



PROCEEDINGS

Industry Leaders' Interaction Synergy & Collaboration Towards Global Excellence

27th September 2023

NATIONAL CONFERENCE ON India-an Emerging Global Food Hub

Role of Sustainable Crop
Protection Solutions

28th September 2023

SPEAKERS



Shri Jai Parkash Dalal
Hon'ble Minister of Agriculture
Government of Haryana



Shri Kakani Gowardhan Reddy
Hon'ble Minister of Agriculture
Government of Andhra Pradesh



Dr. Ashok Dalwai
Chairman, Empowered Committee
Doubling Farmers' Income
Ministry of Agriculture &
Farmers Welfare
Government of India



Dr. Praveen Kumar Singh
Agriculture Commissioner
Ministry of Agriculture &
Farmers Welfare
Government of India



Dr. S. C. Dubey
ADG (Plant Protection)
Ministry of Agriculture &
Farmers Welfare,
Government of India



Dr. S. N. Sushil
Director
NBAIR, Bengaluru



Dr. Vishal Choudhary
Dy Industry Advisor
Ministry of Chemicals
& Fertilisers



Dr. Anupama Singh
JD(Edu.), Dean & Principal Scientist
Indian Agricultural
Research Institute



Ms. Chhavi Rajawat
First MBA Sarpanch
Motivational Speaker,
Aspen Fellow
WEF Young Global Leader



Ms. Sangeeta Bojappa Moorthy
Chief Farmeress /Founder
FARMINGTON.IN



Ms. Nisha Solanki
First Women Drone Pilot
Haryana



Dr. K. C. Ravi
Chairman
CropLife India



Mr. Deepak P. Shah
Chairman
Crop Care Federation
of India



Mr. Pradip P. Dave
President
Pesticides
Manufacturers &
Formulators
Association of India



Mr. Parikshit Mundhra
Chairman
Agro
Chem federation
of India



Mr. Shishir-Sinha
Associate Editor
Hindu Business Line



Ms. Laxmi Devi
Assistant Editor
Press Trust of India



Mr. Deepak Verma
Domain Lead – Agriculture
Open Network for Digital
Commerce



Dr. Siang Hee TAN
Executive Director
CropLife Asia



Mr. Sarjwan Manhas
Chief Sustainability Officer
Crystal Crop Protection Ltd.



Mr. Rahul Dhanuka
Chief Operating Officer
Dhanuka Agritech Ltd.



Dr. Ajit Kumar
Vice President – Technical &
Development
SWAL Corporation Ltd.



Mr. Rajiv Rathi
Director – Public Affairs,
Science & Sustainability,
Bayer Crop Science Ltd.



Mr. Jagdeesh Yermeni
Sales Lead
IndoFl Industries Ltd.



Mr. Srinivasa Karavadi
Lead-Commercial Unit,
South & Rice Community,
Bayer Crop Science Ltd.



Mr. Raju Kapoor
Public & Industry Affairs
FMC India Pvt. Ltd.



Mr. Rajesh Dhawan
Head Crop Protection –
Regulatory
Syngenta India Pvt. Ltd.



Mr. Sunjay Vuppuluri
National Head
Food & Agribusiness Strategic
Advisory and Research,
YES BANK



Mr. Durgesh Chandra
Secretary General
CropLife India

Contents

Page No.

- About CropLife India 1
- Board of Directors 2
- CropLife India Secretariat 4
- Key Takeaways 5
- Industry Leaders' Interaction Synergy & Collaboration
Towards Global Excellence - Proceedings 7
- Inaugural Session - Day 2 - The Rise of Indian Agriculture –
World's Emerging Food Basket & Roles of States 15
- Plenary Session-I Day 2 20
Women driving the growth of Indian Agriculture
- Special Plenary Session I -Day 2 23
Perspective of State Governments
- Plenary Session III: Day 2 27
Role of Agrochemicals in the Growth of Indian Agriculture
- Media Coverage 30

About CropLife India

CropLife India is a leading industry association of both Indian and Global R & D driven crop science organizations. CropLife India jointly represents around 70% of the Indian crop protection market and are responsible for 95% of the molecules introduced in the country. Our member companies have an annual global R & D spend of over INR 50,000 crores.

Our member companies were established in India as far back as the 1950s. We continue to work hand-in-hand with the Government to build the agriculture sector – from introduction of several newer and safer molecules, direct investment of building factories, jobs creation, bringing in agriculture innovation and working endlessly over the years with multi-stakeholders to enhance agriculture productivity. All member companies are firmly committed to engage with the farming community to enable Safe, Secure and Sustainable Food Supply.

CropLife India members enable farmers adopt new technologies in agriculture, while providing in depth farmer trainings on good farming practices,

including responsible use of crop protection products, container management and spraying techniques promotion of safe, responsible & judicious use of crop protection products under Integrated Pest Management approach.

CropLife India extensively engages with the farming community including dealers and traders for growing safe, secured and nutritious food committed to responsible crop care and crop production for sustainable development of Indian Agriculture.

CropLife India is a not for profit organization, (registered under Section 8 company) wholly funded by membership. CropLife India is a part of the CropLife International Network; and works closely with CropLife Asia & CropLife International, spread across 91 countries while engaging with diverse stakeholders to drive programs on Anti-Counterfeiting, Product Stewardship, Progressive Regulations, IPR/Data Protection, Policy & Advocacy, Communications & Outreach.

Our Members



Our Associate Members



Board of Directors

FY 2022-23



Dr. K. C. Ravi

Chairman, CropLife India

Chief Sustainability Officer
Syngenta India Pvt. Ltd.



Mr. Giridhar Phani Ranuva

Business Director
BASF India Ltd.



Mr. Anil Kakkar

Vice-Chairman, CropLife India

Vice President-Sales & Marketing
Sumitomo Chemical India Ltd.



Mr. Rajvir Rathi

Head-Public Affairs, Science &
Sustainability
India Bangladesh & Sri Lanka
Bayer CropScience Ltd.



Mr. Ankur Aggarwal

Vice-Chairman, CropLife India

Managing Director
Crystal Crop Protection Ltd.



Ms. Anuja Kadian

Government & Industry Affairs
Director- APAC,
Corteva Agriscience India Pvt. Ltd.



Mr. Ramkishan Rao Thanugula

Additional Director and
Head of Strategy & Portfolio
ADAMA India Pvt. Ltd.



Mr. Rahul Dhanuka

Joint Managing Director
Dhanuka Agritech Ltd.



Board of Directors

FY 2022-23



Mr. Ravi Annavarapu

President
FMC India Pvt. Ltd.

Mr. Jagdeesh Yereni

Sales Lead Cluster II
Indofil Industries Ltd.



Mr. Prashant Hegde

CEO - Agri Input
PI Industries Ltd.



Mr. Sanjiv Lal

Managing Director & CEO
Rallis India Ltd.



Dr. Ajit Kumar

Vice President - Technical &
Development
SWAL Corporation Ltd.



ASSOCIATE DIRECTORS

Mr. Kimihide Kondo

Managing Director
Bharat Certis Agriscience Ltd.



Mr. Sajal Kumar Biswas

Director (Business Development)
NISSO Chemical India LLP



Ms. Lakshmi Narayanan

Wholetime Director
T. Stanes & Company Ltd.



CropLife India Secretariat

The CropLife India Secretariat is led by a dedicated team of professionals, who play an important role in engaging with diverse stakeholders. Domain experts in the fields of Regulatory Affairs, Anti-Counterfeiting, Stewardship, Communications and Accounts, Compliance and Human Resources; hold the mantle of CropLife India. The association has committees for various disciplines, which are represented by member companies' experts. The different committees meet at regular intervals to carry out focussed programs, projects and engagements, to take forward the association's strategic objectives along with its vision and mission. The functional heads at the secretariat ensure that the strategic initiatives are implemented at various levels throughout the year.



DURGESH CHANDRA SHARMA
Secretary General



ANJANA SUNDRIYAL
Head - Human Resources & Finance



JOYDEEP CHAKRABORTY
Head - Communications



DR. RAKESH KUMAR DAHIYA
Head - Regulatory Affairs

Industry Leaders' Interaction Synergy & Collaboration Towards Global Excellence

27th September 2023

Key Takeaways

- A ***Curtain Raiser*** to the National Conference was an “**Industry Leaders' Interaction: Synergy & Collaboration towards Global Excellence**”; organized on **27th September 2023** in New Delhi. The evening witnessed the assembly of the leadership of the **four Associations**, working in the crop protection industry - CropLife India, Crop Care Federation of India (CCFI), Pesticides Manufacturers & Formulators Association of India (PMFAI) and Agro Chem Federation of India (ACFI).
- The unified industry should undertake public private partnership for providing better technologies to the farmers for increasing the productivity, production and also undertake data based research studies to help frame better policies.
- The issue of **perception vs. reality management** needs to be taken up by the industry; which should ideally be **mix of perception and subsistence management**.
- **Pest Risk (PR) Analysis** for as many crops / commodities as possible – The analysis should be conducted in collaboration with research institutes.
- **Enhance Crop Protection Label Claim for all the crop groups** (out of 545 crop groups, approved products are only for 85 groups) – The Label claim extension is not the appropriate approach and crop grouping needs to be done for better policy.
- **Absence of Crop Protection Products Testing Laboratories** – Sufficient number of Referral Labs in the country will ensure supply of quality agri inputs to the farmers
- **Product Stewardship** – Farmers many a times are not away about how to use the products, which may lead to serious instances. The industry should under take specific projects with focus on product stewardship.
- **Efficient usage of crop protection products** – Only 0.4kg of crop protection products per hectare is used in India, which requires optimal usage. Industry is working towards ultra-low volume sprayers and drones.
- **Six member companies of CropLife have pledged 10 billion Euro to invest in precision agriculture by 2030 and another 4 billion Euros in bio pesticides development, globally.**



