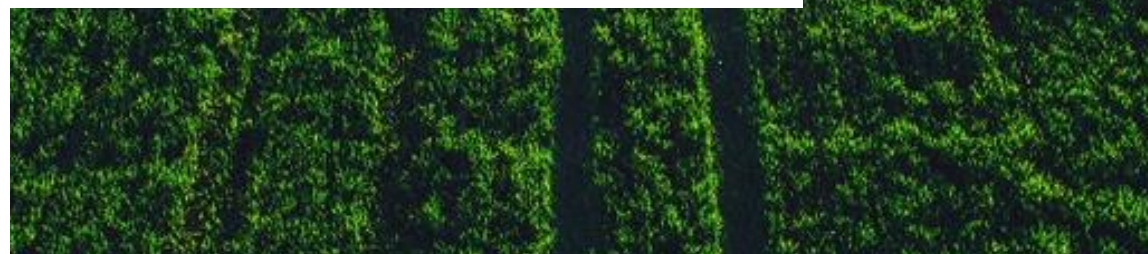




BRINGING
WORLD CLASS TECHNOLOGY
TO
INDIAN FARMERS



Capital Markets Day Presentation 2019

This presentation contains statements that contain “forward looking statements” including, but without limitation, statements relating to the implementation of strategic initiatives, and other statements relating to Insecticides (India) Limited (“Insecticides India” or the Company) future business developments and economic performance.

While these forward looking statements indicate our assessment and future expectations concerning the development of our business, a number of risks, uncertainties and other unknown factors could cause actual developments and results to differ materially from our expectations.

These factors include, but are not limited to, general market, macro-economic, governmental and regulatory trends, movements in currency exchange and interest rates, competitive pressures, technological developments, changes in the financial conditions of third parties dealing with us, legislative developments, and other key factors that could affect our business and financial performance.

Insecticides (India) undertakes no obligation to publicly revise any forward looking statements to reflect future / likely events or circumstances.

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1. Business Overview



Mr. Rajesh Aggarwal
Managing Director

Mission

Our purpose, what we are

We work to make agriculture sustainable and profitable for our farmers, ensuring food security for all living beings on earth, using simple and effective technologies

Vision

Our dream, our big contribution to this planet earth

We will make this earth greener and cleaner through our work and our various product portfolio that will become the first choice for all farmers worldwide

Business Overview

Engaged in the manufacturing and marketing of crop-protection products

Four product categories:
Insecticides, Herbicides,
Fungicides,
Biologicals and Plant Growth
Regulators (PGRs)

5 R&D centers – Developing a comprehensive range of agro chemical products

State-of-the-art manufacturing facilities in Chopanki (Rajasthan), Samba & Udhampur (Jammu & Kashmir) and Dahej (Gujarat)

100+ Branded products
20+ Technical
375+ SKUs

60,000+ retail outlets
5,000 Distributors
28 depots/branches
500+ sales team



Headquarters - Delhi,
started operations
in 2001-02



Nation-wide strong customer reach under umbrella brand 'Tractor Brand'



Our Business

Domestic

International

Brand

Institutional

Maharatna

Other Brand

Formulations

Technicals

Agrochemicals

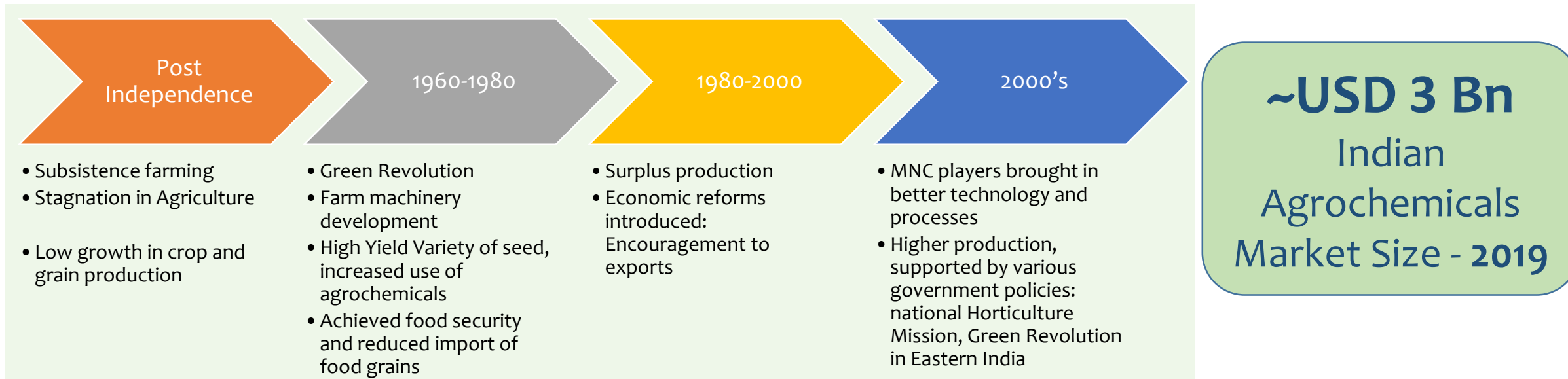
Biological Products

Household Products



Agriculture Sector in India

- ❖ With a population of 1.27 billion India is the world's second most populous country
- ❖ India is the world's largest producer of milk, pulses and jute, and ranks as the second largest producer of rice, wheat, sugarcane, groundnut, vegetables, fruit and cotton



Growth Drivers

- ❖ **Government Policy Support:** Increasing MSP, Exports facilitation and Promotion Schemes
- ❖ **Innovation:** Hybrid and genetically modified seeds, mechanization and irrigation system development
- ❖ **Market Demand:** Increasing population and disposable income
- ❖ **Infrastructure:** Large proportion of agricultural land and increasing storage capacity

“To bring synergetic benefits to farmers by providing a comprehensive range of agro chemical product mix.”



Continuously adopting innovative measures



Always evolving in best interest of farmers



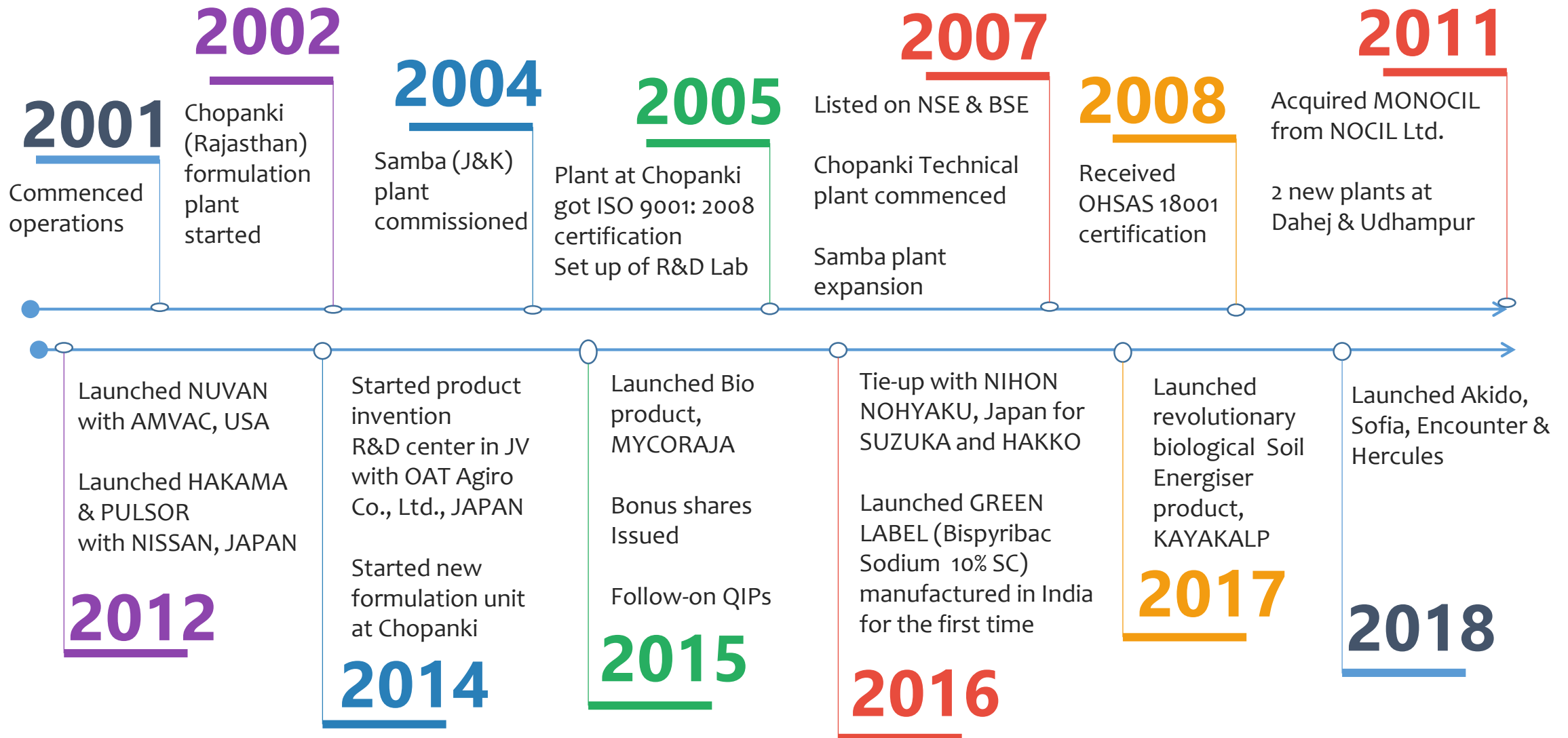
Eco-friendly production

Advancing towards sustainable agricultural practices



Ultra-modern automated manufacturing for consistent quality and safety.

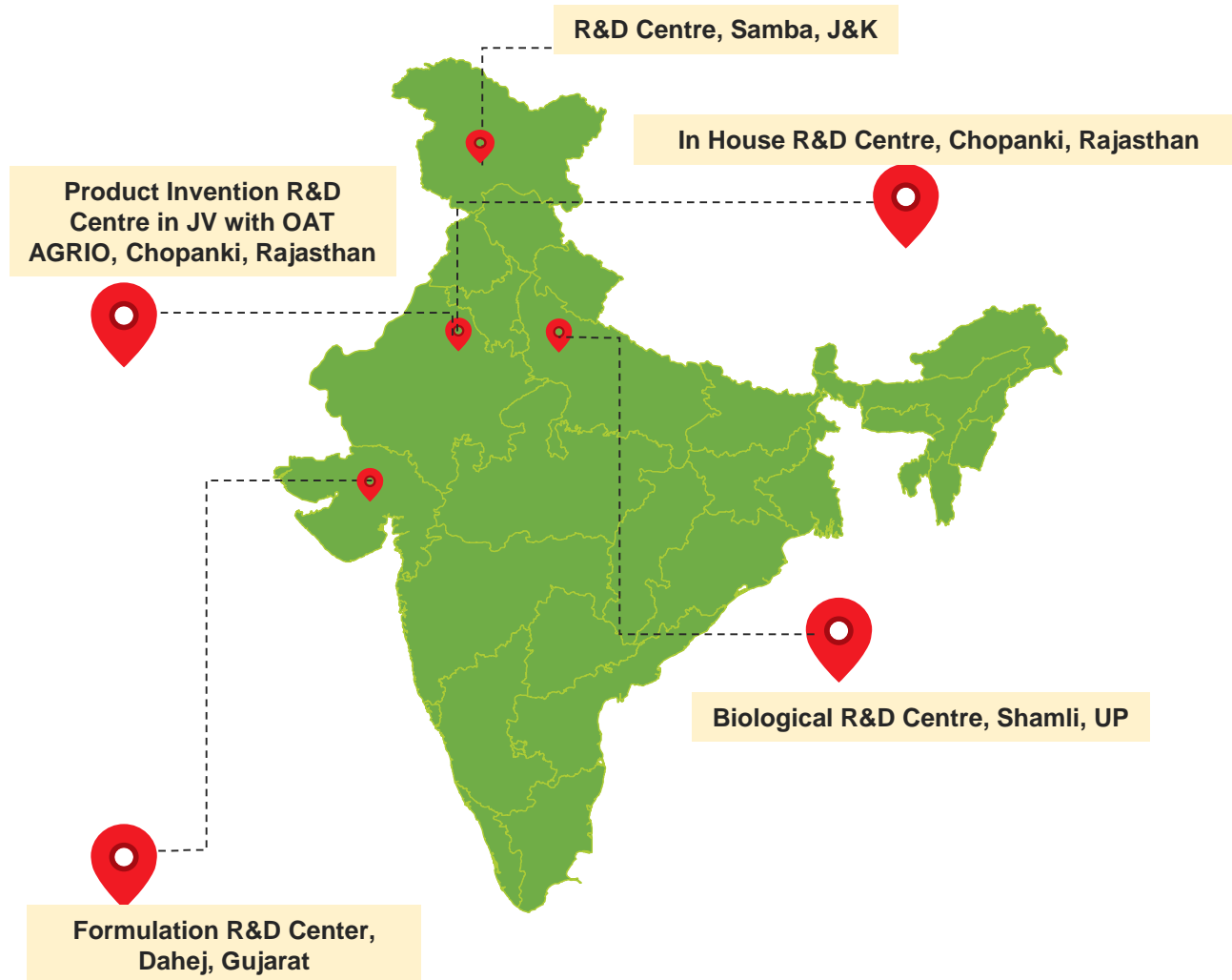
IIL Evolution



Innovate, Integrate and Lead



*under toll arrangement



- There is definite need to innovate and focus on new products / molecules to stay relevant in the competitive and dynamic landscape
- Chopanki was the IIL's first R&D centre established in 2004 and as of today we have, 5 R&D centres with 75+ well experienced scientists
- IIL has built State-of-the-art R&D centre for Technicals, Formulations, Reverse Engineering and Biologicals
- R&D centres have delivered many successful product such as Green Label, Hercules, Encounter, Sofia
- Many products are in pipeline, our R&D remains fully committed and working on the products to be launched in the medium term and long term
- Investing in R&D today for a better tomorrow and this will allow IIL to stay ahead of its competition in the long run

R & D has played a pivotal role in transforming IIL business and will continue to drive future growth



2. Research and Development



Dr. Mukesh Kumar
GM – R&D



Mr. Shailesh Patel
DGM –R&D



Dr. LC Rohela
Sr. GM - QA



Mr. Kazuya Kishimoto
MD & CEO
OAT & IIL India Laboratories



Dr. Kallolmay Biswas
GM – R&D
OAT & IIL India Laboratories



2.1 R&D - Chopanki



Dr. Mukesh Kumar
GM – R&D

Vision of R&D Centre - Chopanki

- Chopanki was the IIL's first R&D centre and was established in 2004
- Focus on reverse engineering of off patented products
- Development of New Formulations; ecofriendly & ready-mix solutions for farmers
- Development of New Technicals (Active Ingredients)
- Optimizing parameters for process of technicals for cost reduction
- Work on effluent treatment to minimize cost for it
- Replacement of toxic solvent
- To work with DSIR, Ministry of Science and Technology to contribute towards the growth of Indian agriculture
- Contribute towards the growth of Indian agriculture
- Process development for import substitution
- Registration of the products

**2004
Established**

**Chopanki,
Rajasthan
Location**

**In-House R&D Centre
recognized by DSIR,
Ministry of Science and
Technology, New Delhi**

R&D Equivalent to International Standards

- Well-designed instrument and process lab
- International exposure to R&D scientists
 - Participation in National and International conference
- Patent granted for import substitute products like Imidacloprid and Acetamiprid, MNIO and PMIDA
- All lab procedures are carried out as per GLP guidelines
- Pre-inspection audit for GLP recognition done

Team




- Experienced and dedicated scientist in R&D
- Team of 12 employees at Chopanki R&D centre
 - Doctorate – 2
 - Post Graduate – 6
 - Graduates - 4

R&D Equipment

- Well furnished and best- equipped R&D laboratory with all safety measures
- LC-MS: 1, HPLC: 3, GC –MS : 1, GLC :3 , Prep-HPLC : 1, FTIR: 1, UV-visible spectrophotometer: 1
- R&D is well equipped with all utilities. We have 6 fumehoods where 12 reactions can be carried out simultaneously



Certifications and Recognitions – Chopanki

| | Certification | Framework |
|--|-----------------|--|
|  | ISO 9001:2015 | Quality Management System |
|  | ISO 14001:2015 | Environment Management System |
|  | ISO 45001: 2018 | Occupational Health & Safety Management System |

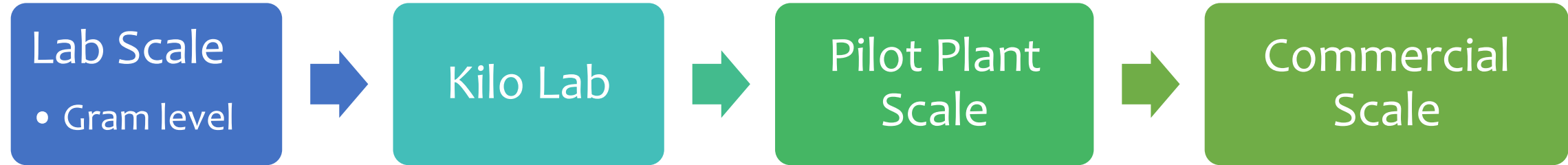
Recognitions

- Recognized by DSIR: Since 2005
 - IIL In-House R&D Centre recognized by DSIR, Ministry of Science and Technology, New Delhi
- NABL Accreditation of QC Labs at Chopanki



Process of Scaling Up from Lab to Commercial

In House R&D Labs for Testing and Commercializing Potential Products
at a Low Cost and Shorter Turnaround Time



Achievements

| | Products Developed | Commercialized |
|--------------|--------------------|----------------|
| Insecticides | 26 | 17 |
| Herbicides | 16 | 11 |
| Fungicides | 9 | 3 |
| Total | 51 | 31 |

Key Technical Products Developed Contributing to Maharatna

| Technical | Chlorpyrifos | Thiamethoxam | Diafenthiuron | Acetamiprid |
|-----------|--------------------------|--------------|---------------|-------------|
| Brands | Lethal Range of Products | Bheema | Hercules | Hercules |
| | | Bheema Super | Logo/ Gama | Sharp |
| | | Arrow | | |

Strategy for Process Improvement

1. Quality Improvement
2. Remove Cumbersome Process
3. Removal of Multiple Solvents
4. Make Processes - Simple, Shorter and Cost-Effective

Way Forward

Identified new products to meet farmer requirements and 15 products are under development



2.2 R&D - Dahej



Mr. Shailesh Patel
DGM –R&D

Key Objectives

- Process improvement of existing products with respect to cost
- To develop the process for new products /intermediates in terms of competitive cost, energy efficient and environmental friendly to stay ahead of farmer's requirement and market competition
- Formulation development
- Backward integration
- Contribute for safe and eco friendly practices in agriculture
- Adopt and implement new research technology

Capabilities

- Design and Development
- Project approval to commercialization
- Product registration (CIB/Export)

Unit Process



Dahej R&D Overview

- Established in 2014
- Well equipped with latest technology and facility
- New molecules development, process scale up and technology transfer to plant
- Impurities synthesis and characterization
- Plant trouble shooting/support
- Five batch analysis as per GLP guidelines

Team

- Team of 10 employees at Dahej R&D centre
- Doctorate – 1
- Post Graduate – 7
- Others - 2

R&D Equipment

- 2 Labs with fume hoods and all required facilities.
- Separate dedicated ADL facility with GC, HPLC etc.



Objectives:

1. Independency of the key raw materials procurement
2. Cost benefits: Reduce the cost of purchasing the raw materials. Will also result in reduction of wastages, transport costs and other costs
3. Increased control: Control the supply chain process in a more efficient manner

Six intermediaries developed to get independency of the key raw materials and realize cost benefits

Technicals

| | Products Developed | Commercialized |
|--------------|--------------------|----------------|
| Insecticides | 4 | 2 |
| Herbicides | 7 | 4 |
| Fungicides | 2 | 2 |
| Total | 13 | 8 |

Formulations for Exports

| | Products Developed | Commercialized |
|--------------|--------------------|----------------|
| Insecticides | 11 | 8 |
| Herbicides | 5 | 4 |
| Total | 16 | 12 |

Key Products Developed Contributing to Maharatna

| Technicals | Imazethapyr | Bispyribac Sodium | Glyphosate | Pretilachlor |
|------------|-------------|-------------------|--------------|--------------|
| Brands | Selector | Green Label | Hijack | Racer |
| | | | Hijack Super | Super Racer |
| | | | Flight 71 | |



2.3 R&D - Biological and Patents



Dr. LC Rohela
Sr. GM - QA

Why Biologicals?

