

Agricultural Microbials Market by Function (Soil Amendment and Crop Protection), Crop Type (Cereals & Grains, Oilseeds & Pulses, Fruits & Vegetables), Type (Bacteria, Fungi, Virus, Protozoa), Application, and Region - Global Forecast to 2030

Market Report | 2025-02-03 | 378 pages | MarketsandMarkets

AVAILABLE LICENSES:

- Single User \$4950.00
- Multi User \$6650.00
- Corporate License \$8150.00
- Enterprise Site License \$10000.00

Report description:

The global market for agricultural microbials is estimated to be valued at USD 9.45 billion in 2025 and is projected to reach USD 18.75 billion by 2030, at a CAGR of 14.7% during the forecast period. The adoption of artificial intelligence (AI) is transforming the agricultural microbials market by enhancing product development, precision application, and decision-making processes. AI-driven tools and machine learning algorithms are being utilized to analyze vast datasets, such as soil health, climate patterns, and crop conditions, to identify optimal microbial formulations tailored to specific environments. These technologies also support precision agriculture by enabling the targeted application of microbial solutions, reducing waste and maximizing efficiency.

Disruption in the agricultural microbials market: The agricultural microbials market is undergoing significant disruption driven by advancements in innovation and technology. Emerging trends include the integration of AI and machine learning for precision microbial formulations, CRISPR-based genetic engineering to enhance microbial effectiveness, and the development of next-generation delivery systems like encapsulation and controlled-release technologies. Some of the key disruptions in the agricultural microbials market include:

- AI and Machine Learning Integration: Advanced data analytics and AI technologies are being used to create precision microbial formulations tailored to specific crops, soil types, and environmental conditions, improving efficacy and reducing waste.

- CRISPR and Genetic Engineering: Cutting-edge genetic editing tools like CRISPR are being employed to enhance microbial strains, boosting their resilience and effectiveness against pests, diseases, and environmental stressors.

- Innovative Delivery Systems: The development of encapsulation and controlled-release technologies ensures the stability and gradual activation of microbial products, improving their shelf life and field performance.

Scotts International. EU Vat number: PL 6772247784

tel. 0048 603 394 346 e-mail: support@scotts-international.com

www.scotts-international.com

"The fruits & vegetables segment holds the highest market share in the crop type segment of agricultural microbials market." Fruits and vegetables hold the largest market share in the crop type segment of the agricultural microbials market, driven by the growing demand for high-quality, residue-free produce and the need for sustainable farming practices. Microbial solutions, such as biopesticides, biofungicides, and biofertilizers, are increasingly used to protect these crops from pests, diseases, and soil-borne pathogens while minimizing the reliance on synthetic chemicals. The rising consumer preference for organic and healthy food options, coupled with stringent regulations on pesticide residues, has further propelled the adoption of microbial products in the fruits and vegetables sector. As these crops are highly sensitive to chemical residues, the demand for eco-friendly alternatives is expected to continue growing, reinforcing the prominence of this segment in the agricultural microbials market.

"The seed treatment segment is projected to grow at the highest rate in the application segment during the forecast period."

The seed treatment application segment is expected to grow at the highest rate in the agricultural microbials market, driven by the increasing demand for effective and sustainable solutions to protect seeds from soil-borne diseases, pests, and environmental stress. Microbial seed treatments, including biofungicides and biostimulants, offer significant advantages in enhancing seed germination, improving root development, and boosting early plant vigor. As farmers seek eco-friendly alternatives to chemical-based seed treatments, microbial solutions provide an ideal option, supporting healthier crops and higher yields while minimizing environmental impact.

Asia Pacific is expected to hold a significant share in the agricultural microbials market.

Asia Pacific is expected to hold a significant market share in the agricultural microbials market, driven by the region's rapidly expanding agricultural sector and increasing demand for sustainable farming practices. Countries like China, India, and Japan are adopting microbial solutions to address challenges such as soil degradation, pest resistance, and the need for environmentally friendly alternatives to chemical pesticides. The growing emphasis on organic farming, government support for sustainable agriculture, and rising consumer awareness of food safety and environmental issues further contribute to the market's expansion in the region. With a large agricultural base and increasing investment in agricultural innovation, Asia Pacific is poised to play a key role in the growth of the global agricultural microbials market.

In-depth interviews have been conducted with chief executive officers (CEOs), Directors, and other executives from various key organizations operating in the agricultural microbials market:

- By Company Type: Tier 1 - 25%, Tier 2 - 45%, and Tier 3 - 30%
- By Designation: Directors- 20%, Managers - 50%, Others- 30%
- By Region: North America - 25%, Europe - 30%, Asia Pacific - 20%, South America - 15% and Rest of the World -10%

Prominent companies in the market include BASF SE (Germany), Bayer AG (Germany), Syngenta Group (Switzerland), UPL (India), Corteva (US), FMC Corporation (US), Nufarm (Australia), Sumitomo Chemical Co., Ltd. (Japan), BIONEMA (US), Koppert (Netherlands), Certis USA L.L.C. (US), Bioceres Crop Solutions (Argentina), Novonosis Group (Denmark), BioFirst Group (Belgium), and Lallemand Inc (Canada).

