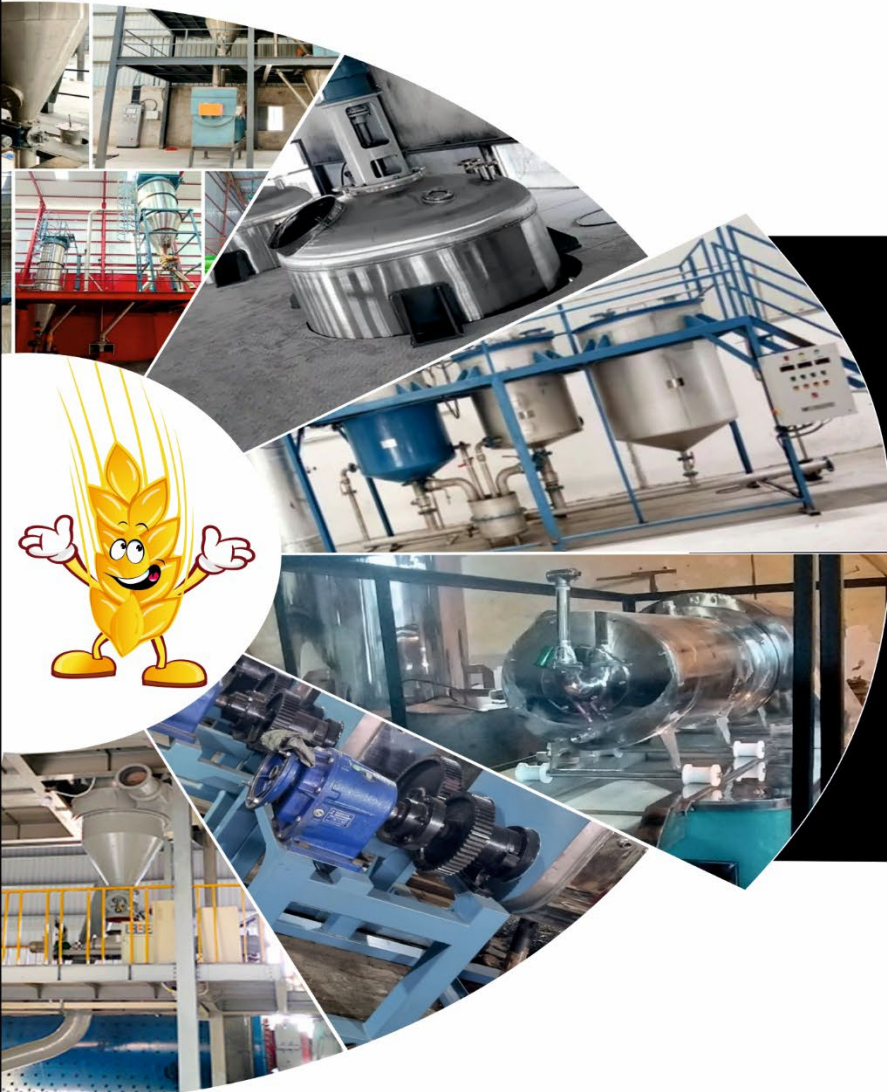




# CROPSAFE PESTICIDES INDIA PVT. LTD.



Better products for better life

# INTRODUCTION

## CROPSAFE PESTICIDES INDIA PVT. LTD.

- An ISO certified company with GLP manufacturing facility with presence in 40+ countries extensively covering the domestic market and export to Asia, Africa, Latin America, CIS countries and Middle East.
- Leading manufacturers and exporter of Agrochemical Products
- With trust of our associates/clients we have been giving consultancy/technology transfer in form of complete machinery setup and transfer of technologies to manufacture pesticides formulations to our existing clients
- Young & Dynamic team with 25 years + experience in AGRO industry.
- 350+ registered products with GLP dossiers among with acute 6 pack Toxicological and 5 batch Chemistry data.
- ISO and NABL accredited company with GMP compliant manufacturing setup



Our overseas clients/associates trusted us with supply of various machineries and technology transfer along with long term supply agreement to supply technical and other adjuvants and inners required for formulations.

