January 14, 2021

Zacks Small-Cap Research

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Marrone Bio Innovations, Inc. (MBII-NASDAQ)

Management's strategic expansion in international and seed treatment markets helped drive the 26.8% increase in product revenues in the 3rd quarter

A discounted cash flow (DCF) model that applies a 12.5% discount rate and a terminal price-to-sales ratio (P/S) of 0.52 (which is the average P/S ratio of a large agricultural products company) indicates a NAV share price target of $2.11.

Current Price (01/13/21)	$1.28
Valuation	**$2.11**

OUTLOOK

Marrone Bio Innovations is the only pure play in the growing **ag biologics** space, a market that includes biopesticides, biostimulants, bionutrients, bio-disinfectants and plant health. The biologics market is the **highest growth segment** in the agricultural business with an expected CAGR in the 13%-to-18% range.

Management's strategy is focused on new products, product extensions, seed treatments, row crops and plant health coupled with international expansion, acquisitions and strategic alliances. The company's R&D efforts have resulted in a **large patent & patent pending portfolio** (over 590 globally).

SUMMARY DATA

52-Week High	**$1.59**
52-Week Low	**$0.62**
One-Year Return (%)	**24.27**
Beta	**0.25**
Average Daily Volume (shrs.)	**263,660**
Shares Outstanding (millions)	**152.5**
Market Capitalization ($mil.)	**$195.2**
Short Interest Ratio (days)	**6.33**
Institutional Ownership (%)	**79.3**
Insider Ownership (%)	**0.91**
Annual Cash Dividend	**$0.00**
Dividend Yield (%)	**0.00**
5-Yr. Historical Growth Rates	
Sales (%)	**33.0**
Earnings Per Share (%)	**N/M**
Dividend (%)	**N/M**
P/E using TTM EPS	**N/M**
P/E using 2020 Estimate	**N/M**
P/E using 2021 Estimate	**N/M**

Risk Level	**Above Average**
Type of Stock	**Small - Growth**
Industry	**Ag. Chemicals**

ZACKS ESTIMATES

Revenue
(millions of $)

	Q1 (Mar)	Q2 (Jun)	Q3 (Sep)	Q4 (Dec)	Year (Dec)
2018	$4.32 A	$5.75 A	$5.43 A	$5.72 A	$21.22 A
2019	$8.72 A	$7.00 A	$6.97 A	$6.69 A	$29.37 A
2020	$9.65 A	$12.18 A	$8.80 A	$9.36 E	$40.02 E
2021					$55.50 E

Earnings per Share
(EPS is operating earnings before non-recurring items)

	Q1 (Mar)	Q2 (Jun)	Q3 (Sep)	Q4 (Dec)	Year (Dec)
2018	-$0.04 A	-$0.04 A	-$0.04 A	-$0.07 A	-$0.20 A
2019	-$0.04 A	-$0.06 A	-$0.14 A	-$0.08 A	-$0.32 A
2020	-$0.05 A	-$0.02 A	-$0.04 A	-$0.04 E	-$0.15 E
2021					-$0.09 E

Quarterly revenues & EPS estimates may not equal annual numbers due to rounding.
Annual EPS is impacted by changes in share count during the year.

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RECENT NEWS

Third Quarter 2020 Financial Results

On November 9, 2020, Marrone Bio Innovations reported financial results for the third quarter ending September 30, 2020. **Total revenues** increased to approximately $8.83 million, **up 26.7%** versus the comparable quarter last year. Product revenues increased 26.8% to approximately $8.70 million, primarily driven by management's strategic expansion in seed treatments and international expansion, along with the continued expansion of Regalia and Venerate. Royalty revenues were approximately $131,000.

Cost of product revenues increased 13.2%, a rate less than increase in sales, which expanded the **gross profit margin by 520 basis points to 56.7%** versus 51.5% in the comparable quarter last year due to an improved mix of sales in high-value markets. Gross profit expanded by 39.5% to approximately $5.0 million.

Total operating expenses declined 21.8% versus the comparable quarter last year to $10.45 million, primarily as a result of non-re-occurring acquisition-related and litigation expenses incurred in the third quarter of 2019, but also due to the cost savings measures undertaken in response to the COVID-19 pandemic (e.g. the restriction of non-essential travel). The reductions in operating expenses were partially offset by additional operating expenses from the acquisition of Pro Farm. Consequently, the operating expense ratio declined 7,342 basis points to 118.3% versus 191.8% in the third quarter of 2019.

For the third quarter, Marrone Bio reported a **net loss** attributable to shareholders of $6.06 million (or **$0.04 per diluted share**).

As of September 30, 2020, working capital was approximately $1.07 million, a $435,000 improvement from the year ending on December 31, 2019. A healthy level of cash and cash equivalents of approximately is $8.70 million appears sufficient to fund operations for the next 12 months. Thus far in 2020, **shares outstanding have increased by 9.3%** to approximately 152,475,000 shares **since December 31, 2019**.

On the conference call, the recently appointed CEO, Kevin Helash, emphasized that the double-digit sales growth is being achieved through deliberate strategic shifts, including by focusing on **international expansion** and **seed treatments for row crops**. The quarter's 56.7% gross margin was in line with the annual target in the mid-50% range, and the management continues to concentrate on managing operating costs in order to reduce the company's operating expense ratio.

Shareholder Letter and Operational Update

On October 19, 2020, Marrone Bio Innovations released a letter to shareholders and provided an operational update. The recently appointed CEO, Kevin Helash, outlined the Marrone Bio's growth strategy of **building the scope of the company's biologicals platform** to better address the higher growth segments in the biologicals space in order to **drive revenue growth**. In addition, management is **targeting an annual gross margin in the mid-50% range**. Ultimately, through operational excellence, the company should attain profitability by growing revenues and gross profit at a faster rate than operating expenses.

Top-line growth will be achieved through international expansion, the acquisition of new product lines and the in-house development of next-generation products and formulations.

- **Grow sales of the company's existing products domestically** by **crop expansion**, implementing the **BioUnite** strategy (that targets traditional growers) and selling additional products to existing customers. Also grow sales i**nternationally** by expanding distribution into certain targeted countries.
- Expand revenues through the **additive sales from the newly acquired Pro Farm products**
- Continue to **develop next-generation products and formulations** by selectively focusing on novel and efficacious biologically-based crop plant protection, nutrition and health products.

Management is reviewing the company's R&D pipeline in order to identify the higher-potential projects in terms of revenues, internal rates of return and net present values.

RECENT STRATEGIC ALLIANCES

Strategic Alliance with Rizobacter (a subsidiary of Bioceres Crop Solutions)

On September 15, 2020, Marrone Bio Innovations and Rizobacter signed an **exclusive agreement** to distribute a foliar fertilizer and plant health technology in Argentina, Uruguay, Paraguay and Bolivia. Rizobacter was acquired in 2016 by and is now is a subsidiary of Bioceres Crop Solutions (NYSE: BIOX), a leading company in the development, manufacture and commercialization of biological solutions for agricultural operations in 31 countries.

Founded in 1980, **Rizobacter is an established supplier of biopesticides and biostimulants in Argentina, Uruguay, Paraguay and Bolivia**, a well-known region of extensive soybean, corn and wheat production. Rizobacter has a significant commercial presence with a robust distribution network in the South American agriculture market with a current focus on biologicals and crop solutions that will improve plant health through improved nutrition thereby increasing yields.

This strategic alliance creates **a platform from which Marrone Bio's specific biologics can be deployed throughout the southern cone of South America**, particularly for row crops. There is increased farmer awareness and adoption of biopesticides and biostimulants in the region, where the estimated market value is US$1 billion with a projected 11% CAGR.

Strategic Alliance with Vive Crop Protection

On August 6, 2020, Marrone Bio Innovations and **Vive Crop Protection** (the owner of the patented Allosperse® Delivery System) entered into an agreement for the purpose of combining Marrone Bio's biologicals platform with **Vive Crop's** proven conventional chemical products and also **utilizing Vive Crop's Allosperse Delivery System** in order to **create a suite of enhanced crop protection products**.

The partnership's first product will be **AZterknot™ FC**, a fungicide for broad crop use. AZterknot FC will combine the active ingredients of Marrone's Regalia® (Reynoutria sachalinensis extract) and Vive Crop's AZteroid® FC 3.3 (azoxystrobin). AZterknot FC will also utilize Vive Crop's Allosperse Delivery System technology. This first product combines three approaches to crop protection (biologicals, chemistry and nanotechnology) to better control disease, enhance plant health and further increase yield. AZterknot FC is the first premix BioUnite launch for a Marrone Bio active ingredient.

