\$41.67	\$41.67	\$41.67	\$500.00	
	Concord Soil Sampler	\$3,995.00	\$66.58	\$66.58	\$66.58	\$66.58	\$66.58	\$66.58	\$66.58	\$66.58	\$66.58	\$66.58	\$66.58	\$799.00	
	Building Depreciation	\$65,000.00	\$166.67	\$166.67	\$166.67	\$166.67	\$166.67	\$166.67	\$166.67	\$166.67	\$166.67	\$166.67	\$166.67	\$2,000.00	
	<b>Total Depreciation Expenses</b>	\$486.33	\$486.33	\$486.33	\$486.33	\$486.33	\$486.33	\$486.33	\$486.33	\$486.33	\$486.33	\$486.33	\$486.33	\$5,836.01	
<b>Operating Profit (Loss) Pre-Tax</b>		\$26,459.79	\$21,986.93	\$26,459.79	\$4,095.46	(\$14,096.00)	(\$14,096.00)	(\$14,096.00)	\$5,586.42	\$23,477.88	\$26,459.79	\$23,477.88	\$23,477.88	\$139,193.82	
	Less Taxes	\$4,639.79	\$4,639.79	\$4,639.79	\$4,639.79	\$4,639.79	\$4,639.79	\$4,639.79	\$4,639.79	\$4,639.79	\$4,639.79	\$4,639.79	\$4,639.79	\$55,677.53	
<b>Operating Profit (Loss) Post-Tax</b>		\$21,820.00	\$17,347.13	\$21,820.00	(\$544.33)	(\$18,735.80)	(\$18,735.80)	(\$18,735.80)	\$946.62	\$18,838.09	\$21,820.00	\$18,838.09	\$18,838.09	\$83,516.29	
	Plus Depreciation Expense	\$486.33	\$486.33	\$486.33	\$486.33	\$486.33	\$486.33	\$486.33	\$486.33	\$486.33	\$486.33	\$486.33	\$486.33	\$5,836.01	
<b>Net Cash Flow (NCF)</b>		\$22,306.33	\$17,833.47	\$22,306.33	(\$58.00)	(\$18,249.46)	(\$18,249.46)	(\$18,249.46)	\$1,432.96	\$19,324.42	\$22,306.33	\$19,324.42	\$19,324.42	\$89,352.31	

Table 5. Year 5 Monthly Cash-flow Analysis

		January	February	March	April	May	June	July	August	September	October	November	December	Totals/Averages	# of Acres Serviced/Year
	Number of Days Open	27	24	27	25	27	28	26	27	25	27	25	25	311	55000
	Number of Days Services Performed	27	24	27	12	0	0	0	13	25	27	25	25	205	
<b>Operating Revenue</b>	Average Acres Serviced Per Month	7244	6439	7244	3220	0	0	0	3488	6707	7244	6707	6707	4583	
	Average Acres Serviced Per Day	268	268	268	268	0	0	0	268	268	268	268	268	268	
	Average Charge Per Acre	\$7.50	\$7.50	\$7.50	\$7.50	\$7.50	\$7.50	\$7.50	\$7.50	\$7.50	\$7.50	\$7.50	\$7.50	\$7.50	
	Total Monthly Sales	\$54,329.27	\$48,292.68	\$54,329.27	\$24,146.34	\$0.00	\$0.00	\$0.00	\$26,158.54	\$50,304.88	\$54,329.27	\$50,304.88	\$50,304.88	\$412,500.00	
	Cost of Goods Sold	\$5,795.12	\$5,151.22	\$5,795.12	\$2,575.61	\$0.00	\$0.00	\$0.00	\$2,790.24	\$5,365.85	\$5,795.12	\$5,365.85	\$5,365.85	\$44,000.00	
	Cost of Goods Sold as %	10.67%	10.67%	10.67%	10.67%	0.00%	0.00%	0.00%	10.67%	10.67%	10.67%	10.67%	10.67%	10.67%	
	Total Monthly Equipment Sales	\$3,000.00	\$3,000.00	\$3,000.00	\$3,000.00	\$3,000.00	\$3,000.00	\$3,000.00	\$3,000.00	\$3,000.00	\$3,000.00	\$3,000.00	\$3,000.00	\$36,000.00	
	Cost of Goods Sold	\$1,800.00	\$1,800.00	\$1,800.00	\$1,800.00	\$1,800.00	\$1,800.00	\$1,800.00	\$1,800.00	\$1,800.00	\$1,800.00	\$1,800.00	\$1,800.00	\$21,600.00	
