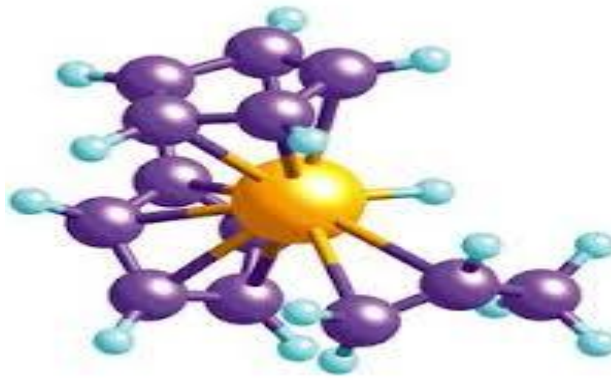


Biodegradable Plastics and Polymers

(Coated Paper, Shopping Bags, Landfill Cover Film, Plant Phytotoxicity Testing, Toxicity, Fillers, Activated Sludge, Copolyesters, Monomer, Polymer, Fibre-Reinforced Composites, Biodegradable Polymers, Biodegradation, Polysaccharides, Collagen, Bacterial Cellulose, Biobased Materials)



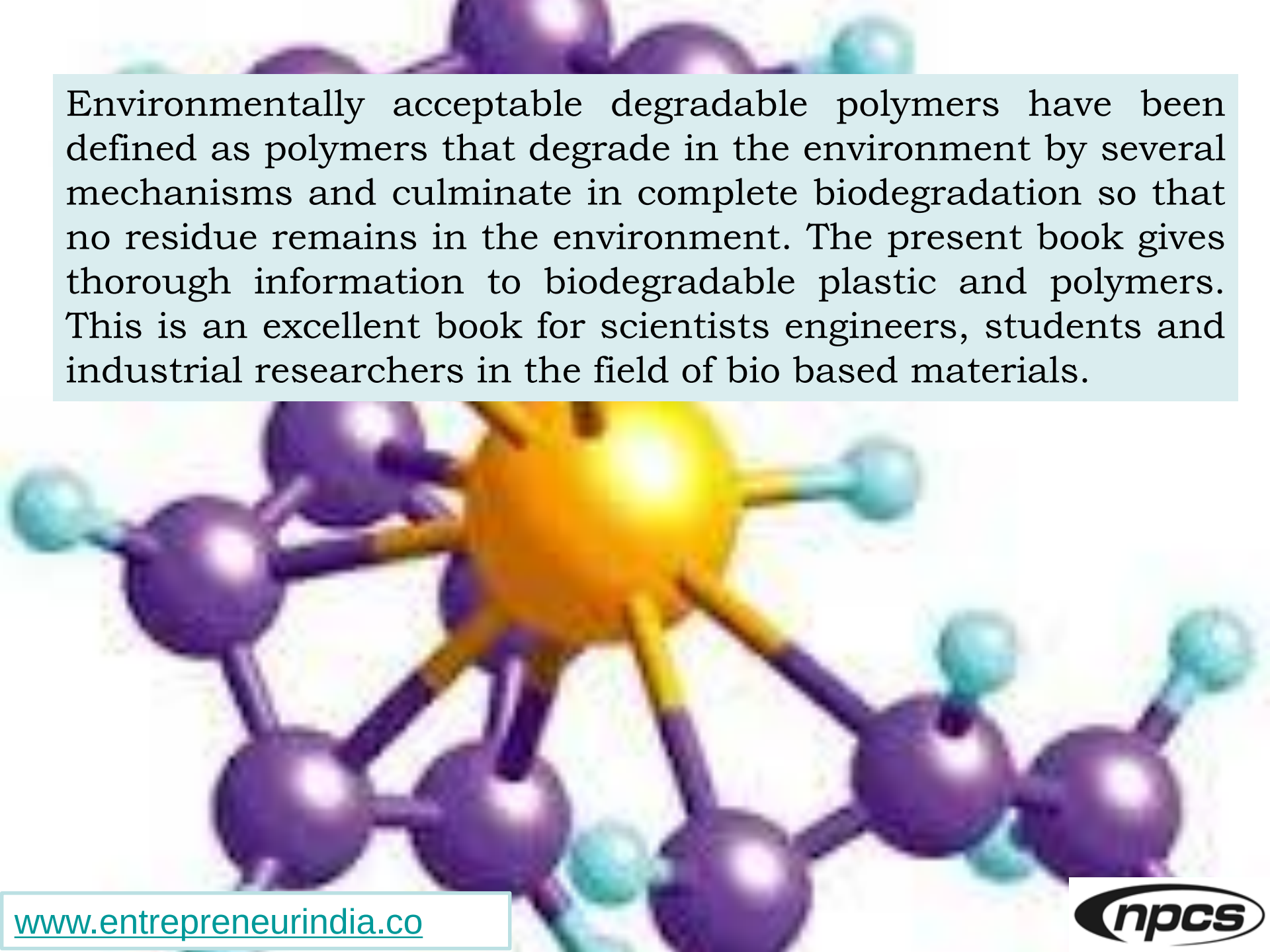
Introduction

Biodegradable plastics are plastics that are decomposed by the action of living organisms, usually bacteria.