Other players include IPL Biologicals (India), Rovensa Next (Spain), Vestaron Corporation (US), AgriLife (India), Aphae.Bio (Belgium), Andermatt Group AG (Switzerland), Genica (Brazil), SEIPASA, S.A. (Spain), BioConsortia (US), and Nordic Microbes A/SV (Denmark).

Research Coverage:

This research report categorizes the agricultural microbials market by type (fungi, bacteria, protozoa, and virus), function (soil amendment, crop protection), application (foliar spray, seed treatment, soil treatment), formulation (liquid, dry), crop type (cereals & grains, fruits & vegetables, oilseeds & pulses) and region (North America, Europe, Asia Pacific, South America, and Rest of the World). The scope of the report covers detailed information regarding the major factors, such as drivers, restraints, challenges, and opportunities, influencing the growth of agricultural microbials market. A detailed analysis of the key industry players has been done to provide insights into their business overview, services, key strategies, contracts, partnerships, agreements, new service launches, mergers and acquisitions, and recent developments associated with the agricultural microbials market. Competitive analysis of upcoming startups in the agricultural microbials market ecosystem is covered in this report. Furthermore, industry-specific trends such as technology analysis, ecosystem and market mapping, patent, regulatory landscape,

Scotts International. EU Vat number: PL 6772247784

tel. 0048 603 394 346 e-mail: support@scotts-international.com

www.scotts-international.com

among others, are also covered in the study.

Reasons to buy this report:

The report will help the market leaders/new entrants in this market with information on the closest approximations of the revenue numbers for the overall agricultural microbials and the subsegments. This report will help stakeholders understand the competitive landscape and gain more insights to position their businesses better and plan suitable go-to-market strategies. The report also helps stakeholders understand the pulse of the market and provides them with information on key market drivers, restraints, challenges, and opportunities.

The report provides insights on the following pointers:

- Analysis of key drivers (increasing adoption of organic farming), restraints (environment and technological limitations of agricultural microbials), opportunities (Government subsidies and initiatives) and challenges (regulatory barriers) influencing the growth of the agricultural microbials market.
- New product launch/Innovation: Detailed insights on research & development activities and new product launches in the agricultural microbials market.
- Market Development: Comprehensive information about lucrative markets - the report analyzes the agricultural microbials market across varied regions.
- Market Diversification: Exhaustive information about new services, untapped geographies, recent developments, and investments in the agricultural microbials market.
- Competitive Assessment: In-depth assessment of market shares, growth strategies, product offerings, brand/product comparison, and product foot prints of leading players such as BASF SE (Germany), Bayer AG (Germany), Syngenta Group (Switzerland), UPL (India), Corteva (US), FMC Corporation (US), and other players in the agricultural microbials market.

Table of Contents:

1	INTRODUCTION	36
1.1	STUDY OBJECTIVES	36
1.2	MARKET DEFINITION	36
1.3	MARKET SCOPE	37
1.3.1	MARKET SEGMENTATION	37
1.3.2	INCLUSIONS & EXCLUSIONS	38
1.4	YEARS CONSIDERED	39
1.5	UNIT CONSIDERED	39
1.5.1	CURRENCY/VALUE UNIT	39
1.5.2	VOLUME CONSIDERED	40
1.6	STAKEHOLDERS	40
1.7	SUMMARY OF CHANGES	41
2	RESEARCH METHODOLOGY	42
2.1	RESEARCH DATA	42
2.1.1	SECONDARY DATA	43
2.1.1.1	Key data from secondary sources	43
2.1.2	PRIMARY DATA	43
2.1.2.1	Key data from primary sources	44
2.1.2.2	Key industry insights	45
2.1.2.3	Breakdown of primaries	45
2.2	MARKET SIZE ESTIMATION	46
2.2.1	BOTTOM-UP APPROACH	46
2.2.2	TOP-DOWN APPROACH	47
2.2.2.1	Approach to estimate market size using top-down analysis	48
2.3	DATA TRIANGULATION	50

