AN ISO 9001 : 2015 CERTIFIED COMPANY

Potato and Potato Products Cultivation, Seed Production, Manuring, Harvesting, Organic Farming, Storage and Processing

AN ISO 9001 : 2015 CERTIFIED COMPANY

Author: NPCS Board of Consultants & Engineers
Format: paperback
Code: NI199
Pages: 560
Price: Rs 1275 | US$ 125
Publisher: NIIR PROJECT CONSULTANCY SERVICES
Shipping: 5 days

About the Book

Potato ranks fourth position in the world after wheat, rice and maize as non cereal food crop. Potato is probably the most popular food item in the Indian diet and India is one of the largest producers of potato. It is used in many ways like vegetable, potato wafers/chips, powder, finger chips etc. Potato tubers constitute a highly nutritious food. It provides carbohydrates, vitamin C, minerals, high quality protein and dietary fiber. Potato is a rich source of starch and it is consumed mainly for its calorific value, also contains phosphorus, calcium, iron and some vitamins. Boiling potatoes increases their protein content and almost doubles their calcium content. It is vastly consumed as a vegetable and is also used in various forms such as starch, flour, alcohol, and dextrin and livestock fodder. It is estimated that about 25 % of the potatoes, which are spoiled due to several reasons, may be saved by processing and preservation of various types of processed products. The potatoes can be processed for preservation and value addition in the form of wafers/ chips, powder, flakes, granules, canned slices. Potato granules are used for the preparation of various recipes, to add to vegetable and non vegetable recipes and to enhance the quantity as well as to enrich the food value. There is a huge potential for processed potato products such as potato flakes, potato powder, frozen potatoes, frozen French fries, potato chips/wafers are one of the most popular snack items consumed throughout world. International trade in potatoes and potato products still remains thin relative to production, as only around 6 percent of output is traded. High transport costs, including the cost of refrigeration, are major obstacles to a wider international marketplace. The industry is still growing at a rapid pace where French fries are showing the highest growth followed by potato chips and potato powder/flakes. It is by far the largest product category within snacks, with 85% of the total market revenue.

This book basically deals with origin, evolution, history and spread of potato, potato products, quality requirements for processing, morphological, size and shape, defects, biochemical, dry matter, reducing sugars, phenols, inheritance, morphological attributes, tuber shape, growth cracks, hollow heart, internal rust spots, greening, biochemical attributes, glycoalkaloids, dry matter, reducing sugars, enzymic browning, development of varieties for processing, areas suitable for growing processing potatoes, processing quality of Indian potato varieties, processed potato products, dehydrated products at village level, potato chips, french fries and flakes commercial production, grading manual for frozen French fried potatoes for frozen French fried potatoes, areas of production, varieties, receiving, determining the quality and condition of raw potatoes for frying purposes, determining the quality and condition of raw potatoes for frying purposes, etc.
The present book covers complete details of potato cultivation and processing in proper manner. This book is

an invaluable resource for agriculture universities, students, technocrats and entrepreneurs.

Contents

1. ORIGIN, EVOLUTION, HISTORY AND SPREAD OF POTATO
Introduction, Origin, Archaeological Evidence, Historical Evidence, Evolution, History, Early History, Spread in Europe, Spread in Asia, Africa, etc., Spread in India

2. BACTERIAL DISEASES OF POTATO AND THEIR MANAGEMENT
Bacterial Wilt/Brown Rot, Distribution, Etiology, Diagnostics and Detection, Management, Avoidance, Soft Rot or Black Leg

3. POST HARVEST HANDLING OF POTATO
Significance, Post Harvest Losses, Enhancement of Shelf-Life of Potato Tuber, Avoid Mechanical Tuber Damage Including Internal Bruising, Sorting and Grading of Tubers, Wound Healing and Curing, Weight Loss, Dormancy, Storage Temperature, Treatment of Tubers Against Diseases and Insect, Use of Growth Regulators Against Sprouting, Regulation of Sprouting in Stored Potato, Pre-harvest Application for Sprout Suppression, Post Harvest Application for Sprout Suppressions, Mode of Application, Storage, Controlled And Modified Atmosphere Storage of Potato, Other Storage Methods of Potato, Improvised Country Storage, Low Cost Zero Energy Cool Storage, Kucha Mud House or Room Storage, Pit Storage, Viability of Stored Potato Seed, Gamma-Irradiation, Change in Composition During Storage, Percentage Dry Matter, Carbo-hydrates, Phenolic Compounds, Glycoalkaloids, Vitamins, Processing, Morphological Characters, Chemical Composition, Dry Matter, Reducing Sugar Content, Varieties for Processing, Practical Aspect of Potato Processing, Grading, Cleaning, Peeling, Cutting/Slicing, Blanching/Cooking, Frying, Dehydra-tion, Cooling/Freezing, Sterilization, Packaging, Popular Potato Products, Potato Flakes and Granules, Potato Dice, Potato Chips, French Fries, Canned Potatoes