Management expects to **launch AZterknot FC in the U.S. after EPA approval is granted** for foliar and in-furrow application on all major crops, which is **anticipated to be in mid-2021**. Marrone is also seeking approval for specialty crop growers.

Exclusive Agreement with UPL for Distribution of REGALIA® MAXX in South Africa

In June 2020**,** Marrone Bio Innovations and UPL (the fifth largest agricultural solutions company with presence in 130 countries) entered into an **exclusive commercial distribution agreement** for UPL to distribute **REGALIA® MAXX** biofungicide in the **Republic of South Africa**.

Major crops in the Republic of South Africa are table grapes and grape wine with over 120,000 hectares in production. A major problem for South Africa's grape crops is **Botrytis**, also known as grey mold. Botrytis is comprised of several species within the Sclerotiniaceae family and has approximately 30 strains; there is no crop that is resistant to these fungi. In North America and Europe, REGALIA MAXX is a significant solution for mold control on grapes by both improving yield and harvest quality.

RECENT REGULATORY APPROVALS

U. S. and Canadian Approvals for Use of REGALIA® MAXX on Hemp

On January 7, 2020, Marrone Bio Innovations received **approval from the U.S.** Environmental Protection Agency (EPA) **for the use of Stargus and Regalia**, both biofungicide products, **on hemp** for both indoor and outdoor use. REGALIA also is approved for use on cannabis in California (USA), which has the largest acreage of organic farming in the Unites States.

On May 14, 2020, Marrone Bio Innovations received the **approval from the Ontario Ministry** of Agriculture, Food & Rural Affairs **for the use of REGALIA MAXX** biofungicide on cannabis and hemp (two varieties of cannabis sativa) **in Canada**. Hemp and lifestyle cannabis are legal in Canada; however, both crops are regulated by Health Canada, under several tiers of activity (cultivation, wholesale distribution, retail distribution, processing, etc.). Since the majority of hemp and cannabis grown in Canada is certified as organic, chemical treatment options are limited and biologicals have a competitive advantage. REGALIA® MAXX is already available in Canada for use on several other crops, and is currently obtainable in Ontario and British Columbia.

Cannabis/hemp is susceptible to **powdery mildew**. It can destroy complete crops and increases the plant's vulnerability to other diseases. If hemp plants are not treated as soon as it is detected, powdery mildew spreads very quickly throughout the crop. The early use of REGALIA MAXX strengthens the plant by triggering immune responses as well as inhibiting powdery mildew from growing and spreading through germinating spores.

U. S. Approval for Use of Pacesetter™ on Corn, Soybean and Wheat Crops

On February 2020, Marrone Bio Innovations received **approval from the U.S.** Environmental Protection Agency (EPA) **for the use of Pacesetter** as a plant health product **on corn, soybean** and **wheat crops**. By April, Marrone Bio pre-launched Pacesetter for the upcoming growing season in the United States.

As a plant health product, Pacesetter acts in a complementary manner with conventional fungicides improving yield by the promotion of root growth and an increase in chlorophyll production, both of which improve plant health and vigor. Pacesetter's active ingredient is a plant extract from Reynoutria sachalinensis (Giant Knotweed), which activate a plant's internal defense system preventing the growth of certain fungi, particularly powdery mildew and gray mold. **In field trials**, the use of Pacesetter in a grower's standard fungicide program, the incremental yield has been up to seven bushels per acre for soybeans and up to 13 bushels per acre for corn.

The months for the application of fungicide products are usually June/July for corn; May/June for soybeans and May/June for wheat. Generally, products are purchased about a month in advance and are applied to the leaves by both ground and aerial spraying of water-based suspensions at application rates of between 6 and 12 ounces per acre.

In the United States the "normal" (depending on rain, snow and heat conditions at the time of planting) acres under cultivation are 80 million acres under corn; 75 million under soybeans and 62 million under wheat (USDA data), but there is significant variability in reported data from various sources and acres planted each year depend on prior year prices, current prices, the export market, current inventory and many other factors.

The grower cost of Pacesetter on corn is about $5 an acre. A normal improvement in yield is about 4 bushels an acre. At this time (January 12, 2021), corn is selling for $5.17 a Bu (it peaked in price at $8.24 a Bu in 2012), average yield is about 175 Bu/acre so the monetary gain to the farmer is around $20.60 an acre at a cost of $5.

ACQUISITIONS

Acquisition of Pro Farm Technologies

On September 13, 2019, Marrone Bio Innovations acquired Finland-based **Pro Farm Technologies** OY **for $31.8 million** (comprised of $6.2 million cash and approximately 12.7 million shares of MBII). If certain commercial milestones are achieved between 2021 and 2024, up to $7.5 million worth of additional MBII shares would be issued under the terms of earn-out provisions.

Pro Farm, now a wholly owned subsidiary of Marrone Bio, has developed and sells **plant bionutrients** and **growth biostimulants** that are based on lignin, a byproduct extracted from the pulp waste stream created during the paper production process. These bionutrients and biostimulants utilize (as its base) organic lignin polymers (in combination with other nutrients in a proprietary process) for both **seed treatments** and **foliar (leaf) treatments**.



Pro Farm's technology employs a **mode of action**, which stimulates plant growth and improves plant health in numerous row and specialty crops, such as wheat, corn, soybean, sunflowers, rape seed (canola), sugar beets and many vegetables. Consequently, yields are improved and crop quality is enhanced. Pro Farm's technology is **complementary to and compatible with Marrone's entire product portfolio**.

Pro Farm also expands the geographical reach of Marrone Bio Innovations. Pro Farm has a **global distribution network** that services many agricultural production areas. With offices in Finland, Estonia, Uruguay and Brazil, Pro Farm has particular distribution strength in EMEA (Europe, Middle East and Africa), CIS (Commonwealth of Independent States) and South America.

Just prior to the acquisition, Pro Farm enters into a long-term, **exclusive commercial agreement with Corteva Agriscience in Europe**. Under the agreement, Pro Farm and Corteva Agriscience will develop and commercialize **biological seed-treatment products**, initially for corn, sunflower and rapeseed (used for canola oil).

Since Pro Farm's gross margin is significantly higher than Marrone's, management expects Pro Farm to be accretive to net income and cash flow in 2020.

Acquisition of Jet-Ag and Jet-Oxide Product Lines

On September 9, 2019, Marrone Bio **acquired the Jet-Ag® and Jet-Oxide® product lines** from Austin Grant, Inc (d/b/a Jet Harvest Solutions) for approximately $2.534 million in cash, plus cash payments under the terms of earn-out provisions based on certain future sales purchased through a specified supplier over the next five years (through 2024). Two years prior to this transaction, Marrone and Jet Harvest Solutions had entered into a distribution agreement.

Jet-Ag and Jet-Oxide are broad-spectrum liquid formulations for use as **biofungicides** (to control fungal mold and bacteria on specialty agricultural and field crops) and as **agricultural disinfectants (**to sanitize greenhouse surfaces, agricultural equipment & machinery and post-harvest storage facilities as well as to disinfect irrigation systems and drainage ditches). Jet-Oxide is used to treat both raw, unprocessed fruits and vegetables and fruits & vegetables during storage. Jet-Oxide is environmentally friendly since the product biodegrades over time.

These agricultural bioprotection products utilize the active ingredient of peroxyacetic acid (aka peracetic acid), an organic peroxide known for its capability to sanitize and disinfect. The products are currently available in the U.S.

Since gross margins of Jet -g and Jet-Oxide are similar to Marrone's, the product lines are expected to increase the company's revenues and become accretive to earnings by 2021.

Subsequently, in March 2020, the EPA approved **Jet-Oxide 15% Sanitizer** for **use in the food industry against the human coronaviruses** on hard surfaces (metal, plastics and glass) where strains of the coronavirus have been known to survive up to several days.

KEY POINTS

1. Founded by Dr. Pamela Marrone Ph.D. in 2006, Marrone Bio Innovations is the only pure play in the **biopesticide market**. All other biopesticide companies are either subsidiaries of large agricultural companies or small, privately-owned entities.
    - The biopesticide market is **segmented** into three primary categories: **bioinsecticides/ bionematicides**, **biofungicides** and **bioherbicides**
    - Dr. Marrone was the founder of AgraQuest Inc. (which was acquired by Bayer in 2012) and a founder of Entotech, Inc.
2. Management is focused primarily in the **biopesticide** and plant health (growth stimulant) markets.
    - Marrone Bio Innovations is not a fertilizer company.

