Biostimulant Product Evaluation and Comparison Trials 2025-2027, Year 1

Baljeet Singh*, Brittany McDougall, Tomiwa Babalola, Samarjot Singh Dhillon, and Samantha Teal
Assiniboine Community College, Brandon, Manitoba, Canada
*Corresponding Autor: singhb2@assiniboine.net

In collaboration with Manitoba Pulses and Soybean Growers (MPSG), Assiniboine College is evaluating the performance of five commercially available Biostimulant products on soybean growth, yield, and seed quality at three Manitoba Diversification Centers: Melita, Carberry, and Portage la Prairie. Biostimulant's are increasingly promoted for improving nutrient uptake, water retention, root development, and plant resilience to environmental stresses. To assess their practical value for producers, small-plot field trials are being conducted under diverse soil and weather conditions to compare each product's effectiveness and consistency. Biochar is included as a reference input to evaluate how its performance aligns with or differs from that of Biostimulant products. The project aims to provide unbiased, scientifically robust data that can be measured against manufacturers' claims and the wider research literature, ultimately helping producers make informed, climate-smart decisions for sustainable soybean production. Results from the 2025 season show that Melita consistently produced the highest yields across all treatments. Product impacts were minimal, with most Biostimulant's performing similarly. Biochar applied plots showed statistically significant yield differences at Carberry site. However, further research will be carried out to clarify if the yield differences are because of Biochar application or environmental parameters. A late-August rainfall event of about 30 mm at Melita likely contributed to stable yields by supporting grain filling.