

Plant Phenotyping - Market Share Analysis, Industry Trends & Statistics, Growth Forecasts 2019 - 2029

Market Report | 2024-02-17 | 90 pages | Mordor Intelligence

AVAILABLE LICENSES:

- Single User License \$4750.00
- Team License (1-7 Users) \$5250.00
- Site License \$6500.00
- Corporate License \$8750.00

Report description:

The Plant Phenotyping Market size is estimated at USD 281.32 billion in 2024, and is expected to reach USD 463.47 billion by 2029, growing at a CAGR of 10.5% during the forecast period (2024-2029).

The increasing population has driven the need to grow high-yielding crops for the fulfillment of food security needs, which in turn is boosting the demand for innovative plant breeding techniques for improved crop productivity. High frequency of extreme weather conditions and global warming are also enhancing the need for crop productivity across the world which is favoring the phenotyping market. The market is dominated by the European region.

Furthermore, the innovations in imaging techniques facilitate the better assessment of plant characteristics for the development of better crop breeds suitable for the particular environment. Imaging techniques assist in detecting optical properties of plants by using various technologies like imaging spectroscopy, infrared imaging, fluorescence imaging, and visible light imaging, whose data sorts from macroscopic to molecular scale.

Plant Phenotyping Market Trends

Increasing Number of Seed Borne Diseases is Driving the Market

Almost 90% of all the world's food crops are grown from seeds that are widely distributed in national trade and international trade. Germplasm is also distributed and exchanged in the form of seeds in breeding programs. However, many plant pathogens can be seed transmitted and seed distribution is a very efficient form of plant disease dispersal. Under suitable environmental conditions, disease-causing organisms that are carried by seeds may be transmitted to cause disease in developing seedlings or

Scotts International. EU Vat number: PL 6772247784

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

www.scotts-international.com

plants. The pathogen attacks the germinating seedling and affects the seedling establishment, with others, disease symptoms are not seen until a later stage of growth. With the rising number of seed diseases that are affecting crop productivity, it has become necessary to adopt techniques like plant phenotyping to eliminate them and propagate better and disease-free crop varieties. Hence, the market is increasingly been driven by the outbreak of plant diseases in cereals, fruits, vegetables, oilseeds and other crops across the world.

Europe Dominates the Phenotyping Market

Europe accounted for the largest share of the plant phenotyping market in 2019. High emphasis on the funding of plant phenotyping experiments from governments and other organizations in Europe and North America has played a vital role in the growth of the plant phenotyping market in these regions. Additionally, key players in the plant phenotyping market are located in the European region, which makes it the dominant market with effective phenotyping research and services over other regions. There is a rising number of research activities taking place across the European countries which are driving awareness and in turn the market for plant phenotyping products and services. In 2019, a study conducted in Europe established that the Mediterranean climate in the countries of Italy, Greece, Portugal, and Spain with hot dry summers and frequent droughts alongside the heterogeneous panorama of phenotyping within Mediterranean countries, describing the state of the art of agricultural production, breeding initiatives, and phenotyping capabilities, drive the market in the region.

Plant Phenotyping Industry Overview

The plant phenotyping market is consolidated and is dominated by a few major players like LemnaTec, CropDesign - BASF SE, Heinz Walz, Photon Systems Instruments, Qubit Systems, and KeyGene. The market is characterized by a high degree of competition and the companies are increasingly investing in product launches, mergers & acquisitions, collaborations, and expansions to keep ahead of the competition. For example, in 2018, BASF (CropDesign) opened a global state-of-the-art breeding center for cucumbers in Nunhem, housing all cucumber pre-breeding and breeding programs in Nunhem: high wire, long, short, snack, and pickling cucumber types, including the phenotyping line which offers digital evaluation of fruit characteristics. Furthermore, CropDesign engineers are also developing novel sensors for monitoring plant growth or soil quality, which can be readily linked to in-house developed, user-friendly apps.

Additional Benefits:

- The market estimate (ME) sheet in Excel format
- 3 months of analyst support

Table of Contents:

1 INTRODUCTION

1.1 Study Deliverables

1.2 Study Assumptions

1.3 Scope of the Study

2 RESEARCH METHODOLOGY

3 EXECUTIVE SUMMARY

4 MARKET DYNAMICS

4.1 Market Overview

4.2 Market Drivers

Scotts International. EU Vat number: PL 6772247784

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

www.scotts-international.com

- 4.3 Market Restraints
- 4.4 Porter's Five Force Analysis
 - 4.4.1 Threat of New Entrants
 - 4.4.2 Bargaining Power of Buyers
 - 4.4.3 Bargaining Power of Suppliers
 - 4.4.4 Threat of Substitute Products
 - 4.4.5 Competitive Rivalry