- It is estimated that without the use of pesticides, the potential loss of worldwide crop production could be as much as 37% in dollar terms. The use of pesticides reduces the loss to about 14%. Pesticides are essential on a worldwide basis.

3. Biopesticides are NOT based on traditional or synthetic chemicals, but rather derived from naturally occurring substances, compounds and micro-organisms.
    - The phase-out of current chemical pesticides due to health concerns and potential damage to the environment opens the door to new, more selective biopesticides. The company's products are environmentally friendly
    - Biopesticides do not stimulate pest resistance, which does not occur with many chemical pesticides
    - All of Marrone Bio's current products (except Haven and UBP brands) are certified for organic food production.
        - A macro-trend towards increased cultivation of organic qualified crops is driving incremental growth in the agricultural sector
4. Strategic Alliances
    - **Rizobacter** (a subsidiary of Bioceres Solutions Inc. NYSE: BIOX) in September 2020
        - **exclusive agreement** to distribute a foliar fertilizer and plant health technology in Argentina, Uruguay, Paraguay and Bolivia
        - creates **a platform from which Marrone Bio's biologics can be deployed throughout the southern cone of South America**, particularly for row crops
    - **Vive Crop Protection** in August 2020
        - expected **to create a suite of enhanced crop protection pre-mix products** based on the BioUnite strategy, starting with **AZterknot™ FC**, a fungicide for broad crop use
        - **awaiting EPA approval** for foliar and in-furrow application on all major crops; approval on the Federal level is anticipated to be in mid-2021
    - **Compass Minerals** (NYSE: CMP) - May 2019
        - Collaborative research effort to develop products that utilize microorganisms to enhance the nutrient uptake by plants
    - **Albaugh LLC** - exclusive agreement signed in August 2016
        - entered into strategic collaboration in January 2017
        - Venerate technology used in Albaugh's BIOst™ biological seed treatment platform (a broad portfolio of biological seed treatments)
        - expanded reach into row crops (cotton, soybeans, corn and wheat)
5. Acquisitions
    - **Pro Farm** in September 2019
        - Added **bionutrients** and **biostimulants** that utilize organic lignin as its material
        - Augmented seed treatment portfolio (corn, soybeans, sunflower and canola)
        - Pro Farm's **global distribution network** expanded Marrone's geographical footprint
    - **Jet-Ag** and **Jet-Oxide** product lines in September 2019
        - Added peroxyacetic acid-based products for use as **fungicides** and **agricultural disinfectants** to Marrone's portfolio of products
6. Marrone Bio Innovations has a strong, patent protected series of products that have been introduced over the last ten years.
    - As of December 31, 2019, Marrone holds 53 U.S. and 396 foreign patents with 23 U.S. and 105 foreign patents pending. During 2020, an additional 5 U.S. and 28 foreign patents were granted.
7. Marrone Bio has vertically integrated manufacturing facilities in Bangor, Michigan (just north of I94 and east of Lake Michigan). The facility has three 20,000L fermentation tanks (total capacity of 15,850 gallons), mixing tanks and centrifuges that are currently used for the production of Regalia, Grandevo and Zequanox. The facility is scalable. Contracted capacity of 50,000L is available, if needed.

8. Management's **BioUnite™ strategy** harnesses the power of biological products with the performance of conventional chemistry.
    - Launched in the spring of 2019, BioUnite is a science-based pest management program that integrates biopesticides with conventional chemical pesticides. By adding biologicals to traditional chemical tank mixes, the value-added product improves both crop quality and crop yield. In field trials, it has been demonstrated that the combination of biological products and chemical pesticides are more effective than either treatment alone.
9. The company continues to **build awareness** by attending **Analyst Conferences**:
    - Bank of America Global Agriculture and Materials Conference (February 26, 2020)
    - SNN Planet MicroCap Showcase 2020 Virtual Investor Conference (April 22, 2020)
    - 2020 Virtual Investor Summit (June 9, 2020)
    - Canaccord Genuity 40th Annual Growth Conference (August 12, 2020)
    - LD Micro 500 Virtual Conference (September 2, 2020)
    - H.C. Wainwright 22nd Annual Global Investment Conference (September 14, 2020)

MANAGEMENT'S STRATEGY

Management's **multi-faceted strategy** seeks to benefit from positive global trends prevalent in the agricultural industry. The demand for biologicals (biopesticides, biostimulants and bionutrition) is growing at a substantially higher rate than conventional Ag products (chemicals for pest control and fertilizers for plant nutrition). This increased demand comes both from growers that acknowledge the benefits of biologics and consumers that increasingly prefer sustainably produced, organic food.

Management's strategy entails:

- **adding new products** to the company's product portfolio
    - through **internal R&D**
    - by **acquisitions** and
    - via **strategic collaborations**
- broadening **the commercial applications** of existing products and
- **globally expanding the distribution** of all products under the company's control

Before delving deeper into the company in terms of products, applications and distribution, it is important to emphasize the complexity of the agricultural sector and parse out the various categories by which the space is analyzed.

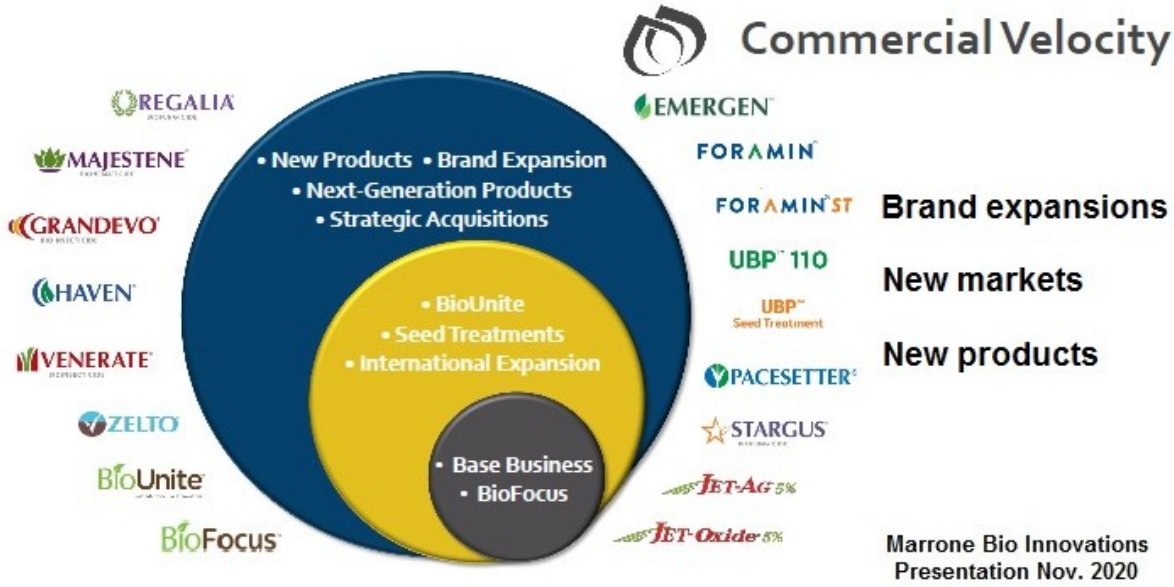
The core competency of Marrone Bio Innovations is the ability to manage **multiple product lines** (Regalia, Grandevo, Venerate, UBP Seed Treatment among others) in **varying categories** (biofungicides, bioinsecticides, bionematicides, mollusicides, seed treatments and plant health) addressing **several distinct crop groups** (row crops, fruits/vegetables, trees/nuts/vine and greenhouse-grown) over **different geographies** (North America, EMEA/CIS, Latin America and APAC) in a **seasonal business**. Management has selectively entered collaborations with third parties and completed acquisitions in order to both improve the efficacy of its product lines and expand into related categories, while also increasing the company's geographical reach by augmenting its distribution network.

Management is embarking on the complex task of pursing revenue growth through brand extensions, new products and new markets, which will by simultaneously **shift the company's mix** by **product category**, targeted **crop groups** and **geographic regions**.

