ISSN 0971-7463

Business Ideas for Startups

Entrepreneur India

R.N.I. NO. 61509/95

AN ISO 9001-2015 CERTIFIED COMPANY

www. entrepreneurindia.co

₹ 20/-

An Industrial Monthly Journal on

INDUSTRIAL DEVELOPMENT, TECHNOLOGIES & PROJECT OPPORTUNITIES

Vol. 31 | No. 10 | October 2025 | 16 Pages

About Us

NPCS is a well-known technical consultancy that focuses on Project Reports Compilation, and we have been following a tight system and procedure to assure only top quality in accordance with our clients' expectations in this rapidly increasing and changing market. We've created the list of the top projects to start your own business startups.

EDITOR :
AJAY KUMAR GUPTA
D.M.S, M.B.A.
Entrepreneurship Management

ASSOCIATE EDITOR :
UDANT GUPTA

NIIR PROJECT CONSULTANCY SERVICES
AN ISO 9001:2015 CERTIFIED COMPANY
106 E, Kamla Nagar,
Delhi–110 007 (India).

Tel. : 91-11-23843955
Mob.: +91-9097075054
+91-8800733955

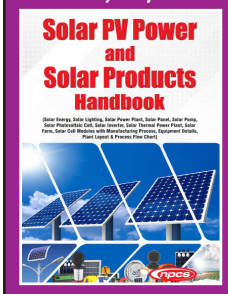
E-mail :
info@niir.org
npcs.india@gmail.com

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

Solar PV Power and Solar Products Handbook

(Solar Energy, Solar Lighting, Solar Power Plant, Solar Panel, Solar Pump, Solar Photovoltaic Cell, Solar Inverter, Solar Thermal Power Plant, Solar Farm, Solar Cell Modules with Manufacturing Process, Equipment Details, Plant Layout & Process Flow Chart)

₹ 2,275/-



Solar energy is expanding worldwide and becoming an increasingly important part of the energy mix in many countries. Solar energy is used all over the world, but in terms of total installed solar capacity, India, China, Japan, and the United States are now top of the world. Solar panels can create power almost anywhere on the planet. However, some regions receive more sunshine than others and hence have a greater solar energy potential. It is based on insolation, which is a measurement of how much solar radiation reaches a specific area on the earth's surface.

Solar energy can be captured in a variety of ways. Photovoltaic solar panels are the most frequent method. Photovoltaic (PV) devices use semiconductors to generate power directly from sunlight. Photons impact and ionize semiconductor material on the solar panel as the silicon photovoltaic solar cell absorbs solar energy, causing electrons to break free of their atomic bonds. A flow of electrical current is created when electrons are compelled to move in one direction. Only a portion of the light spectrum is absorbed, while the rest is reflected, too faint (infrared), or generates heat rather than electricity (ultraviolet). Concentrated solar power is the second type of solar energy technology (CSP). Solar thermal energy is used in CSP facilities to create steam, which is subsequently turned into electricity via a turbine.

The global solar energy installed capacity is estimated to reach 1,645 gigawatts (GW), registering a CAGR is 13.78%. The growth of the solar energy market is driven by an increase in environmental pollution and the provision of government incentives & tax rebates to install solar panels. In addition, a decrease in water footprint associated with solar energy systems has fueled their demand in power generation sectors. The demand for solar cells has gained major traction owing to a surge in rooftop installations, followed by an increase in applications in the architectural sector. Furthermore, the demand for parabolic troughs and solar power towers in electricity generation is expected to boost the demand for concentrated solar power systems.

Only the two commonly recognized kinds of technology for converting solar energy into electricity — photovoltaics (PV) and concentrated solar power (CSP, also known as solar thermal) — are considered in their current and possible future forms in The Future of Solar Energy.

• Expanding the solar sector considerably from its current small size may result in developments that no one can predict right now. Solar deployment in the future will be highly influenced by uncertain future market conditions and public policies, including but not limited to measures aimed at mitigating global climate change.

The book covers a wide range of topics connected to Solar, as well as their manufacturing processes. It also includes contact information for machinery suppliers, as well as images of equipment.

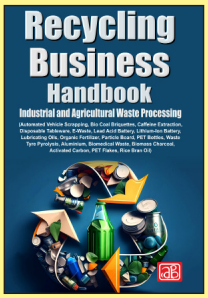
A complete guide on Solar PV Power and Solar Products manufacture and entrepreneurship. This book serves as a one-stop-shop for everything you need to know about the Solar, which is ripe with opportunities for manufacturers, merchants, and entrepreneurs. This is the only book that covers Solar PV Power and Solar Products in depth. From concept through equipment procurement, it is a veritable feast of how-to information.

Recycling Business Handbook

Industrial and Agricultural Waste Processing

(Automated Vehicle Scrapping, Bio Coal Briquettes, Caffeine Extraction, Disposable Tableware, E-Waste, Lead Acid Battery, Lithium-Ion Battery, Lubricating Oils, Organic Fertilizer, Particle Board, PET Bottles, Waste Tyre Pyrolysis, Aluminium, Biomedical Waste, Biomass Charcoal, Activated Carbon, PET Flakes, Rice Bran Oil)

₹ 1,995/-



Industrial and agricultural waste refer to the by-products generated from industrial processes and agricultural activities respectively. Industrial waste often includes materials such as metals, chemicals, plastics, and other manufacturing residues. Each type of industrial waste requires specific handling and processing methods to ensure safe and effective recycling.

Industrial and agricultural both types of waste present unique challenges and opportunities for recycling. Effective management and processing of industrial and agricultural waste not only mitigate environmental impact but also offer potential economic benefits by turning waste into valuable resources. Understanding these distinct waste types and their processing requirements is crucial for any business looking to implement successful recycling operations.

The global industrial waste management market size was valued at USD 1.05 billion. The market is projected to grow from USD 1.10 billion to USD 1.79 billion, exhibiting a CAGR of 6.22%. The Industrial Waste Management market in the U.S. is projected to grow significantly, reaching an estimated value of USD 323.81 billion, driven by the stringent waste management solutions and emergence of advanced waste-to-energy plants.

Management of waste produced through industrial activities generally consists of separation, composting, landfill, and waste recycling. Industrial waste management through landfill includes waste burial which cannot be further composed or recycled. Subsequently, recycling of industrial waste is generally referred to reuse of waste materials and generally includes the utilization of multiple management of waste technologies.

The agricultural waste processing industry is witnessing significant growth, driven by advancements in recycling technologies and sustainable practices. The market size for this industry was valued at approximately USD 150 billion, with projections indicating a compound annual growth rate (CAGR) of 8-10%, reaching USD 450 billion.

Covering a wide range of recycling industries, the book delves into areas such as Effective Waste Management Planning, Automated Vehicle Scrapping Unit, Bio Coal Briquettes from Agricultural Waste, Caffeine Extraction from Tea Waste, Disposable Tableware from Sugarcane Bagasse, E-Waste Recycling, Lead Acid Battery Recycling, Lithium-Ion Battery Recycling, Lubricating Oils Recycling, Organic Fertilizer Manufacturing from Cow Dung, Particle Board from Rice Husk, Recycling of Pet Bottles, Waste Tyre Pyrolysis, Aluminium Recycling, Biomedical Waste Management, Biomass Charcoal, Activated Carbon from Coconut Shell, Pet Flakes from Pet Bottles, Rice Bran Oil Extraction Process, Pathogen Reductions during Waste Treatment, Glossary, Factory Layout, Machinery, Equipment Details and Photographs with Suppliers Contact Details are also given.

The Recycling Business Handbook Industrial and Agricultural Waste Processing is a thorough guide crafted to give entrepreneurs and industry professionals a deep insight into recycling businesses across various sectors. This resourceful handbook serves as an essential tool for entrepreneurs, policymakers, and environmental advocates, presenting strategies for transforming waste materials into valuable products.

Indian Made Foreign Liquor (IMFL) and Beer Plant:

A Profitable Venture for Emerging Entrepreneurs

The Indian alcoholic beverage market has undergone a remarkable transformation in recent decades, with Indian Made Foreign Liquor (IMFL) emerging as one of the fastest-growing segments. IMFL refers to spirits manufactured in India that replicate internationally popular liquors such as whisky, rum, vodka, gin, and brandy. Unlike traditional country liquor, IMFL caters to the premium and semi-premium consumer segments, reflecting changing lifestyles, rising disposable incomes, and urbanization trends. This industry offers vast potential for startups and investors looking to tap into India's ever-expanding beverage sector.

Market Overview and Growth Potential

The IMFL market in India is valued at over USD 30 billion (□2.5 lakh crore) in 2025 and is expected to reach USD 45 billion by 2030, growing at a CAGR of 8–9%. India ranks among the top three global alcohol markets, and IMFL alone accounts for nearly 65% of the total alcoholic beverage consumption. Urban India drives much of this demand, but Tier-2 and Tier-3 cities are now becoming major consumption hubs due to changing social attitudes and modernization.

Maharashtra, Telangana, Karnataka, and West Bengal are among the largest markets, while North-Eastern and coastal states show the highest growth rates. Furthermore, premiumization trends—where consumers trade up to better-quality and branded liquors—are fueling demand for locally produced IMFL products that rival international brands.

Why Startups Should Enter the IMFL Manufacturing Industry

1. High and Steady Demand:

Alcohol consumption in India is socially and economically entrenched, ensuring consistent market demand. IMFL commands a loyal consumer base, with whisky alone representing more than 60% of IMFL sales.

2. Favorable Demographics:

With more than 65% of India's population under 35 years, the country has a young, aspirational consumer base open to new products and experiences—an ideal environment for new liquor brands.

3. Attractive Profit Margins:

The IMFL business offers high profit margins, especially in blending and bottling operations. Entrepreneurs can start with a contract bottling arrangement before moving into full-scale distillation.

4. Export Potential:

Indian whisky, rum, and vodka brands are gaining traction in African, Middle Eastern, and Southeast Asian markets. The export of Indian alcoholic beverages is growing at 10–12% annually, supported by strong demand in developing economies.

5. Government Incentives and Industry Liberalization:

Many state governments are encouraging IMFL production through policies that promote local manufacturing, rural employment, and investment in agro-based distilleries. Entrepreneurs can also benefit from policies allowing molasses, grain-based, or neutral spirit-based production.

Key Market Trends

- **Premiumization:** Consumers are shifting toward better-quality IMFL brands, driving investment in branding and packaging.
- **Flavored and Ready-to-Drink Spirits:** There is growing interest in infused and cocktail-based IMFL products.
- **Sustainability:** Distilleries are adopting zero-liquid-discharge (ZLD) and bioenergy recovery systems, creating scope for eco-conscious startups.
- **E-commerce and Retail Transformation:** Some states have started permitting online liquor sales, expanding market access.

Manufacturing Process Overview

The IMFL manufacturing process involves blending and bottling of alcohol derived from rectified spirit or extra neutral alcohol (ENA), sourced from molasses, grains, or other raw materials.

1. **Procurement of ENA/Spirit:** High-purity neutral spirit forms the base for all IMFL products.
2. **Blending:** The spirit is blended with water, flavors, colors, and other additives as per recipe formulations.
3. **Maturation (Optional):** Certain liquors like whisky and rum are aged in wooden casks for flavor development.
4. **Filtration and Quality Control:** The blended liquor passes through carbon filters to ensure clarity and taste consistency.
5. **Bottling and Packaging:** The product is filled into glass bottles, sealed, labeled, and packaged for distribution.
6. **Storage and Dispatch:** Finished goods are stored in climate-controlled warehouses before being dispatched to wholesalers and retailers.

The IMFL manufacturing industry represents a golden opportunity for Indian entrepreneurs. With robust market demand, export potential, and a favorable policy environment, setting up an IMFL plant promises both economic and brand-building rewards. The sector's strong alignment with India's agribusiness, packaging, and logistics industries further enhances its ecosystem value. Entrepreneurs entering this field not only tap into one of India's most resilient markets but also contribute to the growth of a globally competitive beverage industry.

PROJECT COST ESTIMATE

CAPACITY:	
Whisky (90ml Bottles)	***: 13,333 Nos. Per Day***
Beer (330ml Cans)	***: 3,636 Nos. Per Day***
Plant & Machinery	**: ₹ 16 Crores**
Cost of Project	**: ₹ 33 Crores**
Rate of Return	**: 29%**
Break Even Point	**: 41%**

Caustic Soda Flakes:

A Profitable Opportunity for Modern Entrepreneurs

Caustic soda flakes, also known as sodium hydroxide flakes (NaOH), play a crucial role in numerous industrial applications, from textiles and paper to soaps, detergents, and water treatment. The increasing global demand for this versatile chemical makes it a highly lucrative investment avenue for startups and entrepreneurs aiming to enter the chemical manufacturing industry.

Market Overview and Growth Potential

The global caustic soda market is valued at over USD 45 billion and is projected to grow at a CAGR of 4.5% over the next decade. India stands as one of the largest producers and exporters, with leading players such as Aditya Birla Chemicals, Gujarat Alkalies & Chemicals, and Tata Chemicals driving innovation and scale.

Domestic demand is primarily fuelled by industries such as:

- Textiles and dyeing units (for mercerization and bleaching)
- Soap and detergent manufacturers
- Paper and pulp producers
- Water purification plants
- Food processing and pharmaceuticals

With rapid industrialization and growing environmental regulations encouraging the use of high-purity chemicals, the caustic soda market offers strong and sustainable growth opportunities.

