



Editorial

‘Soil and Plant Nutrition’—A Section of *Agronomy*: Advances and Perspectives

Tomasz Głąb

Department of Machinery Exploitation, Ergonomics and Production Processes, University of Agriculture in Krakow, ul. Balicka 116B, 31-149 Krakow, Poland; rtglab@cyf-kr.edu.pl

‘Soil and Plant Nutrition’ is a peer-reviewed and open-access section of *Agronomy* (ISSN 2073-4395). ‘Soil and Plant Nutrition’ is dedicated to investigating plant biology and soil sciences, aiming to advance the understanding of plant–soil relationships. It covers a broad range of topics, encompassing fundamental and applied aspects of plant nutrition, plant productivity and quality, plant–soil interactions, and soil health. Soil health is understood as the ability to perform ecosystem functions, described through physical, chemical, and biological properties. Additionally, the scope of the section extends to articles that explore agrophysics and mathematical modelling of crop and soil systems.

The interest in crop nutrition and soil health has been growing, as the need for sustainable agriculture and preservation of natural ecosystems is rooted in all societies. Figure 1 indicates a significant increasing trend in research subjects related to plant nutrition. This highlights the growing total number of research reports and the very rapid growth in publications in *Agronomy* since 2017.

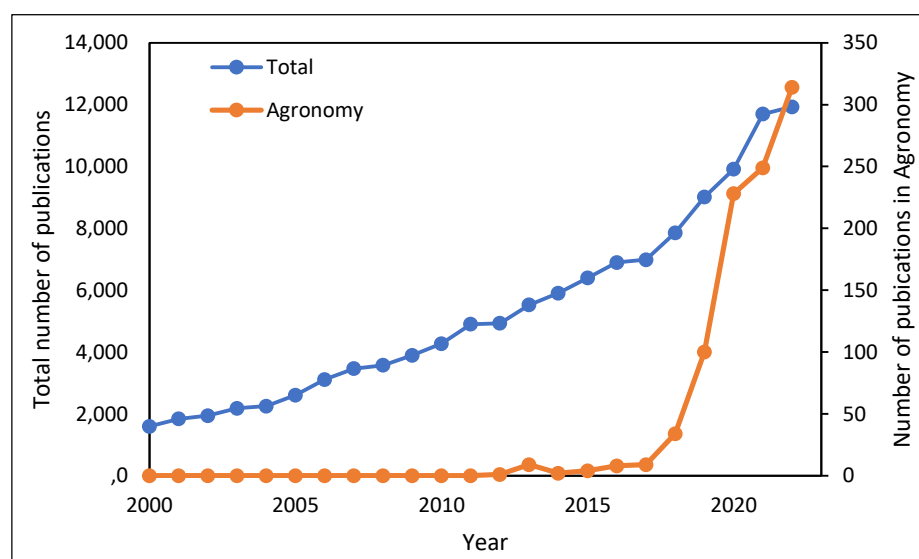


Figure 1. The number of published articles, indexed by Scopus in the period of 2000–2022, which include the terms “plant nutrition” OR “fertilizers” OR “soil fertility” OR “soil properties” OR “soil amendments” OR “crop productivity” OR “nutrient uptake”.

The main challenge faced by the authors contributing to ‘Soil and Plant Nutrition’ is linking soil quality with crop productivity. Crop productivity not only is critical to meet food demands but also serves as a feedstock for industry, including biofuel production. In recent decades, a real challenge has been devising agricultural systems with a lower environmental impact, particularly due to climate change and resource depletion. To address these problems, conducting interdisciplinary research is necessary. The development of genetic research, molecular biology, and plant physiology allows us to understand the basis of plant nutrition [1–5].



Citation: Głąb, T. ‘Soil and Plant Nutrition’—A Section of *Agronomy*: Advances and Perspectives.

Agronomy **2023**, *13*, 2461. <https://doi.org/10.3390/agronomy13102461>

Received: 7 August 2023

Revised: 18 September 2023

Accepted: 20 September 2023

Published: 23 September 2023



Copyright: © 2023 by the author. Licensee MDPI, Basel, Switzerland. This article is an open access article distributed under the terms and conditions of the Creative Commons Attribution (CC BY) license (<https://creativecommons.org/licenses/by/4.0/>).