Management plans on executing its strategic plan through:

- **go-to-market programs** that promote the company's current commercially available products
- **acquisitions** that add already commercialized products to the company's portfolio
- the continuation of R&D efforts in order to **advance promising product candidates** and
- **international expansion** via acquisitions and strategic alliances

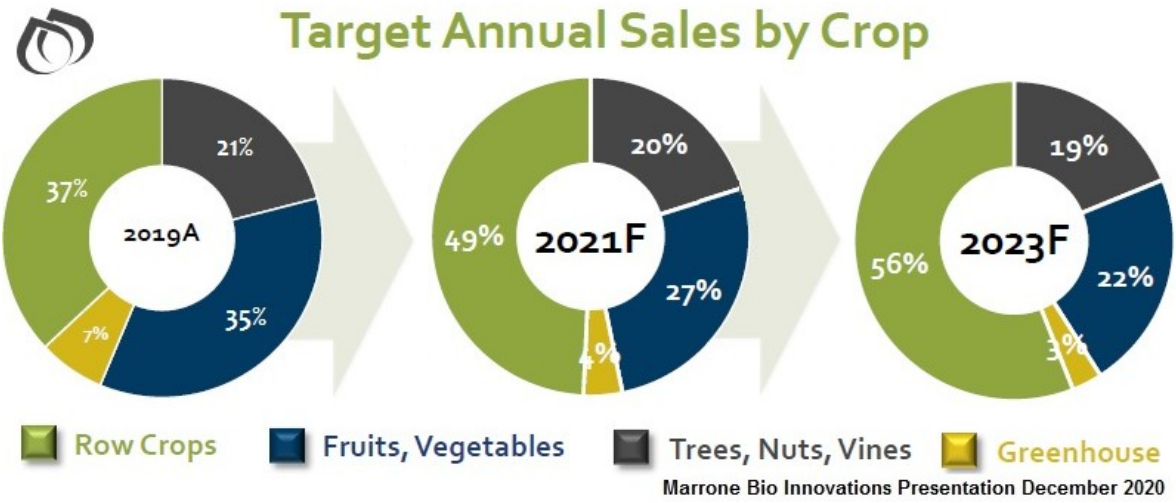
At the same time, management continues to reduce expenses by focusing on improving operating efficiencies.



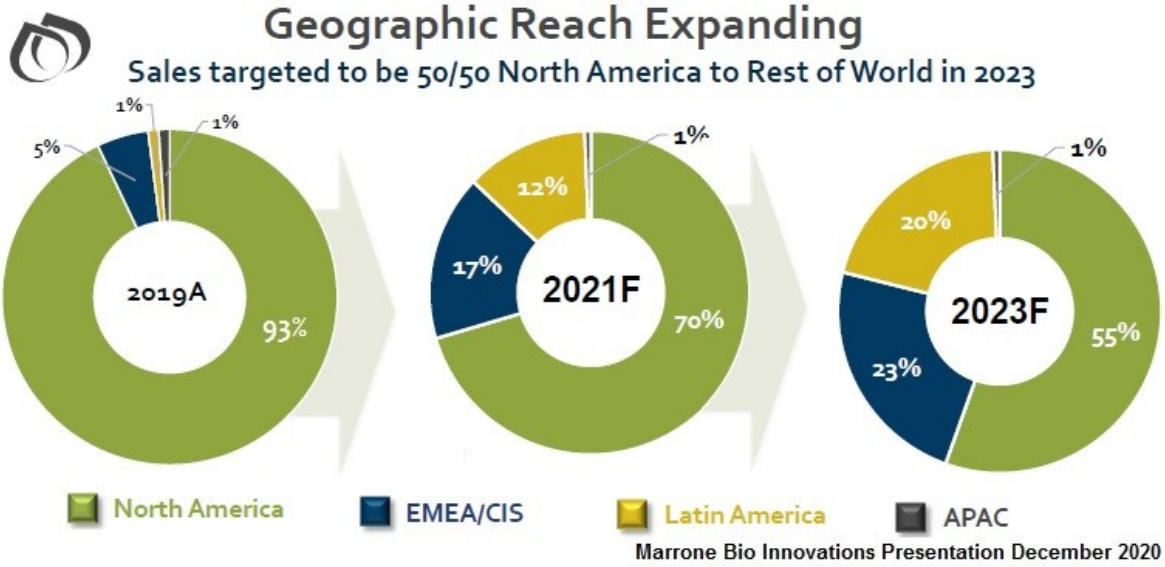
In terms of product categories, **seed treatments** and **plant health** (bionutrition and biostimulant products) are **being emphasized** and are expected to contribute to a larger percentage of sales. **Seed treatments** are projected to grow from 35% of sales in 2019 to 45% in 2023 while **plant health** is expected to expand from 0% to 14% of sales. As a result, the company's successful older products in the categories of biofungicide, bioinsecticide and bionematicide will be a smaller percentage of a growing base of revenues.



Over the last few years, management's emphasis on **seed treatments** and **row crops** became apparent in January 2017 by entering a **strategic collaboration with Albaugh LLC** that targeted the seed treatment market for row crops, such as cotton, soybeans, corn and wheat. Subsequently, in 2018, Albaugh launched its BIOst™ biological seed treatment platform which provides a broad portfolio of biological seed treatments that utilize Marrone's Venerate technology.



Continuing to strategically focus on **seed treatments for row crops**, **plant health products** and **international expansion**, in September 2019, Marrone Bio **acquired Pro Farm**. The acquisition provides four commercial bionutrients/biostimulant products (based on lignin) for the treatment initially on row crops (corn, soybeans, sunflower and canola), along with a **global distribution network**.

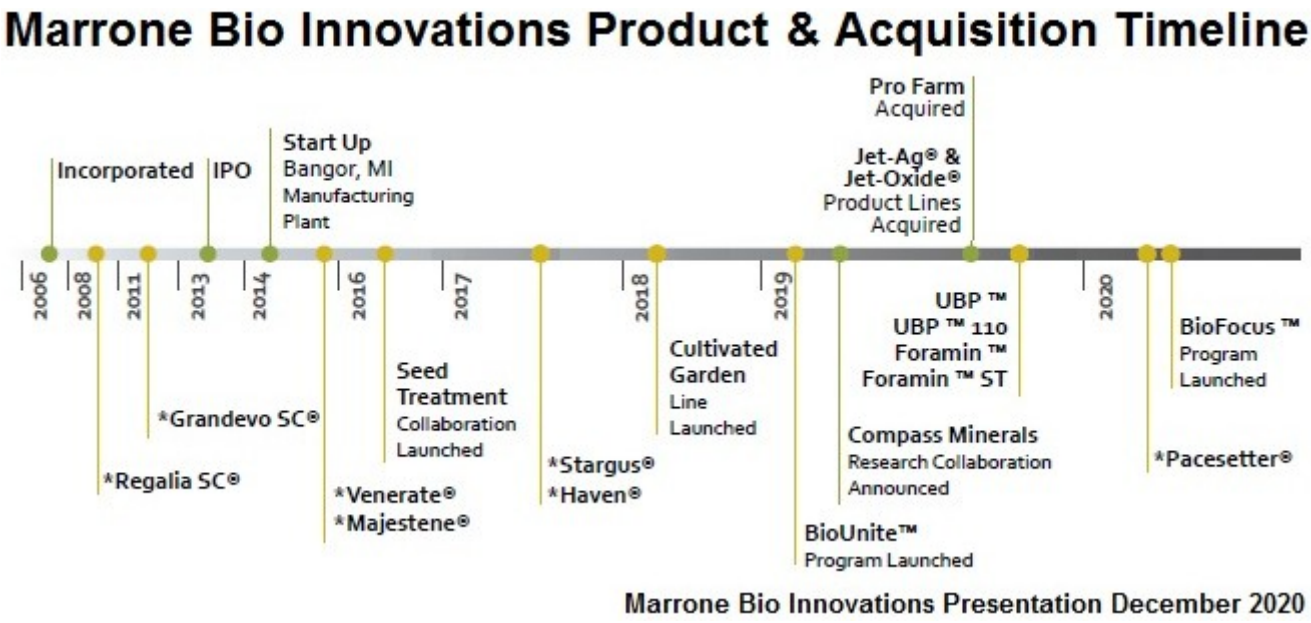


Programs

Launched in 2018, **Cultivated Garden** is a program geared toward the greenhouse and ornamental markets, along with cultivators of cannabis and hemp. The program presents Marrone's bioprotection portfolio of products (Regalia CG, Grandevo CG, Venerate CG, Stargus and Jet-Ag) in a format geared to the education of customers about controlling pests, improving plant health and increasing crop yields in order to generate additional sales. Cultivated Garden has bolstered since 2018.



