Int.J.Curr.Res.Aca.Rev.2025; 13(4): 1-8

International Journal of Current Research and Academic Review

ISSN: 2347-3215 (Online) Volume 13 Number 4 (April-2025)

Journal homepage: http://www.ijcrar.com

doi: https://doi.org/10.20546/ijcrar.2025.1304.001

Effect of Compost on Yield and Forage Quality of *Brachiaria ruziziensis* and *Panicum maximum* in Faranah, Republic of Guinea

Mamadou Habib Diallo[1, 2], Zaki Bonou-Gbo[2], Hamidou Bah[3*] and Mamadou Aliou Diallo[2]

[1]Ecole doctoraleen Agriculture Durable et Gestion des RessourcesenEau, InstitutSupérieurAgronomique et Vétérinaire Valery Giscard d'Estaing de Faranah, BP: 131 Faranah, République de Guinée.

[2]Département Sciences animales, InstitutSupérieurAgronomique et Vétérinaire Valery Giscard d'Estaing de Faranah, BP: 131 Faranah, République de Guinée.

[3]Département Agriculture, InstitutSupérieurAgronomique et Vétérinaire Valery Giscard d'Estaing de Faranah, BP: 131 Faranah, République de Guinée.

**Corresponding author*

Abstract

This study evaluates the effect of compost on the yield and forage quality of *Brachiaria ruziziensis* and *Panicum maximum* under the agro-ecological conditions of Faranah, Guinea. The experiment, conducted in 2021 and 2022 using a randomised block design, consisted of three treatments: a compost-free control (D0), a moderate compost application (D1) and an intensive application (D2). Biometric parameters (stem diameter, plant height, biomass yield) and organic parameters (moisture, dry matter, crude protein, fibre) were measured and analysed statistically. The results show a significant increase in feed yield and nutritional value with compost application, including an improvement in raw protein and a reduction in insoluble fibre, promoting better digestibility. *Panicum maximum* showed superior growth while *Brachiaria ruziziensis* showed better nutritional quality. The influence of climatic conditions on treatment performance was observed. The study recommends the use of compost to improve forage production in a sustainable way and encourages farmers' awareness of its adoption.

Article Info

Received: 10 February 2025
Accepted: 30 March 2025
Available Online: 20 April 2025

Keywords

Compost, Brachiaria ruziziensis, Panicum maximum, yield, forage quality, organic fertilisation, Guinea.

Introduction

Agriculture and livestock are the main economic activities in Guinea, accounting for a significant share of rural livelihoods. In this context, quality forage production is essential to support livestock production, improve animal productivity, and meet growing demand for animal products (FAO and OECD, 2021). However, soil fertility in many areas, including Faranah, is declining due to agricultural intensification, deforestation, and inadequate management of natural resources (Bationo *et al.,* 2012). *Brachiaria ruziziensis* and *Panicum maximum* are forage grass species known for their high productivity and nutritional value, making them crucial for the development of farming systems in tropical Africa (Thornton & Herrero, 2015). However, their productive potential is often limited by nutrient-poor soils, which require adequate fertilisation.

Using compost as an organic amendment is part of a sustainable approach to improving soil fertility, increasing crop yields, and reducing greenhouse gas emissions (Lehmann & Joseph, 2015). Compost improves soil structure, water retention, and nutrient content while reducing the use of chemical fertilisers. Despite these advantages, few studies have been conducted on its specific efficiency in forage production, particularly in Guinea's tropical systems. The work of Lehmann and Joseph (2015) has shown that compost increases soil organic matter and stimulates microbial activity, thus contributing to improved agricultural yields. Tien *et al.,* (2017) reported that composting on forage grasses in sub-Saharan Africa increased biomass yield by 20-40% compared to unamended soils. In a study by Diatta *et al.,* (2018) on *Panicum maximum*, compost intake significantly increased the crude protein content and reduced the insoluble fibre content, improving the digestibility of the forage. Kambiré (2022) observed that the use of compost in the Faranah region for food crops resulted in an average increase of 30% in yield, but specific data on forage crops remain missing. How does composting affect the yield and forage quality of *Brachiaria ruziziensis* and *Panicum maximum* in the agro-ecological conditions of Faranah, Guinea?