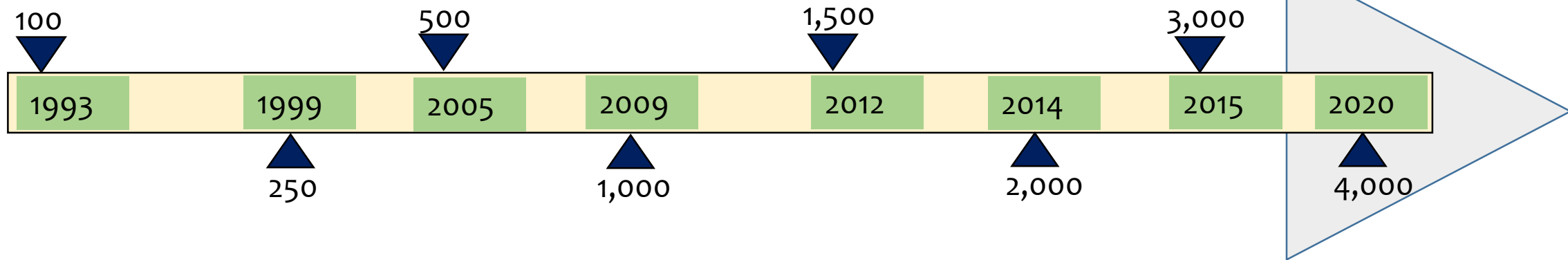
- Modern science is **200 years** old while nature science is **3 billion years** old
- Nature science wonders- Sequoia tree 100ft wide, 100ft tall withstand 100 tons of load in structure made of cellulose - strength is more than steel
- Integrated Crop Management (ICM) and Soil health - **Low toxicity to humans and nontarget insects**

Modern science following nature science path:

| | |
|------------------|---|
| Material science | <ul style="list-style-type: none">• Biopolymers |
| Medicine | <ul style="list-style-type: none">• Penicillin to cefixime etc., Taxol to Docetaxil, Neutraceuticals- Plant Derived |
| Cosmetics | <ul style="list-style-type: none">• Herbal blends |
| Agriculture | <ul style="list-style-type: none">• Pyrethin to synthetic pyrethroids• Nerotoxins to insecticides |

Recent trends – Biosimilar molecules in medicines, biosimilar peptides derived from spider venom as effective as agrochemicals with zero harvest waiting period **Is On A Rising Trend**

Global Market Potential – USD millions



Future Market Drivers

- Fewer new synthetic crop protection active ingredients will emerge - too expensive
- Improved market access for bio pesticides and bio stimulants
- Federal registration guideline for bio stimulants in EU & USA will make market more attractive
- ICM + Soil health
- MNC's in last 4 years have acquired Agri biological products manufacturing companies

Biological Facility Overview

Lab Facility: Aseptic lab, autoclaves , microscopes, laminar air flow, incubator, cryo centrifuge

Location: Shamli, Uttar Pradesh

Biological Team: Doctorate – 4 , Post Graduate - 1 , Graduate - 3

Total Product range

- Biofertilizer, Organic Manure, Soil Enrichment and Biostimulants
- Projected reduction in chemical fertilizers by 25%

Business Potential

- Current CAGR 10-15% in global Agri bio business

33 Cr
Biological Revenue
FY2019



Products Commercialized

MYCORAJA

- Vascular Arbuscular Mycorrhizae based fungal formulation

PRIME GOLD

- A biologically fortified PGR

MILSTIM

- A liquid organic manure

ROOT BEAD

- For increasing root nodule formulation in pulses

KAYAKALP

- A consortia of micro organisms for soil enrichment . It has potential for rejuvenating soil and has the capacity to protect plants from soil borne pathogens

Products in Pipeline

1. **Kayakalp PRO:** Kayakalp application was on farm fermentation for 6 days. Kayakalp Pro designed to 12 hrs on farm fermentation. Capacity for soil rejuvenation and controlling soil borne pathogens
2. **Zinc Solubilising Bacteria:** Under launching, capable of fortifying produce with Zinc and will support combating diabetes
3. **Glomus Arbuscular Mycorrhizae:** Production by root organ culture technique. Developing roots in jars in asptic conditions with mycorrhizae. Very good activity for transfer of nutrients to roots. Good export potential to USA, EU, Australia

- **Design Of Formulation**
 - Activity by contact, systemic or stomach
 - Single or multiple activities
- **Threats**
 - Hydrophobic agrochemical, 50-250g to spread over 1 acre in terms of land and 20-30 acres when calculated on leaf area in 1 acre
 - Uniform distribution up to target
 - Synergism establishment in case of combinations
- **Solutions** – Micronization, surface chemistry aided by suitably designed surfactants. Tank mix adjuvants
- **Types Of Formulations-** EC/SC/WP/WG/CGR/SC/CS/EW/SE/ ME

No. Of Formulations

| | Commercialized | Under Development |
|---------------------------|----------------|-------------------|
| Single AI | 11 | 1 |
| Combinations | 4 | 19 |
| Tank Mix Adjuvants | 3 | 2 |

Development Support

- Developing synergistic combination formulations performing multiple actions through different modes of action with increased bio efficacy duly supported by bio- efficacy team
- New generation formulation in SC/SE/CS/SG/ME form which are farmer friendly

Intellectual property of developed innovative products / process preserved through patents



7
Patents Granted

22
Patents Pending

| | Biotech | Formulation | Synthesis | New A.I. |
|------------------------------|---------|-------------|-----------|----------|
| Patents Granted | - | 3 | 4 | - |
| Patents due for Grant | 1 | 12 | 1 | 8 |



Aim – 

Target – Adherence to quality policy

Advantage – Farmer's satisfaction and brand development

Evaluation Criteria

- ✓ Standard operating procedure
- ✓ QC-RM/PM/FG
- ✓ Market complaints
- ✓ Corrective Action Preventive Action (CAPA)

Well Defined Process





2.4 R&D - OAT & IIL India



Mr. Kazuya Kishimoto
MD & CEO
OAT & IIL India Laboratories

Indian Experience on R&D

- ❖ India is suitable for R&D with nearly all crops and seasons
- ❖ Man-power is good and available reasonably
- ❖ Efficacy testing is possible round the year
- ❖ Easy to do field trails due to IIL's pan-India presence

Relationship with IIL and Experience

- ❖ IIL's long term vision for Research is a major reason for association
- ❖ OAT and IIL will bring the new chemistry with least possible cost
- ❖ Relationship with IIL has been great in these years and look forward to work on many more ventures
- ❖ Management is aggressive and fast decision is one of core strength's

Vision

- ❖ Becoming a first-class research & development centre, which continuously invent/develop new molecules to contribute to the world crop protection markets (including India & Japan)
- ❖ Will target to be a first company to invent an "Invent in India" first pesticide

History

- ❖ Established on 6th March, 2013 with approximately 50 employees, consisting of chemists/biologists and supporting staffs.
- ❖ 4 chemistry laboratories
- ❖ Total number is increased to 60 as on Nov, 2019

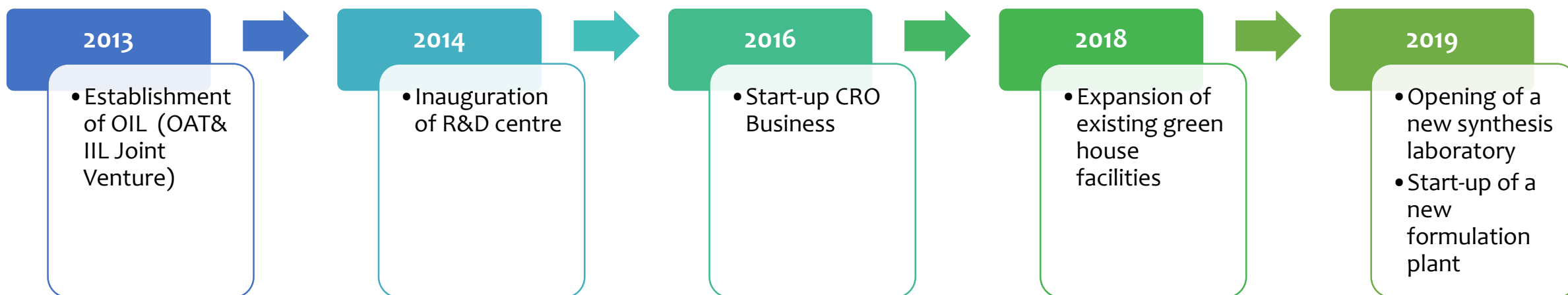




2.5 R&D - OAT & IIL India



Dr. Kallolmay Biswas
GM – R&D
OAT & IIL India
Laboratories



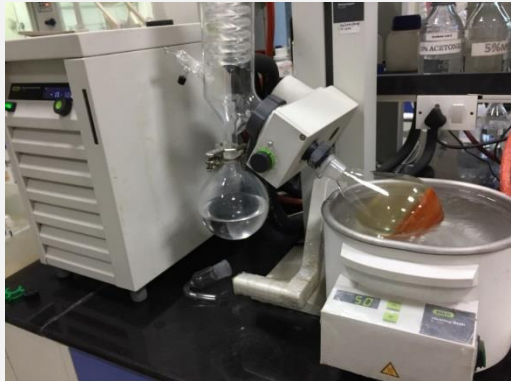
Mission

- ❖ Contribute to sound crop production through novel sophisticated crop protection agents and support the rich diet and health of people
- ❖ Creation of new agrochemicals with high safety to mammals, animals and non-target organisms and no impact to environment
- ❖ The residue of this product will be insignificant so that the crop can be used for consumption even after one day of spray

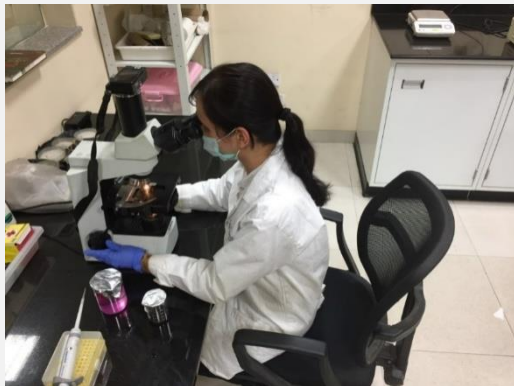
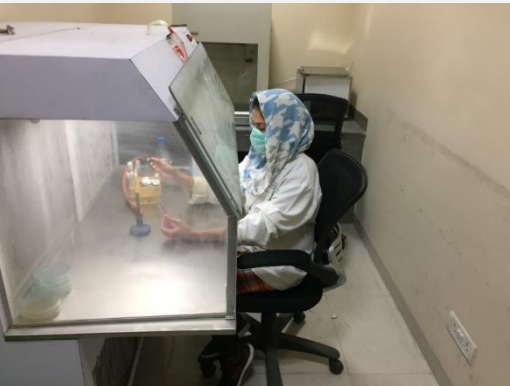
Invention at R&D Centre

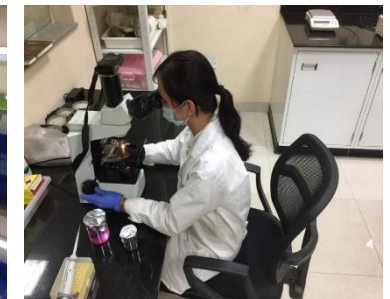
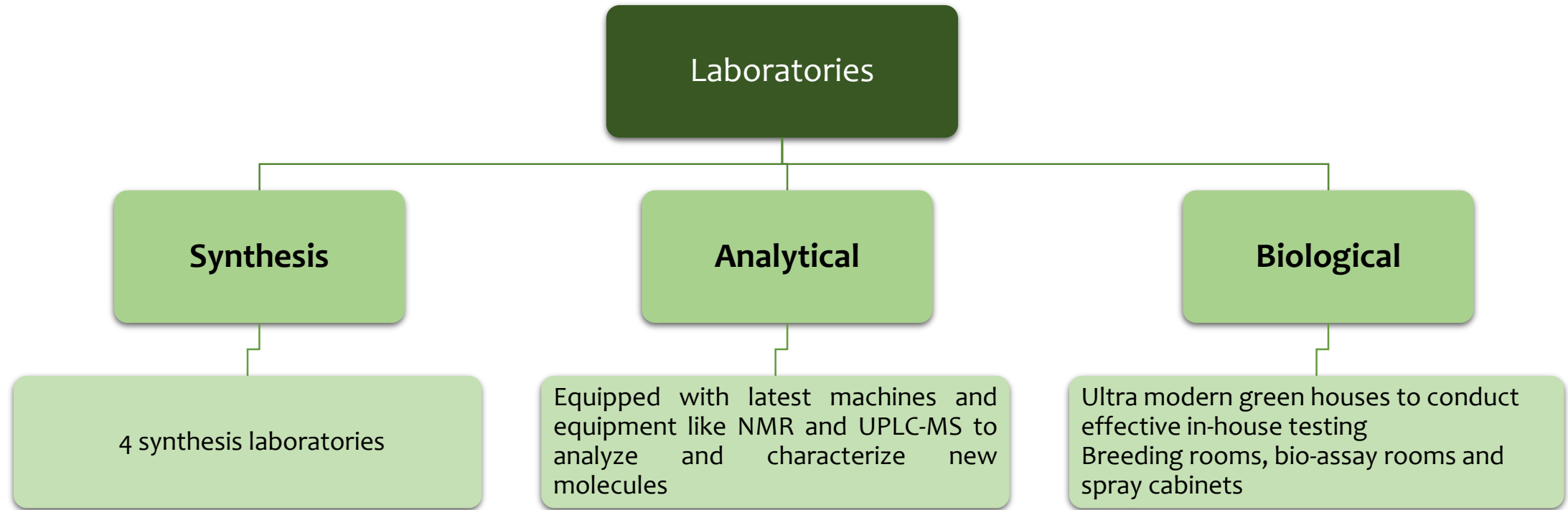
- ❖ First time, a Japanese company established such facility in the field of agro-chemicals in India
- ❖ Approved by DSIR, Ministry of Science and Technology
- ❖ 45+ scientists are conducting research
- ❖ Lead by renowned scientist with more than 20 year of experiences in the field of agrochemicals
- ❖ We have 5 Japanese leading the R&D centre

West Building - Synthesis Lab



East Building - Biology Lab





Chaperone

Sodium Para - Nitrophenolate 0.3% SL

- Plant Growth Regulator (PGR) which effects various stages of development of plants
- Stimulation of activity of enzymes resulting in faster cytoplasmic streaming, more efficient photosynthesis and mineral uptake

Advantages:

- Enhances germination and rooting
- Stimulates Vegetative growth and Flower bud development
- Accelerates Pollen germination
- Improves health as well as quality of crops
- Resulting in higher yield which gives more profit to farmers

Formulation Plant



Way Forward

- Develop new generation products and new generation formulations
- The flexible business model has enabled us to deliver good outcomes in a relatively short period of time
- The team is now concentrating on cost reduction, customer friendly and environment safe products



3. Regulatory, Market Development and Manufacturing



Mr. Sanjay Vats
Vice President



Mr. Sanjay Singh
GM – Market Development



Mr. Bhupendra Tiwari
Head Manufacturing



3.1 Regulatory



Mr. Sanjay Vats
Vice President

Regulatory Environment in India

- ❖ India is one of the most dynamic generic pesticide manufacturers in world and is fourth largest pesticide manufacturer after China, USA and Japan
- ❖ Use of pesticides in India is regulated by the Insecticides Act, 1968 and Rules, 1971
- ❖ All pesticides (Insecticides, Fungicides, Herbicides, Public Health insecticides) must be registered with Insecticides Board & Registration Committee (CIB & RC)

Registration Process

1

Registration is done under various sections of Insecticides Act, 1968

2

Application for the registration is prepared in Form-I and submitted online

- All requisite data (Chemistry, Toxicology, Bio-efficacy and Packaging) as per approved latest guidelines of CIB & RC is submitted

3

Scrutiny of submitted data by concerned scientists/technical officers to check data conformity

4

Registration approval by the Registration Committee

Registration Categories and Timeframe

| | | | | |
|--------------|---|------------------------------|--------------------|---|
| 9 (3) | First-time manufactured/imported in India | Original Registration | 5-6 Years | Data generation: 2.5 - 3 Years CIB & RC: 2-3 Years |
| 9 (4) | Already registered pesticides | Me-too Registration | 2.5-3 Years | Technical: 2.5 – 3 Years Formulations: 1-1.5 Years |

Registration Process Challenges

- ❖ Immense data requirement for registering new product in India
- ❖ Slow process to scrutinise the application resulting delay in registration approval

Dedicated Team to Speed Up the Process

Team

- 6 experienced members specialized in different streams and following up with regulatory departments:
 - Toxicology
 - Chemistry
 - Bio Efficacy
 - Packaging

IIL 9(3) Registrations

| Technicals | Formulations |
|------------|--------------|
| 2 | 10 |

| Name of the Product | Product Category | Brand Name |
|--|------------------|----------------|
| Bispyribac Sodium Technical 95% Min. | Technical | - |
| Bispyribac Sodium 10% SC | Formulation | Green Label |
| Imazethapyr Technical 93% Min | Technical | - |
| Bifenthrin 8%SC | Formulation | To be launched |
| Metsulfuron Methyl 20%WG | Formulation | To be launched |
| Diafenthiuron 40.1% + Acetamiprid 3.9%WP | Formulation | Hercules |
| Emamectin Benzoate 3% + Thiamethoxam 12%WG | Formulation | Encounter |
| Hexaconazole 4% + Carbandazim 16%SC | Formulation | Sofia |
| Buprofezin 22% + Fipronil 3%SC | Formulation | Aikido |
| Bifenthrin 3% + Chlorpyriphos 30%EC | Formulation | Lethal Gold |
| Bifenthrin 8.8%CS | Formulation | Rockstar |
| Cyenopyrafen 30%SC | Formulation | Kunoichi |

IIL Number of Registrations

- ❖ **Category 9(3) : 12** registration certificates approved by CIB & RC
- ❖ **Category 9(4) : 47** technical and **225** of formulation registration certificates approved by CIB & RC

Year-wise Registration

| Year | 9(3) Registrations | 9(4) Registrations |
|-----------|--------------------|--------------------|
| 2019-20 | 02 | 12 |
| 2018-19 | 05 | 29 |
| 2017-18 | 02 | 30 |
| 2016-17 | 02 | 26 |
| 2015-16 | - | 35 |
| Upto 2014 | 01 | 140 |

Registration Pipeline

| 9(3) Registrations | 9(4) Registrations |
|--------------------|--------------------|
| 22 | 06 |

IIL strategic focus on developing newer technicals and products which can be registered under 9 (3) category and can contribute towards growth of Maharatna Products



3.2 Market Development



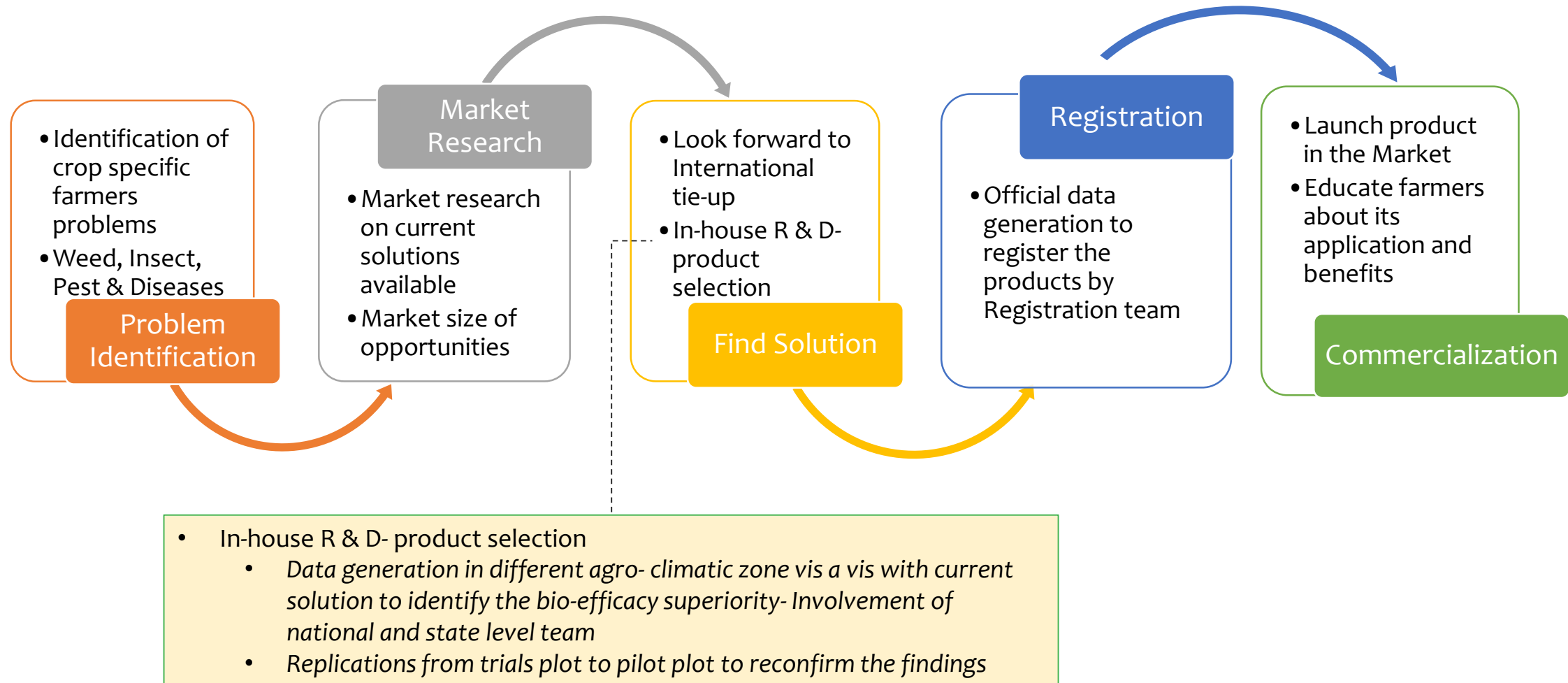
Mr. Sanjay Singh
GM – Market
Development