Scotts International. EU Vat number: PL 6772247784

tel. 0048 603 394 346 e-mail: support@scotts-international.com

www.scotts-international.com

2.4	RESEARCH ASSUMPTIONS	51
2.5	RESEARCH LIMITATIONS	51
3	EXECUTIVE SUMMARY	52
4	PREMIUM INSIGHTS	57
4.1	ATTRACTIVE MARKET OPPORTUNITIES IN AGRICULTURAL MICROBIALS MARKET	57
4.2	ASIA PACIFIC: AGRICULTURAL MICROBIALS MARKET, BY FUNCTION AND COUNTRY	58
4.3	AGRICULTURAL MICROBIALS MARKET: SHARE OF MAJOR REGIONAL SUBMARKETS	58
4.4	AGRICULTURAL MICROBIALS MARKET, BY TYPE AND REGION	59
4.5	AGRICULTURAL MICROBIALS MARKET, BY FUNCTION AND REGION	60
4.6	AGRICULTURAL MICROBIALS MARKET, BY MODE OF APPLICATION AND REGION	61
4.7	AGRICULTURAL MICROBIALS MARKET, BY FORMULATION AND REGION	62
4.8	AGRICULTURAL MICROBIALS MARKET, BY CROP TYPE AND REGION	63
5	MARKET OVERVIEW	64
5.1	INTRODUCTION	64
5.2	MACROECONOMIC INDICATORS	65
5.2.1	INCREASE IN PRODUCTION OF HORTICULTURAL CROPS	65
5.2.2	GROWTH IN ORGANIC AGRICULTURAL PRACTICES	65
5.2.3	RELUCTANCE IN ADOPTION OF HARMFUL CHEMICAL PESTICIDES IN DEVELOPED MARKETS	66
5.3	MARKET DYNAMICS	67
5.3.1	DRIVERS	68
5.3.1.1	Pest proliferation-result of rapid climate change	68
5.3.1.2	Low development cost of microbial as compared to chemical pesticides	69
5.3.1.3	Target specificity of microbial crop protectants	69
5.3.1.4	Growth of organic farmland globally	69
5.3.2	RESTRAINTS	70
5.3.2.1	Shorter shelf life and complex storage requirements of microbial products	70
5.3.2.2	Environmental and technological limitations of agricultural microbial products	71
5.3.2.3	Low awareness among farmers pertaining to biofertilizers and high labor costs	71
5.3.3	OPPORTUNITIES	71
5.3.3.1	Shift toward regenerative agriculture and sustainable practices	71
5.3.3.2	Initiatives by governments for growing concerns about environmental impact of traditional chemical pesticides	72
5.3.4	CHALLENGES	73
5.3.4.1	Unorganized market and easy availability of cheaper chemical fertilizers that function as substitutes	73
5.3.4.2	Regulatory barriers	74
5.4	IMPACT OF AI/GEN AI ON AGRICULTURAL MICROBIALS MARKET	74
5.4.1	INTRODUCTION	74
5.4.2	USE OF GEN AI IN AGRICULTURAL MICROBIALS	76
5.4.3	CASE STUDY ANALYSIS	77
5.4.3.1	Koppert's digital assistant revolutionizing crop protection in agricultural microbial market	77
5.4.3.2	Pivot Bio's AI-driven Success	78
	?	
6	INDUSTRY TRENDS	79
6.1	INTRODUCTION	79
6.2	VALUE CHAIN ANALYSIS	79
6.2.1	RESEARCH & PRODUCT DEVELOPMENT	79
6.2.2	SOURCING	80
6.2.3	PRODUCTION	80

Scotts International. EU Vat number: PL 6772247784

tel. 0048 603 394 346 e-mail: support@scotts-international.com

www.scotts-international.com

6.2.4	FORMULATION	80
6.2.5	DISTRIBUTION	80
6.2.6	END-USE APPLICATION	80
6.3	TRADE ANALYSIS	81
6.3.1	EXPORT SCENARIO (HS CODE 3808)	81
6.3.2	IMPORT SCENARIO (HS CODE 3808)	82
6.4	TECHNOLOGY ANALYSIS	83
6.4.1	KEY TECHNOLOGIES	83
6.4.1.1	Microbial inoculants	83
6.4.2	COMPLEMENTARY TECHNOLOGIES	84
6.4.2.1	Precision agriculture technologies	84
6.4.3	ADJACENT TECHNOLOGIES	85
6.4.3.1	CRISPR and gene-editing	85
6.4.3.2	Carbon sequestration technologies	85
6.5	PRICING ANALYSIS	86
6.5.1	AVERAGE SELLING PRICE OF KEY PLAYERS, BY TYPE	86
6.5.2	AVERAGE SELLING PRICE TREND OF AGRICULTURAL MICROBIALS, BY REGION	87
6.6	ECOSYSTEM ANALYSIS	88
6.6.1	DEMAND SIDE	88
6.6.2	SUPPLY SIDE	88
6.7	TRENDS/DISRUPTIONS IMPACTING BUYERS IN AGRICULTURAL MICROBIALS MARKET	90
6.8	PATENT ANALYSIS	91
6.9	KEY CONFERENCES & EVENTS, 2025-2026	94
6.10	REGULATORY LANDSCAPE	95
6.10.1	REGULATORY BODIES, GOVERNMENT AGENCIES, AND OTHER ORGANIZATIONS	95
6.10.2	US	98
6.10.3	CANADA	98
6.10.4	MEXICO	100
6.10.5	EUROPE	101
6.10.6	ASIA PACIFIC	102
6.10.6.1	India	103
6.10.6.2	Australia	103
6.10.6.3	Japan	103
?		
6.10.7	SOUTH AMERICA	104
6.10.7.1	Brazil	104
6.10.7.2	Argentina	105
6.10.8	REST OF THE WORLD	105
6.11	PORTER'S FIVE FORCES ANALYSIS	106
6.11.1	INTENSITY OF COMPETITIVE RIVALRY	107
6.11.2	BARGAINING POWER OF SUPPLIERS	107
6.11.3	BARGAINING POWER OF BUYERS	107
6.11.4	THREAT OF SUBSTITUTES	107
6.11.5	THREAT OF NEW ENTRANTS	107
6.12	KEY STAKEHOLDERS AND BUYING CRITERIA	108
6.12.1	KEY STAKEHOLDERS IN BUYING PROCESS	108