Industry Leaders' Interaction

Synergy & Collaboration Towards Global Excellence

27th September 2023 | New Delhi



Mr. Pradip P Dave

Dr. K C Ravi

Dr. Ashok Dalwai

Mr. Deepak P Shah

Mr. Parikshit

**Industry Leaders' Interaction
Synergy & Collaboration Towards Global Excellence
27th September 2023**

Industry Leaders' Interaction
Synergy & Collaboration Towards Global Excellence
A Curtain raiser for National Conference
27th September 2023, New Delhi
Proceedings

Highlights –

A *Curtain Raiser* to the National Conference was an “**Industry Leaders' Interaction: Synergy & Collaboration towards Global Excellence**”; organized on **27th September 2023** in New Delhi. The evening witnessed the assembly of the leadership of the **four Associations**, working in the crop protection industry - CropLife India, Crop Care Federation of India (CCFI), Pesticides Manufacturers & Formulators Association of India (PMFAI) and Agro Chem Federation of India (ACFI).



Mr. Durgesh Chandra, Secretary General, CropLife India welcomed the participants and shared, the Indian crop protection industry has been facing perception issues from quite some time. These issues have been promoted with vested interests by multiple parties, which damage the reputation of the industry but the biggest loss is to the farmer, who is devoid of quality products, which is his foremost requirement. The interaction of the industry leaders would result in synergies between the Associations, towards a unison voice.

Mr. Deepak Shah, Chairman, Crop Care Federation of India (CCFI) iterated that **Synergy & Collaboration towards Global Excellence** is the need of the hour. As the World is working towards China + 1 strategy, India is well placed to take up the challenge. Apart from the domestic market, exports have been moving at a great pace and so is our overall country's infrastructure. It is an appropriate time for a collaborative approach, which should result in precision / smart agriculture, improvement of soil health – repopulating it with microbes, etc.; ultimately resulting in benefit to our farmers.

Mr. Pradip P. Dave, President, Pesticides Manufacturers & Formulators Association of India (PMFAI) said, India ranks 2nd in the world in terms of exports and our domestic per acre consumption is way too less compared to the rest of the world. Agriculture being a State subject in the country, it is high time, all the Associations should work towards a collaborative approach, which would send a strong signal to all that we are working towards better prospects for the farmer.

Mr. Parikshit Mundhra, Chairman, Agro Chem Federation of India (ACFI) said, ACFI is the youngest Association. We have collaborated with the national associations in the interests of Label & Leaflet, usage of Glyphosate via PCOs, PMB 2020, etc. which result in faster opinion corroboration for the policy makers, towards better policy for the farmers. ***The next trillionaire of the world will be the one, who solves the climate crisis.*** Climate is the biggest variable for our industry and in my opinion, if we collaborate, we may work towards solving the climate crisis. Earlier, the Government used to speak adversely about the crop protection industry, only on the Independence Day; however now a days, it is spoken much more frequently throughout the year. Although, Government is cognizant of the fact that the industry is contributing significantly towards the exports and yet the public statements are purely for optics.

Dr. K. C. Ravi, Chairman, CropLife India, who conceptualized the event of bringing together the national associations of the crop protection industry, shared that today's presence reinforces the fact that the intent is present amongst all of us and it proves that we want to collaborate for the benefit of the farmer. The policy maker has taken advantage of the difference of opinions and have delayed the policy making & consulting process. ***It will be our endeavour that collectively, we should not only meet the Agriculture Minister but the Prime Minister as well and present the credentials of our industry, which offer immense potential.*** Today's gathering would result in common minimum processes and principles, which should shape our representation to the Government.

Roadmap towards creation of unified strategy

Mr. Parikshit Mundhra, Chairman, Agro Chem Federation of India (ACFI) said that the Associations have collaborated on common issues in the past, which have yielded better results and we would remain committed to the same. All the Associations should meet once in a quarter to take stock of the progress made and charting our way forward.

Mr. Deepak Shah, Chairman, Crop Care Federation of India (CCFI) shared Andhra Pradesh had drafted a policy mandating all agrochemicals entering the State needs to be analysed before their Sale. This would have translated into each truck and each batch of every company be analysed in labs for quality checks; a humongous issue which even the State Legislature might not have even visualized. A Joint Representation of the national associations along with Andhra Pradesh Manufacturers Association (APMA) to the Secretary Agriculture, which although took about a week to sign by the leaders; resulted in response in just 10 days and that too, positively. This is the power of coming together and we should begin today, which would eliminate about 70 - 80% issues.

Mr. Pradip P. Dave, President, Pesticides Manufacturers & Formulators Association of India (PMFAI) agreed that the success of Andhra Pradesh needs to be replicated in other States as well. Currently, Maharashtra is contemplating a change in the Legislation which would result in non-bailable warrants and criminal proceedings for even minor mistakes like sample failure, improper labels, etc. for the top official of the manufacturer. All Associations should come together against such legislation, wherein the genuine manufacturers will be harassed and the fly-by-night operators run scot free. We need to be agile enough to corroborate our submission, in the least possible time of the publication of the Notification as such news spreads like wild fire and prompt other States as well.

Dr. K. C. Ravi, Chairman, CropLife India said that while with our collective wisdom and experience, we have solved certain issues and would continue to do so. We should work towards common minimum principles of our representation to Government, beyond submission. Today's presence of leaders of Associations proves that the intent to work cohesively is present and we shall carry forward the same, as we all want smiles on our farmers' faces. We should all work together to strengthen awareness of ***Safe and Responsible Use of crop protection products*** and showcase the same to the Government. The difficult issues of divergent opinions be parked for the time being and be worked upon on the side-lines. The collaboration should yield in better service to the farmers and our nation.

Dr. Ashok Dalwai, Chairman, Empowered Committee Doubling Farmers' Income, Ministry of Agriculture & Farmers' Welfare, Government of India joined as the Chief Guest in the Industry Leaders' Interaction and shared his views on the public private partnership for providing better technologies to the farmers for increasing the productivity and also suggested for data based research studies.



Although the Government should have been forthcoming in acknowledging the fact that the industry is an equal partner in the policy making process, however it is far from realization. In my opinion, in the early 90's, the Government felt we were masters of everything that we surveyed and it was a command and control system of governance; where economy, society at large were all permit and license oriented and therefore we always looked at others in a condescending manner.

However, post 1991 when India embraced liberalization and then started bringing down all the regulations, permits, licenses etc.; our generation realized that we need to now engage with the private sector; which as per our upbringing was sacrilegious. We have been cognizant of the fact that we now need, in the national interest itself, to engage actively and transparently with the private sector.

Although the budgets mentioned building partnership between the public and the private sector in research and development; which has happened only to some extent, activities, but largely not yet done. ICAR and the Central & State Agriculture Universities have vast extent of land across the country in different agro-ecology and simultaneously it also has built up one of the best infrastructure over the last 75 years, but the challenge has been of low resources for research and development.

On an average, India spends about 0.6% of the GDP on R & D of agriculture, where China has reached 1% and of course Europe and Western societies have gone to 3%- 4%. The immediate step would be to increase the R&D investments to at least 1% of our GDP/GVA. Keeping in mind that there's always a competition for limited resources, Private sector may come forward in bridging this particular gap.

In order to achieve this, the simple private public partnership projects can be achieved by dividing the responsibilities; viz. the private sector would focus on high value agriculture (not practiced by masses, e.g. fruits, vegetable, livestock, poultry, etc.) and larger agriculture production of grains, cereals, etc., which are

part of the food security remain with the public sector. Out of the 216 million hectares of gross cultivated area, (140 million hectares is net cultivated area, however with the development of irrigation facilities, technology, etc., the entire area is under agriculture), 106 million hectares is under food grains (cereals including millets and pulses – common man's food). This remains with the Public Sector and the Private sector can focus on the rest.

Another area of private public partnership will be to lease land for research purpose. This would be required for R&D of new molecules; however this would differ from State to State. The Private Sector should engage with ICAR, KVKs and State Universities for land leasing (being done in Karnataka), while showcasing the benefits. PPPs are existing from the past 20 years but not in the field of R&D, which needs to be explored.