Two basic classes of biodegradable plastics exist: Bioplastics, whose components are derived from renewable raw materials, and plastics made from petrochemicals containing biodegradable additives which enhance biodegradation.

Biodegradable polymers are a specific type of polymer that breaks down after its intended purpose to result in natural by products such as gases (CO_2 , N_2), water, biomass, and inorganic salts. These polymers are found both naturally and synthetically made, and largely consist of ester, amide, and ether functional groups. Their properties and breakdown mechanism are determined by their exact structure. These polymers are often synthesized by condensation reactions, ring opening polymerization, and metal catalysts. There are vast examples and applications of biodegradable polymers.

This book basically deals with biodegradable plastics developments and environmental impacts, hydro biodegradable and photo biodegradable, starch synthetic aliphatic polyester blends, difference between standards for biodegradation, polybutylene succinate (pbs) and polybutylene, recent developments in the biopolymer industry, recent advances in synthesis of biopolymers by traditional methodologies, polymers, environmentally degradable synthetic biodegradable polymers as medical devices, polymers produced from classical chemical synthesis from bio based monomers, potential bio based packaging materials, conventional packaging materials, environmental impact of bio based materials: biodegradability and compostability, etc.



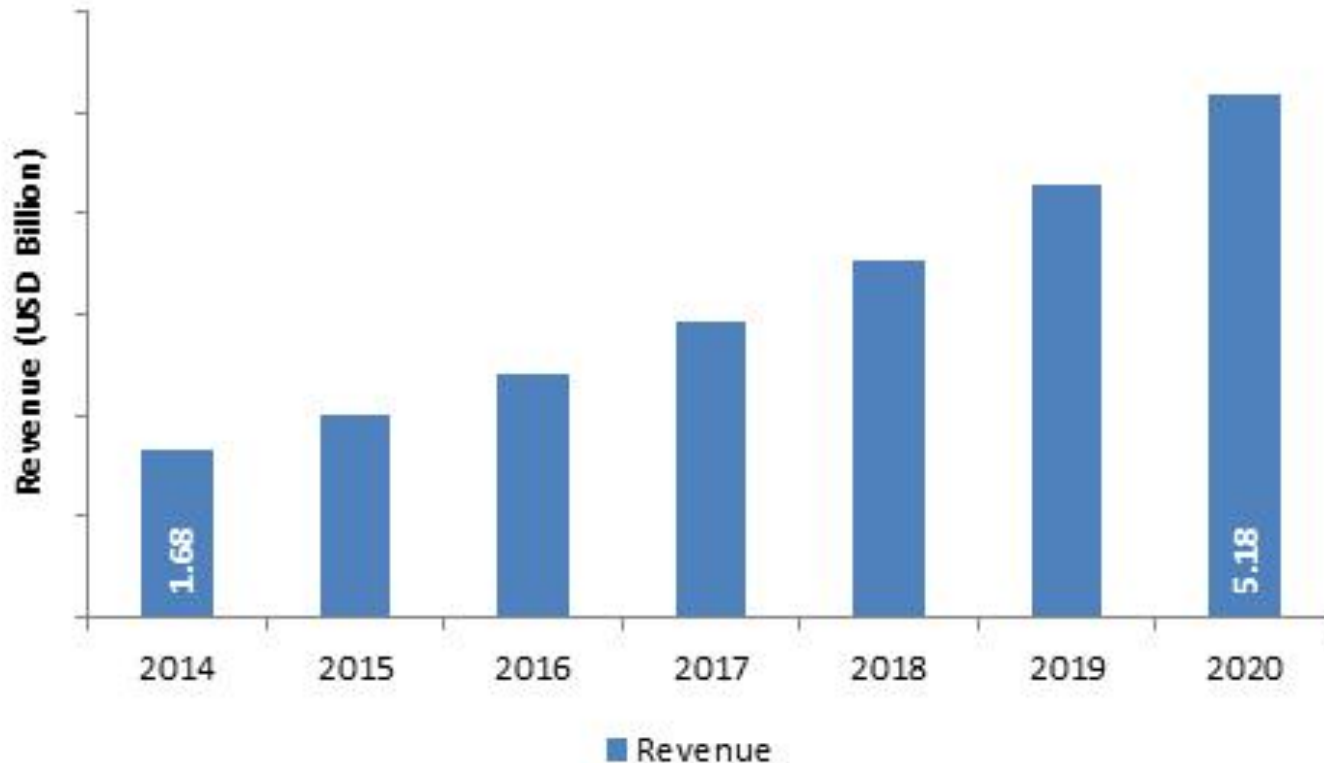
Environmentally acceptable degradable polymers have been defined as polymers that degrade in the environment by several mechanisms and culminate in complete biodegradation so that no residue remains in the environment. The present book gives thorough information to biodegradable plastic and polymers. This is an excellent book for scientists engineers, students and industrial researchers in the field of bio based materials.