Scotts International. EU Vat number: PL 6772247784

tel. 0048 603 394 346 e-mail: support@scotts-international.com

www.scotts-international.com

- 6.12.2 BUYING CRITERIA 109
- 6.13 CASE STUDY ANALYSIS 110
 - 6.13.1 HUMIC FACTORY - REVITALIZING GREEN VALLEY FARM'S PRODUCTIVITY 110
 - 6.13.2 INDIGO AGRICULTURE - ENHANCING CROP YIELDS WITH MICROBIAL SEED TREATMENTS 110
 - 6.13.3 INVESTMENT AND FUNDING SCENARIO 111
- 7 AGRICULTURAL MICROBIALS MARKET, BY TYPE 112
 - 7.1 INTRODUCTION 113
 - 7.2 BACTERIA 114
 - 7.2.1 BENEFICIAL BACTERIA LIKE BACILLUS SUBTILIS AND RHIZOBIUM TO ENHANCE CROP PRODUCTIVITY AND SOIL HEALTH 114
 - 7.3 FUNGI 115
 - 7.3.1 MYCORRHIZAL FUNGI HELP IN NUTRIENT UPTAKE AND IMPROVE STRESS TOLERANCE 115
 - 7.4 VIRUS 116
 - 7.4.1 NUCLEOPOLYHEDROVIRUS USED TO CONTROL VARIOUS WORM INSECTS 116
 - 7.5 PROTOZOA 117
 - 7.5.1 AMOEBA-BASED PRODUCTS TO DRIVE MARKET 117
- 8 AGRICULTURAL MICROBIALS MARKET, BY FUNCTION 119
 - 8.1 INTRODUCTION 120
 - 8.2 SOIL AMENDMENTS 122
 - 8.2.1 BIOFERTILIZERS 124
 - 8.2.1.1 Nitrogen-fixing microorganisms 125
 - 8.2.1.1.1 Rhizobium is most widely used as nitrogen-fixing biofertilizer 125
 - 8.2.1.1.2 Rhizobium 126
 - 8.2.1.1.3 Azotobacter 126
 - 8.2.1.1.4 Azospirillum 127
 - 8.2.1.1.5 Other nitrogen-fixing microorganisms 127
 - 8.2.1.2 Phosphate-solubilizing microorganisms 128
 - 8.2.1.2.1 Phosphate-solubilizing microorganisms to reduce consumption of chemical phosphate fertilizers 128
 - 8.2.1.2.2 Bacillus 129
 - 8.2.1.2.3 Pseudomonas 129
 - 8.2.1.2.4 Other phosphate-solubilizing microorganisms 129
 - 8.2.1.3 Potassium-solubilizing & mobilizing microorganisms 129
 - 8.2.1.3.1 Bacillus-based potassium biofertilizers are commonly used as seed treatment and soil amendments 129
 - 8.2.1.3.2 Bacillus mucilaginosus 130
 - 8.2.1.3.3 Other potassium-solubilizing microorganisms 130
 - 8.2.1.4 Other microorganisms 131
 - 8.2.2 BIOSTIMULANTS 131
 - 8.3 CROP PROTECTION 132
 - 8.4 BIOINSECTICIDES 135
 - 8.4.1 BACILLUS THURINGIENSIS 136
 - 8.4.1.1 Wide-scale availability, target-specificity, and efficiency 136
 - 8.4.2 BEAUVERIA BASSIANA 137
 - 8.4.2.1 Availability in various formulations 137
 - 8.4.3 METARHIZIUM ANISOPLIAE 137
 - 8.4.3.1 Effective in controlling caterpillars 137
 - 8.4.4 VERTICILLIUM LECANII 138
 - 8.4.4.1 Wide applications in ornamentals, vegetable crops, nurseries, lawns, and vegetable field crops 138
 - 8.4.5 BACULOVIRUS 138

