

Happy New Year

From the Director's Desk



At the outset, I wish to extend my heartfelt thanks to all the stakeholders of CSIR-CMERI who have contributed in one way or other for taking the Institute to the greater heights during yesteryears and supported the Institute to achieve its vision even during the period of pandemic with their tireless efforts. On the onset of this year, I wish a very **Happy, Healthy and Prosperous New Year 2021** to all my CSIR-CMERI family members and such stakeholders. I urge all to welcome the New Year with a lot of determination in the areas of research, training, technical services, and social work through technological interventions.

We have been working in the area of research, but unfortunately, many practitioners view the laboratory research as impractical and ungrounded in real life. High-quality research ought to be aligned with the perceived needs of the Society. How do we transform our thought process to fully comprehend the ideas of Science as a tool for delivery of Societal Solutions? Research sensitizes decision makers to new ideas and innovations. Research may convert existing problems into non-problems through application of dynamic minds. Research can help drastically revise the way that policymakers define issues. It also helps to expand the horizons of the parameters within which policy solutions are sought at the same time, bridges the gap between requirement of effective solutions and availability of the same. In the long run, through collective efforts of other influencers, it often redefines the policy agenda. But all the above are possible if young curious minds come together and align with dynamic leadership.

Today, there is a need to disseminate acquired Scientific Knowledge to youngsters and MSME. The Hon'ble Prime Minister of India in his today's address has urged CSIR and other scientific organisations to reach to more and more students in order to inculcate inquisitiveness and nurture the future scientists, policy makers. In this line, we have already started participating in programs such as Jigyasa (for school students), Skill development (ITI, Diploma, MSME), and CSR (Industry) to reach to the common man (society). Efforts have been made to initiate social change through collaborative efforts between academicians and practitioners. CSIR-CMERI is continuously engaged in dissemination of Scientific Knowledge to the Young Minds of the Nation to describe science & innovation as engines of economic opportunities and key contributors to affordability crisis. Numerous Webinars programs have been organised by CSIR-CMERI and promoted through Social Media tools to ensure maximum outreach. The Webinars organised cover a wide array of subjects ranging from Bio-Mimetic Robots, Renewable Energy, Municipal Solid Waste Management, Farm Mechanization, Water Purification etc. These, interactive Webinars sows the seeds of 'Curiosity and Inquiry' in the young minds and thus helps in the development of a 'Scientific Temper' in them. We wish to pay adequate emphasis on strategic issues to minimize social inequality. Normally, people envision the recruitment process as a local affair. But during the recent recruitment of stenographers and assistants in the Institute, we adopted wider perspective. Since CSIR-CMERI is a National Institute, its workforce should represent a National Character. Consequently, the venue of the Selection Process was decided for selection of the best candidates from across the Nation. The diverse background of the finally selected candidates showcases that some of them belong from Economically Marginalised backgrounds but had tremendous potential. They have been able to significantly improve the quality of life of their Family Members and also contributed significantly in attaining the goals of the Institute after being provided the platform to showcase their potential.

Further, we need to appreciate that the dynamic nature of the work assignments of the modern day requires Leaders to continuously evolve their style of leadership. There is also a need to engage the first level managers in decision making and to continuously involve new performers in decision making, to ensure the creation of New Perspectives and Ideas.

During this year's resolution, I wish to emphasize on Civic learning, which is very critical for our society and identifying effective mechanisms for improving the quality of life for all citizens. Substantial Infrastructure has been developed in the recent times to facilitate a Good Quality Life for the CMERians and their Family Members. There ought to be a sound Civic Sense amongst the CMERians as CSIR-CMERI is an emblem of discipline and Societal Awareness.

We have been developing infrastructure to support technical services. We developed "water testing facility", "full workshop setup", "Added a number of sophisticated equipment in NDT and material science area". Today we are trying to establish technical services for farm machinery equipment. Agriculture i.e. production of food is the fundamental premise for the sustenance of any society, especially during abnormal situations such as the current COVID-19 pandemic. However, the same is not economically feasible in numerous regions and circumstances owing to scarcity of Water and unavailability of affordable fertilisers and few other issues. CSIR-CMERI's Waste Water Treatment Technology uses easily sourceable technology to convert Waste Water into Water fit for Agricultural Purposes. This technology is currently deployed in the CSIR-CMERI Residential Colony and is currently successfully being used for organic farming purpose. Besides, the organic manure is skilfully sourced from the Bio-Gas plants and the MSW facility. Thus, this Agricultural Practice becomes both economically as well as environmentally viable. Since, practicing Agriculture will also absorb humongous amounts of Carbon Dioxide from the environment and will also provide us with Food. This step will provide us with Food Security and might help feed the 14% (Global Hunger Index Report 2020) of the Indian population living in hunger.

During COVID-19, the sudden Comprehensive Lockdown across the Globe massively shook the foundations of the Global Supply Chains as well stressed out the sourcing of Raw Materials. The huge Import-Dependence of India on critical components and high-end/medical equipment, exposed the huge-gaps in the manufacturing sector of India. The limelight now should be upon the development of Decentralised and not Capital-Intensive Manufacturing hubs across the Nation. Therefore innovative manufacturing is in demand. Skill, Reskill and Up-skill in manufacturing sector is required. In this regard the training programs introduced by CSIR-CMERI will give an opportunity to the Young Minds to acquaint them with the latest Technological developments at CSIR-CMERI and provide them an opportunity to skill themselves on Operations and Maintenance of these technologies, thereby providing them with a viable economic opportunity. Thus, most of the technologies developed at CSIR-CMERI are characterised to be decentralised in nature. These Decentralised Models of Technologies have dual-benefit, i.e. firstly it allows the local communities to actively participate in the manufacturing, operations and maintenance, thereby providing them with an Economic as well as Skilling Opportunity and secondly, it provides a vehicle for the technologies to be immediately deployed for the benefit of the Society through the Small, Medium and Micro Enterprises. Besides, the sourcing options for CSIR-CMERI have also been diversified through maximal promotion of Local Manufacturers/Vendors/Business entities. **'Trust and Collaboration' will be our key mantra for 2021.**

I would like to conclude this by sharing our experience we went through during the various phases of Lockdown. Since March, we have received 12 major CSIR projects amounting Rs. 17 Crore. Few important projects have been entrusted to CSIR-CMERI to provide comprehensive solution to remove the drudgery of manual scavenging, sustainable cooking solution for rural people, development of cotton ball picking head etc. In this crisis period (From April to December), our Institute has also earned around 8.25 Crore from external source like sponsored projects and technical services (Govt as well as Industrial funding). Moreover, few notable International projects were also sanctioned during the period. Apart from that, the highest number of SCI journal papers have been published in this year i.e. 120 (published + online). In this year, 48 nos of IPRs (DR: 7, CR: 31, Patent: 10) have been filed from our Institute. During unforeseen and sudden onset of the COVID 19 pandemic, CSIR-CMERI was raised to the occasion and able to develop numerous COVID 19 technologies such as the IntelliMAST, Sprayers, Road Sanitizing Units, COVID Protection System, different Variants of Facemasks etc. In spite of this very hostile scenario there were a total of 35 Technology Transfers amounting to almost 154 Lakhs in the year 2020.

With this I again congratulate all the members of CSIR-CMERI family for their contributions and our stakeholders for their association, especially during the Pandemic situation. We should also take a New Year resolution at this juncture to devote ourselves with more enthusiasm towards providing sustainable, effective and affordable solutions to the Society through technological interventions.

Jai Hind!

[HARISH HIRANI]

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START