1. Recent Advances

Reviewing publications from recent years, the main issues addressed by authors are:

- Mineral and organic soil amendments (biochar, compost, animal manure, sewage sludge, etc.) and their effect on soil properties and crop growth and quality.
- Nitrogen loss and its causes and methods of prevention.
- Soil biota as an indicator of soil health.
- Crop productivity and quality.

Nitrogen losses not only diminish soil fertility and plant yield but can also have adverse effects on the environment. Nitrogen can be lost from the soil through processes such as leaching, denitrification, and volatilization, which lead to acidification in terrestrial systems, eutrophication of aquatic systems, and decline in biodiversity and contribute to climate change. The most commonly proposed solutions involve optimizing fertilizer doses, as well as considering the form of fertilizers used, such as slow-release fertilizers [6–14]. A very promising solution is the application of nitrification inhibitors [15–20].

The most commonly researched soil amendments are organic. Studies focus on both the individual application of specific soil amendments and their mixtures. In the case of mixed amendments, the primary research aim has been to determine the optimal proportions and doses for different crop species in various climatic zones [21–25]. Many publications have also explored combining organic soil amendments with mineral fertilizers, with the main objective being nutrient supplementation [26–32]. These investigations primarily aimed to determine the impact of soil amendments on chemical properties, but they also addressed physical properties, including soil structure and water-related characteristics, as well as their influence on soil biota.

Biochar is the most intensively investigated amendment and is widely described in the literature, including in the ‘Soil and Plant Nutrition’ section [6,21–23,33–39]. Many review papers (1327 reviews indexed in the Web of Science Core Collection in categories related to agronomy) and meta-analyses have already been written on this subject [40–48]. Biochar has been recognized as a soil amendment that provides opportunities for soil improvement and mitigates climate change by promoting carbon sequestration. Biochar amendment has a beneficial influence on the physical, chemical, and biological properties of soil. The application of biochar increases crop production, providing a liming effect, increasing soil water and nutrient retention, and reducing N leaching. However, these results depend on the feedstock used for biochar production, the parameters of the pyrolysis process, and soil and climate conditions.

It is expected that further investigations into biochar will not be promising. However, there are still interesting topics such as the long-term effects of biochar application and the mechanisms of soil ecosystem responses.

The impact of mineral and organic fertilization on crop yield and crop quality is also a subject receiving less attention. The novelty of these studies is systematically decreasing despite the consideration of specialty crops, new features, or more precise measurement methods [49–56].

2. Perspectives

Many research topics remain interesting and innovative. However, some of the previously explored subjects are gradually losing novelty. This raises a fascinating question for every researcher: which research areas will be the most promising in the coming years?

Based on their increasing number of publications and citations in recent years, the following prospective research topics can be distinguished:

1. Searching for new soil amendments materials and formulations. Of particular interest is waste utilization in agriculture as a soil amendment.
2. Long-term soil amendment experiments and the effect after decades of systemic application.

3. Improving soil water management (especially irrigation systems in the context of limited water sources).
4. Climate change and crop production resilience and adaptation.
5. Artificial intelligence (AI) adaptation in soil management and plant fertilization.
6. Soil–plant–microbe interactions.

Climate change has many negative effects on plants by creating numerous stresses. Agronomy practices are continuously adapted to the impacts of climate change to ensure food security and preserve natural resources. A detailed understanding of the mechanisms affecting these processes is highly relevant for researchers. Three areas regarding ‘Soil and Plant Nutrition’ are very promising in the context of climate change: soil amendments as a method of carbon sequestration, methods for improved soil water retention, and nitrogen management to reduce greenhouse gas emissions.

Interest in AI applications has rapidly grown in recent years. It is also expected to find applications in agronomy. AI application seems to be a useful tool in modelling soil processes and crop responses to environmental and agronomic factors. It can be used in crop yield prediction, to increase crop quality, in nutrient management and to find the optimal agrotechnical parameters in crop production and soil tillage.