<b>Operating Expenses</b>	Cost of Goods Sold as %	60%	60%	60%	60%	60%	60%	60%	60%	60%	60%	60%	60%	60%	
	<b>Total Operating Revenue</b>	\$49,734.15	\$44,341.46	\$49,734.15	\$22,770.73	\$1,200.00	\$1,200.00	\$1,200.00	\$24,568.29	\$46,139.02	\$49,734.15	\$46,139.02	\$46,139.02	\$382,900.00	
	Wages (Salary Experienced Emp.)	\$6,666.67	\$6,666.67	\$6,666.67	\$6,666.67	\$6,666.67	\$6,666.67	\$6,666.67	\$6,666.67	\$6,666.67	\$6,666.67	\$6,666.67	\$6,666.67	\$80,000.00	
	Wages (Salary Assistant Emp.)	\$5,000.00	\$5,000.00	\$5,000.00	\$5,000.00	\$5,000.00	\$5,000.00	\$5,000.00	\$5,000.00	\$5,000.00	\$5,000.00	\$5,000.00	\$5,000.00	\$60,000.00	
	Wages (2 Emp. Hourly at \$7.00/hr.)	\$2,704.39	\$2,403.90	\$2,704.39	\$1,201.95	\$0.00	\$0.00	\$0.00	\$1,302.11	\$2,504.07	\$2,704.39	\$2,504.07	\$2,504.07	\$20,533.33	
	Vehicle Lease Payment (2 at \$300/mo.)	\$600.00	\$600.00	\$600.00	\$600.00	\$600.00	\$600.00	\$600.00	\$600.00	\$600.00	\$600.00	\$600.00	\$600.00	\$7,200.00	
	Vehicle Maintenance & Operation	1.5%	\$814.94	\$724.39	\$814.94	\$362.20	\$200.00	\$200.00	\$392.38	\$754.57	\$814.94	\$754.57	\$754.57	\$6,787.50	
	ATV Maintenance & Operation	0.35%	\$190.15	\$169.02	\$190.15	\$84.51	\$0.00	\$0.00	\$91.55	\$176.07	\$190.15	\$176.07	\$176.07	\$1,443.75	
	Office Supplies	1%	\$543.29	\$482.93	\$543.29	\$241.46	\$100.00	\$100.00	\$100.00	\$261.59	\$503.05	\$543.29	\$503.05	\$503.05	\$4,425.00
	Electricity	\$35.00	\$35.00	\$35.00	\$35.00	\$35.00	\$35.00	\$35.00	\$35.00	\$35.00	\$35.00	\$35.00	\$35.00	\$420.00	
	Water	\$25.00	\$25.00	\$25.00	\$25.00	\$25.00	\$25.00	\$25.00	\$25.00	\$25.00	\$25.00	\$25.00	\$25.00	\$300.00	
	Telephone	\$60.00	\$60.00	\$60.00	\$60.00	\$60.00	\$60.00	\$60.00	\$60.00	\$60.00	\$60.00	\$60.00	\$60.00	\$720.00	
	Broadband Internet	\$75.00	\$75.00	\$75.00	\$75.00	\$75.00	\$75.00	\$75.00	\$75.00	\$75.00	\$75.00	\$75.00	\$75.00	\$900.00	
	DTN	\$39.00	\$39.00	\$39.00	\$39.00	\$39.00	\$39.00	\$39.00	\$39.00	\$39.00	\$39.00	\$39.00	\$39.00	\$468.00	
	Insurance	\$800.00	\$800.00	\$800.00	\$800.00	\$800.00	\$800.00	\$800.00	\$800.00	\$800.00	\$800.00	\$800.00	\$800.00	\$9,600.00	
<b>Depreciation Expenses</b>	Cellular Phones	4	\$280.00	\$280.00	\$280.00	\$280.00	\$280.00	\$280.00	\$280.00	\$280.00	\$280.00	\$280.00	\$280.00	\$3,360.00	
	Building & Land Payment	\$929.00	\$929.00	\$929.00	\$929.00	\$929.00	\$929.00	\$929.00	\$929.00	\$929.00	\$929.00	\$929.00	\$929.00	\$11,148.00	
	<b>Total Operating Expenses</b>	\$18,762.44	\$18,289.91	\$18,762.44	\$16,399.79	\$14,809.67	\$14,809.67	\$14,809.67	\$16,557.30	\$18,447.42	\$18,762.44	\$18,447.42	\$18,447.42	\$207,305.58	
	Computers	\$1,500.00	\$31.94	\$31.94	\$31.94	\$31.94	\$31.94	\$31.94	\$31.94	\$31.94	\$31.94	\$31.94	\$31.94	\$383.33	
