



## **Best Green Technologies USA Marketing and Market Penetration Plan**

September 20, 2018

*Funding for the internationalisation project of the Lazio PMI 2018 in particular the "Explora USA 2018" project (# A 0223-2018-21411).*

### **Product Identity and Situation**

Bacstone Maximum is a simple mineral fertilizer containing 12% ammoniacal nitrogen, 1% copper and 5% zinc. Bacstone Maximum is registered in many countries for foliar application and as an irrigation injection application.

As a bactericide Bacstone Maximum is manufactured to prevent and solve copper and zinc deficiency problems and to control bacterial diseases in fruits and vegetables.

Best Green Technologies would like to launch Bacstone Maximum in the USA. The differentiated product could fill a niche in the fruit and vegetable marketplace. AgriThORITY® has been approached to provide a market access pathway to Best Green with initial focus on Florida as a major producer of citrus and vegetable crops.

The registration pathway to allow promotion of Bacstone Maximum as a fungicide is considerably more expensive than the pathway to allow sales and promotion as a nitrogen fertilizer with added micronutrients copper and zinc.

The USA crop input market is driven by efficacy data. Most mainstream suppliers of crop inputs demand a minimum of three years of data across multiple locations each year to ensure a reasonable level of "predictability" of positive results. Some smaller companies may move more quickly, particularly when working with nutritional products. Mainstream suppliers of crop inputs also demand regulatory compliance of products they distribute, promote and sell. Products registered as fertilizers will be sold only as fertilizers and pesticides including fungicides and plant growth regulators will only be accepted in their product line if they have the appropriate EPA registration.

Research conducted when used as a fertilizer can collect coincidental information on secondary impact of fertilizer use on disease incidence in the treated crops. Care must be taken to focus on the fertilizer use of Bacstone Maximum to prevent violations of pesticide regulations and triggering the necessity to register the product as a pesticide.

### **Markets Examined**

In April 2018 it was decided to test Bacstone Maximum as a fertilizer on citrus and tomato and record any coincidental impact on diseases in these crops from the fertilizer applications. Subsequently, it was decided that strawberry would be a better target for the initial evaluation of Bacstone Maximum as a fertilizer.



Based on information available, the primary fit for Bacstone Maximum as a fertilizer in Florida is as a liquid foliar applied or injected through the drip irrigation system used on many acres of the target crops. Other bulk applications of fertilizers are made on these crops but the nature of the soils are often conducive to leaching which is further complicated by a shallow water table. Season-long multiple-applications of smaller doses of nutrients is generally accepted as most efficient and environmentally friendly.

Initial market penetration depends on factors yet to be determined. For a preliminary estimate, an estimate of 8% initial market penetration is based on assumptions that adequate performance data will be generated prior to introduction and a product roll-out program including an advertising and promotion plan will be funded and that pricing is competitive.

### **Citrus**

During the 2017-2018 production season, Florida produced 2,224,000 tons of fruit on 400,900 acres of bearing citrus groves comprising an estimated 62,664,800 trees. This represents approximately 33% of the total citrus production and 38% of the producing citrus acres in the US. The total value of the Florida crop in 2017-2018 was approximately \$551,180,000 as estimated by the University of Florida Extension Service. USDA estimates the value of this production in excess of \$800,000,000. For market forecasts I will use 400,000 acres as the probable acreage of citrus in Florida.

The fresh market grapefruit production budget for the Indian River area includes \$185.59 to \$281.77 per acre for fertilizer. \$281.77 is for 19 liquid/fertigation applications. Liquid/fertigation use is estimated at \$157.91/acre for 16 liquid/fertigation applications per season for processed oranges in Southwest Florida. Central Florida costs for processed oranges is 10 fertigation/liquid fertilizer applications per season at \$220.41/acre. These are all product cost only. Using these regional costs, the average product cost per acre for liquid/fertigation application is \$220 per acre across 400,000 acres. The total market for liquid/fertigation applied fertilizer in Florida citrus is \$88,000,000. If one estimates 8% market penetration the resultant value is \$7,040,000.