Research on microbe application to increase crop production is increasingly promising. Abiotic stresses, such as salinity, drought, heavy metals, and climate change, are still important factors limiting agricultural production. To overcome the adverse effects of these stresses, the application of microbes is an effective, eco-friendly, and economically reasonable method. The microbial biome, especially in the soil ecosystem, plays a vital role in combating environmental stress and substantially impacts crop growth and product quality.

The ‘Soil and Plant Nutrition’ section in the *Agronomy* journal welcomes articles in every agronomic aspect of soil–plant relationships, with a particular interest in the range of promising topics.

Conflicts of Interest: The author declares no conflict of interest.

References

1. Calicioglu, O.; Flammini, A.; Bracco, S.; Bellù, L.; Sims, R. The Future Challenges of Food and Agriculture: An Integrated Analysis of Trends and Solutions. *Sustainability* **2019**, *11*, 222. [\[CrossRef\]](#)
2. Monokrousos, N.; Mourouzidou, S. Ensuring Plant Nutrition through Sustainable Soil Management Strategies: Assessing Research Progress and Challenges. *Agronomy* **2023**, *13*, 2061. [\[CrossRef\]](#)
3. von Wirén, N. Grand challenges in plant nutrition. *Front. Plant Sci.* **2011**, *2*, 1–3. [\[CrossRef\]](#)
4. Dobermann, A.; Bruulsema, T.; Cakmak, I.; Gerard, B.; Majumdar, K.; McLaughlin, M.; Reidsma, P.; Vanlauwe, B.; Wollenberg, E.; Zhang, F.; et al. A New Paradigm for Plant Nutrition. In *Science and Innovations for Food Systems Transformation*; Springer: Cham, Switzerland, 2023. [\[CrossRef\]](#)
5. Gojon, A. Nitrogen nutrition in plants: Rapid progress and new challenges. *J. Exp. Bot.* **2017**, *68*, 2457–2462. [\[CrossRef\]](#) [\[PubMed\]](#)
6. Qian, X.; Li, Q.; Chen, H.; Zhao, L.; Wang, F.; Zhang, Y.; Zhang, J.; Müller, C.; Yi, Z. Enhancing Soil Nitrogen Retention Capacity by Biochar Incorporation in the Acidic Soil of Pomelo Orchards: The Crucial Role of pH. *Agronomy* **2023**, *13*, 2110. [\[CrossRef\]](#)
7. Korsakov, K.; Stepanov, A.; Pozdnyakov, L.; Yakimenko, O. Humate-Coated Urea as a Tool to Decrease Nitrogen Losses in Soil. *Agronomy* **2023**, *13*, 1958. [\[CrossRef\]](#)
8. Rossi, G.; Beni, C.; Benedetti, A.; Felici, B.; Neri, U. Effect of Mineral or OFMSW Digestate Fertilization on Ryegrass and Nitrogen Leaching. *Agronomy* **2023**, *13*, 1316. [\[CrossRef\]](#)
9. Cassimiro, J.B.; de Oliveira, C.L.B.; Boni, A.d.S.; Donato, N.d.L.; Meirelles, G.C.; da Silva, J.F.; Ribeiro, I.V.; Heinrichs, R. Ammonia Volatilization and Marandu Grass Production in Response to Enhanced-Efficiency Nitrogen Fertilizers. *Agronomy* **2023**, *13*, 837. [\[CrossRef\]](#)
10. Tubeileh, A.M.-S.; Alam-Eldein, S.M.; Banks, S. Effect of Polymer-Coated Urea/Urea Blends on Corn Yields under Short Growing Season Conditions in Eastern Canada. *Agronomy* **2023**, *13*, 695. [\[CrossRef\]](#)
11. ten Huf, M.; Reinsch, T.; Zutz, M.; Essich, C.; Ruser, R.; Buchen-Tschiskale, C.; Flessa, H.; Olf, H.-W. Effects of Liquid Manure Application Techniques on Ammonia Emission and Winter Wheat Yield. *Agronomy* **2023**, *13*, 472. [\[CrossRef\]](#)
12. Liu, M.; Song, F.; Yin, Z.; Chen, P.; Zhang, Z.; Qi, Z.; Wang, B.; Zheng, E. Effects of Reduced Nitrogen Fertilizer Rates on Its Fate in Maize Fields in Mollisols in Northeast China: A ¹⁵N Tracing Study. *Agronomy* **2022**, *12*, 3030. [\[CrossRef\]](#)