Why Entrepreneurs Should Invest in This Project

1. **Ever-Growing Industrial Demand:** Caustic soda is indispensable to over 50 different industries, ensuring a consistent market base and reducing dependency on a single sector.
2. **Low Raw Material Costs:** The primary raw materials—common salt and water—are abundantly available at low cost, making the production process both economical and scalable.
3. **Export Potential:** India exports substantial volumes to Southeast Asia, Africa, and the Middle East, where chemical and textile sectors are expanding. Export incentives and lower freight costs give Indian manufacturers a competitive edge.
4. **Government Support and MSME Benefits:** Under the Make in India and MSME schemes, chemical manufacturers can access capital subsidies, lower interest rates, and technology upgradation grants.
5. **Eco-Friendly Process Innovations:** Modern membrane-cell technology has significantly reduced power consumption and improved environmental compliance, making the business sustainable and globally competitive.

Market Trends and Analysis

- **Shift Toward Chlor-Alkali Integration:** Many producers integrate caustic soda with chlorine and hydrogen production, optimizing energy use and maximizing profitability.
- **Technological Advancements:** Transition from mercury-cell to membrane-cell electrolysis has improved yield, reduced pollution, and enhanced purity levels.
- **Rising Demand for Purified Grades:** The pharmaceutical, food, and water treatment industries are increasing the demand for high-purity caustic soda flakes.
- **Expanding Export Markets:** Growth in African and Middle Eastern industrial bases has opened new avenues for Indian exporters.

These trends indicate a stable and expanding market with high entry potential for new entrepreneurs equipped with modern technology and efficient operations.

Manufacturing Process of Caustic Soda Flakes

The manufacturing process is primarily based on the chlor-alkali process, which involves the electrolysis of brine (saltwater). The simplified steps include:

1. **Brine Preparation:** Raw salt is dissolved in water and purified using chemicals like soda ash and sodium carbonate to remove impurities such as calcium and magnesium ions.
2. **Electrolysis:** The purified brine undergoes electrolysis in a membrane cell.
   - **At the cathode:** Water is reduced to form hydrogen gas and hydroxide ions.
   - **At the anode:** Chloride ions are oxidized to produce chlorine gas.
3. **Caustic Soda Formation:** The hydroxide ions combine with sodium ions to produce sodium hydroxide solution.
4. **Concentration and Flaking:** The caustic soda solution is concentrated in an evaporator and then cooled in flake-forming machines to produce solid caustic soda flakes.
5. **Packaging:** The flakes are packed in moisture-proof HDPE bags with inner liners to maintain quality during storage and transportation.

Caustic soda flakes manufacturing presents a future-ready business opportunity for startups and investors looking to tap into the thriving Indian chemical sector. With consistent industrial demand, low-cost raw materials, and expanding export markets, it offers stable profitability and long-term scalability.

Entrepreneurs adopting modern membrane-cell technology and focusing on product purity can establish themselves as competitive players in the global chlor-alkali market. This project not only ensures economic returns but also contributes to industrial growth, employment generation, and sustainable development.

PROJECT COST ESTIMATE

CAPACITY:

Caustic Soda Flakes (98%)	*: 10,000 Kgs Per Day*
by Product Chlorine Gas	*: 8,686 Kgs Per Day*
by Product Hydrogen Gas	*: 247 Kgs Per Day*
Plant & Machinery	: ₹ 6.5 Crores
Cost of Project	: ₹ 14 Crores
Rate of Return	: 36%
Break Even Point	: 41%

Calcium Silicate Insulation Board — A Profitable Manufacturing Opportunity for Startups

Calcium Silicate Insulation Board is emerging as one of the most in-demand materials in the construction and industrial insulation sector due to its excellent thermal performance, fire resistance, and durability. Startups and entrepreneurs looking for a stable, technology-based business opportunity with high growth potential should seriously consider entering this sector.

Overview of Calcium Silicate Insulation Board

Calcium Silicate Board (CaSi Board) is a lightweight, rigid insulation product primarily composed of calcium oxide, silica, and reinforcing fibers. It is widely used for thermal insulation in furnaces, boilers, ducts, kilns, and high-temperature industrial equipment. In the construction industry, it's used as a building board for ceilings, walls, and partition systems as a non-combustible alternative to gypsum boards.

This material stands out for its low thermal conductivity, moisture resistance, and exceptional fireproofing qualities. Unlike asbestos-based products, calcium silicate is environmentally friendly and complies with global green-building standards.

Market Size, Share & Growth Trends

The global calcium silicate board market is projected to surpass USD 1.9 billion by 2030, growing at a CAGR of around 5.5%. Asia-Pacific dominates the global market, driven by rapid urbanization, infrastructure development, and the growing construction of energy-efficient buildings.

In India, the calcium silicate board market is expanding at an impressive rate of over 8% annually, fueled by government initiatives like Smart Cities Mission, Housing for All, and the Make in India campaign. Increasing demand from sectors like oil refineries, power plants, petrochemicals, and shipbuilding also contributes to its robust industrial consumption.

Export opportunities are strong, especially in the Middle East, Africa, and Southeast Asia, where fire safety and insulation regulations are tightening. Indian manufacturers benefit from low production costs, easy availability of raw materials (silica sand, lime, and fibers), and skilled labor—making India a preferred export base.

Why Entrepreneurs Should Invest in This Industry

1. **High Demand & Diverse Applications:** Calcium silicate boards are used in construction, steel, cement, petrochemical, power generation, and shipbuilding industries—offering multiple customer bases.
2. **Low Competition, High Margin:** Despite the growing demand, only a limited number of domestic manufacturers exist. Early entry ensures higher profit margins and strong brand positioning.
3. **Eco-Friendly and Sustainable Product:** As global regulations tighten around sustainability, eco-friendly insulation boards are replacing asbestos and mineral wool—boosting future demand.
4. **Steady Cash Flow & Repeat Orders:** Industries require insulation materials for maintenance and energy efficiency upgrades, ensuring repeat business.
5. **Government Support for Manufacturing:** Under MSME and Startup India initiatives, manufacturers can access subsidies, tax benefits, and low-interest loans.

Manufacturing Process of Calcium Silicate Insulation Board

The manufacturing process is systematic and involves the following major steps:

1. Raw Material Preparation: Silica sand, lime, and cellulose fibers are measured and mixed. The ratio is carefully controlled to ensure consistent board density and insulation quality.
2. Slurry Formation: The raw materials are mixed with water to form a uniform slurry.
3. Molding and Forming: The slurry is poured into molds or sheet-forming machines to shape the boards.
4. Autoclaving: The molded boards are placed in autoclaves and subjected to high-pressure steam curing. This step forms the calcium silicate crystal structure, providing mechanical strength and stability.
5. Drying and Trimming: After autoclaving, boards are dried in ovens to remove residual moisture and then trimmed to desired dimensions.
6. Surface Finishing: Boards may be sanded or coated to enhance surface smoothness and appearance.
7. Quality Inspection and Packaging: Each batch undergoes dimensional checks, thermal resistance tests, and density verification before being packed for dispatch.

By leveraging India's cost advantage, abundant resources, and supportive government policies, entrepreneurs can build a profitable and future-ready venture in the insulation materials sector. Starting a calcium silicate board manufacturing plant today means positioning your business at the intersection of green construction, industrial modernization, and energy efficiency—a foundation for long-term growth and success.

PROJECT COST ESTIMATE

CAPACITY

Calcium Silicate Insulation Board (12mm)	: 3,333 Sq. Mtrs. Per Day
Plant & Machinery	: ₹ 5 Crores
Cost of Project	: ₹ 13 Crores
Rate of Return	: 28%
Break Even Point	: 60%

Manufacturing Business Plan for Zinc Ingots

Zinc ingot is a white or gray color pure zinc metal, which is cast into a block or bar that is suitable for further processing of metal. The zinc ingot is produced using solid-state, crystallization, and ultra-high purification processes including sublimation.

Uses and Applications

Zinc oxide is widely used in the manufacture of very many products such as paints, rubber, cosmetics, pharmaceuticals, plastics, inks, soaps, batteries, textiles and electrical equipment. Some application Galvanizing, Zinc Oxide, Die Castings, Alloys

Industries

The rising demand for zinc ingots in the hot-dip galvanization steel will fuel the market growth. In the process of hot-dip galvanization, the steel objects are dipped in pool of the molten zinc ingots, so that the melted zinc ingots can be applied to all exposed surface of steel.

Indian Market

The rising demand for zinc ingots in the hot-dip galvanization steel will fuel the market growth. In the process of hot-dip galvanization, the steel objects are dipped in pool of the molten zinc ingots, so that the melted zinc ingots can be applied to all exposed surface of steel.

PROJECT COST ESTIMATE

CAPACITY

Zinc Ingots (Purity 98%)	: 6 MT Per Day
Plant & Machinery	: ₹ 124 Lakhs
Cost of Project	: ₹ 863 Lakhs
Rate of Return	: 29%
Break Even Point	: 65%

Biomass Pellets from Bio Waste – A Green Gold Opportunity for Startups

The world is transitioning toward sustainable energy solutions, and one of the most promising opportunities lies in biomass pellets made from bio waste. These eco-friendly fuel substitutes are emerging as powerful alternatives to coal, LPG, and other fossil fuels. For entrepreneurs and startups, investing in biomass pellet manufacturing is not just a business venture—it's a gateway to a cleaner, greener, and profitable future.

Market Overview

The global biomass pellet market is witnessing significant expansion, driven by rising environmental concerns, renewable energy targets, and the need to reduce dependency on fossil fuels. According to industry estimates, the global market was valued at USD 10 billion in 2023 and is expected to reach USD 16 billion by 2030, growing at a CAGR of around 7–8%.

In India alone, the biomass energy sector contributes nearly 32% of the primary energy mix, with over 500 million tonnes of agricultural residues generated annually—enough to support large-scale pellet production.

Government initiatives like the National Bioenergy Programme, Waste-to-Wealth Mission, and Renewable Energy Purchase Obligations (RPOs) have further fueled market potential. Export demand is equally robust, with European countries, Japan, and South Korea importing biomass pellets to meet carbon neutrality goals.

Why Startups Should Choose This Business Idea

1. **Low Raw Material Cost, High Value Output:** Agricultural residues, sawdust, coconut shells, husk, and other bio waste are abundantly available and inexpensive. Converting these into high-calorific pellets creates immense value addition.
2. **Rising Global and Domestic Demand:** Industries, power plants, and institutional boilers are switching to biomass pellets for clean combustion and compliance with emission standards. India's growing renewable energy portfolio makes it an ideal domestic market.
3. **Government Incentives and Policy Support:** Startups can benefit from subsidies, concessional financing, and carbon credit mechanisms. Under the MSME and PMEGP schemes, entrepreneurs can avail up to 35% subsidy on plant setup.
4. **Export Potential:** The global pellet demand—especially from Europe, Japan, and South Korea—offers lucrative export opportunities. With India's advantage in agricultural residues and logistics, startups can easily cater to these markets.
5. **Sustainability and Brand Image:** Businesses today thrive on environmental responsibility. Setting up a biomass pellet manufacturing plant aligns perfectly with ESG (Environmental, Social, and Governance) goals and contributes to circular economy principles.

Market Trends and Analysis

- **Shift Toward Clean Energy:** Thermal power plants and industrial boilers are increasingly co-firing biomass pellets with coal to meet emission norms.
- **Technological Advancements:** Automated pellet mills and torrefied pellets (high-energy-density variants) are improving efficiency and shelf life.
- **Rising Carbon Prices:** As carbon trading systems expand globally, the cost advantage of biomass energy grows stronger.
- **Urban Bio Waste Utilization:** Municipal solid waste and agro-industrial residues are being repurposed into energy-grade pellets—turning waste into wealth.

Manufacturing Process

The process of making biomass pellets from bio waste involves several key stages designed to convert raw organic residues into uniform, energy-dense fuel.

1. **Raw Material Collection:** Agricultural residues, wood chips, sawdust, coconut shells, sugarcane bagasse, etc., are sourced from farms and sawmills.
2. **Drying:** The raw material is dried using a rotary or belt dryer to reduce moisture content to below 12%, ensuring optimal pellet quality.
3. **Grinding / Size Reduction:** A hammer mill or crusher grinds the biomass into fine powder (particle size around 3–5 mm) for uniform pellet formation.
4. **Pelletizing:** The powdered biomass is fed into a pellet mill where it is compressed through die holes at high pressure. Natural lignin in the biomass acts as a binder.
5. **Cooling:** Hot pellets are cooled using a counter-flow cooler to harden and prevent deformation.
6. **Screening and Packaging:** Fines are separated, and uniform pellets are packed in bags or bulk containers for dispatch.

Setting up a biomass pellet manufacturing unit from bio waste is not just an environmentally responsible venture—it's a profitable business model aligned with global sustainability goals. With rising energy demand, government incentives, and expanding export markets, startups have a golden opportunity to turn agricultural waste into green wealth.

PROJECT COST ESTIMATE

CAPACITY

Biomass Pellets (6mm to 10mm)	: 48 MT Per Day
Plant & Machinery	: ₹ 178 Lakhs
Cost of Project	: ₹ 846 Lakhs
Rate of Return	: 24%
Break Even Point	: 50%

Cold Storage: A Profitable Venture for Modern Entrepreneurs

Cold storage is no longer just a part of the agricultural supply chain—it's a cornerstone of India's growing food economy and logistics network. As consumption patterns shift toward processed foods, frozen products, and exports, the demand for reliable cold chain infrastructure is skyrocketing. For startups and investors, setting up a cold storage facility is a smart, scalable, and government-backed opportunity that promises high returns with long-term stability.