### **Strawberry**

The initial plan was to evaluate Bacstone Maximum for use on tomatoes. Tomatoes are the second highest value-of-production crop in Florida. Produced on 27,000 acres in 2018, the crop's estimated value was \$336,496,000. This market has come under heavy competitive pressure in recent years from imported tomatoes. There has also been a strong effort among pest management experts to influence the industry to avoid year-round tomato production in the state for the purposes of managing insecticide resistance of major pests of tomatoes. A strong trend has been to replace tomato acreage with strawberry plantings. It was decided that strawberry was a better target market for Bacstone Maximum.

Strawberries were produced on only 9,800 Florida acres in 2018. While this is a minor acreage, Strawberries are the third highest value of production crop in Florida. The 9,800 acres harvested in 2018 produced an estimated \$281,750,000 worth of fruit. The investment for strawberry production is approximately \$30,000 per acre. In some areas, strawberry has become a replacement crop for tomatoes. For market forecasting, 10,000 acres will be used as the probable acreage of strawberries in Florida.



Production costs per acre for Strawberries is high. Of approximately \$30,000 per acre total cost, fertilizer cost was \$687 per acre from a 2012-2013 University Extension budget. This figure is for total fertilizer cost, Nitrogen requirement for strawberry production is variable, but 150 lbs. N per acre per season would be a reasonable estimate. A 2011 California study of strawberry production costs indicates N cost of approximately \$1 per lb. N. This would equal \$150 per acre at the Florida recommended rate of 150 lbs N per acre per season. Cost of ammoniacal N (anhydrous) has increased greatly in recent years and it is reasonable to presume the cost per acre for N on strawberry is now at least \$200 per acre. At \$200 per acre, the total market value for N fertilizer on 10,000 acres is \$2,000,000. An 8% market penetration would mean \$160,000 sales potential for initial market penetration.

Table 1: Preliminary Estimates of Market potential for Bacstone Maximum in Florida Citrus and Strawberries.

Market Description			Market Value		
Crop	Market	Acres	Per acre	Total	8% Penetration
Citrus	Liquid Foliar and Fertigation Use	400,000	\$220.00	\$88,000,000	\$ 7,040,000
Strawberry	Total Nitrogen Applications	10,000	\$200	\$ 2,000,000	\$ 160,000

### Market Structure

Total specialty fertilizer sales in 2018 in Florida at the grower level totaled 1,887,036 tons. No data is available on the dollar value of these sales. There were 397 companies or company locations that made these sales. Twelve companies (Table 2) were registered as fertilizer dealers but reported no retail sales in 2018 indicating their total sales were through third party dealers and not direct to growers. These basic suppliers with no retail sales included Bayer Environmental Sciences and Wilbur Ellis.

Of the 397 companies reporting retail sales, there were 14 locations representing 12 companies that sold 45,000 tons or more. These included companies such as Diamond R, United States Gypsum, Crop Production Services and Helena Chemical. Duplications of company names in table 3 and other tables are due to multiple locations of the same company selling direct to the farmer each location operating under a different fertilizer license. These companies are national distributors that sell through their own or other retail outlets. The reported sales here are direct to growers, they total 1,103,192 tons or 58% of the total sales. The other 383 companies are a mixture of national distributors, national small manufacturers selling grower direct and local farm supply stores and cooperative retail outlets. There is no clear pattern of a two-step or three-step marketing structure but a mixture of all possible channel patterns.



Tabel 2: Companies with fertilizer licenses but no farmer direct fertilizer sales in Florida in 2018

GRO TEC, INC.
MITCHELL COUNTY FARM SERVICE, INC.
BAYER ENVIRONMENTAL SCIENCE/B.U. OF BCS LP
Bradex Inc.
GENERAL ORGANICS
SynaTek, LP
ELLENTON AG SERVICE, INC.
LAWN AND GARDEN PRODUCTS, INC.
MEHERRIN FERTILIZER INC.
GILES CHEMICAL, DIV. OF PREMIER CHEMICALS, LLC
U.S. AG, LLC
Wilbur Ellis Company LLC

Table 3: Companies with >45,000 tons of fertilizer sales in Florida to Farmers in 2018