13. Zhao, L.; Zheng, H.; Wang, L.; Nie, X.; Zuo, J.; Liu, S.; Cheng, J. The Fate and Balance of Nitrogen on a Sloped Peanut Field on Red Soil. *Agronomy* **2022**, *12*, 2388. [\[CrossRef\]](#)
14. Incrocci, L.; Maggini, R.; Cei, T.; Carmassi, G.; Botrini, L.; Filippi, F.; Clemens, R.; Terrones, C.; Pardossi, A. Innovative Controlled-Release Polyurethane-Coated Urea Could Reduce N Leaching in Tomato Crop in Comparison to Conventional and Stabilized Fertilizers. *Agronomy* **2020**, *10*, 1827. [\[CrossRef\]](#)
15. Torabian, S.; Farhangi-Abri, S.; Qin, R.; Noulas, C.; Wang, G. Performance of Nitrogen Fertilization and Nitrification Inhibitors in the Irrigated Wheat Fields. *Agronomy* **2023**, *13*, 366. [\[CrossRef\]](#)
16. Školníková, M.; Škarpa, P.; Ryant, P.; Kozáková, Z.; Antošovský, J. Response of Winter Wheat (*Triticum aestivum* L.) to Fertilizers with Nitrogen-Transformation Inhibitors and Timing of Their Application under Field Conditions. *Agronomy* **2022**, *12*, 223. [\[CrossRef\]](#)
17. Cui, L.; Li, D.; Wu, Z.; Xue, Y.; Xiao, F.; Zhang, L.; Song, Y.; Li, Y.; Zheng, Y.; Zhang, J.; et al. Effects of Nitrification Inhibitors on Soil Nitrification and Ammonia Volatilization in Three Soils with Different pH. *Agronomy* **2021**, *11*, 1674. [\[CrossRef\]](#)
18. Nakamura, S.; Saliou, P.S.; Takahashi, M.; Ando, Y.; Subbarao, G.V. The Contribution of Root Turnover on Biological Nitrification Inhibition and Its Impact on the Ammonia-Oxidizing Archaea under Brachiaria Cultivations. *Agronomy* **2020**, *10*, 1003. [\[CrossRef\]](#)
19. Giacometti, C.; Mazzon, M.; Cavani, L.; Ciavatta, C.; Marzadori, C. A Nitrification Inhibitor, Nitrapyrin, Reduces Potential Nitrate Leaching through Soil Columns Treated with Animal Slurries and Anaerobic Digestate. *Agronomy* **2020**, *10*, 865. [\[CrossRef\]](#)
20. Chiodini, M.E.; Perego, A.; Carozzi, M.; Acutis, M. The Nitrification Inhibitor Vizura® Reduces N₂O Emissions When Added to Digestate before Injection under Irrigated Maize in the Po Valley (Northern Italy). *Agronomy* **2019**, *9*, 431. [\[CrossRef\]](#)
21. Ud Din, M.M.; Khan, M.I.; Azam, M.; Ali, M.H.; Qadri, R.; Naveed, M.; Nasir, A. Effect of Biochar and Compost Addition on Mitigating Salinity Stress and Improving Fruit Quality of Tomato. *Agronomy* **2023**, *13*, 2197. [\[CrossRef\]](#)
22. Linh, D.T.T.; Khoi, C.M.; Ritz, K.; Sinh, N.V.; Phuong, N.T.K.; My, H.M.T.; Linh, T.B.; Minh, D.D.; Linh, T.T.; Toyota, K. Effects of Rice Husk Biochar and Compost Amendments on Soil Phosphorus Fractions, Enzyme Activities and Rice Yields in Salt-Affected Acid Soils in the Mekong Delta, Viet Nam. *Agronomy* **2023**, *13*, 1593. [\[CrossRef\]](#)
23. De la Rosa, J.M.; Pérez-Dalí, S.M.; Campos, P.; Sánchez-Martín, Á.; González-Pérez, J.A.; Miller, A.Z. Suitability of Volcanic Ash, Rice Husk Ash, Green Compost and Biochar as Amendments for a Mediterranean Alkaline Soil. *Agronomy* **2023**, *13*, 1097. [\[CrossRef\]](#)
24. Medyńska-Juraszek, A.; Marcinkowska, K.; Gruszka, D.; Kluczek, K. The Effects of Rabbit-Manure-Derived Biochar Co-Application with Compost on the Availability and Heavy Metal Uptake by Green Leafy Vegetables. *Agronomy* **2022**, *12*, 2552. [\[CrossRef\]](#)