Market Overview

India ranks among the top global producers of fruits, vegetables, dairy, fish, and meat. Yet, according to NCCD and FAO estimates, nearly 30–40% of this produce gets wasted due to inadequate post-harvest management and lack of temperature-controlled storage. The cold chain industry, currently valued at USD 15 billion, is projected to reach USD 40 billion by 2029, growing at a CAGR of around 14–16%.

Key growth drivers include:

- Rising food processing industry
- Expansion of organized retail and e-commerce
- Government initiatives like PMKSY, Mega Food Parks, and Agri-Infra Fund
- Surging exports of perishable goods

India's export potential in frozen foods, seafood, dairy, and pharmaceuticals is immense. Cold storage is the link that ensures quality and shelf life from farm gate to export terminal.

Why Startups Should Choose This Business

1. **High Market Demand:** Cold storage units are critical for fruits, vegetables, meat, fish, dairy, and even pharmaceuticals. The growing awareness of quality preservation creates a ready market year-round.
2. **Government Incentives:** The Government of India provides 35–50% subsidies under various schemes such as the Pradhan Mantri Kisan SAMPADA Yojana and Mission for Integrated Development of Horticulture (MIDH) for setting up cold storage and reefer logistics.
3. **Export-Oriented Growth:** Exporters of frozen foods, marine products, and flowers require cold storage facilities near ports and airports. Startups can partner with APEDA and FSSAI-certified exporters for long-term contracts.
4. **Rising Retail and E-commerce Sector:** With the boom in online grocery platforms and cloud kitchens, local and regional cold rooms for last-mile distribution are becoming profitable micro-enterprises.
5. **Technology-Driven Efficiency:** Modern automation, IoT-based temperature tracking, and solar refrigeration reduce operational costs, making the sector more attractive to new investors.

PROJECT COST ESTIMATE

CAPACITY :

Fruits, Vegetables, Pulses & Spices Store	: 55 MT
Plant & Machinery	: 132 Lakhs
Cost of Project	: 968 Lakhs
Rate of Return	: 26%
Break Even Point	: 42%

Industry Trends and Analysis

- **Temperature Zoning:** Multi-chamber cold storages allow for separate temperature ranges—ideal for storing different products like potatoes, dairy, and pharmaceuticals.
- **Energy-Efficient Systems:** The adoption of ammonia and freon-based systems, coupled with renewable energy, is reducing running costs.
- **Integrated Cold Chain Parks:** Clusters near food processing units, ports, and airports are emerging, enabling end-to-end solutions.
- **Digitization:** IoT sensors, real-time monitoring apps, and blockchain integration are revolutionizing traceability and compliance.

The North and Western regions of India (Uttar Pradesh, Maharashtra, Gujarat, and Punjab) hold over 60% of the total cold storage capacity, while Eastern and Northeastern states present new untapped opportunities for entrepreneurs.

Operational Process

The establishment of a cold storage facility involves several stages:

1. **Site Selection & Building Construction:** Selection near farming clusters or consumption centers with proper road connectivity and power supply. The building must be thermally insulated using PUF panels.
2. **Insulation & Refrigeration Installation:** Proper insulation reduces heat transfer. Refrigeration systems are installed based on product category and temperature range requirements.
3. **Cooling System Setup:** Ammonia-based or Freon-based compressor systems are connected to condensers and evaporators for maintaining optimal cooling cycles.
4. **Temperature Control and Automation:** Digital sensors and SCADA systems ensure continuous monitoring of humidity, temperature, and air circulation.
5. **Storage and Handling:** Products are received, pre-cooled, stacked on pallets, and stored in designated chambers as per temperature and product type. Regular maintenance ensures efficiency and hygiene.

Cold storage facilities form the backbone of India's food security and export competitiveness. For startups and entrepreneurs, it's more than just a storage business—it's an entry point into the agri-logistics revolution. With strong market demand, technological advancements, and government support, cold storage projects offer sustainable growth, assured demand, and lucrative returns. Entrepreneurs who invest today are not just preserving food—they're preserving profit for the future.

Moringa Oleifera (Drumstick) Powder

Moringa Oleifera is the most widely cultivated species of the genus Moringa, which is the only genus in the family Moring aceae. English common names include: moringa, drumstick tree (from the appearance of the long, slender, triangular seed-pods), horseradish tree (from the taste of the roots, which resembles horseradish), ben oil tree, or benzoil tree (from the oil which is derived from the seeds).

Originated from India, moringa trees are now found in Ghana, the Philippines, Nigeria, Kenya, Rwanda, Niger, Mozambique, Cambodia and Haiti. Today, the moringa market globally is estimated at more than Rs 27,000 crore, which is expected to cross Rs 47, 250 crore by 2020, growing at a rate of nine per cent per year.

The increasing awareness about the health advantages of moringa products will be one of the major factors that will have a positive impact on the global moringa products market during the forecast period. Over the years, moringa products such as moringa leaf powder have seen a growth in the sales in the global market. The rising health awareness in countries such as Europe and Americas have given rise to the increasing usage of moringa products by the consumers. This will drive the moringa products market future growth till 2022. As a whole any entrepreneur can venture in this project without risk and earn profit.

PROJECT COST ESTIMATE

CAPACITY

Drumstick (Moringa Oleifere) Powder	: 400 Kgs / Day
Plant & Machinery	: ₹ 31 Lakhs
Cost of Project	: ₹ 71 Lakhs
Rate of Return	: 29%
Break Even Point	: 71%

Toughened Glass: A Smart Business Opportunity for Emerging Entrepreneurs

Toughened glass, also known as tempered glass, is one of the most in-demand materials in modern architecture, automotive, and interior industries. Its superior strength, safety features, and elegant appearance make it indispensable for everything from skyscraper facades and shower enclosures to smartphone screens and vehicle windshields. For startups and entrepreneurs, investing in the toughened glass manufacturing industry offers a blend of stability, growth, and profitability — driven by rapid urbanization, rising safety standards, and booming real estate and infrastructure sectors.

Market Overview and Industry Growth

The global toughened glass market is valued at over USD 70 billion and is projected to grow at a CAGR of 6–8% by 2030. In India alone, the demand is accelerating due to massive construction projects, government initiatives like Smart Cities Mission, and the exponential rise in automotive production. Toughened glass is becoming the preferred material for both commercial and residential spaces because of its high resistance to thermal shock and mechanical stress.

The Asia-Pacific region dominates the market, contributing more than 40% of the global demand, primarily driven by China, India, and Japan. With new factories, metro rail projects, IT parks, and retail malls emerging rapidly, the local consumption of architectural glass is expected to grow by 10–12% annually. Furthermore, the automobile and solar panel industries are boosting the need for customized tempered glass sheets with anti-reflective and laminated properties.

Why Entrepreneurs Should Invest in This Sector

1. **Growing Market Demand:** The global shift toward modern architecture and sustainable design has fueled an ever-growing demand for high-performance glass. Developers prefer toughened glass for its energy efficiency, safety, and durability.
2. **Diverse Application Areas:** From office buildings and airports to furniture, railways, and electronics, toughened glass has wide applications. This ensures steady demand throughout the year.
3. **Government Support:** India's Make in India and Atmanirbhar Bharat programs are encouraging domestic production of industrial materials, providing tax incentives, and offering subsidies under MSME schemes.
4. **High Return on Investment (ROI):** A well-established toughened glass unit can start generating profits within two years due to its steady market and export opportunities.
5. **Sustainability and Recyclability:** As environmental regulations tighten, toughened glass — being fully recyclable — positions manufacturers at the forefront of the green building movement.

Market Size, Share, and Export Potential

The Indian glass manufacturing industry is estimated to exceed INR 35,000 crore and continues to expand. Toughened glass represents about 30% of this share, showing immense growth potential in both domestic and international markets. Major export destinations include the Middle East, Africa, Europe, and Southeast Asia, where demand for construction and automotive safety glass is on the rise.

India's skilled labor, lower production costs, and improved logistics infrastructure have turned it into a global hub for glass exports. By 2030, exports of toughened and laminated glass from India are expected to reach USD 3 billion.

Manufacturing Process of Toughened Glass

The process of manufacturing toughened glass involves a combination of precision heating, controlled cooling, and quality inspection. The steps include:

1. **Cutting and Edge Grinding:** Large sheets of annealed glass are cut to the required size and their edges are smoothened using automatic edge-grinding machines.
2. **Washing and Drying:** Glass sheets are thoroughly washed to remove dust and residues before heating.
3. **Heating:** The glass is heated uniformly in a tempering furnace to around 650°C, near its softening point.
4. **Quenching (Rapid Cooling):** Immediately after heating, the glass undergoes rapid cooling with high-pressure air jets. This induces compressive stress on the surface and tensile stress inside, making the glass 4–5 times stronger than regular glass.
5. **Inspection and Packaging:** Finished sheets are inspected for optical distortion, surface quality, and thickness uniformity, then packed for dispatch.

Emerging Trends and Future Outlook

The future of the toughened glass industry looks promising with innovation driving new applications. Smart glass, self-cleaning coatings, UV-protection films, and energy-efficient glazing systems are reshaping the sector. Additionally, the growing adoption of solar panels, electric vehicles, and smart buildings is expanding the scope for specialized tempered glass production.

The toughened glass industry is a resilient and future-oriented investment option. It merges technology, design, and sustainability — the three pillars of modern manufacturing. Entrepreneurs entering this sector can expect strong demand, attractive margins, and long-term growth potential. With moderate capital investment, easy scalability, and significant export prospects, setting up a toughened glass manufacturing unit is an excellent opportunity for startups aiming to build a durable and profitable business.

PROJECT COST ESTIMATE

CAPACITY

Project Capacity	: 4,000 Sq.Ft. Per Day
Plant & Machinery	: ₹ 277 Lakhs
Cost of Project	: ₹ 1082 Lakhs
Rate of Return	: 27%
Break Even Point	: 43%

Manufacturing Business of Bamboo Charcoal

Bamboo charcoal production is a great business to start since it has high profit margins, requires few expensive inputs, and can be set up in a short amount of time. Furthermore, bamboo charcoal can be provided to customers in a variety of forms, such as briquettes and wood chunks, obviating the need for any middlemen or manufacturers in the supply chain. In a nutshell, this is the future of business! Let's take a look at how you may get started making bamboo charcoal right now.

Market Predictions:

From 2021 to 2026, the value of the bamboo charcoal market is expected to increase by USD 2.33 billion, with a CAGR of 19.35 percent. The bamboo charcoal market is mostly driven by factors such as rising demand for natural charcoal.

The bamboo charcoal powder market is segmented into culinary, medicinal, cosmetics, and other applications. Chemicals, labs, and agriculture are among the other segments. Different grades of bamboo charcoal powder are utilised in industries depending on their needs. In terms of application, the bamboo charcoal powder market is dominated by the culinary, medicinal, and cosmetics industries.

PROJECT COST ESTIMATE

CAPACITY

Capacity	: 4 MT Per Day
Plant & Machinery	: ₹ 40 Lakhs
Cost of Project	: ₹ 200 Lakhs
Rate of Return	: 26%
Break Even Point	: 56%

PROCESS TECHNOLOGY BOOKS

NAME OF BOOKS	₹

CHEMICALS, FINE CHEMICALS, VITAMINS, AMINO ACIDS AND PROTEINS

- Handbook on Chemical Industries (Alcohol Based) .....750 /-
- Industrial Chemicals Technology Handbook 1100/-
- The Complete Technology Book on Chemical Industries.....975/-
- Handbook on Manufacture of Acetophenone, Alcohols, Alletrhin, Anthracene, Barium Potassium Chromate Pigment, Calcium Cyanamide, Carboxymethylcellulose, Carotene, Chlorophyll,Chemicals from Acetaldehyde, Fats, Milk, Oranges, Wood, Manufacture of Dye Intermediates and Dyes, Fine Chemicals, Formaldehyde, Granulated Fertilizers, Granulated Triple Superphosphate and Hydroquinone 1100/-
- Handbook on Fine Chemicals, Vitamins, Amino Acids And Proteins 1450/-
- Detailed Project Profiles on 9 Selected Chemical Industries (2nd Revised Edition) # 1995/-
- Detailed Project Profiles on Chemical Industries (Vol II) (2nd Revised Edition) # 1695/-
- The Complete Book on Non Ferrous and Precious Metals with Electroplating Chemicals.....1975/-
- Modern Technology of Industrial Chemicals 1100/-
- The Complete Technology Book on Fine Chemicals 1100/-

PHARMACEUTICAL, DRUGS, API

- Drugs & Pharmaceutical Technology Handbook.....1075/-
- Business Ideas for Startup in Drugs & Pharmaceutical Industry with Project Profiles (L-Ascorbic Acid (Plain), Pharmaceutical Unit, Ciprofloxacin Hydrochloride, Paracetamol, Paracetamol (BP/IP/USP Grade), Sterile Water for Injection, Active Pharma Ingredients Metformin and Ciprofloxacin, IV Fluid (BFS Technology) 3rd Edition #..... 2595/-
- Handbook on Active Pharmaceutical Ingredients (API), Drugs & Pharmaceutical Products (Paracetamol, Aspirin, IV Fluids, Ointment, Metronidazole, Liquid Glucose, Surgical Cotton, Syrup, Tablet, Excipients, Pharmaceutical Salts with Manufacturing Process, Machinery Equipment Details and Factory Layout)..... 2495/-