Study environment

The test was carried out at the Pilot Centre for Agronomic Research of the Department of Agriculture of ISAV-VGE/F, on ferralitic soil of sandy-clay-silt texture. During the 2021-2022 Trial Period, data on ambient temperature, relative humidity and rainfall were collected during the trial at the Meteorological Station of the Higher Agronomic and Veterinary Institute of Faranah (ISAV/F).

Conduct of the experiment

Long before the test was installed, soil samples were collected using a hand auger at a depth of 0-20 cm randomly at five selected locations on the site. A composite mixture of 500 g was formed and sent to the SENASOL laboratory in Guinea for the determination of the physico-chemical parameters. Samples of compost were also taken and sent to the National Diagnostic and Veterinary Laboratory (LNDV) for physico-chemical analyses.

The experiment was installed in a split-plot design with two factors. The main factor consists of two forage plant species (*B. ruziziensis* and *P. maximum*) and the second factor represented by three fertilisation levels including D0 = 0t/ha (control), D1 = 20 t/ha (320g/hill), D2 = 30t/ha (480g/hill). Thus, six elementary plots were installed in four repetitions for a total of 24 elementary plots. The elementary plots within a block were separated by spaces of 0.75 m while the consecutive blocks were separated by 1.5 m aisles. In addition, each of the repetitions was separated by a 2 m aisle.

Healthy, robust young seedlings from a nursery of both species were transplanted 21 days after half following rain with 20 cm stripped strains. The subculturing was carried out according to a spacing of 50 cm between plant and between lines for a parcel density of 4 plants/m^2.

Data collection method

A total of fourteen variables were measured during the experiment, including six biometric and eight organic parameters. The biometric parameters include the mean number of tiller (NT), the mean stem diameter (SD) in mm using the slide stand, the mean stem height (PH) in cm using a tape, and three yield parameters including yield (Yield) in tons per hectare, the mean weight of fresh (WFB) and dry (WDB) biomass in Kg/ha using an OHUS electronic balance of 0,1g accuracy. The organic parameters concern the assessment of the moisture content, dry matter, mineral matter, total nitrogenous matter, fat, crude protein, crude celluloses and glucid. These data were collected at the beginning of the run and were carried out on twelve (12) plants selected per plot, avoiding the border effects. More specifically with biomass and organic parameters, at 30% run, 12 plots were mowed per species, i.e. 4 plots per treatment. Each species was mowed 50 mcm from the end of each plot over an area of 1 m^2.

Data analysis method

Before making comparisons, descriptive statistics (means and standard deviations) are presented for each parameter, treatment, species and year. The ANOVA was carried out for each biometric and organic parameter in order to determine whether there are significant differences between the treatments.

When ANOVA is significant, a post-hoc Tukey test was done to identify which pairs of treatments differ.

Results and Discussion

In this section, we present a detailed analysis of biometric and organic data collected in 2021 and 2022 for two grass species (*Brachiaria ruziziensis and Panicum maximum*) under different treatments (D0, D1, D2). The aim is to compare the performance of treatments, identify differences between species, and evaluate the impact of years on measured parameters.

Correlations between different parameters

The correlation between mean stem diameter (SD) and mean stem height (PH) is strong and positive (r=0.85, p<0.01r=0.85, p<0.01r=0.85, p<0.01), indicating that the increase in stem diameter is directly associated with greater plant height, with a highly significant relationship. The correlation between foliar biological mechanical weight (WFB) and strain biological mechanical weight (WFB) is also positive and significant (r=0.75, p<0.05r=0.75, p<0.05r=0.75, p<0.05), showing that increased development of foliar biomass is related to an increase in strain biomass. Moisture and dry matter content are negatively correlated (r=-0.65, p<0.05r=-0.65, p < 0.05r=-0.65, p<0.05), which means that an increase in moisture results in a decrease in dry matter, a relationship expected in forage composition analyses. The correlation between total nitrogenous matter and carbohydrates is moderately positive (r=0.60, p<0.05r=0.60, p<0.05r=0.60, p<0.05), suggesting that higher levels of nitrogen are related to increased carbohydrates, probably due to improved plant metabolic activity. Finally, the correlation between fat and crude protein content is low but significant (r=0.55, p<0.05r=0.55, p<0.05r=0.55, p<0.05), indicating that these two parameters vary together to some extent, which may reflect an effect of compost on the biochemical composition of forage.

