



International Journal of Research in Agronomy

E-ISSN: 2618-0618
P-ISSN: 2618-060X
© Agronomy
NAAS Rating (2026): 5.20
www.agronomyjournals.com
2026; 9(9): 17-22
Received: 11-06-2026
Accepted: 15-07-2026

Nirbhay Singh

Department of Soil Science, Sardar Vallabhbhai Patel University of Agriculture and Technology, Modipuram, Meerut, Uttar Pradesh, India

Uday Pratap Shahi

Department of Soil Science, Sardar Vallabhbhai Patel University of Agriculture and Technology, Modipuram, Meerut, Uttar Pradesh, India

SP Singh

Department of Soil Science, Sardar Vallabhbhai Patel University of Agriculture and Technology, Modipuram, Meerut, Uttar Pradesh, India

PK Singh

Department of Soil Science, Sardar Vallabhbhai Patel University of Agriculture and Technology, Modipuram, Meerut, Uttar Pradesh, India

Ashok Kumar

Department of Soil Science, Sardar Vallabhbhai Patel University of Agriculture and Technology, Modipuram, Meerut, Uttar Pradesh, India

SK Gupta

Department of Soil Science, Sardar Vallabhbhai Patel University of Agriculture and Technology, Modipuram, Meerut, Uttar Pradesh, India

Corresponding Author:

Nirbhay Singh

Department of Soil Science, Sardar Vallabhbhai Patel University of Agriculture and Technology, Modipuram, Meerut, Uttar Pradesh, India

Assessment of yield-limiting nutrients in finger millet (*Eleusine coracana* L.) grown in light-textured soils

Nirbhay Singh, Uday Pratap Shahi, SP Singh, PK Singh, Ashok Kumar and SK Gupta

DOI: <https://www.doi.org/10.33545/2618060X.2026.v9.i9a.6459>

Abstract

A field experiment was conducted during the Kharif season of 2025 at the Crop Research Centre, Sardar Vallabhbhai Patel University of Agriculture and Technology, Meerut, Uttar Pradesh, Assessment of yield-limiting nutrients in finger millet (*Eleusine coracana* L.) grown under light-textured soil conditions. The experiment was laid out in a Randomized Block Design (RBD) with eight treatments and three replications, comprising nutrient omission treatments, the recommended dose of fertilizers (RDF), and foliar application of ZnSO₄ (0.5%) and FeSO₄ (0.2%). Balanced nutrient management significantly improved crop growth, yield attributes, and yield compared to nutrient omission treatments. The combined application of RDF with ZnSO₄ at 0.5% and FeSO₄ at 0.2% foliar spray (T₈) recorded the highest grain yield (31.50 q ha⁻¹), straw yield (62.30 q ha⁻¹), and biological yield (93.80 q ha⁻¹). Among the nutrient omission treatments, nitrogen omission (T₂) resulted in the greatest reduction in crop productivity, confirming nitrogen as the primary yield-limiting nutrient under light-textured soils. Application of RDF alone (T₅) produced 26.23 q ha⁻¹ grain yield, 53.34 q ha⁻¹ straw yield, and 79.57 q ha⁻¹ biological yield, whereas foliar application of FeSO₄ (T₆) and ZnSO₄ (T₇) further enhanced yield over RDF alone. The highest harvest index (37.71%) was recorded under T₂ (P₂O₅ + K₂O), although differences among treatments were statistically non-significant. The study concludes that the combined application of RDF with zinc and iron foliar spray is an effective and sustainable nutrient management strategy for maximizing finger millet productivity in light-textured soils.

Keywords: Finger millet, yield-limiting nutrients, light-textured soil, RDF, zinc, iron, grain yield, biological yield, harvest index

Introduction

Finger millet (*Eleusine coracana* L.), commonly known as ragi, is one of the most important nutri-cereal crops cultivated in the tropical and subtropical regions of Asia and Africa. The crop is highly valued for its exceptional nutritional quality, being an excellent source of calcium, dietary fibre, iron, phosphorus, essential amino acids, and natural antioxidants. Owing to its superior nutritional composition, finger millet is considered a "smart food" that contributes significantly to food and nutritional security, particularly in developing countries. Its low glycaemic index, gluten-free nature, and high mineral content make it an ideal food for children, women, diabetic patients, and health-conscious consumers (Shobana *et al.*, 2013; Goron and Raizada, 2015) [7, 18].

