

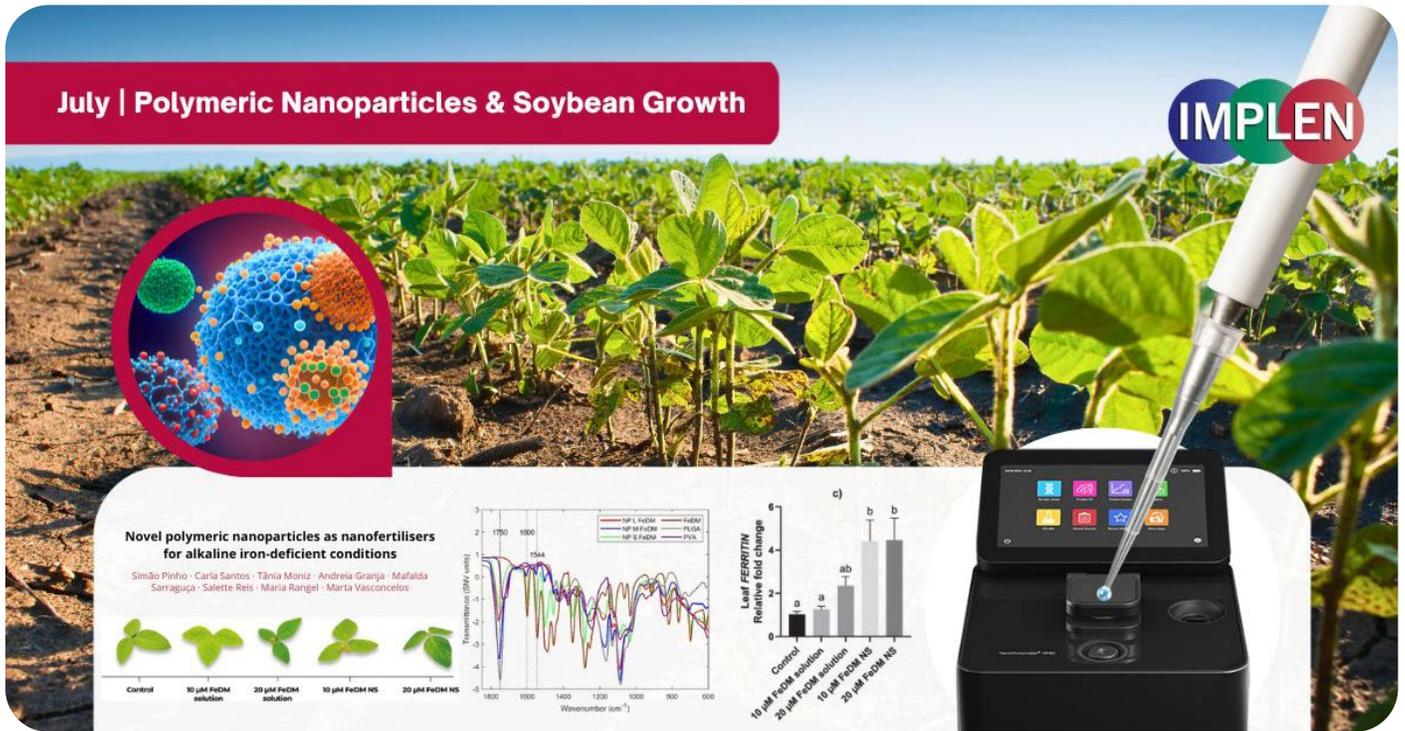
Reproductive Risks at “Safe” Glyphosate Exposure Levels

New research published in Environment International examined the effects of glyphosate exposure in male zebrafish using two regulatory “safe” levels—the acceptable daily intake (ADI) and the no-observed-adverse-effect level (NOAEL). ADI exposure disrupted early sperm development and DNA packaging. NOAEL exposure caused DNA damage, hormonal imbalances, tissue injury, and ultimately, complete infertility—raising concerns about current safety thresholds.

The Implen NanoPhotometer® was used in this work to assess RNA quantity.

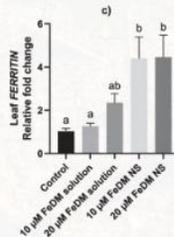
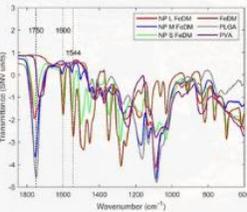
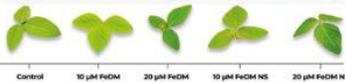
#Implen #NanoPhotometer #UV/VIS #Spectroscopy ##Glyphosate #Toxicology #ReproductiveHealth Findings prompt fresh scrutiny of regulatory margins.

