Agrochemicals are chemical agents that are applied to fields to boost the nutrient content of the soil or crops. Herbicides, fungicides, and insecticides are among them, as are synthetic fertilizers, hormones, and soil conditioners. They boost agricultural growth by eradicating pests that wreak havoc. They are used in horticulture, dairy farming, poultry farming, crop shifting, commercial planting, and other farming industries.

- A pesticide is any substance that is used to kill, repel, or control pests in plants or animals.
- Insecticides are chemicals that are used to keep insects under control by killing them or stopping them from engaging in undesired or damaging behaviour. Their structure and mode of action are used to classify them.
- Fungicides are pesticides that kill or prevent fungus and their spores from growing. They can be used to manage plant-damaging fungi such as rusts, mildews, and blights. They could also be used to keep moulds and mildew at bay in other places.
- Herbicides are chemicals that are used to control or manage unwanted vegetation. Herbicides are most commonly used in row-crop farming, where they are treated before or during planting to increase crop productivity while reducing other vegetation.

The global agrochemicals market estimated size is CAGR of 3.4%. Increasing demand for food supply due to the rapid growth in the human population has triggered agricultural intensification. Agrochemicals are widely employed in agriculture to meet rising food demands, bridging the gap between food supply and consumption. Concurrently imbalanced use of agrochemicals, on the other hand, degrades the environment and poses serious threats to aquatic and terrestrial ecosystems. Chemical agents used in agricultural lands to increase nutrient shortage in the field or crop are known as agrochemicals. They also help to boost crop development by destroying hazardous insects. Agrochemicals increase the quantity and quality of agricultural goods. These are utilized in horticulture, dairy farming, cattle, grain farming, shifting cultivation, commercial plantation, and many other agricultural fields.

The book covers a wide range of topics connected to Pesticides, Insecticides, Fungicides and Herbicides, as well as their manufacturing processes. It also includes contact information for machinery suppliers, as well as images of equipments.