PESTICIDES, INSECTICIDES

- The Complete Technology Book on Pesticides, Insecticides, Fungicides and Herbicides (Agrochemicals) with Formulae, Manufacturing Process, Machinery & Equipment Details (4th Rev. Edn.).....1975/-
- Biopesticides Handbook 1575/-

STARCH & ITS DERIVATIVES

- The Complete Technology Book on Starch & Its Derivatives 1100/-

WAX & POLISHES

- The Complete Technology Book on Wax and Polishes 1895/-
- Wax Polishes Manufacturing Handbook with Process and Formulae (Automobile, Industrial, Leather, Furniture, Floor, Marine, Metal and Shoe Polish) 2nd Rev. Edn. 1875/-

JUTE & COIR PRODUCTS

- The Complete Book on Jute & Coir Products (With Cultivation & Processing) 2nd Rev. Edn. 1575/-
- Handbook on 100% Export Oriented Jute & Jute Products (Eco Friendly Projects) # 695/-

BIO-TECHNOLOGY, NANOTECHNOLOGY, ENZYMES, FOOD BIO-TECHNOLOGY, VERMICULTURE, VERMICOMPOST, BIO-FERTILIZER, ORGANIC FARMING, BIOGAS, MUSHROOM

- Bio -Technology Handbook.....1100/-
- Plant Biotechnology Handbook 1100/-
- Hand Book on Projects in Export Thrust Area with International Market Survey (Bio-Tech & Pharmaceutical Technology) # 1095/-
- Biotech & Pharmaceutical Handbook #.....1895/-
- Enzymes Bio -Technology Handbook.....1100/-
- The Complete Book on Biotechnology Based Bulk Drugs 1050/-
- Handbook on Food Bio-Technology (Extraction, Processing of Fruits, Vegetables and Food Products) 2nd Revised Edition.....1495/-
- Handbook on Plants and Cell Tissue Culture 1275/-
- The Complete Technology Book on Vermiculture and Vermicompost (Earthworm) with Manufacturing Process, Machinery Equipment Details & Plant Layout (3rd Edn.).....1475/-
- The Complete Technology Book on Biofertilizer and Organic Farming (Potash, Greenhouse Farming, Hydroponic Farming, Pellet Fertilizer, Seaweed Fertilizer, Biogas with Manufacturing Process, Machinery Equipment Details) (4th Revised Edition).....1995/-
- Handbook on Mushroom Cultivation and Processing (With Dehydration, Preservation and Canning).....1275/-
- The Complete Book on Organic Farming and Production of Organic Compost (3rd. Rev. Edn.).....1675/-
- Nanotechnology Handbook.....1675/-
- Nanoscience and Nanotechnology Handbook.....1675/-
- Integrated Organic Farming Handbook 1275/-
- Handbook on Organic Farming and Processing 1275/-
- Handbook on Small & Medium Scale Industries (Biotechnology Products) 1695/-
- Manufacture of Biofertilizer and Organic Farming (2nd Edn.) 1195/-

 # Limited Edition–only photostat copy available

BIOGAS AND INDUSTRIAL GASES

- The Complete Book on Industrial Gases (Acetylene, Argon, Butane, Butene, Carbon Dioxide, Carbon Monoxide, Ethane, Ethene, Helium, Hydrogen Chloride, Hydrogen, Krypton, Liquefied Natural Gas (LNG), Methane, Neon, Nitrogen, Nitrogen Trifluoride Gas, Nitrous Oxide, Oxygen, Ozone, Propane, Propene, Refrigerant Gases, Sulphur Dioxide Gas, Sulphur Hexafluoride Gas, Xenon, Gas Mixtures with Machinery Equipment Details and Factory 2495/-
- Biogas and Compressed Biogas (CBG) Production Handbook (From Waste & Renewable Resources) 1775/-

FERTILIZER, BIOFUEL

- Handbook on Biofuel, Ethanol and Bioenergy Based Products (Ethanol as Biofuel, Methane Gas, Biodiesel, Biogas, Biomass Gasification, Bio-Chemical, Renewable Energy, Clean-Energy, Activated Carbon, Agricultural Residues, Forestry Residues, Animal Waste, Wood Wastes, Industrial Wastes, Municipal Solid Wastes and Sewage with Machinery, Manufacturing Process, Equipment Details and Plant Layout) 1875/-
- Fertilizers Manufacturing Handbook (Ammonium Sulfate, Diammonium Phosphate (DAP), Urea–Ammonium Nitrate, Neem Coated Urea, N.P.K. Complex Fertilizers, Single Superphosphate (SSP), Triple Superphosphate, Zinc Sulfate Monohydrate, Magnesium Sulfate with Manufacturing Process, Machinery Equipment Details & Factory Layout.....2795/-

BIOPLASTIC, BIODEGRADABLE

- Bioplastics & Biodegradable Products Manufacturing Handbook (Bioplastic Carry Bags, Bio-PET, Bioplastic Drinking Straws, Corn and Rice Starch-Based Bioplastics, Food Packaging Applications, Cassava Bags, Biodegradable Tableware, Biodegradable Plates, Biodegradable Toilet Paper, Starch Based Biodegradable Plastics, Polylactic Acid (PLA)) 1575/-
- Handbook on Biodegradable Plastics (Eco-Friendly Plastics) 600/-

PRINTING, PACKAGING, PRINTING INK

- Handbook on Modern Packaging Industries (2nd Rev. Edn.).....1675/-
- Modern Technology of Printing & Writing Inks (2nd Rev. Edn.) 1475/-
- The Complete Technology Book on Printing Inks.....1000/-
- Handbook on Printing Technology (Offset, Flexo, Gravure, Digital, 3D Printing with Book Binding & CTP) (6th Revised Edition) 2475/-
- Screen Printing Technology Handbook 1000/-
- The Complete Book on Printing Technology with Process Flow Diagrams, Plant Layouts and Machinery Details (Offset, Gravure, Flexographic, Security, Web Offset and Pad Printing) 3rd Rev. Edn. 1895/-

PAPER, PULP & PAPER CONVERSION

- Modern Technology of Pulp, Paper and Paper Conversion Industries 1000/-
- The Complete Technology Book on Pulp & Paper Industries.....1100/-
- Handbook on Pulp and Paper Processing.....1875/-

VEGETABLES, SPICES, AGRO BASED, CEREAL FOOD, MILK, PLANTATION, FARMING, FOOD & BEVERAGES, FRUITS, DAIRY, OILS & FATS, FISHERIES, MEAT, COCONUTS, SUGARCANE, TEA CULTIVATION & PROCESSING

- Cultivation of Fruits, Vegetables and Floriculture.....1100/-
- Cultivation of Tropical, Subtropical, Vegetables, Spices, Medicinal and Aromatic Plants 1075/-
- Tropical, Subtropical Fruits and Flowers Cultivation.....1075/-
- Food Packaging Technology Handbook (Biodegradable Films, Materials, Polymers, Aseptic Packaging, Labels and Labelling, Packaging of Cashew Nuts, Dairy Products, Milk, Fish, Meat, Shrimps, Canning of Vegetables, Fruits with details of Machinery and Equipments) 4th Rev.Edn. 1995/-
- Modern Technology on Food Preservation (2nd Rev. Edn.).....1275/-
- Modern Technology of Food Processing & Agro Based Industries (Confectionery,Bakery, Breakfast Cereal Food, Dairy Products, Sea Food, Fruits & Vegetable Processing) with Project Profiles (3rd Rev. Edn).....1775/-
- Modern Technology of Agro Processing & Agricultural Waste Products..... 975/-
- Handbook on Agro Based Industries (Garlic Oil and Powder, Biomass Briquettes from Bio Waste, Moringa Oleifera (Drumstick) Powder, Dehydrated Onion, Aloe Vera Gel and Powder, Cashew Nut Shell Oil and Cardanol, Rice Powder, Puttu and Wheat Powder, Fructose Syrup from Broken Rice, Potato Powder, Granules and Pellets, Rice Flakes and Puffed Rice, Cashew Nut Processing Unit, Banana, Onion, Orange and Tomato Powder & Disposable Plate and Cups from Waste Rice Husk Powder) 3rd Edition # 1775/-
- Handbook on Spices 975/-
- Modern Technology of Oils, Fats & Its Derivatives (2nd Rev. Edn.) 1875/-
- Detailed Project Profiles on Dairy & Dairy Products (Dairy Industry, Dairy Packaging, Dairy Farming & Dairy Products, Chocolate Confectionery Plant, Cheese Analogue, Milk Processing, Skimmed Milk Powder & UHT Milk Plant) 3rd Revised Edition #.....2595/-
- Profitable Agro Based Projects with Project Profiles (Cereal Food Technology) (2nd Revised Edition) # 1895/-
- Modern Technology of Milk Processing & Dairy Products (4th Rev. Edn.) 1475/-

PROCESS TECHNOLOGY BOOKS

NAME OF BOOKS	₹
The Complete Technology Book on Dairy & Poultry Industries with Farming & Processing (2nd Rev. Edn.)	1275/-
Handbook on Drying, Milling and Production of Cereal Foods (Wheat, Rice, Corn, Oat, Barley and Sorghum Processing Technology) (2nd. Rev. Edn.)	1295/-
The Complete Book on Spices & Condiments (With Cultivation, Processing & Uses) (2nd Rev. Edn.)	2275/-
The Complete Book on Coconut & Coconut Products (Coconut Cultivation, Manufacturing Process of Coconut Oil, Desiccated Coconut, Coconut Powder, Coconut Milk, Coconut Milk Powder, Coconut Chips, Coconut Water, Vinegar, Activated Carbon, Coconut Jam with Machinery Equipment Details & Factory Layout)	1695/-
Profitable Farming & Allied Projects (2nd Rev. Edn.) #	1495/-
Rabbit, Goat, Sheep, Poultry, Fish and Pig Farming with Feed Technology	1100/-
The Complete Technology Book on Processing, Dehydration, Canning, Preservation of Fruits & Vegetables (Processed Food Industries) (5th Rev. Edn.)	1950/-
Handbook on Fruits, Vegetable & Food Processing with Canning & Preservation (3rd Rev. Edn.)	1475/-
Handbook on Fisheries and Aquaculture Technology	1100/-
The Complete Book on Meat Processing and Preservation with Packaging Technology	1275/-
Preservation of Meat and Poultry Products (Preservation Techniques, Luncheon Meats, Meat Loaves, Meat Spreads, Canned Meat Products, Maintenance of Eggs, Soups, Gravies, Sauces, Sausage with Machinery, Equipment Details & Factory Layout)	1575/-
The Complete Technology Book on Meat, Poultry and Fish Processing (2nd Revised Edition)	1475/-
Potato and Potato Products Cultivation, Seed Production, Manuring, Harvesting, Organic Farming, Storage and Processing	1275/-
Handbook on Rice Cultivation and Processing	1075/-
The Complete Book on Beekeeping and Honey Processing (2nd Rev. Edn.)	1475/-
Handbook on Citrus Fruits Cultivation and Oil Extraction	1575/-
Fruits, Vegetables, Corn and Oilseeds Processing Handbook	1675/-
Handbook on Spices and Condiments (Cultivation, Processing and Extraction)	1575/-
Handbook on Fermented Foods and Chemicals	1875/-
Handbook on Milk and Milk Proteins	1275/-
The Complete Book on Cultivation and Manufacture of Tea (2nd Rev. Edn.)	1625/-
The Complete Book on Sugarcane Processing and By-Products of Molasses (with Analysis of Sugar, Syrup and Molasses)	1675/-
The Complete Book on Fruits, Vegetables and Food Processing	1675/-
The Complete Book on Cashew (Cultivation, Processing & By-Products)	1775/-
The Complete Book on Tomato & Tomato Products Manufacturing (Cultivation & Processing) 2nd. Rev. Edn.	1400/-
The Complete Book on Onion & Garlic Cultivation with Processing (Production of Onion Paste, Flakes, Powder & Garlic Paste, Powder, Flakes, Oil) 2nd Revised Edition	1575/-
Handbook on Pig Farming and Pork Processing (Feeding Management, Breeding, Housing Management, Sausages, Bacon, Cooked Ham with Packaging) 2nd Rev. Edn.	1275/-
Handbook on Manufacture of Indian Kitchen Spices (Masala Powder) with Formulations, Processes and Machinery Details (Chaat Masala, Sambar Masala, Pav Bhaji Masala, Garam Masala, Goda Masala, Pani Puri Masala, Kitchen King Masala, Thandai Masala Powder, Meat Masala, Rasam Powder, Kesari Milk Masala, Punjabi Chole Masala, Shahi Biryani Masala, Tea Masala Powder, Jaljeera Masala, Tandoori Masala, Fish Curry Masala, Chicken Masala, Pickle Masala, Curry Powder) (6th Rev. Edn.)	1995/-
The Complete Book on Ginger Cultivation and Manufacture of Value Added Ginger Products (Ginger Storage, Ginger Oil, Ginger Powder, Ginger Paste, Ginger Beer, Instant Ginger Powder Drink and Dry Ginger from Green Ginger)	1575/-
55 Most Profitable Micro, Small, Medium Scale Food Processing (Processed Food) Projects and Agriculture Based Business Ideas for Startup (2nd Revised Edition)	1495/-
Manufacture of Pan Masala, Tobacco and Tobacco Products (Tobacco Cultivation, Chewing Tobacco, Cigarettes, Bidi, Cigars, Khaini, Zarda, Gutka, Katha, Mouth Freshner, Pan Chatni, Kimam, Sweet Supari, Nicotine Sulphate, USP Nicotine, Nicotine Tartarate, Nicotine, Polacrilex Resin) 2nd Rev. Edn.	2225/-
फूड प्रोसेसिंग इंडस्ट्रीज़ (खाद्य प्रसंस्करण एवं कृषि आधारित उद्योग परियोजनाएं) 2nd Rev. Edn	1475/-
Handbook on Maize (Corn) Processing and Manufacture of Maize Products (Oil, Starch, Corn Steep Liquor, Syrup, Cornmeal, Popcorn, Flakes, Gluten, Husk, Anhydrous Dextrose, High Maltose Syrup, Maltodextrin Powder, Monohydrate Dextrose, Sorbitol, Ethanol, Cattle Feed with Manufacturing Processes, Equipment Details and Plant Layout)	1895/-
The Complete Book on Gums and Stabilizers for Food Industry	1275/-