4. BIOTECHNOLOGY FOR PRODUCTION OF QUALITY PLANTING MATERIAL
Meristem Culture, Thermotherapy, Chemotherapy, Electrotherapy, Virus Detection and Diagnosis, Micropropagation, Micropropagation in Virus-Free Potato Seed Production, Conclusion

5. BREEDING FOR PROCESSING VARIETIES
Potato Products, Quality Requirements for Processing, Morphological, Size and Shape, Defects, Biochemical, Dry Matter, Reducing Sugars, Phenols, Inheritance, Morphological Attributes, Tuber Shape, Growth Cracks, Hollow Heart, Internal Rust Spots, Greening, Biochemical Attributes, Glycoalkaloids, Dry Matter, Reducing Sugars, Enzymic Browning, Development of Varieties for Processing

6. TRUE POTATO SEED TECHNOLOGY
Role of TPS Populations, Potential and Advantages of TPS Technology, Constraints/Shortcomings in the Adoption of TPS Technology, Early History, Priority Areas for TPS Dissemination, Economics of TPS Technology, Agronomy of True Potato Seed (TPS), Utilization of TPS for Potato Production, Substrate Composition and Preparation of Nursery Beds, TPS Sowing, Production of Seedlings for Transplanting, Production of Seedling Tubers, Field Preparation, Crop from Seedling Transplanting, Crop from Seedling Tubers, Crop from Seed Broadcasting, Identification Of Suitable TPS Families, Breeding of TPS Populations, Breeding Requirements for TPS, Parental Lines, Flowering, Production and Fertility of Pollen, Berry/Seed Formation, Production of Hybrid TPS, Planting of Hybridization Block, Hybridization, Harvesting of Berries and Seed Extraction, Processing, Packaging And Storage of TPS, Dormancy in TPS, Evaluation and Selection of TPS Populations, Utilization of TPS for Potato Production, TPS Populations Released, Future Strategies

7. SEED PRODUCTION

Seed Potatoes, Variety, Diseases, Degeneration, Seed Plot Technique, Selection and Preparation of Field, Seed, Thermotherapy, Planting, Seed Size and Spacing, Time of Planting, Fertilization, Irrigation, Weed Control, Roguing and Inspection, Haulm Cutting, Aphid Management, Disease and Pest Management, Harvesting and Storage, Seed Treatment, Impact of the Technique, True Potato Seed (Botanical Seed), Production of Hybrid TPS, Hybridization, Seed Extraction and Storage, Crop Production Through TPS, Nursery, Development of Virus Free Seed of Potato and Testing for Viruses, Selection of Healthy Seed, Sanitation, Meristem TIP Culture, Chemical Treatment, Reduction in Vector Population, Testing of Potato Viruses, Conventional Methods, Advanced Methods, Elisa Test, Advantage of Elisa, Maintenance of Virus Tested Foundations, Potato Biotechnology, Elimination of Pathogen through Meristem Culture, Potato Meristem Culture, Establishment of in Vitro Cultures, From Infected Plants, from Infected Tubers, Steps involved in Potato Meristem Culture, Meristem Tipculture, Micro Propagation of Mericlones:, Micro Tuber Production, Production of Micro Tubers, Production of Normal Tubers, Synthetic (Artificial) Seed, Seed Certification, Methods of Inspection for Certification, Tagging, Content of Breeder Seed Bag, Seed Certification Standards, Quality Control, Objective, Sampling, Procedure of Grow Out Test

8. PHYSIOLOGICAL DISORDERS
Tuber Cracking, Tuber Malformation or Deformities, Surface Abrasions or Feathering, Hollow Heart, Greening, Black Heart, Low Temperature Injury, Sunscalding, Aerial Tubers

9. FAVOURABLE CONDITIONS OF GROWTH FOR POTATO
Climate, Rainfall, Temperature, Light, Soil, Topography, Economical Condition, Capital, Labour