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

Contents

1. AGROCHEMICALS
   1.1 Introduction
   1.2 Classifications
   1.3 Benefits
   1.4 Effects
   1.5 Needs and Precautions
2. MANAGEMENT OF AGRO-CHEMICALS FOR IMPROVED PUBLIC AND ENVIRONMENTAL HEALTH
   2.1 Introduction
   2.2 A Strategy for Better Agrochemical Management and Use Implementing the Strategy as a Whole
      2.2.1 Multilevel Response
      2.2.2 Nine Regional Projects for Implementation
   2.3 Using Agro-Chemical Management in a Coordinated Way
   2.4 Implementing GAP and Other Good Practice Codes of Conduct
   2.5 Informing Management Decisions
      2.5.1 Public Health Monitoring
      2.5.2 Environmental Monitoring
      2.5.3 Further Research
   2.6 Supporting Improved Agro-Chemical Use and Management
      2.6.1 Sustainable Financing
      2.6.2 Communication and Education
      2.6.3 Capacity Building
   2.7 Strategy Implementation
3. AGROCHEMICAL INDUSTRY OUTLOOK
   3.1 Diverse Changes Indicate a Continuously Evolving Industry
      3.1.1 Longer Product Development Cycles and Escalating Costs
      3.1.2 Increasing Stringency of Regulatory Requirements
   3.2 Current Performance and Strategy of Nurturing the Growth Momentum
      3.2.1 Leveraging M&A to Optimize Portfolio and Extend Geographical Presence
      3.2.2 Focusing on Innovation and R&D to Develop and Commercialize New Products
      3.2.3 Bolstering Product Offerings with Digital Technologies to Enhance the Firm-Farmer Engagement
   3.3 Opportunities and Challenges in Agrochemicals Today
   3.4 Strategic Positioning Uncertainty and Opportunity
      3.4.1 Business Strategy & Growth
      3.4.2 Digital Transformation
      3.4.3 Governance and Board
      3.4.4 Innovation
      3.4.5 Marketing & Sales
      3.4.6 Private Enterprise
3.5 Strategic Positioning Required in a Future That is Uncertain but Full of Opportunities
3.5.1 Capturing Value from Increasing Interest in Sustainable Agricultural Practices and Precision Farming
3.5.2 Taking Advantage of Asset-Light Business Model and Achieving Innovation Success
3.5.3 Recognizing Long-Term Opportunities that Masquerade as Challenges
3.6 The Future of Agrochemicals: Capturing Value
4. AGROCHEMICALS MANUFACTURING
4.1 Dispersing and Deagglomeration
4.1.1 Dispersion into Liquids
4.2 Dispersion of Nanomaterials (Nanoparticles)
4.2.1 Dispersion of Nanoparticles
4.2.2 Dispersing and Size Reduction of Nanomaterials
4.3 Emulsifying
4.3.1 Stabilizing Emulsifiers
4.3.2 Devices for Efficient Emulsification
4.4 Ultrasonic Dissolving of Solids in Liquids
4.5 Sonochemical Reaction and Synthesis
4.6 Phase Transfer Catalysis
4.7 Agrochemical Formulations
4.8 Processing
4.8.1 Drying
4.8.2 Milling
4.8.3 Blending
4.8.4 Agglomeration
5. AGROCHEMICAL TESTING
5.1 Testing Technology
5.2 Methods of Analysis for Pesticide Residues
5.3 Methods for Testing Agricultural Chemical Residues in Food
5.3.1 Validation Procedure
(1) Selectivity
(2) Trueness
(3) Precision
(4) Limit of Quantification
5.4 Method Validation and Quality Control Procedures for Pesticide Residues Analysis in Food and Feed
5.5 Sampling, Transport, Processing and Storage of Samples
5.5.1 Sampling
5.5.2 Laboratory Sample Transportation
5.5.3 Sample Preparation and Processing Prior to Analysis
5.5.4 Identity, Purity, and Storage of Standards
5.5.5 Preparation and Storage of Stock Standards
5.5.6 Preparation, Use and Storage of Working Standards
5.6 Testing and Replacement of Standards
5.6.1 Extraction and Concentration
5.6.2 Extraction Conditions and Efficiency
5.6.3 Extract Concentration and Dilution to Volume
5.7 Contamination and Interference
5.7.1 Contamination
5.7.2 Interference
5.8 Analytical Calibration, Representative Analytes, Matrix Effects and Chromatographic Integration