Globally, finger millet is cultivated on approximately 4.8 million hectares, with an annual production of about 5.6 million tonnes, mainly in India, Nepal, Uganda, Ethiopia, Kenya, and Tanzania (FAOSTAT, 2023) [5]. India is the largest producer of millets, contributing nearly 42.75% of the world's millet production. According to the Third Advance Estimates (2024-25) of the Ministry of Agriculture and Farmers Welfare, the total millet production in India is estimated at 18.01 million tonnes from 12.86 million hectares. Karnataka occupies the largest area under finger millet cultivation, followed by Tamil Nadu, Uttarakhand, Odisha, Maharashtra, and Andhra Pradesh (MoA&FW, 2025; FAOSTAT, 2023) [5].

Finger millet is widely cultivated under rainfed and resource-poor farming systems because of its remarkable tolerance to drought, high temperature, and low soil fertility. The crop can survive under harsh environmental conditions where major cereals often fail, making it an important component of climate-resilient agriculture (Maharajan *et al.*, 2022) [11].

However, despite its adaptability, the productivity of finger millet remains relatively low due to nutrient deficiencies, poor soil fertility, and imbalanced fertilizer application.

Light-textured soils are characterized by low organic carbon content, poor water-holding capacity, low cation exchange capacity, and weak nutrient retention. These soils are highly susceptible to nutrient losses through leaching, resulting in poor fertilizer use efficiency and reduced crop productivity. Continuous cultivation without adequate nutrient replenishment further aggravates nutrient depletion, particularly nitrogen, zinc, and iron deficiencies, thereby limiting crop growth and yield (Prakasha *et al.*, 2015; Tandon, 2013) ^[14, 20].

Nitrogen, phosphorus, and potassium are the primary macronutrients required for optimum crop growth and yield, whereas zinc and iron play indispensable roles in chlorophyll formation, enzyme activation, photosynthesis, protein synthesis, and grain development. Deficiency of these nutrients adversely affects plant growth, tillering, grain formation, and nutrient uptake, ultimately reducing grain yield and quality (Alloway, 2008; Maharajan *et al.*, 2022) ^[2, 11].

Among different approaches for nutrient diagnosis, the nutrient omission technique has emerged as a reliable and scientific method for identifying yield-limiting nutrients under specific soil and climatic conditions. This technique evaluates crop response by systematically omitting individual nutrients while maintaining adequate supply of the remaining nutrients, thereby identifying the nutrient responsible for maximum yield reduction. The information generated through nutrient omission trials provides a scientific basis for balanced fertilizer recommendations and site-specific nutrient management (Dobermann and Fairhurst, 2000; Prakasha *et al.*, 2015) ^[4, 14].

Several studies have reported that integrated application of the recommended dose of fertilizers (RDF) along with foliar application of zinc and iron improves nutrient uptake, nutrient use efficiency, photosynthetic activity, growth attributes, and grain yield of finger millet. Balanced fertilization not only enhances crop productivity but also maintains soil fertility and ensures sustainable crop production under light-textured soils (Maharajan *et al.*, 2022; Kalsi *et al.*, 2023) ^[8, 11].

Therefore, the present investigation entitled "Assessment of Yield-Limiting Nutrients in Finger Millet (*Eleusine coracana* L.) Grown in Light-Textured Soils" was undertaken to identify the major yield-limiting nutrients and to evaluate the effect of balanced fertilization and foliar application of zinc and iron on growth, yield attributes, and yield of finger millet under light-textured soil conditions.

