

# Market report examples

[Business](#), [Marketing](#)



## **Business Opportunity Analysis**

### EXECUTIVE SUMMARY

The following report is a business opportunity analysis for AtlanTech Resources Limited, for the purposes of determining the feasibility of lowbush blueberry moisture sensors as a viable addition to our family of products. Given the decreasing rate of sales that exists currently within the company (8% annual decrease), a new product must be released in the next three years to sustain the viability of our current business model; this report discusses the viability of the lowbush blueberry moisture sensor in fulfilling that role.

The existing market research and need for the product is established, as well as the environmental effects of the product. Currently, there is an exclusive, yet highly profitable market to be found in agribusiness, particularly of lowbush blueberries grown in the USA and Canada; the high-profit nature of blueberry sales creates incentive for growers/farmers to look for products that will increase efficiency. Environmental factors are comparatively minor compared to existing, non-automatic crop maintenance. The product itself is described and discussed in terms of present and future utility and market potential; findings reveal a high-end, expensive yet profitable product that is an essential purchase for its target audience. Direct and indirect competition is described, and the market evaluated; 3-year financial assumptions are also described. Multi-stage plans are suggested to provide workable window for integration of product into normal business operations, as well as ensuring profitability and safety for the product itself. Recommendations are made for further movement in product acceptance process along evaluation

criteria. Having examined the business opportunity at length, it is advised that we pursue this avenue of increasing profits immediately.

#### Identification of Market Need

In order to examine the market for the lowbush blueberry moisture sensor as a product, it is vital to determine the areas of greatest use for such a sensor - namely, the primary areas of cultivation for lowbush blueberries. Areas such as Nova Scotia in Prince Edward Island, New Brunswick, Quebec and Maine, USA are areas where the lowbush blueberry is cultivated in the greatest quantities. In Maine, particularly, the wild/lowbush blueberry industry averaged approximately \$71 million dollars in 2011, and continues to grow (USDA, 2012). In Canada, the lowbush blueberry industry reached \$56 million, with \$20 million of that projected market value existing in Nova Scotia alone (AGR. ca, 2011). Because of this profitable and substantial industry, it is more important than ever to maximize efficiency in cultivation operations.

Moisture sensors as an apparatus are of great need to blueberry farmers and companies who subsidize them; the monolinia blight fungus has been shown to have devastating effects on crops, minimizing crop yield and reducing profits (AGFC, 2013). With the help of devices like the lowbush blueberry moisture sensor, farmers who practice large scale production of the blueberry can increase their yields and create more product to maintain this thriving blueberry industry.

## Size of Market

The blueberry market is an international one, with huge demand in countries such as North America and Canada, as well as other nations in Asia, South Africa, South America and Europe. North America, in particular, is responsible for approximately 70% of the world's supply of lowbush blueberries; as a result, it is reasonable to posit that the market size for moisture sensors for lowbush blueberries would correlate directly to locations where blueberries are being cultivated (" World Blueberry Prices Drop", 2010). The greater the concentration on these areas for sale of moisture sensors, the higher the potential profits will be.

Figure 1: Lowbush Blueberry World Market

Source: Forest Byproducts, Inc. (2008)

## Environmental Trends

Given that the purpose of this technology is to control environmental conditions for lowbush blueberry crops, it is necessary to determine their effects on the environment. When inadequate moisture levels are detected by the sensor, the device only requires a single spray to control the spread of fungus; this minimizes the extent to which the blueberry plants are exposed to fungicides, and automatically performs the bare minimum required for the control of said fungus. As moisture sensors do not dramatically change their immediate environment, due to their unobtrusive methods of detecting moisture and applying controlled levels of fungicide over a wide area, changes to the environment are minimized.