In the recent times we have exported / at various stages of Project development to clients in the following countries:

## Turnkey Projects Completed/Ongoing

---

1. **CROATIA:** Formulation Plant of EC, SC & SL products with Technical & formulation Know-how.
2. **PAKISTAN:** Complete plant and technology transfer for manufacturing Sulfur WDG,DF and SC.
3. **IRAN:** Formulation Plant of EC, SC & SL with Technical & formulation Know-how.
4. **KENYA:** Complete from the scratch for EC, SC, SL, WDG, SP/WP formulations with Technical & formulation Know-how.
5. **UAE:** Various mixing Vessels for one of our existing client.
6. **Nigeria:** Complete from the scratch for EC, SC, SL, WDG, SP/WP formulations with Technical & formulation Know-how.

# SOME OF OUR RECENT EXPORTS



# SOME OF OUR RECENT EXPORTS



# ON THE BASIS OF ALGERIA'S IMPORT DATA, WE PROPOSE THE FOLLOWING MACHINERY SET UP

|   | <b>Formulation</b>                 | <b>Some common Products</b>  |
|---|------------------------------------|--|
| 1 | EC: Emulsifiable Concentrate       | Chlorpyrifos, Cypermethrin, Deltamethrin, Bifenthrin, Malathion, etc |
| 2 | SL- Soluble Liquid                 | Glyphosate, Paraquat etc   |
| 3 | WP/SP: Wettable / Soluble Powder   | Acetamiprid, Captan, Metribuzin etc                                  |
| 4 | WDG: Wettable Dispersible Granules | Emamectin benzoate, thiamethoxam, Glyphosate etc                     |
| 5 | SC: Suspension Concentrate         | Imidacloprid, Thiamethoxam, Azoxystrobin etc                         |



## WHAT IS EC FORMULATION?

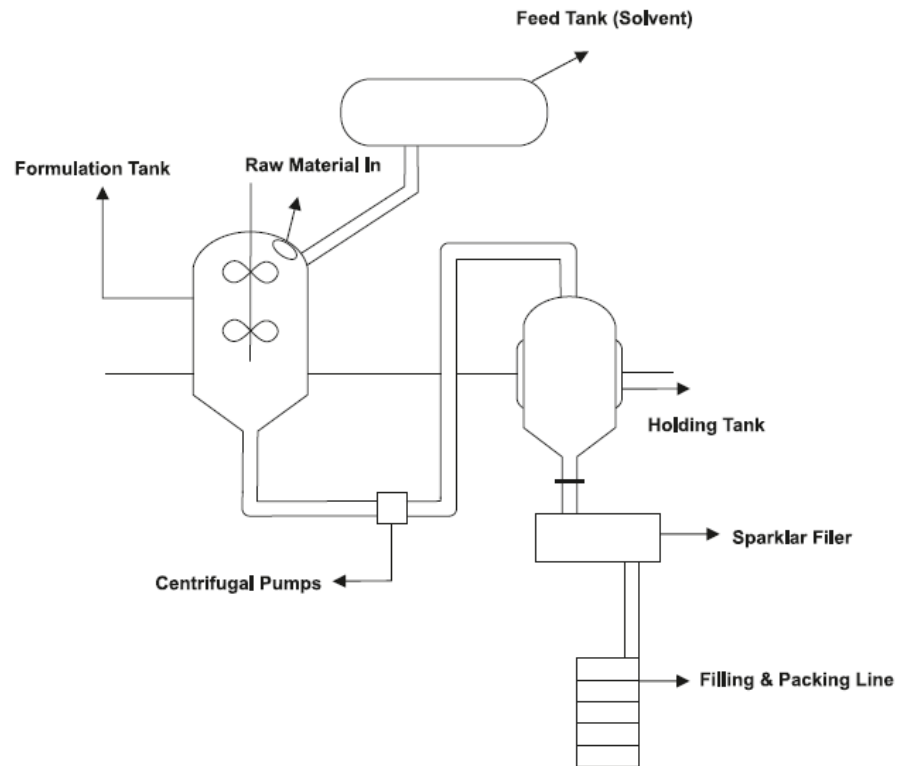
EC formulations represent **28%** of total pesticide **formulations** & usually contain an oil-soluble liquid active ingredient, a petroleum-based solvent, and an emulsifier (mixing agent). The emulsifier allows the active ingredient in the solvent to mix with water, these form an emulsion.