5 MARKET SEGMENTATION

- 5.1 Products
 - 5.1.1 Equipment
 - 5.1.1.1 By Automation Type
 - 5.1.1.1.1 Manual
 - 5.1.1.1.2 Semi-Automated
 - 5.1.1.1.3 Fully Automated
 - 5.1.1.2 By Application
 - 5.1.1.2.1 High-Throughput Screening
 - 5.1.1.2.2 Trait Identification
 - 5.1.1.2.3 Photosynthetic Performance
 - 5.1.1.2.4 Morphology and Growth Assessment
 - 5.1.1.2.5 Other Applications
 - 5.1.1.3 By Analysis System
 - 5.1.1.3.1 Image Analysis Systems
 - 5.1.1.3.2 Multispectral Scientific Cameras
 - 5.1.1.3.3 Canopy Analysis Systems
 - 5.1.1.3.4 Fluorometers
 - 5.1.1.3.5 Others
 - 5.1.1.4 By Site
 - 5.1.1.4.1 Laboratory
 - 5.1.1.4.2 Green House
 - 5.1.1.4.3 Field
 - 5.1.1.5 By Platform
 - 5.1.1.5.1 Conveyor-Based/Modular Systems
 - 5.1.1.5.2 Bench-Based Systems
 - 5.1.1.5.3 Handheld/Portable Systems
 - 5.1.1.5.4 Drones
 - 5.1.2 Softwares
 - 5.1.2.1 Image Analysis
 - 5.1.2.2 Data Acquisition
 - 5.1.2.3 System Control
 - 5.1.2.4 Other Softwares
 - 5.1.3 Sensors
 - 5.1.3.1 Image Sensors
 - 5.1.3.2 NDVI Sensors
 - 5.1.3.3 Temperature Sensors
 - 5.1.3.4 Other Sensors
- 5.2 Services

Scotts International. EU Vat number: PL 6772247784

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

www.scotts-international.com

- 5.2.1 Measurement Acquisition & Data Analysis
- 5.2.2 Statistical Analysis
- 5.3 Geography
 - 5.3.1 North America
 - 5.3.1.1 United States
 - 5.3.1.2 Canada
 - 5.3.1.3 Mexico
 - 5.3.1.4 Rest of North America
 - 5.3.2 Europe
 - 5.3.2.1 Germany
 - 5.3.2.2 United Kingdom
 - 5.3.2.3 France
 - 5.3.2.4 Italy
 - 5.3.2.5 Russia
 - 5.3.2.6 Spain
 - 5.3.2.7 Rest of Europe
 - 5.3.3 Asia Pacific
 - 5.3.3.1 China
 - 5.3.3.2 Japan
 - 5.3.3.3 India
 - 5.3.3.4 Australia
 - 5.3.3.5 Rest of Asia-Pacific
 - 5.3.4 South America
 - 5.3.4.1 Brazil
 - 5.3.4.2 Argentina
 - 5.3.4.3 Rest of South America
 - 5.3.5 Africa
 - 5.3.5.1 South Africa
 - 5.3.5.2 Rest of Africa

6 COMPETITIVE LANDSCAPE

- 6.1 Most Adopted Strategies
- 6.2 Market Share Analysis
- 6.3 Company Profiles
 - 6.3.1 BASF SE (Crop Design)
 - 6.3.2 Delta-T Devices
 - 6.3.3 Heinz Walz GmbH
 - 6.3.4 Keygene
 - 6.3.5 LemnaTec GmbH
 - 6.3.6 Phenomix
 - 6.3.7 Phenospex
 - 6.3.8 PSI (Photon Systems Instruments)
 - 6.3.9 Qubit Systems
 - 6.3.10 Rothamsted Research
 - 6.3.11 The Vienna Biocenter Core Facilities
 - 6.3.12 WPS

Scotts International. EU Vat number: PL 6772247784

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

www.scotts-international.com

Plant Phenotyping - Market Share Analysis, Industry Trends & Statistics, Growth Forecasts 2019 - 2029

Market Report | 2024-02-17 | 90 pages | Mordor Intelligence

To place an Order with Scotts International:

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

ORDER FORM:

Select license	License	Price
	Single User License	\$4750.00
	Team License (1-7 Users)	\$5250.00
	Site License	\$6500.00
	Corporate License	\$8750.00
		VAT
		Total

*Please circle the relevant license option. For any questions please contact support@scott's-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"/>
		Date	<input type="text" value="2026-02-26"/>
		Signature	

Scotts International. EU Vat number: PL 6772247784

tel. 0048 603 394 346 e-mail: support@scott's-international.com

www.scott's-international.com

