


**Summer Field School [Online] on
 MOUNTAIN ECOSYSTEMS AND RESOURCE MANAGEMENT
 Ivano-Frankivsk Region, Ukraine :: 19-28 September, 2021**

DELEGATE PARTICIPANT'S PROFILE

	<p>Mr. Shubham Singh <i>Research scholar</i> School of Natural Resource Management CPGS-AS, Central Agricultural University Umiam 793103, Meghalaya, India</p> <p>Tel: +91 8414900133 Email: shubhamagrian1995@gmail.com</p>
<p>Highest Education</p>	<p>Master degree (M.Sc in Soil Science and Agricultural Chemistry)</p>
<p>Personal Statement</p>	<p>Dear colleagues! Further I would like to say a few words in order to present myself as the delegate participant for the forthcoming Summer School on 'Mountain Ecosystems and Resource Management'. I am pursuing my Doctoral degree in Soil Science and Agricultural Chemistry at School of Natural Resource Management in CPGS-AS, Central Agricultural University, Meghalaya. I had done my bachelor degree in Agriculture from Assam Agricultural University, Jorhat, Assam, India in 2016 and Master degree in Soil Science and Agricultural Chemistry from CPGS-AS, Central Agricultural University, Meghalaya. Currently I'm working on 'Interactive effect of lime, biochar and FYM on soil acidity indices under rice in acid Inceptisol'. I'm working on nutrient management aspect in acidic soils and published seven research papers, ten book chapters and two popular articles from which one article entitled Mitigation Strategies for decreasing greenhouse gases from paddy fields received Best Article Award 2020 by Agriculture and Food e-Newsletter. I published two books as co-author with Biotech Books Publishing House, New Delhi entitled Sustainable Agriculture- Recent Advances. I also has been conferred the Best Master Thesis Award 2019 by Agricultural Technology Development Society during 3rd International Conference at Tribhuvan University,</p>

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	<p>Kathmandu, Nepal for research on temporal phosphorus availability with Azolla incorporation, the corresponding mechanisms and changes in soil acidity indices in acid Inceptisol of Meghalaya. I also cleared the ICAR NET (II)-2018 in Soil Science and Agricultural Chemistry. I have acted as Joint Organizing Secretary the International Web Conference on “Perspective on Agricultural and Applied Sciences in COVID-19 Scenario (PAAS2020)” organized by Agricultural & Environmental Technology Development Society (AETDS) during October 4-6, 2020. My poster entitled “Importance of integrated nutrient management in conservation agriculture” was selected as Best Poster Award during National e- Poster Olympiad on Soils, Biomes and Resilience to climate Change” in world soil day celebration 2020, Dec 4-5, 2020 conducted by Soil Conservation Society of India, New Delhi.</p>
Paper/Presentation Title (Unpublished Research or Review or Field Work)	<i>Interactive Effect of Lime, Biochar and FYM on Soil Acidity Indices under Rice in Acid Inceptisol</i>
Keywords	Biochar; Lime; FYM; Acidity Indices; Climate Smart Agriculture
Abstract (100-300 words)	<p>Soil acidity is one of the major constraints in crop production throughout the world. It reduces 30-40 percent of world's arable land crop production. In India, approximately one-third of the cultivated land is affected by soil acidity. In Meghalaya, it consist of 2.24 m ha of acidic soil. Soil acidity is a serious constraint for crop production in many regions of the world including India. The poor fertility of acid soils is due to a combination of mineral toxicities (Al and Mn) and deficiencies of essential nutrients (P, Ca, Mg, B and Mo). But, Al toxicity is the single most important factor limiting plant growth and a major constraint for crop production. As a result, the productivity of the acid soils of Meghalaya is very low (<1 t ha⁻¹). There are several indices used to correct soil acidity for maximizing crop yields which include pH, base saturation, acidity saturation, aluminum saturation, calcium saturation, magnesium saturation and potassium saturation. Quantifying optimum soil acidity indices is an important strategy for achieving maximum economic yield on acid soils.</p>

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	<p>The soil amendments widely used to increase soil pH include lime that in turn reduce exchangeable aluminum, iron, and hydronium in the soil. However, lime is relatively expensive and challenging to afford for the subsistence farmers where the supply is limited. Due to this, we can use biochar as an alternative soil amendment to increase crop yield as it can be prepared from locally available weed biomass/crop residues and cheaper compared to lime. Application of biochar not only increases crop productivity and soil cation exchange capacity (CEC) but also helps to increase soil macro- and microelement. Different studies reported that biochar increases soil pH, plant growth, and yield but no information on comparative responses of lime, biochar and organic manures on soil acidity indices.</p>
More Information (weblinks)	