One potential concern for the device is exposure of humans to fungicides emitted by the spray - Anwar (1997) notes that fungicides, upon human

exposure (uptake), can lead to DNA damage and chromosomal aberrations, including sister chromatid exchanges. In essence, research indicates that exposure of workers to fungicides should be limited for the sake of their health. Luckily, the automated, single-spray nature of the moisture sensor virtually guarantees no human presence during sprays, thus keeping workers out of harm's way (Anwar, 1997). While fungicides have been known to provide similar microbial changes in plant and animal life, significant changes happen only after repeated, increased exposure to large volumes of fungicides; the low yield of this sensor's fungicides will minimize that exposure (Ohlsson et al., 2010).

Reducing fungal infections in blueberry crops is shown to have a dramatically positive effect on the environment; Tournas and Katsoudas (2005) note that " it is important to identify fungal contaminants in fresh fruits because some moulds can grow and produce mycotoxins on these commodities while certain yeasts and moulds can cause infections or allergies" (p. 11). These mycotoxins have the effect of causing the aforementioned microbial changes and damage in both plant and animal life, including humans. To that end, the moisture sensor's fungicide spray system should provide a net positive effect on the environment in which it is placed.

## **Market Research Data**

According to market research data, the lowbush blueberry moisture sensor has a high profit margin, due to substantial demand in targeted areas where lowbush blueberries are grown in abundance (as well as the high estimated standard retail price (ESRP) of the product itself). Areas of high demand for the moisture sensor include Quebec, Prince Edward Island, Canada, Maine,

and other areas where lowbush blueberries are intensely cultivated. As a result, the usual customers of these moisture sensors will be professionals working in the lowbrush blueberry industry, and will live and work in these areas of large-scale production. It is prudent to note, therefore, that retail offices and suppliers dealing with these farmers are the primary means by which to offer these moisture sensors for purchase.

## **PRODUCT**

### Product Description

The lowbrush blueberry moisture sensor is an apparatus that approximates the risk of fungal infection in blueberry fields; the device detects the levels of moisture in the environment through sensor functions using complex algorithms to indicate the state or risk of fungal infection (which is caused by wetness in the air). When improper levels of moisture are detected, the moisture sensor sprays a fungicide solution along the affected fields, thus preventing the onset and spread of the disease. The device is meant to be automated, which facilitates less hands-on maintenance of the system; furthermore, automation ensures that no humans or plant and animal life are in the vicinity when fungicide spray is administered. One single spray per area is used, in order to minimize exposure to fungicide, and the spray covers a considerable acreage. Fewer sprays also increases the quality of the crops, and sprays only occur when the crops require them, providing further protection to the plant. This regular oversight of the blueberry fields by the sensor provides greater preventative care of the plants, thus saving money and increasing yield.

## **Assumptions**

The product itself carries with it several assumptions:

\* Timely Disease Control

**Persistent operation of moisture sensor ensures instant detection of unfavorable conditions for blueberry fields, and perfectly timed fungicide solution administration.**

\* Cost-Effective, Healthy Crops

The moisture sensor contributes to an ideal environment for growing yields with the maximum volume of viable crops, ensuring prevention of fungal infections and a larger crop of healthy product.

\* Environmental Friendliness

The fungicide is specially formulated to minimize risk to crops, and moisture sensor system administers single spray of minimally required fungicide to accomplish fungus prevention. This also prevents potential harm to other plants, animals and humans in the environment, as well as the water supply.

\* Better Crop Management in Aging Field

Fields which are aging can benefit from the moisture sensor system, as it allows for greater yield due to infection prevention even as nutrient levels in a well-used field diminish.

\* Risk Prediction for Fungal Infections

**The sensor system can accurately predict fungal infections, thus minimizing the risk of infection in crops overall.**

Future/Other Potential

In addition to the current applications of the lowbush blueberry moisture sensor for eliminating fungal infections in this one particular crop, the

technology itself has many unique possibilities for future growth and evolution of the company.

First, remote communications can be applied to the moisture sensor to provide added utility to blueberry farmers and growers, who often have crops that are in remote locations in forested areas that are difficult to reach. Due to the automated nature of these sensors, crop maintenance can be monitored and dealt with in a much more hands-off basis, allowing growers to successfully prevent fungal infection from remote locations. This would cut down travel time and overhead substantially for growers, thus making them an incredibly tempting incentive. If remote communications technology were applied to the moisture sensor, the utility of the product would increase substantially, along with its value to growers (Li et al., 2010).