The issue of **perception vs. reality management** needs to be taken up by the industry; which should ideally be **mix of perception and subsistence management**. Education at the grass root level is imminent. India uses only about 0.4 kg per hectare of crop protection products, compared to 12 kg per hectare in Japan; however the perception is not the same. Japan is considered more Natural Farming oriented than us, however the reality is otherwise. The reason for such perception is the rejection of our exports, which are not meeting the standards. One of the reasons is the lack of Pest Risk (PR) Analysis. As per the Sanitary and Phyto-sanitary standards (SPS) laid down by the International Plant Protection Convention, we are supposed to have as many pest risk analysis for as many crops as possible, which has not been done. The following should be our priority –

- **Pest Risk (PR) Analysis** for as many crops / commodities as possible – Industry should coordinate with research institutes to undertake such studies at the earliest
- **Enhance Crop Protection Label Claim for all the crop groups** (out of 545 crop groups, approved products are only for 85 groups) – The Label claim extension is not the appropriate approach and crop grouping needs to reflect in the policy.
- **Absence of Crop Protection Products Testing Laboratories** – Sufficient number of Referral Labs in the country will ensure supply of quality agri inputs to the farmers
- **Product Stewardship** – Farmers should be aware about the precise product usage, which necessitates stewardship. The Public Extension Service has not been able to explain in detail on how to correctly use the products. The industry should undertake specific projects with focus on product stewardship.
- **Efficient usage of crop protection products** – Only 0.4 kg of crop protection products per hectare is used in India, which requires optimal usage. Industry is working towards adoption of PPE and ultra-low volume sprayers and drones.

The industry associations should now create a corpus fund and design a program with aggressive campaigning targeting both the Perception and subsistence. This program will be irrespective of any organization specific products, hence will be beneficial to all.

Data Analysis needs to be undertaken by the industry. While most of the crop protection products are being used in high value crops, viz. Cotton in Raichur, Apples in Kashmir, etc. usage of the same in rest of the crops is very low. The precise data of crop loss due to pests, is grossly inaccurate.

As CropLife India has members who are focussed on R&D with around 6 billion U.S. dollars; it should be their focus that R&D should not now compartmentalized and R&D has to move beyond. The world is now working towards **One Health**, an integrated relationship between the crop world to animal world, bio-diversity and to the human world. As we continue to lose our forest cover, the pasture lands the bio-diversity is being risked. This would mean the virus, bacteria and insects be rendered homeless and we will experience their change in behaviour and Covid-19 was just a beginning of the same. As R&D of CropLife India members evolve beyond just plant protection, agriculture and the world would benefit from the same.

Audience Perspective

Mr. R. G. Agarwal, Founder Chairman, Dhanuka Agritech Ltd. echoed the views of Dr. K. C. Ravi that the issue of **Safe and Responsible Use of crop protection products**, will be the foremost subject of all associations joining hands and together showcasing the Government that steps should be taken towards awareness generation for farmers on this subject. ACFI on the same lines, launched 10 Mobile Vans in Maharashtra which are spreading the message of purchasing the crop protection products against a proper bill including GST, which would eliminate the issue of counterfeits.

Government should not criticise the crop protection industry in general. Sri Lanka and Sikkim are the examples, which went the organic way and drastically reduced its production. In order to achieve Food Security for the Indian population, crop protection products are a necessity.



Dr. Siang Hee TAN, Executive Director, CropLife Asia said all Associations jointly should address the issues like **Adhoc Ban of molecules**, especially for Basmati Rice Exports and **Safe and Responsible Use of crop protection products**. We have undertaken several projects wherein we have provided training to farmers on IPM (Integrated Pest Management) on rice, yet 150,000 metric ton of rice exports are under threat. Once PMB 2020 gets activated, we may have to undertake Adhoc ban of six months which would mean, all our AI's will be under threat. Adhoc ban needs a root-cause analysis and then and addressed jointly by all associations.

Six member companies of CropLife have pledged 10 billion Euro to invest in precision agriculture by 2030 and another 4 billion Euros in bio pesticides development, globally. In India, regulatory changes need to develop in tandem with technology development.

It is heartening to witness the adoption of Drones in agriculture, which would bring in ultra-low volume products and would also witness the onset of entrepreneurs, giving impetus to the technology.



Mr. Raju Kapoor, Director - Corporate Affairs, FMC India congratulated the heads of the Associations coming together and shared *what was yesterday, will not be tomorrow; and tomorrow is going to be far more challenging.* Regulations are being triggered from far and wide, from Europe to Africa and myths surrounding our industry are being propelled by the food industry. To address the issues of the crop protection industry, jointly associations must form two groups having representations from all the four associations viz. -

- **Strategic Group** – having Chairman / President of all the four associations
- **Working Group** – Two members nominated each from all the four associations.

The single agenda should be to protect Indian farmers' interest and protect the larger industry's interests.



Mr. Rahul Dhanuka, Joint Managing Director, Dhanuka Agritech Ltd. echoed the views and congratulated Dr. K. C. Ravi that under his leadership, this initiative has been undertaken which is undoubtedly the prime most need of the hour, **अभी समय है और सही समय है.**

If all the captains of the associations are willing to undertake committed action, we will have a much better future.



Mr. Srinivas Karavadi, Lead - Commercial Unit, South & Rice Community, Bayer Crop Science- India, Bangladesh & Sri Lanka shared while the industry has been focussed on farmers, the perception towards our industry has been grossly negative. It should be now the endeavour of the joint Associations to launch campaigns focussed on the consumer, rather than the farmer.

Mr. Rajvir Singh Rathi, Director- Public Affairs, Science & Sustainability IBSL, Lead – Traits Licensing Business, Bayer CropScience Ltd. shared, most of the companies believe in co-existence of all forms of agriculture and we have the example of Sri Lanka with us. A perception which we are fighting is that if you reduce crop protection products, probably organic will go up; however this will not happen in India.



Another request to be taken up, on this momentous occasion of all associations coming together will be to request Government to create a Unified Cell, which would analyse all aspects of Policies, International treaties, Green deals, NFTs, etc. and execute the best suited solution for Indian agriculture. This Cell would comprise of experts, wherein industry is represented as well and tailor-made the policies keeping in mind all what is present in the horizon. Unless we focus on “Ease of Doing Agriculture”, “Ease of Doing Business” will not be productive.



National Conference on

India-An Emerging Global Food Hub

Role of Sustainable Crop Protection Solutions

28th September 2023

Key Takeaways

- Indian farmers need far greater range of newer molecules to fight the battle against pests, diseases, weeds and other attacks.
- In the age of Internet of Things (IoT), agriculture is at the cusp of becoming 'smart' with the seamless integration of the latest, interconnected technologies.
- The need of the hour for the benefit of farmers, is encouraging multi-stakeholder public-private partnerships for extension services, capacity building and awareness campaigns.
- Indian agriculture has consistently shown growth and even during the pandemic, the sector continued to feed the nation.
- Indian Government is investing in plant breeding centres, which would ensure varieties of crops, which are drought resistant.
- The crop protection industry has been implementing programs to build capacities and develop entrepreneurial skills among women in agriculture in India to empower them and take larger roles in the sector.
- Up skilling of rural women has empowered them to take-up entrepreneurship roles, resulting not only in income enhancement of the family but also contributing to increased share of women workforce in the country.
- A new age farmer cares for the conservation of natural resources, raising livestock, doing aquaponics, hydroponics, precision agriculture etc.
- Industry is moving from products based to service-based industry in agriculture.
- Lots of innovations are needed in terms of new products being applied through drones.
- Government is now moving towards “One Health” initiative which involves soil, water, air, crops plants, environment, humans etc.
- Cropping pattern and cropping sequences are changing and all these factors demand innovations at the farmer's level.
- The biological production of semi chemicals should be explored.
- There is a misconception is that PRD is only for multinational companies.
- The Chemical Ministry is working on creating dedicated HS codes for all the chemicals under chapter 38 and 29 to resolve the mis-classification and duty rationalization.
- No country can sustain unless they have their strong R&D.
- Empty pesticide containers management and disposal of gunny bags need priority and efforts by the companies to resolve these issues.
- One of the areas of concern is perception regarding use of agrochemicals not only among environmentalists but also among scientists.



National Conference on
India-An Emerging Global Food Hub
Role of Sustainable Crop Protection Solutions
28th September 2023

National Conference on
India-An Emerging Global Food Hub
Role of Sustainable Crop Protection Solutions

Inaugural Session

The Rise of Indian Agriculture – World's Emerging Food Basket & Roles of States

Highlights:

CropLife India; the association of leading domestic and multinational R&D driven crop science companies; organized a National Conference on the occasion of its 43rd AGM. Being conducted annually, this year's conference witnessed the congregation of two Agriculture Ministers from the key States of Andhra Pradesh and Haryana; senior Government officials, experts, academia and industry leaders. Yes Bank was the Knowledge Partner for the event. Krishi Jagran and Indian Chemical News were the Media Partners.



In the inaugural address **Shri Kakani Govardhan Reddy, Hon'ble Minister of Agriculture Government of Andhra Pradesh** shared that, “The State Government is committed towards Farmers' education for enhanced use of new technology in agriculture; which has led to multiple novel initiatives viz. 'E-KYC Know Your Crop' aiming to provide farmers with essential digital resources. The State is considering implementing the State Minimum Support Price Act to further bolster inclusive agricultural practices”.



The primary responsibility of the State Government is to address farmers' concerns. Agriculture forms the backbone of the Indian economy and is a significant contributor to our GDP. In Andhra Pradesh, we have introduced various systems and institutions that are unparalleled in the country.