Some of the Common EC formulation:

- Chlorpyrifos 48% EC
  - Bifenthrin 10 % EC
  - Lambda-cyhalothrin 2.5% / 5% EC
  - Cypermethrin 5% / 10% / 20% EC
  - Malathion 50% EC
  - Temephos 50% EC
- etc.

# WORKING FLOW CHART OF EC

## EC





# IMAGES OF EC EQUIPMENTS



# SOLUBLE CONCENTRATE (SL) FORMULATION

In SL formulations the pesticide is dissolved in water or a water-soluble organic solvent. To enhance the efficiency and efficacy of the spray mixture, penetration enhancers and wetting agents are often included.

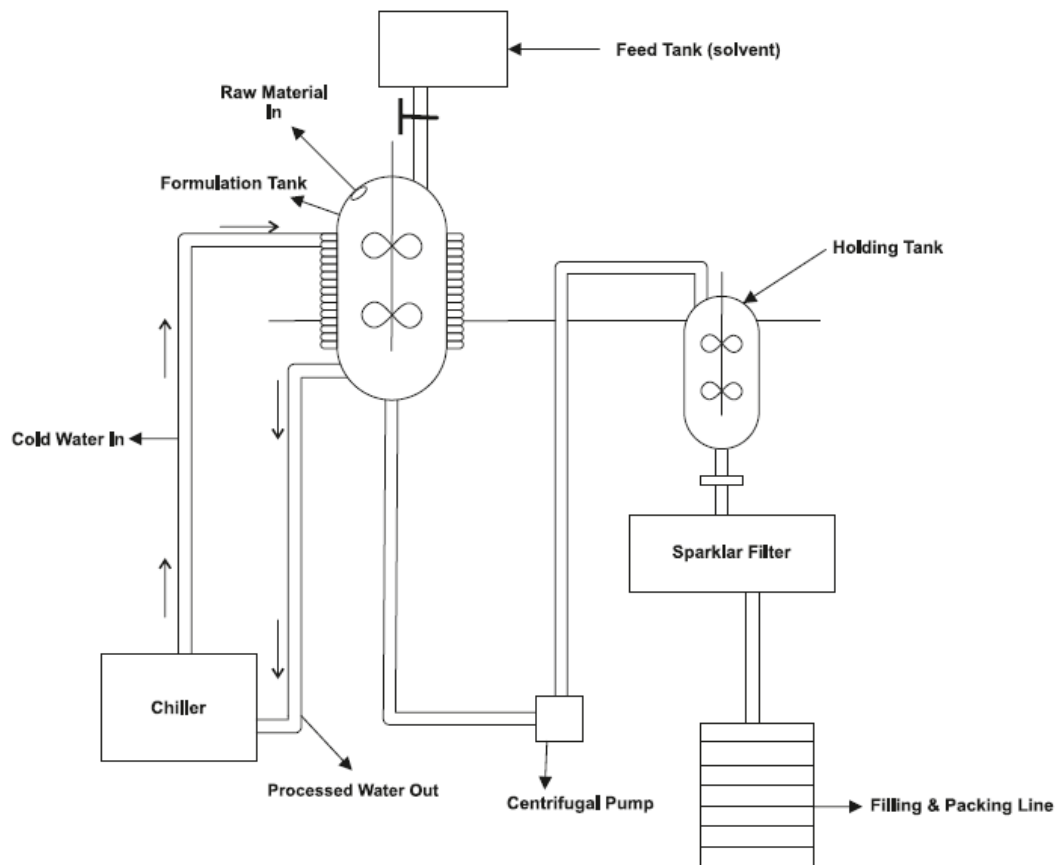
Some of the Common SL formulations:

1. Glyphosate 41% SL
  2. Paraquat 24% SL
  3. Imidacloprid 20% SL
- Etc.



SL

# WORKING FLOW CHART OF SL





# EQUIPMENTS OF SL PLANT

# Wettable Powder (WP) / Soluble Powder (SP) Formulation

In WP formulation the active ingredients are applied to finely ground talc or clay particles. Most WP formulations also include wetting and/or dispersing agents. Usually, they are mixed with water to form a suspension and applied as a spray.