Tractor Brand – Farmer’s Choice




- ✦ A trust of decades
- ✦ Umbrella Brand for end to end solutions
- ✦ Farmers’ first choice pan India
- ✦ Symbol of Confidence



Continuous process from product identification to commercialization and offer complete solution to farmers



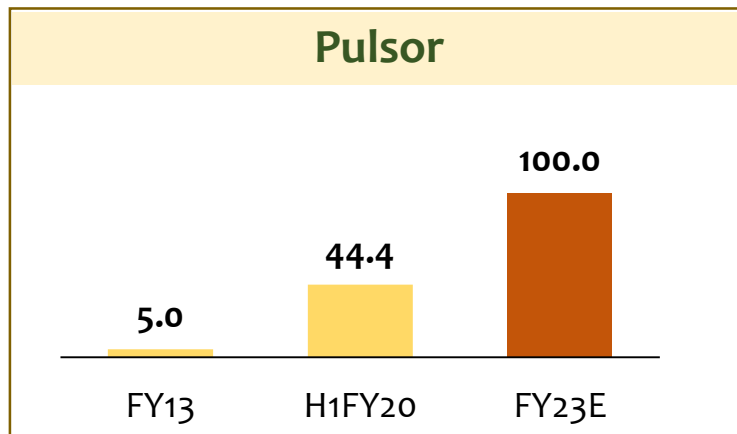
Nissan, Japan



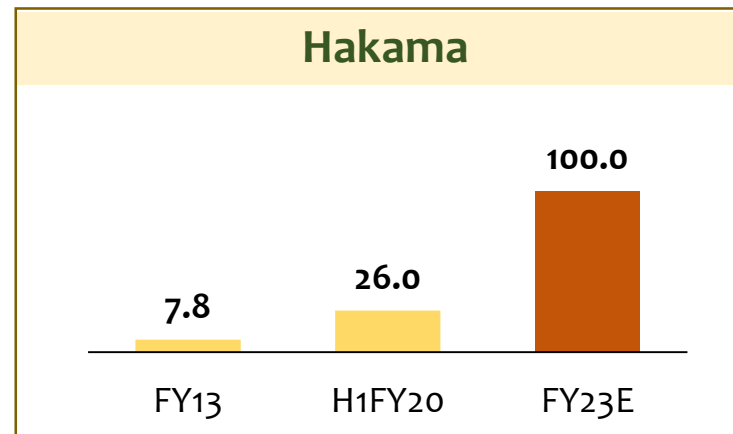
Marketing Tie up for specialty products Fungicide **PULSOR** (2012), Selective Herbicide **HAKAMA** (2012) and Miticide **KUNOICHI** (Oct 2019)

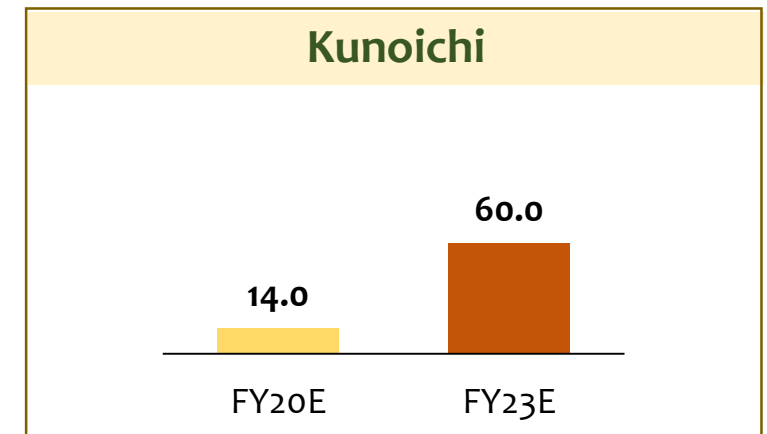
(All figures in Rs. Crore)



1 New combination to be launched



1 New variant and 3 New combinations to be launched



OAT Agrio, Japan



JV to set up a dedicated R&D Centre in India to invent new agrochemical molecules.
PGR **ROOT BEAD** (2017)
PGR **CHAPERONE** (Dec 2019)

Nihon, Japan



Tie up for **SUZUKA** (Flubendiamide) (2016) **AIKIDO** (2018) & **HAKKO** (Buprofezin) (2016)

Momentive, USA



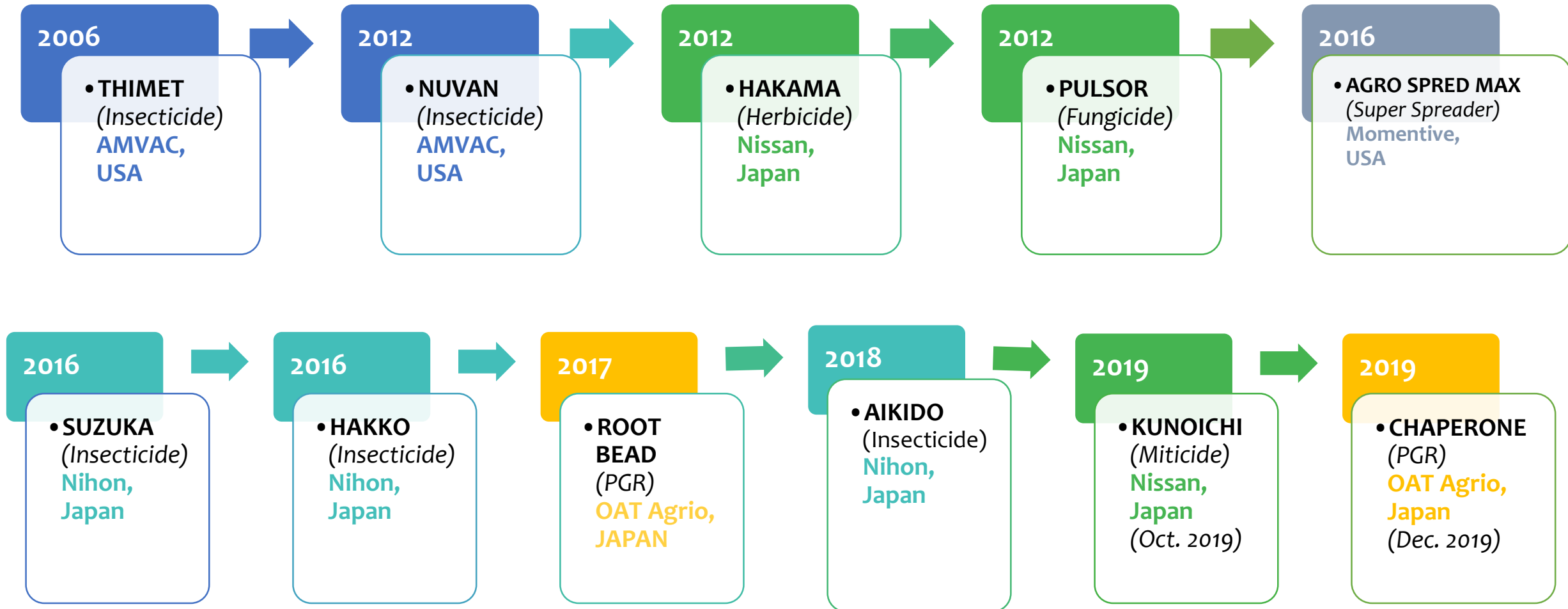
Tie up with MOMENTIVE Performance Material INC, USA for **AGRO SPRED MAX** (2016) for silicone based super spreader

AMVAC, USA



Technical Collaboration for manufacturing and marketing of **THIMET** (2006) & **NUVAN** (2012)

International Tie-ups and Timeline



Innovative Technology – Select Success Stories

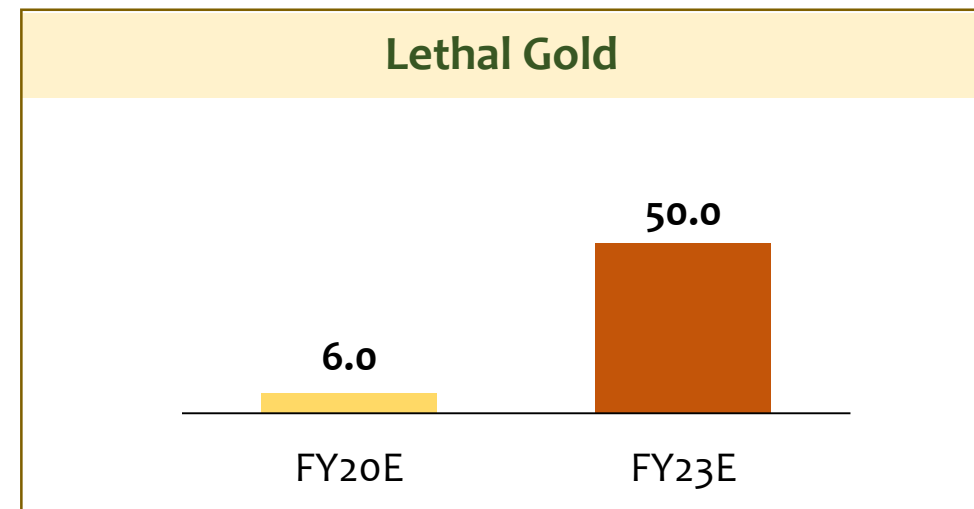
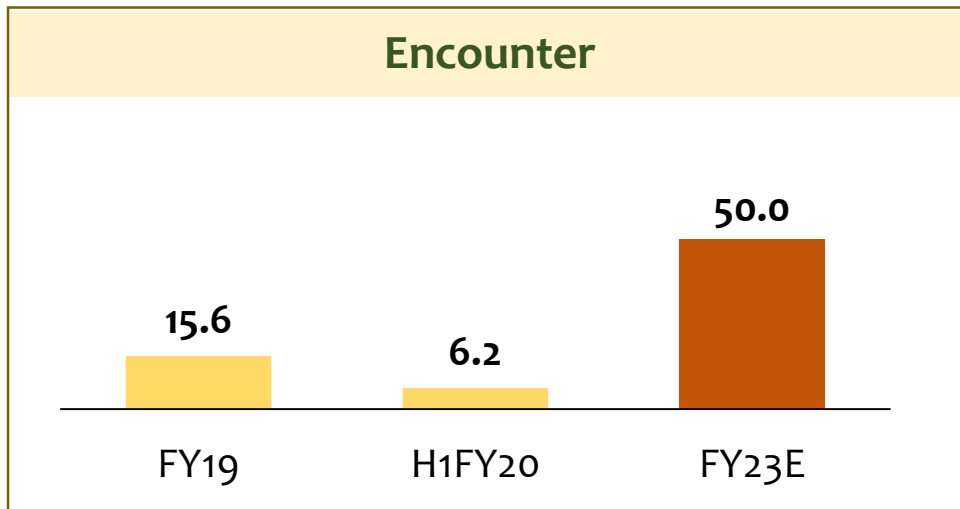
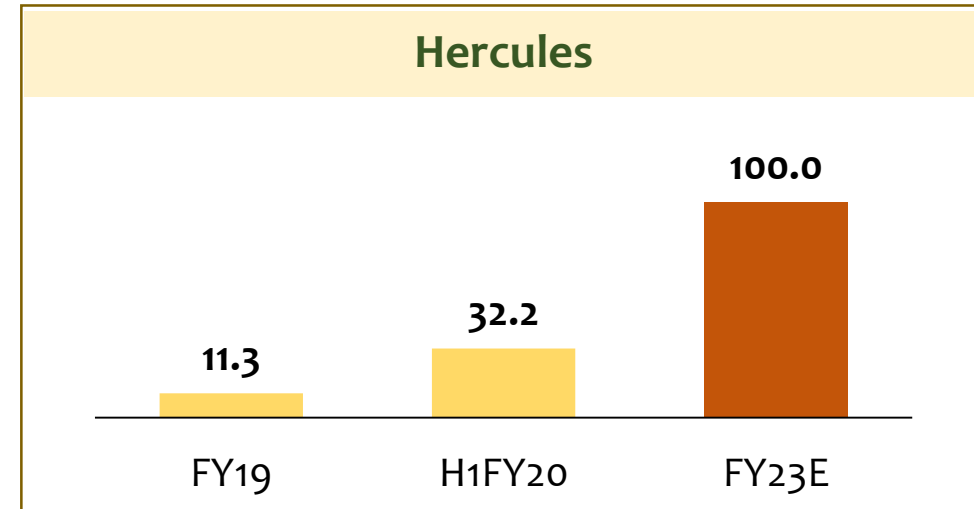
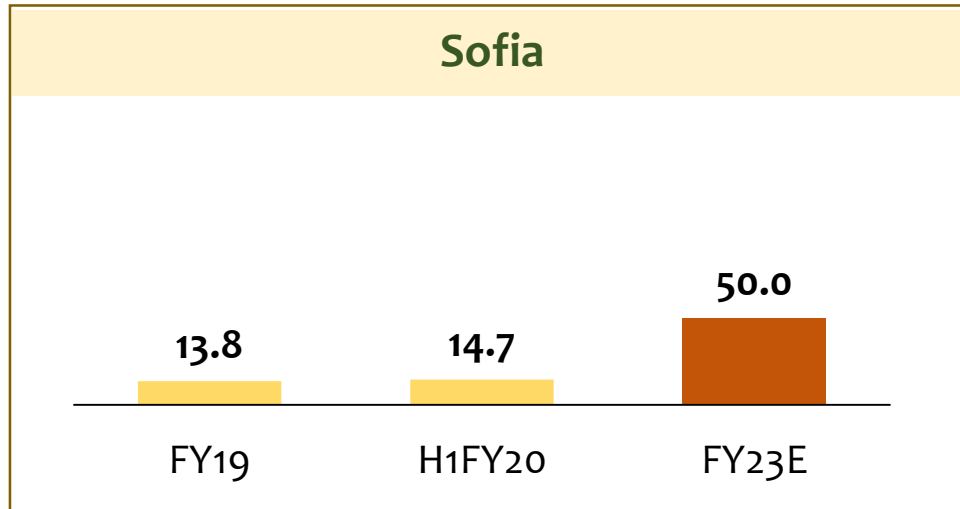
| | |
|----------------------|--|
| Root bead | : Nodule enhancer in pulse crops |
| Pulsor | : A unique product for rice sheath blight-Best solution available in India |
| Hakama | : Strong graminicide |
| Agrospred Max | : A silicon based spreading agent- need for the farmers |
| Kunoichi | : A strongest miticide from Nissan kills all the stages of mites including eggs. |
| Hercules | : A promising product for cotton to control white fly- most damaging pest |
| Encounter | : A perfect product for simultaneous solution of Loopers and Tea Mosquito bug in tea |
| Sofia | : Established as the first spray of crop protection against various diseases |



Many more examples are the success stories of IIL and the journey continues...

Key Products – Sales and Forecasts

(All figures in Rs. Crore)



Team

- Head Office - Delhi
- H.O. Market Development Team - 5
- Network Distributed in Zones:
 - North, East, South, West
- Market Development Team:
 - Pay Roll: 72
 - Third Party Roll: 600-850

West Zone

Pay Roll : 21
TPR : 150-200

North Zone

Pay Roll : 18
TPR : 100-150

East Zone

Pay Roll : 10
TPR : 150-200

South Zone

Pay Roll : 23
TPR : 200-300

Demonstrations: Crops vs Pest Specific



Field Days : Seeing & Believing



Farmer Meetings: Solution for specific problems



Mega Farmer Meetings: Crop solution



Intensive Consumer Awareness Program



Dealers Training Program



Market Development Activities & Large Farmer Contact

| | Mega Meeting | Farmer Meetings | Group Meetings | A V Van Campaign | Demo | Field Days | Balloon Show | Total Farmers contact |
|--------------|--------------|-----------------|----------------|------------------|---------------|---------------|--------------|-----------------------|
| Total | 750+ | 1,000+ | 20,000+ | 6,500+ | 5,000+ | 2,500+ | 250+ | 20+ Lakhs |

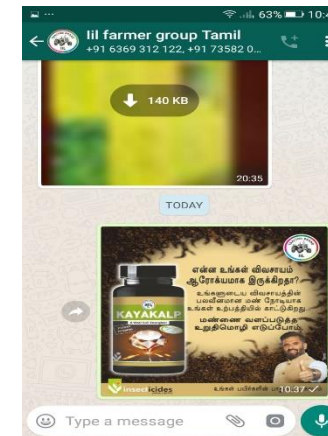
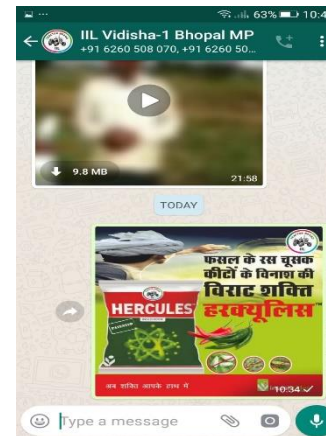
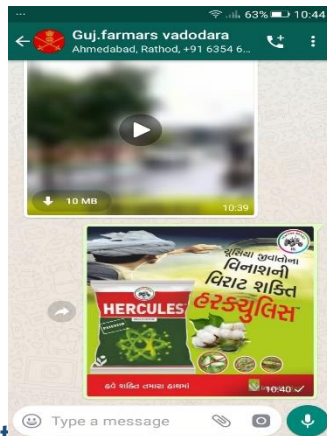
Engaged with 20+ lakh farmers through Market Development Activities & Farmer Contact Initiative

Mass Media Campaign: News Paper, Radio and TV campaign



Social Media: WhatsApp groups of Farmers across country

Android App and WhatsApp Group for Farmers and Dealers for product information





3.3 Manufacturing



Mr. Bhupendra Tiwari
Head Manufacturing

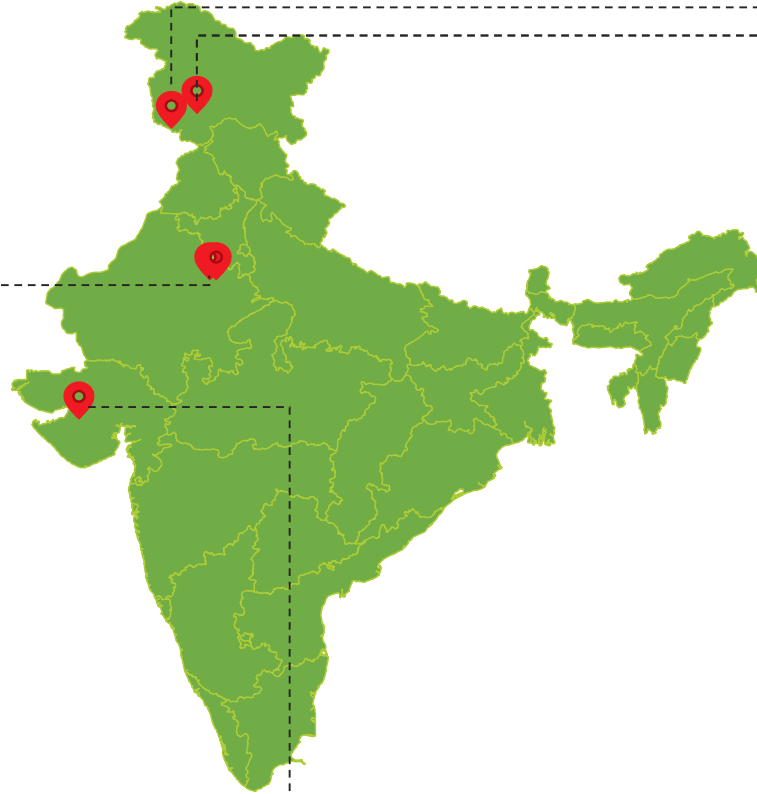
Manufacturing Sites – Formulations



Unit 1: Chopanki, Rajasthan



Unit 2: Chopanki, Rajasthan



Unit 4: Samba, J&K



Unit 5: Udhampur, J&K



Unit 3: Dahej, Gujarat

Aggregate Installed Capacity

19,400 KLPA
Liquid Formulation

75,750 MTPA
Granules Formulation

18,770 MTPA
Powder Formulation

13,800 MTPA
Technical Garde

New Generation Formulations

- ❖ New generation formulations are effective, safer, easier to handle and environment friendly