These institutions primarily focus on imparting the latest agricultural knowledge and resources to our farming community, facilitated through modern libraries. To support the farmers, Andhra Pradesh is offering 6,000 rupees in financial assistance, with an additional 7,500 rupees provided by the Chief Minister under various schemes.

Our goal is to promote inclusive agricultural practices that empower farmers and contribute to the overall growth of our State and the country. We actively participate in the Pradhan Mantri Fasal Bima Yojana, where the State Government covers farmers' premiums and we are considering the implementation of a Minimum Supporting Price Act to further bolster agricultural practices.

Dr. K. C. Ravi, Chairman, CropLife India welcomed the participants and shared, the theme of the conference is the most apt as India is definitely emerging as a global food hub and the role of sustainable crop protection solutions is contributing immensely to this. In the last couple of years, it has been our endeavour to partner with State Governments and to ensure that our farmers get the latest technologies and services.

Last year, we had the honour of presence of Hon'ble Agriculture Ministers of Madhya Pradesh, Telangana, Karnataka and Uttar Pradesh in our National Conference. This year we are very grateful to **Shri Kakani Govardhan Reddy, Hon'ble Minister of Agriculture Government of Andhra Pradesh** for joining the conference as the Chief Guest along with **Shri J. P. Dalal, Hon'ble Minister of Agriculture Government of Haryana**.

India's agro-chemical industry has come a long way in past 76 years and we truly believe that with right policy and enabling environment this sector holds promise for a flourishing future to take Indian Agriculture and our farmers to greater heights. In last five years the crop protection market in India is estimated at INR 264.8 Bn in 2022 and is expected to reach INR 355 Bn by 2027. The crop protection industry has also been contributing significantly to India's exports. It is not only a forex earner for the country but also has been contributing to the exports of food and agricultural products from India. With exports estimated at USD 5.38 Bn, India is the second largest exporter of agrochemicals globally, after China.

In India, estimates suggest that about **INR 2 lakh crores** worth of crop yield is lost annually due to pests. The R&D based crop sciences industry has been launching molecules that has over time led to reduced application rates. These were as high as 1,000-3,000 grams of active ingredient per hectare, during the 1960s and 1970s. By the eighties, the dosages had come down to 50-500 grams per hectare. From the nineties to the early 2000s, with further advancement dosages have come down to 25-200 grams per hectare.

The unfounded criticism by the NGOs is that India already uses large amounts of crop protection products. According to available data per hectare consumption of pesticides in India is a mere 0.4 kg/ha compared to other countries like China at 13.06 kg/ha, Japan 11.85 kg/ha and Brazil 4.57 kg/ha.

There is another facet to this, at present 1175 molecules are available globally but only around 310 are registered in India. We need more molecules to protect 140 million hectare of diverse Indian agricultural crops. In contrast, much smaller countries like Vietnam, Pakistan have over 500 registered molecules. USA, EU and Brazil have around 650/750 approved molecules for their farmers. It is therefore absolutely necessary that Indian farmers need far greater range of newer molecules to fight the battle against pests, diseases, weeds and other attacks.

We need everyone's support to ensure a predictable, science based policy and regulatory regime for further enhancing the ability of the crop protection sector to make our farmers and Indian agriculture sustainable – which will be our continued commitment.

With the AI revolution that is taking place in Agriculture, crops can today tell as to what they feel and what they require through this wonderful tool called sensors and transmitters. In the age of Internet of Things (IoT), agriculture is at the cusp of becoming 'smart' with the seamless integration of the latest, interconnected technologies. The sensors and transmitters can monitor everything from soil and plant health to greenhouse humidity levels and the data generated can help in improving growing conditions and overall efficiency. Technology is helping in forecasting of crops' requirement. This is an opportunity to

leapfrog agriculture practices to the levels of **Industry 4.0**. There is immense opportunity for public-private partnerships (PPP) in leveraging the benefit of emerging technologies as the private sector is also introducing cutting edge innovation in the areas of digitization and AI.



Mr. Sunjay Vuppuluri, National Head, Food & Agribusiness Strategic, Advisory and Research, Yes Bank emphasized on the importance of continuing to promote farmer income enhancement solutions, extending beyond crop protection and stressed on the need for investment in Research & Development, to introduce innovative crop protection solutions that are resilient to climate change.

On this occasion **CropLife India & Yes Bank Knowledge Report** was released by **Shri Kakani Govardhan Reddy, Hon'ble Minister of Agriculture Government of Andhra Pradesh**.

CropLife India & Yes Bank Knowledge Report estimates **INR 2 lakh crores** of crop yield loss annually due to pests in India. The Knowledge Report highlights crop protection usage in India at 0.37 kg/hectare compared to a staggering 11.24 kg/hectare in Japan.

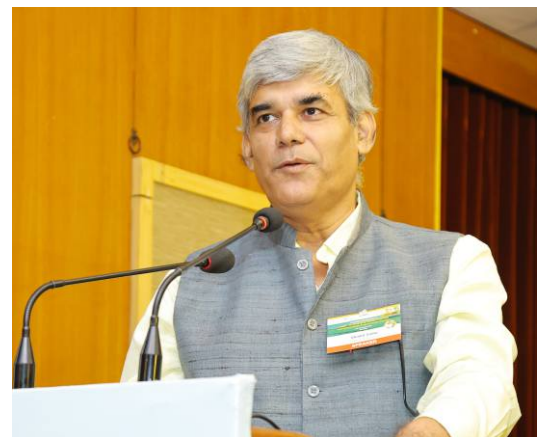
The report further stresses on the role of State Governments in enabling agriculture. India now stands as the 2nd largest exporter of agrochemicals globally, after China, making it a key participant in the global crop protection industry as per the latest data made available by WTO. The main importers of Indian Agrochemicals are USA, Brazil, Japan, and Belgium.

It is a myth is that there is high use of chemicals in India; as the data reveals in different perspective. There are variety of micronutrients, which are redefining the task of Indian Agriculture. The level of crop protection usage in India is only 0.4 kg/hectare while in Japan is 11.2 kg/hectare and global average is 2.3kg/hectare.

The crop protection industry is committed towards embracing sustainability as a core value and the policy makers should support the agricultural sector by investing in public digital infrastructure. The need of the hour for the benefit of farmers, is encouraging multi-stakeholder public-private partnerships for extension services, capacity building and awareness campaigns.

Session Moderator, Mr. Shishir Sinha, Associate Editor, The Hindu Business Line shared, Indian agriculture faces multiple challenges, vagaries of weather, uncertainty of the monsoon, insects eating about 10,000 varieties of plants and 30,000 varieties of weeds, ready to devastate the crop and the challenge of becoming a big centre of grain production at the global level; while enhancing the farmers' income.

Indian agriculture has consistently shown growth and even during the pandemic, the sector continued to feed the nation. The crop protection industry has aided the growth of Indian agriculture with continuous innovation and sustainability, hence the industry is seeking stimulus from the Government to further boost Indian agriculture.



Ms. Chhavi Rajawat, First MBA Woman Sarpanch, Village Soda, Rajasthan said, the farmers face numerous challenges yet they are extremely receptive towards the shift in technology. The industry needs to be more

cognizant of the farmers' evolving needs; which would even add to the heightened awareness of the younger generation towards farming. The whole hearted approach of the industry should be to lower the damage of the farmers; in short - adopt a farmer-centric approach, explore sustainable solutions and devise effective strategies.

Ms. Sangeeta Bojappa, Chief Farmeress & Founder, Farmington.in shared that farming should be viewed as a way of life that transcends technology and knowledge. Indian agriculture amidst the ever-changing world and environment, necessitates for a more scientific approach to farming; enhanced adaptability towards the youth, thus re-shaping the future. The future farms would need effective management (rather than just farming) and in order to achieve that, it will be imperative to interconnect different aspects of farming into a coherent system.

Agrochemicals would play a critical role in the future of plant technology and the future for all will be to embrace change, including innovations like hydroponics, envision a future driven by nutrition management and safer chemicals.



Dr. Siang Hee, TAN, Executive Director, CropLife Asia said, women have a significant share in agriculture, more than 75% of Indian rural women are employed in agriculture and 45% of Asian women are farmers and they are extremely receptive to technology; which is core to agriculture. We should move towards enhancing entrepreneurship in agriculture, with focus on youth, innovation and technology; thus enabling farmers to enhance the produce and selling directly in the markets; leading to increase their income.

We are witnessing the changing format of agriculture in developing countries. There are three challenges to **Food Security – Covid, Conflict and Climate** and India is in the fulcrum. **Food Security and Affordability, cannot be taken for granted!!** If we do not have farmers, mankind is at risk.

Due to the above factors, multiple grains are under threat, price escalation and the reserves are dwindling, viz. soy and rice are down to 50%; which is forcing the Governments to initiate extreme steps to expand Nation's Toolbox and enhance the country's ability to ensure Food Security and affordability.

China and Indonesia have initiated bio-tech engineering to quickly enhance the reserves and de-coupling from international dependence. Indian Government is investing in plant breeding centres, which would ensure varieties of crops, which are drought resistant. The focus of Indian Government towards increasing usage of technology in agriculture and **Go to market strategy** is commendable.