5.8.1 General Requirements
5.8.2 Calibration
5.9 Representative Analytes
5.10 Matrix Effects and Matrix-Matched Calibration
5.11 Standard Addition
5.12 Effects of Pesticide Mixtures on Calibration
5.12.1 Calibration for Pesticides that are Mixtures of Isomers
5.12.2 Calibration using Derivatives or Degradation Products
5.13 Chromatographic Integration
5.13.1 Analytical Method Validation and Performance Criteria
5.13.1.1 Qualitative Screening Methods
   • On-going Performance Verification during Routine Analysis
5.13.2 Quantitative Methods
5.13.3 Initial Method Validation
   • On-going Performance Verification (Routine Recovery Determination)
5.13.4 Methods for Determination of Fat or Dry Weight Content
5.13.5 Proficiency Testing and Analysis of Reference Materials
5.14 Agrochemicals Solutions Technology
5.14.1 Spectrum 3 MIR/NIR/FIR Spectrometer
5.14.2 Max ICP-OES Scott/Cross-Flow Configuration
5.14.3 Gas Chromatography (GC)
5.15 Agrochemicals Testing Solutions
5.15.1 Atomic Spectroscopy
   • Atomic Absorption (AA)
   • Inductively Coupled Plasma (ICP-OES & ICP-AES) Instruments
   • Inductively Coupled Plasma Mass Spectrometry (ICP-MS) Instruments
   • Mercury Analysis Systems
   • Microwave Systems
5.15.2 Chromatography
   • Gas Chromatography Mass Spectrometry (GC/MS)
   • Liquid Chromatography Mass Spectrometry (LC/MS & LC/MS/MS)
   • Liquid Chromatography
   • Discover the LC 300 HPLC and UHPLC Systems
5.15.3 Molecular Spectroscopy
   • Infrared Spectroscopy
   • Fluorescence Spectroscopy
   • Ultraviolet-Visible (UV-Vis) Spectroscopy
   • FT-IR Microscopy & Imaging Systems
5.15.4 Thermal Analysis
   • Thermogravimetry (TGA)
   • Differential Scanning Calorimetry (DSC)
   • Mechanical Analysis (DMA & TMA)
   • Simultaneous Thermal Analysis (STA)
6. PACKAGING OF AGROCHEMICALS
6.1 Selection of Packaging Types
6.1.1 Selection of Packaging Materials for Solid Formulations
6.1.2 Selection of Packaging Materials for Liquid Formulations
6.1.3 Plastics
6.1.4 Metal
6.1.5 Glass
6.2 Specifications
6.3 Packaging Instructions
6.4 Closures
6.4.1 Prevention of Leakage
6.4.2 Tamper Evidence
6.4.3 Closure Diameter - Liquid Products
6.4.4 Dispensing Liquid Products from Packs Designed for Pouring
6.5 Labelling
6.6 Shelf Life
6.7 Pack Design With Regard to Easy Rinsing and Disposal
6.8 Types of Secondary Packaging
6.8.1 Unit Cartons
6.8.2 Combination with Primary Pack
6.8.3 Methods for Protection of Unit Loads
7. REGISTER A PESTICIDE BUSINESS (PESTICIDE LICENSE)
7.1 Procedure
7.2 Required Documents
7.3 Eligibility
7.4 Validity
8. PESTICIDE REGISTRATION PROCESS-EPA (UNITED STATES ENVIRONMENTAL PROTECTION AGENCY)
8.1 Risk Assessments to Analyses the Potential for Harm
8.2 The Evaluation Process
8.3 Federal Pesticide Laws
8.4 The Pesticide Label
8.5 Compliance and Enforcement
9. PESTICIDES
9.1 How do Pesticides “Work”?
9.1.1 Organophosphates
9.1.2 Organochlorines (Chlorinated Hydrocarbons)
9.1.3 Carbamates and Thiocarbamates
9.1.4 Pyrethroids (Synthetic)
9.2 Types of Pesticides
9.3 Chemical Pesticides
9.4 Biopesticides
9.5 Benefits of Pesticides
9.6 Classification of Pesticides
9.7 Pesticide Formulations
9.8 Pesticides Modes of Action
9.8.1 Insecticides
9.8.2 Fungicides
9.8.3 Herbicides
9.9 Pesticide Behavior in the Environment
9.9.1 Pesticide Degradation
9.9.2 Pesticide Migration
  • Sorption
  • Leaching
  • Spray Drift
  • Volatilization
  • Surface Runoff
10. APPLICATION OF PESTICIDES
10.1 Choice of Chemicals (Insecticides)
10.2 Timing of Pesticide Application
10.2.1 Stage of Development of Pests
10.2.2 The Growth Stage of the Crop
10.2.3 The Development Stage of Natural Enemies and Activity of Honey Bees
10.2.4 The Severity of Damage or Infestation
10.2.5 The Type of Weather and the Time of Day
10.2.6 Pre-Harvest Interval