Materials and Methods

Experimental Site

A field experiment was conducted during the Kharif season of 2025 at the Crop Research Centre, Sardar Vallabhbhai Patel University of Agriculture and Technology (SVPUAT), Modipuram, Meerut, Uttar Pradesh, India. The experimental site is situated at 29°08' N latitude and 77°70' E longitude, at an altitude of approximately 237 m above mean sea level. The region has a sub-tropical climate characterized by hot summers and cool winters. During the crop growing season, weather conditions were favourable for finger millet cultivation, with intermittent rainfall and warm temperatures. The maximum temperature ranged from 17.9 to 35.6°C, while the minimum temperature

varied between 7.8 and 26.6°C. The total rainfall received during the crop season was approximately 1026 mm, with most of the precipitation occurring during the south-west monsoon.

Experimental Setup

The experiment comprised eight nutrient management treatments, viz., T₁: control (no fertilizer application); T₂: P₂O₅ + K₂O @ 45:45 kg ha⁻¹; T₃: N + K₂O @ 90:45 kg ha⁻¹; T₄: N + P₂O₅ @ 90:45 kg ha⁻¹; T₅: recommended dose of fertilizers (RDF) @ 90:45:45 kg N:P₂O₅:K₂O ha⁻¹; T₆: RDF + foliar application of FeSO₄ @ 0.2%; T₇: RDF + foliar application of ZnSO₄ @ 0.5%; and T₈: RDF + foliar application of ZnSO₄ @ 0.5% + FeSO₄ @ 0.2%. The experiment was conducted using finger millet variety VL-376. Nitrogen, phosphorus and potassium were supplied through urea, single superphosphate (SSP) and muriate of potash (MOP), respectively. Full doses of phosphorus and potassium along with half of the recommended nitrogen were applied as basal at sowing, while the remaining nitrogen was applied in two equal splits at the active tillering and panicle initiation stages. Foliar application of ZnSO₄ (0.5%) and FeSO₄ (0.2%) was carried out at the recommended crop growth stage using a knapsack sprayer to ensure uniform coverage of the crop canopy.

The experimental soil was light-textured (sandy loam) in nature. Before sowing, representative soil samples (0-15 cm depth) were collected and analyzed for physicochemical properties including pH, electrical conductivity (EC), organic carbon, available nitrogen, phosphorus, potassium, zinc, and iron using standard analytical procedures.

Growth observations including plant height, number of tillers plant⁻¹, and leaf area index (LAI) were recorded at different growth stages. Yield attributes such as effective tillers, ear head length, number of fingers ear head⁻¹, grain weight plant⁻¹, and test weight were recorded at harvest. Grain yield, straw yield, biological yield, and harvest index were computed after harvesting. Plant and soil samples were analysed for nutrient content and uptake following standard laboratory procedures.

Statistical Analysis

The experimental data were subjected to analysis of variance (ANOVA) appropriate for a Randomized Block Design (RBD) following the procedure described by Gomez and Gomez (1984) ^[6]. Treatment means were compared using the Critical Difference (CD) test at the 5% level of significance (P = 0.05) wherever the F-test indicated significant differences.

Results and Discussion

Effect of Limiting Nutrients on Growth Parameters of Finger Millet

The application of different fertilizer combinations and micronutrient foliar sprays significantly influenced the growth parameters of finger millet (*Eleusine coracana* L.) at all crop growth stages (Table 1). Plant height increased progressively from 30 DAS to harvest across all treatments. At 30 DAS, the maximum plant height (36.38 cm) was recorded under T₈ (RDF + ZnSO₄ at 0.5% + FeSO₄ at 0.2% foliar spray), which was statistically at par with T₇ (36.04 cm) and T₆ (35.88 cm), but significantly superior to the remaining treatments. A similar trend was observed at subsequent stages; at harvest, T₈ produced the tallest plants (119.09 cm), followed by T₇ (116.33 cm) and T₆ (113.47 cm), whereas the untreated control (T₁) recorded the

lowest plant height (98.38 cm).