Launched in the spring of 2019, **BioUnite** integrates Marrone's biopesticides with conventional chemical pesticides, a program that improves yield and the return on investment for growers. By adding Marrone's biopesticides to traditional chemical tank mixes, the value-added product improves both crop quality and crop yield. The combination of biological products and chemical pesticides been demonstrated in field trials to be more effective than either treatment alone.



Internally Developed Products

Through internal R&D at the company's Davis California facilities, Marrone Bio has commercially launched Regalia (2008), Grandevo (2011), Venerate (2014), Majestene (2015), Haven (2017) Stargus (2017), Zelto (2018), Zequanox (2018) and Pacesetter (2020).

The product brands that are the major contributors to the company's revenues are **Regalia**, **Grandevo**, **Venerate** and **UBP Seed Treatment**, which also have higher gross margins. Majestene, Stargus, Foramin, UBP-110, Jet-Ag and Jet-Oxide brands also generate significant product sales.



Generally, an agricultural biological product requires several growing seasons (with the appropriate climatic conditions) to generate significant revenues. These growing seasons can be in the form of small-scale field tests, initial farmer trials, larger-scale field trials and finally seasons of broader acceptance by farmers.

Regalia, Grandevo and Venerate are clearly in the period of generating meaningful revenues. The UBP Seed Treatment brand entered the product portfolio through the Pro Farm acquisition. Though achieving some level of sales in 2019 and 2020, Majestene, Haven, Stargus, Amplitude and Zelto are on the verge of contributing a more important impact to Marrone's revenue base and future growth.

Marrone Bio Innovations, Inc.

Internally Developed Products

Year	Product	Function	Major pests	Target crop markets
2008	Regalia	Fungicide	fungal diseases (powdery mildew)	Fruit, cannabis, hemp
2012	Zequanox	Molluscide	zebra & quagga mussels	Power plants, industrial plants
2014	Grandevo	Insecticide	mites, insects (thrips & aphids)	Fruit, vegetables, cannabis
2014	Venerate	Insecticide	mites, insects (thrips & aphids)	Fruit, nuts, cannabis
2015	Majestene	Nematicide	parasitic root-feeding nematodes	Corn, soybeans, cotton
2017	Haven	Stimulant	excess sunlight & heat stress	Almonds, citrus
2017	Stargus	Fungicide	downy mildew & white/gray molds	Leafy greens, grapes, berries
2017	Amplitude	Fungicide	white mold & soil diseases	Beans, dried beans (pulse crops)
2018	Zelto	Nematicide	parasitic nematodes on turf	Turf, golf courses
2020	Pacesetter	Plant health	root growth & chlorophyll production	Row crops: corn, soybean, wheat

Regalia

Introduced in 2008, Regalia is a biofungicide that helps control plant disease and increase plant health, and as a result, promotes plant vigor, improves yield and harvest quality. The **active ingredient** of Regalia is an **extract of giant knotweed** (*Reynoutria sachalinensis*), which activates a plants natural defenses.

Regalia is particularly effective against **powdery mildew** and is also effective managing a broad spectrum control of fungal plant diseases (alternaria fruit rot, *anthracnose*, black spot, bud rot, crown rot, pythium blight**,** southern blight and stem rot, along with diseases caused by *botrytis, fusarium, rhizoctonia* and *verticillium*).

Regalia is most commonly applied on (listed alphabetically) berries (blackberries, blueberries, cranberries, raspberries, strawberries), citrus crops, cucurbits (cucumbers, pumpkins, squash, watermelons), fruiting vegetables, grapes, leafy greens, onions, pome fruit, potatoes, nuts (almonds, tree nuts) and tobacco.





<u>Grandevo</u> and **<u>Venerate</u>**

Grandevo and Venerate are microbial-based bioinsecticides for the control of insects and mites. The **active ingredient** of Grandevo is the dead bacteria (and cell-associated compounds) of the *Chromobacterium subtsugae strain PRAA-T* while Venerate is based on heat-killed cells of *Burkholderia rinojensis spp. strain A396*.

Grandevo is a **broad spectrum microbial-based insecticide** that affects sucking & chewing insects, flies and mites. Grandevo prompts many species of insects and mites to stop feeding and cease reproduction, thereby inducing death. The product is effective in controlling armyworms (larvae of *spodoptera*), aphids, Asian citrus psyllid (*Diaphorina citri*), mites, spotted wing drosophila (*Drosophila suzukii* – a fruit fly), thrips and whiteflies.

Grandevo can be used on a wide range of crops, including (listed alphabetically) blueberries, citrus crops, cucurbits, fruiting vegetables, grapes, leafy greens, medicinal plants, pome fruit, potatoes, strawberries and tree nuts.

Venerate is also a **broad spectrum microbial-based insecticide** that controls a wide variety of chewing & sucking insects, mites, certain weevils and soil dwelling nematodes, such as aphids,

leafhoppers, lygus, stink bugs and thrips. Venerate has multiple modes of action: it reduces egg mass formation; it interferes with the molting process between the juvenile and adult stages; it degrades an insect's exoskeleton; and in the free-living stage, it is toxic when ingested.

Venerate may be used on blueberries, citrus crops, cucurbits, fruiting vegetables, grapes, leafy greens, medicinal plants, pome fruit, potatoes, strawberries and tree nuts.

Mites & Insects Controlled by Grandevo & Venerate



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The table below is in the company's 2019 10-K. It summarizes Marrone's commercially-available internally-developed product portfolio.

Marrone Bio Innovations Product Lines

NAME	MARKET	USE	DESCRIPTION	STATUS
Regalia (liquid formulations)	Crop Protection, Home and Garden, Turf and Ornamentals	Plant Disease/Plant Health	Protects against fungal and bacterial diseases and enhances yields/quality	Commercially Available Domestically and Internationally
Grandevo (dry formulations)	Crop Protection, Home and Garden, Turf and Ornamentals, Seed Treatment	Insects and Mites	Controls a broad range of sucking and chewing insects through feeding	Commercially Available Domestically and Mexico; International Expansion Efforts Underway
Venerate (liquid formulation)	Crop Protection, Home and Garden, Turf and Ornamentals, Seed Treatment	Insects and Mites	Controls sucking and chewing insects on contact	Commercially Available Domestically and Mexico; International Expansion Efforts Underway
Majestene (liquid formulation)	Crop Protection, Turf and Seed Treatment	Plant Parasitic Nematodes/Soil-Borne Insects	Controls soil-dwelling nematodes by preventing and reducing root galls, and by reducing adult reproduction and egg hatch. Also control certain soil borne insects.	Commercially Available Domestically, International Expansion Efforts Underway
Stargus (liquid formulation)	Crop Protection, Home and Garden, Turf and Ornamentals, Seed Treatment	Plant Disease/Plant Health	Protects against fungal and bacterial diseases and enhances yields	Commercially Available Domestically, Canada and Mexico. International Expansion Efforts Underway
Haven (liquid formulation)	Crops, Home and Garden, Turf	Sun stress/Plant Health/Quality	Reduces sun stress and dehydration and increases yields and quality	Commercially Available Domestically and in Canada
Zequanox (dry formulation)	Water Treatment	Invasive Mussels (In-Pipe and Open Water Habitat Restoration)	Controls invasive mussels that restrict water flow in industrial and power facilities and harm recreational waters	Commercially Available Domestically and in Canada

Marrone Bio Innovations 2019 10-K

Acquired Products

In September 2019, Marrone Bio Innovations **acquired Pro Farm** and the rights and assets of two products, **Jet-Ag** and **Jet-Oxide**. The Pro Farm acquisition included four biological products: two seed treatments (**Foramin ST** and **UBP**) and two foliar treatments (**Foramin** and **UPB-110**).

Jet-Ag and Jet-Oxide are broad spectrum bio-disinfectants based on peroxyacetic acid (a strong oxidizing agent that prevents/eliminates/controls algae, fungi and bacteria).

Jet-Ag is a bactericide, algaecide and fungicide that is used as a pre-plant dip that controls soil-borne diseases on roots and stems It is also used in greenhouses and irrigation systems to suppress

the growth of algae. In greenhouses, ornamentals and flowering plants, Jet-Ag controls a broad spectrum of diseases when applied as a foliar spray treatment.