 # Limited Edition–only photostat copy available

NAME OF BOOKS	₹
Millet Production, Processing and Value-Added Products Handbook (Millet Cookies, Flakes, Flour, Noodles, Pasta, Beverages, Extruded Snacks, Extruded Flakes, Instant Dosa Mix, Instant Pongal Mix, Instant Sorghum Idli Mix, Instant Sorghum Upma Mix, Bread, Cakes, Instant Laddu Mix, Pizza Base, Rawa/Suji, Vermicelli, Puffs and Sorghum Muesli with Manufacturing, Machinery, Equipment Details & Factory Layout)	2495/-
Handbook on Spices, Seasonings and Condiments - Processing, Extraction with Kitchen Spices Manufacturing	2595/-
Handbookon Meat Products Manufacturing (Processing, Preservation and Packaging)	2195/-
CONFECTIONERY, COCOA, CHOCOLATE, ICE CREAM, BAKERY & SNACKS	
Modern Technology of Confectionery Industries with Formulae & Processes (2nd Rev.Ed.)	600/-
The Complete Technology Book of Cocoa, Chocolate, Ice Cream and Other Milk Products	1275/-
The Complete Technology Book on Flavoured Ice Cream (Manufacturing Process, Flavours, Formulations with Machinery Details) 2nd Revised Edition	1475/-
The Complete Technology Book on Bakery Products (Baking Science with Formulation & Production (5th Rev. Edition)	1875/-
The Complete Technology Book on Snack Foods (2nd Rev. Edn.)	1475/-
Confectionery Products Handbook (Chocolate, Toffees, Chewing Gum & Sugar Free Confectionery)	1975/-
Handbook on Natural and Flavoured Ice Cream Manufacturing (Flavours, Formulae and Machinery Details)	1575/-
SMALL SCALE INDUSTRY (SSI), ENTREPRENEURSHIP, PROJECT IDENTIFICATION AND PROFILES, HI-TECH PROJECTS, EXPORT BUSINESS, GUIDELINES, SELF EMPLOYMENT, WOMEN ENTREPRENEURSHIP, SMALL, COTTAGE & HOME INDUSTRIES	
Stop Dreaming–Start Your New Business	400/-
What No One Ever Tells You About Starting Your Business-Facilities and Procedures for Entrepreneurs	400/-
Secrets for Making Big Profits from Your Business with Export Guidelines	400/-
Opportunities for Women Entrepreneurship (With Project Profiles) 2nd Edition	575/-
लघु व कुटीर उद्योग (स्माल स्केल इण्डस्ट्रीज़) (5th Revised Edition)	1150/-
Profitable Small, Cottage & Home Industries	800/-
Select and Start Your Own Industry (4th Revised Edition)	475/-
Just For Starters : How To Start Your Own Export Business ? 5th Revised Edition	995/-
Just For Starters : How To Become A Successful Businessman ? 3rd Revised Edition	475/-
Best Businesses You Can Start With Low Cost (2nd Rev. Edition)	750/-
50 Projects To Start With 5,00,000	475/-
Just For Starters: Selected Projects To Start With 30,00,000	475/-
Just For Starters: Selected Projects To Start With 15,00,000	475/-
Just For Starters : Selected Projects To Start With 35,00,000	475/-
Grow Rich By Starting Your Own Business	325/-
50 Best Home Businesses To Start with Just 50,000	425/-
Profitable Cottage and Tiny Industries	475/-
Money Making Business IdeasYou Can Start from Home with Low Costs (Profitable Part Time, Spare Time and Side Businesses) 2nd Revised Edition	800/-
स्मॉल स्केल इण्डस्ट्रीज़ प्रोजेक्ट्स (लघु, कुटीर व घरेलू उद्योग परियोजनाएं उद्यमिता मार्गदर्शिका) 2nd Rev. Edn.	950/-
Start-Up Projects for Entrepreneurs : 50 Highly Profitable Small & Medium Industries–2nd Rev. Edn.	1700/-
Entrepreneurs Start-Up Handbook: Manufacturing of Profitable Household (FMCG) Products with Process & Formulations (2nd Rev. Edition)	1675/-
Profitable Small Scale Industries Money making Business Ideas for Startup (when you don't know what industry to start)	975/-
FASHION TECHNOLOGY	
Fashion Technology Handbook	495/-
CANDLE: MAKING & DESIGNS	
The Complete Technology Book on Candle: Making & Designs	650/-
PLASTICS, SPECIALITY PLASTICS, FOAMS (URETHANE, FLEXIBLE, RIGID), PET & PREFORM, POLYESTER FIBERS, MOULD DESIGNS, PLASTIC FILMS, HDPE AND THERMOSET PLASTICS, MEDICAL PLASTICS, INDUSTRIAL POLYMERS, ADDITIVES, COLOURANTS AND FILLERS, FIBRE GLASS, OPTICAL GLASS AND REINFORCED PLASTICS	
Modern Technology of Plastic Processing Industries (2nd Edn.)	975/-
Detailed Project Profiles on Hi-Tech Plastic Products (2nd Rev. Edn.)#	1895/-
Handbook on Pet Film and Sheets, Urethane Foams, Flexible Foams, Rigid Foams, Speciality Plastics, Stretch Blow Moulding, Injection Blow Moulding, Injection and Co-Injection Preform Technologies	1275/-

PROCESS TECHNOLOGY BOOKS

NAME OF BOOKS	₹
• Polymers and Plastics Technology Handbook	750/-
• The Complete Book on Medical Plastics	975/-
• The Complete Technology Book on Expanded Plastics, Polyurethane, Polyamide and Polyester Fibers	1275/-
• The Complete Technology Book on Industrial Polymers, Additives, Colourants and Fillers	1100/-
• The Complete Technology Book on Polymers (With Processing & Applications)	1100/-
• The Complete Technology Book on Plastic Extrusion, Moulding and Mould Designs (2nd Rev. Edn.)	1475/-
• The Complete Technology Book on Fibre Glass, Optical Glass and Reinforced Plastics	1275/-
• The Complete Technology Book on Plastic Films, HDPE and Thermoset Plastics	1175/-
• Modern Technology of Plastic and Polymer Processing Industries	750/-
• The Complete Book on Water Soluble Polymers	1575/-
• Speciality Plastics, Foams (Urethane, Flexible, Rigid) Pet & Preform Processing Technology Handbook	1275/-
LEATHER PROCESSING & TANNING	
• Leather Processing & Tanning Technology Handbook	1400/-
TEXTILE SPINNING, WEAVING, FINISHING AND PRINTING, PROCESSING WITH EFFLUENT TREATMENT, TEXTILE DYES & PIGMENTS, NATURAL DYES & PIGMENTS, NATURAL FIBERS, JUTE & COIR	
• The Complete Technology Book on Textile Spinning, Weaving, Finishing and Printing (4th Rev.Edn.)	1875/-
• The Complete Technology Book on Textile Processing with Effluent Treatment	1000/-
• Modern Technology of Textile Dyes & Pigments (3rd Rev. Edn.)	2275/-
• The Complete Technology Book on Dyes and Dye Intermediates (2nd Rev. Edn.)	1995/-
• The Complete Book on Natural Dyes & Pigments	1100/-
• Handbook on Natural Dyes for Industrial Applications (Extraction of Dyestuff from flowers, Leaves, Vegetables) 2nd Rev. Edn	1575/-
• Natural Fibers Handbook with Cultivation & Uses	1275/-
• Woollen Spinning, Weaving, Knitting, Dyeing, Bleaching and Printing Technology Handbook	1100/-
• Handbook on Textile Auxiliaries, Dyes and Dye Intermediates Technology	1575/-
• The Complete Book on Textile Processing and Silk Reeling Technology	1750/-
• A Concise Guide on Textile Dyes, Pigments and Dye Intermediates with Textile Printing Technology	1675/-
ELECTROPLATING, ANODIZING & METAL TREATMENT, POWDER COATING AND METAL FINISHING	
• Electroplating, Anodizing & Metal Treatment Handbook	1475/-
• The Complete Technology Book on Electroplating, Phosphating, Powder Coating and Metal Finishing (3rd Rev. Edn.)	1695/-
• Handbook on Electroplating with Manufacture of Electrochemicals (2nd Rev. Edn.)	1975/-
RUBBER PROCESSING, RUBBER CHEMICALS AND COMPOUNDING	
• The Complete Book on Rubber Processing and Compounding Technology (Rubber Vulcanization, Compounding, Rubber Gloves, Condoms, Rubber Band, Latex Mattress, Bushings, Gasket, Sheets, Tubing, Tyre, Hoses, Conveyor Belt, Latex and Foam Rubber, Silicone Rubber, Reclaimed Rubber, Waste Tyre Recycling with Manufacturing Process, Machinery Equipment Details and Factory Layout) (4th Revised Edition)	2350/-
• The Complete Book on Rubber Chemicals	1575/-
• Handbook on Rubber and Allied Products (with Project Profiles) #	2295/-
SURFACE COATING, PAINTS, VARNISHES & LACQUERS	
• The Complete Book on Resins (Alkyd, Amino, Phenolic, Polyurethane Epoxy, Silicone, Acrylic) Paints, Varnishes, Pigments & Additives (Surface Coating Products with Formulae) 3rd Rev. Edn.	2275/-
• Paints, Pigments, Varnishes and Enamels Technology Handbook (With Process & Formulations) 2nd Rev. Edn.	1675/-
• Modern Technology of Paints, Varnishes & Lacquers (3rd Edn.)	2200/-
• Handbook on Paints and Enamels	1275/-
• Surface Coating Technology Handbook	1475/-
• Spirit Varnishes Technology Handbook (with Testing and Analysis)	1275/-
• The Testing Manual of Paints, Varnishes and Resins	1875/-
• Handbook on Paint Testing Methods	1575/-
• Manufacture of Thinners & Solvents (Properties, Uses, Production, Formulation with Machinery Details) 2nd Edn. Rev.	1875/-
• Manufacture of Paint Varnish & Allied Products (Industrial Paint, N.C. Thinner, Paint Industry, Infrared Reflected (IR) Paint, High Temperature Aluminium Based Paint, Paint Drier, Powder Coating Paint, Latex Paints for Roof) 3rd Edition #	1995/-
GUMS, ADHESIVES & SEALANTS, ROSIN & DERIVATIVES, RESINS AND OLEORESINS	
• Gums, Adhesives & Sealants Technology (with Formulae & their Applications) 2nd Rev. Edn.	1475/-