11. PRODUCTION OF PESTICIDES
11.1 Raw Materials
11.2 The Manufacturing Process
11.2.1 Synthesizing the Pesticide
11.2.2 Formulating the Pesticide
11.2.3 Diluting the Pesticide
11.2.4 Applying the Pesticide

12. PESTICIDE APPLICATION EQUIPMENT
12.1 Dusters
12.1.1 Hand Operated Dusters
12.1.2 Plunger Tube Dusters
12.1.3 Hand Crank Dusters
12.1.4 Foot Pump Dusters
12.1.5 Power Dusters
12.1.6 Electric Motor Powered Dusters
12.1.7 Gasoline Motor Powered Dusters
12.1.8 Air Pressure Dusters
12.2 Sprayers
12.2.1 Hand Operated Sprayers Flit Gun
12.2.2 Small Hydraulic Sprayer
12.2.3 Compressed Air Sprayers
12.2.4 Electric or Gasoline-Operated Sprayers (Powered Spraying)
  • Tanks
  • Pumps
    a) Piston Pump
    b) Centrifugal Pumps
    c) Roller Pumps
    d) Internal and External Gear Pumps
    e) Diaphragm Pump
    f) Flexible Impeder Pump
    g) Vane Pump
  • Hoses
  • Nozzles
  • Strainers
  • Valves
  • Pressure Regulators
  • Agitators
12.2.5 Gas Generating Sprayers
12.2.6 Granular Applicators
12.2.7 Brush Application
12.2.8 Fumigant Injection
12.2.9 Spot Treatment
12.2.10 Crack and Crevice Treatment
12.2.11 U.L.V
12.2.12 Soil Injection
12.2.13 Sub-Slab Injection
13. ROLES AND RESPONSIBILITIES
13.1 Role of Manufacturers
13.1.1 Development and Packaging
13.1.2 Advertising and Marketing of Agrochemicals
13.2 Role of Government Agencies
13.2.1 Product Registration
13.2.2 Promulgating Regulations
13.2.3 Provisions for Enforcement and Advisory Services
13.2.4 International Exchange of Information
13.3 Role of Retailers
13.4 Role of Employers and Their Organizations
13.5 Role of Workers and Their Organizations
13.6 Role of the Public
14. PESTICIDE MIXTURES
14.1 Introduction
14.2 Benefits Associated with Pesticide Mixtures
14.3 Concerns Associated with Pesticide Mixtures
14.4 Pesticide Mixtures and Resistance Mitigation
14.5 Pesticide Mixtures and Natural Enemies
15. PESTICIDE FORMULATIONS
15.1 Type
15.2 Formulation Process
15.2.1 Sorption
15.2.2 Solution
15.2.3 Suspension
15.2.4 Emulsion
15.3 Formulation Selection Considerations
15.3.1 Applicator Safety
15.3.2 Environmental Concerns
15.3.3 Pest Biology
15.3.4 Available Equipment
15.3.5 Surfaces to be Protected
15.3.6 Cost
15.4 Common Pesticide Formulations
15.4.1 Solid Formulations
15.4.2 Dusts
15.4.3. Granules
15.4.4 Pellets
• Wettable Powders
• Dry Flowables
• Soluble Powders
15.5 Liquid Formulations
16. VARIOUS METHODS IN PESTICIDE FORMULATION ANALYSIS
16.1 Titrimetry
16.2 Types of Titrations
16.2.1 Some Redox Titrations are Named after the Reagent
• Permanganate Titrations
• Dichromate Titrations
16.2.2 Iodimetric Titrations also are Redox Titrations
16.3 Preparation of Standard Solutions
16.3.1 Preparation of 0.1N Silver Nitrate
16.3.2 Preparation of 0.1N Potassium Thiocyanate
16.3.3 Preparation of 0.1N Sodium Thiosulphate Solution
16.3.4 Preparation of 0.1N Iodine
16.3.5 Preparation of 0.1N Sodium Hydroxide
16.3.6 Preparation of 0.1N Hydrochloric Acid
16.4 Carbofuran
16.5 Captan
16.6 Dicofol
16.7 Copper Compounds
16.8 Dithiocarbamates
16.9 Tridemorph
16.10 Phorate
16.11 Sulphur
16.12 Aluminium Phosphide
16.13 Zinc Phosphide
17. PESTICIDES DILUTED
17.1 Mixing Soluble and Wettable Powders
17.2 Mixing Liquid Formulations
17.3 Mixing Concentrates for Air Blast Sprayers or Mist Blowers
18. DISPERSION AND GRINDING OF PESTICIDES
19. PESTICIDES AND ENVIRONMENTAL PROTECTION
19.1 Pesticides in the Environment
19.1.1 Sources of Contamination
19.1.3 Pesticide Movement
   a) Air
   b) Particles and Droplets
   c) Vapors
   d) Water
   e) On or in Objects, Plants, or Animals
19.1.4 Harmful Effects on Non Target Plants and Animals
   1) Harmful Effects from Direct Contact
   2) Harmful Effects from Residues
   3) Harmful Effects on Surfaces
19.2 Protecting the Environment
19.2.1 Protecting Groundwater
   1. Sources of Groundwater
   2. Pesticide Contamination of Groundwater
      A. Practices for Pesticide Users
         • Water on the Treated Surface
         • Rain
         • Irrigation
         • Pesticide Factors
         • Soil Factors
         • Geology
      B. Protection of Endangered Species
         • Limitations on Pesticide Use
         • Habitats of Endangered Species
         • Importance of Protecting Endangered Species
   a. Agriculture
20. DISTRIBUTION ORGANOCHLORINE PESTICIDES IN SOIL AND GROUNDWATER
20.1 Materials and Methods
20.1.1 Research Area Description
20.1.2 Sample Collection
20.1.3 Sample Preparation
20.1.4 Analysis Methods
20.2 Physical-Chemical Properties of Soil Profile in Farmlands
20.2.1 Physical-Chemical Indexes
20.2.2 Profile Textures

