

INDIAN SOCIETY OF AGROPHYSICS

Proceedings of the 7th Prof. B. P. Ghildyal Memorial Lecture

held on 10th September, 2020, Through Zoom Platform

The 7th Prof. B.P. Ghildyal Memorial Lecture was delivered on 10th September, 2020 by Dr. Trilochan Mohapatra Secretary, DARE & DG, ICAR, Krishi Bhawan, New Delhi-110001. The programme was chaired by Padma Bhushan Dr. R.S. Paroda, Chairman, TAAS. The programme was organized by the Indian Society of Agrophysics and hosted by the Division of Agricultural Physics, IARI.

At the outset of the programme, Dr. P. Krishnan, Head, Div. of Agril. Physics welcomed the gatherings. Dignitaries paid floral tribute to the great soul of Prof. B.P. Ghildyal. Dr S K Chaudhari, DDG (NRM), ICAR and President, Indian Society of Agrophysics (ISAP) welcomed the gathering and formally welcomed the chief guest of the programme, Padma Bhushan Dr. R.S. Paroda, Chairman, TAAS. The esteemed family members of Prof. B.P. Ghildyal were also welcomed with the bouquet of flowers in the occasion.

Dr S K Chaudhari, the President of ISAP, briefly greeted the dignitaries on and off the dais, and the general gathering. He briefed on the history of this coveted lecture. He mentioned about Prof. B.P. Ghildyal's contribution for the society and the scientific community at large, especially the message to reach to the young scholars, researchers and students of IARI. He also named the speakers who have delivered this lecture in the past. Dr. A.K. Singh, Director, IARI welcomed and briefly introduced about the Chairperson, Padma Bhushan Dr. R.S. Paroda Ji.

Padma Bhusan Dr. R.S. Paroda Ji in his brief address expressed his due respect to Prof. Ghildyal, his happiness to receive the family members of Prof. Ghildyal., and feeling honoured to be a part of this auspicious programme. Padma Bhusan Dr. R.S. Paroda Ji introduced the Speaker, Dr. Trilochan Mohapatra, Secretary, DARE & DG, ICAR.

Dr. Trilochan Mohapatra, delivered the lecture on the topic " **Transforming Indian Agriculture in New Normals** ", only after paying his tribute to Prof. Ghildyal, a teacher per excellence and a beautiful soul. Prof. Chaudhury felt that he was indeed considering himself fortunate to deliver this lecture as it was in the name of Prof. Ghildyal and moreover, in the past the lecture was delivered by illustrious scientists like Prof. M.S. Swaminathan, Dr. J.S.P. yadav, Dr. Punjab Singh, Dr. L.S. Rathore and Dr. A K Sikka.

Dr Mohapatra in his lecture addressed the application of Physics in agriculture. Agricultural Physics is a subject of utmost importance. These subject covers soil physics, plant biophysics, remote sensing and GIS, agricultural meteorology. He also emphasized the importance of artificial intelligence and machine learning and big data analytics which will be the very important tools in the near future. He talked about use of machine learning and AI based techniques for phenotyping of plants. I shall illustrate use of deep learning techniques for some applications. He concludes by highlighting the challenges of AI based techniques.

The programme ended with a closing remarks by Padma Bhusan Dr. R.S. Paroda Ji, and the vote of thanks by Dr. Pragati Pramanik Maity, the Secretary of the Society.