Water Dispersible Granules
(WG)

Suspension Concentrate
(SC)

Concentrated Emulsion (CE)

Microemulsion
(ME)

Controlled Release
Formulation
(CR)

Suspo-emulsion Formulation
(SE)

Automation

- ❖ Most of the plants are having automation in formulation and packaging

Automatic formulation and packing lines for powder, granules and liquid products



Quality Check Laboratory

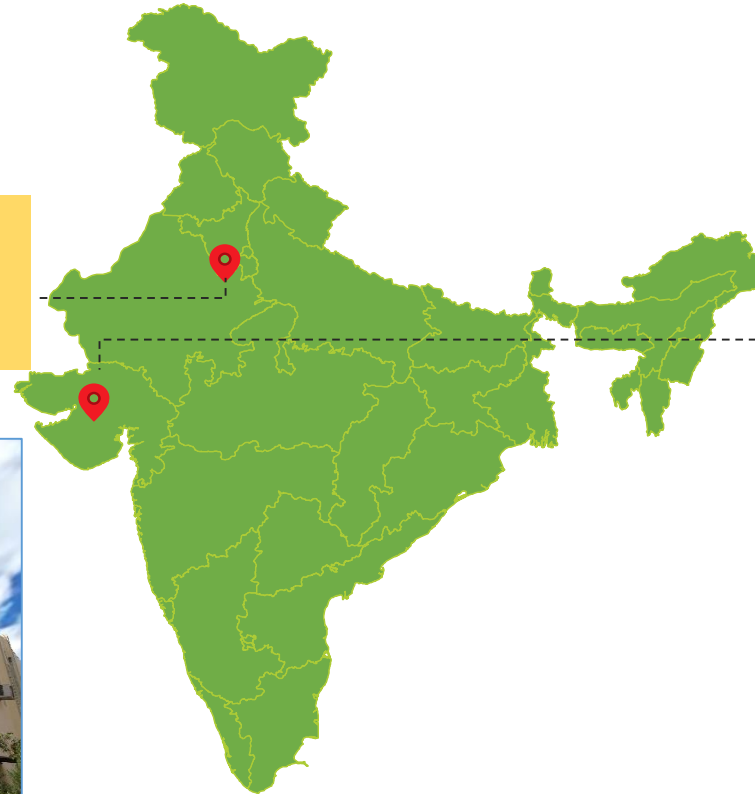
- ❖ All factory sites are having well established test lab with ultra modern facilities and experienced chemists to check
 - ❖ Raw materials
 - ❖ Intermediates
 - ❖ Finish goods
 - ❖ Packing materials
 - ❖ Environmental samples
- ❖ **NABL Accreditation at Chopanki**

**ZERO
DEFECT**
Aim



Manufacturing Sites – Technicals

Unit 1:
Chopanki, Rajasthan
(*Technical Production started in 2007*)



Unit 2:
Dahej, Gujarat
(*Technical Production started in 2011*)



Aggregate Installed Capacity

13,800 MTPA
Technical Garde

Characteristics

- Multi-products plant and multipurpose lines
- Self dependent in utilities
- Backward integration for products
- Independent quality control
- Remarkable R&D support for process improvement, validation of new products & innovative ideas
- Adaptability of latest technology in term of cost & environment friendliness
- State of art Effluent Treatment facility
- Trained safety team with training facility
- Higher capacity utilization
- Efficient regulatory and technical team
- Due to backward integration less dependency on suppliers
- Low site operating cost due to expansion on same site

Team and Infrastructure

Chopanki

- Regular Employee : 100
- Contractual : 150

Dahej

- Regular Employee : 300
- Contractual : 300
- Total area : 50 Acre

Products Manufactured

Insecticide & Fungicide Plant - Dahej

| Product | Brand |
|----------------------|--------------------------|
| Chlorpyrifos | Lethal Range of Products |
| Cartap hydrochloride | Indan |
| Thiophanate Methyl | Prism |
| Diafenthiuron | Hercules, Logo/ Gama |
| Tricyclazole | Force11 |
| Acetamiprid | Hercules, Sharp |

Insecticide & Fungicide Plant - Chopanki

| Product | Brand |
|--------------------|--|
| Lambda Cyhalothrin | Bravo, Metacil |
| Bifenthrin | Super Star, Lethal Gold |
| Thiamethoxam | Arrow, Bheema, Bheema Super, Encounter |
| Coded Fungicide | Fungicide for CRAMs |

Herbicide Plant - Dahej

| Product | Brand |
|----------------------|--------------------|
| Atrazine | Strike |
| Pretilachlor | Super Racer, Racer |
| Metribuzin | Anchor |
| Sulfosulfuron | Kaiser |
| Imazethapyr | Selector |
| Bispyribac sodium | Green Label |
| Diuron | Duron |
| Clodinafop propargyl | Omega |
| Cloquintocet-mexyl | - |

Capacity Expansion Plans To Manufacture Technicals

- ❖ Target to add 5 new technical in 2020
- ❖ Target to backward integrate intermediates for three technicals

Backward Integration Plan at Dahej and Chopanki

- Developed land is readily available for expansion
- Due to geographical location of Dahej, logistics & easy availability of raw material will help in cost reduction as compared to other part of India
- Gearing of ourselves to meet future demands of new customers and enhance overall profitability

Advantages

- Lower dependency on supplier
- Low manufacturing cost of finished products
- Reduction in overhead cost per tonne
- Optimum utilisation of existing utilities
- Better control on process
- Lower inventory build-up and shorter working capital cycle

Setting up “SEZ” unit at Dahej

- We are coming with export oriented unit at SEZ Dahej for formulation of Insecticides & herbicides
- Production is expected to commence in February 2020
- This will enable us to multiplying our exports and meet our FY2023 targets

Advantages

- 10-year tax holiday in a block of the first 20 years
- Exemption from duties on all imports for project development
- Exemption from GST on domestic sourcing of capital goods for project
- Exemption from import duty, GST and other taxes



4. Sales & Marketing



Mr. VK Garg
Vice President



Dr. Arun Kohli
Vice President –
Institutional Sales



Mr. Shrikant Satwe
Head - International
Business



4.1 Sales & Marketing – Domestic Sales



Mr. VK Garg
Vice President

Agricultural Production vs Pesticides Consumption

“ FARMERS WAS THE FIRST SOCIAL PERSON ON EARTH”

| Country | World rank in Agriculture Production | Agriculture Production (\$ bn) | Pesticide Use (tons, 2017) | Number of Pesticide molecules registered |
|-----------|--------------------------------------|--------------------------------|----------------------------|--|
| China | 1 | 978 | 1,763,000 | 681 |
| India | 2 | 394 | 52,750 | 282 |
| EU | 3 | 269 | 362,421 | 467 |
| USA | 4 | 164 | 407,779 | 481 |
| Brazil | 7 | 81 | 377,176 | 477 |
| Japan | 9 | 58 | 52,248 | 583 |
| Thailand | 13 | 41 | 35,287 | 364 |
| Australia | 17 | 37 | 63,416 | 561 |
| Argentina | 21 | 32 | 196,009 | 414 |

Important Observations:

- India, the second largest agricultural producer, uses much less pesticides both in volume and in variety
- “Indian farmers use excessive pesticides” is a mischievous propaganda by foreign funded environmental activists to malign Indian agriculture in the international trade

Source: Crop Care Federation of India

Region-wise Pesticides Ratio

| REGION | 2002 | 2018 | REMARKS |
|------------|------|------|---|
| East Zone | 13% | 20% | Generic dominant and fast-growing market |
| West Zone | 20% | 25 % | Combination of Generic & Research and fast-growing Market |
| North Zone | 30 % | 25% | Research dominant and growing in Value |
| South Zone | 37 % | 30% | Combination of Generic & Research And growing in value |

| REGION | IIL Share in B2c Sales 2018-19 | Market Share 2018-19 |
|------------|--------------------------------|----------------------|
| East Zone | 27% | 6% |
| West Zone | 22% | 5% |
| North Zone | 23% | 6% |
| South Zone | 28% | 5% |

IIL presence is well diversified across states and zones

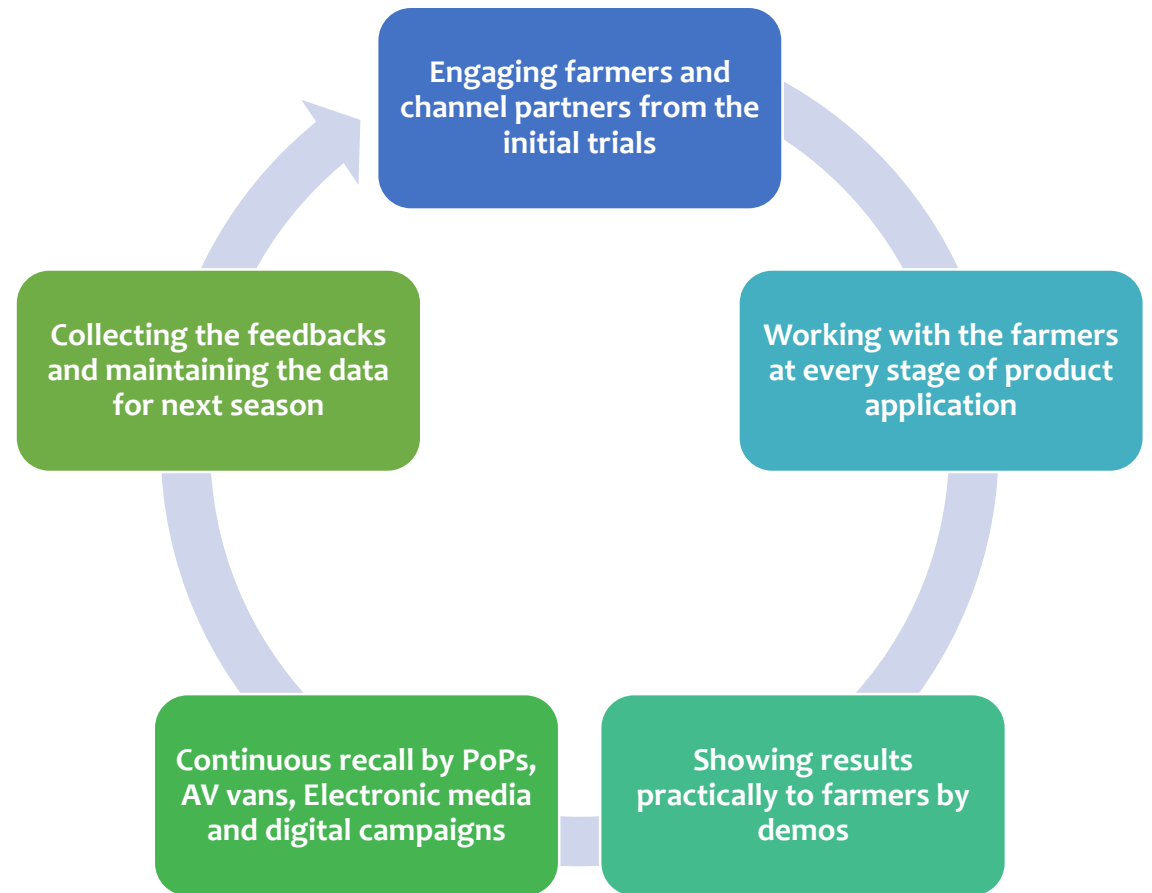
Strategy to move to Blue Ocean

Team

| Designation | Strength |
|----------------------|----------|
| Vice President | 4 |
| Marketing Manager | 2 |
| Zonal manager | 7 |
| Regional Manager | 38 |
| Area Manager | 54 |
| Sales Executive | 43 |
| Sales Officer | 115 |
| Sales Representative | 193 |
| Development team | 72 |

500 + Team with 600-850 TPR

Farmer Engagement for the Product Launch



❖ Farmer centric approach

❖ Strong Brand Image and Recall

- **Old brands:** Lethal, Lethal Super, Thimet, Monocil, Victor, Sharp, Hijack And Racer
- **New brands:** Pulsor, Xplode, Nuvan, Mycoraja, Green Label, Hijack Super, Hakama, Super Racer, Lethal Gold, Hercules, Sofia, And Kunoichi

❖ PAN India Quality & Stable network

- Depots : 28
- Distributors: 5,000
- Dealers: 60,000

❖ Strong market development team and robust product identification to commercialization process

Strengthen the team

Strengthen the market

Strengthen the field

Strengthen the product portfolio

Strengthen the system and policy



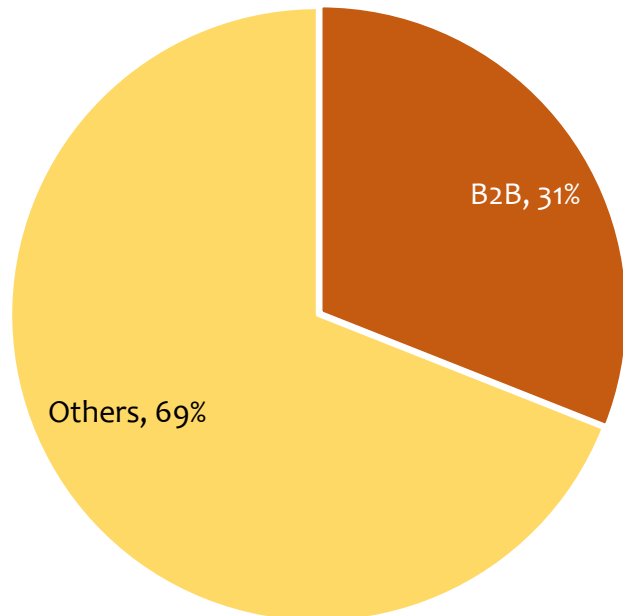
4.2 Sales & Marketing – Institutional Sales



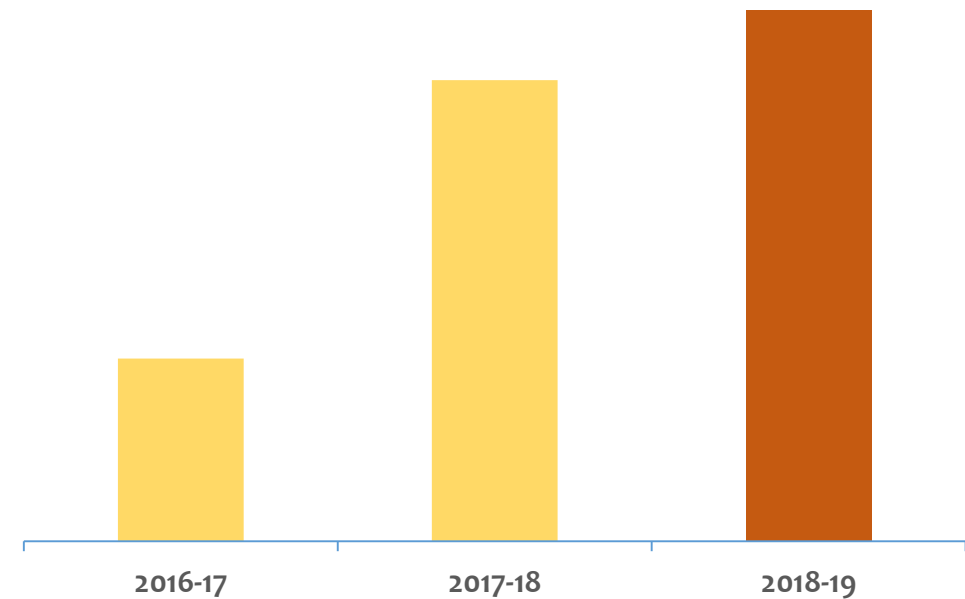
Dr. Arun Kohli
Vice President –
Institutional Sales

Institutional Sales Contribution

FY2019 Revenue



Institutional Sales Trend



Constant growth in sales over the years

IIL Capabilities

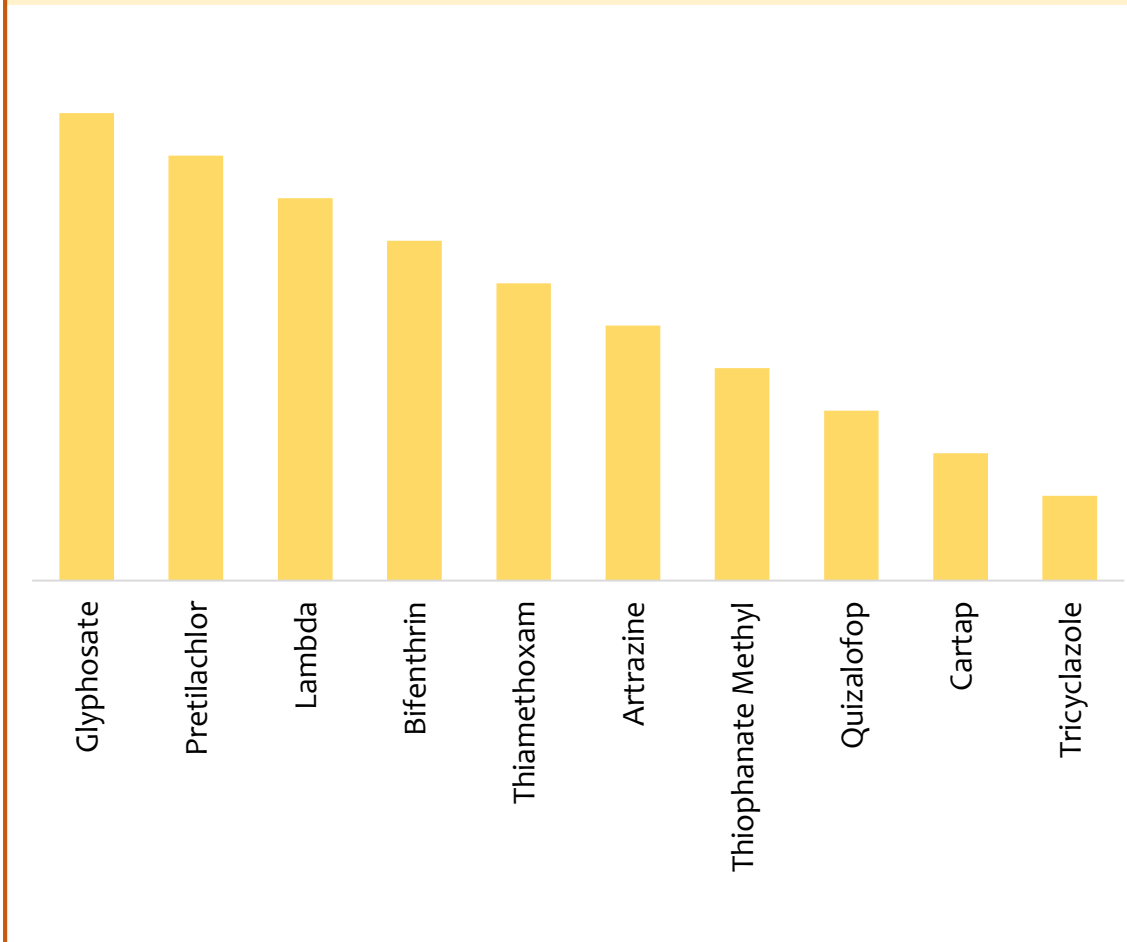
- Two synthesis plants
- Five formulation plants
- Capability to produce complex molecules
- R&D support
- Good brand perception with large customers
- Good quality product
- Timely execution capabilities