Company Name	2018 Reported Tonnage
WEDGORTH INC	222,210.47
DIAMOND R FERTILIZER CO., INC.	115,961.57
UNITED STATES GYPSUM COMPANY	98,806.74
HOWARD FERTILIZER & CHEMICAL CO., INC.	88,165.00
Wedgworth's, Inc	71,278.32
MIRACLE-GRO LAWN PRODUCTS, INC.	63,163.21
GRIFFIN FERTILIZER - FROSTPROOF	59,478.34
HOWARD FERTILIZER & CHEMICAL CO., INC.	59,114.00
CROP PRODUCTION SERVICES, INC.	56,774.03
HOWARD FERTILIZER & CHEMICAL CO., INC.	56,725.00
CROP PRODUCTION SERVICES, INC.	56,544.00
MAYO FERTILIZER, INC.	55,719.25
GROWERS FERTILIZER CORPORATION	53,037.00
HELENA CHEMICAL CO.	46,215.65



Table 4: Companies with <45,000 tons of fertilizer sales in Florida to farmers in 2018

Company Name	2018 Reported Tonnage	Company Name	2018 Reported Tonnage
HARRELL'S, LLC	37,916.62	BRANDT CONSOLIDATED, INC.	82.78
FLORIDA FERTILIZER COMPANY, INC.	36,442.33	SBM Life Science Corp.	82.17
OLDCASTLE LAWN & GARDEN SOUTH	35,514.00	Plant Food Company, Inc.	80.00
DIAMOND R FERTILIZER	34,823.82	Quality Green Specialists, Inc.	78.00
LESCO, INC.	31,357.00	REDOX CHEMICALS, LLC	77.00
Compass Minerals Ogden Inc.	30,317.79	SUN BULB COMPANY, INC	76.80
Wedgworth's, Inc.	29,891.90	CUSTOM AGRICULTURAL FORMULATORS, INC.	75.00
HYPONEX CORPORATION	29,344.37	AGRI-AFC, LLC	71.00
Crop Production Services Inc	25,251.00	GREEN INDUSTRIES, INC.	67.25
HELENA CHEMICAL COMPANY	24,969.20	AG SPECIALTIES, LLC.	66.10
MAYO FERTILIZER, INC.	23,899.38	HI-TECH TURF PRODUCTS	66.00
Griffin Fertilizer Company	21,300.94	Granco Minerals, Inc.	64.00
SUNNILAND CORPORATION	20,670.00	GENERAL HYDROPONICS, INC.	59.66
THE SCOTTS COMPANY	19,673.47	The Sanctuary, Inc.	57.00
BLACK GOLD COMPOST CO.	18,382.13	Numerator Technologies Inc.	55.65
GRIFFIN FERTILIZER - LA BELLE LIQUID PLANT	16,247.10	Sea to Soil Organics, LLC	55.00
Coggins Farm Supply Georgia, LLC	13,223.41	United Fertilizer Technologies LLC	52.00
MAYO FERTILIZER INC.	12,883.05	AgMax LLC	52.00
Charlotte County Bio-Recycling Center, LLC	10,936.75	BAYER ADVANCED/B.U. BAYER CROPS SCIENCE LP	51.72
JAY PEANUT FARMERS COOPERATIVE, INC.	10,695.93	GREENCARE FERTILIZERS, INC.	50.40
ALTHA AGRONOMY AGRI-AFC	10,428.73	Oilean Glas Teoranta	48.34
FLORIKAN E.S.A., LLC	10,407.00	Vogel Seed & Fertilizer, Inc	48.00
CHEMICAL DYNAMICS	10,085.77	Evonik Corporation	48.00