Tiller density and Leaf Area Index (LAI) were also significantly affected by the treatment combinations (Table 2 and Table 3). At 60 DAS, the highest tiller count (197.75 m⁻²) and peak LAI (4.60) were recorded under T₈, followed by T₇ (166.65 m⁻²; LAI 4.20) and T₆ (155.54 m⁻²; LAI 4.05). In contrast, nutrient omission treatments (T₂, T₃, T₄) and the control (T₁) showed significantly lower growth performance, highlighting the vital role of balanced macro and micronutrient supply.

The enhanced vegetative growth observed under integrated RDF and micronutrient foliar sprays (T₈, T₇, T₆) can be attributed to the pivotal role of zinc and iron in cellular metabolic processes. Foliar-applied zinc promotes tryptophan synthesis, which is a precursor of indole-3-acetic acid (IAA), thereby facilitating cell elongation and division, while iron acts as a structural component in chlorophyll synthesis and cytochrome systems, boosting photosynthetic efficiency (Alagarswamy *et al.*, 2024; Sanwal, 2020) [1, 16]. Similar positive responses in growth characteristics of finger millet and small millets due to foliar micronutrient supplementation have been documented by Krupashree *et al.* (2022) and Seemansethupathi and Kamaraj (2024) [9, 17].

Effect of Limiting Nutrients on Yield Attributes of Finger Millet

Yield-attributing characteristics of finger millet, including effective tillers per m², days to maturity, ear head length, number of fingers per ear head, number of grains per ear head, and 1000-grain test weight, were significantly impacted by nutrient management practices (Table 2 and Table 3).

Application of RDF alone (T₅) substantially improved yield attributes over nutrient-omitted treatments (T₂-T₄), recording 138.50 effective tillers m⁻², an ear head length of 9.22 cm, 1380 grains per ear head, and a test weight of 3.32 g. However, supplementary foliar sprays of micronutrients (T₆-T₈) further augmented these parameters. The maximum values across all yield attributes were obtained under T₈ (RDF + ZnSO₄ at 0.5% + FeSO₄ at 0.2% foliar spray), yielding 168.87 effective tillers m⁻², 9.68 cm ear head length, 8.88 fingers per ear head, 1566 grains per ear head, and a test weight of 3.57 g. The absolute control (T₁) recorded the lowest values across all yield parameters.

The superior reproductive development under T₈ is attributed to

the synergistic action of zinc and iron delivered via foliar application during critical growth phases. Rapid leaf uptake of Zn and Fe bypasses potential soil fixation, maintaining optimum enzymatic activity, enhancing pollen viability, and promoting carbohydrate translocation from source to sink tissues (Alagarswamy *et al.*, 2024) [1]. These findings are in strong alignment with Krupashree *et al.* (2022) [9], who reported significant increases in ear head components and grain setting in small millets with combined foliar fortification of Zn and Fe.

Effect of Limiting Nutrients on Yield and Harvest Index of Finger Millet

Grain yield, straw yield, and biological yield of finger millet were significantly influenced by nutrient management strategies, whereas the harvest index varied non-significantly across treatments (Table 3).