[Learn more](#)



Novel polymeric nanoparticles as nanofertilisers for alkaline iron-deficient conditions

Simão Pinho · Carla Santos · Tânia Moniz · Andreia Granja · Mafalda Sarragaça · Salette Reis · Maria Rangel · Marta Vasconcelos



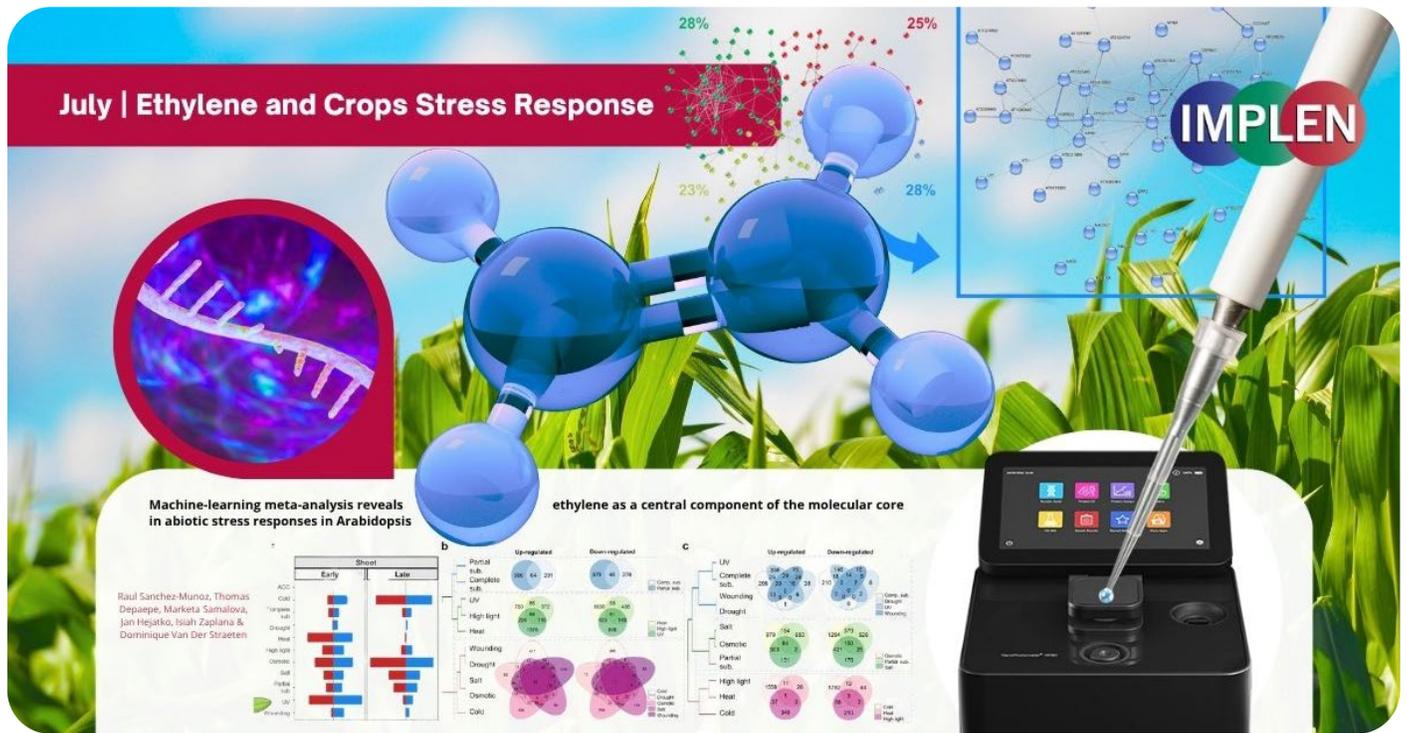
Iron Boost: How Polymeric Nanoparticles Help Crops Thrive in Tough Soil

Scientists recently published in the journal of Plant and Soil that they developed novel polymeric nanoparticles to deliver iron to plants growing in tough, alkaline soil. These nanoparticles helped soybeans grow faster, look greener, and stay healthier than with regular iron treatments. This new approach could offer a safer, more effective way to fight iron deficiency in crops.

The Implen NanoPhotometer® was used in this study to measure the quantity and quality of the extracted RNA using UV-spectrophotometry.