Table 4; Continued

FARMERS COOPERATIVE, INC. OF LIVE OAK	9,481.00	HUMIC GROWTH SOLUTIONS	46.42
Kellogg Garden Products	8,908.62	EARTHGREEN PRODUCTS, INC.	45.00
SWISS FARMS PRODUCTS, INC.	8,747.72	Bio Basics, LLC	45.00
WEST GENEVA COUNTY COOP.	8,608.32	YARA NORTH AMERICA, INC.	44.00
BIOSOLIDS DISTRIBUTION SERVICES	8,215.70	Ostara USA, LLC	44.00
Galaxy Sulfur, LLC	8,175.93	SCL Americas Inc.	43.90
LEE COUNTY	7,481.63	Coastal Fertilizer	40.09
WM EarthCare Okeechobee Compost	7,447.71	LILLY MILLER BRANDS	39.42
EVERRIS NA, INC.	7,219.12	The Organic Mechanics Soil Company, LLC	35.00
MILWAUKEE METROPOLITAN SEWERAGE DISTRICT	6,902.37	ENP Investments, LLC	33.00
Enviva Pellets Cottdale, LLC	6,740.24	SOLUTIONS 4 EARTH, LLC	32.35
WAUKEENAH FERTILIZER & FARM SUPPLY, INC.	6,434.07	Farmers Gold Organic Plant Food Company	32.00
QC CORPORATION	6,281.00	HIT Manufacturing	31.26
MADRID FARM SERVICE	6,149.68	Master Plant-Prod Inc.	31.00
Organic Growing Solutions, LLC	5,741.40	JH BIOTECH, INC.	30.68
Darling Ingredients, Inc.	5,333.00	UNITED AGRICULTURAL SERVICES OF AMERICA, INC.	29.54
CROP PRODUCTION SERVICES, INC.	4,861.37	SJ Enterprises PTY LTD	29.52
FARMERS COOPERATIVE INC.	4,776.09	BREWER INTERNATIONAL	29.00
ProPlus Products, Inc.	4,761.00	FLORIDA PHOSPHORUS, INC.	28.75
Vigiron	4,578.43	NUTRIENT TECHNOLOGIES, LLC	28.00
WINFIELD SOLUTIONS, LLC	4,486.68	Tower Garden, LLC	27.63
R.W. GRIFFIN INDUSTRIES, LLC	4,269.58	BioGro Inc.	26.67
TURF CARE SUPPLY CORP	4,211.00	C.S.I. CHEMICAL CORPORATION	25.68
Gonzalez Enterprises	4,110.09	Bainbridge Terminal Services, LLC	25.29
Sigma AgriScience	3,781.22	PBI/GORDON CORPORATION	25.15
T BRAND FERTILIZER, INC.	3,592.94	DR. EARTH	25.00
KEEN FARM & GROVE SERVICE, INC.	3,590.33	BRANDT iHammer	25.00
KELLY AG OF HARTFORD LLC	3,327.39	New Millenium Garden Inc	24.91
Pinnacle Agriculture Distribution, Inc.	3,271.00	EXCELAG CORPORATION	24.00
nuTerra Management	2,513.94	CROMARTIE AGRICULTURE CHEMICAL,	24.00
AARON INDUSTRIES, INC.	2,454.00	ARYSTA LIFESCIENCE NORTH AMERICA, LLC	24.00
HAIFA NORTH AMERICA, INC.	2,449.00	AMP	23.75
CENTRAL FLORIDA FERN COOPERATIVE	2,327.65	SoilBiotics	23.00
Pursell Agri-Tech, LLC	2,275.83	Ala-Flo Brand Fertilizer	22.87
NUTRI-SOURCE, INC.	2,260.56	Innophos, Inc.	21.00
G. P. SOLUTIONS, LLC	2,256.00	CALCIUM SILICATE CORPORATION, INC.	21.00
TURF CARE SUPPLY CORP.	2,104.00	SOUTHERN ORGANICS & SUPPLY	20.00
FLORALA FARMERS & BUILDERS CO-OP	1,989.67	AGRI-GRO MARKETING, INC.	20.00
PLANT FOOD SYSTEMS, INC.	1,976.41	Tranlin, Inc.	19.80
LAKE BUTLER FARM CENTER	1,899.09	Acadian Seaplants Limited	19.50
TRIANGLE CHEMICAL COMPANY	1,854.00	Plant Science, Inc.	19.00
AGLIME SALES, INC.	1,847.79	Complete Hydroponics, LLC	18.93
Compass Minerals Wynyard Inc.	1,825.50	Greenstar Plant Products, Inc.	18.57
PIERSON SUPPLY COMPANY, INC.	1,798.02	Essential Green LLC	18.00
Immokalee Water and Sewer District	1,692.47	BOTANICARE	17.98
GRACO FERTILIZER COMPANY	1,618.00	BASF Corporation	17.75
City of Tallahassee	1,594.28	AGRI-BUSINESS TECHNOLOGIES, INC.	17.67
MARTIN MARIETTA MAGNESIA SPECIALTIES LLC	1,524.17	Bloom Brothers Garden Supply Inc.	16.42
LIBERTY ACRES FERTILIZER CORP.	1,451.74	Caltec Ag Inc.	15.84