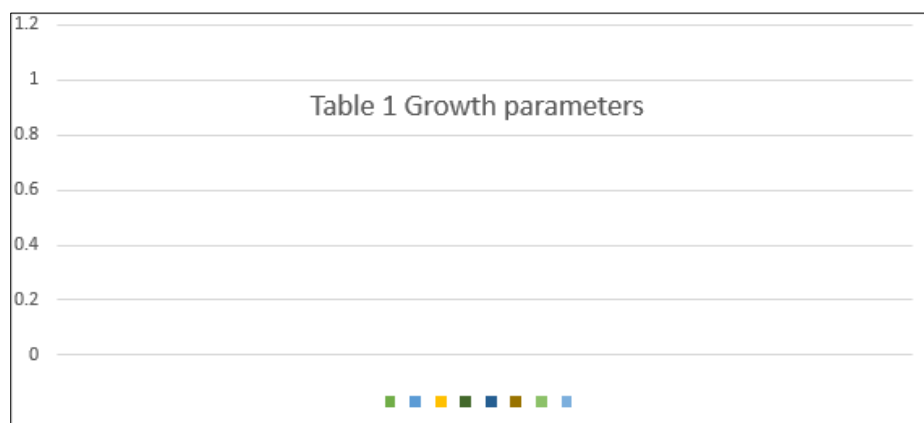
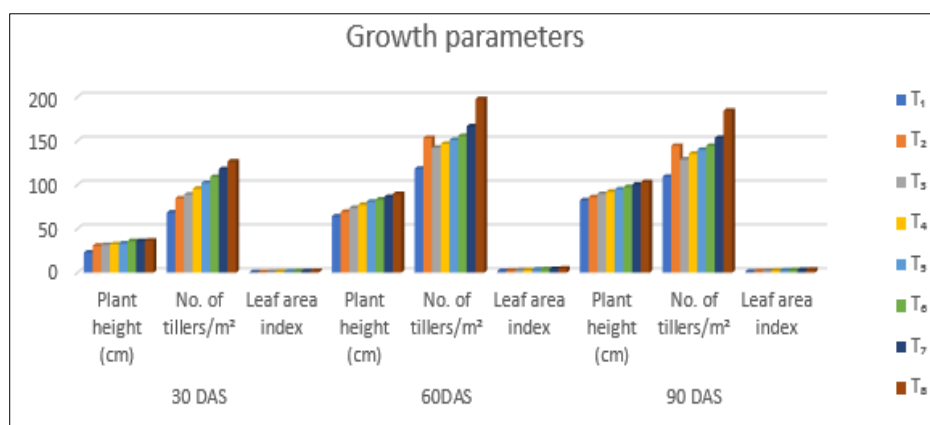
The maximum grain yield (31.50 q ha⁻¹), straw yield (62.30 q ha⁻¹), and total biological yield (93.80 q ha⁻¹) were recorded under T₈ (RDF + ZnSO₄ at 0.5% + FeSO₄ at 0.2% foliar spray), followed by T₇ (29.10 q ha⁻¹ grain yield) and T₆ (28.40 q ha⁻¹ grain yield). RDF application alone (T₅) achieved a grain yield of 26.23 q ha⁻¹, which represented a significant gain over the unfertilized control (T₁: 14.53 q ha⁻¹) and nitrogen-omitted treatment (T₂: 17.80 q ha⁻¹). The lower yields under N-omitted treatments underscore the primary role of nitrogen in driving vegetative canopy development and overall biomass accumulation.

Harvest index values ranged between 32.96% (T₅) and 37.71% (T₂); however, these variations were statistically non-significant (P = 0.05), indicating that nutrient treatments enhanced total biomass production and grain yield proportionately without altering dry matter partitioning ratios.

The significant increment in grain yield under combined RDF and foliar micronutrient treatment (T₈) can be credited to extended leaf area retention, improved light interception, and efficient translocation of assimilates to the grain head during panicle development (Sanwal, 2020; Seemansethupathi and Kamaraj, 2024) [16, 17]. Similar yield improvements in millets subjected to balanced NPK fertilisation supplemented with foliar Zn and Fe sprays have been previously established by Krupashree *et al.* (2022) [9].

Table 1: Effect of treatments on growth parameters of finger millet at different growth stages

Treatment	30 DAS			60DAS			90 DAS			120DAS
	Plant height (cm)	No. of tillers/m ²	Leaf area index	Plant height (cm)	No. of tillers/m ²	Leaf area index	Plant height (cm)	No. of tillers/m ²	Leaf area index	Plant height (cm)
T ₁	22.97	68.50	0.45	64.18	118.40	1.80	82.28	109.20	1.13	98.38
T ₂	30.69	84.43	0.65	69.19	153.31	2.30	85.88	144.43	1.70	101.90
T ₃	31.65	88.88	0.85	73.68	142.20	2.80	89.72	128.87	2.10	105.74
T ₄	32.36	95.54	1.10	77.26	146.65	3.00	92.17	135.54	2.40	108.21
T ₅	33.29	102.21	1.35	80.86	151.09	3.60	94.85	139.98	2.55	110.80
T ₆	35.88	108.87	1.50	83.31	155.54	4.05	97.43	144.43	2.80	113.47
T ₇	36.04	117.76	1.65	86.17	166.65	4.20	100.21	153.31	3.10	116.33
T ₈	36.38	126.65	1.85	89.61	197.75	4.60	103.05	184.42	3.30	119.09
SEm±	1.55	2.26	0.02	2.76	3.52	0.07	3.10	3.26	0.05	2.10
CD (P=0.05)	4.71	6.87	0.08	8.40	10.68	0.23	9.42	9.89	0.16	6.39