Market Outlook

Global demand for biodegradable polymer market was valued at around USD 1.68 billion in 2014 and is expected to reach approximately USD 5.18 billion in 2020, growing at a CAGR of slightly above 21.0% between 2015 and 2020.



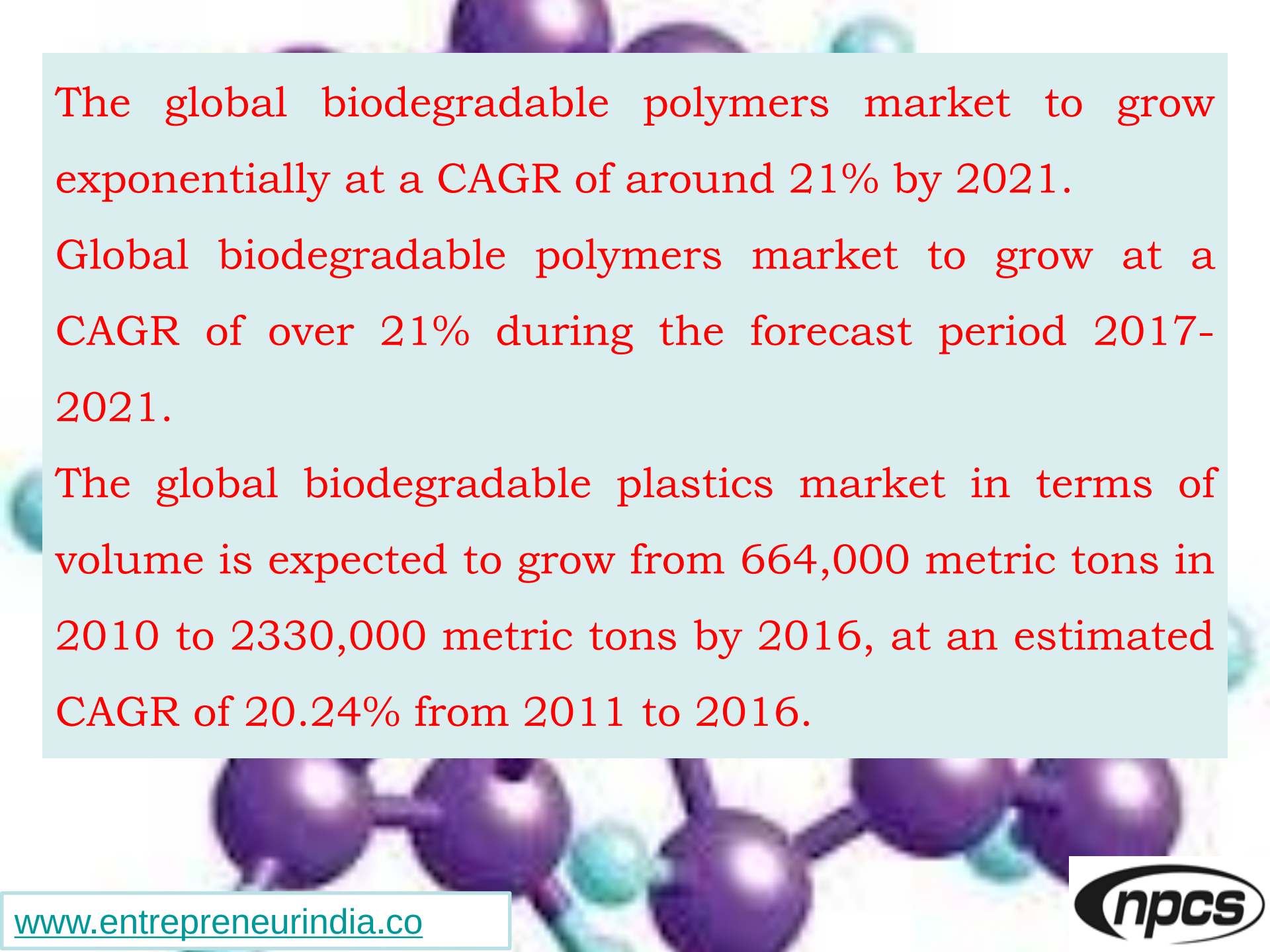
Global Biodegradable Polymer Market





The global market was valued at USD 2040.2 million in 2016 and is forecast to reach USD 5324.4 million by 2021.