SP formulations look like wettable powders. However, when mixed with water, soluble powders dissolve readily and form a true solution.

Some of the common SP/WP formulations:

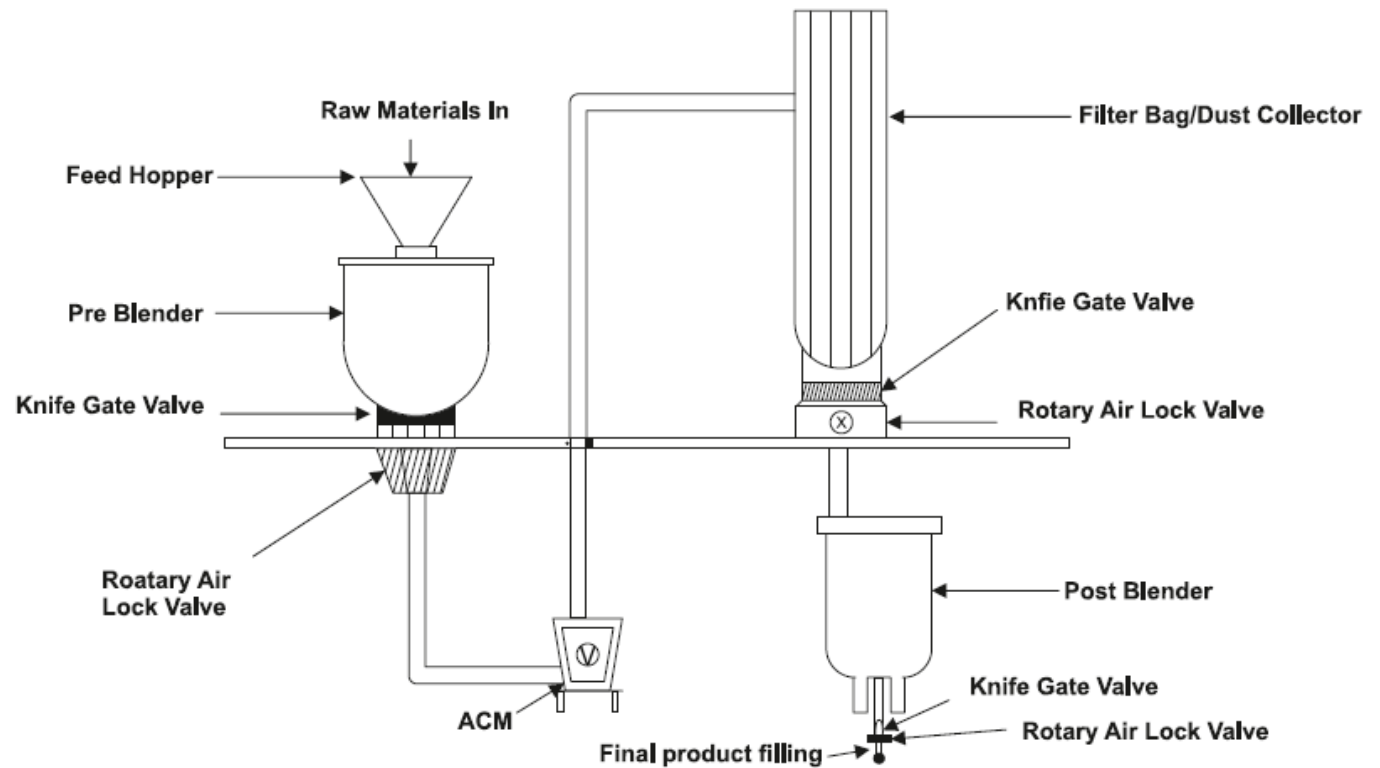
1. Carbendazim 50% WP
  2. Captan 50% WP
  3. Acetamiprid 20% SP
- etc



# WORKING OF WP/SP FORMULATION

## SP

ACM 30 (Air Classifying Mill)



# 3D IMAGE OF WP/SP PLANT





# EQUIPMENTS OF WP/SP PLANT



# Water Dispersible Granules (WG) Formulation

WGs are a solid, non-dusty granular formulation which disperses or dissolves when added to water in the spray tank to give a fine particle suspension.