Jet-Oxide has been approved for use on **non-porous (hard) surfaces**, such as metal, plastics and glass, in the food and agricultural industries, such as food and beverage plants, dairies, wineries, breweries, poultry facilities etc. Jet-Oxide is also used in irrigation water systems and wastewater treatment plants. In addition, Jet-Oxide is used for the direct treatment of **post-harvest**, unprocessed **fruit and vegetables** to control the growth of microorganisms that can cause decay and spoilage.

In March 2020, the EPA approved **Jet-Oxide 15% Sanitizer** for **use in the food industry against the human coronaviruses** on hard surfaces (metal, plastics and glass) where strains of the coronavirus have been known to survive up to several days.

Marrone Bio Innovations, Inc.

Acquired Products

Year	Product	Function	Product category	Target crop markets
2019	**Formamin ST**	**Bionutrient**	seed treatment - Pro Farm	Corn, wheat, soybeans, canola
2019	**UBP ST**	**Bionutrient**	seed treatment - Pro Farm	Wheat, barley, corn, soybeans
2019	**Foramin**	**Bionutrient**	foliar treatment - Pro Farm	Wheat, barley, corn, soybeans
2019	**UBP-110**	**Bionutrient**	foliar treatment - Pro Farm	Corn, wheat, soybeans, canola
2019	**Jet-Ag**	**Fungicide**	broad spectrum sanitzer	Pre-plant treatment & ag irrigation
2019	**Jet-Oxide**	**Disinfectant**	broad spectrum disinfectant	Post-harvest & hard surfaces

Product Pipeline

Since the company's founding in 2004, Marrone Bio Innovations has screened and amassed a library of over 18,000 micro-organisms. The company has a robust pipeline of new product candidates and product extensions in the areas of pest management, plant nutrition and plant health. A current focus is on biostimulants (for the reduction of crop stress) and bionutrition (for improving the efficiency of nutrient uptake by plants), both of which lead to increased yields and crop quality.

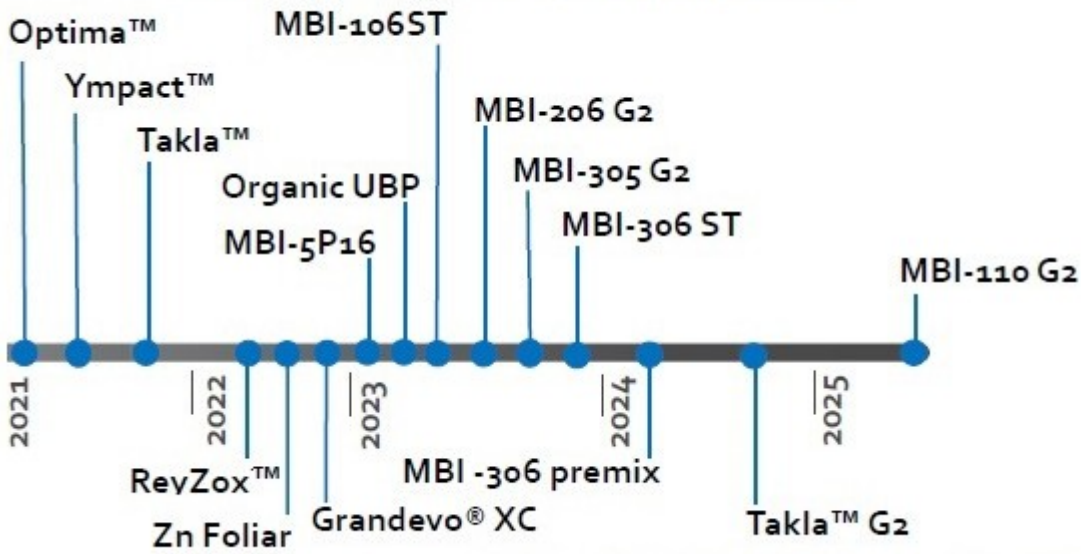
Near-Term Pipeline

Category	R&D Project	Launch Region	Target Crops	2020	2021	2022
Seed and Soil Treatment	Optima®	European Union	Corn			
Plant Health	Pacesetter®	United States	Corn, Soybeans, Cotton			
Seed and Soil Treatment	Takla®	European Union	Corn			
Seed and Soil Treatment	Ympact®	European Union	Cereals			
Plant Health and Bio-Protection	ReyZox®	United States	Corn, Soybeans, Potatoes			
Plant Health	Zn-Foliar®	Latin America	Corn, Soybean, Rice, Wheat			
Bio-Protection	Grandevo XC®	United States	Specialty Crops, Berries, Vegetables			

Discovery Development Validation & Regulatory Submissions Commercialization

Marrone Bio Innovations Presentation December 2020

Marrone Bio Product Pipeline



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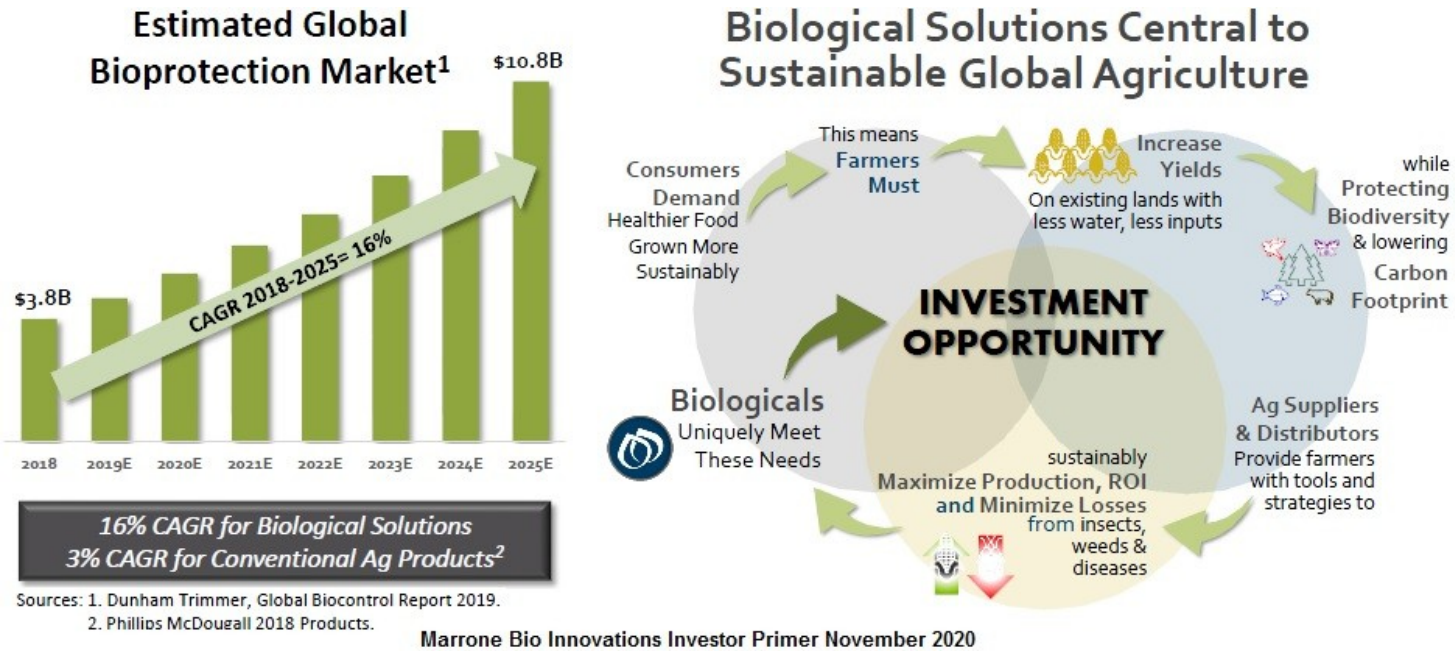
INDUSTRY OUTLOOK (GLOBAL BIOLOGICS/BIOPESTICIDES)

In May 2020, Dunham Trimmer® released its Global Biocontrol Market Overview Report, which projects a **15%-to-18% CAGR** for the biocontrol sector. Dunham Trimmer forecasts that microbials will be the fastest growing product type segment and that bionematicides will be the fastest growing use segment. Latin America is projected to be the fastest growing regional segment. Bioinsecticides and biofungicides are expected to continue dominating global market

In May 2020, **ResearchAndMarkets.com** released its Biological Market Report,[i] in which it was the global biologicals market was **projected to grow at a 14.7% CAGR** during the forecast period of 2020 through 2025. The growth is expected to be driven by increased organic farming, the increased cost of chemical-based products, environmental concerns, growing awareness of balanced plant nutrition, regulatory changes, among others.

