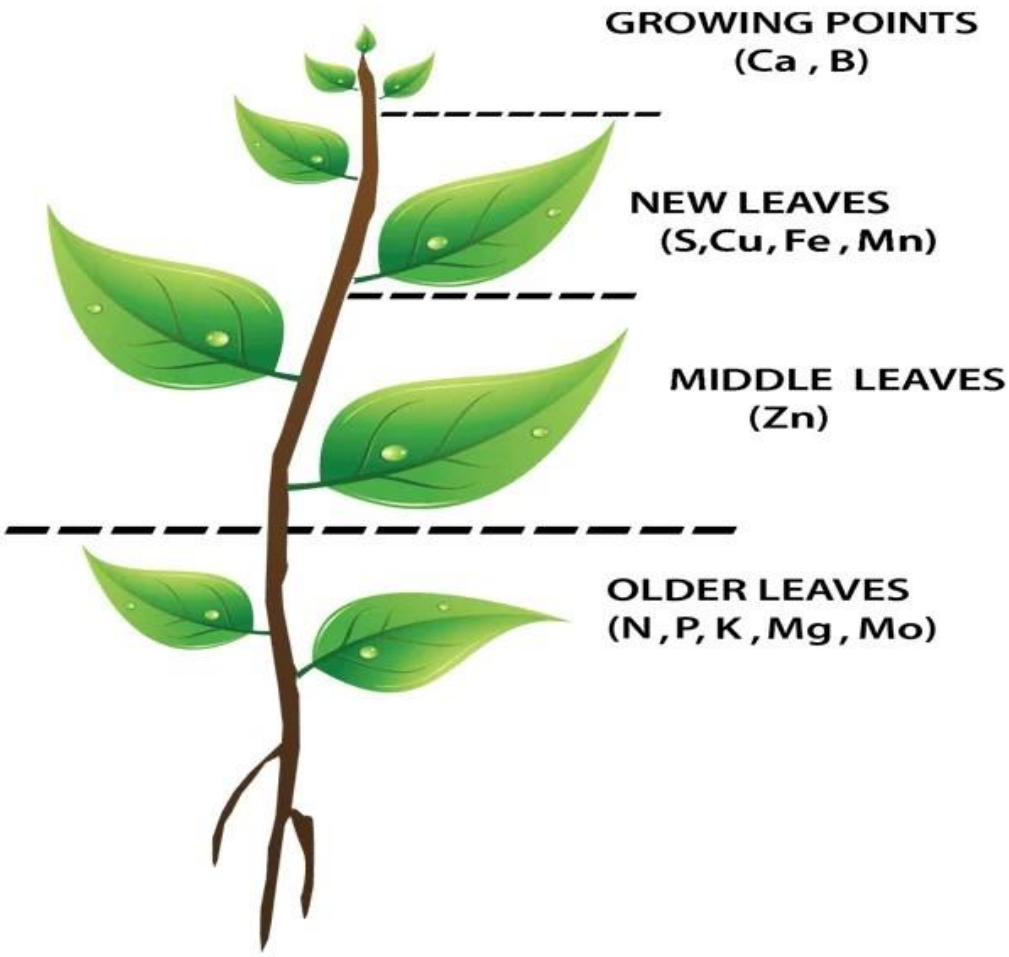
NATIONAL SEMINAR
ON
RECENT ADVANCES IN MICRONUTRIENT RESEARCH & APPLICATION IN HORTICULTURAL CROPS IN INDIA



11 AUGUST 2025

Hotel Radisson Blu
Kharadi, Pune (Maharashtra)

Dear Friends,

FAI has been conducting various training programs for the fertiliser industry personnel on the subjects of topical importance. It is proposed to organize a National Seminar on **Recent Advances in Micronutrient Research & Application in Horticultural Crops in India** at Hotel Radisson Blu, Kharadi, Pune (Maharashtra) on 11 August 2025.

Horticultural crop quality is an important aspect of agricultural production because it directly influences customer preference, market value and overall sustainability. Micronutrients are important for plant nutrition because they affect the growth, development, and quality of horticultural crops. Despite the well-proven beneficial role of micronutrients, excessive applications of such nutrients may lead to plant toxicity, soil contamination and environmental problems ultimately leading to detrimental health effects. Moreover, considering that plant-derived micronutrients are essential for human health, another important aspect in crop nutrition is the bio-fortification of crops with micronutrients that could help fighting against mineral deficiencies that plague a great part of world population.

Recent research focusing on crop micronutrient management revealed several mechanisms involved in micronutrients' uptake and translocation in plants, and their role in plant physiological processes. Moreover, several reports suggest specific strategies that could help toward the optimization of micronutrient application management in modern crop production.