25. Haque, A.N.A.; Uddin, M.K.; Sulaiman, M.F.; Amin, A.M.; Hossain, M.; Aziz, A.A.; Mosharraf, M. Impact of Organic Amendment with Alternate Wetting and Drying Irrigation on Rice Yield, Water Use Efficiency and Physicochemical Properties of Soil. *Agronomy* **2021**, *11*, 1529. [\[CrossRef\]](#)
26. Li, B.; Tian, X.; Zhang, S.; Duan, M.; Wang, L. Effects of Combined Application of Biochar and Different Types of Nitrogen Fertilizers on Rapeseed Root Growth and Properties of Purple Soil in Southwest China. *Agronomy* **2023**, *13*, 2209. [\[CrossRef\]](#)
27. Li, S.; Wei, W.; Liu, S. Long-Term Organic Amendments Combined with Nitrogen Fertilization Regulates Soil Organic Carbon Sequestration in Calcareous Soil. *Agronomy* **2023**, *13*, 291. [\[CrossRef\]](#)
28. Li, C.; Zhao, C.; Zhao, X.; Wang, Y.; Lv, X.; Zhu, X.; Song, X. Beneficial Effects of Biochar Application with Nitrogen Fertilizer on Soil Nitrogen Retention, Absorption and Utilization in Maize Production. *Agronomy* **2023**, *13*, 113. [\[CrossRef\]](#)
29. Dawar, K.; Ali, W.; Bibi, H.; Mian, I.A.; Ahmad, M.A.; Hussain, M.B.; Ali, M.; Ali, S.; Fahad, S.; Rehman, S.; et al. Effect of Different Levels of Zinc and Compost on Yield and Yield Components of Wheat. *Agronomy* **2022**, *12*, 1562. [\[CrossRef\]](#)
30. Sifola, M.L.; Cozzolino, E.; Di Mola, L.; Ottaiano, L.; del Piano, L.; Mori, M. Yield and Quality of Three Cultivars of Dark Fire-Cured (Kentucky) Tobacco (*Nicotiana tabacum* L.) Subjected to Organic (Compost) and Mineral Nitrogen Fertilization. *Agronomy* **2022**, *12*, 483. [\[CrossRef\]](#)
31. Uddin, S.; Islam, M.R.; Jahangir, M.M.R.; Rahman, M.M.; Hassan, S.; Hassan, M.M.; Abo-Shosha, A.A.; Ahmed, A.F.; Rahman, M.M. Nitrogen Release in Soils Amended with Different Organic and Inorganic Fertilizers under Contrasting Moisture Regimes: A Laboratory Incubation Study. *Agronomy* **2021**, *11*, 2163. [\[CrossRef\]](#)
32. Hays, K.N.; Muir, J.P.; Kan, E.; DeLaune, P.B.; Brady, J.A.; Obayomi, O.; Mitchell, A.B. Tillage, Manure, and Biochar Short-Term Effects on Soil Characteristics in Forage Systems. *Agronomy* **2023**, *13*, 2224. [\[CrossRef\]](#)
33. Xu, S.; Zhou, M.; Chen, Y.; Sui, Y.; Jiao, X. Biochar Addition with Water and Fertilization Reduction Increases Soil Aggregate Stability of 0–60 cm Soil Layer on Greenhouse Eggplant in Mollisols. *Agronomy* **2023**, *13*, 1532. [\[CrossRef\]](#)
34. Chen, J.; Yu, J.; Li, Z.; Zhou, J.; Zhan, L. Ameliorating Effects of Biochar, Sheep Manure and Chicken Manure on Acidified Purple Soil. *Agronomy* **2023**, *13*, 1142. [\[CrossRef\]](#)
35. Song, S.; Cong, P.; Wang, C.; Li, P.; Liu, S.; He, Z.; Zhou, C.; Liu, Y.; Yang, Z. Properties of Biochar Obtained from Tropical Crop Wastes Under Different Pyrolysis Temperatures and Its Application on Acidic Soil. *Agronomy* **2023**, *13*, 921. [\[CrossRef\]](#)
36. Iacomino, G.; Sarker, T.C.; Ippolito, F.; Bonanomi, G.; Vinale, F.; Staropoli, A.; Idbella, M. Biochar and Compost Application either Alone or in Combination Affects Vegetable Yield in a Volcanic Mediterranean Soil. *Agronomy* **2022**, *12*, 1996. [\[CrossRef\]](#)
37. Holatko, J.; Hammerschmidt, T.; Latal, O.; Kintl, A.; Mustafa, A.; Baltazar, T.; Malicek, O.; Brtnicky, M. Deciphering the Effectiveness of Humic Substances and Biochar Modified Digestates on Soil Quality and Plant Biomass Accumulation. *Agronomy* **2022**, *12*, 1587. [\[CrossRef\]](#)