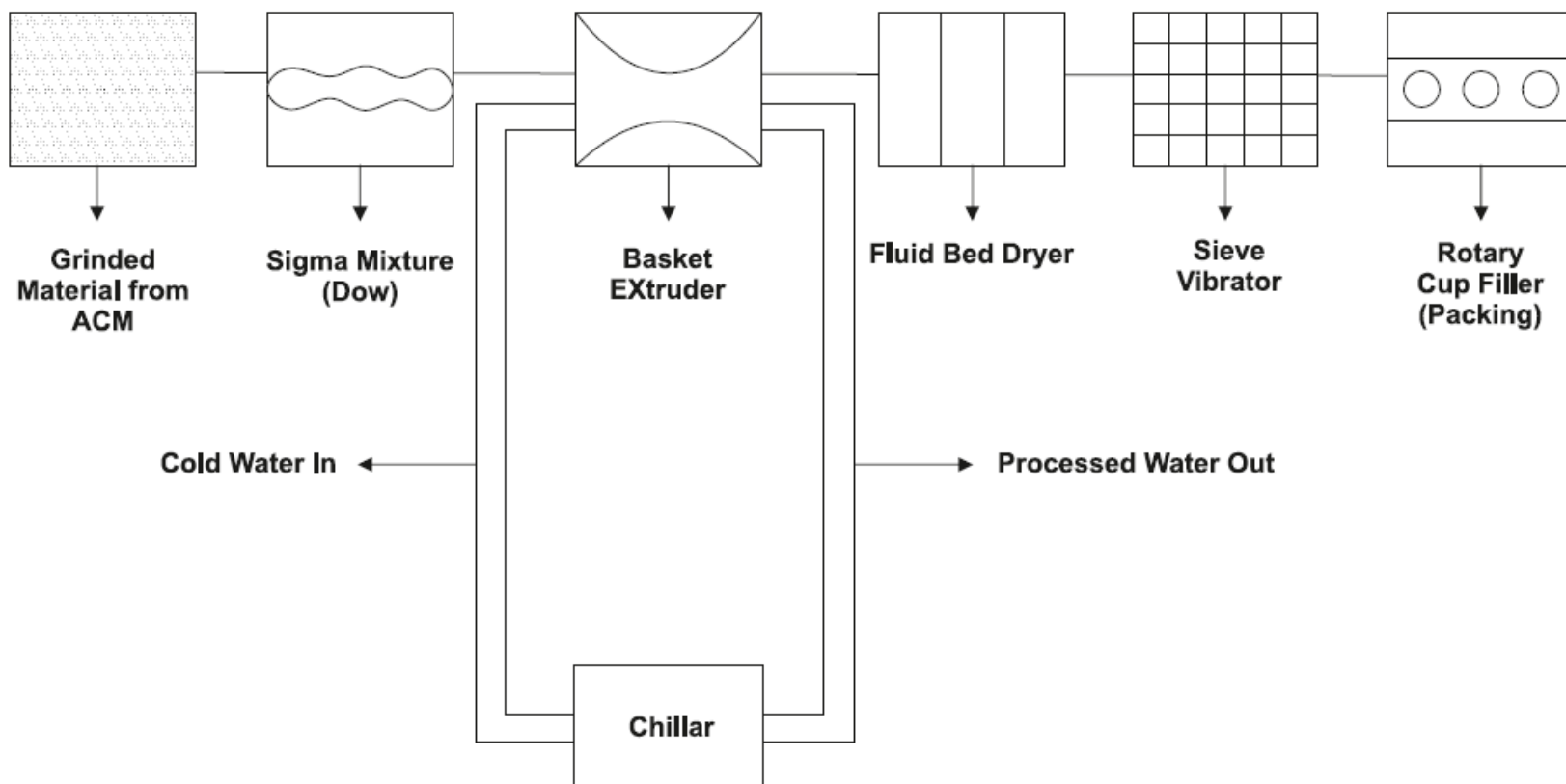
Some of the common WDG formulations are:

1. Emamectin 5% WG
  2. Thiamethoxam 25% WG
  3. Hexaconazole 75% WG
  4. Imidacloprid 70% WG
  5. Glyphosate 71% WG
- etc