Scotts International. EU Vat number: PL 6772247784

tel. 0048 603 394 346 e-mail: support@scotts-international.com

www.scotts-international.com

8.4.5.1	Significant demand as effective biocontrol tool for IPM programs	138
8.4.6	OTHER BIOINSECTICIDES	139
8.5	BIOFUNGICIDES	139
8.5.1	TRICHODERMA	141
8.5.1.1	Easy availability and long shelf life encouraging adoption among farmers	141
8.5.2	BACILLUS	142
8.5.2.1	Development of bacillus-based products to witness significant demand for biofungicides	142
8.5.3	PSEUDOMONAS	143
8.5.3.1	Rise in demand for pseudomonas-based biofungicide for seed-borne diseases	143
8.5.4	STREPTOMYCES	143
8.5.4.1	Eliminate pathogenic antagonists by secreting volatile compounds	143
8.5.5	OTHER BIOFUNGICIDES	144
	?	
8.6	BIONEMATICIDES	145
8.6.1	PAECILOMYCES LILACINUS	146
8.6.1.1	Promising as biocontrol agent for controlling growth of root-knot nematodes	146
8.6.2	BACILLUS FIRMUS	147
8.6.2.1	Effective for larvae and adult nematodes	147
8.6.3	OTHER BIONEMATICIDES	147
8.7	BIOHERBICIDES	147
8.7.1	BEST ALTERNATIVE FOR WEED CONTROL	147
8.7.2	COLLETOTRICHUM SPP.	149
8.7.2.1	Ongoing research and development in strain development driving market	149
8.7.3	XANTHOMONAS CAMPESTRIS	150
8.7.3.1	Research progress and strain innovation are key factors driving market forward	150
8.7.4	OTHER MICROBIAL BIOHERBICIDES	150
8.8	OTHER CROP PROTECTION FUNCTIONS	151
9	AGRICULTURAL MICROBIALS MARKET, BY MODE OF APPLICATION	152
9.1	INTRODUCTION	153
9.2	FOLIAR SPRAY	154
9.2.1	FOLIAR SPRAYS HELP IN BETTER ABSORPTION OF AGRICULTURAL MICROBIALS	154
9.3	SOIL TREATMENT	155
9.3.1	SOIL TREATMENT HELPS IN IMPROVING SOIL STRUCTURE AND NUTRIENT AVAILABILITY	155
9.4	SEED TREATMENT	156
9.4.1	ADVANCEMENTS IN TECHNOLOGY TO DRIVE DEMAND	156
9.5	OTHER MODES OF APPLICATION	157
10	AGRICULTURAL MICROBIALS MARKET, BY FORMULATION	159
10.1	INTRODUCTION	160
10.2	LIQUID	161
10.2.1	LIQUID FORMULATION PROVIDES UNIFORM APPLICATION	161
10.2.2	EMULSIFIABLE CONCENTRATES	162
10.2.3	SUSPENSION CONCENTRATES	162
10.2.4	SOLUBLE LIQUID CONCENTRATES	163
10.3	DRY	163
10.3.1	DRY AGRICULTURAL MICROBIALS IMPROVE SOIL HEALTH	163
10.3.2	WETTABLE POWDERS	164
10.3.3	WATER-DISPERSIBLE GRANULES	165

Scotts International. EU Vat number: PL 6772247784

tel. 0048 603 394 346 e-mail: support@scotts-international.com

www.scotts-international.com

10.3.4 DRY GRANULES 165

?

11 AGRICULTURAL MICROBIALS MARKET, BY CROP TYPE 166

11.1 INTRODUCTION 167

11.2 CEREALS & GRAINS 168

11.2.1 CORN 170

11.2.1.1 Corn affected by fall armyworm and nematodes to drive market for agricultural microbials 170

11.2.2 WHEAT 171

11.2.2.1 Aphids causing severe damage to wheat crop 171

11.2.3 RICE 171

11.2.3.1 Bacillus thuringiensis to be effective against leaf folder and stem borer 171

11.2.4 OTHER CEREALS & GRAINS 171

11.3 OILSEEDS & PULSES 172

11.3.1 SOYBEAN 173

11.3.1.1 Infestation from root-knot nematodes to be severe in soybean crops 173

11.3.2 SUNFLOWER 174

11.3.2.1 Preference for sunflower oil and confectionery value of sunflower seed to drive demand 174

11.3.3 OTHER OILSEEDS & PULSES 174

11.4 FRUITS & VEGETABLES 174

11.4.1 ROOT & TUBER VEGETABLES 176

11.4.1.1 Range of pests, diseases, and nematodes cause economic losses in root & tuber vegetables 176

11.4.2 LEAFY VEGETABLES 176

11.4.2.1 Rapid use of bacterial-based agricultural microbials to control diseases like downy mildew, collar rot, and leaf blight 176

11.4.3 POME FRUITS 177

11.4.3.1 Biocontrol agents found to be effective on pome fruits 177

11.4.4 BERRIES 177

11.4.4.1 Stringent regulations of export to increase demand for agricultural microbials 177

11.4.5 CITRUS FRUITS 177

11.4.5.1 Citrus canker disease boosting use of microbial products 177

11.4.6 OTHER FRUITS & VEGETABLES 178

11.5 OTHER CROP TYPES 178

?