**Fig 1:** Growth parameters**Fig 2:** Growth parameters**Table 2:** Effect of treatments on yield attributes of finger millet

Treatment	Effective tillers/m ²	Days to maturity	Ear head length (cm)	No. of fingers/ear head	No. of grains/ear head	Test weight (g)
T ₁	105.50	101.90	7.80	6.20	1020	2.75
T ₂	118.40	103.73	8.42	7.12	1175	3.02
T ₃	124.60	104.77	8.75	7.45	1230	3.15
T ₄	131.20	105.97	9.05	7.82	1315	3.24
T ₅	138.50	107.73	9.22	8.15	1380	3.32
T ₆	145.20	109.00	9.41	8.41	1460	3.44
T ₇	151.80	109.80	9.52	8.62	1510	3.51
T ₈	168.87	111.80	9.68	8.88	1566	3.57
SEm±	3.13	0.18	0.21	0.18	30.79	0.07
CD (P=0.05)	9.40	0.56	0.63	0.54	93.41	0.23

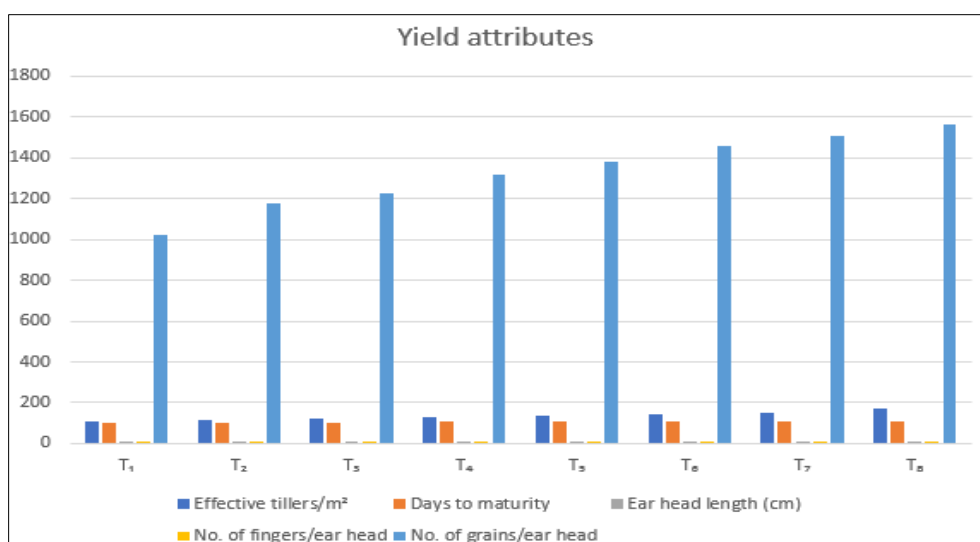
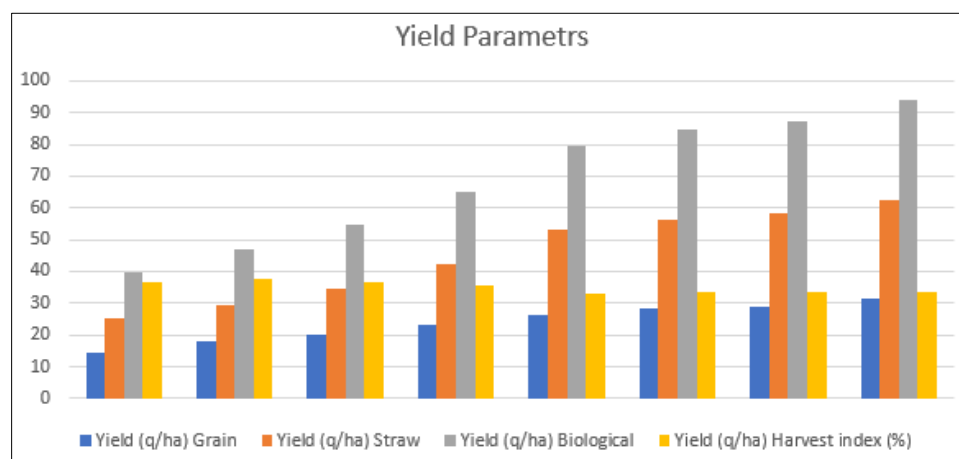
**Fig 3:** Yield attributes