In view of the above, the program has been specifically designed to address all the stakeholders i.e. manufacturers, importers / exporters, distributors, policy makers, researchers for in-depth discussion on the recent advances in micronutrient research & application in horticultural crops in India. We are sure that the participants will gain valuable insight into the advances in micronutrient fertilisers research & application and will be equipped to face the future challenges in this sector.

With this background, it is proposed to organize a National Seminar on **Recent Advances in Micronutrient Research & Application in Horticultural Crops in India** on 11 August 2025 at Hotel Radisson Blu, Kharadi, Pune (Maharashtra).

We request you to avail this opportunity by nominating officers from your organization. We look forward to your early and favorable response.

Dr. Suresh Kumar Chaudhari
Director General

ABOUT FAI

The Fertiliser Association of India (FAI), set up in 1955, is the national representative body of all fertilizer industry in India comprising membership across public, private, joint and cooperative sectors. It is a non-profit, non-trading organization of fertilizer manufacturers/importers, technologists, plant/equipment manufacturers, research institutes and others interested in fertilisers.

The main objective of FAI is to bring together all concerned with the production, import, marketing and use of fertilisers with a view to promote solution of industry problems, to assist industry in improving its operational efficiency and to promote the balanced fertilization for raising agricultural productivity.

To cater to the need of the officials working in different disciplines of the industry, FAI has been regularly conducting programs in the areas of fertiliser policy, marketing, technology, agriculture, environment, management development, forecasting of fertiliser demand, etc. Realizing the need of the industry, we have planned a national level seminar on **Recent Advances in Micronutrient Research & Application in Horticultural Crops in India** wherein the experts from the Government, FAI, Agricultural Institutions and the Micronutrient fertiliser Industry would be sharing their thoughts & ideas in making the deliberations interesting and meaningful.

TRAINING APPROACH

The training approach aims at stimulating individual thinking and maximum participation of the officers working or interested to work in the micronutrient fertiliser industry. Emphasis is on participative approach rather than merely lectures so that participants become intimately involved in the learning process.

BACKGROUND

Apart from their role in plant growth and development, micronutrients are also essential in plant tolerance against biotic and abiotic stresses and in plant innate immunity, by being involved in metabolic processes

that control plant response and perception to stresses. However, despite the well-proven beneficial role of micronutrients, excessive applications of such nutrients may lead to plant toxicity, soil contamination and environmental problems ultimately leading to detrimental health effects. Moreover, considering that plant-derived micronutrients are essential for human health, another important aspect in crop nutrition is the bio-fortification of crops with micronutrients that could help fighting against mineral deficiencies.

Plant nutrition management in commercial / horticultural crops through the application of macro and micronutrients is essential not only for achieving high yields but also for fulfilling market requirements for high-quality end products. Common nutrition practices focus on the application of macronutrients through synthetic fertilisers without considering micronutrients. In addition, it is not uncommon to witness the irrational use of excessive fertiliser rates, which may result in soil and/or groundwater contamination and phyto-toxicity. Recent research focusing on crop micronutrient management revealed several mechanisms involved in micronutrients' uptake and translocation in plants, and their role in plant physiological processes. Moreover, several reports suggest specific strategies that could help toward the optimization of micronutrient application and management in modern crop production.

Recent advancements in micronutrient research for plants include the development of bio-fortification strategies, innovative foliar spray technologies, and the use of nanotechnology to improve micronutrient uptake and utilization. These strategies aim to address micronutrient deficiencies in crops and improve food quality and yield, particularly in developing countries where micronutrient malnutrition is prevalent.

Emerging areas of research related to micronutrients include investigating (i) micronutrient roles and function in plant metabolism and their uptake and transport within the plant as a function of different genetic and environmental factors; (ii) novel fertiliser management strategies to address plant micronutrient deficiency or toxicity stress, (iii) the use of plant grafting and epigenetic technology to address micronutrients deficiency and/or toxicity stress; (iv) sustainable strategies for the development of functional food through agronomic bio-fortification techniques, including the use of bio-fertilisers, bio-stimulants, supplemental artificial lighting and micronutrient nanoparticles.

It must be recognized that the nutrient needs of Indian agriculture are increasing. Fertilisers are a costly input and their availability is also limited. These should be used in most efficient manner under fertiliser best management practices developed on the 4R Nutrient Stewardship principles. To encourage the production and use of various types of micronutrient fertilisers, State Governments may develop effective mechanisms to have accurate month-wise information on import, production and sale of micronutrient fertilisers. Research institutions may encourage research and evaluation studies on innovative fertiliser products. Fertiliser industry and research institutions (ICAR & SAUs) can pool their resources in R&D of micronutrient fertilisers. Fertiliser industry also needs to adopt a different marketing approach for new innovative fertilizer products. The marketers have to shift their focus from ‘selling product’ to ‘selling crop nutrition solutions’ for a better future.