Diversified Range of Products

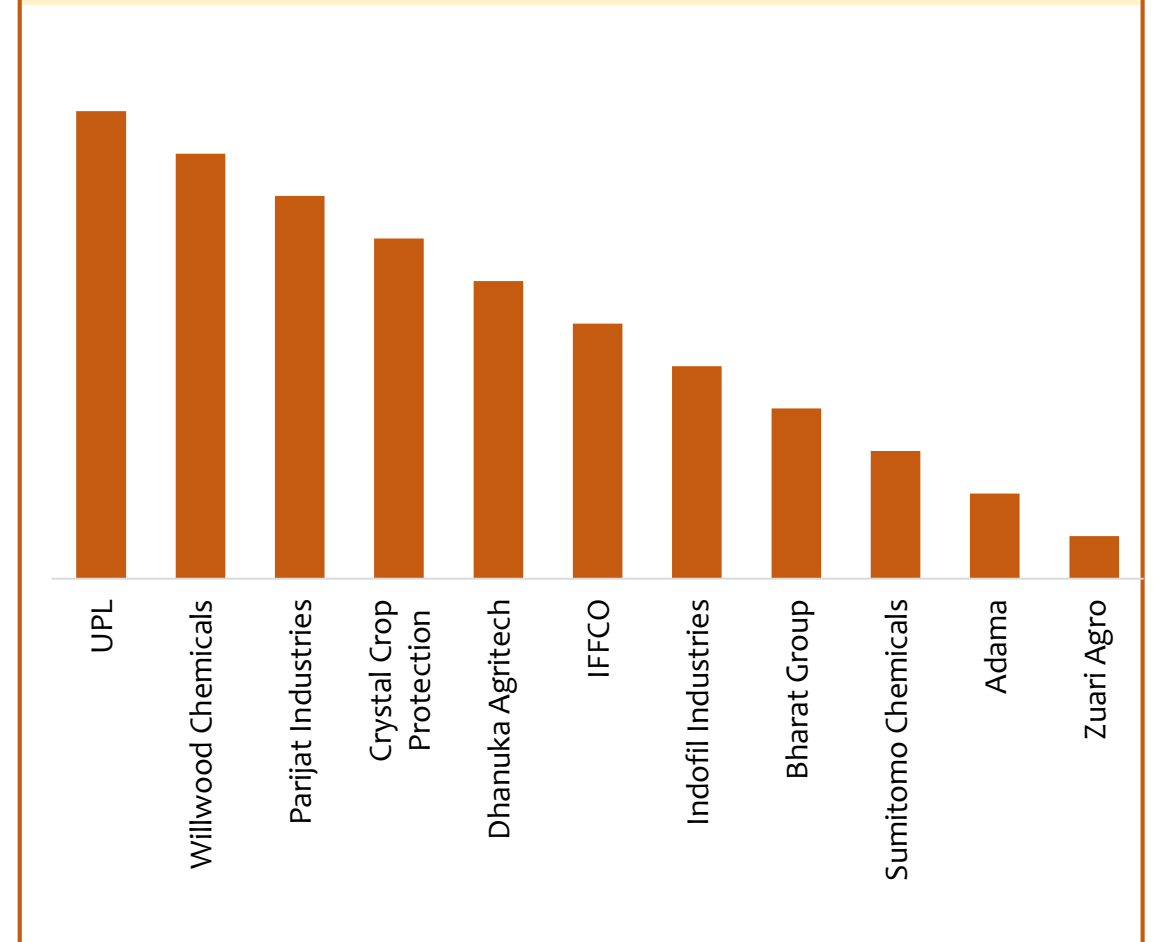
| Insecticides | Fungicides | Herbicides | Household Insecticides |
|--------------------|--------------|-------------------|------------------------|
| ACETAMIPRID | TRICYCLAZOLE | GLYPHOSATE | D-TRANS ALLETHRIN |
| LAMBDA CYHALOTHRIN | THIOPHANATE | ATRAZINE | |
| IMIDACLOPRID | METALAXYL | IMAZETHAPYR | |
| BIFENTHRIN | MYCLOBUTANIL | PRETILACHLOR | |
| DIAFENTHIURON | | BISPYRIBAC SODIUM | |
| CHLORPYRIFOS | | SULFOSULFURON | |
| CARTAP | | CLADINOFOP | |
| | | QUIZALOFOP Bulk | |

Top Products & Customers

Top 10 Products – FY2019



Top Customers – FY2019



Strategy

- Adding new chemistries and molecules
- Focus on complex molecules with low competition
- Identifying the products getting off patented and focus on reverse engineering
- Have large scope for sales to new and existing customers
- Pan India presence already and plan is to go deeper in the market through strong sales and distribution network

Future Scope

- Agriculture markets to grow by double digit
- Commodity prices are high
- Farmers are prepared to invest in Agri Input/agro chemicals
- The changed product portfolio caters to all segment
- We are future ready to cater to customers
- Our Business relations with our customers
- Dual working on buying and selling
- Technology transfers and sharing



4.3 Sales & Marketing – International Sales

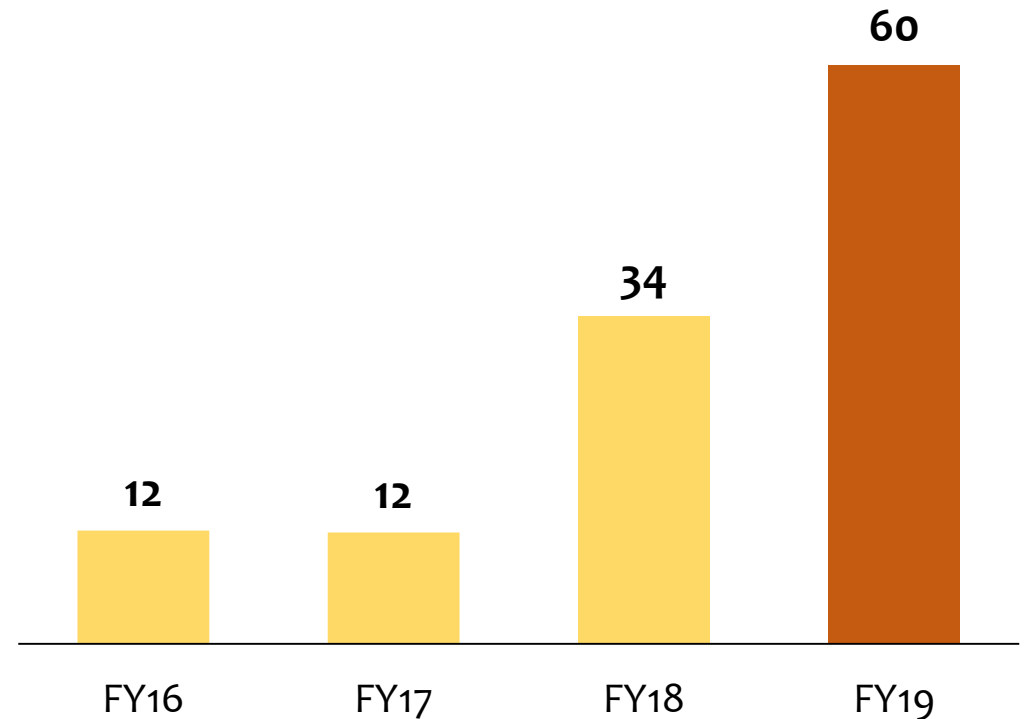


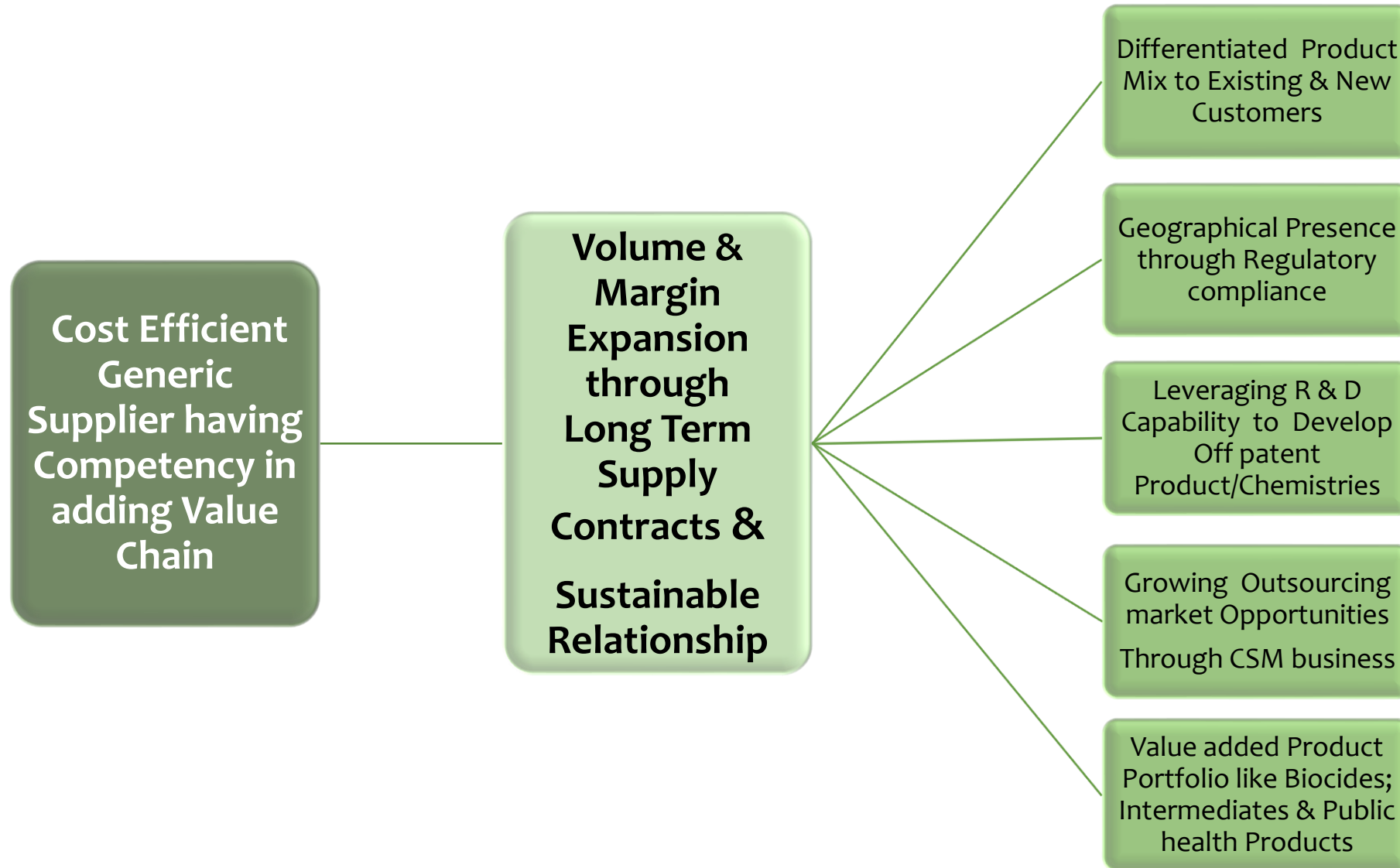
Mr. Shrikant Satwe
Head - International
Business

Highlights

- IBD grown at 82% CAGR between FY16-19
- IBD contribute 4 % of total IIL Sales
- Presence in 18 countries with 42 customers
- APAC contributed maximum (40%) followed by Africa & ME
- Herbicides Contributed maximum followed by Insecticides & Fungicides
- Formulation contribute > 90% of the business
- WDG ; EC formulations maximum contributed
- 80% business from IIL core products
- “Trading House Status” confirmed in FY18

International Sales Trend (Rs. Cr.)





Key Products : Data in Progress

Insecticides

- ❖ Acetamiprid
- ❖ Thiamethoxam
- ❖ Dinotefuran
- ❖ Diafenthiuron
- ❖ Lambda Cyhalothrin
- ❖ Bifenthrin

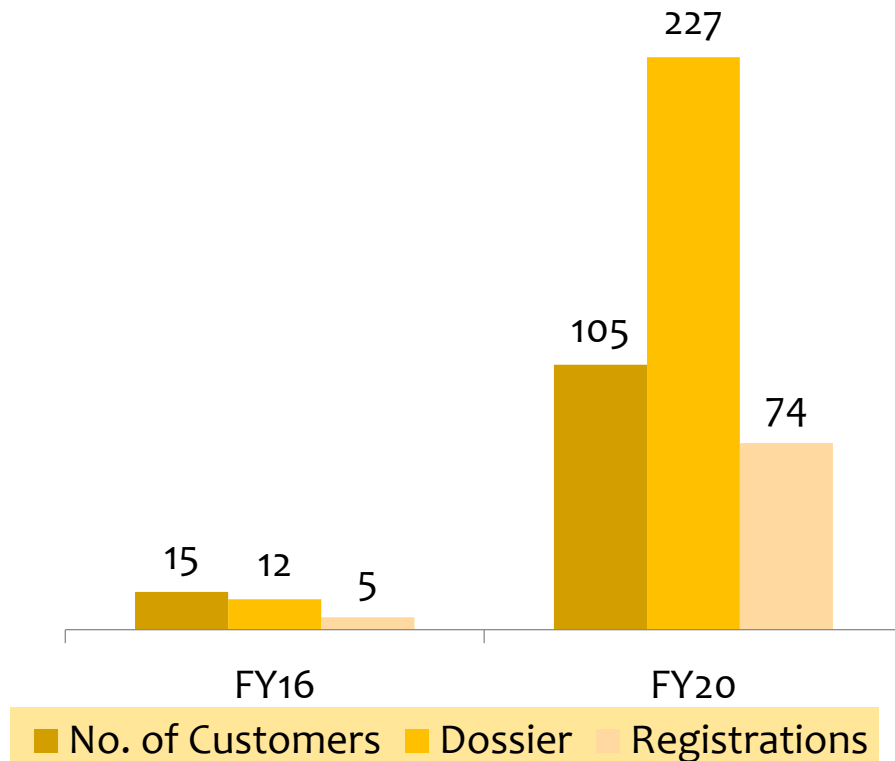
Herbicides

- ❖ Bispyribac sodium
- ❖ Diuron

Fungicides

- ❖ Thiophanate Methyl
- ❖ Tricyclazole
- ❖ Myclobutanil

Regional Alliances



Highlights

- Presence in 30 countries & > 100 customers through registrations
- Total 227 Dossiers submitted till Nov 2019
- Total 74 Registrations received till Nov 2019

(in USD BN)



Regulatory

- ❖ Stringent Data Compliance & regulatory guidelines
- ❖ Lead time for Registration
- ❖ Restricted product usage due to resistance issue
- ❖ GM area Expansion
- ❖ OECD registration must for MEENA markets
- ❖ “REACH” & Quality Compliance

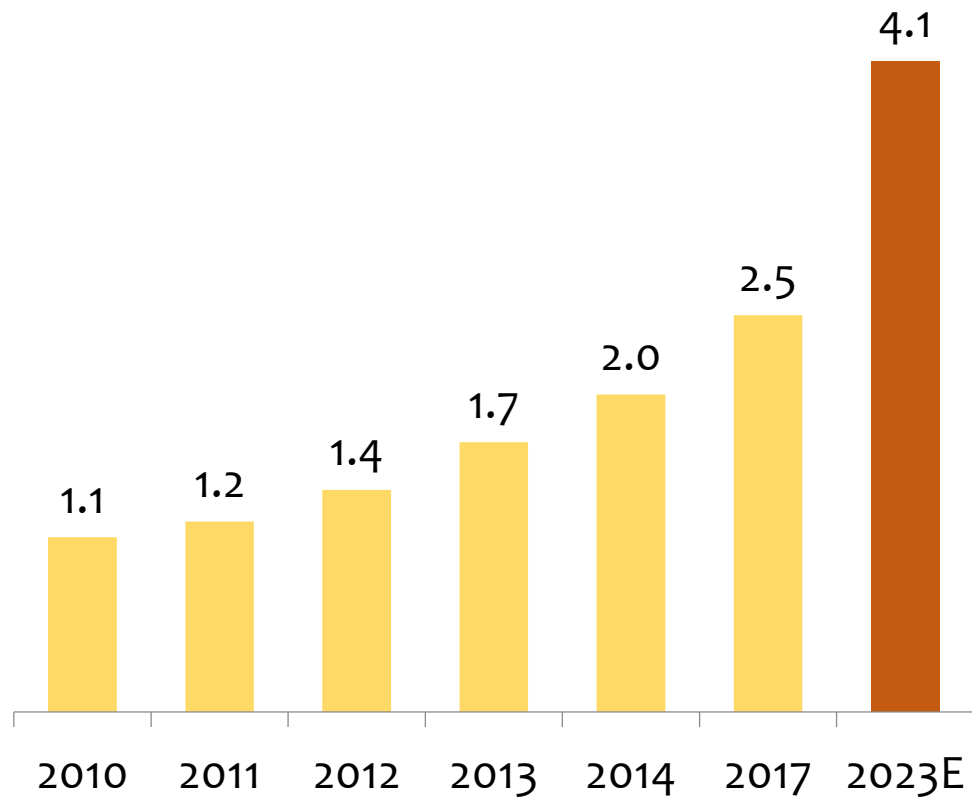
Government

- ❖ Slow Economy
- ❖ Distressed Farm Commodity prices
- ❖ Stringent ESH norms
- ❖ Trade Sanctions
- ❖ Credit Risk
- ❖ Currency Volatility
- ❖ Trade Blocks & Trade agreements like US-China Trade Agreements; BREXIT

Supply Chain

- ❖ Major Uncertainties in Raw Material availability & Pricing
- ❖ Lead time to register alternative source for major Intermediates

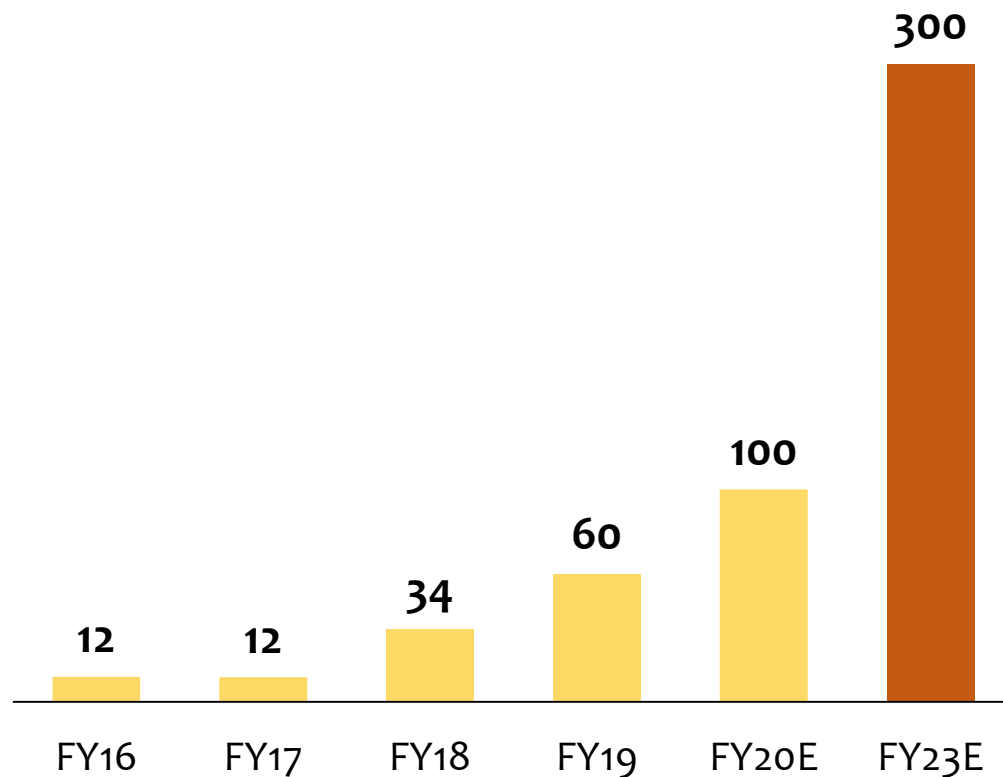
Exports from India (USD Bn)



Highlights

- Exports from India to grow up to 4.10 USD Bn by 2023
- Global players incrementally looking to diversify their sourcing base to India
- Strong Ethanol demand 15% as bio diesel
- Proportion of High Generic molecules in rise leading to lower IP protection concerns
- Demand for Ecofriendly / Innovative product
- Consolidation within industry
- Higher Prices of the Agriculture commodities
- Demand for high Value & Industrial Crops
- Rising Per Capita Income & demand from emergent economies in both Crop & Non crop

International Sales Trend (Rs. Cr.)