# WORKING FLOW CHART WDG

## WDG





# EQUIPMENTS OF WG PLANT



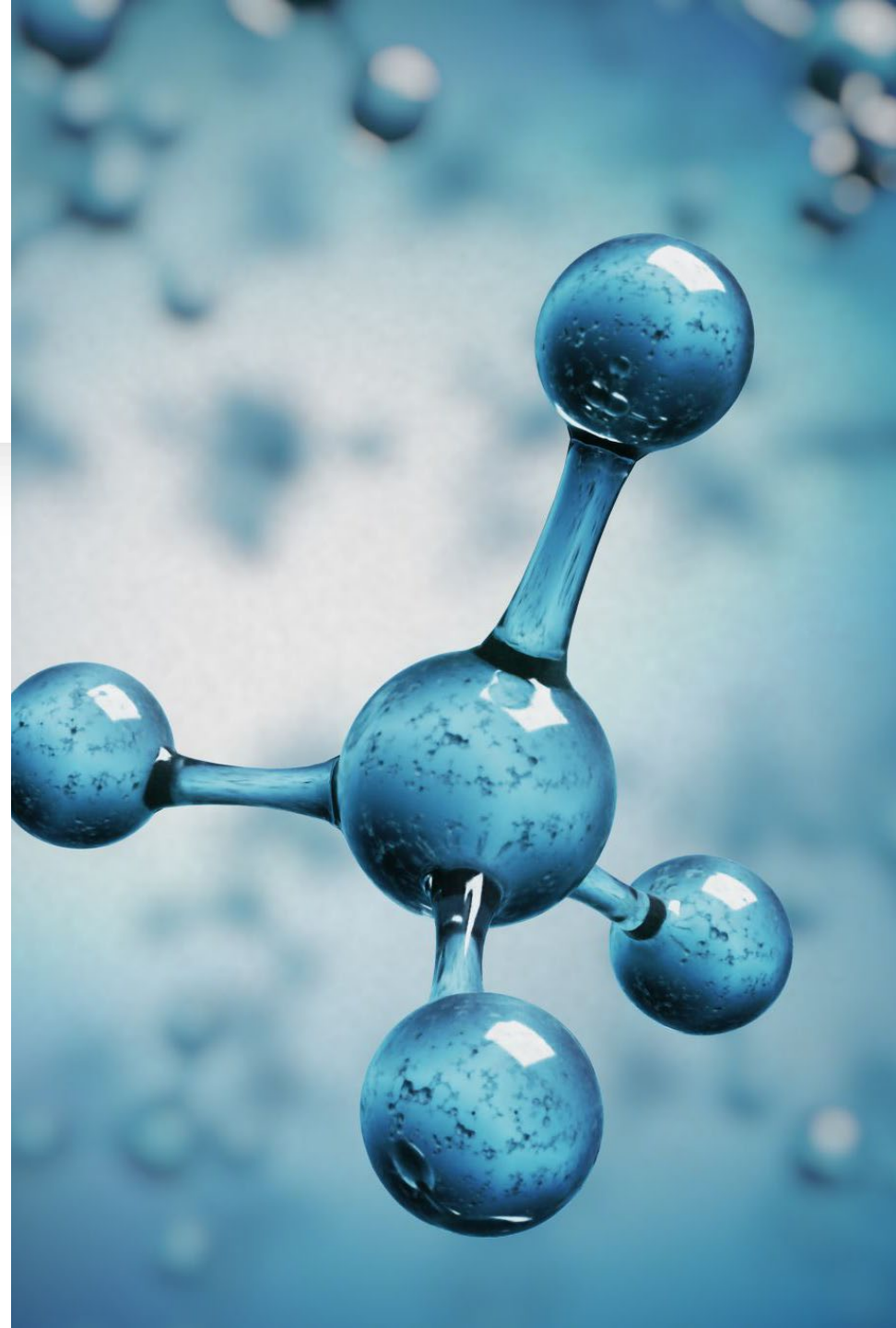
**EQUIPMENT OF WG PLANT**

# SC FORMULATION

The suspension concentrates (SC) formulation consist of Stable dispersion of micronized active ingredient in water.