The global biodegradable polymer market should reach 5.6 billion pounds by 2021 from 2.4 billion pounds in 2016 at a compound annual growth rate (CAGR) of 18.0%, from 2016 to 2021.

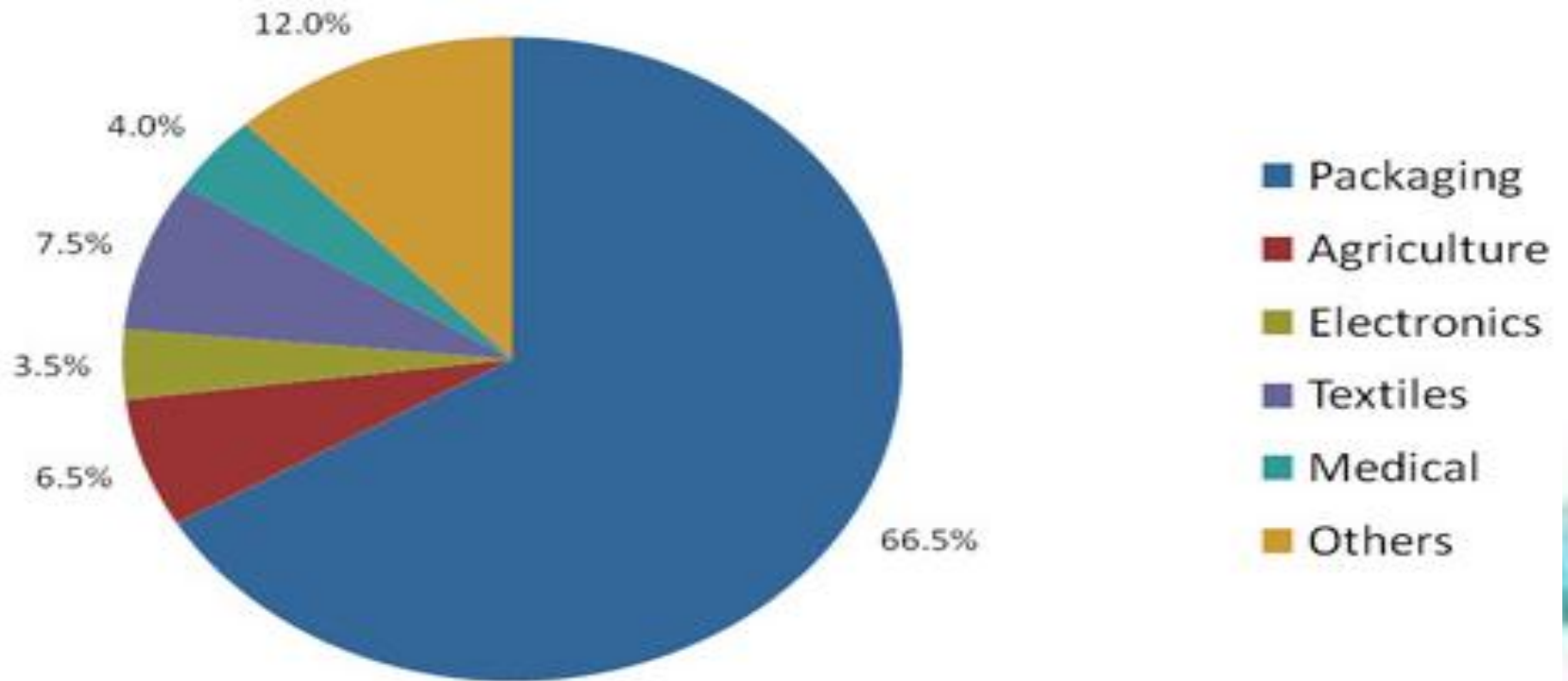


The global biodegradable polymers market to grow exponentially at a CAGR of around 21% by 2021.

Global biodegradable polymers market to grow at a CAGR of over 21% during the forecast period 2017-2021.

The global biodegradable plastics market in terms of volume is expected to grow from 664,000 metric tons in 2010 to 2330,000 metric tons by 2016, at an estimated CAGR of 20.24% from 2011 to 2016.

