Humic substances stimulate maize nitrogen assimilation and amino acid metabolism at physiological and molecular level

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#	Paper	IF	Citations
43	Transcriptome Analysis of Gelatin Seed Treatment as a Biostimulant of Cucumber Plant Growth. *Scientific World Journal, The*, **2015**, 2015, 391234	2.2	18
42	Humic and fulvic acids as biostimulants in horticulture. *Scientia Horticulturae*, **2015**, 196, 15-27	4.1	352
41	Humic-like bioactivity on emergence and early growth of maize (Zea mays L.) of water-soluble lignins isolated from biomass for energy. *Plant and Soil*, **2016**, 402, 221-233	4.2	36
40	Enhancing sustainability of a processing tomato cultivation system by using bioactive compost teas. *Scientia Horticulturae*, **2016**, 202, 117-124	4.1	34
39	Molecular characteristics of water-extractable organic matter from different composted biomasses and their effects on seed germination and early growth of maize. *Science of the Total Environment*, **2017**, 590-591, 40-49	10.2	41
38	Humic-Like Water-Soluble Lignins from Giant Reed (Arundo donax L.) Display Hormone-Like Activity on Plant Growth. *Journal of Plant Growth Regulation*, **2017**, 36, 995-1001	4.7	24
37	Effects of humic substances and indole-3-acetic acid on Arabidopsis sugar and amino acid metabolic profile. *Plant and Soil*, **2018**, 426, 17-32	4.2	21
36	Water-extractable humic substances speed up transcriptional response of maize roots to nitrate. *Environmental and Experimental Botany*, **2018**, 147, 167-178	5.9	27
35	Bioactivity of humic substances and water extracts from compost made by ligno-cellulose wastes from biorefinery. *Science of the Total Environment*, **2019**, 646, 792-800	10.2	39
34	Humic Acids Interfere with Nutrient Sensing in Plants Owing to the Differential Expression of TOR. *Journal of Plant Growth Regulation*, **2019**, 38, 216-224	4.7	7
33	Metabolite fingerprints of maize and sugarcane seedlings: searching for markers after inoculation with plant growth-promoting bacteria in humic acids. *Chemical and Biological Technologies in Agriculture*, **2019**, 6,	4.4	11
32	Effects of Two Protein Hydrolysates Obtained From Chickpea (L.) and on (L.) Plants. *Frontiers in Plant Science*, **2019**, 10, 954	6.2	17
31	Evaluation of the effects of humic acids on maize root architecture by label-free proteomics analysis. *Scientific Reports*, **2019**, 9, 12019	4.9	17
30	Humic Substances Contribute to Plant Iron Nutrition Acting as Chelators and Biostimulants. *Frontiers in Plant Science*, **2019**, 10, 675	6.2	70
29	The Soil Humeome: Chemical Structure, Functions and Technological Perspectives. **2019**, 183-222		14
28	Effects of controlled-release urea combined with fulvic acid on soil inorganic nitrogen, leaf senescence and yield of cotton. *Scientific Reports*, **2020**, 10, 17135	4.9	3
27	Interaction between Humic Substances and Plant Hormones for Phosphorous Acquisition. *Agronomy*, **2020**, 10, 640	3.6	20