12 AGRICULTURAL MICROBIALS MARKET, BY REGION 180

12.1 INTRODUCTION 181

12.2 NORTH AMERICA 183

12.2.1 US 191

12.2.1.1 Government policies and initiatives fueling expansion of US agricultural microbials market 191

12.2.2 CANADA 193

12.2.2.1 Focus on innovation, policy support, and research investment driving growth of agricultural microbials market 193

12.2.3 MEXICO 195

12.2.3.1 Growing emphasis on sustainable agricultural practices fueling growth of agricultural microbials market 195

12.3 EUROPE 196

12.3.1 SPAIN 205

12.3.1.1 Collaborative innovations driving demand for agricultural microbials in Spain 205

12.3.2 FRANCE 207

12.3.2.1 Leading shift toward sustainable farming practices 207

Scotts International. EU Vat number: PL 6772247784

tel. 0048 603 394 346 e-mail: support@scotts-international.com

www.scotts-international.com

- 12.3.3 GERMANY 208
- 12.3.3.1 Germany supports ban on chemical insecticides 208
- 12.3.4 ITALY 210
- 12.3.4.1 Significant use of microbials in horticulture and development of organic farming practices to support market growth 210
- 12.3.5 UK 211
- 12.3.5.1 Developing market for agricultural microbials with farmers slowly adopting organic practices 211
- 12.3.6 REST OF EUROPE 213
- 12.4 ASIA PACIFIC 214
- 12.4.1 CHINA 222
- 12.4.1.1 Efforts to raise sustainable farming practices to support market 222
- 12.4.2 INDIA 224
- 12.4.2.1 Rise of microbial solutions driving growth of agricultural microbials in India 224
- 12.4.3 JAPAN 226
- 12.4.3.1 Rise in food security and quality concerns among population to drive market for microbials in crop cultivation 226
- 12.4.4 AUSTRALIA 227
- 12.4.4.1 Vast organic farmland demanding agricultural microbial products 227
- 12.4.5 REST OF ASIA PACIFIC 229
- ?
- 12.5 SOUTH AMERICA 230
- 12.5.1 ARGENTINA 237
- 12.5.1.1 Argentina emerges as leading market for agricultural microbials through organic and sustainable farming initiatives 237
- 12.5.2 BRAZIL 238
- 12.5.2.1 Bt biopesticides propel Brazil toward agricultural sustainability leadership 238
- 12.5.3 REST OF SOUTH AMERICA 240
- 12.6 REST OF THE WORLD (ROW) 242
- 12.6.1 AFRICA 248
- 12.6.1.1 International organizations collaborating with biopesticide stakeholders to drive market 248
- 12.6.2 MIDDLE EAST 250
- 12.6.2.1 High demand for domestically produced organic foods to boost demand 250
- 13 COMPETITIVE LANDSCAPE 252
- 13.1 OVERVIEW 252
- 13.2 KEY PLAYERS' STRATEGIES/RIGHT TO WIN 253
- 13.3 SEGMENTAL REVENUE ANALYSIS 255
- 13.4 MARKET SHARE ANALYSIS, 2023 255
- 13.5 COMPANY EVALUATION MATRIX: KEY PLAYERS, 2023 257
- 13.5.1 STARS 257
- 13.5.2 EMERGING LEADERS 257
- 13.5.3 PERVASIVE PLAYERS 257
- 13.5.4 PARTICIPANTS 257
- 13.5.5 COMPANY FOOTPRINT: KEY PLAYERS, 2023 259
- 13.5.5.1 Company footprint 259
- 13.5.5.2 Region footprint 260
- 13.5.5.3 Type footprint 261
- 13.5.5.4 Function footprint 261
- 13.5.5.5 Formulation footprint 262
- 13.6 COMPANY EVALUATION MATRIX: STARTUPS/SMES, 2023 263
- 13.6.1 PROGRESSIVE COMPANIES 263

Scotts International. EU Vat number: PL 6772247784

tel. 0048 603 394 346 e-mail: support@scotts-international.com

www.scotts-international.com

13.6.2	RESPONSIVE COMPANIES	263
13.6.3	DYNAMIC COMPANIES	263
13.6.4	STARTING BLOCKS	263
13.6.5	COMPETITIVE BENCHMARKING: STARTUPS/SMES, 2023	265
13.6.5.1	Detailed list of key startups/SMEs	265
13.6.5.2	Competitive benchmarking of key startups/SMEs	266
13.7	COMPANY VALUATION AND FINANCIAL METRICS	267
13.8	BRAND/PRODUCT/SERVICE ANALYSIS	268
?		
13.9	COMPETITIVE SCENARIO AND TRENDS	269
13.9.1	PRODUCT LAUNCHES	269
13.9.2	DEALS	272
13.9.3	EXPANSIONS	277
14	COMPANY PROFILES	280
14.1	KEY PLAYERS	280
14.1.1	BASF SE	280
14.1.1.1	Business overview	280
14.1.1.2	Products/Solutions/Services offered	281
14.1.1.3	Recent developments	282
14.1.1.3.1	Product launches	282
14.1.1.3.2	Deals	283
14.1.1.3.3	Expansions	283
14.1.1.4	MnM view	284
14.1.1.4.1	Key strengths	284
14.1.1.4.2	Strategic choices	284
14.1.1.4.3	Weaknesses and competitive threats	284
14.1.2	BAYER AG	285
14.1.2.1	Business overview	285
14.1.2.2	Products/Solutions/Services offered	286
14.1.2.3	Recent developments	287
14.1.2.3.1	Product launches	287
14.1.2.3.2	Deals	287
14.1.2.3.3	Expansions	288
14.1.2.4	MnM view	289
14.1.2.4.1	Key strengths	289
14.1.2.4.2	Strategic choices	289
14.1.2.4.3	Weaknesses and competitive threats	289
14.1.3	CORTEVA	290
14.1.3.1	Business overview	290
14.1.3.2	Products/Solutions/Services offered	291
14.1.3.3	Recent developments	292
14.1.3.3.1	Product launches	292
14.1.3.3.2	Deals	293
14.1.3.4	MnM view	295
14.1.3.4.1	Key strengths	295
14.1.3.4.2	Strategic choices	295
14.1.3.4.3	Weaknesses and competitive threats	295