Apart from the **focus on technology** in various aspects, CropLife member companies will continue to invest towards finding – **'how to protect our crop'**; which is our core principle; as failing this, there will be no food to feed the world. Investments are categorized as follows –

- Upstream - Innovative Food
- Midstream - Food safety, traceability technologies
- Downstream – e-Grocery – Online Stores + Marketplaces

When we focus on 'Digital'; we need to understand all the facets, which are involved. There are multiple options available for the farmers and Governments should work towards the policy environment and leave the choice to the farmers. Farmers would adapt to technology, based on their affordability and profitability.

Mr. Srinivasa Karavadi, Lead- Commercial Unit, South & Rice Community, Crop Science Div. of Bayer India, Bangladesh & Sri Lanka, Bayer Crop Science Limited shared while delivering the *Vote of Thanks* that it has been the privilege of CropLife India that **Shri Narendra Singh Tomar, Hon'ble Minister of Agriculture**, despite his absence, shared his message for the crop protection industry of the country. The admirable outreach being doled out by **Shri Kakani Govardhan Reddy, Hon'ble Minister of Agriculture, the Government of Andhra Pradesh** for the welfare of the farmers of Andhra Pradesh is insightful and motivates the industry as well. More than 3500 farmers have earned the RBK today, supplying quality inputs and infrastructure which serves as a successful model in helping farmers thrive. Apart from the execution of the schemes at the ground level, the enhancement of lab testing facilities and coordination centres is helping the farmers and the entire ecosystem of agriculture in the State.



The insightful perspective shared by **Ms. Sangeeta Bojappa** on transforming the farming mind-set emphasis on embracing technology and process driven approach will open newer avenues of collaboration. The comprehension of the farmers' behaviour of **Ms. Chhavi Rajawat** towards technology will boost our advocacy efforts for a better future of farmers.

Mr. Srinivasa Karavadi thanked all the speakers for their valuable suggestion.

Plenary Session I

Women driving the growth of Indian Agriculture



Shri J. P. Dalal, Hon'ble Minister of Agriculture Government of Haryana, Chief Guest of the National Conference said, “Farmers of Haryana are being encouraged to take up crop diversification and produce as per the market demands. Asia's largest market, spanning over 550 acres, is under construction in Ganaur in Haryana, and will be better than the markets in developed countries like Spain and France. The market would provide farmers with facilities for grading, packaging and sorting at the block and Tehsil levels, thus helping in export quality products to the international market”.

Shri Jai Parkash Dalal added –

- As a representative of the Government, I have pledged to support our farmers during all circumstances. The state of Haryana has made significant contributions to our nation. During the challenging times of COVID-19, our farmers played a pivotal role in maintaining food security. The hard work of our farmers led to bountiful harvests. I urge everyone to remember and appreciate the efforts being laid down by the farmers, each time, we have our meals, as their contributions are immense.
- When Haryana was being separated from Punjab, questions were raised about the sustainability of the State; yet today, the State is thriving against all odds. Shri Dalal requested the entire industry to join the Agricultural Fair scheduled in Hisar from the 8th to the 10th October 2023.
- The State aims to continue to export outside the country and the State offers the highest MSP on 14 crops.
- CropLife India has contributed significantly towards the crop protection sector in the country. Shri Dalal requested all the organizations in the crop protection industry to continue to contribute towards farmers' awareness and education towards responsible use. Shri Dalal stressed on the need of Government & industry collaboration with a common interest towards the growth of India's agriculture and improve farmers' livelihood.



Mr. Rajvir Rathi, Director – CropLife India, Lead - Advocacy Committee and Head - Agricultural Policy & Stakeholder Affairs, Bayer CropScience shared during the **Welcome Address** that, ***In India, about 75% of rural women workers are engaged in agriculture but women's operational landholding is only 13.96%.*** The Indian crop protection has demonstrated its strong commitment towards enabling Safe, Secure and Sustainable food production and supply. Up-skilling of rural women has empowered them to take up entrepreneurship roles, resulting not only in income enhancement of the family but also contributing to increased share of women workforce in the country. CropLife India member companies place great importance on encouraging the employment of women in all roles across the organization and recognize the need to increase the percentage of women in the workforce.

Our members understand the role, the sector needs to play in achieving the Sustainable Development Goals, ***SDG-5 – Gender Equality***. Initiatives and reforms (like women-oriented training/entrepreneurship programs, promotion of SHGs, financial literacy, equal remuneration etc.) that specifically provide women farmers and women workforce equal rights and opportunities to access economic resources, financial services, ownership and control overland/property, inheritance and natural resource; would auger well for achievement of this SDG.



Session Moderator - Ms. Laxmi Devi, Assistant Editor, Press Trust of India (PTI) shared while initiating the **Panel Discussion** that in **India women's contribution are still not being recognized completely, even in the agriculture sector.**

This inequality in landownership limits their access to inputs, seeds, fertilizers, credit, and agricultural extension services. The crop protection industry has been implementing programs to build capacities and develop entrepreneurial skills among women in agriculture in India to empower them and take larger roles in the sector.

Dr. Anupama Singh, JD (Edu.) & Dean & Principal Scientist, Indian Agricultural Research Institute, shared that the hurdles women face in agriculture is primarily due to societal norms, which has been prevailing since the ages. Dr. Singh emphasized the importance of empowering both women and men to change these demeanor and eliminate insecurity. She stressed on the critical role of education, including vocational training, in enabling women to excel in agriculture. Dr. Singh concluded that ***education*** is the driving force for women's success and suggested public-private partnerships to bridge the gender bias.



Ms. Chhavi Rajawat, First MBA Woman Sarpanch, Village Soda, Rajasthan shared that the importance of field learning is critical compared to classroom education and the same has attributed to her transformative journey in the unorganized rural sector. The community learning in women is extremely high hence collaborative efforts, particularly public-private partnerships, will aid to bring about positive change. Ms. Rajawat shared her experience as a Sarpanch and how she ensured the smooth functioning of her office, while highlighting the importance of logical thinking, reinforced by her education and ethnicity. The society has to accept the fact that women are deserving enough and hence the pay parity be achieved.



Ms. Sangeeta Bojappa, Chief Farmeress & Founder - Farmington.in shared that women are involved in all the stages of production in agriculture, especially in her organization and they perform with equal zest and fervour and even excel in rural areas.

Up skilling of rural women has empowered them to take-up entrepreneurship roles, resulting not only in income enhancement of the family but also contributing to increased share of women workforce in the country. We should continue to work towards building capacities and developing entrepreneurial skills among women in agriculture in India to empower them to take larger roles in the sector.

Ms. Nisha Solanki, First Women Drone Pilot Haryana & Head – Digital & Data Science, Syngenta India Pvt Ltd. explained her role as an agriculture engineer and her connection to mechanization and the drone industry. She also highlighted the challenges of being judged by farmers as a woman in a male-dominated field. Ms. Solanki believes in traversing the country and advocating for the encouragement of women farmers to become drone operators.



The Government's efforts to encourage farmers and the need to organize machines to bring small landowners together is commendable and industry should collaborate to multiply the efforts and results.



Mr. Rahul Dhanuka, Director, CropLife India & Joint Managing Director, Dhanuka Agritech Ltd. thanked all the panellists of the session while delivering the **Vote of Thanks**, सर्व प्रथम भारत का प्रणाम, महिला किसान के नाम..

While focusing key takeaways from each of the panelist, **Mr. Dhanuka added that Dr. Anupama Singh** brought to the limelight the issue of gender gap and inequality and the solution for the same is education and empowerment along with public private partnership. The outlook of men towards women needs to undergo a major transformation for the explosive growth. **Ms. Sangeeta Bojappa** shared the need for training of women in marketing and packaging; while empowering men towards women empowerment. The journey of **Ms. Nisha Solanki, First Women Drone Pilot**, from the State of **Haryana** is extremely inspiring, which has seen numerous prejudices and apprehensions and breakthrough the demeanour. Mr. Dhanuka expressed gratitude towards **Ms. Laxmi Devi** that her resilience helped bring out the realities of the panellists, which would help stimulate healthy conversations and actions.

Plenary Session II: Innovations for the New Age Farmers



- Dr. Ajeet Kumar, Director, CropLife India & VP-Technical & Development, SWAL Corporation** welcomed the Panellists of the session on “Innovations for the New Age Farmers”. While delivering his welcome address, Dr. Ajeet shared his views about new age farmers and innovations. New Age farmers are those who produce more from less, grows a sustainable future, builds new age farming services with modern technology, use automation methods to reduce waste of crops, water, and other natural resources. A new age farmer cares for the conservation of natural resources, raising livestock, doing aquaponics, hydroponics, precision agriculture etc. While doing so, he increases efficiency, reduces wastes and provides fresh and sustainable produce for the consumers.

As far as innovations are concerned, we have already made strides in permaculture principle i.e. using drip irrigation, doing water harvesting, creating biodiversity within the farm using polyhouse and net houses and this is going to be our future. But agriculture in poly and net houses faces problem of nematodes and mites and practically no chemical works for their control. Therefore, there is tremendous scope of using predators and parasite for controlling nematodes and mites in net and poly houses. A lot of work has been done in this direction at NBAIR and many natural resources are available in the form of parasites and predators. But there is an issue of transportation of these parasites and predators to the site where they are needed i.e. at the site of infestation. This is one area where innovation is required in transporting these parasites and predators with their full vigour and vitality.