 # Limited Edition–only photostat copy available

NAME OF BOOKS	₹
• Adhesives Formulary Handbook (Adhesives for Construction, Fabric, Packaging, Paper, Film, Flocking, Foam, Water-Based, Oil-Based, Corrugation, Labelling, Hot Melt Adhesives, Pressure Sensitive Adhesives, Hot Melt Coatings, Grouting Compounds, Epoxy Adhesives, Caulking, Cement, Concrete and Plaster Patching Compounds, Glazing Compounds, Joint Cements, Mastics, Putties, Sealants, Solders with Machinery Equipment Details & Factory Layout)	1895/-
• Handbook on Speciality Gums, Adhesives, Oils, Rosin & Derivatives, Resins, Oleoresins, Katha, Chemicals with Other Natural Products	2175/-
• The Complete Book on Adhesives, Glues & Resins Technology (with Process & Formulations) 2nd Rev. Edn.	1675/-
• The Complete Technology Book on Industrial Adhesives	1675/-
• The Complete Book on Water Soluble Gums and Resins	1675/-
SYNTHETIC, ALKYD, EPOXY AND PHENOLIC RESINS	
• Modern Technology of Synthetic Resins & Their Applications (2nd Revised Edition)	1575/-
• Synthetic Resins Technology Handbook	1100/-
• The Complete Technology Book on Synthetic Resins with Formulae & Processes	1150/-
• Alkyd Resins Technology Handbook (2nd Rev. Edition)	1995/-
• Epoxy Resins Technology Handbook (Synthesis, Epoxy Resin Adhesives, Epoxy Coatings) with Manufacturing Process and Machinery Equipment Details (3rd Revised Edition)	2275/-
• Phenolic Resins Technology Handbook (2nd Revised Edition)	1895/-
PETROLEUM, GREASES, PETROCHEMICALS, LUBRICANTS	
• Modern Technology of Petroleum, Greases, Lubricants & Petrochemicals (Lubricating Oils, Cutting Oil, Additives, Refining, Bitumen, Waxes with Process and Formulations) 3rd Rev. Edn.	1995/-
• The Complete Book On Distillation And Refining of Petroleum Products (Lubricants, Waxes And Petrochemicals)	975/-
• Lubricating Oils, Greases and Petroleum Products Manufacturing Handbook	1475/-
• Manufacturing of Petroleum Products (Petroleum Waxes, Greases and Solid Lubricants, Solid Fuels, Gaseous Fuels, Gasoline, Diesel Fuel Oils, Automotive, Diesel and Aviation Fuels, Lubricating Oils and Lubricating Greases)	1675/-
• Petroleum & Petroleum Products Technology Handbook (Thermal Cracking of Pure Saturated Hydrocarbons, Petroleum Asphalts, Refinery Products, Blending and Compounding, Oil Refining and Residual Fuel Oils)	1875/-
WASTE MANAGEMENT, PRODUCTS FROM WASTE, MEDICAL, MUNICIPAL WASTE, E-WASTE, BIOMASS, MEDICAL & SURGICAL DISPOSABLE PRODUCTS	
• Products from Waste (Industrial & Agro Waste) 2nd Edition	975/-
• Handbook on Recycling & Disposal of –Hospital Waste Municipal, –Solid Waste, –Biomedical Waste, –Plastic Waste	1275/-
• Water and Air Effluents Treatment Handbook	1275/-
• The Complete Guide on Industrial Pollution Control	1275/-
• The Complete Book on Managing Food Processing Industry Waste	1275/-
• Handbook on Organic Waste for Biological Treatment, Liquid Manure into a Solid, Tomato Waste Water Treatment, Oxalic Acid from Jute Stick, Cotton Processing Waste, Fish Waste, Agro-Industrial Wastes, Bioconversion of Pretreated Wheat Straw and Sunflower Stalks to Ethanol, Agricultural Waste Treatment, Waste of Dehydrated Onion, Beef-Cattle Manure Slurry, Meat Meal and Algae for Calves, Wastes from Large Piggeries, Pig Waste, Oxytetracycline, Methane from Cattle Waste	1275/-
• Handbook on Medical and Surgical Disposable Products (Blood Bags, Plastic Gloves, I.V. Cannula, Infusion Set, Gowns, Masks, Catheter, Cotton and Bandage, Surgical Wear, Syringes)	1775/-
• Disposable Products Manufacturing Handbook (Plastic Cups, Cutlery, Paper Cups, Banana Leaf Plates, Facial Tissues, Wet Wipes, Toilet Paper Roll, Sanitary Napkins, Baby Diapers, Thermocol Products, PET Bottles)	1575/-
• The Complete Technology Book on E-Waste Recycling (Printed Circuit Board, LCD, Cell Phone, Battery, Computers) 3rd Rev. Edn.	1975/-
• The Complete Book on Waste Treatment Technologies (Industrial, Biomedical, Water, Electronic, Municipal, Household/ Kitchen, Farm Animal, Dairy, Poultry, Meat, Fish & Sea Food Industry Waste and Machinery Equipment Details) 2nd Revised Edition	2095/-
• Manufacture of Value Added Products from Rice Husk (Hull) and Rice Husk Ash (RHA) (Precipitated Silica, Activated Carbon, Cement, Electricity, Ethanol, Hardboard, Oxalic Acid, Paper, Particle Board, Rice Husk Briquettes, Rice Husk Pellet, Silicon, Sodium Silicate Projects) 3rd Rev. Edition	1995/-
• Medical, Municipal and Plastic Waste Management Handbook	1275/-
• The Complete Book on Biological Waste Treatment and their Utilization	1675/-

PROCESS TECHNOLOGY BOOKS

NAME OF BOOKS	₹
• Recycling Business Handbook *Industrial and Agricultural Waste Processing* (Automated Vehicle Scrapping, Bio Coal Briquettes, Caffeine Extraction, Disposable Tableware, E-Waste, Lead Acid Battery, Lithium-Ion Battery, Lubricating Oils, Organic Fertilizer, Particle Board, PET Bottles, Waste Tyre Pyrolysis, Aluminium, Biomedical Waste, Biomass Charcoal, Activated Carbon, PET Flakes, Rice Bran Oil)	1995/-
INFRASTRUCTURE, HOSPITALITY, MEDICAL, ENTERTAINMENT, WAREHOUSING, EDUCATION BUSINESS & REAL ESTATE PROJECTS	
• Investment Opportunities in Infrastructure Projects #	2500/-
• Investment Opportunities In Hospitality, Medical, Entertainment, Ware Housing & Real Estate Projects (with 15 Project Profiles)#	4408/-
• How to Start Profitable Education Business (12 Detailed Project Profiles) (Engineering, Dental, ITI, Management, Marine Engineering, Medical, Pharmacy, Polytechnic College and Schools) 2nd Revised Edition #	2295/-
WOOD AND ITS DERIVATIVES, BAMBOO PLANTATION	
• The Complete Technology Book on Wood and Its Derivatives	1100/-
• Bamboo Plantation and Utilization Handbook	1475/-
HERBAL PRODUCTS, AYURVEDIC, HERBAL & UNANI MEDICINES, DRUGS, NEEM, HERBS & MEDICINAL PLANTS CULTIVATION, COSMETICS, NATURAL PRODUCTS, JATROPHA	
• Handbook on Unani Medicines with Formulae, Processes, Uses and Analysis (3rd Revised Edition)	1795/-
• Handbook on Herbal Drugs And Its Plant Sources	1000/-
• Herbal Foods And Its Medicinal Values	1275/-
• Herbal Cosmetics & Ayurvedic Medicines (Eou) (3rd Rev. Edn.)	1475/-
• Handbook on Ayurvedic and Unani Medicines with Formulae, Process & Their Uses	2495/-
• Herbal Cosmetics Handbook (Formulae, Manufacturing Processes with Machinery & Equipment Details (5th Rev. Edn.)	1875/-
• The Complete Technology Book on Herbal Beauty Products (Cosmetic Industry) with Formulations, Manufacturing Process, Machinery Equipment Details & Plant Layout (4th Revised Edition)	1850/-
• Modern Technology of Cosmetics	1100/-
• Handbook of Herbal Products (Medicines, Cosmetics, Toiletries, Perfumes) 2 Vols.	1500/-
• Herbs Cultivation & Medicinal Uses	975/-
• Herbs Cultivation & Their Utilization	800/-
• Medicinal Plants Cultivation & Their Uses	975/-
• Compendium of Medicinal Plants	875/-
• Compendium of Herbal Plants	975/-
• Cultivation And Processing of Selected Medicinal Plants	1175/-
• Aromatic Plants Cultivation, Processing and Uses	975/-
• Cultivation and Utilization of Aromatic Plants	1100/-
• The Complete Book on Jatropha (Bio-Diesel) with Ashwagandha, Stevia, Brahmi & Jatamansi Herbs (Cultivation, Processing & Uses)	1500/-
• Handbook on Medicinal Herbs With Uses	1075/-
• Aloe Vera Handbook Cultivation, Research Findings, Products, Formulations, Extraction & Processing	1275/-
• Handbook on Herbs Cultivation & Processing	875/-
• Handbook of Neem & Allied Products	975/-
• Handbook on Herbal Medicines (Ayurveda Cream, Oil, Pain Balm, Tablet, Herbal Capsules, Churna, Syrup, Medicines with Composition, Rasa Preparations with Production Process, Machinery, Equipment Details and Factory Layout) 2nd edition	1675/-
• Handbook on Cosmetics (Processes, Formulae with Testing Methods)	1675/-
• Handbook on Drugs from Natural Sources	1175/-
ESSENTIAL OILS, AROMATIC CHEMICALS, PERFUMES, FLAVOURS, FOOD COLOURS	
• The Complete Technology Book of Essential Oils (Aromatic Chemicals (Reprint 2011)	1275/-
• Essential Oil Hand Book	975/-
• The Complete Technology Book on Herbal Perfumes & Cosmetics (2nd Rev Edn.)	1275/-
• Modern Technology of Perfumes, Flavours and Essential Oils 2nd Edn.	975/-
• Food Colours, Flavours And Additives Technology Handbook (2nd Revised Edition)	1895/-
• Food Flavours Technology Handbook	1075/-
• The Complete Technology Book on Flavours, Fragrances and Perfumes (2nd Rev. Edn.)	1975/-
• Perfumes and Flavours Technology Handbook with Manufacturing Formulations, Process, Machinery Equipment Details & Factory Layout (3rd Edition)	2275/-
• Handbook on Perfume, Deodorant, Air Freshener, Body Spray, Fragrances, Flavours and Essential Oil Industry with Manufacturing Formulations, Process, Machinery Equipment Details & Factory Layout (2nd Rev. Edn.)	1875/-
SOAPS, DETERGENTS, ACID SLURRY, TOILETRIES & DISINFECTANTS	
• Modern Technology of Soaps, Detergents & Toiletries (With Formulae & Project Profiles) (4th Rev. Edn.)	1275/-
• Herbal Soaps & Detergents Handbook	1275/-
• Handbook on Soaps, Detergents & Acid Slurry (3rd Rev. Edn.)	1575/-
• The Complete Technology Book on Detergents (2nd Rev. Edn.)	1100/-
• The Complete Technology Book on Soaps (2nd Revised Edn.)	1425/-
• Surfactants, Disinfectants, Cleaners, Toiletries, Personal Care Products Manufacturing and Formulations (Phenyl, Naphthalene Ball, Mosquito Coil, Floor Cleaner, Glass Cleaner, Toilet Cleaner, Utensil Cleaning Bar, Liquid Detergent, Detergent Powder, Detergent Soap, Liquid Soap, Handwash, Hand Sanitizer, Herbal Shampoo, Henna Based Hair Dye, Herbal Cream, Shaving Cream, Air Freshener, Shoe Polish, Tooth Paste) 3rd Revised Edition	1895/-
• Soaps, Detergents and Disinfectants Technology Handbook (Washing Soap, Laundry Soap, Handmade Soap, Detergent Soap, Liquid Soap, Hand Wash, Liquid Detergent, Detergent Powder, Bar, Phenyl, Floor Cleaner, Toilet Cleaner, Mosquito Coils, Naphthalene Balls, Air Freshener, Hand Sanitizer and Aerosols Insecticide) (3rd Revised Edition)	1595/-
GLASS, CERAMICS, COAL, LIGNIN, RARE EARTH & MINERALS	
• The Complete Book on Glass & Ceramics Technology (2nd Revised Edition)	1495/-
• The Complete Book on Glass Technology	1625/-
• The Complete Technology Book on Minerals & Mineral Processing	2200/-
• Handbook on Rare Earth Metals and Alloys (Properties, Extraction, Preparation and Applications)	1875/-
• Hand book on Coal, Coke, Cotton, Lignin, Hemicellulose, Wood, Wood-Polymer Composites, Lignocellulosic-Plastic Composites from Recycled Materials, Wood Fiber, Rosin and Rosin Derivatives	1875/-
ALUMINIUM, STEEL, FERROUS, NON-FERROUS METALS WITH CASTING AND FORGING, FERROALLOYS & AUTOMOBILE COMPONENTS	
• The Complete Technology Book on Hot Rolling of Steel (Hot Strip Mill, Hot Rolled Steel Plates, Hot Rolled Coils, Hot Rolled Steel Bars, Railway Track, TMT Bars) 2nd Rev. Edn.	1975/-
• Steel Rolling Technology Handbook (2nd Revised Edition)	1775/-
• The Complete Book on Ferrous, Non-Ferrous Metals with Casting and Forging Technology	1575/-
• The Complete Technology Book on Aluminium and Aluminium Products	1450/-
• The Complete Technology Book on Steel and Steel Products (Fasteners, Seamless Tubes, Casting, Rolling of flat Products & others)	1625/-
• The Complete Book on Ferroalloys (Ferro Manganese, Ferro Molybdenum, Ferro Niobium, Ferro Boron, Ferro Titanium, Ferro Tungsten, Ferro Silicon, Ferro Nickel,Ferro Chrome)	2775/-
• Steel and Iron Handbook	1775/-
• Handbook on Steel Bars, Wires, Tubes, Pipes, S.S. Sheets Production with Ferrous Metal Casting & Processing	1775/-
• The Complete Book on Production of Automobile Components & Allied Products (Engine Parts, Piston, Pin, Piston Ring, Valve, Control Cable, Engine Mounting, Auto Lock, Disc Brake, Drum, Gear, Leaf Spring, Shock Absorber, Silencer, Chain, Cylinder Block, Chassis, Battery, Tyre & Flaps)	2275/-
• Handbook on Automobile & Allied Products (2nd Rev. Edn.) #	1495/-
FORMULARY (FORMULATION) BOOKS	
• Selected Formulary Book on Cosmetics, Drugs, Cleaners, Soaps and Detergents (2nd Revised Edition)	1475/-
• Selected Formulary Book on Inks, Paints, Lacquers, Varnishes and Enamels	1475/-
• Selected Formulary Handbook	1475/-
• Selected Formulary Book on Petroleum, Lubricants, Fats, Polishes, Glass, Ceramics, Nitrogenous Fertilizers, Emulsions, Leather and Insecticides	2275/-
CONSTURCTION MATERIALS, CEMENT, BRICKS, ASBESTOS	
• The Complete Book on Construction Materials	1475/-
• The Complete Technology Book on Bricks, Cement and Asbestos	1400/-
• The Complete Technology Book on Asbestos, Cement, Ceramics and Limestone	1875/-
• Handbook on Gypsum and Gypsum based Products (Mining, Processing, Transportation, Handling & Storage, Gypsum Board, Plaster of Paris with Machinery & Equipment Details)	2275/-
• The Complete Book on Cement & Concrete Products Manufacturing (AAC Blocks, Slag & High Alumina Cement, Clinker, Concrete Block, Floor Slab, Roof Tiles, Interlocking Paving Blocks, Fly Ash Bricks, Flooring Tiles, Precast RCC Wall, Prestressed Concrete Beams, Poles, Pipe, Sleeper, RCC Beam, Ready Mix Concrete and Wall Putty with Manufacturing Process, Machinery Equipment Details and Factory Layouts)	1975/-