38. Wojewódzki, P.; Lemanowicz, J.; Debska, B.; Haddad, S.A. Soil Enzyme Activity Response under the Amendment of Different Types of Biochar. *Agronomy* **2022**, *12*, 569. [\[CrossRef\]](#)
39. Zafeiriou, I.; Gasparatos, D.; Ioannou, D.; Kalderis, D.; Massas, I. Selenium Biofortification of Lettuce Plants (*Lactuca sativa* L.) as Affected by Se Species, Se Rate, and a Biochar Co-Application in a Calcareous Soil. *Agronomy* **2022**, *12*, 131. [\[CrossRef\]](#)
40. Bu, F.; Nan, Q.; Li, W.; Bolan, N.; Sarkar, B.; Meng, J.; Wang, H. Meta-Analysis for Quantifying Carbon Sequestration and Greenhouse Gas Emission in Paddy Soils One Year after Biochar Application. *Agronomy* **2022**, *12*, 3065. [\[CrossRef\]](#)
41. Cerven, V.; Novak, J.M.; Szögi, A.A.; Pantuck, K.; Watts, D.W.; Johnson, M.G. The Occurrence of Legacy P Soils and Potential Mitigation Practices Using Activated Biochar. *Agronomy* **2021**, *11*, 1289. [\[CrossRef\]](#)
42. Conte, P.; Bertani, R.; Sgarbossa, P.; Bambina, P.; Schmidt, H.-P.; Raga, R.; Lo Papa, G.; Chillura Martino, D.F.; Lo Meo, P. Recent Developments in Understanding Biochar's Physical–Chemistry. *Agronomy* **2021**, *11*, 615. [\[CrossRef\]](#)
43. Arunrat, N.; Kongsurakan, P.; Sereenonchai, S.; Hatano, R. Soil Organic Carbon in Sandy Paddy Fields of Northeast Thailand: A Review. *Agronomy* **2020**, *10*, 1061. [\[CrossRef\]](#)
44. Cataldo, E.; Fucile, M.; Mattii, G.B. A Review: Soil Management, Sustainable Strategies and Approaches to Improve the Quality of Modern Viticulture. *Agronomy* **2021**, *11*, 2359. [\[CrossRef\]](#)
45. Rahim, H.U.; Akbar, W.A.; Alatalo, J.M. A Comprehensive Literature Review on Cadmium (Cd) Status in the Soil Environment and Its Immobilization by Biochar-Based Materials. *Agronomy* **2022**, *12*, 877. [\[CrossRef\]](#)
46. Sohi, S.P.; Krull, E.; Lopez-Capel, E.; Bol, R. Chapter 2—A Review of Biochar and Its Use and Function in Soil. In *Advances in Agronomy*; Academic Press: Cambridge, MA, USA, 2010; Volume 105, pp. 47–82.
47. Oliveira, F.R.; Patel, A.K.; Jaisi, D.P.; Adhikari, S.; Lu, H.; Khanal, S.K. Environmental application of biochar: Current status and perspectives. *Bioresour. Technol.* **2017**, *246*, 110–122. [\[CrossRef\]](#)
48. Lehmann, J.; Rillig, M.C.; Thies, J.; Masiello, C.A.; Hockaday, W.C.; Crowley, D. Biochar effects on soil biota—A review. *Soil Biol. Biochem.* **2011**, *43*, 1812–1836. [\[CrossRef\]](#)
49. Bărdaș, M.; Rusu, T.; Russu, F.; Șimon, A.; Chețan, F.; Ceclan, O.A.; Rezi, R.; Popa, A.; Cărbunar, M.M. The Impact of Foliar Fertilization on the Physiological Parameters, Yield, and Quality Indices of the Soybean Crop. *Agronomy* **2023**, *13*, 1287. [\[CrossRef\]](#)
