## ABSTRACT

Agriculture supports the global economy; Nano chitosan can replace dangerous and environmentally unfriendly compounds. With its biocompatible properties, nano chitosan is useful in various applications, including as a bioagent and plant growth promoter. In addition, nano chitosan shows potential in anti-cancer, antioxidant and stress management activities in plants. Applied in various industries such as cosmetics, food, and medical, nano chitosan has a variety of benefits without significant risk of toxicity. In precision agriculture, the application of nano Chitosan brings an innovative approach to increase crop yields in a controlled manner.

keywords: Chitosan, nano chitosan, biocompatible properties