Table 3: Effect of treatments on yield and harvest index of finger millet

Symbol	Treatment combination	Yield (q/ha)			
		Grain	Straw	Biological	Harvest index (%)
T ₁	Control (No fertilizer application)	14.53	25.23	39.76	36.54
T ₂	P ₂ O ₅ + K ₂ O (45:45 kg ha ⁻¹)	17.80	29.41	47.21	37.71
T ₃	N + K ₂ O (90:45 kg ha ⁻¹)	20.14	34.56	54.70	36.82
T ₄	N + P ₂ O ₅ (90:45 kg ha ⁻¹)	23.10	42.12	65.22	35.42
T ₅	RDF (90:45:45 kg N:P ₂ O ₅ :K ₂ O ha ⁻¹)	26.23	53.34	79.57	32.96
T ₆	RDF + FeSO ₄ at 0.2% foliar spray	28.40	56.42	84.82	33.48
T ₇	RDF + ZnSO ₄ at 0.5% foliar spray	29.10	58.31	87.41	33.29
T ₈	RDF + ZnSO ₄ at 0.5% + FeSO ₄ at 0.2% foliar spray	31.50	62.30	93.80	33.58
SEm±		1.26	2.45	3.71	1.90
CD (P=0.05)		3.82	7.45	11.27	5.77 (NS)

**Fig 4:** Yield attributes

Conclusion

The present investigation revealed that balanced nutrient management plays a crucial role in improving the growth, yield attributes, and productivity of finger millet (*Eleusine coracana* L.) cultivated under light-textured soils. Among the nutrient omission treatments, nitrogen deficiency emerged as the most critical yield-limiting factor, causing a marked reduction in vegetative growth, reproductive development, and grain yield. Application of the Recommended Dose of Fertilizer (RDF) in combination with foliar application of ZnSO₄ (0.5%) and FeSO₄ (0.2%) (T₈) produced the best crop performance by recording the highest plant height (119.09 cm), tiller density (184.42 m⁻²), Leaf Area Index (3.30), effective tillers (168.87 m⁻²), ear head length (9.68 cm), grains per ear head (1566), and test weight (3.57 g). The same treatment also resulted in the maximum grain yield (31.50 q ha⁻¹), straw yield (62.30 q ha⁻¹), and biological yield (93.80 q ha⁻¹), significantly outperforming RDF alone and all nutrient omission treatments.

The findings clearly indicate that while the application of 100% RDF is essential for achieving optimum crop growth, the inclusion of foliar zinc and iron substantially enhances nutrient use efficiency, improves assimilate partitioning, and increases productivity. Therefore, integrated nutrient management comprising RDF along with foliar application of 0.5% ZnSO₄ and 0.2% FeSO₄ is recommended for sustainable and profitable finger millet cultivation under light-textured soil conditions.

Acknowledgement

The authors express their sincere gratitude to the Department of Soil Science for providing the necessary field, laboratory, and technical facilities to carry out this research successfully. We are deeply thankful to the advisory committee members and university staff for their continuous guidance, insightful feedback,

and constant encouragement throughout the experimental trial and data analysis. The technical support provided during field observations and lab procedures is gratefully acknowledged.