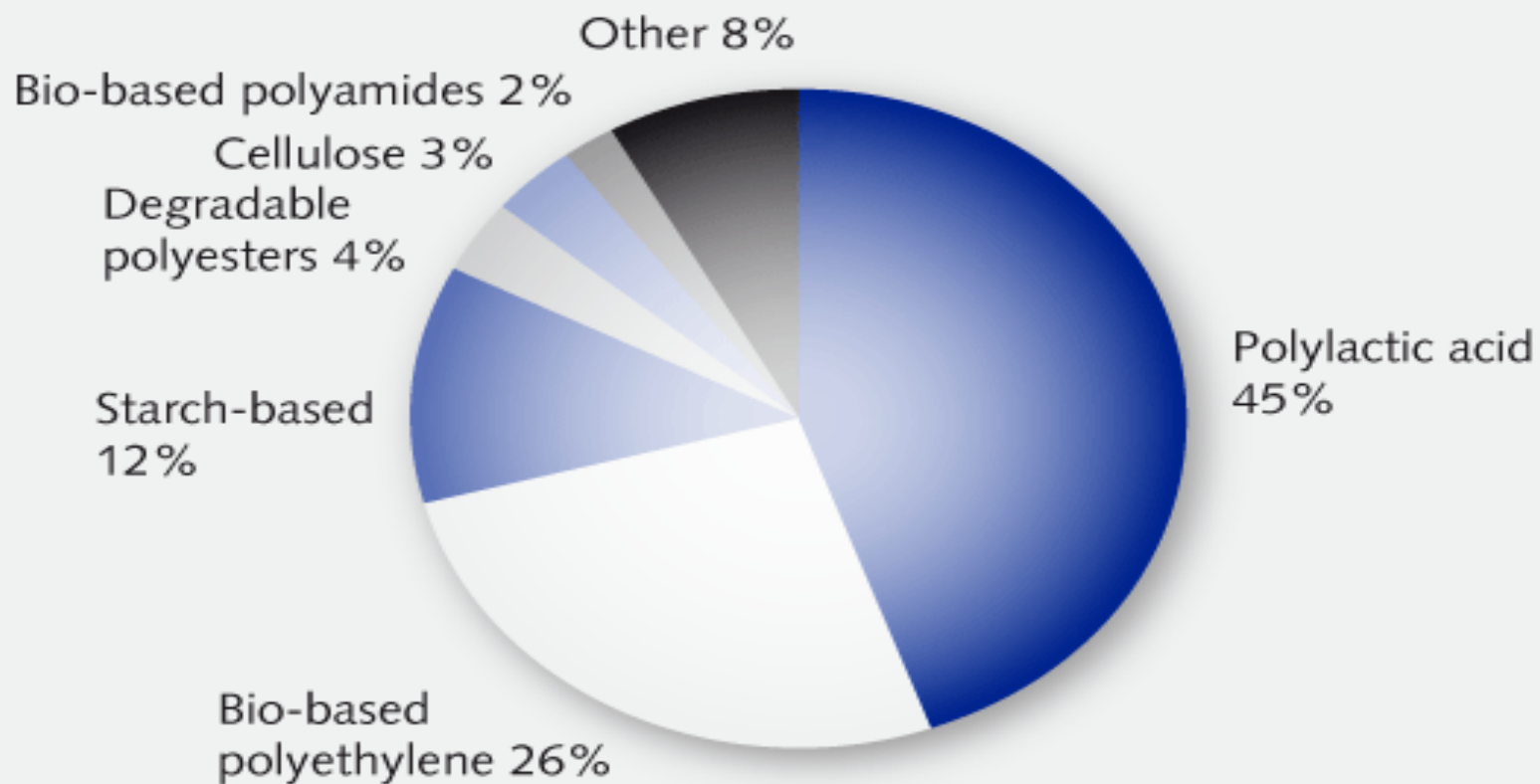
Global Bio Plastic Market





The global bio plastics market was 19.54 billion USD in 2016 and is estimated to reach US\$ 65.58 billion in 2022 at an estimated CAGR of 22.36% for the forecasted period.

Bioplastic: US demand



The global bioplastics market to grow at a high CAGR of more than 29% by 2020. The rise in demand for eco-friendly packaging has propelled several plastic manufacturers and packaging vendors to shift towards the use of bioplastics in packaging.