Table 4; Continued

Company Name	2018 Reported Tonnage	Company Name	2018 Reported Tonnage
PRINCE ERACHEM S.A. DE C.V.	1,448.00	PLANT MARVEL LABORATORIES, INC.	15.75
Emerald Coast Utilities Authority	1,440.15	QUEST PRODUCTS CORP	15.00
KEYPLEX	1,433.00	Antler Technologies, LLC	15.00
AGRIUM U.S. INC.	1,337.10	Freedom Ag Research LLC	14.35
PLANT FOODS, INC.	1,217.00	Cape fear chemicals inc.	14.00
AGRI-AFC, LLC	1,214.00	T-NOU NV	13.98
H & H LIQUID SLUDGE DISPOSAL, INC.	1,185.38	Weldon's Chemical LLC	13.53
UNITED COMPOST AND ORGANICS, INC.	1,155.00	Bertels B.V	13.38
SOUTHERN STATES COOPERATIVE	1,152.39	LUTZ CORPORATION	13.00
SYNAGRO-WWT, INC.	1,133.57	GenNext Biotech, LLC	13.00
BARBER FERTILIZER CO.	1,083.91	PRO PRODUCTS LLC	12.73
GREEN TECHNOLOGIES, LLC.	1,041.89	Natural Agriculture Solutions of America, LLC	12.00
HARVEST CONSUMER PRODUCTS LLC	1,015.06	Cool Planet Energy Systems	12.00
ORGANIC PRODUCTS CO/TURF PRO USA	982.00	OCEAN CREST SEAFOODS, INC.	11.74
The Andersons, Inc.	981.41	Inocucor Technologies Inc.	11.48
BIG BEND AGRI-SERVICES, INC.	972.08	GULF COAST ORGANIC, INC.	11.11
Wedgworth's, Inc.	970.53	SPECTRUM GROUP	11.07
Hartford Farmer's Co-op	909.53	KOCH AGRONOMIC SERVICES, LLC.	11.00
EcoScraps, Inc.	896.33	WOODSTREAM CORPORATION	10.70
Bethel Tri Yield, Inc.	869.57	AQUA-YIELD OPERATIONS LLC	10.60
Agricultural Solutions, LLC	867.87	BALL DPF, LLC	10.56
M&S Fertilizer and Farm Inc.	774.21	Rock Holdings (SA) PTY LTD	10.00
SOUTHERN STATES COOPERATIVE, INC.	746.73	Huma Gro	10.00
AGRI-AFC, LLC ATMORE AGRONOMY	746.37	PLANTATION PRODUCTS DBA VITAMIN INSTITUTE/ SUPERTHR	9.84
SCOTTS MIRACLE-GRO PRODUCTS, INC.	742.19	Advancing Eco Agriculture, LLC	9.14
Harvest Power Orlando, LLC	709.71	Barenbrug USA Inc	9.00
HEARTLAND FERTILIZER COMPANY	702.92	KNOX FERTILIZER COMPANY, INC.	8.84
VOLUNTARY PURCHASING GROUPS, INC.	696.00	Necternal LLC.	8.70
Terra Feed	683.12	Atami America, Inc.	8.39
ESCAMBIA GRAIN CORP.	682.89	Rhizoflora Inc	8.30
CROWN TECHNOLOGY, INC.	634.00	Ted Vickers Farms	8.00
BORATES PLUS INC	626.58	SEAAGRI, inc.	8.00
BULLOCH FERTILIZER CO., INC.	621.24	Nutriag LTD	8.00
MICHIGAN PEAT	619.00	Natural Ag Inc	8.00
STIM-U-PLANT A DIV SUWANNEE LUMBER CO.	607.00	BioWorks, Inc.	8.00
DOLLAR FARM PRODUCTS CO., INC.	603.34	DYNA-GRO CORPORATION	7.81
WESTWAY FEED PRODUCTS, LLC	595.44	GROWERS CHEMICAL CORP.	7.14
AGRO-K CORPORATION	550.54	Maxicrop USA, Inc.	7.00
ANDALUSIA FARMERS COOPERATIVE, INC.	548.96	HYDRODYNAMICS INTERNATIONAL	7.00
LIDOCEM, INC.	546.00	BioPro Technologies, LLC	7.00
MEHERRIN AGRICULTURAL & CHEMICAL CO.	516.64	ALLIED IMPORTS AND LOGISTICS, INC.	7.00
MILLER CHEMICAL & FERTILIZER, LLC	510.00	Mulch Manufacturing, Inc.	6.60
Sun Gro Horticulture Distribution Inc.	507.00	HORTICULTURAL ALLIANCE, INC.	6.00
SOUTHERN AGRICULTURAL INSECTICIDES, INC.	484.39	Field 16, LLC.	6.00
NURSERYMEN'S SURE-GRO CORP.	470.95	DAVEY TREE EXPERT COMPANY (THE)	6.00
COASTAL PLAINS FARMERS CO-OP, INC.	450.00	BONIDE PRODUCTS, INC	5.21
LEBANON SEABOARD CORPORATION	426.00	Indian River Organics, LLC	5.00
Ag Nutrients	424.00	HydroGro LLC	5.00
Agrium U.S. Inc.	412.03	DOWN TO EARTH DISTRIBUTORS, INC.	5.00