TOPICS TO BE COVERED

1. Recent Advances in Micronutrient Research & Application in Horticultural Crops in India
2. Global vis-à-vis Indian trends in Micronutrient Fertiliser Usage
3. Strategies to Mitigate Micronutrient Deficiencies in Soil & Crops
4. Panel Discussion - Recent Advances in Research & Application of Micronutrient EDTA / Chelates and Way Forward
5. Panel Discussion - Recent Advances in Research & Application of Micronutrient Oxides and Way Forward
6. Panel Discussion - Recent Advances in Research & Application of Glycine based Micronutrients and Way Forward
7. Trends in Micronutrients Usage
   - Grapes
   - Pomegranate
   - Onion & Garlic
   - Sugarcane

TARGET AUDIENCE

Manufacturers, importers / exporters, marketers, distributors, policy makers, researchers, students who are interested in micronutrient fertilisers.

FACULTY

Subject matter specialists from the Government, Agriculture Institutions, FAI and Micronutrient Fertiliser Industry will act as the faculty.

DURATION AND DATE

The duration of the program is one-day i.e. on 11 August 2025.

VENUE OF THE PROGRAM

The program will be held at:

Hotel Radisson Blu
Nagar Bypass Road, Kharadi, Pune
Maharashtra – 411 014

Since this is a non-residential program, participants have to make their own travel & stay arrangements.

COURSE FEE

In order to cover the expenses of the program, a contribution of Rs. 5,000/- plus 18% GST per participant is payable. The contribution covers reading material, conference facilities, breakfast, lunch, AM /PM tea coffee.

The fee can be remitted through a Banker's cheque / draft payable at Mumbai in favour of The Fertiliser Association of India. The payment can also be made by NEFT/RTGS transaction through Punjab National Bank; Branch: Linking Road, Bandra (West), Mumbai;

Saving Bank A/c. No.: 0082002100061929; SWIFT / IFSC / RTGS: PUNB0008200 under intimation to us. FAI-WR GSTIN: 27AAACT0097M1Z1

REQUEST FOR NOMINATION

We have to be absolutely specific with the hotel about the number of participants. It is, therefore, requested that nomination of the participants should reach us latest by the **5 August 2025**. Early communication on nominations will be highly appreciated.

REGISTRATION

Registration form duly filled in along with the payment of fee by Demand Draft / Bankers' Cheque / Online transfer may please be sent to:

S. P. Shete
Regional Executive
The Fertiliser Association of India (Western Region)
3, New Commonwealth Society, 229, Linking Road
Bandra (West), Mumbai – 400 050, India
Contact No : 9594131210
wr@faidelhi.org,www.faidelhi.org

REGISTRATION FORM

National Seminar on Recent Advances in Micronutrient Research &
Application in Horticultural Crops in India

11 August 2025
Hotel Radisson Blu
Nagar Bypass Road, Kharadi
Pune (Maharashtra) – 411 014

To:
The Regional Executive
The Fertiliser Association of India (WR)
3, New Commonwealth Society, 229,
Linking Road, Bandra (West), Mumbai - 400 050

Dear Sir,

Please register the following for the above program:

S. No.	Name in Capital Letters (Dr./Mr./Ms.)	Designation	Organization and Postal Address	Mobile / Phone (O)	Email
1.					
2.					
3.					
4.					

Sponsored by: Name: …… Designation : ……

Email: …… Signature: ……Date : ……

For raising invoice, please provide following additional information:

PAN Number: …… GST Number : ……

Billing Address:…… Contact Person : ……

……

……

Photocopies can be used, if additional forms are needed.
You may also email the filled in nomination form to wr@faidelhi.org

TEL : (022) – 26518162 TELEFAX : 26416174
E-mail : wr@faidelhi.org faiwrmumbai@vsnl.net

THE FERTILISER ASSOCIATION OF INDIA

WESTERN REGION

3, NEW COMMONWEALTH SOCIETY, 229, LINKING ROAD, BANDRA (W), MUMBAI-400 050
CIN : U85300DL1955NPL002999

Punjab National Bank

Payment by Electronic Mode

Bank Details	
Beneficiary Name	**THE FERTILISER ASSOCIATION OF INDIA**
Beneficiary Address	3, New Commonwealth Society, 229, Linking Road, Bandra (West) Mumbai-400050
Beneficiary Tel.No.	020-26518162
Bank Name	Punjab National Bank
Bank Address	LINKING ROAD, BANDRA (W) MUMBAI – 400 050
Bank Telephone No.	022-26420456, 26426174
Branch Name	Bandra (West), Mumbai
Bank Code & Branch Code	008200
SWIFT Number/RTGS	PUNB0008200
Bank Account Number	0082002100061929
IFSC Code	PUNB0008200
Account Type	Current Account
MICR No.	40024004
Account Currency	Indian Rupees

For THE FERTILISER ASSOCIATION OF INDIA (WR),

REGIONAL EXECUTIVE