Estimated Biopolymer & Bioplastic Growth



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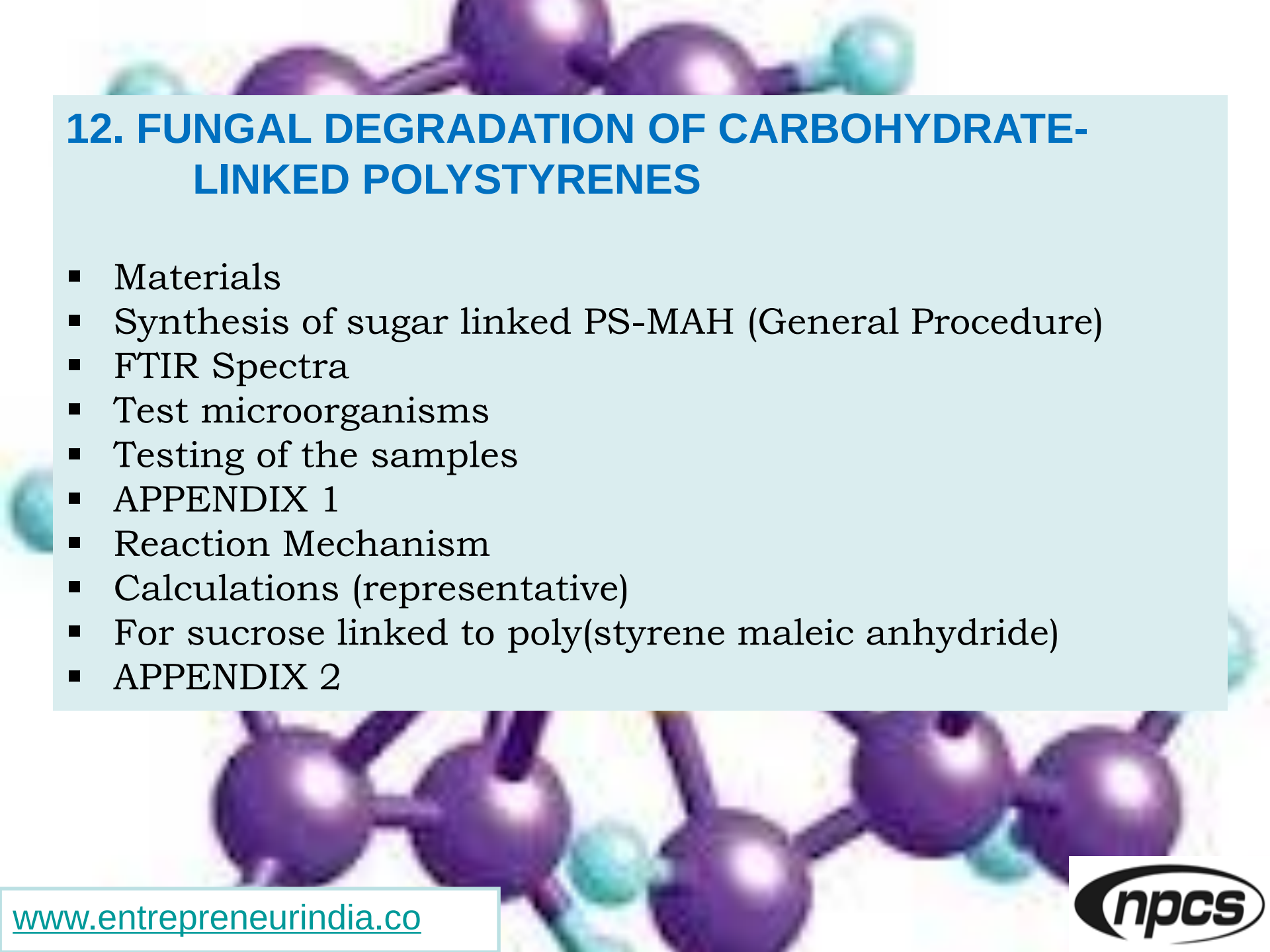
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A background image showing a molecular structure with purple and teal spheres connected by bonds, representing a chemical compound.

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Tags

Bioplastics and Biodegradable Plastics, Biodegradable Plastics and Polymers, Biodegradable Products, Biodegradable Plastics from Waste, How to Make Biodegradable Plastic, Biodegradable Plastic Bags, Biodegradable Plastic Bottles, Biodegradable Plastic Manufacture, Producing Biodegradable Plastic, Starch-Based Biodegradable Plastics, Biodegradable Plastic Packaging, Bio-Based Biodegradable Plastics, Biobased and Biodegradable Plastic, Biodegradable Polymers, Biodegradable Polymers Plastic, Biodegradable Polymer Materials, Synthetic Biodegradable Polymers, Biodegradable Polymers, Production of Biodegradable Polymers, Degradation of Biodegradable Polymers, Starch Based Bio-Plastics, Biodegradable Polyesters, Polyester-Based (Bio)Degradable Polymers, Polyhydroxyalkanoates, Phbh Polyesters, PLA Polyesters, Degradation Mechanism, Coated Paper, Agricultural Mulch Film, Shopping Bags, Plastic Sorting and Reprocessing, Biopolymer Industry, Industrial Biopolymer, Fiber-Reinforced Composites, Natural Polymers, Environmentally Degradable Polymers, Production of Environmentally Degradation Polymers, Synthetic Biodegradable Polymers as Medical Devices, Natural and Synthetic Biodegradable Polymers, Degradation of Commercial Biodegradable, Commercial Biodegradable Material, Biobased Packaging Materials for Food Industry, Bio Food Packaging, Compostable Packaging Bio Based Materials, Production of Biobased Products, Plastics from Potato Waste, Biodegradable Plastics from Potato Waste, Carbohydrate-Based Polymers, Synthesis of Carbohydrate Based Polymers, Synthesis and Polymerization of Anhydro Sugars,