21. PESTICIDES IN EXPORT AND DOMESTIC AGRICULTURE
21.1 Conceptual Revisions for More Controlled Comparisons
21.1.1 Comparing Different Crop Types to Explain the Effects of Markets
21.1.2 Assuming Low and Homogenous Pesticide use on National Market Crops
21.1.3 Assuming Ever-Increasing Pesticide use in Export Production
21.2 Methods
21.2.1 Study Site
21.2.2 Farmer Survey
21.2.3 Complementary Methods

22. BOTANICAL PESTICIDES: A POTENTIAL PLANT PROTECTION TOOL
22.1 Introduction
22.2 Chemical Composition
22.2.1 Essential Oil Components
22.2.2 Isothiocyanates and Glucosinolates Glucosinolates (GLSs)
22.2.3 Cyanogenic Glycosides
22.2.4 Alkaloids
22.2.5 Phenolics – Flavonoids
22.2.6 Polyacetylenes & Polythienyls
22.2.7 Pyrethrum
22.2.8 Organic Acids
22.2.9 Others
22.3 Greek Plants as a Source of Botanical Pesticides
22.3.1 Bacteria, Fungi & Terpenes
22.3.2 Insects & Terpenes
22.3.3 Nematodes & Terpenes
22.3.4 Nematodes & Limonoids
22.4 Current Trend and Future Prospective

23. DIFFUSION CONTROLLED PESTICIDE RELEASE FORMULATIONS: EFFECTIVE CONSIDERATIONS
23.1 Introduction
23.2 Diffusion Model Development
23.3 Polydisperse Capsule Size Distribution
23.4 Microcapsule Clustering
23.5 Experimental
23.5.1 Microcapsule Construction
23.5.2 Visualization System for Microcapsule Clustering
23.6 Theoretical
23.6.1 Microcapsules Transport via Convective Patterns from Sessile Drop Evaporation
23.7 Coupling Capsule Clustering with Pesticide Release Rate
24. FORMULA OPTIMIZATION DESIGN OF PESTICIDE MICRO EMULSION
24.1 Introduction
24.2 Experimental Section
24.2.1 Materials
24.2.2 Construction of Pseudo-Ternary Phase Diagram
24.2.3 Arrangement of Orthogonal Experiment
24.3 Results and Discussion
24.3.1 Selection of Formula Components
24.3.2 Choice of the Best Phase Diagram
24.3.3 The Research of Physical Stability
25. PROCESSING OF MICROBIAL PESTICIDES
25.1 The Importance of Microbial Pesticides
25.2 Production and Commercialization of Pathogens
25.2.1 Steps Leading to Commercialization
25.2.2 Process Development and Production
25.2.3 Organism Storage
25.2.4 Fermentation Method
25.3 Theoretical Background of Industrial Processing in Biotechnology
25.3.1 Laboratory Processing
25.3.2 Cleanliness and Safety
25.3.3 Preparation of Dilution
25.4 Dilution Plate Counting and Distribution of Bacteria
25.4.1 Pure Culture Techniques Tube transfers
25.4.2 Pure Culture
25.4.3 Preparation and Testing of Culture Media
25.4.4 Sterilization
25.4.5 Steam Sterilization
25.4.6 Flaming
25.4.7 Hot Air
25.4.8 Preservation of Strains
25.4.9 Elaboration of a Processing
25.4.10 Laboratory Scale
25.4.11 Small Scale Production
25.4.12 Problems of Contamination of Microbial Processes
25.4.13 Sterility of Microbial Process
25.4.14 Sensitivity of Microbial Processes to and Protection against Contamination
25.4.15 Pilot-Plant-Fermenters
26. SPRAYING PESTICIDES SAFELY IN GREENHOUSES: A NEW TECHNIQUE
26.1 Introduction
26.2 Greenhouse Spraying Requirements
26.3 Design of the New System
26.4 Fog Generation
26.4.1 Atomizer Nozzles
a. Internal Mix Model
b. External Mix Model
c. Jet Impact Model