 # Limited Edition–only photostat copy available

PROCESS TECHNOLOGY BOOKS

NAME OF BOOKS	₹
EMULSIFIERS, OLEORESINS AND TALL OIL	
• The Complete Book on Emulsifiers with Uses, Formulae and Processes. (2nd Rev. Edn.)	1400/-
• Handbook on Oleoresin and Pine Chemicals (Rosin, Terpene, Derivaties, Tall Oil ,Resin & Dimer Acids	2200/-
• Handbook on Tall Oil Rosin Production, Processing and Utilization	1575/-
COLD STORAGE, COLD CHAIN & WAREHOUSE	
• The Complete Book on Cold Storage, Cold Chain & Warehouse (with Controlled Atmosphere Storage & Rural Godowns) 6th Rev.Edn.	1750/-
BATTERY ASSEMBLING AND RECYCLING	
• Handbook on Production, Recycling of Lithium Ion and Lead-Acid Batteries (with Manufacturing Process, Machinery Equipment Details & Plant Layout) (2nd Rev. Edn.)	2999/-
RENEWABLE ENERGY AND SOLAR PRODUCTS	
• Solar PV Power and Solar Products Handbook (Solar Energy, Solar Lighting, Solar Power Plant, Solar Panel Solar Pump, Solar Photovoltaic Cell, Solar Inverter, Solar Thermal Power Plant, Solar Farm, Solar Cell Modules with Manufacturing Process, Equipment Details, Plant Layout & Process Flow Chart)	2275/-
ELECTRIC VEHICLES MANURING, E- CAR, ELECTRIC BICYCLE, E- SCOOTER, E-MOTORCYCLE, ELECTRIC RICKSHAW, E- BUS, ELECTRIC TRUCK, E MOBILITY, EV INDUSTRY, AUTOMOBILE, LIGHT ELECTRIC VEHICLES, ELECTRIC VEHICLE INDUSTRY	
• Handbook on Electric Vehicles Manufacturing (E- Car, Electric Bicycle, E- Scooter, E-Motorcycle, Electric Rickshaw, E- Bus, Electric Truck with Assembly Process Machinery Equipments & Layout) 2nd Rev. Edition	3795/-
ELECTRICAL CABLE, WIRE AND WIRE PRODUCTS	
• Manufacture of Electrical Cables, Wire and Wire Products Handbook (Copper Wire, Barbed Wire, Spring, Wire Nail, Wire Mesh, Fiber-Optic Cable, PVC Wire and Cable, Aluminum Wire, Steel Wire Rope, Galvanised Wire, Coaxial Cable, Litang Cable LAN/Ethernet Cable, Power Cord Cable, Submersible Cable, XLPE Cable with Machinery Equipment Details & Factory Layout)	2575/-

 # Limited Edition–only photostat copy available

NAME OF BOOKS	₹
ALCOHOLIC, NON-ALCOHOLIC, BEVERAGES, WINE & INDUSTRIAL ALCOHOL	
• The Complete Technology Book on Alcoholic and Non- Alcoholic Beverages (Fruit Juices, Sugarcane Juice, Whisky, Beer, Microbrewery, Rum and Wine) 2nd Revised Edition	2275/-
• The Complete Book on Wine Production	2275/-
• Industrial Alcohol Technology Handbook	1675/-
• Manufacture of Food & Beverages (2nd Edn.) #	1895/-
TOYS INDUSTRY	
• Toy Manufacturing Handbook (Plastic, Silicone, Wooden, Rubber, Soft, Electronic, Magnetic, Metal / Die-Cast, Traditional Indian Toys Manufacturing Process, Quality controls and safety standards, Machinery Equipment details and Factory Layouts)	2295/-

Start Investing in Fastest Growing Industries

Soya Nugget, Tea Packaging, Turmeric Grinding & Packaging and Jam are four business ventures that are currently booming in the market. Each of these businesses caters to a specific need and is growing in popularity due to their effectiveness and quality.

Benefit of Starting This Business

High Demand: All four of these products are in high demand and have a significant market potential.

Low Startup Costs: These businesses have low startup costs and require minimal investment in machinery and equipment.

Health Benefits: All four of these products are known for their health benefits. Soya nuggets are a rich source of protein and other essential nutrients, tea has antioxidants that can improve overall health, turmeric has anti-inflammatory properties, and jam is a good source of vitamins and minerals.

Branding Opportunities: The packaging of these products provides branding opportunities, which can help build brand recognition and customer loyalty.

Global Market Outlook

According to reports, the global Soya Nugget market is expected to grow at a CAGR of over 10% during the forecast period of 2021-2026. Similarly, the tea packaging industry is also expected to experience growth, with the global tea market expected to reach $81.6 billion by 2026. Tea has become increasingly popular due to its numerous health benefits, and the convenience of tea bags has made it an easy choice for people on the go. The global turmeric market is expected to grow at a CAGR of 5.8% during the forecast period of 2021-2026, driven by increasing demand for natural remedies and supplements. Finally, the jam market is also expected to see growth, driven by increased demand for healthy and organic alternatives. According to reports, the global jam market is expected to reach $9.8 billion by 2025, with Asia Pacific being the fastest-growing market. As such, there are significant opportunities for entrepreneurs and businesses looking to invest in these sectors and take advantage of the growing demand and changing consumer preferences.

Start Integrated Unit of

• Soya Nugget • Tea Packaging,

• Turmeric Grinding & Packaging

• Jam

Manufacturing Plant

Conclusion

These businesses have proven to be lucrative and offer various opportunities for growth, innovation, and expansion. The global market for these products is promising, and their uses and applications are only expanding. It's no wonder why these businesses are booming, and it's exciting to see where they will go in the future.

PROJECT COST ESTIMATE

CAPACITY:	
Soya Nuggets	*: 1,600 Kgs Per Day*
Tea Packaging	*: 1,200 Kgs Per Day*
Fruit Jam	*: 1,000 Kgs Per Day*
Turmeric Powder	*: 40 Kgs Per Day*
Plant & Machinery	: ₹ 202 Lakhs
Cost of Project	: ₹ 380 Lakhs
Rate of Return	: 27 %
Break Even Point	: 58 %

SELECTED BUSINESS IDEAS FOR RIGHT INVESTMENT

EACH DETAILED PROJECT REPORT (BUSINESS PLAN) CONTAINS

BEGINNING : Project Introduction, Brief History of the Product, Properties, BIS (Bureau of Indian Standard) Specifications & Requirements, Uses & Applications.

MARKET SURVEY : Present Market Position, Expected Future Demand, Statistics of Imports & Exports, Export Prospect, Names and Addresses of Existing Units (Present Manufactures).

PLANT & MACHINERY : List of Plant & Machineries, Miscellaneous Items and Accessories, Instruments, Laboratory Equipments and Accessories, Plant Location, Electrification, Electric Load and Water, Maintenance, Suppliers/Manufacturers of Plant and Machineries.

RAW MATERIAL : List of Raw Materials, Properties of Raw Materials, Availability of Raw Materials, Required Quality of Raw Materials, Cost/Rates of Raw Materials.

MANUFACTURING TECHNIQUES : Formulae DetailedProcess of Manufacture, Flow Sheet Diagram.

PERSONNEL REQUIREMENTS : Requirement of Staff & Labour, Personnel Management, Skilled & Unskilled Labour.

LAND & BUILDING : Requirement of Land Area, Rates of the Land, Built up Area, Construction Schedule, Plant Layout.

FINANCIAL ASPECTS : Cost of Raw Materials, Cost of Land & Building, Cost of Plant & Machineries, Fixed Capital Investment, Working Capital, Project Cost, Capital Formation, Cost of Production, Profitability Analysis, Break Even Point, Cash Flow Statement for 5 to 10 Years, Depreciation Chart, Conclusion, Projected Balance Sheet, Land Man Ratio.

- **Prepared by highly qualified and experienced consultants and Market Research and Analyst Supported by a panel of experts and computerised data bank.**
- **Data provided are reliable and upto date collected from suppliers/ manufacturers, plant already commissioned in India.**
- **NPCS Reports are very economical and immediately available on demand where as commissioned Feasibility Studies are time consuming and costly.**

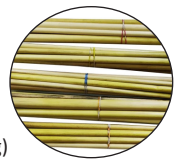
FOR ASSESSING MARKET POTENTIAL, INVESTMENT DECISION MAKING CORPORATE DIVERSIFICATION PLANNING ETC.

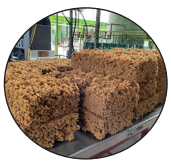
NPCS Engineers and Consultants have prepared Market Survey Cum Detailed Techno Economic Feasibility Report on the following products which are most viable and profitable.

Business Ideas: 4 - 4.5 Crore *(Plant and Machinery) :*

Selected Project Profiles for Entrepreneurs, Startups

» Aluminium Fluoride
» Bamboo Sticks
» Calcium Silicate Insulation Board
» Carbon Black (Furnace Black Process)
» Copper Wire Drawing & Enamelling
» Copper Wire Manufacturing (Wire Drawing & Enamelling)
» Oxygen Gas Plant (Industrial and Pharmaceutical Grade)
» Disposable Nitrile Gloves (Nitrile Examination Hand Gloves)
» Disposable Plastic Syringes
» Fusion Bonded Epoxy Coated TMT Rebars
» Granulated Fertilizers
» Mini Aerodrome
» Natural Glycerine
» Natural Rubber Block





» Precipitated Silica from Rice Husk Ash
» Polyvinyl Alcohol
» Liquid Hand Soap, Foam & Bath Soap
» Stone Plastic Composite (SPC) Flooring Tiles
» Recovery of Fe2o3 & Tio2 from Bauxite Processing Waste
» Steel Ingot from Scrap Plant
» Solar Power Plant
» Sorbic Acid/Potassium Sorbate
» Surgical and Examination Latex Rubber Gloves
» Tartaric Acid Production Business
» Tissue Paper from Recycled Paper
» Titanium Dioxide
» Titanium Dioxide (Chloride Process)
» Yarn, Fabric & Garments Production Using Solar Charkha & Solar Looms

Market Survey Cum Detailed Techno Economic Feasibility Report on all above Businesses are Available. Contact :

NIIR PROJECT CONSULTANCY SERVICES
AN ISO 9001:2015 CERTIFIED COMPANY
106 E, Kamla Nagar, Delhi–110 007 (India). Tel. : 91-11- 23843955
Mob.: +91-9097075054 • 8800733955
Website : www.niir.org • www.entrepreneurindia.co • E-mail : info@niir.org • npcs.india@gmail.com

Instant Noodles: A Fast-Growing Opportunity for Startups and Entrepreneurs

Instant noodles have become a global staple food, loved for their convenience, affordability, and taste. From college students to working professionals, their appeal spans every demographic. In India and other emerging economies, the instant noodle industry is witnessing rapid expansion, making it an excellent business opportunity for aspiring entrepreneurs. Establishing a manufacturing unit for instant noodles not only promises quick market penetration but also ensures consistent profitability with relatively moderate investment.

Market Overview and Growth Potential

The global instant noodles market was valued at over USD 55 billion in 2024 and is projected to grow at a CAGR of around 6% between 2025 and 2030. Asia-Pacific, led by India, China, Indonesia, and Japan, accounts for more than 80% of global demand. In India alone, the instant noodles market has crossed ₹10,000 crore, dominated by brands like Nestlé's Maggi, ITC's Yippee, and Patanjali Atta Noodles.

Urbanization, a rise in working-class populations, and increasing disposable incomes are key factors driving this growth. Additionally, changing lifestyles and the growing popularity of ready-to-eat foods have made instant noodles an everyday household product.

Why Entrepreneurs Should Invest in This Industry

1. **High Demand and Repeat Purchase:** Instant noodles are a fast-moving consumer good (FMCG) with strong repeat sales. Consumers often buy them in bulk, ensuring a steady cash flow for manufacturers.
2. **Low Investment, High Returns:** Compared to many food processing ventures, instant noodle manufacturing requires relatively moderate initial capital. Entrepreneurs can start small with semi-automatic setups and scale as demand grows.
3. **Diversified Product Range:** Manufacturers can offer different variants — masala, chicken, vegetable, atta, rice, and millet noodles — to cater to diverse tastes and health-conscious consumers.
4. **Export Potential:** Instant noodles enjoy huge export potential across Africa, the Middle East, and South Asia. India already exports to over 35 countries, leveraging low production costs and a growing reputation for quality.
5. **Government Support and Schemes:** Entrepreneurs can benefit from MoFPI's PMKSY (Pradhan Mantri Kisan Sampada Yojana), MSME subsidies, and Export Promotion Councils that support processed food manufacturing units through financial assistance and tax incentives.