Polymerization of Anhydro Sugar, Fungal Degradation of Carbohydrate Linked Polystyrenes, Polyester Film Manufacturing, PET Film & Polyester Film, Casting, Drawing, Slitting and Winding, Coating, Production of Multilayer Co-Injection, Co-Injection Molding, Injection Blow Molding, Injection and Co-Injection Preform, NPCS, Niir, Process Technology Books, Business Consultancy, Business Consultant, Project Identification and Selection, Preparation of Project Profiles, Startup, Business Guidance, Business Guidance to Clients, Startup Project, Startup Ideas, Project For Startups, Startup Project Plan, Business Start-Up, Business Plan for Startup Business, Great Opportunity for Startup, Small Start-Up Business Project, Best Small and Cottage Scale Industries, Startup India, Stand Up India, Small Scale Industries, New Small Scale Ideas for Bioplastics and Biodegradable Plastics Industry, Biodegradable Polymers Business Ideas you can start on your own, Indian Biodegradable Polymers Industry, Small Scale Biodegradable Plastics Industry, Guide to Starting and Operating Small Business,

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Business Ideas for Biodegradable Plastics, How to Start Biodegradable Plastics Business, Starting Biodegradable Polymers Industry, Start your own Biodegradable Plastics Business, Biodegradable Plastics Business Plan, Business Plan for Biodegradable Plastics, Small Scale Industries in India, Biodegradable Polymers Based Small Business Ideas in India, Small Scale Industry you can start on your own, Business Plan for Small Scale Industries, Set Up Biodegradable Plastics, Profitable Small Scale Manufacturing, How to Start Small Business in India, Free Manufacturing Business Plans,

Niir Project Consultancy Services (NPCS) can provide
Process Technology Book on

Biodegradable Plastics and Polymers

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Copolyesters, Monomer, Polymer, Fibre-Reinforced
Composites, Biodegradable Polymers, Biodegradation,
Polysaccharides, Collagen, Bacterial Cellulose, Biobased
Materials)*

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A complex 3D molecular model of a protein or polymer chain, featuring purple and blue spheres connected by bonds, with a central orange sphere.

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Website : www.entrepreneurindia.co , www.niir.org

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#StreetView**

<https://goo.gl/VstWkd>



A 3D molecular model of a complex organic or inorganic structure. It features a central orange-yellow sphere with multiple bonds radiating outwards to purple spheres, which are further connected to smaller cyan spheres. The overall shape is symmetrical and complex.

Niir PROJECT CONSULTANCY SERVICES

An ISO 9001:2008 Company

Who are we?

- *One of the leading reliable names in industrial world for providing the most comprehensive technical consulting services*
- *We adopt a systematic approach to provide the strong fundamental support needed for the effective delivery of services to our Clients' in India & abroad*

We at NPCS want to grow with you by providing solutions scale to suit your new operations and help you reduce risk and give a high return on application investments. We have successfully achieved top-notch quality standards with a high level of customer appreciation resulting in long lasting relation and large amount of referral work through technological breakthrough and innovative concepts. A large number of our Indian, Overseas and NRI Clients have appreciated our expertise for excellence which speaks volumes about our commitment and dedication to every client's success.



A background image showing a complex molecular structure with purple and teal spheres connected by bonds, resembling a chemical or biological molecule.

We bring deep, functional expertise, but are known for our holistic perspective: we capture value across boundaries and between the silos of any organization. We have proven a multiplier effect from optimizing the sum of the parts, not just the individual pieces. We actively encourage a culture of innovation, which facilitates the development of new technologies and ensures a high quality product.

What do we offer?

- *Project Identification*
- *Detailed Project Reports/Pre-feasibility Reports*
- *Business Plan*
- *Industry Trends*
- *Market Research Reports*
- *Technology Books and Directory*
- *Databases on CD-ROM*
- *Laboratory Testing Services*
- *Turnkey Project Consultancy/Solutions*
- *Entrepreneur India (An Industrial Monthly Journal)*

How are we different ?