As far as pesticides are concerned, our new age farmers have shown to the world to produce food worth \$563 billion using just 62,000 MT of pesticides. This contrasts with European Union which uses 3,50,000 MT of pesticides to produce half of what India currently produce. Our new age farmers know how to use very sophisticated pesticides. Therefore, the innovation area could be to develop more and more low dose pesticides but this cannot happen without enabling policies. Low dose product will be more relevant when we are planning to use drones and in case of low volume formulations.



- **Mr. Raju Kapoor, Lead-State Affairs Committee, CropLife India & Director-Public and Industry Affairs, FMC** shared his views on the theme of the session and that the innovations are essential for building a better tomorrow. India's aspiration is not only to become self-sufficient in food production but also to serve as a food bowl for the world and take the agriculture exports to over \$100 billion. To achieve this aspirational target, there is a need for all the stakeholders to work together. Innovation is not only limited to the product but runs across the entire delivery system such as innovations in policy formulation also. The classic example is the use of drones in agriculture, made possible with innovative enabling policy.

Lots of innovations are happening in development of formulations, delivery mechanism of products etc. Industry is moving to products based to service-based industry in agriculture. Innovations in discovery is also happening based on the choices of the farmers, regulators, environmental protection etc. Products having any iota of environmental impact are being discouraged and dropped from the product portfolio of the companies. Sustainability is the going to be a major focus area. Lot needs to be achieved in the Indian agricultural productivity using innovation and technology. India needs to develop its crop protection or crop medicine portfolio to around 700-800 from the existing level of about 300-400 molecules.

- **Dr. P. K. Singh, Agriculture Commissioner & Chairman-CIB&RC, Ministry of Agriculture & Farmers' Welfare, Government of India** shared his view on sustainability and innovation and their correlation. He emphasized that Crop protection solutions should be innovative. Government is now moving towards “**One Health**” initiative which involves soil, water, air, crops plants, environment, humans etc. We need to broaden the base of crop protection solutions to suit the new requirement. For examples, the government has fastened the registration process for nematicide products with its limited resources and manpower. This is the requirement for protected cultivation and Government has well recognized this requirement. Diversification is happening due to climate change and new insect-pest and diseases challenges are emerging with the diversification of production in newer areas.



Cropping pattern and cropping sequences are changing and all these factors demand innovations at the farmer's level. Lots of innovations are needed in terms of new products being applied through drones, their application with fertilizers, nano urea and micronutrients etc. Government is promoting IPMS. Contribution of agrochemicals should be projected in a positive way. Dr. Singh also highlighted that in spite of limited resources at CIB&RC, Government has cleared approximately 67,000 registration application between last two consecutive CIB&RC meetings. Introduction of KYC has helped to weed out the frivolous applications. Since September 2022, approximately 1.47 lakh applications have been cleared.

CIB&RC is trying to reduce the registration time to a max. of 2 years. In the absence of data protection in the country, the registration of new molecules is going through the same process of 9(3B) otherwise the “Me Too” registration will create problems for new molecule registrants, if registrations are granted within a year for new molecules. Therefore, in the present circumstances, 9(3B) registration process is

much better than direct 9(3) for companies registering new molecules. Government is already doing the faster registration for any new good molecules during the emergence of any new insect-pests and granting registration in record time.



- **Dr. S. N. Sushil, Director, NBAIR, Bengaluru & Ex-PPA**, highlighted about the current trends in use of agrochemicals, especially microbials and biologicals. There is a huge scope for the industry to grow and already a shift is happening among the users towards biologicals. Lots of biologicals are available in India which are untapped and not used. About 150 ICAR developed commercial technologies on biologicals are already in the market. Many more technologies are available with the institutions but in the absence of regulatory framework, they are not being utilized. There is a need for regulators to take some bold decisions now. For example, when locust attack happened government allow *Metarhizium Acridum* for RTT. Likewise, there are many other biological products available globally which can be allowed for import. After having proper scientific review of such products, they can be allowed if found safe for Indian conditions.

NBAIR has also recently developed a double stranded RNA technology and developed its nano based formulation targeting one single gene and it is providing 90% control of *Bemesiatabaci* (Silverleaf Whitefly). But in the absence of any regulations, it's not being utilized and commercialized. Sprayable pheromones are available but there are no regulations in India for such products. Similarly, the biological production of semi chemicals should be explored. One of the solutions could be to utilize the data available anywhere in the globe where it has been tested and proven with result without compromising on the safety aspects.

- **Dr. Siang Hee TAN, Executive Director, CropLife Asia** highlighted that today we cannot talk about sustainability in isolation as India will soon reach about 1.6-1.7 billion population. There is a need to discuss the long-term food security for India because the agriculture sector productivity is not like manufacturing sector where you can have the desired level of production within a specific time. Dr. TAN made a comparative analysis of agriculture of India and China. Despite having almost similar population, arable land, irrigated cultivated area, total sown area, adoption of modern technologies and high yielding varieties, the agricultural output of China is more than three times that of India's.



The challenge before Indian agriculture is that how to increase the production without increasing the arable land and under similar and existing environmental footprints. He attributed the higher agriculture production of China to crop protection chemicals. Efficiency in the regulatory environment is the core to allow the innovation to happen. Technology and innovation need to operate in tandem. In China, a total of about 41,000 products are being registered in a year and almost 4000 new products are being registered. In China 727 new active ingredients are registered which were 672 in 2017. This shows that 55 new active ingredients were registered in the last 4 years in China.

There is a misconception that Protection of Regulatory Data (PRD) is not good for industry and it does not spur innovation. But when China went to WTO in 2001, it got 6+2 years PRD and its industry, manufacturing and registration of crop protection products continue to grow and India continued to import 50-70% of its intermediates. This signifies that PRD does not retard the growth of the industry. Another misconception is that PRD is only for multinational companies. About 97% of registrations comprising about 35,000 crop protection products in China in 2017 were by Chinese companies and

MNCs were not even 1%. This shows that PRD does not impede investments. It encourages the production of different technologies. This is a golden opportunity for 'Make in India' because chemical industry needs investment and innovation and it is a R&D based industry. Dr. TAN also touched upon the issue of transparency and predictability in the timeline of registration of crop protection products by showing the example of Australian regulatory system in terms of no. of application received, in progress, processed or not processed on time etc. This transparency helps the industry to plan their production schedule and their entire supply chain pipeline.

- **Dr. Vishal Choudhary, Dy. Industry Advisor, Ministry of Chemicals & Fertilisers, Government of India** elaborated the role of Ministry as a facilitator and promoter of agrochemical sector. The regulatory part of agrochemical industry is with the CIBRC while Chemical Ministry looks after the promotion and development of this sector. Ministry has established an **Industry Facilitation Cell** to take up the issues of the industry with other relevant Ministries. The Ministry is working on creating dedicated HS codes for all the chemicals under chapter 38 and 29 to resolve the mis-classification and duty rationalization and to eliminate the others category in the imports. In the current financial budget, HS codes for 14 agrochemicals have been created out of a list of 50 top agrochemicals which are being imported in the country.



The Ministry is also working for establishment of sector specific chemical parks in each State. Four PCPIRs have already been notified. Dr. Choudhary also highlighted the role of the ministry in the Stockholm and Rotterdam Convention in protecting the interest of the industry based on the effect of listing of a chemical on the socio-economic impact. He cited the classical example of DDT where India has taken use exemption for Malaria control in the absence of any other equally effective and economical alternative to DDT and HIL is exporting it to many African countries.

- **Mr. Rajesh Dhawan, Lead- Regulatory Affairs Committee, CropLife India & Head -Crop Protection-Regulatory India & Sr. Regulatory Expert, CPD India, Pakistan & Bangladesh, Syngenta India Pvt. Ltd.** proposed the vote of thanks. In his address, he specially thanked Dr. P.K. Singh for sparing his valuable



time despite his very busy schedule in the Ministry and his one-word message "One Health" and his views on diversification, climate changes and innovation for changing pest dynamics. Mr. Dhawan thanked Dr. Ajeet Kumar for kickstarting this session with his perspective on the topic of the session and highlighting the increasing problem of nematodes and need for availability of more nematicides. He thanked Mr. Raju Kapoor for steering this session with his oratory skills and highlighting how the innovation is the key for our aspiration to food and nutritional security.

Mr. Rajesh Dhawan thanked Dr. S. N. Sushil for highlighting the increasing role of biologicals, necessitating the need for regulatory framework for some of the available proven technologies to take off, need for allowing import of microbials and highlighting about semio-chemicals etc. He thanked Dr. Siang Hee TAN for an eye-opening data driven presentation on the regulatory scenario of China, touching on the PRD issue and also highlighting the need for technology and regulatory requirement to go in tandem. He also thanked Dr. Vishal Choudhary for facilitating the agrochemical industry and especially for the increased import quantities of technical and formulations for R&D purposes. In the last he also requested Dr. P. K. Singh to look into the issue of fast tracking of new molecules, which is lingering on since 2004.