	AgView Software	\$2,495.00	\$20.79	\$20.79	\$20.79	\$20.79	\$20.79	\$20.79	\$20.79	\$20.79	\$20.79	\$20.79	\$20.79	\$249.50	
	Desks	\$798.00	\$5.82	\$5.82	\$5.82	\$5.82	\$5.82	\$5.82	\$5.82	\$5.82	\$5.82	\$5.82	\$5.82	\$69.80	
	Desk Chairs	\$240.00	\$3.06	\$3.06	\$3.06	\$3.06	\$3.06	\$3.06	\$3.06	\$3.06	\$3.06	\$3.06	\$3.06	\$36.67	
	Office Chairs	\$200.00	\$2.50	\$2.50	\$2.50	\$2.50	\$2.50	\$2.50	\$2.50	\$2.50	\$2.50	\$2.50	\$2.50	\$30.00	
	Kawasaki Mule	\$9,999.00	\$95.23	\$95.23	\$95.23	\$95.23	\$95.23	\$95.23	\$95.23	\$95.23	\$95.23	\$95.23	\$95.23	\$1,142.71	
	GPS	\$2,500.00	\$52.08	\$52.08	\$52.08	\$52.08	\$52.08	\$52.08	\$52.08	\$52.08	\$52.08	\$52.08	\$52.08	\$625.00	
	PDA	\$500.00	\$41.67	\$41.67	\$41.67	\$41.67	\$41.67	\$41.67	\$41.67	\$41.67	\$41.67	\$41.67	\$41.67	\$500.00	
	Concord Soil Sampler	\$3,995.00	\$66.58	\$66.58	\$66.58	\$66.58	\$66.58	\$66.58	\$66.58	\$66.58	\$66.58	\$66.58	\$66.58	\$799.00	
	Building Depreciation	\$65,000.00	\$166.67	\$166.67	\$166.67	\$166.67	\$166.67	\$166.67	\$166.67	\$166.67	\$166.67	\$166.67	\$166.67	\$2,000.00	
	<b>Total Depreciation Expenses</b>		\$486.33	\$486.33	\$486.33	\$486.33	\$486.33	\$486.33	\$486.33	\$486.33	\$486.33	\$486.33	\$486.33	\$5,836.01	
<b>Operating Profit (Loss) Pre-Tax</b>		\$30,485.37	\$25,565.22	\$30,485.37	\$5,884.61	(\$14,096.00)	(\$14,096.00)	(\$14,096.00)	\$7,524.66	\$27,205.27	\$30,485.37	\$27,205.27	\$27,205.27	\$169,758.40	
	Less Taxes	\$5,658.61	\$5,658.61	\$5,658.61	\$5,658.61	\$5,658.61	\$5,658.61	\$5,658.61	\$5,658.61	\$5,658.61	\$5,658.61	\$5,658.61	\$5,658.61	\$67,903.36	
<b>Operating Profit (Loss) Post-Tax</b>		\$24,826.76	\$19,906.60	\$24,826.76	\$226.00	(\$19,754.61)	(\$19,754.61)	(\$19,754.61)	\$1,866.05	\$21,546.66	\$24,826.76	\$21,546.66	\$21,546.66	\$101,855.04	
	Plus Depreciation Expense	\$486.33	\$486.33	\$486.33	\$486.33	\$486.33	\$486.33	\$486.33	\$486.33	\$486.33	\$486.33	\$486.33	\$486.33	\$5,836.01	
<b>Net Cash Flow (NCF)</b>		\$25,313.09	\$20,392.94	\$25,313.09	\$712.33	(\$19,268.28)	(\$19,268.28)	(\$19,268.28)	\$2,352.38	\$22,032.99	\$25,313.09	\$22,032.99	\$22,032.99	\$107,691.06	

**Table 6. Feasibility Decision Factors**

<b>Net Investment</b>		\$139,725.00		
<b>Payback</b>		3.07		
<b>Cost of Capital</b>		5.50%		
			<b><i>NCF</i></b>	<b><i>DNCF</i></b>
<b>Net Present Value Calculation</b>	Year 0		(\$139,725.00)	(\$139,725.00)
	Year 1		(\$38,357.67)	(\$36,357.98)
	Year 2		\$15,997.31	\$14,372.82
	Year 3 (Plus computers salvage value of \$350.00)		\$53,024.81	\$45,156.65
	Year 4		\$89,352.31	\$72,126.68
	Year 5		\$107,691.06	\$82,398.13
<b>NPV</b>				
		\$37,971.29		
<b>Benefit Cost Ratio</b>				
		1.27		
<b>Internal Rate of Return</b>				
		11.04%		