Scotts International. EU Vat number: PL 6772247784

tel. 0048 603 394 346 e-mail: support@scotts-international.com

www.scotts-international.com

?

- 14.1.4 SYNGENTA GROUP 296
 - 14.1.4.1 Business overview 296
 - 14.1.4.2 Products/Solutions/Services offered 297
 - 14.1.4.3 Recent developments 297
 - 14.1.4.3.1 Product launches 297
 - 14.1.4.3.2 Deals 298
 - 14.1.4.3.3 Expansions 300
 - 14.1.4.4 MnM view 301
 - 14.1.4.4.1 Key strengths 301
 - 14.1.4.4.2 Strategic choices 301
 - 14.1.4.4.3 Weaknesses and competitive threats 301
- 14.1.5 FMC CORPORATION 302
 - 14.1.5.1 Business overview 302
 - 14.1.5.2 Products/Solutions/Services offered 303
 - 14.1.5.3 Recent developments 304
 - 14.1.5.3.1 Product launches 304
 - 14.1.5.3.2 Deals 305
 - 14.1.5.3.3 Expansions 306
 - 14.1.5.3.4 Other developments 306
 - 14.1.5.4 MnM view 307
 - 14.1.5.4.1 Key strengths 307
 - 14.1.5.4.2 Strategic choices 307
 - 14.1.5.4.3 Weaknesses and competitive threats 307
- 14.1.6 UPL 308
 - 14.1.6.1 Business overview 308
 - 14.1.6.2 Products/Solutions/Services offered 309
 - 14.1.6.3 Recent developments 310
 - 14.1.6.3.1 Product launches 310
 - 14.1.6.3.2 Deals 311
 - 14.1.6.4 MnM view 312
- 14.1.7 SUMITOMO CHEMICAL CO., LTD. 313
 - 14.1.7.1 Business overview 313
 - 14.1.7.2 Products/Solutions/Services offered 314
 - 14.1.7.3 Recent developments 316
 - 14.1.7.3.1 Deals 316
 - 14.1.7.3.2 Expansions 316
 - 14.1.7.4 MnM view 317

?

- 14.1.8 NUFARM 318
 - 14.1.8.1 Business overview 318
 - 14.1.8.2 Products/Solutions/Services offered 319
 - 14.1.8.3 Recent developments 320
 - 14.1.8.3.1 Deals 320
 - 14.1.8.3.2 Other developments 320
 - 14.1.8.4 MnM view 320
- 14.1.9 NOVONESIS GROUP 321

Scotts International. EU Vat number: PL 6772247784

tel. 0048 603 394 346 e-mail: support@scotts-international.com

www.scotts-international.com

14.1.9.1	Business overview	321
14.1.9.2	Products/Solutions/Services offered	323
14.1.9.3	Recent developments	324
14.1.9.3.1	Product launches	324
14.1.9.3.2	Deals	325
14.1.9.4	MnM view	327
14.1.10	BIOCERES CROP SOLUTIONS	328
14.1.10.1	Business overview	328
14.1.10.2	Products/Solutions/Services offered	329
14.1.10.3	Recent developments	330
14.1.10.3.1	Product launches	330
14.1.10.3.2	Deals	331
14.1.10.4	MnM view	331
14.1.11	KOPPERT	332
14.1.11.1	Business overview	332
14.1.11.2	Products/Solutions/Services offered	332
14.1.11.3	Recent developments	333
14.1.11.3.1	Deals	333
14.1.11.3.2	Expansions	335
14.1.11.4	MnM view	335
14.1.12	CERTIS USA L.L.C.	336
14.1.12.1	Business overview	336
14.1.12.2	Products/Solutions/Services offered	336
14.1.12.3	Recent developments	337
14.1.12.3.1	Product launches	337
14.1.12.3.2	Deals	338
14.1.12.3.3	Other developments	339
14.1.12.4	MnM view	339
14.1.13	BIONEMA	340
14.1.13.1	Business overview	340
14.1.13.2	Products/Solutions/Services offered	340
14.1.13.3	Recent developments	341
14.1.13.3.1	Product launches	341
14.1.13.4	MnM view	342
14.1.14	BIOFIRST GROUP	343
14.1.14.1	Business overview	343
14.1.14.2	Product/Solutions/Services offered	343
14.1.14.3	Recent developments	344
14.1.14.3.1	Deals	344
14.1.14.4	MnM view	346
14.1.15	LALLEMAND INC	347
14.1.15.1	Business overview	347
14.1.15.2	Products/Solutions/Services offered	347
14.1.15.3	Recent developments	348
14.1.15.3.1	Product launches	348
14.1.15.4	MnM view	348
14.2	OTHER PLAYERS (SMES/STARTUPS)	349