26.4.2 Experimental Tests on Nozzles
26.4.3 Numerical Simulation of Leaf Spraying
26.4.4 Experimental Tests with Various Crops
26.4.5 Test Parameters and Results

26.5 Defined Volume
26.6 Fixed Covering Prototypes
26.6.1 First Fixed-Covering Prototype
26.6.2 Second Prototype with a Fixed Covering
26.7 Prototype with Retractable Covering (DeVoPeS)
26.8 DeVoPeS Work Cycle
26.9 Greenhouse Testing

27. GREEN PESTICIDES FOR ORGANIC FARMING: OCCURRENCE AND PROPERTIES OF ESSENTIAL OILS FOR USE IN PEST CONTROL
27.1 Plants and Essential Oils
27.1.1 Technology of Using Eucalyptus Oil
27.1.2 Aromatherapy
27.2 Essential Oil Pharmacological Properties
27.2.1 Antiseptic
27.2.2 Expectorant and Diuretic
27.2.3 Spasmolytic and Sedative
27.2.4 Other Related Properties
27.3 Pesticidal Properties

28. REGULATED SOCS: PESTICIDES, COMMON TRADE NAMES, AND RELATED CHEMICALS

29. HOW TO START AN INSECTICIDE INDUSTRY
29.1 Steps
29.1.1 Understand the Industry
29.2 Conduct Market Research and Feasibility Studies
29.2.1 Demographics and Psychographics
29.3 Decide Which Niche to Concentrate on
29.4 Economic Analysis
29.5 Decide Whether to Buy a Franchise or Start from Scratch
29.6 Know the Possible Threats and Challenges Will Face
29.7 Choose the Most Suitable Legal Entity (LLC, C Corp, S Corp)
29.8 Choose a Catchy Business Name
29.9 Discuss with an Agent to Know the Best Insurance Policies
29.10 Protect Intellectual Property with Trademark, Copyrights, and Patents
29.11 Get the Necessary Professional Certification
29.12 Get the Necessary Legal Documents Need to Operate
29.13 Raise the Needed Startup Capital
29.14 Choose a Suitable Location for Business
29.15 Hire Employees for Technical and Manpower Needs
29.16 Write a Marketing Plan Packed with Ideas & Strategies
29.17 Develop Strategies to Boost Brand Awareness and Create a Corporate Identity