Market Trends and Analysis

- **Health-Conscious Variants:** The introduction of multigrain, millet-based, and low-sodium noodles has expanded the consumer base.
- **Premiumization:** Flavored, non-fried, and organic instant noodles are gaining traction among urban consumers.
- **E-commerce Boom:** Online grocery platforms have made distribution easier and more cost-effective for small manufacturers.
- **Regional Flavor Innovations:** Manufacturers are launching regional spice blends (e.g., South Indian sambar, Punjabi masala) to attract local markets.

These trends show strong adaptability in the instant noodle industry, providing room for innovation and product diversification.

Manufacturing Process of Instant Noodles

1. **Mixing and Dough Preparation** – Wheat flour (or other flour bases) is mixed with water, salt, and other additives to create dough.
2. **Sheeting and Rolling** – The dough is passed through rollers to form thin sheets.
3. **Slitting and Cutting** – The sheets are cut into noodle strands of desired length and width.
4. **Steaming** – The noodles are steamed to gelatinize the starch and improve texture.
5. **Frying or Drying** – Depending on the product type, noodles are either deep-fried in oil or air-dried (non-fried versions).
6. Cooling and Seasoning – After drying, they are cooled and paired with flavor sachets.
7. Packaging – The final product is packed in pouches or cups using automatic packaging machines.

Instant noodles manufacturing is an evergreen business opportunity with strong domestic and export demand. Its adaptability, quick market acceptance, and potential for innovation make it one of the most promising ventures for startups. With strategic marketing, quality production, and government support, entrepreneurs can achieve rapid growth in this lucrative FMCG segment.

PROJECT COST ESTIMATE

CAPACITY

Instant Noodles (70gms Pouch)	: 71,440 Pkts Per Day
Plant & Machinery	: ₹ 178 Lakhs
Cost of Project	: ₹ 514 Lakhs
Rate of Return	: 28%
Break Even Point	: 52%

Emerging Business of Ductile Iron Pipe Fittings

Pipe fittings basically include the range of components that are used to connect pipe ends for in-line, multi-port, offset and mounting configurations. Pipe fitting cross sections are mostly, but not always, circular in shape to match with the pipe section with which they are connected. Pipes can be metallic or plastic and pipe fittings vary depending on the type of pipe used.

The plastic pipes used are predominantly PVC pipes and recent increase in use of HDPE pipes in competition for PVC pipes. The other pipes include GRP, BWSCC pipes, Hume pipes, stoneware pipes, etc. GRP pipes, RCC pipes, and stoneware pipes are used predominantly in sewerage applications.

The increasing share of DI pipes obviously indicates its rising acceptance by customers and its growing popularity. The increasing share of DI pipes indicates that DI pipes are gradually replacing all other pipes, especially steel pipes. The government bodies have virtually stopped purchase of CI pipes for potable water supply and the existing CI pipelines are increasingly being replaced by DI pipes. Plastic pipes and cement pipes (AC/RCC/PSC) are also being replaced in urban and semi-urban areas; however, in rural water supply schemes they still exist due to the low initial investment.

PROJECT COST ESTIMATE

CAPACITY

Capacity	: 12 MT Per Day
Plant & Machinery	: ₹ 311 Lakhs
Cost of Project	: ₹ 1135 Lakhs
Rate of Return	: 33.83%
Break Even Point	: 55.20%

Titanium Dioxide – A Profitable Industrial Venture for Modern Entrepreneurs

Titanium dioxide (TiO_2) is one of the most versatile and in-demand industrial chemicals in the world. Known for its brilliant whiteness, opacity, and ability to scatter light, titanium dioxide is the backbone of several industries including paints, coatings, plastics, paper, cosmetics, and even food. For entrepreneurs and startups, investing in a titanium dioxide manufacturing unit represents a high-potential opportunity, driven by rising global consumption, import substitution trends in India, and technological advancements in pigment production.

Market Overview and Industry Potential

The global titanium dioxide market was valued at over USD 22 billion in 2024 and is projected to reach around USD 30 billion by 2030, growing at a CAGR of 5–6%. The Asia-Pacific region dominates the market, with China and India emerging as major consumers due to rapid infrastructure development, growth in the paints and coatings sector, and expanding automotive and construction industries.

In India, demand for titanium dioxide is expected to exceed 300,000 metric tonnes annually, driven by domestic paint manufacturing, plastic compounding, and paper industries. The government's "Make in India" initiative and restrictions on certain imports have created a favorable environment for local production, encouraging entrepreneurs to establish medium- and large-scale plants.

Why Startups Should Choose Titanium Dioxide Manufacturing

1. **Consistent Global Demand:** Titanium dioxide is irreplaceable in its applications. Every construction project, plastic molding operation, or cosmetic product requires TiO_2 for brightness and opacity. This ensures steady demand, insulating manufacturers from market volatility.
2. **Import Substitution Advantage:** India imports a significant portion of its TiO_2 requirements from countries like China, Korea, and Germany. Setting up a domestic manufacturing plant helps reduce dependence on imports while capturing a lucrative domestic market.
3. **High Profit Margins and Export Scope:** Titanium dioxide commands a strong export market, particularly in the Middle East, Africa, and South Asia. The product has a high value-to-weight ratio, reducing logistics costs and improving profitability.
4. **Technological Advancements:** The shift toward eco-friendly chloride process technology enhances yield, reduces waste, and minimizes pollution, making new plants more sustainable and efficient.
5. **Wide Industrial Applications:**
   - Paints and coatings: Over 60% of total TiO_2 consumption
   - Plastics and polymers: About 25%
   - Paper and pulp: 8–10%
   - Cosmetics, pharmaceuticals, and food colorants: Remaining share

With such a diversified application base, the market is resilient to sector-specific downturns.

Manufacturing Process

Titanium dioxide is produced primarily by two processes: Sulphate Process and Chloride Process.

1. **Sulphate Process:** This method involves digesting ilmenite or titaniferous slag with concentrated sulfuric acid to form titanyl sulfate. The solution is then filtered, hydrolyzed, and calcined to obtain pure TiO_2 pigment.

   Steps include:
   - Ore digestion with H_2SO_4
   - Clarification and filtration
   - Hydrolysis of titanyl sulfate
   - Washing and calcination
   - Milling and surface treatment
2. **Chloride Process:** This is a cleaner and more efficient route. Titanium-bearing feedstock (rutile or synthetic rutile) reacts with chlorine gas in the presence of carbon to form titanium tetrachloride ($TiCl_4$). It is then oxidized at high temperatures to yield TiO_2.

   Steps include:
   - Chlorination of ore
   - Purification of $TiCl_4$
   - Oxidation and cooling
   - Finishing and packaging

Both processes yield a high-quality pigment, but the chloride route offers superior purity and lower environmental impact.

Market Trends and Analysis

The titanium dioxide market is witnessing a surge in eco-friendly production technologies and surface-modified grades that offer better dispersion and weather resistance. Emerging applications in nanotechnology, photocatalysis, and energy-efficient coatings further enhance growth prospects. The construction boom, automobile manufacturing, and the packaging industry in developing nations are the key demand drivers.

Sustainability is also shaping the market. Manufacturers are increasingly adopting closed-loop recovery systems and low-carbon production routes, aligning with global ESG (Environmental, Social, and Governance) goals. Startups entering this sector can leverage these innovations to build cleaner, more competitive plants.

Titanium dioxide manufacturing presents a robust, scalable, and future-proof business opportunity for entrepreneurs. With rising industrial demand, a supportive policy environment, and significant room for import substitution, this venture promises consistent returns and global competitiveness.

For startups, setting up a TiO_2 plant is not just a business—it's an entry into a high-value chemical industry that supports multiple downstream sectors. Entrepreneurs who invest early in this market stand to gain from both domestic demand growth and international export potential, ensuring a sustainable and profitable industrial journey.

PROJECT COST ESTIMATE

CAPACITY

Project Capacity	: 50 MT Per Day
Plant & Machinery	: ₹ 126 Crores
Cost of Project	: ₹ 165 Crores
Rate of Return	: 25%
Break Even Point	: 41%

A Business Plan for Crumb Rubber Powder from Waste Tyre (with Shredding Process)

Crumb Rubber Powder represents a finely milled material produced from the recycling of waste tires. Through a meticulous shredding and grinding process, discarded tires are transformed into a granular substance that boasts both versatility and environmental benefits. This powder, characterized by its small, uniform particle size, is utilized in a variety of applications, showcasing its adaptability across numerous industries.

The Increasing Significance of Recycling Waste Tyres

Recycling used tires offers a twofold advantage: it addresses the environmental risks linked with improper tire disposal while also leveraging the potential of recycled materials. By converting these tires into crumb rubber powder, we not only divert them from ending up in landfills but also utilize a resource that can be repurposed for various uses. This sustainable approach to managing tire waste is in line with global initiatives promoting a circular economy, where products and materials are reused and recycled to the fullest extent possible.

Furthermore, the process of recycling tires into crumb rubber powder plays a vital role in conservation endeavors. It diminishes the need for new raw materials, thereby alleviating the pressure on natural resources. Moreover, the energy consumed in the recycling process is generally lower compared to that needed for manufacturing new materials from scratch, resulting in an overall reduction in carbon emissions.

Uses and Applications

Crumb rubber powder produced from waste tires through shredding processes has numerous uses and applications across various industries. Here are some of the most common ones:

- Asphalt Modification
- Rubberized Concrete
- Playground and Sports Surfaces
- Rubber Products Manufacturing
- Civil Engineering Applications
- Landscaping and Mulching
- Equestrian Surfaces
- Manufacture of Rubberized Products

Overall, crumb rubber powder from waste tires plays a vital role in promoting sustainability, reducing landfill waste, and creating value-added products across a wide range of industries.

Global Market Outlook

The global crumb rubber market is expected to grow from USD 1.68 billion in 2022 to USD 2.79 billion by 2032, at a CAGR of 5.20% from 2023-2032. Discarded tyres from automotive are processed and reduced to their granular forms, which are then further processed to remove most of the steel and fabric particles. The resultant product is called crumb rubber. Crumb rubber is integrated with asphalt to improve its quality. The improved and advanced rubberized asphalt is used in highways, pavements and other constructions. Crumb rubber is also used in artificial turfs, running tracks, and as a soil supplement for sports and playgrounds. Additionally, crumb rubber is relatively greener than new rubber as it is created primarily from recycled tyres and other rubber goods. Crumb rubber is also utilized in tires and automotive components again. It finds application in adhesives and plastic manufacturing. Crumb rubber offers great thermal and sound insulation, low shrinkage, and high impact and acid resistance. The multiple benefits of crumb rubber have increased its application over the years, driving its growth.

Conclusion

Venturing into the business of transforming waste tires into crumb rubber powder presents a compelling opportunity for entrepreneurs and investors alike. This industry not only addresses a critical environmental challenge by recycling a significant and problematic form of waste but also taps into a growing market demand for sustainable materials. As industries worldwide seek greener alternatives to traditional materials, the demand for crumb rubber powder is set to rise, offering substantial revenue potential for businesses in this sector.

PROJECT COST ESTIMATE

CAPACITY:

Crumb Rubber Powder	*: 10 MT Per Day*
By Product Steel Wire	*: 2 MT Per Day*
Plant & Machinery	: ₹ 97 Lakhs
Cost of Project	: ₹ 303 Lakhs
Rate of Return	: 26%
Break Even Point	: 56%

Start Potato Starch Manufacturing business

Potato starch is a carbohydrate obtained from the tuber of the potato plant and is used as a thickener and binder in many culinary dishes. It is a white powder with a mild taste and has a similar consistency to cornstarch.

Nutrition in Potato Starch?

Potato starch is rich in vitamins and minerals, making it a nutrient-rich alternative to other starches. It contains Vitamins A, B, C, and E, as well as calcium, iron, magnesium, phosphorus, potassium, sodium, and zinc. These vitamins and minerals can help to improve digestion, strengthen bones, and support cardiovascular health.

Indian Market Outlook

The potato starch market in India are the increasing demand from food processing and convenience food sectors, government initiatives to promote the use of potato starch, and the growing popularity of vegan and vegetarian products. Additionally, the use of potato starch in the pharmaceutical industry and animal feed industry is also contributing to its increased demand in India.

Global Market Outlook

The Potato Starch Market is projected to reach $5.6 billion by 2029, at a CAGR of 3.9% from 2022 to 2029, while in terms of volume, the market is projected to reach 5,128.5 thousand tons by 2029, at a CAGR of 3.6% from 2022 to 2029. North America holds a commanding position in the potato starch market share on account of growing demand from the food and beverage industry.

Conclusion

Potato starch is an increasingly popular industry that has seen significant growth in recent years. Potato starch can be used in a variety of ways, making it a versatile ingredient that can be used in a range of different products. It is no wonder why the potato starch industry is booming. As the market continues to expand, we can expect to see even more growth in this sector in the coming years.

PROJECT COST ESTIMATE

CAPACITY

Potato Starch	: 30 MT Per Day
Plant & Machinery	: ₹ 329 Lakhs
Cost of Project	: ₹ 894 Lakhs
Rate of Return	: 30 %
Break Even Point	: 57 %

SUBSCRIPTION RATE FOR INDIA–Single Copy ₹ 20/- , One Year ₹ 720/- (with Registered Post Charges)

OWNER, PUBLISHER, PRINTER & EDITOR : AJAY KUMAR GUPTA Printed at M/s. Balaji Offset Printers, 315/21, Daya Basti, Delhi 110 035
PUBLISHED AT : 106 E, Kamla Nagar, Delhi–110 007 (India).

R.N.I. NO. 61509/95

DATE OF PUBLICATION : 19 EVERY MONTH