26	An investigation into the beneficial effects and molecular mechanisms of humic acid on foxtail millet under drought conditions. *PLoS ONE*, **2020**, 15, e0234029	3.7	2
25	Fulvic acid increases forage legume growth inducing preferential up-regulation of nodulation and signalling-related genes. *Journal of Experimental Botany*, **2020**, 71, 5689-5704	7	5
24	Leonardite iron humate and synthetic iron chelate mixtures in Glycine max nutrition. *Journal of the Science of Food and Agriculture*, **2021**, 101, 4207-4219	4.3	1
23	A Metabolic Choreography of Maize Plants Treated with a Humic Substance-Based Biostimulant under Normal and Starved Conditions. *Metabolites*, **2021**, 11,	5.6	10
22	Effects of Biostimulants and Fertilization on Nutrient Uptake by Grass and Composition of Soil Pore Water Versus 0.01 M CaCl2 Soil Extracts. *Communications in Soil Science and Plant Analysis*, **2021**, 52, 2516-2532	1.5	0
21	Biowaste-Derived Humic-like Substances Improve Growth and Quality of Orange Jasmine (Murraya paniculata L. Jacq.) Plants in Soilless Potted Culture. *Resources*, **2021**, 10, 80	3.7	2
20	[illegible]. **2017**, 84	1.2	3
19	Humic acids from vermicompost positively influence the nutrient uptake in mangosteen seedlings1. *Pesquisa Agropecuaria Tropical*, 49,	1.2	1
18	The effectiveness of vermigumates under the conditions of vegetation experience. *IOP Conference Series: Materials Science and Engineering*, 941, 012028	0.4	
17	Ginger Extract and Fulvic Acid Foliar Applications as Novel Practical Approaches to Improve the Growth and Productivity of Damask Rose.. *Plants*, **2022**, 11,	4.5	3
16	Application of Humic Substances in Agricultural Industry. *Agronomy*, **2022**, 12, 584	3.6	0
15	Understanding the Role of Humic Acids on Crop Performance and Soil Health. *Frontiers in Agronomy* , **2022**, 4,	4	2
14	Humic acid complex formation with urea alters its structure and enhances biomass production in hydroponic maize. *Journal of the Science of Food and Agriculture*, **2021**,	4.3	0
13	Can co-application of silicate rock powder and humic-like acids increase nutrient uptake and plant growth in weathered tropical soil?. *Acta Agriculturae Scandinavica - Section B Soil and Plant Science*, **2022**, 72, 761-774	1.1	
12	Effects of Vermicompost and Vermicompost Leachate on the Biochemical and Physiological Response of Withania somnifera (L.) Dunal. *Journal of Soil Science and Plant Nutrition*,	3.2	2
11	The Combined Application of Urea and Fulvic Acid Solution Improved Maize Carbon and Nitrogen Metabolism. *Agronomy*, **2022**, 12, 1400	3.6	0
10	Pancar Fidelerinin B[illegible]esi ve Kalitesine Toprak Biyostimulant Uygulamas[illegible] Etkisi. *Mustafa Kemal [illegible]niversitesi Tar[illegible]m Bilimleri Dergisi*, **2022**, 27, 272-277	0.3	
9	Humic Acid Modified by Being Incorporated Into Phosphate Fertilizer Increases Its Potency in Stimulating Maize Growth and Nutrient Absorption. 13,		

8	Use of Organic Materials to Limit the Potential Negative Effect of Nitrogen on Maize in Different Soils. **2022**, 15, 5755	0
7	Combination of humic biostimulants with a microbial inoculum improves lettuce productivity, nutrient uptake, and primary and secondary metabolism.	0
6	Light-emitting diode combined with humic acid improve the nutritional quality and enzyme activities of nitrate assimilation in rocket (Eruca sativa (Mill.) Thell.). **2022**, 187, 11-24	
5	Properties of Humic Acid Substances and Their Effect in Soil Quality and Plant Health.	1
4	Changes in Metabolic Profile of Rice Leaves Induced by Humic Acids. **2022**, 11, 3261	0
3	Physiological and Transcriptomic Analyses Revealed That Humic Acids Improve Low-Temperature Stress Tolerance in Zucchini (Cucurbita pepo L.) Seedlings. **2023**, 12, 548	0
2	Humic acids induce the expression of nitrate transporters in passion-fruit seedlings. 45,	0
1	The Influence of Humic Acids and Nitrophenols on Metabolic Compounds and Pesticide Behavior in Wheat under Biotic Stress. **2023**, 13, 1378	0