10. CULTIVATION
Land Preparation, Preparatory Tillage, Primary Tillage or Ploughing, Country Plough, Mould Board Plough, Bose Plough, Disc Plough, Spade, Tractor, Power Tiller, Secondary Tillage, Ladder or Plank, Harrow, Cultivator, After Tillage, Planting of Potato, Sowing Time, Selection of Seeds, Source of Seed-Tubers for Commercial Use, Seed Stored in Country Cellers, Seed Stored in the Cold Storage, Seed Produced in the Hill Areas, Dormancy of Seed Potatoes, Varieties with Short Dormancy Period, Varieties with Medium Dormancy Period, Varieties with Long Dormancy Period, Breaking of Dormancy, Mechanical Method, Heating of Seed Tubers, Cutting of Seed Tubers, Peeling of Seed Tubers, Chemical Method, Correct Size and Weight of Seed Tubers, Seed Treatment, Seed Rate, Method of Planting, Flat Bed Planting, Planting in Furrows, Planting on Ridges, Pit Method, Spacing, Potato Planting Equipments, Tractor Drawn Fertilizer Drill Cum Line Marker, Tractor Drawn Potato Planter Cum Fertilizer Application, Two Row Space Marker-Cum-Ridger, Potato Planters, Hand Fed Potato Planter, Corrective Type Potato Planter

11. MANURING
Manures, Compost, Rural Compost or Village Compost, Urban Compost or Town Compost, Farm Yard Manure (F.Y.M.), Oil Cakes, Edible Oil Cakes, Non-edible
Oil Cake, Green Manure, Fertilizers, Nitrogenous Fertilizers, Phosphatic Fertilizers, Potassic Fertilizers, Role of Nutrients in Potato, Nitrogen, Phosphorus, Potassium, Calcium, Magnesium, Sulphur, Zinc, Iron, Manganese, Copper, Micronutrient, Doses of Fertilizers, Method and Time of Application, For the Hills, For the Plains, Autumn Crop, Spring Crop

12. HARVESTING
Early Crop, Main Crop, Method of Harvesting, Animal Drawn Single-row Potato Digger, Two-row-tractor Mounted Potato Digger, Potato Elevator Digger, Potato Spinner Digger, Grading, Marketing, Transport, Storage, Method of Storage, Country Method of Storage, Room Storage, Pit Storage, Heap Storage, Factors Influencing The Storage Behaviour, Variety, Time of Harvest,
Size of Tubers, Cultural Practices, Cold Storage, Physiological Changes During Storage, Periderm Formation, Starch-Sugar Balance, Sprouting, Yield

13. FUNGAL DISEASES AND THEIR MANAGEMENT
Late Blight, Symptoms, Distribution And Losses, Pathogen, Variability, Survivability, Genetics and Cytogenetics, Epidemiology, Sources of Inoculum, Environment and Disease, Disease Spread and Build Up, Management, Chemical, Cultural Practices, Early and Phoma Blight, Symptoms, Distribution, Epidemiology, Management, Cercospora Leaf Spots, Symptoms, Distribution and Crop Losses, Epidemiology, Management, Soil and Tuber Borne Diseases, Black Scurf and Stem Canker, Symptoms, Pathogen, Epidemiology, Management, Powdery Scab, Symptoms, Pathogen, Etiology and Epidemiology, Management, Charcoal Rot, Wart, Minor Diseases, Fungal Wilts, Tuber Rots, Storage Diseases, Dry Rots

14. LOW INPUT TECHNOLOGY FOR POTATO PRODUCTION
Input Intensiveness of Potato Cultivation, Seed, Cultural Operations, Manures and Fertilizers, Weed Management, Towards Low Input Technology for Potato Production, Tillage, Seed, Fertilizers, Irrigation, Weed Control, Pests and Diseases Control, Organic Farming as a Method of Low Input Technology

15. MICRO-NUTRIENT REQUIREMENTS OF POTATO
Effect of Micro-nutrients on Growth and Yield of Potato, Diagnosis of Micro-nutrient Deficiencies in Soils and Plants, Visual Diagnosis, Deficiency Symptoms, Iron, Manganese, Copper, Boron, Molybdenum, Plant Analysis, Soil Analysis, Micro-nutrient Deficiency in Potato Growing Areas, Response of Potato to Micro-Nutrients, Factors Affecting Response of Potato to Micro-nutrients, Root and Shoot Parameters of Cultivars, Micro-nutrients and Quality of Potato Tubers, Amelioration of Micro-nutrient Deficiencies, Methods of Micro-nutrient Application, Time of Application, Sources of Micro-nutrients