Farming techniques can be changed and made more efficient with the help of these moisture sensors - if connected to satellite communications systems as previously mentioned, these sensors can provide farmers with accurate, up-to-date information on the status of their crops' environment, allowing them to change and control it as they see fit (Li et al., 2010).. Applying the range and scope of these controls to larger production areas would also increase the return on investment, as growers would require fewer sensors to cover larger fields.

The moisture sensors themselves could also be applied to other crops; depending on the fungicide required and the specific environmental conditions of the crop, the moisture sensor can be used to monitor all manner of broad-leafed crops, including strawberries, apples, potatoes, etc. The sensors already show great success with attacking to broad-leafed



crops, thus making them easily adaptable to these other plants. This would further increase the utility of these sensors, and create a wider range of use, opening up the market to other types of farmers/growers.

## **Development / Timeline**

In the long run, the development timeline of these sensors is estimated to last one year in duration. The development of the product itself will follow a strict timeline:

Stage 1 (Months 1-2): The product is introduced to the organization itself, where testers will evaluate the product and verify the efficacy of its use.

Stage 2 (Months 3-4): Field testing of the product will commence, permitting testers to observe the sensors during in-house testing. The results of this testing will verify the operational effectiveness of the product, and its suitability for release into the market. Evaluation of findings will commence.

Stage 3 (Months 5-6): Beta testing of the product will commence, with a small beta sample group of growers who agree to test the sensors in their own fields. Observers will record the effectiveness of the sensors during these trials, and evaluate findings. If results are sufficiently encouraging, licensing, patenting and eventual release of product will commence.

Unless otherwise instructed by the manufacturer's literature, the sensors should only be applied to the fields during good weather, as they may be prone to freeze or otherwise malfunction in the face of inclement conditions. Annual removal and replacement of the sensor is imperative in order to maintain efficient operation (Li et al., 2010)..

## COMPETITION

### Identification of Competition

In order to determine the feasibility of the Lowbush blueberry moisture sensor as a product, we must examine the current saturation of the market in these same products. One of the biggest competitors on the market is Agriculture and Agri-Food Canada (AAFC), a government research institute which has already created Lowbush blueberry moisture sensors that have been successfully developed and utilized in the market (AGR. gc. ca, 2013). However, apart from this international and government-based solution, Lowbush blueberry moisture sensors as a specific product is virtually untapped.

When the market for soil moisture sensors is widened to general use, however, there are a few other competitors to work with. The GroPoint TDT System released by L'Eau Below, a New Zealand-based company, acts similarly to our proposed product system, though it works more to solve irrigation issues than fungal issues (L'Eau Below, 2013). They are but one of many national and international suppliers of soil moisture sensors and other agribusiness equipment, all of whom may provide at least indirect competition with us within the market (Sowacs. com, 2013). However, the specific purpose of the Lowbush blueberry moisture sensor (i. e. fungal infection detection/removal) makes it unique within the market, and fulfills a niche that many of these suppliers/other sensors cannot quite provide (Li et al., 2010).

## Survey of Competition

The advantages of the existing competition include a lack of a significantly competitive market for this specific product. There are but a few large suppliers operating in the Americas and Canada who can provide these specific types of moisture sensors; this creates favorable market conditions that can be taken advantage of quickly and effectively.

The disadvantage of this level of competition includes a greater control of the market by a few well-established companies and organizations. Because of their ubiquity and their control of the market, growers and farmers are much more likely to invest in their products due to name recognition, greater experience in the field, and established infrastructure to deal with customer needs where these specific products are concerned. Given the existing competition, it is possible to make inroads into the market, but expectations should be measured regarding timelines for market domination.