30. INSECTICIDES
30.1 Type of Activity
30.1.1 Systemic Insecticides
30.1.2 Contact Insecticides
30.1.3 Ingested
31. REGULATIONS
32. INSECTICIDE FORMULATIONS
32.1 Types
32.1.1 Dusts
32.1.2 Wettable Powders (WPs) or Water Dispersible Powders (WDP)
32.1.3 Emulsifiable Concentrates (ECs) or (E)
32.1.4 Suspension Concentrates (SCs) or Flowables
32.1.5 Water Soluble Powder (SPs)
32.1.6 Solutions (S)
32.1.7 Granules (G)
32.1.8 Water Dispersible Granules (WGs)
32.1.9 Ultra-low-Volume (ULV) Formulations
32.1.10 Aerosols
32.1.11 Controlled Release (CR) Formulations
32.1.12 Baits
32.2 The Non-Insecticidal Ingredients of Formulations
32.2.1 Solvents
32.2.2 Diluents
32.2.3 Surfactants
32.3 Insecticide Application Equipment
   a. Sprayers
   b. Dusters
   c. Granular Applicator
33. LIST OF INSECTICIDE
34. PRODUCT HARVESTING AND FORMULATION OF MICROBIAL INSECTICIDES
34.1 Product Harvesting
34.2 Formulation
34.2.1 Oil Suspension Formulation
34.2.2 Dusts or Wettable Powder
34.2.3 Suspension Concentrates (SC)
34.3 Processing
34.3.1 Function of the Surfactants
34.3.2 Wetting
34.3.3 Milling Aid
34.3.4 Stabilization
34.3.5 Milling Conditions
34.4 Suggested Evaluation Technique of Flowables
   • Test of Mechanical Stability
   • Suspensibility
   • Storage Stability
   • Viscosity
   • Bloom
   • Biological Activity
34.5 Evaluation of Separation Process “Recovery”
35. FUNGICIDE
35.1 Types
35.2 Mode of Action
35.3 Type of Chemical
35.4 Resistance
35.5 Fungicide Resistance Management
36. HERBICIDE
36.1 Application
36.2 Selectivity
36.3 Translocation
36.4 Mode-of-Action
36.5 Growth Regulator Herbicides
36.6 Photosynthesis Inhibitors
36.7 Pigment Inhibitors
36.8 Seedling Growth Inhibitors
36.9 Cell Membrane Disruptors and Organic Arsenicals
36.10 Lipid Synthesis Inhibitors
36.11 Amino Acid Synthesis Inhibitors
36.12 Other Herbicides that Inhibit Amino Acid Synthesis
37. FORMULATIONS OF HERBICIDE
37.1 The Foundation of Formulations
37.2 Types
37.2.1 Solutions (Water Soluble Concentrate and Soluble Powder)
37.2.2 Emulsions (Emulsifiable Concentrate)
37.2.3 Dry Material Suspensions (Wettable Powders, Dry Flowables, Water Dispersible Granules/Powders)
37.2.4 Granules
38. PESTS OF THE GREENHOUSE
38.1 Insect Anatomy
38.2 Insect Damage
38.3 Sucking Insects and Their Damage
38.4 Insects with Sponging Mouthparts
38.5 Siphoning Insects
38.6 Chewing Lapping Insects
38.7 Life Cycle Development or Metamorphosis
38.8 Insect Pests
38.8.1 Aphids
38.8.2 Fungus Gnats
38.8.3 Leaf Miners
38.8.4 Mealybugs
38.8.5 Mites
38.8.6 Scale Insects
38.8.7 Thrips
38.8.8 Whiteflies
38.9 Insect Control
38.10 Susceptibility of Greenhouse Plants to Pesticide Injury
38.11 Non Target Insecticide Action
39. BIS SPECIFICATIONS
40. PLANT LAYOUT & PROCESS FLOW CHART
41. PHOTOGRAPHS OF MACHINERY WITH SUPPLIER’S CONTACT DETAILS
   • Pesticide Making Machine
   • Glass Lined Steel Storage Tank
• Steel Jacketed Tank
• Storage Tank
• Ultra Filtration System
• Water Softening Plant
• Tray Dryer
• Ribbon Mixer
• Sand Bead Mill
• Dyno Mill
• Pulverizers Mills
• Hammer Mill
• Bucket Elevator
• Air Compressor

About NIIR

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.


NPCS also publishes varies process technology, technical, reference, self employment and startup books, directory, business and industry database, bankable detailed project report, market research report on various industries, small scale industry and profit making business. Besides being used by manufacturers, industrialists and entrepreneurs, our publications are also used by professionals including project engineers, information services bureau, consultants and project consultancy firms as one of the input in their research.

Our Detailed Project report aims at providing all the critical data required by any entrepreneur vying to venture into Project. While expanding a current business or while venturing into new business, entrepreneurs are often faced with the dilemma of zeroing in on a suitable product/line.