The global biological control market is fragmented with various small and regional players. According to the market shares calculated in the report, Mitsui & Co. Ltd.'s subsidiary Certis (TYO:8031; OTCMKTS-Pink: MITSY) amassed the largest share with 5.78%, BASF (FRA: BAS; OTCQX: BASFY) garnered 5.34%, Sumitomo Chemical Company Limited (TYO:4005; OTCMKTS-Pink: SOMMY) held 4.89% and Marrone Bio Innovations (NASDAQ: MBII) held 4.57% with Bayer Aktien Gesellschaft (FRA: BAYN; OTCMKTS-Pink: BAYRY) holding 3.65%. These market shares were attributed to diversified (broad) product portfolios, acquisitions and partnership agreements.



In late September 2020, **Fortune Business Insights**™ issued its global **biopesticides market report** titled: "Biopesticides Market Size, Share & COVID-19 Impact Analysis, By Type (Bioinsecticide, Biofungicide, Bionematicide, and Others), Source (Microbials and Biochemicals), Mode of Application (Foliar Application, Seed Treatment, Soil Treatment, and Others), Crop (Cereals, Oilseeds, Fruits & Vegetables, and Others), and Regional Forecast, 2020-2027."[ii] The report calculated the market to be US$4.40 billion and **projected growth to be at a 13.1% CAGR** during the forecast period of 2020 through 2027.

The drivers were determined as the rapid growth of the organic food & beverage industry due to consumer demand, the development of highly effective biofungicides and an increased level of regulations intended to reduce pesticide residue on food products.

VALUATION

For Marrone Bio Innovations, a reasonable methodology is a discounted cash flow (DCF) model that estimates future cash flows and discounts them by using the cost of capital in order to attain a net present value. Utilizing our estimate of Marrone Bio's revenues for 2020 followed by projected revenues in the out-years based on the company's historical results for product lines as they move through their life cycles, a DCF model was composed by product line categories, namely products introduced over five years ago (Regalia, Grandevo and Venerate), products entering the full market acceptance phase (Majestene, Haven, Stargus, Amplitude and Zelto) and products expected to enter the marketplace in the near future from the company's R&D pipeline.

The model incorporates assumptions relate to the cash costs, R&D expenses and the tax rate. To account for economies of scale, the company's gross margin increases as the top-line grows; therefore, cash costs as a percentage of sales are assumed to decline over time. R&D expenses are expected to increase at a 6.2% annual rate as the company continues to invest in new and ongoing programs. The tax rate is anticipated to rise slowly until the current full corporate tax rate of 21% is attained.

The discount rate for large cap publicly-traded equities is usually in the 5%-to-10% range; however, for small cap companies, the discount rate is generally in the 12%-to-15% range due to a higher level of business risk. Since the outlook for Marrone Bio Innovations is very positive with the company expected to generate meaningful sales over the next few quarters, we are using a discount rate of 12.5% in the DCF model.

It is well known that the results of DCF models are highly sensitive to the input assumptions. As the company reports subsequent quarters, the DCF model will be updated so that it accurately dovetails with reported financial results.

The terminal value is calculated by multiplying the projected sales level in year ten by the estimated terminal price-to-sales ratio (P/S) of 0.52, which is the average P/S ratio of a large, profitable agricultural products company that have market capitalizations over $5.0 billion.

Large Capitalization Industry Comparables	**Ticker**	**P/E Current FY**	**Mkt Cap ($billion)**	**TTM Price/ Book**	**TTM Price/ Sales**
Industry Mean		**17.04**	**16.54**	**1.69**	**0.52**
Industry Median		17.13	15.79	1.72	0.47
ARCHER-DANIELS-MIDLAND CO	ADM	18.59	29.25	1.51	0.47
BUNGE LIMITED	BG	19.78	9.80	2.09	0.26
WLMAR INTERNATIONAL LTD	WLMIY	14.14	21.77	1.25	0.46
INGREDION INC	INGR	15.66	5.32	1.92	0.90

The average P/S ratio of growing, yet unprofitable, agricultural products companies with market capitalizations under $250 million is 42.7 with a large dispersion with a range from 8.6 to 125.6. As an agricultural products company grows and becomes profitable, the P/S valuation metric declines, which is a function of the company's revenue growth rate declining as it captures a greater share of the overall market. The range compresses in tandem as is the case when a group of companies progress from the growth stage to the mature stage in the terms of the business life cycle.

Our **DCF model values Marrone Bio Innovations at $2.11 per share** on a fully diluted basis.

Industry Comparables	% Chg YTD	Ticker	P/E Current FY	Mkt Cap ($million)	TTM Price/ Book	TTM Price/ Sales
MARRONE BIO INNOVATIONS INC	2.4	MBII	N/M	195.17	8.45	5.23
Industry Mean	17.1		N/M	101.21	3.48	52.63
Industry Median	15.4		N/M	104.72	3.69	16.34
S&P 500	1.4	SPX	41.17	N/A	4.16	2.78
ARCADIA BIOSCIENCES INC	6.3	RKDA	N/M	36.72	3.30	19.61
CALYXT INC	12.8	CLXT	N/M	172.72	4.90	11.13
EVOGENE LTD	18.1	EVGN	N/M	176.12	4.08	166.72
YIELD10 BIOSCIENCE	31.3	YTEN	N/M	19.27	1.62	13.06

Marrone Bio Innovations, Inc.

DCF Model

	2021	2022	2023	2024	2025
Revenues	55,500,000	69,791,250	87,780,188	110,428,697	147,275,372
Cash costs	41,500,000	48,696,688	56,859,419	66,008,505	80,669,754
R&D costs	11,600,000	12,319,200	13,082,990	13,894,136	14,755,572
Tax rate	0.1%	0.2%	5.0%	10.0%	15.0%
Free Cash Flow after R&D costs	2,398,080	8,757,812	16,945,889	27,473,451	44,072,540

Discount Rate	**12.5%**	
NPV	**290,066,772**	
Terminal Value	**100,678,332**	
Cash From Warrant Exercise	**31,530,700**	
Cash From Warrant Exercise	**25,268,520**	
Probability	**95%**	
Total Sum of Parts	**425,167,108**	
Debt	**18,667,000**	**3Q:2020**
Cash	**8,971,000**	**3Q:2020**
Current Shares	**152,475,000**	
Warrant/ Option Shares	**44,153,000**	**3Q:2020**
Diluted Shares	**196,628,000**	**3Q:2020**

Total NPV	**415,471,108**
Share Price	**$2.11**

Our product line assumptions are based on the narratives on the top-line revenues presented in the MD&A (Management's Discussion and Analysis) section of the annual (10-K) and quarterly (10-Q) filings.

Products introduced over five years ago: Since 2017, the MD&A in the 10-K's (annual reports) have consistently stated that the company's revenues have been "principally attributable to sales of our Regalia, Grandevo and Venerate product lines." These well-established product lines are driving the company's 28.6% top-line growth over the last three years. We estimate that the revenue growth of these products will continue to grow at a high rate of 25% until management's product adoption and distribution initiatives are achieved. Once the products are ubiquitous within the company's distribution footprint, the growth rate is expected to atrophy to a terminal rate of 10%, driven by further market penetration.

In the third quarter, UBP Seed Treatment (aka LumiBio, a Pro Farm acquisition product line) entered as one of the company's top contributors to revenues. We have yet to determine to what the degree the impact of acquired products in general will have on our DCF model. We expect to clarify the effect as the company reports future financial results.

Products entering the market and beginning to achieve acceptance: We expect that products which have been in the market for less than five years to have a growth rate greater than Regalia, Grandevo and Venerate, albeit from a smaller base. We are modeling initial growth of 30% on that smaller base during the introductory phase of this product class, with the growth rate slowing to 25% after the base reached critical mass. The 25% growth rate is expected to be supported by continued market penetration and geographic expansion.

Product from the R&D pipeline: We are forecasting that the products in the pipeline will experience a similar life cycle, first growing at the rate of products entering the marketplace during the first five years and progressing to the trajectory of products greater than five years old products thereafter. The pipeline is anticipated to be at least as robust in the future as in the company's past.