Impact of Processing on Biometric Parameters

The D0 and D1 treatments significantly improved the biometric growth of *Brachiaria ruziziensis* in 2021, as shown by high SD and PH values. This suggests that these treatments promote more vigourous plant growth. In 2022, an overall decrease in biometric parameters was observed, which could be due to adverse environmental conditions or plant adaptation to treatments.

For *Panicum maximum*, treatments D0 and D1 also supported higher biometric growth in 2021. However, in 2022, although some values have decreased, performance remains relatively stable, indicating a better resilience of this species to annual changes.

Comparison between Species

Brachiaria ruziziensis demonstrated lower biometric growth compared to *maximum Panicum* under the same treatments in 2021 and 2022. This could be attributed to intrinsic genetic differences or better adaptation of the *maximum Panicum* to the treatments applied.

In 2022, although both species showed a decrease in biometric parameters, *Panicum maximum* maintained relatively higher levels, reinforcing the idea of its better resilience.

Effect of Year on Parameters

The analysis found that the years 2021 and 2022 had different impacts on biometric and organic parameters, highlighting the influence of environmental conditions or adjustments in treatments. In 2022, the values of SD and PH declined overall, which could be related to factors such as changes in precipitation, temperature or agricultural management practices.

Organic Parameters

Changes in organic parameters, including total nitrogen and crude protein, indicate that treatments affect not only physical growth but also plant nutrient composition. For example, the D0 treatment for *Brachiaria ruziziensis* showed higher levels of crude protein, which could be advantageous for applications requiring a high protein content, such as animal feed. On the other hand, *Panicum maximum* under D2 treatment has shown an increase in carbohydrates, which could be beneficial for uses requiring a high energy content.

Influence of compost on biomass yield

The results of this study showed that the application of compost significantly increased the biomass yield of *Brachiaria ruziziensis* and *Panicum maximum* compared to unamended plots. These observations corroborate the work of Tien *et al.,* (2017), which reported a 20-40% increase in biomass production of compost forage grasses in sub-Saharan Africa. This increase is due to improvements in soil structure, water retention capacity and nutrient availability, as described by Lehmann & Joseph (2015). Moreover, the analysis of the years revealed a significant variation in yields as a function of climatic conditions. In 2022, a slight decrease in yield was observed, which could be attributed to reduced rainfall, a key factor in the uptake of nutrients from compost (Bationo *et al.,* 2012). This observation highlights the importance of adaptive management of organic fertilisation in relation to agro-climatic conditions.

Table.1 Effect of treatments on morphological parameters and yield of Brachiaria ruziziensis in 2021

Treatment	SD (mm)	PH (cm)	NT	WFB (kg)	WDB (kg)	Yield (t/ha)
D0	3.92± 0.11[a]	3.55± 0.21[a]	4.14± 0.09[a]	4.16± 0.00[a]	95.50± 0.00[a]	60.42± 0.00[a]
D1	3.83± 0.11[a]	3.50± 0.00[a]	3.87± 0.00[b]	4.28± 0.00[a]	83.16± 0.00[b]	61.00± 0.00[a]
D2	3.74 ± 0.00[a]	3.57 ± 0.00[a]	4.29 ± 0.00[a]	4.32 ± 0.00[a]	78.08 ± 0.00[b]	70.50 ± 0.00[b]

Averages with the same letters mean that there is no significant difference from the point of view of 5%; SD: Stem Diameter; PH: Plant Height; NT: Number of Tiller; WFB: Weight of Fresh Biomass; WDB: Weight of Dry Biomass; D0: Control; D1: 20t ha^{-1} of compost; D2: 30 tha^{-1} of compost.