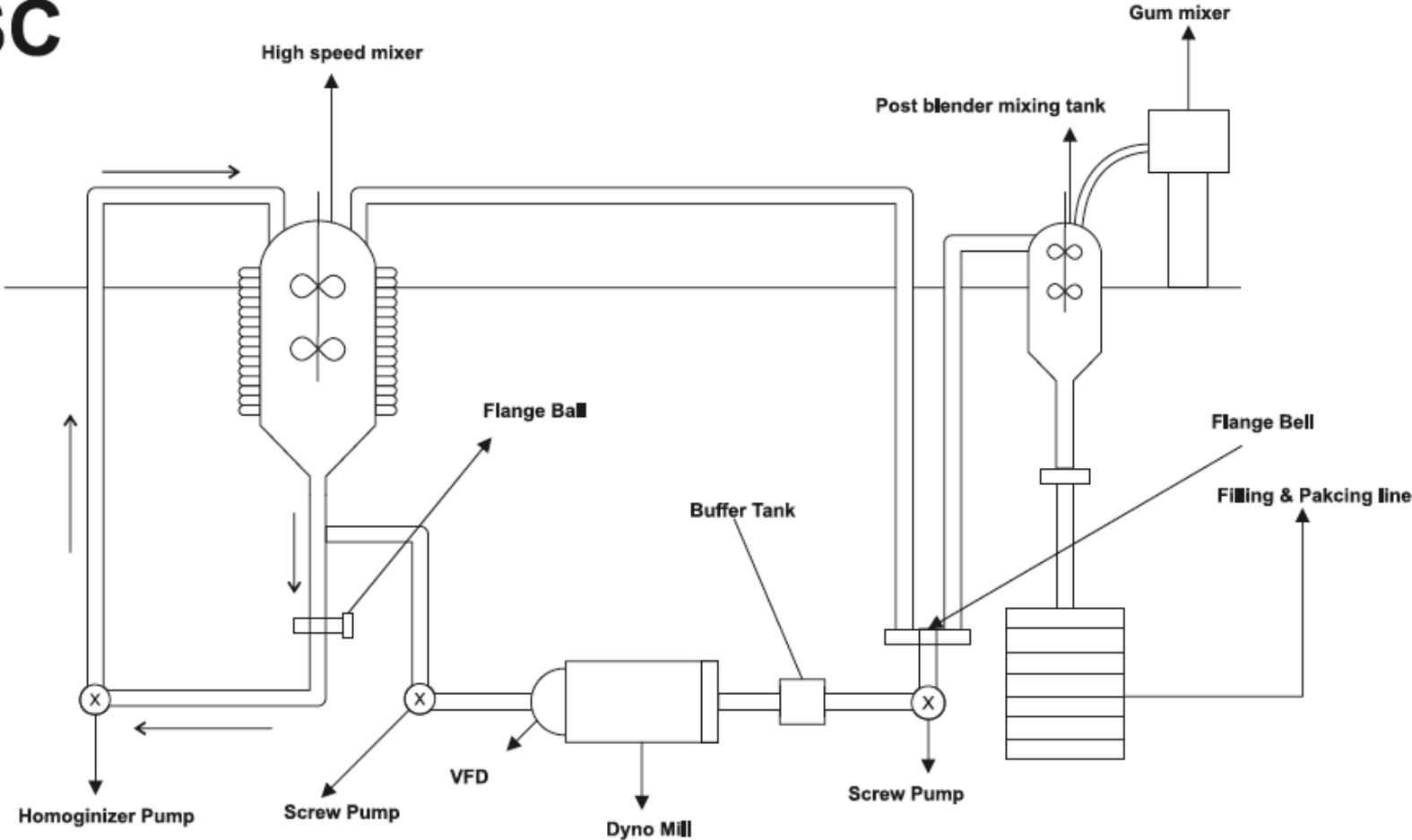
Some of the common SC formulations are:

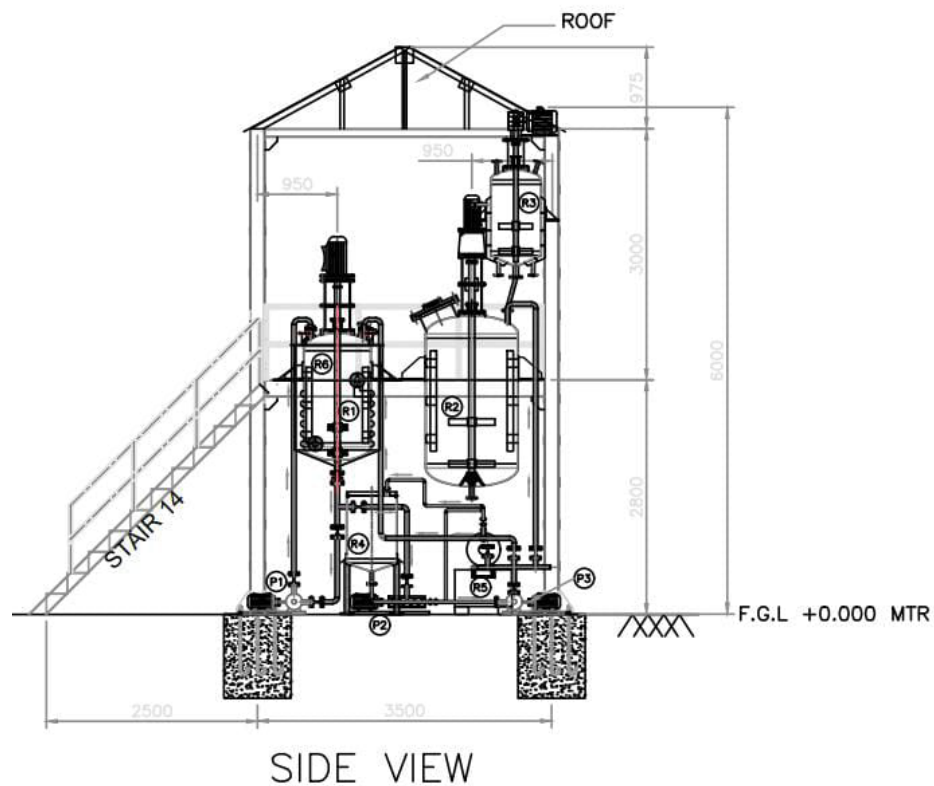
1. Azoxystrobin 25% SC
  2. Azoxystrobin 11 + Tebuconazole 18.3 SC
  3. Chlorantraniliprole 18.5% SC
  4. Paclobutrazole 23% SC
- etc.



# WORKING PLANT OF SC FORMULATION

**SC**





# EQUIPMENTS OF SC PLANT



# SC PLANT



**GUM MIXER**



# HIGH SPEED MIXER SC PLANT



HIGH SPEED MIXER SC PLANT

---

## Other Formulations

There are other formulations like

- Suspo-emulsion(SE)
- Oil-in-water Emulsions ( EW)
- Capsule Suspension (CS) formulations
- ZC (mix combination of Capsule Suspension (CS ) and Suspension concentration (SC)
- Flowable concentrates (FS) formulations

These formulations can be made with small changes in the machinery explained above.



# Raw Material Procurement

The procurement will be made at 3 levels:

1. Local: we will help you find the adjuvant and solvents from your local suppliers. Our technical staff will be there to assist your team.
2. India: Pesticide Technicals, Adjuvant, Solvents, Machinery, Machinery parts
3. China: Pesticide Technicals

# MANPOWER REQUIRED

Manpower requirement depends on the following:

- Proposed capacity of Plant
- Scale of Automation
- Number of formulations at one go.
- Batch size quantity.
- Packaging size

Generally there is a need of 10-12 workers for each product/production line starting from formulations till packaging.

# PROJECT DELIVERY

Cropsafe offers the following value additions-

- Plant Design
- Complete machinery set up
- Commissioning of machinery setup
- Complete technical knowledge of machinery maintenance.
- Training of Man power for process, formulation, Quality control, handling of equipments and maintenance.
- Formulation process/recipes including Quality control SOP.
- Assist with the Supply Chain & procurement of raw material (Technical, Adjuvant, Solvents etc.)
- Assist trouble shooting in process and formulations.

# EMBRACING THE FUTURE OF AGRICULTURE

- ✓ The integration of creative machinery formulations is propelling agriculture into A new era of sustainability and productivity.
- ✓ Let's harness this momentum to cultivate a brighter, more efficient future for agriculture.



# Thank You