50. Crista, F.; Radulov, I.; Imbrea, F.; Manea, D.N.; Boldea, M.; Gergen, I.; Ienciu, A.A.; Bănățeanu Dunea, I. The Study of the Impact of Complex Foliar Fertilization on the Yield and Quality of Sunflower Seeds (*Helianthus annuus* L.) by Principal Component Analysis. *Agronomy* **2023**, *13*, 2074. [\[CrossRef\]](#)
51. Safdar, M.E.; Qamar, R.; Javed, A.; Nadeem, M.A.; Javeed, H.M.R.; Farooq, S.; Głowacka, A.; Michałek, S.; Alwahibi, M.S.; Elshikh, M.S.; et al. Combined Application of Boron and Zinc Improves Seed and Oil Yields and Oil Quality of Oilseed Rape (*Brassica napus* L.). *Agronomy* **2023**, *13*, 2020. [\[CrossRef\]](#)
52. Xing, G.; Ma, J.; Liu, X.; Lei, B.; Wang, G.; Hou, S.; Han, Y. Influence of Different Nitrogen, Phosphorus, and Potassium Fertilizer Ratios on the Agronomic and Quality Traits of Foxtail Millet. *Agronomy* **2023**, *13*, 2005. [\[CrossRef\]](#)
53. de Oliveira Junior, A.C.; Silva dos Santos, L.N.; Reis, M.N.O.; Vitorino, L.C.; Bessa, L.A.; Teixeira, M.B.; Soares, F.A.L. Effect of Mineral and Organic Nitrogen Sources on Vegetative Development, Nutrition, and Yield of Sugarcane. *Agronomy* **2023**, *13*, 1627. [\[CrossRef\]](#)
54. González, J.A.; Yousif, S.K.M.; Erazzu, L.E.; Martínez Calsina, L.; Lizarraga, E.F.; Omer, R.M.; Bazile, D.; Fernandez-Turiel, J.L.; Buedo, S.E.; Rejas, M.; et al. Effects of Goat Manure Fertilization on Grain Nutritional Value in Two Contrasting Quinoa (*Chenopodium quinoa* Willd.) Varieties Cultivated at High Altitudes. *Agronomy* **2023**, *13*, 918. [\[CrossRef\]](#)
55. Teliban, G.-C.; Burducea, M.; Mihalache, G.; Zheljaskov, V.D.; Dincheva, I.; Badjakov, I.; Popa, L.-D.; Bodale, I.; Vlăduț, N.-V.; Cojocaru, A.; et al. Morphological, Physiological and Quality Performances of Basil Cultivars under Different Fertilization Types. *Agronomy* **2022**, *12*, 3219. [\[CrossRef\]](#)
56. Zhang, W.; Liu, Y.; Muneer, M.A.; Jin, D.; Zhang, H.; Cai, Y.; Ma, C.; Wang, C.; Chen, X.; Huang, C.; et al. Characterization of Different Magnesium Fertilizers and Their Effect on Yield and Quality of Soybean and Pomelo. *Agronomy* **2022**, *12*, 2693. [\[CrossRef\]](#)

Disclaimer/Publisher's Note: The statements, opinions and data contained in all publications are solely those of the individual author(s) and contributor(s) and not of MDPI and/or the editor(s). MDPI and/or the editor(s) disclaim responsibility for any injury to people or property resulting from any ideas, methods, instructions or products referred to in the content.