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डा० भुपिन्द्र सिंह
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एवं
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Ref. NRL/RSO/2024/01

Date 19.3.24

TO WHOM IT MAY CONCERN

This is to certify that Dr. Ms. Poonam Yadav D/O Mr. Subedar Yadav worked as **Senior Research Fellow (SRF)** at the Division of Environment Science, CESCRA, Indian Agricultural Research Institute (IARI), Pusa, New Delhi under the BARC-IARI Radioecology project entitled "**Understanding and Quantification of the Radionuclides Transfer in Terrestrial Ecosystem**" since 14.9.2015 to 30.9.2019 and later continued as **Senior Research Fellow (SRF)** under the Tata Steel Limited – ICAR-IARI Contract Research Project (CRP) on **"Assessment and Utilization of Yellow Gypsum in Agriculture under variable Environment"** from 1.11.2019 till 12.10.2021, and further continued as **Research Associate** under the project (24-774) funded by the Ministry of Steel and Steel Industry at ICAR-IARI, project entitled **"Development of steel slag-based cost-effective eco-friendly fertilizers for sustainable agriculture and inclusive growth"** from 13.10.21 to 10.6.23. During the above period she executed the following tasks with distinction

- Physiological basis of macro-nutrient interaction and their impact on use efficiency of macro and micronutrients in bread and durum wheat in a hydroponic system.
- Effect of soil attributes on dynamics of radiocesium transfer in crop plants.
- Use of ^{14}C for understanding the source to sink dynamics of carbohydrates in Kinnow plants
- Effect of SOx and NOx on crop growth and elucidating the underlying physiological and biochemical regulators.
- Use of labeled S (^{35}S) for understanding the dynamics of foliar uptake of SO_2 by crop plants.
- Acquired training/orientation on "Safe use and disposal of radioisotopes"
- Assessed the effect of yellow gypsum, and LD- slag on crop and soil health.
- Hands-on for slag based enriched product development.

She also has operating knowledge of basic and sophisticated laboratory instruments such as UV-Vis Spectrophotometer, Atomic Absorption Spectrometer (AAS), Kjeldahl distillation unit, Flame photometer, IRGA, Refrigerated centrifuge. She is quick to understand biochemical procedures and meticulous and careful in practicing them. She is hardworking, sincere and dedicated researcher and an asset to any working team. She is confident and encourages others in the group in hours of difficulty to facilitate smooth conduct of laboratory working and completion of research goals.

I wish her all the success for her future endeavors.

Bhupinder Singh

(BHUPINDER SINGH) 19.3.24