Table.2 Effect of treatments on morphological parameters and *maximum Panicum* yield in 2021

Treatment	SD (mm)	PH (cm)	NT	WFB (kg)	WDB (kg)	Yield (t/ha)
D0	6.03 ±0.11[a]	4.13 ±0.00[a]	6.73 ± .00[a]	5.96 ±0.00[a]	102.75 ±0.00[a]	92.00 ± 0.00[a]
D1	6.10 ± 0.00[a]	5.62 ± 0.00[b]	6.69 ± 0.00[a]	7.75 ± 0.00[a]	97.33 ± 0.00[b]	103.00 ± 0.00[b]
D2	6.26 ± 0.00[b]	5.23 ± 0.00[b]	6.78 ± 0.00[a]	6.09 ±0.00[a]	95.67 ± 0.00[b]	110.00 ± 0.00[b]

Averages with the same letters mean that there is no significant difference from the point of view of 5%; SD: Stem Diameter; PH: Plant Height; NT: Number of Tiller; WFB: Weight of Fresh Biomass; WDB: Weight of Dry Biomass; D0: Control; D1: 20t/ha of compost; D2: 30 t/ha of compost.

Table.3 Treatment effect on morphological parameters and yield of *Brachiaria ruziziensis* in 2022

Treatment	SD (mm)	PH (cm)	NT	WFB (kg)	WDB (kg)	Yield (t/ha)
D0	3.60 ± 0.00[a]	3.09 ± 0.00[a]	2.55 ± 0.00[a]	2.81 ± 0.00[a]	62.42 ± 0.00[a]	49.08 ± 0.00[a]
D1	3.73 ± 0.00[b]	3.73 ± 0.00[b]	2.73 ± 0.00[a]	2.75 ± 0.00[a]	87.00 ± 0.00[b]	72.67 ± 0.00[b]
D2	4.79 ± 0.00[c]	4.18 ± 0.00[b]	3.35 ± 0.00[b]	3.11 ± 0.00[a]	71.16 ± 0.00[b]	76.17 ± 0.00[b]

Averages with the same letters mean that there is no significant difference from the point of view of 5%; SD: Stem Diameter; PH: Plant Height; NT: Number of Tiller; WFB: Weight of Fresh Biomass; WDB: Weight of Dry Biomass; D0: Control; D1: 20t/ha of compost; D2: 30 t/ha of compost.

Table.4 Effect of treatments on morphological parameters and *maximum Panicum* yield in 2022

Treatment	SD (mm)	PH (cm)	NT	WFB (kg)	WDB (kg)	Yield (t/ha)
D0	5.46 ± 0.00[a]	5.40 ± 0.00[a]	4.89 ± 0.00[a]	4.74 ± 0.00[a]	78.83 ± 0.00[a]	73.25 ± 0.00[a]
D1	6.12 ± 0.00[b]	5.68 ± 0.00[b]	5.44 ± 0.00[b]	4.69 ± 0.00[a]	85.75 ± 0.00[b]	77.58 ± 0.00[b]
D2	5.49 ± 0.00[a]	5.40 ± 0.00[a]	5.93 ± 0.00[b]	4.53 ± 0.00[a]	82.75 ± 0.00[b]	70.27 ± 0.00[a]

Averages with the same letters mean that there is no significant difference from the point of view of 5%; SD: Stem Diameter; PH: Plant Height; NT: Number of Tiller; WFB: Weight of Fresh Biomass; WDB: Weight of Dry Biomass; D0: Control; D1: 20t/ha of compost; D2: 30 t/ha of compost.; Mean and Standard Deviations of Organic Parameters

Table.5 Effect of treatments on the chemical composition of *Brachiaria ruziziensis* in 2021

Treatment	Humidity (%)	Dry Matter (%)	Mineral Matter (%)	Total Nitrogen (%)	Fat (%)	Crude Protein (%)	Crude Celluloses (%)	Carbohydrates (%)
D0	1.13 ±0.08[a]	98.87 ± 0.08[a]	13.17 ± 0.12[b]	1.41 ± 0.00[a]	0.69 ± 0.12[a]	8.80 ± 0.12[b]	41.04 ± 0.00[a]	35.17 ± 0.00[b]
D1	1.15 ± 0.00[a]	98.85 ± 0.07[a]	13.68 ± 0.22[b]	1.55 ± 0.00[b]	0.70 ± 0.00[a]	9.68 ± 0.00[a]	41.98 ± 0.00[a]	32.81 ± 0.00[b]
D2	1.02 ± 0.05[a]	98.98 ± 0.07[a]	11.62 ± 0.18[a]	1.41 ± 0.00[a]	0.77 ± 0.00[a]	8.83 ± 0.00[b]	42.88 ± 0.00[b]	34.88 ± 0.00[b]

Averages with the same letters mean that there is no significant difference from the point of view of 5%.