Growth Outlook

- In FY23 revenue to grow up to Rs 300 crs which is 16.2 % of Total Sales
- Formulation to Tech Sales Ratio 65 to 35
- APAC will contribute (33%) followed by Africa(28%); Middle East (15%); LA (15%) & Europe (8%) each & NAFTA(1.6%)
- Expecting some contribution from CRAM & Biopesticides business
- Insecticides will contribute maximum followed by Herbicides & Fungicides
- Demand for eco-friendly formulation
- Focus on cost effective “ SEZ” based supply
- “2 STAR Trading House” status in FY20

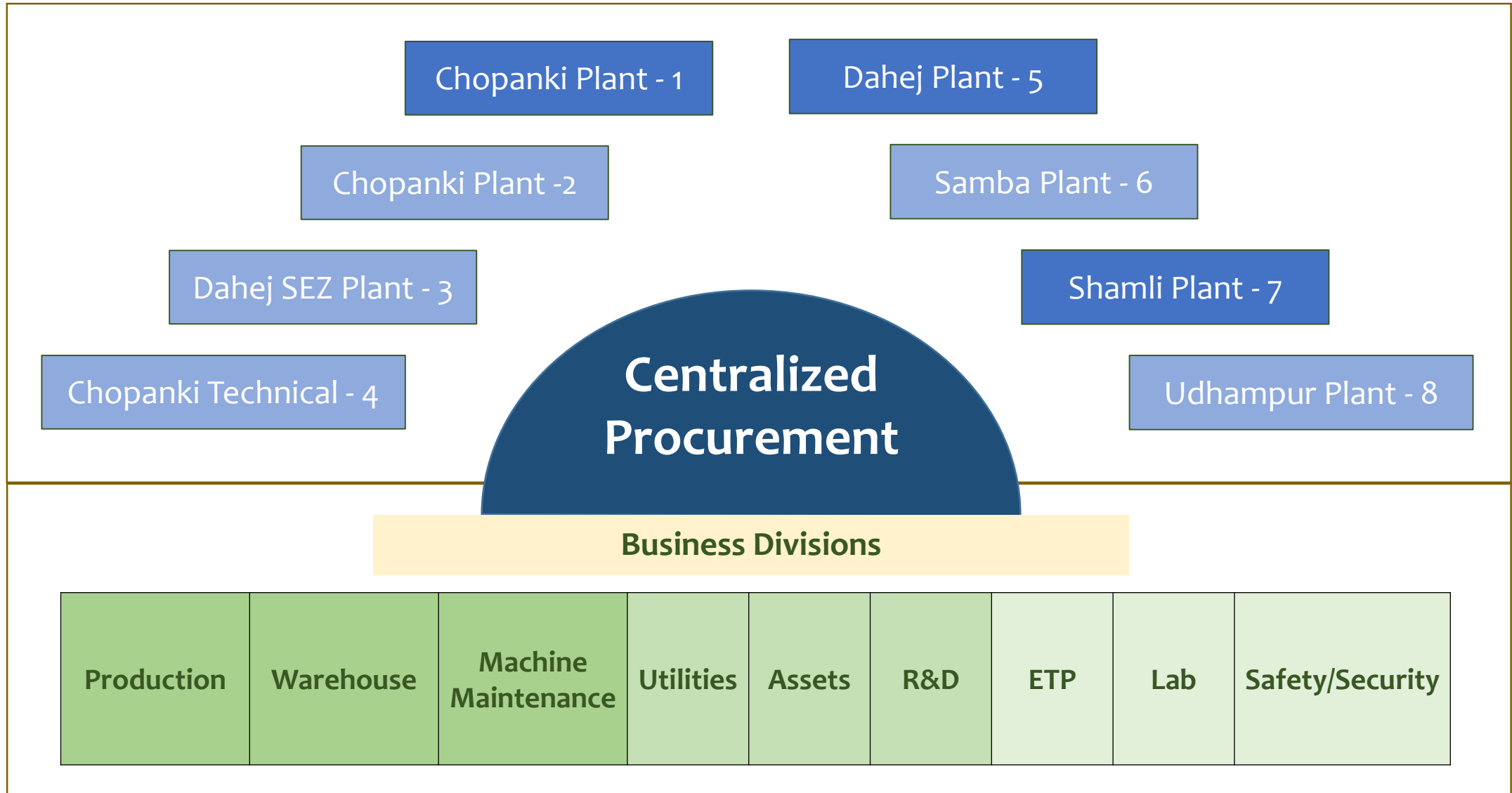


5. Procurement

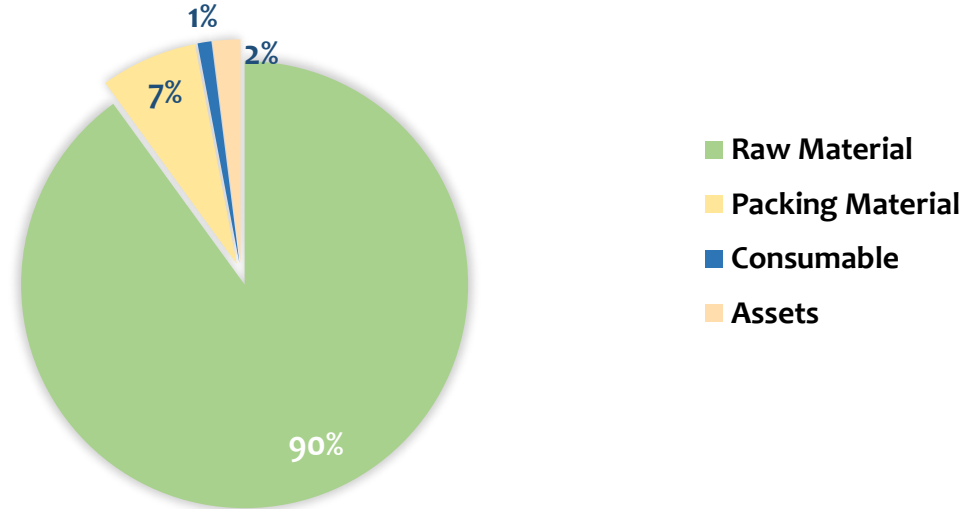


Mr. Sunil Wason
Vice President
Procurement

Centralized Procurement

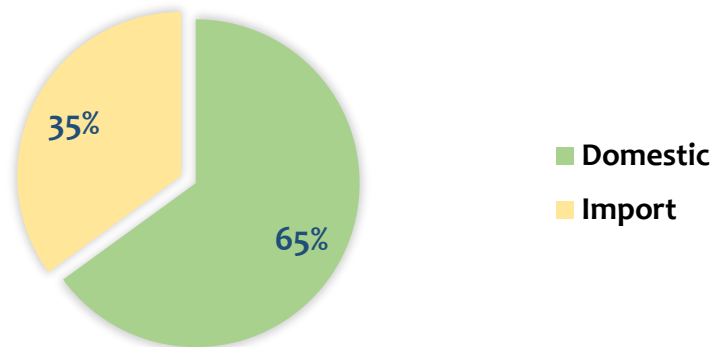


Procurement Expenses – Category Wise

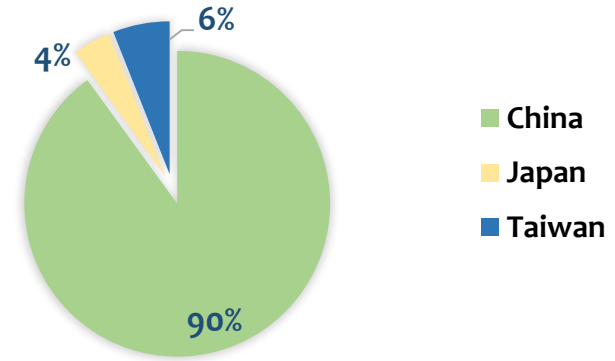


Raw Material

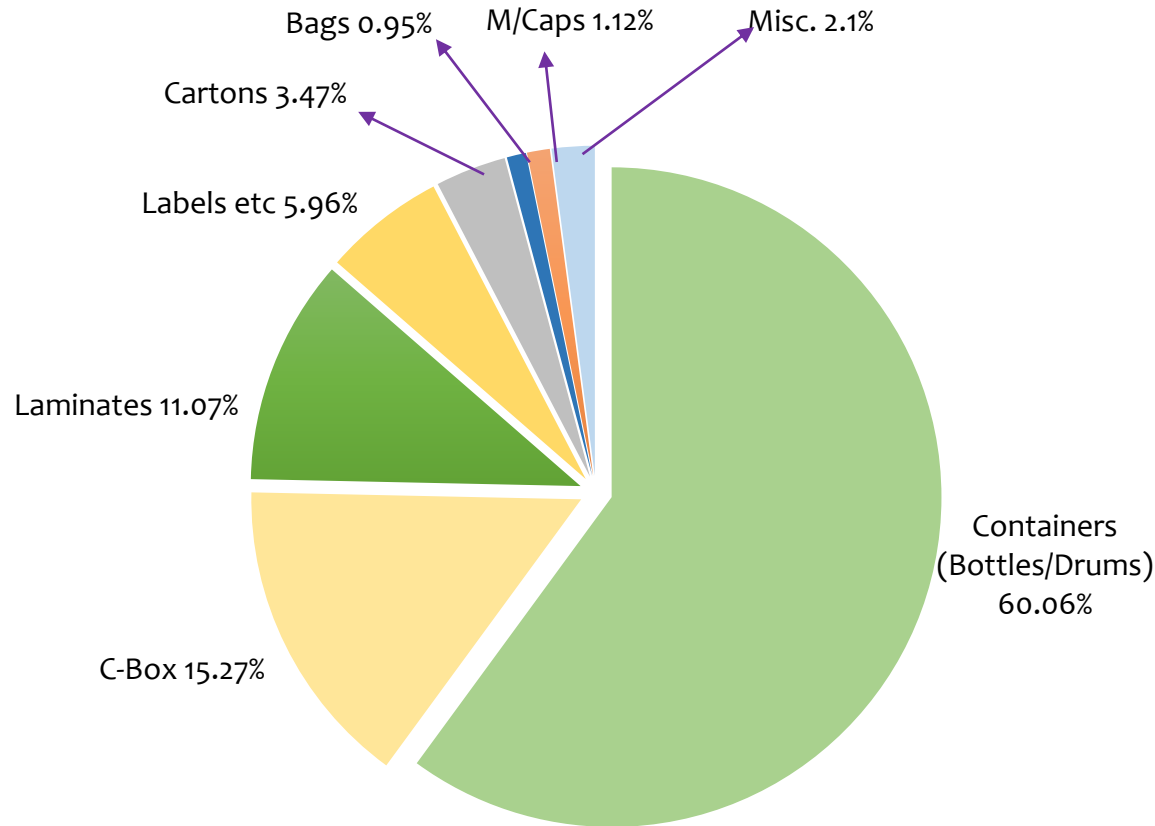
Domestic vs Import



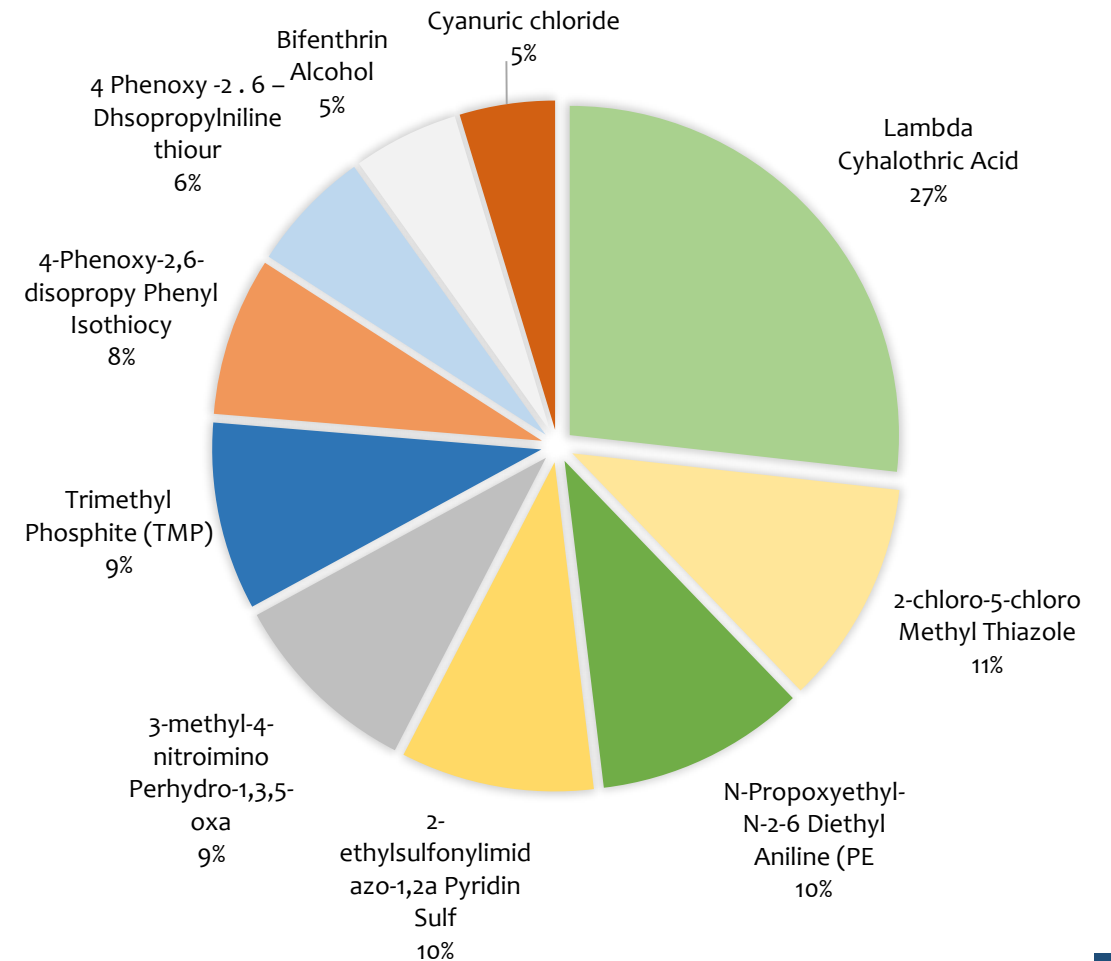
Geography



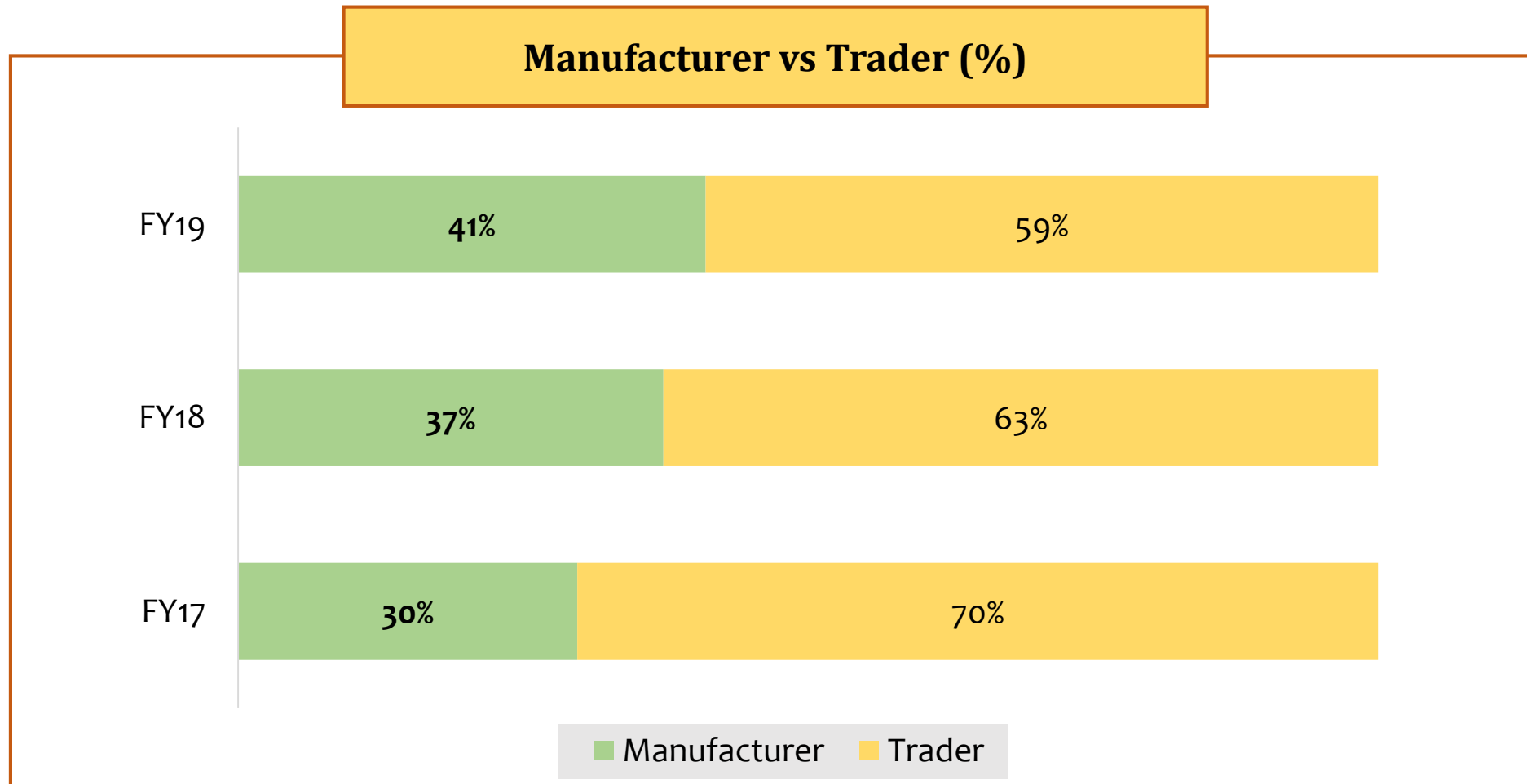
PM Procurement Bifurcation FY 2019



Top 10 spends CHINA FY 2019



Moving from Traders to Manufacturers in China



Challenges

- ❖ High dependency on China
- ❖ Supply commitment from China
- ❖ Price volatility
- ❖ Consistent quality
- ❖ Strong influence of mediators/Traders
- ❖ Disruptive new process/Technology
- ❖ Compete and maintain China bench marking prices

Strengths

- ❖ In-house R & D to support process improvement issue / new technology adoption
- ❖ IIL is one of the top reputed company – Gets priority supplies and pricing
- ❖ Clear vision helps in long term planning
- ❖ Clear-cut strategy to shift from Traders to Manufactures
- ❖ Multiple sources for each item ensuring risk minimization
- ❖ Stringent In-house quality assurance system for vendor selection
- ❖ Setting up backward integration plant at Dahej