Plenary Session III: Role of Agrochemicals in the Growth of Indian Agriculture



Dr. S. C. Dubey, Assistant Director General (Plant Protection) highlighted that for centuries agrochemicals are being used in the agriculture but even today we are justifying the use and role of agrochemicals, which is the sad part. There is no doubt that without agrochemicals there is no production. We are leading globally in agriculture. In most of the crops we are either at first or second rank in the world. Approximately 1.48 lakh crores of produce is lost annually as per the Government of India estimate. Exact estimates of the losses are not available due to various reasons but it is estimated that every year India is facing a crop loss of about 20-40% due to various insect pests, disease, and weeds etc. So, one of the direct benefits of crop protection chemicals is to reduce these losses.

Dr. Dubey highlighted that Crop protection products are directly or indirectly playing the role in production, productivity and sustainability. Many a times the adverse effects of agrochemicals and fertilizers are being talked about such as not applying at the recommended dose and as per the package of practice etc. Crop production and productivity are the two main roles being played by the agrochemicals. They also play important role to reduce the post-harvest losses.

India is now leading in the agrochemicals globally and is at fourth place and there is lot of potential for Indian agrochemical industry to grow. Export potential is also high for agrochemical companies. Our domestic demand is increasing despite the limited resources in terms of land, water resources, and other inputs etc. Therefore, with increasing demand we need the high yielding varieties and better crop protection solutions to minimize the losses etc. In case of new products or new molecules, investments are required. Maybe it is linked to several other policy matters but definitely, it has to be debated and decided by the Government as well as the industry and how to develop our own products in future. How long we can depend on the new products from other countries? No country can sustain unless they have their strong R&D. We need to develop our own products by investing in R&D and by involving ICAR, our research institutions, SAU, private institutions etc. Government is now promoting PPP in R&D.

Dr. Dubey suggested that companies should come forward for collaborative research with the potential research institutes and discuss in which areas research is required for profitable venture. This way some products can be developed. The registration process of products is also being streamlined and within two years the registrations are being granted. Further efforts are being made to reduce it to one year.

Apart from many opportunities, certain challenges were also highlighted by Dr. Dubey. Slow registration process is one of them. At the Directorate level, Government is doing its best. At the companies level also, there is a need to submit the required data in one go to reduce the registration time. Many of the deficiencies are observed in the applications which lead to increased time for processing the applications. Increasing cost of raw materials is another challenge. For example, India is self-sufficient in boric acid but still we are importing boric acid due to cost economics. We are lagging in the discovery of new molecules in India. Awareness on safety and handling of pesticides is another area of concern. Even at the manufacturing sites, many of the companies don't have optimum environment for their workers. Similarly, the safety aspect is lacking at the storage level and also at the farmer level. Empty pesticide containers management and disposal of gunny bags needs priority and efforts by the companies to resolve these issues. For sustainable growth, there is a need to promote awareness at the farmers level about how to produce residue free, healthy with minimum resources. Companies needs to educate farmers on such aspects.

Another area of concern is perception on use of agrochemicals not only among environmentalist but also among scientists. Scientific community should always speak based on facts and data without criticising other areas. Societal awareness is needed to ward-off the negative perception about agrochemicals. Environmental pollution due to use of agrochemicals is being highlighted everyday by NGOs and environmentalists. Big companies now should come forward for biopesticides manufacturing for bringing out quality products. When the time will be mature, Government will also bring out the policy and guidelines for mixing pesticide in biopesticides.



Mr. Jagdeesh Yerneni, Director, CropLife India & Sales Lead, Indofil Industries Ltd. shared about the opportunities in agriculture in India compared to the World. India is having a business of about \$26 billion in domestic and export of about \$2.5 billion and the agrochemicals in India are growing at a CGAR of about 5-7% which is more than the average global growth of about 3.0%. So, there is a big opportunity in India in agrochemicals. The limitation of other resources and unlikely increase in the irrigated area due to limited land resources, agrochemicals as input are going to be major ones for increasing the productivity in India along with integrated nutrient management, quality seeds, mechanization, digitalization etc.

Mr. Yerneni added that there are different stakeholders in this growth journey. For farmers this growth means higher productivity and higher market price; for companies it is revenue and profitability which they can invest in their future R&D for providing better solutions to the farmers, which will again enhance the productivity. In spite of the black thrips attack in chilies in 2021, we are now the largest exporter of the chillies in 2023 and leading in spices also.



Mr. Deepak Verma, Domain Lead Agriculture, Open Network for Digital Commerce (ONDC) spoke about the role of digital technologies for providing the information on right usages of agrochemicals. Right product at recommended dose at right time use (of agrochemicals) will help in removing the negative image of the industry and impacts on the environment. Mr. Verma gave a brief introduction about ONDC and informed that ONDC is a Government of India initiative created with the objective to democratize the e-commerce for deeper penetration. ONDC is an application provider for different service providers. In

simple words, ONDC enables communications between different service providers. It is a network based on open protocol which will enable local commerce across segments such as mobility, grocery, food delivery, hotel booking etc. to be discovered and engaged by any network-enabled application. It makes communication possible between different commercial entities.

Regarding the agri-inputs, Mr Verma explained that for application of right usages, three things are required i.e. advisory, which is available abundantly; assessment for correct insect-pests, diseases, deficiency, soil test analysis; and sale of agri-inputs based on the correct assessment and advisory. In case of agri-inputs, ONDC can bring together the different service providers on a single platform such as service providers of farm advisory, inputs providers (dealers and distributors), credit providers etc. By bringing them together, right solutions can be provided to the farmers to enhance the production and productivity. Many of the agritech platform are doing the same things and they are also trying to collaborate with ONDC. Based on the query from one of the participants, a lot of discussion happened on sale of agrochemicals through online platforms and on how to make the system foolproof so that spurious and fake products which are selling on high discounts on online platforms can be stopped or restricted and only genuine products are available to the farmers.



Mr. Sarjiwan Manhas, Senior Director & Chief Sustainability Officer-Crystal Crop Protection Limited and Former Chairman-CropLife India proposed the vote of thanks. Agrochemicals play an important role and everyone is convinced that without agrochemicals it is difficult to sustain the agricultural productivity and food security. He thanked Mr. Jagdeesh for highlighting the overall growth performance of the Indian agrochemical industry compared with the global growth. Mr. Manhas thanked Dr. Dubey for his views and suggestions on indigenous development of new products i.e. within India under “Make in India” initiative and stressing the need for investing in R&D by the companies.

Mr. Manhas highlighted the need for more stewardship efforts on safe and judicious use of agrochemical by the companies. Although companies are doing their efforts, but more needs to be done. He also thanked Mr. Verma for his deliberations and explaining about ONDC and how it can help in bringing together different platform of service providers so that it can play a role in e commerce sale of agri-inputs. Companies should take advantage of ONDC platform for online sale of their products. Lastly, Mr. Manhas thanked all the participants for sparing their valuable time for attending the national conference and making it a huge success.



भारत में कीटों से सालाना 2 लाख करोड़ रुपये की फसल का नुकसान

नई दिल्ली (कृषक जगत)। क्रॉपलाइफ इंडिया ने अपनी 43वीं एजीएम के अवसर पर एक राष्ट्रीय सम्मेलन का आयोजन किया। सम्मेलन में आंध्र प्रदेश और हरियाणा के कृषि मंत्री, वरिष्ठ अधिकारी, विशेषज्ञ, शिक्षाविद् और उद्योग जगत के प्रमुख उपस्थित थे। यस बैंक इस आयोजन का नॉलेज पार्टनर था।

राष्ट्रीय सम्मेलन के दौरान विचार-विमर्श 'भारत - एक उभरता हुआ वैश्विक खाद्य केंद्र: सतत फसल संरक्षण समाधान की भूमिका विषय पर केंद्रित था। उद्घाटन सत्र का फोकस 'भारतीय कृषि का उदय - विश्व की उभरती खाद्य टोकरी और राज्यों की भूमिका' था। प्रथम सत्र 'भारतीय कृषि के विकास में महिलाएं' पर केंद्रित था और दूसरा सत्र 'नए युग के किसानों के लिए नवाचार' पर केंद्रित था। समापन सत्र में 'भारतीय कृषि के विकास में कृषि रसायनों की भूमिका' पर विचार-विमर्श किया गया।

उद्घाटन भाषण के दौरान आंध्र प्रदेश के कृषि मंत्री श्री काकानी गोवर्धन रेड्डी ने कहा कि राज्य सरकार कृषि में नई तकनीक के बढ़ते उपयोग के लिए किसानों की शिक्षा के लिए प्रतिबद्ध है; जिसके कारण कई नवीन पहल हुई हैं। 'ई-केवाईसी नो योर क्रॉप' का लक्ष्य किसानों को आवश्यक डिजिटल संसाधन उपलब्ध कराना है। हरियाणा के कृषि मंत्री श्री जे.पी. दलाल ने कहा, 'हरियाणा के किसानों को फसल विविधीकरण और बाजार की मांग के अनुसार उत्पादन करने के लिए प्रोत्साहित किया जा रहा है। 550 एकड़ में फैला एशिया का सबसे बड़ा बाजार, हरियाणा के गझीर में निर्माणाधीन है, और यह स्पेन और फ्रांस जैसे विकसित देशों के बाजारों से बेहतर होगा। यह बाजार किसानों को