Table.6 Treatment effect on *Panicum* chemical composition *maximum* in 2021

Treatment	Humidity (%)	Dry Matter (%)	Mineral Matter (%)	Total Nitrogen (%)	Fat (%)	Crude Protein (%)	Crude Celluloses (%)	Carbohydrates (%)
D0	1.05 ± 0.00[a]	98.95 ± 0.00[a]	11.25 ± 0.00[a]	1.35 ± 0.00[a]	0.70 ± 0.00[a]	8.45 ± 0.00[a]	43.20 ± 0.00[a]	35.35 ± 0.00[a]
D1	1.20 ± 0.00[a]	98.80 ± 0.00[a]	11.22 ± 0.00[a]	1.25 ± 0.00[a]	0.60 ± 0.00[a]	7.80 ± 0.00[b]	43.22 ± 0.00[a]	35.96 ± 0.00[a]
D2	1.10 ± 0.00[a]	98.90 ± 0.00[a]	10.02 ± 0.00[a]	1.20 ± 0.00[a]	0.88 ± 0.00[a]	7.47 ± 0.00[b]	45.05 ± 0.00[b]	35.48 ± 0.00[a]

Averages with the same letters mean that there is no significant difference from the point of view of 5%.

Table.7 Effect of treatments on the chemical composition of *Brachiaria ruziziensis* in 2022

Treatment	Humidity (%)	Dry Matter (%)	Mineral Matter (%)	Total Nitrogen (%)	Fat (%)	Crude Protein (%)	Crude Celluloses (%)	Carbohydrates (%)
D0	1.20 ± 0.00[a]	98.75 ± 0.00[a]	12.04 ± 0.00[a]	1.44 ± 0.00[a]	0.71 ± 0.00[a]	8.94 ± 0.00[b]	39.96 ± 0.00[a]	36.08 ± 0.00[a]
D1	1.06 ± 0.00[a]	98.85 ± 0.00[a]	12.79 ± 0.00[b]	1.27 ± 0.00[a]	0.75 ± 0.00[a]	8.50 ± 0.00[b]	43.04 ± 0.00[b]	34.39 ± 0.00[a]
D2	1.15 ± 0.00[a]	98.90 ± 0.00[a]	12.62 ± 0.00[b]	1.27 ± 0.00[a]	0.78 ± 0.00[a]	9.13 ± 0.00[a]	40.84 ± 0.00[a]	38.13 ± 0.00[b]

Averages with the same letters mean that there is no significant difference from the point of view of 5%.