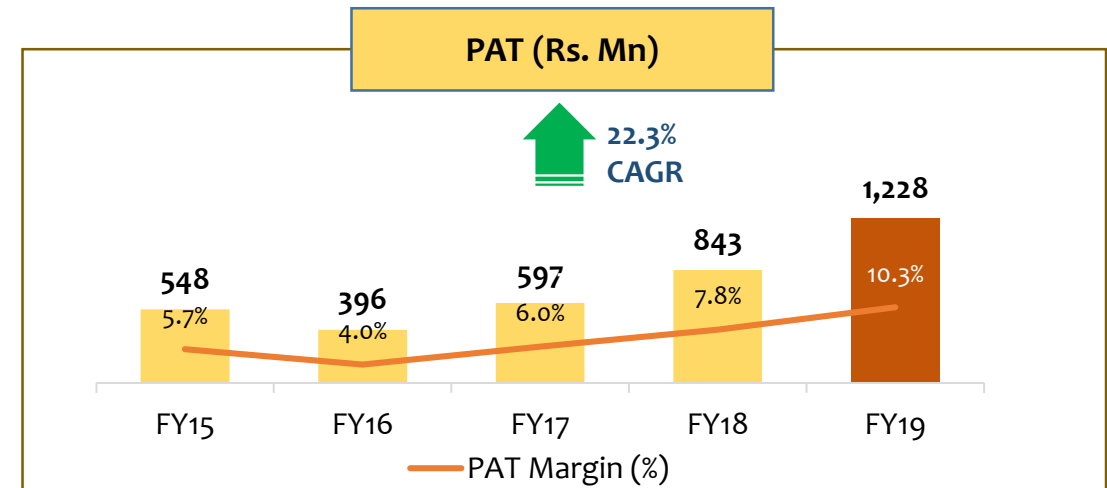
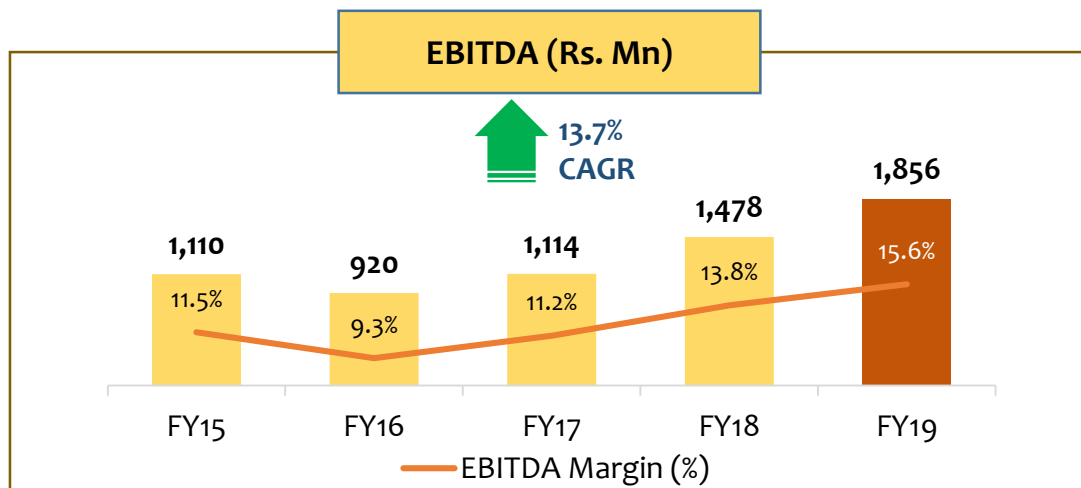
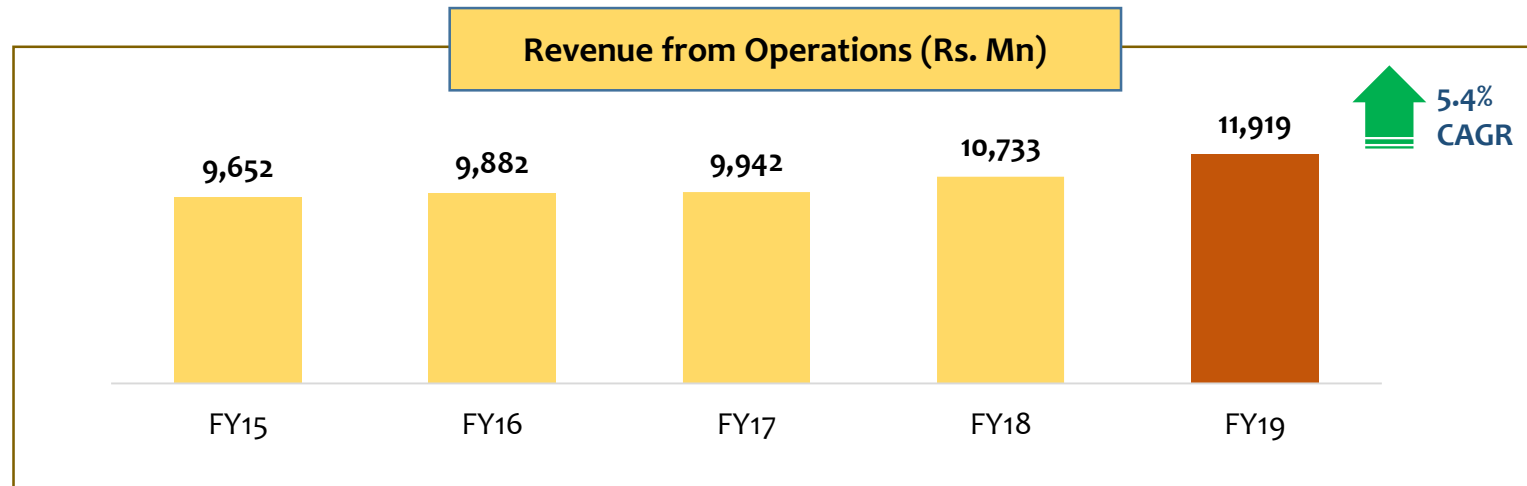
6. Financial Performance



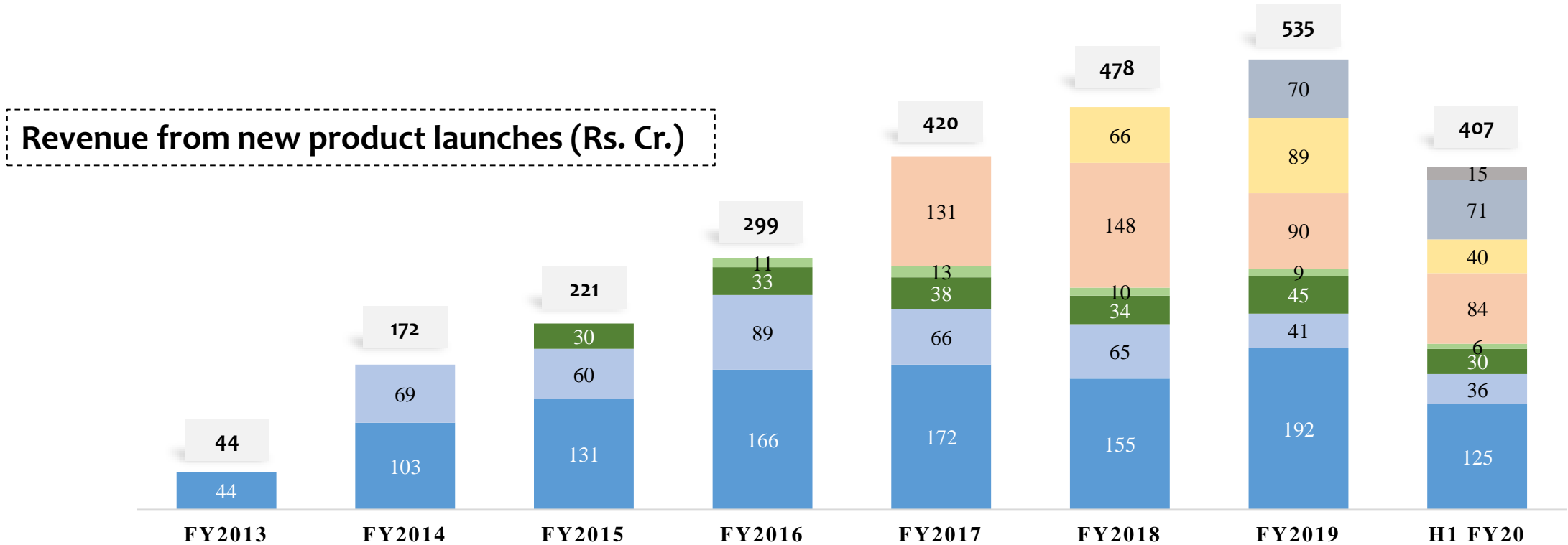
Mr. Sandeep Aggarwal
Chief Financial Officer

Financial Performance – Last 5 years

Strong EBITDA and PAT growth with margin improvements every successive years

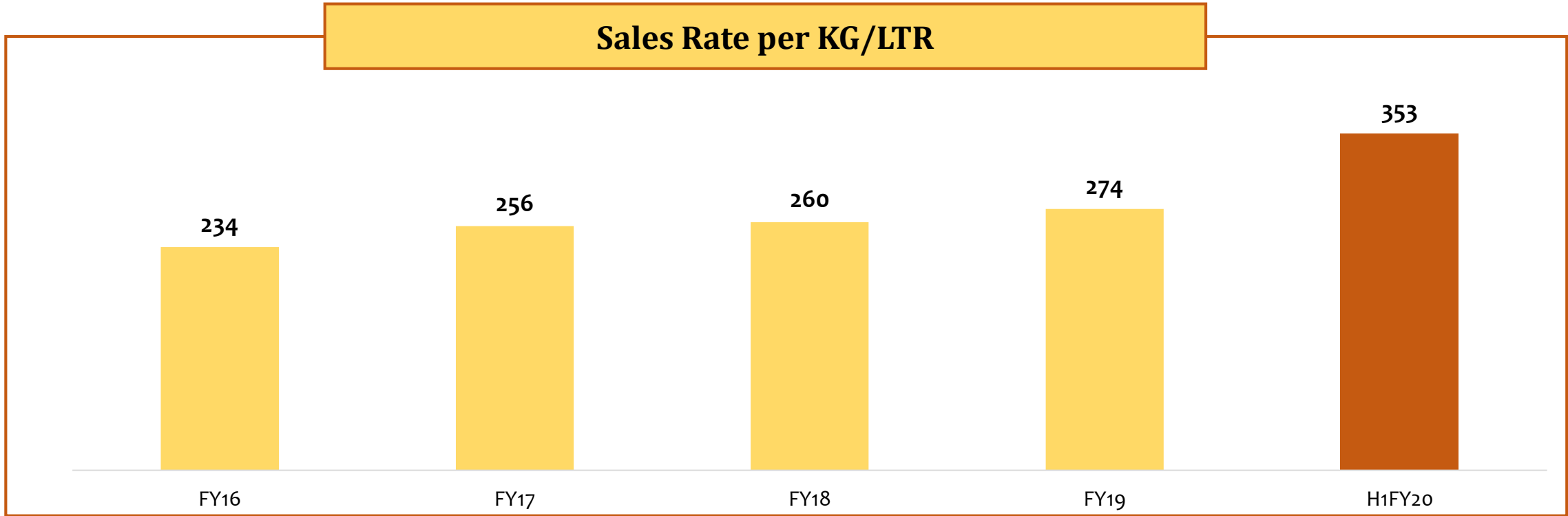


Proven track record of successful new product launches exhibits IIL's strong R&D capabilities and continues to provide competitive edge

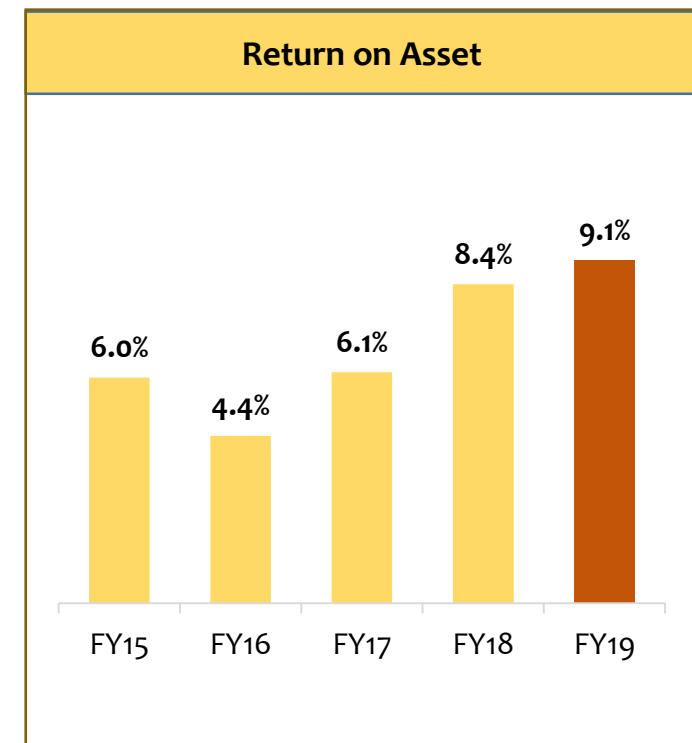
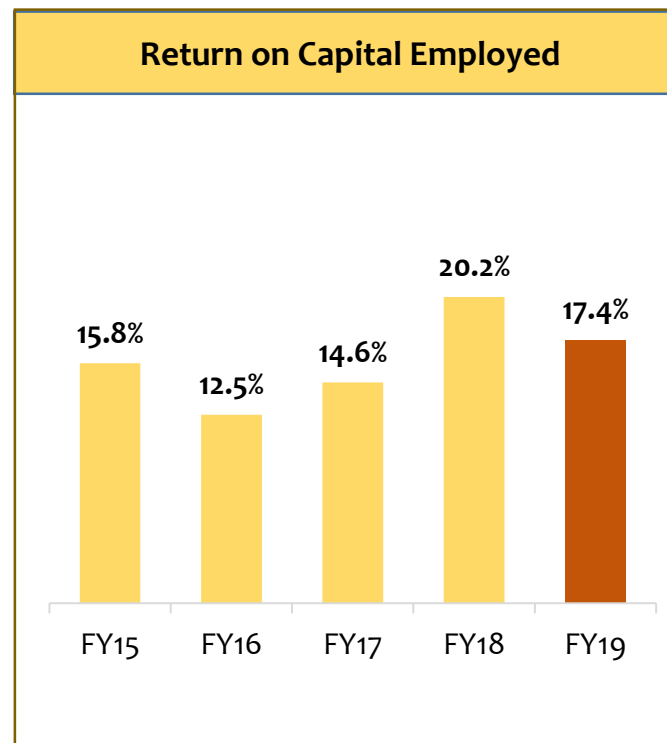
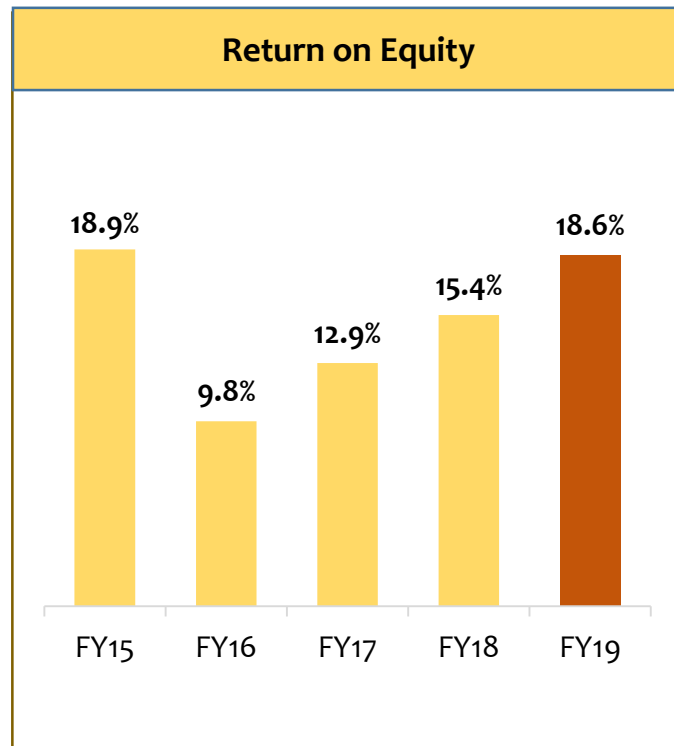


| | | | | | | | | |
|---------------------------------------|------|-------|-------|-------|-------|-------|-------|-------|
| New Products launched during the year | 5 | 5 | 3 | 2 | 5 | 5 | 8 | 5 |
| % of Revenue from Operations | 7.1% | 19.9% | 22.9% | 30.3% | 37.9% | 43.1% | 44.9% | 47.3% |

Increasing Sales Rate Per KG Trend



Consistently improving return ratios and generating wealth for shareholders



Capital Structure

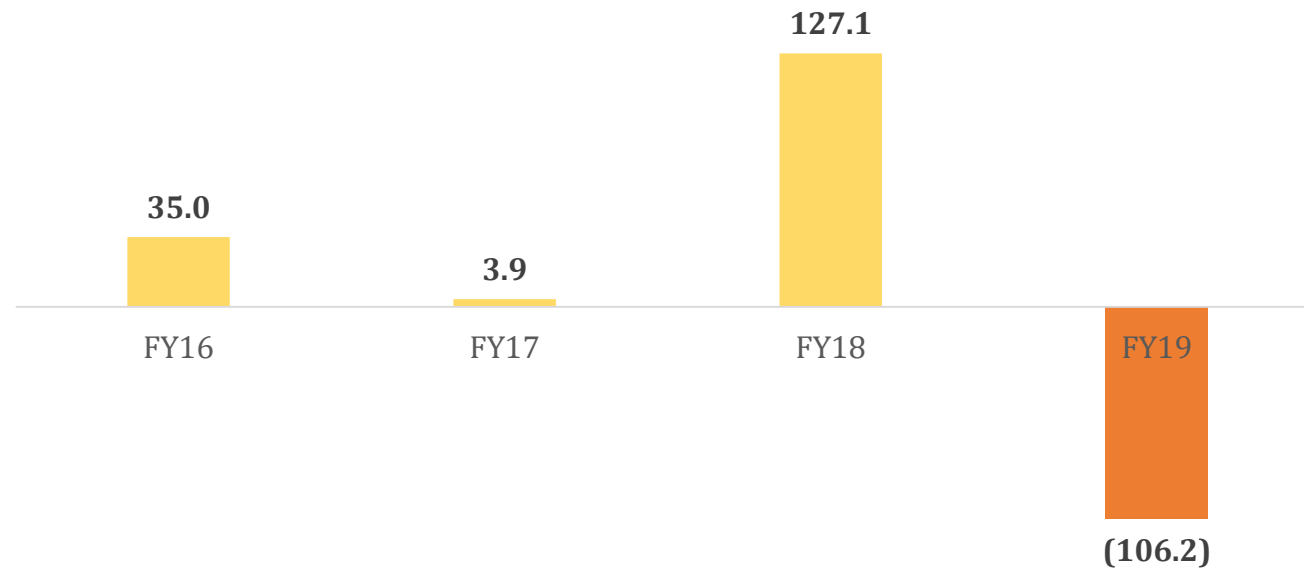
| (Rs. Million) | FY2015 | FY2016 | FY2017 | FY2018 | FY2019 | H1 FY2020 |
|-------------------------|--------------|--------------|--------------|--------------|--------------|--------------|
| Long Term Debt | 775 | 519 | 283 | 145 | 68 | 34 |
| Short Term Debt | 2,409 | 1,514 | 2,060 | 968 | 2,952 | 2,972 |
| Total Debt | 3,184 | 2,033 | 2,342 | 1,112 | 3,020 | 3,006 |
| Cash & Cash Equivalents | 86 | 71 | 68 | 196 | 89 | 91 |
| Net Debt | 3,098 | 1,962 | 2,274 | 917 | 2,931 | 2,915 |
| Total Equity | 2,908 | 4,049 | 4,645 | 5,476 | 6,613 | 7,407 |
| Net Debt/Equity | 1.07x | 0.48x | 0.49x | 0.17x | 0.44x | 0.39x |

Key Highlights

- Higher debt in FY2019 was represents amount invested in building up higher inventory of Thimet and Nuvan
- Debt is expected to normalize to the range of ~150 Cr by the end of the current fiscal year with zero long term debt

Note: Capital Employed = Total Debt + Total Equity

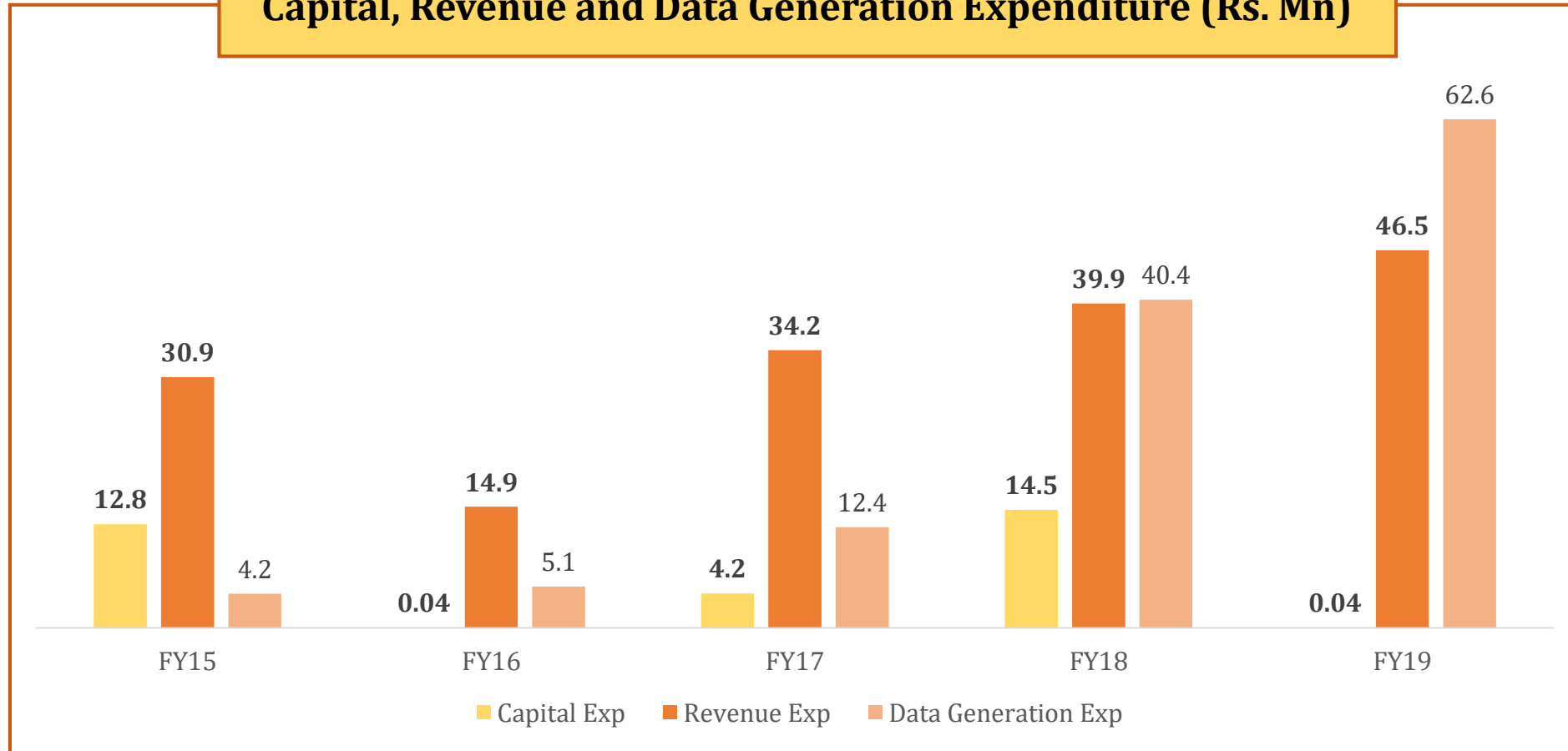
Net Cash from Operating Activities (Rs. Mn)