16. WEED MANAGEMENT
Methods of Weed Management, Non-Chemical Methods, Crop Rotation, Summer Polughing, Placement of Fertilizers, Mechanical Control, Chemical Methods, Efficient Use of Herbicides, Calibration, Calculation of Herbicides for Application, Integrated Weed Management, Mulching, Effect of Herbicides on Quality of Potato, Dry Matter, Starch, Protein

17. ORGANIC FARMING
Concept, Definition and Components, Value of Organic Amendments and Soil Conditioners, Bulky Organic Manurers, Green Manures, Concentrated Organic Manures, Crop residues, Bio-fertilizers, Vermicompost, Crop and Soil Management, Legume based Crop Rotations, Phytosanitary Crop Rotation, Green Manuring, Agricultural Waste Incorporation in Soil, Agricultural Biopesticides, Sustainable Integrated Nutrient Management, Chemical Fertilizers, Organic Manures, Bio-fertilizers, Green Manuring, Crop Yield and Quality
18. CROPPING SYSTEMS
Sustainable Systems, Potato in Relation to Goals of Sustainable Cropping Systems, Strengths of Potato in Multiple/Inter-Cropping Systems, Potato Based Cropping Systems in Different Agri-zones, North-Western Plains, Western and Central Indo-Gangetic Plains, Eastern Gangetic Plains, Plateau Region, North-Western Hills, North-Eastern Hills, Southern-Hills, Implications and Future Thrusts

19. BIOLOGICAL AND SEROLOGICAL DIAGNOSIS OF POTATO VIRUSES
Chloroplast/Slide Agglutination Test (Sat), Micro-precipitin Test, Agar Double-Diffusion Test, Latex-agglutination Test, Enzyme-linked Immunosorbent Assay (ELISA), das-ELISA, Indirect ELISA, Dot-ELISA (dot Immunobinding ELISA), Tissue Blotting and Tissue Squashes, Immuno Electron Microscopy (IEM)

20. POTATO PESTS AND THEIR MANAGEMENT
Soil Pests, Cutworms, Distribution, Nature of Damage, Population Dynamics and Biology, Management, Cultural and Mechanical, Chemical, Biological, Integrated Management, White Grubs, Management, Minor Soil Pests, Foliage Feeders or Defoliating Pests, Defoliating Caterpillars, Distribution, Nature of Damage, Population Dynamics and Biology, Management,
Epilachna Beetles, Minor Defoliating Pests, Sucking Pest or Sap Feeders, Aphids, Management, Cultural and

Mechanical, Leaf hoppers, Broad Mite, Other Minor Sucking Pests or Sap Feeders, Storage Pests, Potato Tuber Moth, Nematode Pests of Potato, Potato Cyst Nematode (PCN), Root Knot Nematode, Cultural Practices

21. POTATO STORAGE
Dormancy, Post-harvest Losses, Physiological Losses, Effect of Temperature, Effect of Relative Humidity, Pathogenic Losses, Storage Methods, Refrigerated Storage, Non-refrigerated Storage of Potatoes, Evaporatively Cooled Potato Store, On-Farm Storage, Sprout Inhibitors, Tetrachloro-Nitrobenzene (TCNB), Maleic Hydrazide (MH), Isopropyl-N-3-Chlorophenyl Carbamate (CIPC), Natural Substances as Sprout inhibitors, Irradiation, Biochemical Changes during Storage, Changes in Carbohydrates, Changes in Nitrogen Fractions, Changes in Enzyme systems, other Biochemical Changes

22. POTATO PROCESSING
History, Areas Suitable for Growing Processing Potatoes, Processing Quality of Indian Potato Varieties, Processed Potato Products, Dehydrated Products - Village Level, Potato chips, French Fries and Flakes - Commercial Production, Grading, Sorting and Washings, Peelingr, Washing, Sorting and Trimming, Chips, French Fries, Flakes, Starch, Other Edible Products, Potato Custard Powder, Soup or Gravy Thickener, Potato Biscuits, Potato Papad, Potato Sticks or Shreds, Chakali, Vada, Alu Bhujiya,

23. STACKABLE POTATO CHIPS TECHNOLOGY
Introduction, Experimental Work, Main Raw Material Characterization, Press Releases, Viscosity Profiles, Dosing Step, Mixing Step, Sheeting Step, Cutting
and Rework Handling, Experimental Work Conclusions, Other Process Steps, Frying and Moulding, Seasoning Device, Portioning and Packaging:

