Plant Factory Lights and Controls -- Markets Reach $3.8 Billion By 2016

LEXINGTON, Massachusetts (May 27, 2010) – WinterGreen Research announces that it has a new study on: Plant Factory Grow Lights and Controls Market Shares and Forecasts, Worldwide, 2010-2016. Plant Factory Grow Lights and Controls are useful as a way to automate the farming process of growing vegetables and plants used for pharmaceuticals. Grow lamps are needed for warehouse year round food production. Crops are more productive than traditional farming by a factor of ten. The study has 254 pages and 115 tables and figures.

Plant factories are positioned as a significant addition to automated process. The ability to grow food consistently, locally in high volume represents a major breakthrough for humanity. People can grow food in warehouses and in the home, dedicating space that is efficient for producing food.

When you take the cost of transportation out of the food chain, this is a breakthrough of major propositions. When you make fresh, sanitary food available consistently, there is a major shift in how people live and the quality of life. When you increase the density of food production by a factor of ten, this is significant.

Food factories produce organic vegetables. This represents a next step in the application of automated process to everyday life. Automated process for farming provides immediate help for food stores that are depleting quickly. Inventors have started to look toward possibilities that allow farming practices that are not dependent on the climate. Food factories produce organic vegetables 24 hours a day. With the land available for farming depleting quickly, new types of farming are evolving.

A plant factory allows the growing of vegetables indoors all year round. It is a system that artificially creates the environment necessary for plants to grow by controlling the amount of culture solution, air, and light from light-emitting diodes (LED). Because the amount of light, temperature, humidity, and carbon dioxide (CO2) concentration levels can be optimized without being affected by the weather, the growth rate of vegetables is two to four times faster than those grown in open-air fields, and yields are ten to twenty times higher.

WinterGreen Research, Inc.
6 Raymond St.
Lexington, MA 02421
(781) 863-5078
www.wintergreenresearch.com

Growth light spectrum positioning relates to understand the spectrum at which plants grow and that this is different from the spectrum that is visible to the human eye. Vendors are then able to build lights that maximize plant growth. These lights are significantly different from light used for human visible lighting.

Plant growth is a function of photosynthesis. This is not determined by lux or energy, but by the photons from the blue to red (400–700 nm) part of the spectrum. This is called growth light. Visible light has a somewhat different spectrum. Light for horticulture is in the visible part of electromagnetic radiation. For horticulture photons from the blue to red (400–700 nm) part of the spectrum are what stimulate growth. Natural daylight (global radiation) is measured in terms of energy (J orW) with a solar meter. New measures of light specific for plant factories are evolving.

A plant factory is a facility in which all the environmental elements for plant growth are artificially controlled. Lighting, temperature, humidity, carbon dioxide density, and culture solution are controlled. Systems are designed to support year-around, scheduled production of plants and vegetables.

The plant factories market can be divided into 2 major categories, new plant factory construction market and plant factory products market. Plants and vegetables are produced in the plant factories.

Plant factories come with complete artificial lighting in a totally-enclosed environment. Other plant systems combine the use of solar and artificial lighting. For the future, plant factories are being implemented is a highly automated, protected environment. Horticulture facilities are being built which permit year-round scheduled plant production.

Energy saving HID Lighting choices are implemented as metal halide (MH) or long lasting high pressure sodium (HPS) light sources . Traditional, shoe box, or curved back specification grade HID Lights with swivel arm, trunnion, slipfitter or wall mounts are offered. Factory installed photocells are optional on most models. Hood, shield, and wire guard accessories for HID Lights can be ordered separately.

Grow light systems, remote ballasts, reflectors, lamps, nutrients, light movers, timers and meters are offered.

WinterGreen Research, Inc.
6 Raymond St.
Lexington, MA 02421
(781) 863-5078
www.wintergreenresearch.com

Plant factory grow lamp market forecast analysis indicates that the market in 2009 at $127 million dollars is anticipated to reach $3.8 billion worldwide by 2016. Market growth comes as solar energy makes it feasible to grow plants locally instead of shipping food long distance. Farming has been moving steadily in the direction of consolidation of workload.

WinterGreen Research is an independent research organization funded by the sale of market research studies all over the world and by the implementation of ROI models that are used to calculate the total cost of ownership of equipment, services, and software. The company has 35 distributors worldwide, including Thompson Financial and Global Information GII Info-Shop.

Keywords: Grow Lights, Moving light, Plant Factory, CEA, Phalaenopsis, Plant Advances In Technology, Plant Factory Growing, Plant Factory Server Controls, Light Farming, Green Flooring, Vegetation, Safe food, Organic vegetables, Plant Factory Vegetables, Plant Factories, Grow Light Plantations, http://www.wintergreenresearch.com/reports/PlantFactory.htm

Contact:

Susan Eustis, President and Co-Author
WinterGreen Research
6 Raymond St.
Lexington, MA 02421

(781) 863-5078 (Work)
(617) 852-7876 (Cell)
susan@wintergreenresearch.com
www.wintergreenresearch.com

WinterGreen Research, Inc.
6 Raymond St.
Lexington, MA 02421
(781) 863-5078
www.wintergreenresearch.com