क्रॉपलाइफ इंडिया और यस बैंक की रिपोर्ट



क्रॉपलाइफ इंडिया और यस बैंक नॉलेज रिपोर्ट श्री संजय वुप्पुलूरी, श्री श्रीनिवास करावाडी, श्री संगीता बोजप्पा, श्री काकानी गोवर्धन रेड्डी, डॉ. के. सी. रवि, सुश्री छवि राजावत, डॉ. मियांग ही, टीएएन और श्री राजवीर राठी द्वारा जारी की गई।

भारत में कीटों के कारण सालाना 2 लाख करोड़ रुपये की फसल का नुकसान होता है। भारत में कीटनाशक उपयोग जापान में किलोग्राम प्रति हेक्टेयर की तुलना में केवल किलोग्राम प्रति हेक्टेयर है। भारत में फसल सुरक्षा उद्योग परिवर्तन के दौर में हैं किसानों को फसल से परे सुरक्षा की पेशकश की जा रही है। एगटेक ड्रोन-टेक सहित किसानों को इनपुट वितरण प्रयोग के साथ-साथ किसानों को बाजारों से जोड़ने के तरीके को बदल रहे हैं। ड्रोन एक बड़ा गेमचेंजर है। भारत अब चीन के बाद वैश्विक स्तर पर कृषि रसायनों का दूसरा सबसे बड़ा निर्यातक बन गया है।

ब्लॉक और तहसील स्तर पर ग्रैडिंग, पैकेजिंग और छँटाई की सुविधाएँ प्रदान करेगा, जिससे अंतर्राष्ट्रीय बाजार में गुणवत्तापूर्ण उत्पादों के निर्यात में मदद मिलेगी।

डॉ. अशोक दलवाई, अध्यक्ष, किसानों की आय दोगुनी करने वाली समिति, ने किसानों को बेहतर तकनीक प्रदान करने के लिए सार्वजनिक निजी भागीदारी पर अपने विचार साझा किए। भारत सरकार के कृषि आयुक्त डॉ. पी.के. सिंह ने कहा, एक ही क्षेत्र में कई फसल चक्रों को सक्षम करने में प्रौद्योगिकी की भूमिका; किसानों को

शिक्षित करना और कृषि रसायनों की धारणा को फिर से तैयार करना समय की मांग है।

डॉ. एस. सी. दुबे, एडीजी (पौध संरक्षण), कृषि मंत्रालय, भारत सरकार ने साझा किया, 'कृषि रसायन पोषक तत्वों और जल प्रबंधन के साथ-साथ फसल के नुकसान को कम करने और उत्पादकता बढ़ाने के लिए महत्वपूर्ण हैं। टिकाऊ कृषि के लिए अनुसंधान एवं विकास में निवेश अपरिहार्य है और नीतियों को पर्यावरणीय स्थिरता, किसान कल्याण, और दीर्घकालिक लाभप्रदता की दिशा में प्राथमिकता दी जानी

चाहिए।

क्रॉपलाइफ इंडिया के अध्यक्ष डॉ. के.सी. रवि ने कहा, 'चूंकि भारत एक वैश्विक खाद्य केंद्र के रूप में उभर रहा है, इसलिए फसल सुरक्षा क्षेत्र को उचित वृद्धि के लिए एक पूर्वानुमानित, स्थिर और विज्ञान आधारित नीति और नियामक व्यवस्था की आवश्यकता अनिवार्य है। यह किसानों के सामने आने वाली चर्तमान और आगामी चुनौतियों का समाधान करने के लिए; आर्टिफिशियल इंटेलिजेंस और ड्रोन जैसी अत्याधुनिक प्रौद्योगिकियों की शुरुआत का मार्ग प्रशस्त करते हुए नवाचार को बढ़ावा देगा'।

क्रॉपलाइफ इंडिया और यस बैंक नॉलेज रिपोर्ट

- भारत में कीटों के कारण सालाना 2 लाख करोड़ रुपये की फसल का नुकसान होता है।
- भारत में कीटनाशक उपयोग जापान में 11.24 किलोग्राम प्रति हेक्टेयर की तुलना में केवल 0.37 किलोग्राम प्रति हेक्टेयर है।
- भारत में फसल सुरक्षा उद्योग परिवर्तन के दौर में हैं। किसानों को 'फसल से परे सुरक्षा' की पेशकश की जा रही है।
- एगटेक (ड्रोन-टेक सहित) किसानों को इनपुट वितरण, प्रयोग के साथ-साथ किसानों को बाजारों से जोड़ने के तरीके को बदल रहे हैं। ड्रोन एक बड़ा गेम चेंजर है।
- भारत अब चीन के बाद वैश्विक स्तर पर कृषि रसायनों का दूसरा सबसे बड़ा निर्यातक बन गया है।



Krishi Jagran

28 September 2023

Some of the leading women in the world of digitalization and agriculture presented their insights on transforming and empowering women with their presence in farming.

#croplifeindia #NationalConference #krishijagran #WomenLead #womenleading #farming



7

2 shares

Home » Policy » AgroChem associations ACFI, CCFI, CropLife India, and PMFAI join hands for growth of the sector

AgroChem associations ACFI, CCFI, CropLife India, and PMFAI join hands for growth of the sector

In February 2023, Indian Chemical News (ICN) took the first initiative of bringing all agrochem industry associations under one platform during AgroChem Summit

By ICN Bureau | October 19, 2023



All four agrochemical associations - Agro Chem Federation of India (ACFI), Crop Care Federation of India (CCFI), CropLife India, and Pesticide Manufacturers & Formulators Association of India (PMFAI) have joined hands for taking up joint representation with state and central government on issues of common interest which will benefit all stakeholders. This was discussed in a joint meeting of all associations which was initiated by CropLife India.

On 24th February 2023, Indian Chemical News (ICN) took the first initiative of bringing all agrochem associations under one platform during AgroChem Summit which was held at The Park, New Delhi and had Arun Baroka, Secretary, Department of Chemicals and Petrochemicals, Ministry of Chemicals and Fertilizers, Government of India as the chief guest. It was not an easy task for

Indian Chemical News at that point of time and ICN is very happy now to witness this new development of all the four industry associations coming together for a common cause which would be very helpful for farmers in the long run.



CropLife India Report: INR 2 lakh Crores of Annual Yield Loss Due to Pests in India

CropLife India organized a national conference on the occasion of its 43rd Annual General Meet, according to *Krishak Jagat*. The conference witnessed the congregation of two Agriculture Ministers from the states of Andhra Pradesh and Haryana; senior Government officials, experts, academia, and industry leaders. Yes Bank was the knowledge partner for the event.

CropLife India & Yes Bank knowledge report was released during the event. The report highlights crop protection usage in India at 0.37 kg/hectare compared to a staggering 11.24 kg/hectare in Japan. It also mentions INR 2 lakh crores worth of crop yield is lost annually due to pests. The report further stresses on the role of state governments in enabling ease of doing business and ease of doing agriculture. India now stands as the 2nd largest exporter of agrochemicals globally, after China, making it a key participant in the global crop protection industry as per the latest data made available by WTO, said the report.



CROP PROTECTION AGRICULTURE INDUSTRY

CropLife India re-elects Dr. K. C. Ravi of Syngenta India as the Chairman; announces Vice Chairman positions during its 43rd AGM

13 October 2023, New Delhi: CropLife India has announced in a statement that Dr. K. C. Ravi, Chief Sustainability Officer, Syngenta India has been re-elected as the Chairman of the Board, 4th year in a row; during the 43rd Annual General Meeting held in New Delhi.

Anil Kakkar, Vice President - Sales and Marketing, Sumitomo Chemical India was re-elected as the Vice Chairman for 3rd year in a row. Ankur Aggarwal, Managing Director, Crystal Crop Protection Ltd. has been elected as the second Vice Chairman of the Board by the members.



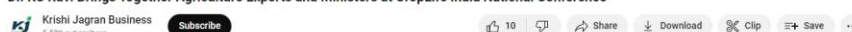
Knowledge Report released - Sunjay Vuppuluri, Srinivasa Karavadi, Sangeeta Bojappa, Kakani Govardhan Reddy, Dr K. C. Ravi, Chhavi Rajawat, Dr Slang Hee, TAN and Rajvir Rathil

Farmer Centric Sustainable Technology Adoption Key to India's Agriculture Growth

ANI | Updated: Sep 30, 2023 15:44 IST



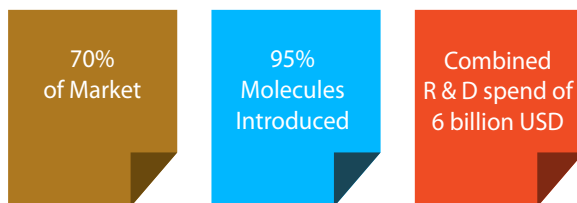
Dr. KC Ravi Brings Together Agriculture Experts and Ministers at CropLife India National Conference





CropLife is a Network of Global Federations comprising of regional and national associations in **91 countries**.

CropLife India represents:



CropLife India,
702, 7th Floor, Bhikaji Cama Bhawan,
Bhikaji Cama Place, New Delhi - 110066

+91 11 26196681 / 26186296

www.croplifeindia.org

communications@croplifeindia.org