## FINANCIAL

### 3 Year Financial Assumptions

### **The following represents the projected profits of the Blueberry moisture sensor over the next three years:**

Figure 2: Projected 3 Year Financial Assumptions (Lowbush Blueberry Moisture Sensor)

In Year 1, profits are projected to be the lowest, as production will be high and the selling price per unit will be the lowest (in order to encourage sales).

Year 2 will see substantial reductions in product cost, as much of the initial infrastructure required to produce the sensors will have been taken care of in Year 1; however, labor costs will increase as more workforce is hired to

accommodate projected demand. In Year 3, production will substantially increase to meet demand, thus increasing product and labor costs; this will be accompanied by increased product sale price and higher profit income per unit.

## **RECOMMENDATIONS**

- Greater research is required to more fully understand the possible demand for moisture sensors for blueberry growers/farmers.
- Comprehensive coverage and investigation of competitors, pricing points, market shares, advertising budgets, etc. must be performed to determine how best to compete within new market.
- Logistics and infrastructure required to manufacture/outsource production of blueberry moisture sensors must be determined.
- Focus group market research must be performed to determine blueberry growers' willingness to adopt moisture sensors into growing regimen.
- Safety and efficacy of product must be determined, as well as cost-effectiveness of production.
- Public relations inroads, interviews and advertising efforts must be initiated to shift demand towards our product.
- Division/department heads and project personnel must be allocated exclusively to this project; operating budget must also be determined.
- Feasibility of proposed timeline and development plan must be determined.

## **EVALUATION**

### Timeline

In evaluating the implementation of these moisture sensors into the

company's product like, key stakeholders need to be consulted and a strictly followed timeline must be followed:

### **Phase One (Months 1-2): Product screening, identification, review/approval; inclusion in manual budget**

Phase Two (Months 3-4): Selecting and assigning personnel to developing product, establishing team guidelines, program requirements/specifications, pricing and sales forecast, etc. Financial analysis and department plans for product in market should also be completed.

Phase Three (Months 5-8): Product qualification process (testing and approval or manufacturing readiness); approval for start-up funding for production of goods

### **Phase Four (Months 9-12): Product manufacturing cycle: maintain responsibility for product, review financial security, continuation/potential withdrawal of product.**

Evaluation Criteria

Economic Performance

The blueberry sensor is an exclusive product that has a very specific niche market (blueberry growers), is extremely expensive but essential to effective crop growth (Kizito et al., 2008). Therefore, it is projected to perform well in the market.

### **Economic Impact**

The product is shown to have a positive impact on the economy, as it would help to maintain a currently-thriving and profitable industry (USDA, 2012).

Reducing the number of crops being lost to fungal infection would result in a

higher yield and return on investment for blueberry growers, thus creating an incentive to purchase (Li et al., 2010).

### **Business Efficiency**

The product is designed to be highly efficient, and therefore cost and profit factors would have to be highly considered. In essence, sales of individual units would be slightly lower due to the durability and long-lasting nature of the product, which must be reflected in price (L'Eau Below, 2013). If appropriate pricing models are created, it is possible to maintain business efficiency with the manufacturing and release of this product.

### **Financial Stability**

In terms of financial stability, this moisture sensor, if appropriately priced, could provide substantial profit from blueberry growers in a \$71 million industry (\$56 million in Canada) - a huge market that is untapped by but a few companies (USDA, 2012; AGR. ca, 2012).

### **CONCLUSION**

In conclusion, it is recommended by this report that we commence measures to adopt the lowbush blueberry moisture sensor into our product line. Given the efficiency of the product, its incredibly valuable utility in an relatively untapped market for a specific niche (blueberry growers/farmers), and the speed at which it is possible to release this product, the profitability of these sensors is quite high. The market size is small, but the importance of the product to that market is high, thus ensuring a greater percentage of potential customers within that market. The durability and essential utility of this product also allows for a high selling price, which will bring about a

greater profit margin. Three-year financial estimations indicate that production and profits will increase substantially by the third year, ensuring business efficiency and financial stability for the company.

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