24. POTATO
Scientific Name and Introduction, Quality Characteristics and Criteria, Horticultural Maturity Indices, Grades, Sizes and Packaging, Optimum Storage Conditions, Controlled Atmosphere (CA) Conditions, Retail Outlet Display Considerations, Ethylene Production and Sensitivity, Physiological Disorders, Postharvest Pathology, Quarantine Issues, Suitability as Fresh-cut Product, Special Considerations

25. TREATMENT AND DISPOSAL OF POTATO WASTES
Pollution, Terminology, Testing, Regulations, History, Characteristics of Processing Plant Effluents, Components of Potato-Processing Waste, Effect of Process, Design of Effluent Treatment Facilities, Waste Treatment Processes, In-Plant Treatment, Screening (Pretreatment), Primary Treatment, Secondary Treatment. Biological Filters, Anaerobic Systems, Solids Disposal, Advanced Wastewater Treatment, Filtration, Other Treatment Methods, Application in Potato-processing, Municipal Treatment

26. ADVANCED THERMAL APPLICATIONS IN POTATO PROCESSING
Storage, Peeling, Preheating, Blanching, Dryers, Rotary Drum Using Radial Nozzles, Convection Drying, Impingement Roaster, Conveyor Dryers, Spray and Flash Drying, Fryers, Vacuum Frying, Radio Frequency, Freezing Technology, Adsorption Chiller, Waste Treatment, Sanitation, Energy Recovery, Belt Cooker, For Steam-cooking of Potatoes and Roots

27. SNACK CHIP DEEP FAT FRYING
Process Description, Emissions and Controls, Emissions, Controls

28. TROIKA POTATO CHIPS
Business Plan, Summary, The Enterprise, General Information, Contributed Capital, Appraising Market Value

of Stockholdersâ€™ Equity, Decision Making,
Profit Sharing, The Product, Analysis of Market and Competition, Marketing and Pricing Strategy, Organization of the Production Process, Risk Factors, Financing and Distribution of Profits, Financial Planning, Appendix, Cultural and Sociological Notes, The Russian Sense of Time, Openness Versus Secrecy, Obedience Versus Autonomy, Attitude toward Law and Contracts, The Importance of Relationships, Organized Crime, Working with Russian Partners

29. MANUFACTURE, STORAGE AND TRANSPORT OF FROZEN FRENCH FRIES
Importance of Frozen Potato Products, Types of Frozen Products, Desirable Characteristics of Processing Potato Varieties, Effects of Crop Production Inputs on Processing Quality, Harvest, Storage, Processing, Frozen Product Storage,
Transportation, Preparation for Final Cooking and Consumption

30. GRADING MANUAL FOR FROZEN FRENCH FRIED POTATOES
For Frozen French Fried Potatoes, Areas of Production, Varieties, Receiving, Determining the Quality and Condition of Raw Potatoes for Frying Purposes, Determining the Quality and Condition of Raw Potatoes for Frying Purposes, Manufacture, Washing, Manufacture, Peeling, Trimming, Slicing, Sizing, By-Products, Desugaring, Blanching, Frying, Fat or Oil, Time and Temperature, Packaging, Inspection During Packing Operations, Inspecting the Product, Sample Unit Size, In Retail Type , In Institutional Type, Fry Color, Fry Color of the Individual Units, Fry Color of the Sample Unit, Fry Color Designation of a Sample Unit, Re-fry Color, Re-fry Color of the Sample Unit, Re-fry Color Designation, Types, Styles, Strips, Length Designations, Determining the Length, Minimum Equipment for Inspecting Frozen French Fried Potatoes, Preparation of Sample, Quality Evaluation, Grade Factors Which are not Scored Flavor, Color Designation of a Sample Unit, Grade A, Good Color, Grade B Reasonably Good Color, Substandard, Uniformity of Size and Symmetry, Grade A, Grade B, Considerations, Defect Tables in the Standards, Assigning the Score for Defects Procedure, Texture, Heating the Product, Oven Method, Deep Fat Method, Sogginess, Hardness, Pull Away, Crisp Outer Surface, Sugary Ends, Excessive Oiliness, Score Points, Scoring Procedure, Certification, Special Instructions, Fry Color Classification, Type, Style, Length Designations, Requests for Specific Certificate Information, Procedure

31. PERFORMANCE ENGINEERED FRYING AND FILTRATION SYSTEMS
SF Series Oil Filter, Consumers Love Coated, Proven Fryers and Filters, Maintaining Cooking Oil Quality, Long-Term Process Productivity, LINK is Comprised of Four Distinct Modules, Productivity Relies on Effective Filtration, An Unlimited Menu of Coated Products, Fryer Heat Method Comparison Analysis, Direct Heat - Direct Fired, Key Advantage, Key Disadvantages Direct Heat- Indirect Fired, Key Advantage, Key Disadvantages

