



IIT DELHI



CENTRE OF EXCELLENCE FOR RESEARCH ON CLEAN AIR
INDIAN INSTITUTE OF TECHNOLOGY, DELHI
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Conference on Stubble Burning
“Findings, Ground Issues and Policy Perspectives”
20th September 2019, IIT Delhi
Conference Summary

Centre of Excellence for Research on Clean Air (CERCA), IIT Delhi has organized a Conference on Stubble Burning at IIT Delhi on 20th September’2019. The objective of this conference is to conferring and help the Government in policymaking and to prioritize actions by providing scientific evidence.



From Left to Right: Prof. Sagnik Dey, Mr. Hemant Kaushal, Shri Jitendra Kumar, Prof. B.R Mehta, Dr. S.K Goyal, Shri Arun Duggal, Shri K. S Pannu, Dr. R. Kaiwal

The Conference aims to deliberate on the scientific findings in terms of fire counts using NASA satellite data to identify top contributing districts, Ground issues related to Stubble burning in Punjab and Haryana which are leading to very high air pollution levels in Delhi/NCR, Measures adopted for combating stubble burning practice, Technology initiatives for stubble reuse and Policy recommendations for prioritizing government resource inputs for effective management of stubble burning practice. This conference provided an opportunity to listen to speakers from across a wide spectrum consisting of leading scientific researchers from IIT Delhi, government policy makers, independent policy think tanks, Leading NGOs working on the ground in the area of stubble burning, Economists, Health practitioners and industry focused on stubble reuse technology.

The conference inaugural session began with a welcome Address by Shri Arun Duggal. The conference was inaugurated by Dr. S.K Goyal, Head NEERI Delhi, with a keynote address in which he focused on a holistic view of the issue. He informed that NEERI has done lots of research in this concern with CPCB. They have consulted with farmers as the problem is not as simple and seen ground realities associated with this problem. He said the issue is complex and need to be addressed with scientific components for its solution. We should take a slightly different approach irrespective of findings and its contribution to Delhi NCR air pollution. Ground reality associated with this

issue is quite different. He said contribution to Delhi air pollution by Punjab and Haryana is limited. Regional activities are more responsible for air pollution in Delhi NCR. It is effecting people health directly. He suggested the need of a business model to eliminate this issue. He said with the help of an app or big online retailers like Amazon and Flipkart can also be part of the solution to this problem. The Scientific community should come up with a firm conclusion after confirming facts and figures with 360 degrees of evaluation of situation and problem. He also suggested to provide incentives to farmers can help to somewhat and selling of their farm stubble as a byproduct.

Followed by Keynote, our guest of honor Shri Jitendra Kumar, Adviser NITI Aayog, gave a brief address in which he said maintaining a healthy environment and ecosystem is a big challenge for us. We should work upon to reduce emissions and carbon storage and become carbon neutral nation. He mentioned about 3 reports published by NITI Aayog and key recommendations on clean fuel clean transport and biomass management. He said NITI Aayog is closely monitoring all schemes and programs and working with the state government to address this issue. He talked about the need for important technological interventions for better results. He mentioned one of the possible solutions which can be insitu or exsitu by converting stubble into bio-fertilizer. He emphasized more on the idea of converting waste into value. He urged all IITs and other technical institutions to work on this issue.

Next address was given by Shri K S Pannu, Secretary, Agriculture, Govt. of Punjab who was also our guest of honor for this conference gave his view on stubble burning in Punjab and its health effects on local people. He said stubble burning is important issue needs to be addressed in Punjab and Haryana. He clarified that Punjab is growing rice which is not a native crop of the state but for enhancing food security of the nation. He indicated that water level is also effecting because of rice cultivation and it is also responsible for soil degradation of the region. Government is providing subsidies of around 700 Cr. to farmers for growing this crop. As of today, there is no method except Insitu management which is significantly helpful in stubble management. Government has also tried other methods also, for example power generation using stubble. Till now 66 MW power plants are being already installed in Punjab but electricity generated cost rs.8/unit to government. Other examples he stated are ethanol production, bioCNG etc. He also informed that Punjab Govt. had also announced an award of 1 Mn USD for the solution of this problem. He also emphasized on the need of technological solutions to address this issue. Happy seeders are highly adopted by farmers in Punjab. He stressed that knowledge and skill of farmers should be enhanced on the alternative methods especially their feasibility in field application. He also mentioned about NGT order for environmental compensation collection from farmers in lieu of burning stubble. He suggested providing additional bonus to farmers. He also said that brick kilns are also equally responsible for air pollution. He urged all IITs to come up with the solution. He concluded with the quest is Punjab is really a culprit for Delhi NCR air pollution due to stubble burning.

Prof. B.R Mehta, Dean R&D has also shared his view on this issue. He informed about recently opened Centre of excellence at IIT Delhi namely CERCA, Renew Power Centre of Excellence on Energy & Environment, DESMI Centre of Excellence on Waste to Wealth. He said research and development in these centers will provide long lasting solution to this problem. He briefed about recent research on novel holistic Local Treatment of Urban Sewage Streams for Healthy Reuse (LOTUS-HR). He also informed about that internal research funding in IIT has been increased to 500 Cr.

The conference covered various topics ranging from Central Government policy and resource prioritization, Association between Stubble burning and cardiovascular health in Northern India, Alternatives to crop residue burning in India, Stubble Burning - Ground issues, gaps and Remedies, Crop residue management-Environmental implications of technological choices, Tracking of stubble burning from Space for prioritizing mitigation strategies, Use of WRF-Chem model to study the effects of stubble burning on PM 2.5 concentrations in Delhi, Zuri : AI-enabled platform to monitor and regulate farm fires in India, Paddy straw: A Problem to solve or an opportunity to tap, a startup's perspective, IIT Delhi start up-From waste to value.