Table 4; Continued

Company Name	2018 Reported Tonnage	Company Name	2018 Reported Tonnage
Wedgworth's Inc.	402.30	Biofeed Solutions, Inc.	5.00
SOUTHERN STATES COOPERATIVE, INC.	401.95	International Mulch Company, Inc.	4.63
CNI AGRIMINERALS LLC	385.55	SUNLEAVES GARDEN PRODUCTS	4.59
DIAMOND R FERTILIZER CO., INC.	381.66	Mirimichi Green Express LLC	4.40
FLORIDA ORGANIX	380.49	Micronomix, LLC	4.00
FLORATINE PRODUCTS GROUP, INC.	380.00	ISAGRO USA, INC.	4.00
TIMAC AGRO USA, INC.	367.54	GROWER'S SECRET	4.00
Verdesian Life Sciences	361.00	Pathway Biologic, LLC	3.90
TETRA TECHNOLOGIES, INC.	358.79	MAR Green	3.16
SDT INDUSTRIES, INC.	348.00	Stark Bros Nurseries & Orchards Co	3.00
MightyGrow Organics	327.00	PENNINGTON SEED, INC.	3.00
VALAGRO USA, INC.	313.00	ORGANIC LABORATORIES, INC.	3.00
TURFGRASS MANAGMENT, INC. DBA GRIGG BROS	304.09	OCEAN GROWN, INC.	3.00
SHELLEY'S ENVIRONMENTAL SYSTEMS	304.00	HYDRO-STACKER LLC	3.00
Pearl Valley Organix	304.00	CX Horticulture	3.00
ICL PREMIUM FERTILIZERS NA	292.00	BIOGROW USA CORP.	3.00
FORESTRY RESOURCES, INC.	291.26	BEATY FERTILIZER COMPANY INC.	3.00
C.R. BROWN ENTERPRISES	286.00	ALBION LABORATORIES, INC.	2.58
Cold Spring Egg Farm, Inc*	273.00	ACCESS BUSINESS GROUP INTERNATIONAL, LLC	2.49
EASY GARDENER, INC.	270.82	Hawthorne Hydroponics Brands	2.46
Agri-AFC, LLC	268.72	AQUATROLS CORP OF AMERICA	2.40
LIGNOTECH USA, INC.	262.00	Purely Organic Products, LLC	2.30
Emerald Harvest	258.10	Osprey Biotechnics, Inc.	2.25
ESPOMA COMPANY, THE	254.00	Growing Solutions, Inc.	2.17
Magic Dirt Horticultural Products, LLC	249.35	SPRA-GREEN LAWN FERTILIZER, LLC	2.09
Stoller Enterprises, Inc.	246.90	Chrysal International BV	2.04
Residex LLC	240.00	NOVELTY MANUFACTURING	2.02
Pinnacle Agriculture Distribution, Inc.	234.00	SPRAY-N-GROW, INC.	2.00
GREEN-WAY INC.	232.00	Rolf C Hagen USA Corp	2.00
The Hawthorne Gardening Company	225.44	NUTRIENTS PLUS, LLC	2.00
Mears Fertilizer, Inc.	222.35	Earthworm Castings Unlimited, LLC	2.00
NATURAL AG SOLUTIONS, LLC	214.70	Cultured Solutions	2.00
CANNA CONTINENTAL	211.52	Amerigrow Soils	2.00
AgroLiquid Div. Of COG Marketers, Ltd.	201.00	Sunlight Supply, Inc.	1.96
Black Earth Humic LP	190.63	Aptus USA, LLC	1.68
ATMORE TRUCKERS ASSOCIATION, INC.	182.00	National Garden Wholesale	1.66
Bountygreens, LLC	175.00	NATURYM, LLC.	1.56
Compass Minerals USA Inc.	172.21	SEACHEM LABORATORIES, INC.	1.42
GRIFFINS WAREHOUSE BLACKSHEAR	168.40	Agro Coast Inc	1.39
Calcium Products Incorporated	166.00	DOMESTIC FERTILIZER, INC.	1.25
Dragan Macura	163.81	Sims Bark Co. Inc.	1.11
NACHURS ALPINE SOLUTIONS	158.62	United Turf Alliance, LLC	1.00
REGAL CHEMICAL COMPANY	155.10	UNCO INDUSTRIES, INC.	1.00
SUSTANE NATURAL FERTILIZER, INC.	153.50	BRIDGEWELL AGRIBUSINESS LLC	1.00
EARTH WORKS	152.00	BAY CHEMICAL CO.	1.00
AgriumUS Inc-A Subsidiary of Nutrien Ltd	142.91	ARBORJET, INC.	1.00
ACTAGRO, LLC	137.46	AGGRAND A DIV OF AMSOIL, INC.	1.00
SOLU-CAL USA, LTD.	133.83	AeroGrow International, Inc.	1.00
LOXAHATCHEE FERTILIZER, INC.	131.49	Gantec Inc	0.92
PCS SALES USA INC.	129.25	RED RIVER SPECIALTIES LLC	0.79
J. R. PETERS, INC.	123.00	Donaghy's Industries, Ltd.	0.79