32. COST EFFICIENCIES IN SNACK
FOOD PROCESSING
Highlights, Sector Overview, Company Description, The Situation, Audit Findings, Humpty Dumptyâ€™s Path to Innovation and Profitability, 2nd Stage R&D Study, Implementation Status, Drivers for Change, Implications to the Food Sector, Food Industry Cost Reduction Program, Ontario Ministry of Agriculture and Food (OMAF)

33. LATEST RADIX POTATO FLAKE SORTER
INSTALLATION EXCEEDS EXPECTATIONâ€•

34. T H E R M A L P R O C E S S I N G S Y S T E M S F O R P O T A T O E S
The Experience You Need, The Excellence You Deserve, Satisfying Customer Performance and Profit Objectives, Testing and Research, Computer Aided Design and Manufacturing, Turnkey Installation, A World Renowned Service Organization, Choose From these Accessories & Options to Customize Your National Installation, Apron Cleaning Devices. Feed/Discharge Equipment, Other Options, National Offers a Complete

Line of Thermal Processing Equipment to Meet the Needs of the Potato Industry, Conveyor Preheater, Two-Stage/ Tri-Mode Belt Blancher, Bi-Mode Dextrose System, Conveyor Dryers & Equilibration Systems, The Seal-Welded Modular Dryer(SWMD)

35. THE POTATO SYSTEM IN WEST JAVA, INDONESIA
Abstract, Acknowledgments, The Potato System
In West Java, Indonesia, Introduction, General Considerations, Methods and Procedures, Potato Production, Present Situation and Trend in production, Cultural Practices, Cost and Benefit, and Institutional Aspects, Conclusions and Issues for Further Research, Potato Marketing, General marketing Situation and Trend in Price of Potatoes, Marketing of Ware Potato, Potato Seed, and Processing Potato, Ware Potato Marketing, Sorting and Grading, Marketing Channels, Field Petty Assembly Traders, Contract traders, Rural Assembly Traders, Regional/Inter-Regional Traders, Wholesalers, Retailers, Marketing Margins, Potato Seed Marketing, Marketing Channels and Marketing Margins for Potato Seed, Marketing of Potatoes as Raw Material for Chips, Conclusions, Potato Processing, Large-Scale Potato Chips Processing, Small-Scale Potato Chips Processing, Conclusions, Consumer Preferences for Potato Chips, Consumer Preferences by Income Group: Results of a Household Survey, Panel Survey of Acceptance of Several Potato Chip Products, Conclusions, Conclusions and Recommendations

36. SCREW BLANCHER FOR POTATO PROCESSING
The equipment, The advantages, Technical Data Screw Blancher

37. PREWASHER WITH CYCLONE DESTONER
FOR POTATO PROCESSING
The Process, The equipment, The advantages, Technical Data, Prewasher

38. BATCH FRYER
Automatically Produce Consistently Uniform Kettle Style Potato Chips, Up to 360 lbs/hr or More, Superior Oil quality, Oil Level Control, Ready to Run, Automatic Slice Stirring, Full PLC control, Easy Cleaning, Optional Features

39. BOOSTER HEATER
Utilize Wasted Exhaust Heat, Boost Output & Save Fuel, Uniform Heat Transfer, Self-Cleaning Tubing, Multi-Layer Insulation, Rugged Construction, Booster Heater Model BH

NIIR PROJECT CONSULTANCY SERVICES (NPCS) is a reliable name in the industrial world for offering integrated technical consultancy services. NPCS is manned by engineers, planners, specialists, financial experts, economic analysts and design specialists with extensive experience in the related industries.

Our various services are: Detailed Project Report, Business Plan for Manufacturing Plant, Start-up Ideas, Business Ideas for Entrepreneurs, Market Research, Manufacturing Process, Machinery, Raw Materials, Project Feasibility, Investment Opportunities, Technical Consultancy and Startup Help.

NPCS also publishes process technology books, technical books, startup books, directory, business database, detailed project reports and market research reports.

Our Detailed Project Report aims at providing all the critical data required by entrepreneurs for starting new business ventures.

NIIR PROJECT CONSULTANCY SERVICES
106-E, Kamla Nagar, New Delhi-110007, India

Email: npcs.india@gmail.com **Website:** https://www.niir.org/