References

1. Alagarswamy S, Karuppasami KM, Djanaguiraman M, Venugopal PBR, Natarajan S, Rathinavelu S, *et al.* Sustaining the yield of crops through the application of nutrients and plant growth regulator mixture. *Plants*. 2024;13(11):1549.
2. Alloway BJ. Zinc in soils and crop nutrition. 2nd ed. Brussels: International Zinc Association and International Fertilizer Industry Association; 2008.
3. Divya B, Singh R, Khan W. Effect of foliar application of iron and zinc on growth and yield of finger millet (*Eleusine coracana* L.). *Asian Journal of Microbiology, Biotechnology and Environmental Sciences*. 2021;23(2):265-268.
4. Dobermann A, Fairhurst TH. Rice: nutrient disorders and nutrient management. Potash and Phosphate Institute and International Rice Research Institute; 2000.
5. FAOSTAT. FAOSTAT statistical database. Rome: Food and Agriculture Organization of the United Nations; 2023.
6. Gomez KA, Gomez AA. Statistical procedures for agricultural research. 2nd ed. New York: John Wiley and Sons; 1984.
7. Goron TL, Raizada MN. Genetic diversity and genomic resources available for the small millet crops to accelerate a New Green Revolution. *Frontiers in Plant Science*. 2015;6:157.
8. Kalsi MK, Singh R, Kaur J. Foliar application of zinc and iron for improving yield and nutrient uptake in finger millet. *Indian Journal of Agricultural Sciences*. 2023;93(4):412-416.
9. Krupashree R, Rao S, Desai BK, Ananda N, Bhat SN. Zinc

- and iron fortification through enriched organics and foliar nutrition on growth, yield and economics of foxtail millet (*Setaria italica*). Environment Conservation Journal. 2022;23(3):62-70.
10. Ladha JK, Tiore Y, Kumar V. Integrated nutrient management for improving crop productivity and soil fertility in cereal-based cropping systems. Advances in Agronomy. 2016;138:101-156.
 11. Maharajan T, Ceasar SA, Ignacimuthu S. Finger millet (*Eleusine coracana* L.) improvement: Current status and future perspectives. Journal of Plant Nutrition. 2022;45(10):1547-1568.
 12. Ministry of Agriculture and Farmers Welfare. Third advance estimates of foodgrains production 2024-25. New Delhi: Government of India; 2025.
 13. Pradhan A, Sao A, Nag S. Sustainable nutrient management in aerobic finger millet (*Eleusine coracana* (L.) Gaertn) under rainfed agriculture. Journal of Experimental Agriculture International. 2018;22(6):1-5.
 14. Prakasha HC, Gowda RC, Veeresh H. Nutrient management in finger millet: A review. International Journal of Agricultural Sciences. 2015;11(2):410-418.
 15. Rathnakar P, Singh R, Kumar M. Effect of zinc fortification on growth and yield of finger millet (*Eleusine coracana* L.). International Journal of Plant and Soil Science. 2022;34(20):71-75.
 16. Sanwal P. Impact of FYM and micronutrients on nutrient content, uptake, yield and economic attributes of direct seeded basmati rice. Indian Journal of Ecology. 2020;48(2):240-245.
 17. Seemansethupathi S, Kamaraj A. Evaluation of foliar application of bio-stimulants and nutrients on the seed yield of transplanted finger millet (*Eleusine coracana*). Ecology, Environment and Conservation. 2024;30(3):S259-S264.
 18. Shobana S, Krishnaswamy K, Sudha V, Malleshi NG, Anjana RM, Palaniappan L, *et al.* Finger millet (*Eleusine coracana* L.): A review of its nutritional properties, processing, and plausible health benefits. Food Reviews International. 2013;29(1):1-25.
 19. Singh RP, Prasad SK, Sharma V. Response of millet crops to balanced fertilization and foliar nutrition: A review. Journal of Crop and Weed. 2018;14(2):15-24.
 20. Tandon HLS. Nutrient management in finger millet. New Delhi: Fertilizer Development and Consultation Organisation; 2013.