Scotts International. EU Vat number: PL 6772247784

tel. 0048 603 394 346 e-mail: support@scotts-international.com

www.scotts-international.com

14.2.1	IPL BIOLOGICALS	349
14.2.1.1	Business overview	349
14.2.1.2	Products/Solutions/Services offered	349
14.2.1.3	Recent developments	351
14.2.1.3.1	Product launches	351
14.2.1.3.2	Deals	351
14.2.1.3.3	Expansions	352
14.2.1.3.4	Other developments	353
14.2.2	ROVENSA NEXT	354
14.2.2.1	Business overview	354
14.2.2.2	Products/Solutions/Services offered	354
14.2.2.3	Recent developments	355
14.2.2.3.1	Expansions	355
14.2.3	SEIPASA, S.A.	356
14.2.3.1	Business overview	356
14.2.3.2	Products/Solutions/Services offered	356
14.2.3.3	Recent developments	357
14.2.3.3.1	Product launches	357
14.2.3.3.2	Expansions	357
14.2.4	VESTARON CORPORATION	358
14.2.4.1	Business overview	358
14.2.4.2	Products/Solutions/Services offered	358
14.2.4.3	Recent developments	359
14.2.4.3.1	Deals	359
14.2.5	AGRILIFE	360
14.2.5.1	Business overview	360
14.2.5.2	Product/Solutions/Services offered	360
	?	
14.2.6	ANDERMATT GROUP AG	362
14.2.7	BIOCONSORTIA	363
14.2.8	APHEA.BIO	363
14.2.9	GENICA	364
14.2.10	NORDIC MICROBES A/S	365
15	ADJACENT AND RELATED MARKETS	366
15.1	INTRODUCTION	366
15.2	LIMITATIONS	366
15.3	BIOPESTICIDES MARKET	366
15.3.1	MARKET DEFINITION	366
15.3.2	MARKET OVERVIEW	367
15.4	AGRICULTURAL BIOLOGICALS MARKET	368
15.4.1	MARKET DEFINITION	368
15.4.2	MARKET OVERVIEW	368
15.5	PLANT GROWTH REGULATORS MARKET	369
15.5.1	MARKET DEFINITION	369
15.5.2	MARKET OVERVIEW	369
16	APPENDIX	371
16.1	DISCUSSION GUIDE	371

Scotts International. EU Vat number: PL 6772247784

tel. 0048 603 394 346 e-mail: support@scotts-international.com

www.scotts-international.com

16.2 KNOWLEDGESTORE: MARKETSANDMARKETS' SUBSCRIPTION PORTAL 374

16.3 CUSTOMIZATION OPTIONS 376

16.4 RELATED REPORTS 376

16.5 AUTHOR DETAILS 377

Scotts International. EU Vat number: PL 6772247784

tel. 0048 603 394 346 e-mail: support@scotts-international.com

www.scotts-international.com

**Agricultural Microbials Market by Function (Soil Amendment and Crop Protection),
Crop Type (Cereals & Grains, Oilseeds & Pulses, Fruits & Vegetables), Type (Bacteria,
Fungi, Virus, Protozoa), Application, and Region - Global Forecast to 2030**

Market Report | 2025-02-03 | 378 pages | MarketsandMarkets

To place an Order with Scotts International:

- Print this form
- Complete the relevant blank fields and sign
- Send as a scanned email to support@scotts-international.com

ORDER FORM:

Select license	License	Price
	Single User	\$4950.00
	Multi User	\$6650.00
	Corporate License	\$8150.00
	Enterprise Site License	\$10000.00
		VAT
		Total

*Please circle the relevant license option. For any questions please contact support@scotts-international.com or 0048 603 394 346.

** VAT will be added at 23% for Polish based companies, individuals and EU based companies who are unable to provide a valid EU Vat Numbers.

Email*	<input type="text"/>	Phone*	<input type="text"/>
First Name*	<input type="text"/>	Last Name*	<input type="text"/>
Job title*	<input type="text"/>		
Company Name*	<input type="text"/>	EU Vat / Tax ID / NIP number*	<input type="text"/>
Address*	<input type="text"/>	City*	<input type="text"/>
Zip Code*	<input type="text"/>	Country*	<input type="text"/>

Scotts International. EU Vat number: PL 6772247784

tel. 0048 603 394 346 e-mail: support@scotts-international.com

www.scotts-international.com

Date

2026-03-02

Signature

A large, empty rectangular box intended for a signature.

Scotts International. EU Vat number: PL 6772247784

tel. 0048 603 394 346 e-mail: support@scotts-international.com

www.scotts-international.com