Table 4; Continued

Company Name	2018 Reported Tonnage	Company Name	2018 Reported Tonnage
ADVANCED NUTRIENTS	121.64	ENCAP, LLC	0.60
Wedgworth's Inc.	120.80	GROWERS SUPPLY CENTER	0.57
MARTIN OPERATING PARTNERSHIP LP	115.00	MAIAGROW	0.53
SOUTHEAST PARTNERS, INC.	113.38	Rx Green Technologies, LLC	0.47
HUMATE INTERNATIONAL, INC.	113.00	CENTRAL AQUATICS	0.46
DIAMOND K GYPSUM, INC.	113.00	Fertile Peat Products LLC	0.37
DREXEL CHEMICAL COMPANY	108.00	Ralco Nutrition Inc.	0.33
True Organic Products, Inc.	107.63	David Austin Roses	0.32
GROWERS SUPPLY SERVICE, INC.	106.25	Schaeffer Manufacturing Co.	0.27
Harsco Metals and Minerals, a Division of Harsco Corporation	106.00	DRAMM CORPORATION	0.26
PQ CORPORATION	103.00	Growcentia	0.25
IMPROCROP U.S.A., INC.	97.00	PRECISION LABORATORIES, LLC	0.24
Holganix	92.15	THE GARDEN PATCH	0.23
Central Garden & Pet Garden Division	92.15	CALCO MARKETING, INC.	0.20
AZOMITE Mineral Products, Inc.	91.50	RHINO SEED AND LANDSCAPE SUPPLY, LLC	0.18
HOWARD JOHNSON'S ENTERPRISES, INC.	90.00	Italpollina USA, Inc.	0.12
Ferti Technologies NC	88.00	MYCORRHIZAL APPLICATIONS, LLC	0.11
BLACK GOLD ENVIRO-SAFE, INC.	83.55	SUPREME GROWERS	0.02
GROWTH PRODUCTS, LTD.	83.00	Elite Garden Wholesale	0.01
		Crystal Clear, Inc	0.01

Field research is needed to confirm the commercial potential of Bacstone Maximum for use in Florida.

Sincerely,

Jerry N. Duff

President - Founder