BALANCE SHEET

Marrone Bio Innovations (In thousands)	Year 12/ 31/ 2016	Year 12/ 31/ 2017	Year 12/ 31/ 2018	Year 12/ 31/ 2019	3Q 2020 9/ 30/ 2020
ASSETS					
Cash and cash equivalents	9,609	786	18,221	6,252	8,971
Restricted cash	1,444	487	-	-	-
Accounts receivable	3,592	3,785	2,720	5,925	6,827
Inventories	8,482	9,827	8,224	8,149	6,193
Deferred cost of product revenues	2,688	3,063	4	-	-
Prepaid expenses	1,060	1,170	967	1,390	2,016
Total current assets	**26,875**	**19,118**	**30,136**	**21,716**	**24,007**
Property and equipment	17,343	16,016	14,512	13,260	12,789
Right of use assets	-	-	-	4,567	3,977
Intangible assets	-	-	-	23,842	22,079
Goodwill	-	-	-	6,764	6,740
Restricted cash	1,560	1,560	1,560	1,560	1,560
Other noncurrent assets	205	219	359	1,008	911
TOTAL ASSETS	**45,983**	**36,913**	**46,567**	**72,717**	**72,063**
LIABILITIES AND STOCKHOLDERS' EQUITY					
Accounts payable	1,385	3,800	1,692	3,379	1,985
Accrued liabilities	5,508	8,189	6,871	12,467	13,101
Accrued interest due to related parties	1,618	1,622	-	-	-
Deferred revenue	5,647	6,193	438	427	541
Derivative liability	-	674	-	-	-
Lease liabilities	839	-	-	913	981
Debt, current portion	252	1,524	2,318	3,899	6,333
Total current liabilities	**15,249**	**22,002**	**11,319**	**21,085**	**22,941**
Deferred revenue	1,787	2,046	2,399	1,986	1,688
Lease liabilities	-	-	-	3,970	3,303
Long term debt	21,083	24,407	11,819	11,847	11,367
Debt due to related parties	36,667	37,822	7,300	7,300	7,300
Other noncurrent liabilities	1,381	1,287	794	2,971	2,359
Total Liabilities	**76,167**	**87,564**	**33,631**	**49,159**	**48,958**
Stockholders' Equity					
Common stock			1	1	1
Additional paid-in capital	204,463	214,921	296,409	344,206	359,710
Accumulated deficit	(234,647)	(265,572)	(283,474)	(320,649)	(336,606)
Total shareholder's equity	**(30,184)**	**(50,651)**	**12,936**	**23,558**	**23,105**
TOTAL LIABILITIES & STOCKHOLDERS' EQUITY	**45,983**	**36,913**	**46,567**	**72,717**	**72,063**
Shares outstanding	24,661,000	31,351,000	110,691,000	139,526,000	152,475,000

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Marrone Bio Innovations, Inc.

Income Statement

(In '000, except share and share data) (For Years Ending December 31)	Year ending 12/31/2016	Year ending 12/31/2017	Year ending 12/31/2018	Year ending 12/31/2019	Year ending 12/31/2020 E
Revenues:					
Product	13,715	17,935	20,775	28,912	39,526
License	327	232	445	461	492
Total revenues	**14,042**	**18,167**	**21,220**	**29,373**	**40,018**
Cost of product revenues	9,522	10,528	10,907	13,260	16,508
Gross profit (loss) from Operations	**4,520**	**7,639**	**10,313**	**16,113**	**23,510**
Operating expenses:					
Research and development	9,670	10,820	10,662	14,026	11,900
Selling, general & administrative	18,510	19,814	19,155	30,072	31,045
Total operating expenses	**28,180**	**30,634**	**29,817**	**44,098**	**42,945**
Operating profit (loss) from Operations	**(23,660)**	**(22,995)**	**(19,504)**	**(27,985)**	**(19,435)**
Interest (expense)	(2,904)	(3,373)	(2,057)	(1,474)	(1,478)
Interest expense, related parties	(4,361)	(4,355)	(451)	-	-
Chg. in fair value of fin. instruments	-	-	(5,177)	-	-
Loss on extinguishment of debt, net	-	-	(2,196)	-	-
Gain on exting. of debt, related party	-	-	9,183	-	-
Loss on modification of warrants	-	-	-	(1,564)	0
Loss on issuance of new warrants	-	-	-	(6,065)	(1,391)
Chg. in FV of contingent consideration	-	(96)	-	(342)	(563)
Other income (expense)	(146)	(106)	(11)	255	321
Total other income (expense):	**(7,411)**	**(7,930)**	**(709)**	**(9,190)**	**(3,111)**
Income (loss) before income tax	**(31,071)**	**(30,925)**	**(20,213)**	**(37,175)**	**(22,546)**
Provision for income tax benefit (expense)	0	0	0	0	(113)
Net Income (loss)	**(31,071)**	**(30,925)**	**(20,213)**	**(37,175)**	**(22,659)**
Net earnings per share (basic and diluted)	**($1.26)**	**($1.06)**	**($0.20)**	**($0.32)**	**($0.15)**
Wgtd. avg. shares outstanding	24,617,000	29,235,000	101,248,000	117,982,000	148,094,000

PROJECTED QUARTERLY INCOME STATEMENTS

Marrone Bio Innovations, Inc.

Income Statement (In '000, except share and share data) (For Years Ending December 31)	2019 12/31/2019	1Q 2020 3/31/2020	2Q 2020 6/30/2020	3Q 2020 9/30/2020	4Q E 2020 12/31/2020	Estimate Yr. ending 12/31/2020
Revenues:						
Product	28,912	9,535	12,063	8,697	9,231	39,526
License	461	115	115	131	131	492
Total revenues	**29,373**	**9,650**	**12,178**	**8,828**	**9,362**	**40,018**
Cost of product revenues	13,260	4,081	4,794	3,826	3,807	16,508
Gross profit (loss) from Operations	**16,113**	**5,569**	**7,384**	**5,002**	**5,555**	**23,510**
Operating expenses:						
Research and development	14,026	3,234	2,312	3,112	3,242	11,900
Selling, general & administrative	30,072	7,993	7,078	7,335	8,639	31,045
Total operating expenses	**44,098**	**11,227**	**9,390**	**10,447**	**11,881**	**42,945**
Operating profit (loss) from Operations	**(27,985)**	**(5,658)**	**(2,006)**	**(5,445)**	**(6,326)**	**(19,435)**
Interest (expense)	(1,474)	(337)	(331)	(405)	(405)	(1,478)
Interest expense, related parties	-	-	-	-	-	-
Chg. in fair value of fin. instruments	-	-	-	-	-	-
(Loss) on extinguishment of debt	-	-	-	-	-	-
Gain on exting. of debt, related party	-	-	-	-	-	-
Gain (loss) on modification of wts.	(1,564)	-	-	-	-	0
Gain (loss) on issuance of new wts.	(6,065)	(1,391)	-	-	-	(1,391)
Chg. in FV of contingent consideration	(342)	237	(600)	(200)	0	(563)
Other income (expense)	255	159	113	24	25	321
Total other income (expense):	**(9,190)**	**(1,332)**	**(818)**	**(581)**	**(380)**	**(3,111)**
Income (loss) before income tax	**(37,175)**	**(6,990)**	**(2,824)**	**(6,026)**	**(6,706)**	**(22,546)**
Provision for income tax benefit (expense)	0	0	(46)	(37)	(30)	(113)
Net Income (loss)	**(37,175)**	**(6,990)**	**(2,870)**	**(6,063)**	**(6,736)**	**(22,659)**
Net earnings per share (basic and diluted)	**($0.32)**	**($0.05)**	**($0.02)**	**($0.04)**	**($0.04)**	**($0.15)**
Wgtd. avg. shares outstanding	117,982,000	141,572,000	148,096,000	150,233,000	152,475,000	148,094,000

HISTORICAL STOCK PRICE



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[i] Global Biological Control Market (2020 to 2025) - Growth, Trends, and Forecast, May 11, 2020, https://www.globenewswire.com/news-release/2020/05/11/2031016/0/en/Global-Biological-Control-Market-2020-to-2025-Growth-Trends-and-Forecast.html

[ii] Biopesticides Market Worth USD 10.63 Billion at 13.1% CAGR Forecast 2027; Rising Research to Develop New Microbial Products will Boost Growth, September 29, 2020, https://www.globenewswire.com/news-release/2020/09/29/2100473/0/en/Biopesticides-Market-Worth-USD-10-63-Billion-at-13-1-CAGR-Forecast-2027-Rising-Research-to-Develop-New-Microbial-Products-will-Boost-Growth-says-Fortune-Business-Insights.html