- *We have two decades long experience in project consultancy and market research field*
- *We empower our customers with the prerequisite know-how to take sound business decisions*
- *We help catalyze business growth by providing distinctive and profound market analysis*
- *We serve a wide array of customers , from individual entrepreneurs to Corporations and Foreign Investors*
- *We use authentic & reliable sources to ensure business precision*

Our Approach

Requirement collection

Thorough analysis of the project

Economic feasibility study of the Project

Market potential survey/research

Report Compilation

Who do we serve?

- *Public-sector Companies*
- *Corporates*
- *Government Undertakings*
- *Individual Entrepreneurs*
- *NRI's*
- *Foreign Investors*
- *Non-profit Organizations, NBFC's*
- *Educational Institutions*
- *Embassies & Consulates*
- *Consultancies*
- *Industry / trade associations*

Sectors We Cover

- *Ayurvedic And Herbal Medicines, Herbal Cosmetics*
- *Alcoholic And Non Alcoholic Beverages, Drinks*
- *Adhesives, Industrial Adhesive, Sealants, Glues, Gum & Resin*
- *Activated Carbon & Activated Charcoal*
- *Aluminium And Aluminium Extrusion Profiles & Sections,*
- *Bio-fertilizers And Biotechnology*
- *Breakfast Snacks And Cereal Food*
- *Bicycle Tyres & Tubes, Bicycle Parts, Bicycle Assembling*

Sectors We Cover *Cont...*

- *Bamboo And Cane Based Projects*
- *Building Materials And Construction Projects*
- *Biodegradable & Bioplastic Based Projects*
- *Chemicals (Organic And Inorganic)*
- *Confectionery, Bakery/Baking And Other Food*
- *Cereal Processing*
- *Coconut And Coconut Based Products*
- *Cold Storage For Fruits & Vegetables*
- *Coal & Coal Byproduct*

Sectors We Cover *Cont...*

- *Copper & Copper Based Projects*
- *Dairy/Milk Processing*
- *Disinfectants, Pesticides, Insecticides, Mosquito Repellents,*
- *Electrical, Electronic And Computer based Projects*
- *Essential Oils, Oils & Fats And Allied*
- *Engineering Goods*
- *Fibre Glass & Float Glass*
- *Fast Moving Consumer Goods*
- *Food, Bakery, Agro Processing*

Sectors We Cover *Cont...*

- *Fruits & Vegetables Processing*
- *Ferro Alloys Based Projects*
- *Fertilizers & Biofertilizers*
- *Ginger & Ginger Based Projects*
- *Herbs And Medicinal Cultivation And Jatropha (Biofuel)*
- *Hotel & Hospitability Projects*
- *Hospital Based Projects*
- *Herbal Based Projects*
- *Inks, Stationery And Export Industries*

Sectors We Cover *Cont...*

- *Infrastructure Projects*
- *Jute & Jute Based Products*
- *Leather And Leather Based Projects*
- *Leisure & Entertainment Based Projects*
- *Livestock Farming Of Birds & Animals*
- *Minerals And Minerals*
- *Maize Processing(Wet Milling) & Maize Based Projects*
- *Medical Plastics, Disposables Plastic Syringe, Blood Bags*
- *Organic Farming, Neem Products Etc.*

Sectors We Cover *Cont...*

- *Paints, Pigments, Varnish & Lacquer*
- *Paper And Paper Board, Paper Recycling Projects*
- *Printing Inks*
- *Packaging Based Projects*
- *Perfumes, Cosmetics And Flavours*
- *Power Generation Based Projects & Renewable Energy Based Projects*
- *Pharmaceuticals And Drugs*
- *Plantations, Farming And Cultivations*
- *Plastic Film, Plastic Waste And Plastic Compounds*
- *Plastic, PVC, PET, HDPE, LDPE Etc.*

Sectors We Cover *Cont...*

- *Potato And Potato Based Projects*
- *Printing And Packaging*
- *Real Estate, Leisure And Hospitality*
- *Rubber And Rubber Products*
- *Soaps And Detergents*
- *Stationary Products*
- *Spices And Snacks Food*
- *Steel & Steel Products*
- *Textile Auxiliary And Chemicals*

Sectors We Cover *Cont...*

- *Township & Residential Complex*
- *Textiles And Readymade Garments*
- *Waste Management & Recycling*
- *Wood & Wood Products*
- *Water Industry(Packaged Drinking Water & Mineral Water)*
- *Wire & Cable*

Contact us

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THANK YOU!!!

For more information, visit us at:

www.entrepreneurindia.co