#Implen #NanoPhotometer #RNA #UV/VIS #Spectroscopy #PolymericNanoparticles #IronDeficiency #SustainableFarming #SoilHealth #SmartFertilizers #PlantGrowth #CropHealth #SoybeanResearch #Nanotechnology #GreenAgriculture #PlantScienceTools #MolecularFarming #SaveTheSoil

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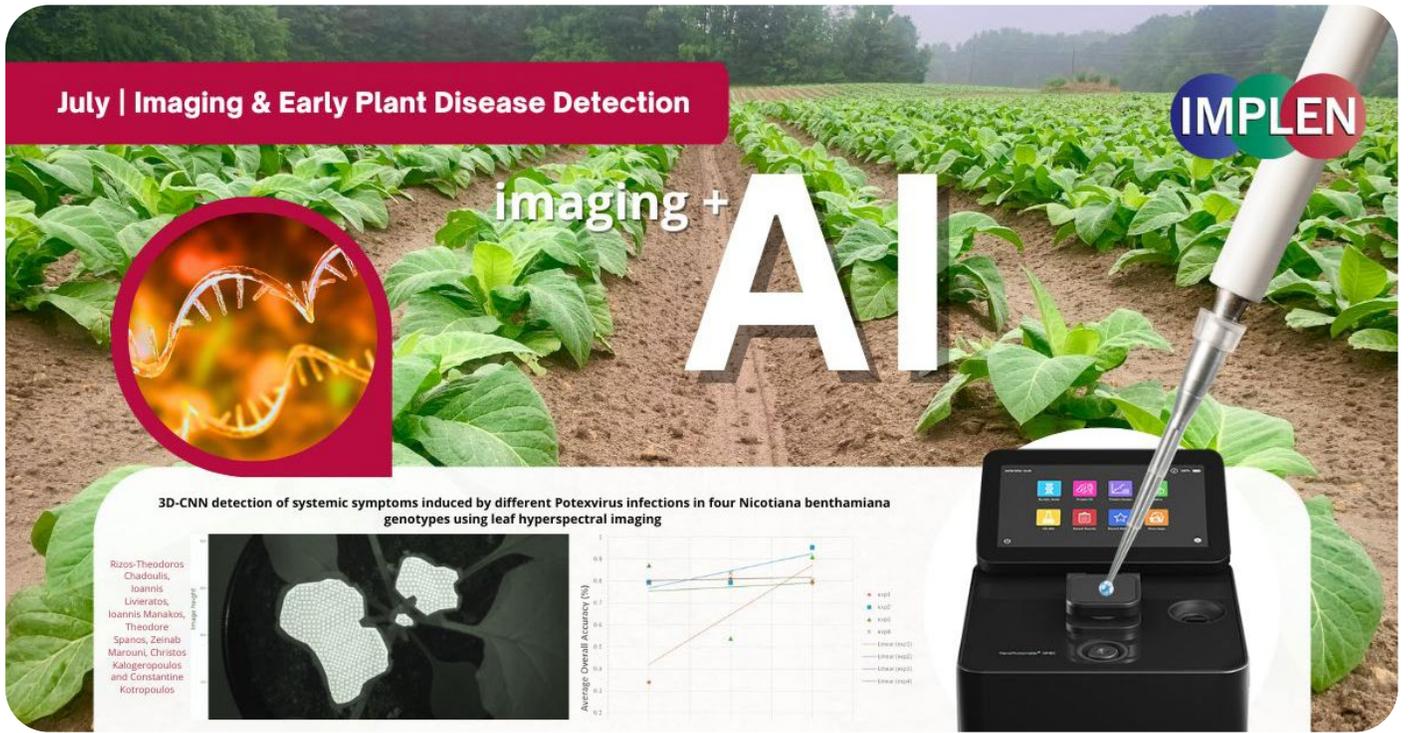
Ethylene Identified as a Master Regulator in Plant Stress Response

A machine learning–driven meta-analysis of 500 Arabidopsis transcriptomes, published in Nature Communications, revealed a common “stress gene core” activated by diverse environmental stressors. Ethylene was identified as a key regulator, acting largely through WRKY33 and MKK9 to shape gene expression. This validated framework paves the way for engineering crops with broad resilience to drought, heat, salinity, and other climate-related challenges.

The Implen NanoPhotometer® NP80 was used in this research to assess RNA quality and quantity.

#Implen #ImplenNanoPhotometer #NP80 #RNA #UV/VIS #Spectroscopy #AbioticStress #PlantResilience #ArabidopsisThaliana #MachineLearning #MetaAnalysis #SustainableAgriculture #PlantMolecularBiology #PlantGenomics #CropEngineering #ClimateResilientCrops #Transcriptomics #SystemsBiology #DataDrivenDiscovery #NextGenFarming

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Early Plant Disease Detection Using Hyperspectral Imaging and AI

Scientists recently reported in the Journal of Plant Methods a novel technique using hyperspectral cameras and artificial intelligence to detect viral infections in tobacco plants before any visible symptoms appear. By analyzing small image segments, the method accurately identified disease early and across different plant varieties. This method outperformed previous approaches, offering a faster, non-invasive tool for early plant disease detection.

The Implen NanoPhotometer® was used to assess the quantity and quality of RNA.

#ImplenNanophotometer #UVSpectroscopy #PlantHealth #HyperspectralImaging #ArtificialIntelligence #3DCNN #EarlyDetection #CropProtection #PrecisionAgriculture #NicotianaBenthamiana #PlantDiseaseDetection #PlantScience

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