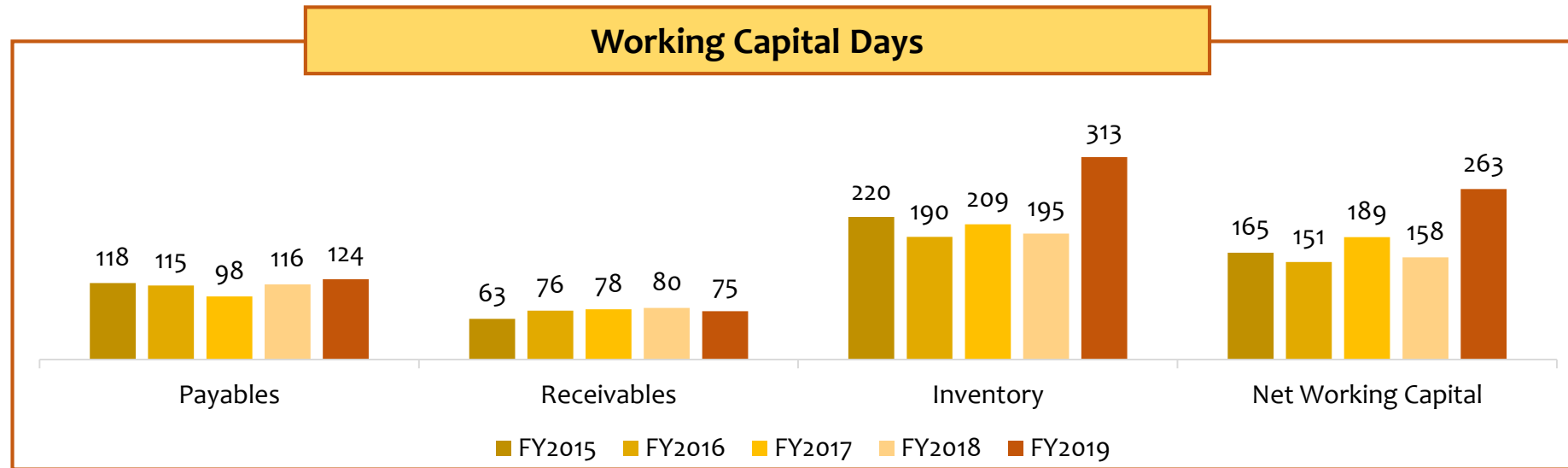
Key Highlights

- At the end of FY2019 Inventory of Thimet and Nuvan amounted to Rs. ~250 Crores
- Thimet inventory to be fully cleared by the end of current year
- Nuvan inventory to be fully cleared by the mid of next fiscal year
- Positive and growing cash flows going forward

Capital, Revenue and Data Generation Expenditure (Rs. Mn)



Management is fully committed to improving its working capital cycle



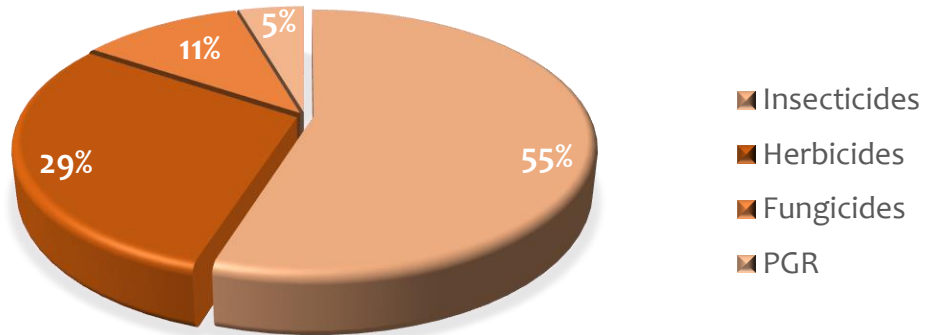
Key reasons for high working capital

- Higher inventory for work in progress products as company manufactures both technical and formulations
- Lower inventory levels of finished goods
- Advance purchases of intermediaries to get the better prices
- FY2019 inventory levels were exceptional due to Thimet and Nuvan inventory

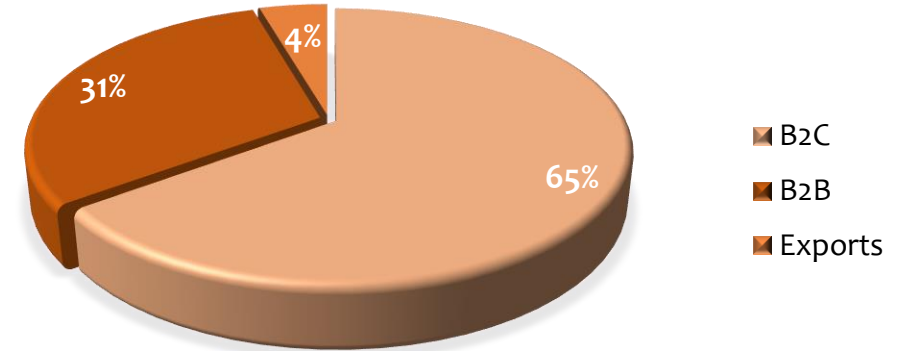
Strategy

- Backward integration and reduce dependence on raw material imports
- Payables days have increased as a result of new MSME payment policy, company is committed to fund the working capital through internal accruals i.e. without raising working capital loans

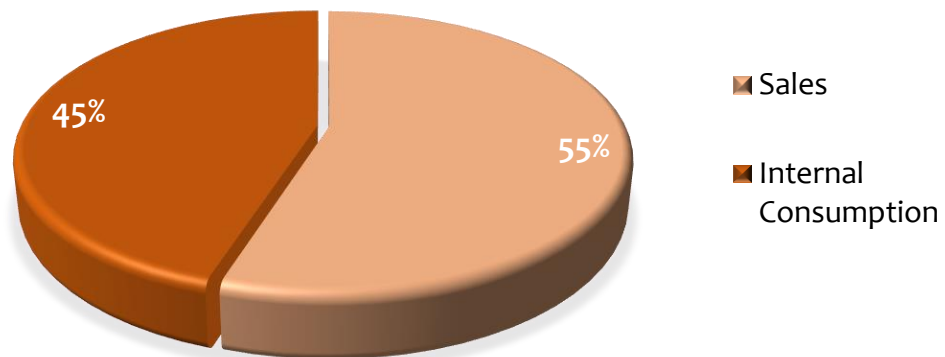
Gross Sales by Product Category



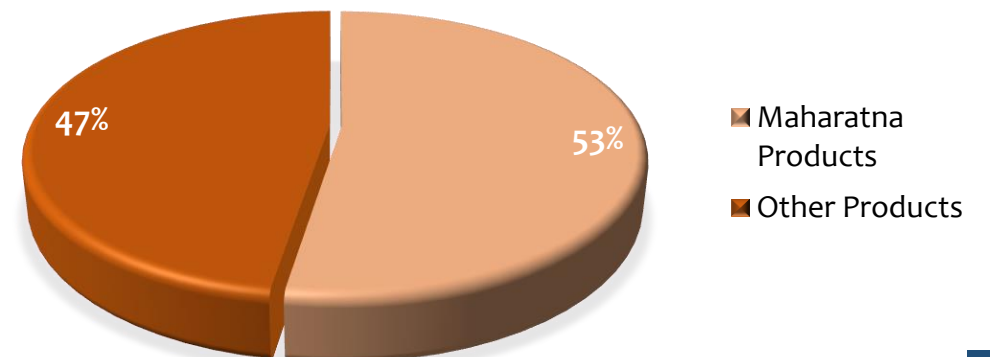
Gross Sales by Segment



Gross Sales vs Internal Consumption



Breakdown of Top Seller Range in B2C





7. Corporate Social Responsibility



Mr. Sanjay Vats
Vice President

- ❖ Empowering Children & Farmers of India
- ❖ Rural initiatives for a sustainable living
- ❖ Projects around Farmer Knowledge Enhancement & Child education
- ❖ Farmer First Approach
- ❖ Millions of beneficiaries till date
- ❖ Employee Participation & Volunteering



विद्या प्रोजेक्ट एक कदम बाल शिक्षा की ओर

- ❖ Children education programs in districts of Punjab, Rajasthan, Bihar, UP and Odisha
- ❖ Adoption of village schools
- ❖ Distribution of books, study materials and stationeries to children
- ❖ Empowering people with dignity and respect by organizing livelihood programs





- ❖ Aimed at educating farmers on crop protection and judicious use of agrochemicals
- ❖ Promoting the cultivation of 3rd crops for soil fertility and extra income
- ❖ Organizing special camps



Signed a MOU with ICAR – IARI for training of farmers to maximize their yield & Entrepreneur ship in 2017



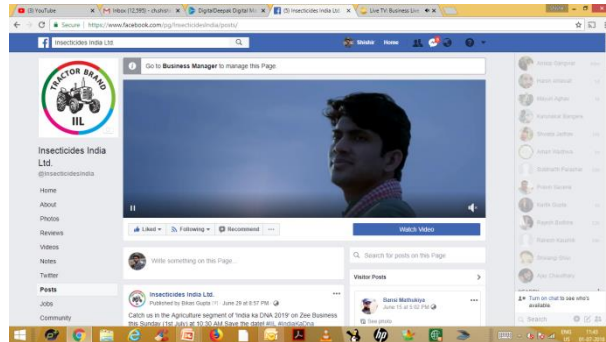
An awareness initiative of informing all the stake holders of the society about the importance, need and judicious use of agro-chemicals

- Involving the agro experts from ICAR-IARI and different universities
- Using social media to take the same to the stake holders
- Involving our industry players in the initiative
- Creating a sense of our responsibility towards farmers

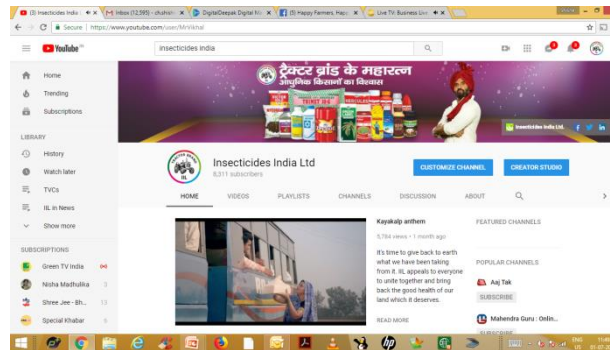


Social media initiatives helps in improving the internal as well as external communication about company and its activities

Facebook



Youtube



Twitter





8. Growth Strategy and Outlook



Mr. Rajesh Aggarwal
Managing Director



**India's
Population**
1.46 billion

**Growing
Middle Class**
High demand
for calories

**Limitation in
Arable Land**
Limited
expansion
possible

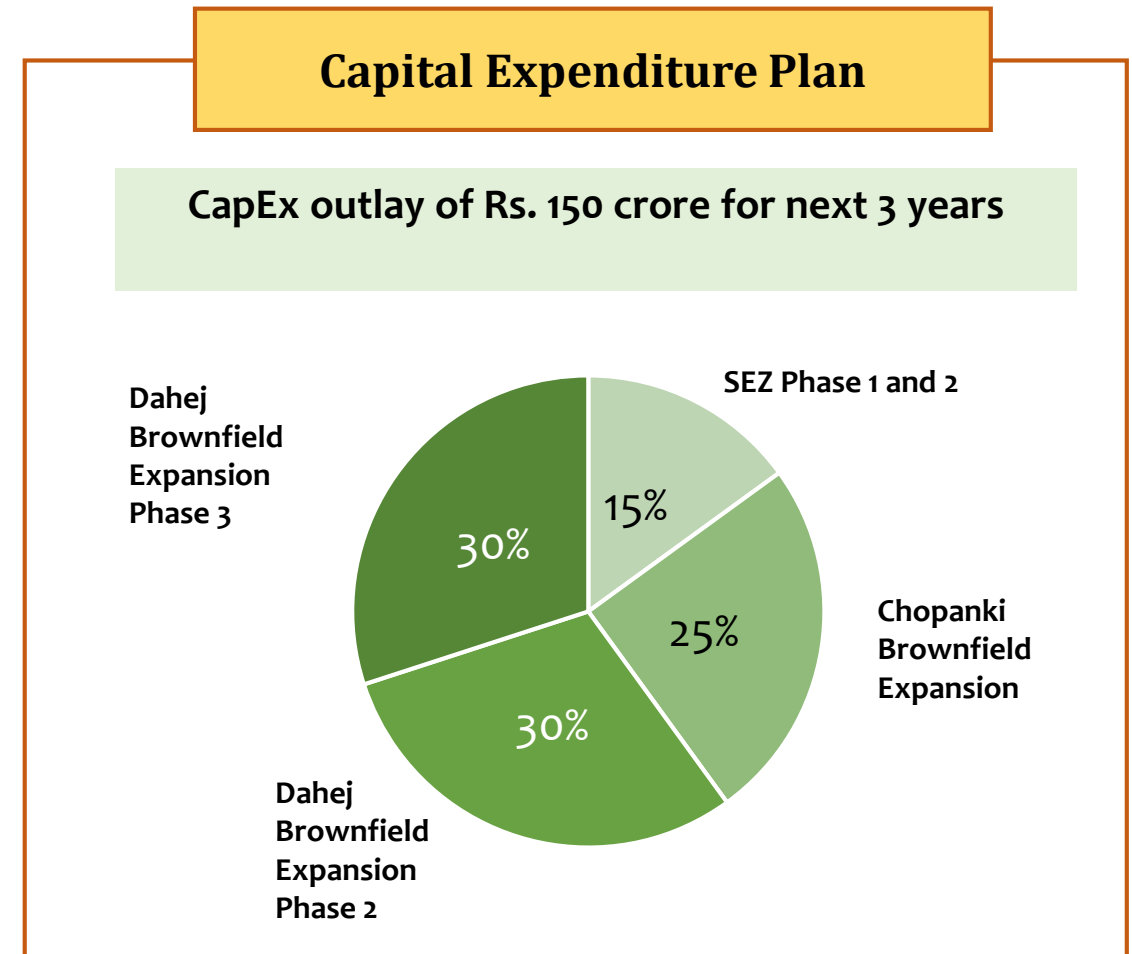
**Climate
Change**
High Volatility
in crop
production

Important Characteristics

- Crop protection continue to grow
- Demand for innovative Products will shape the industry
- Farmers will look to combine crop protection, seeds, digital and application technologies while fulfilling societal requirements

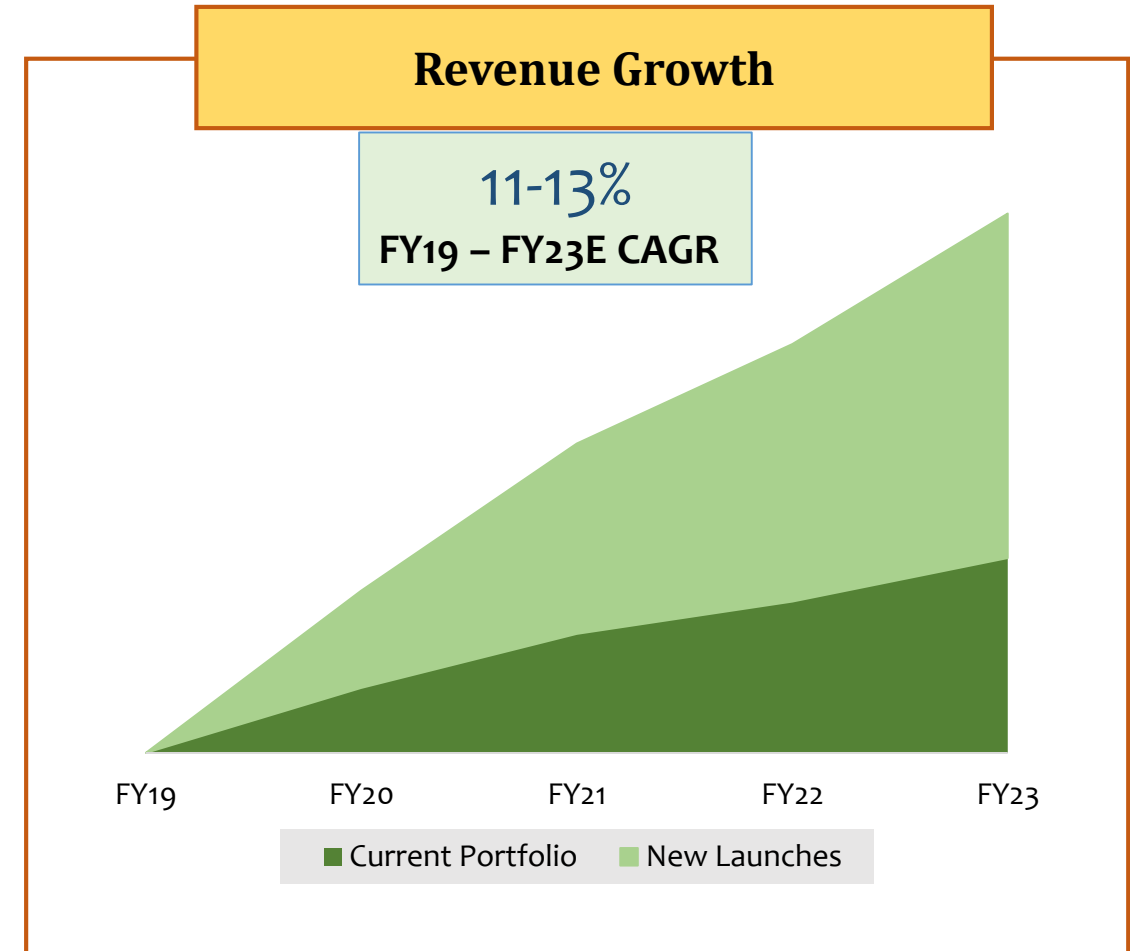
Capex will be incurred in a phased manner over next 3 years and will drive IIL future growth

- ❖ Out of Rs. 150 Crores, already incurred Rs. 32 Crores of Capex for setting up SEZ unit at Dahej. SEZ will result in increased expanding our exports to newer geographies
- ❖ Remaining capex will be incurred in a systematic phased manner
- ❖ Chopanki Brownfield Expansion – Expanding existing facility to add new manufacturing lines to produce high value products
- ❖ Dahej Brownfield Expansion – Setting up backward integration plan to reduce dependence on imported raw materials and reduce cost of sales
- ❖ These investment will yield result in long run and will enhance IIL overall capability to manufacture high value product, complex molecules and facilitate exports into new geographies



Phasing out the generic products and introduction of new products in Maharatna category will significantly grow topline and bottomline by FY2023

- ❖ Revenue is expected to grow by 11-13% CAGR in FY19-23 period
- ❖ The topline growth will be primarily driven by recent and upcoming innovative product launches
- ❖ Maharatna products will constitute more than half of sales by the end of FY23
- ❖ Exports will grow three times from current level, contributing ~ 15% of the sales as compared to ~5 of sales in FY19
- ❖ Identified 25 products which are in the process of tail cutting and with new product launches every year will ultimately result in better product mix and improved margins
- ❖ Efficient working capital management and backward integration of key intermediaries will result in enhanced bottom line



R& D will results in New product launches in Maharatna Category

- Focus on in-house R&D and international partners to launch new products
- 28 registrations are in pipeline out of which 22 registrations are in 9(3) category

Exports

- Working on registration in new countries with 100+ export agreements
- Expanding in new geographies: Exporting to 20+ countries
Expand to 50+ countries and 100+ customers by the end of FY2023

Phase out Generic Products

- Phasing out the Generic Products (high volume-low margin)
- Introduction of new products in the Maharatna category and moving up the value chain

Backward and Forward Integration

- Moving on the strategic path of backward and forward integration
- Capitalize on the Make in India initiative
- Will result in better margins across technicals and formulations

Focussed Approach on Biologicals

- Developed and commercialized VAM (Vascular Arbuscular Mycorrhizae)
- Developed and commercialized soil energizer, Kayakalp
- Development of 3-4 new biological products is in pipeline

Optimum Capital Structure and Operational Efficiency

- Focus on sustainable generation of cash flows
- Capex of Rs. 1.5 bn in next 3 years in a phased manner for setting up SEZ, synthesis facilities and backward integration plant

Thank You

For further information, please contact:

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