Table.8 Treatment effect on *Panicum* chemical composition *maximum* in 2022

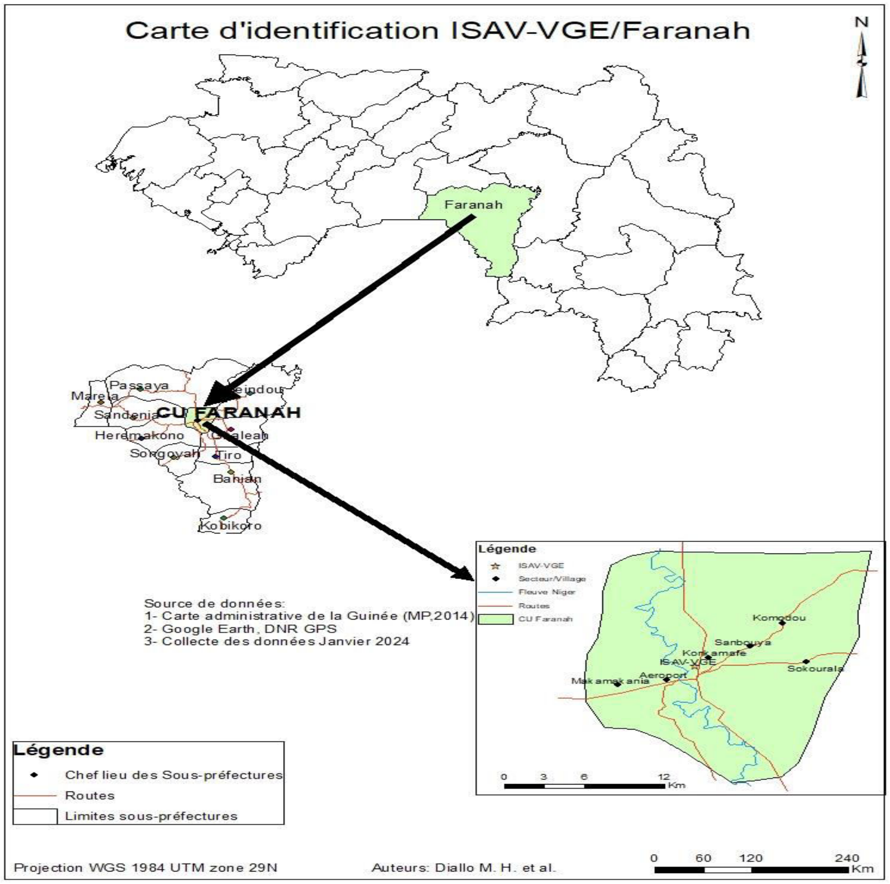
Treatment	Humidity (%)	Dry Matter (%)	Mineral Matter (%)	Total Nitrogen (%)	Fat (%)	Crude Protein (%)	Crude Celluloses (%)	Carbohydrates (%)
D0	1.00 ± 0.00[a]	99.00 ± 0.00[a]	12.04 ± 0.00[a]	1.44 ± 0.00[a]	0.79 ± 0.00[a]	8.21 ± 0.00[a]	41.77 ± 0.00[a]	35.97 ± 0.00[a]
D1	1.00 ± 0.00[a]	99.00 ± 0.00[a]	12.04 ± 0.00[a]	1.44 ± 0.00[a]	0.98 ± 0.00[a]	7.93 ± 0.00[a]	42.84 ± 0.00[b]	35.17 ± 0.00[a]
D2	1.06 ± 0.00[a]	98.94 ± 0.00[a]	12.04 ± 0.00[a]	1.44 ± 0.00[a]	1.00 ± 0.00[a]	7.59 ± 0.00[a]	43.01 ± 0.00[b]	34.55 ± 0.00[a]

Averages with the same letters mean that there is no significant difference from the point of view of 5%.

Table.9 Synthesis of the Correlation Tests

Parameter 1	Parameter 2	Correlation coefficient (r)	p-value
SD	PH	0.85	< 0.01
WFB	WDB	0.75	< 0.05
Humidity (%)	Dry Matter (%)	-0.65	< 0.05
Total Nitrogen Substances (%)	Carbohydrates (%)	0.60	< 0.05
Fat (%)	Crude Protein (%)	0.55	< 0.05

Figure.1 Map showing the study location



Effect of compost on forage quality

The application of compost significantly improved the total nitrogen content and crude protein content for the two forage species studied. These results are in agreement with those of Diatta *et al.,* (2018), which showed that *maximum Panicum* compost intake in West Africa increased the crude protein concentration by 15%. Enrichment of soil with organic nitrogen by compost promotes the uptake of nutrients needed for protein synthesis, a key factor in livestock feed.

As regards digestibility parameters, the decrease in the crude celluloses and insoluble fibre contents was observed in both species. This indicates improved forage quality, favouring more efficient ingestion by livestock (Thornton & Herrero, 2015).

These observations confirm the conclusions of Kambire (2022), who noted that the use of compost on food crops in Guinea has led to an increase in available nutrient levels.

Comparison between *Brachiaria ruziziensis* and *Panicum maximum*

Comparative analysis between the two species showed that *Panicum maximum* had a higher biomass yield than *Brachiaria ruziziensis*, particularly under compost treatment.

This result may be related to increased photosynthetic efficiency and improved nutrient absorption capacity in *Panicum maximum*, as reported by Bationo *et al.,* (2011).

In contrast, *Brachiaria ruziziensis* showed higher values for crude protein and total nitrogenous matter, making it a preferred option for animal feed due to its greater contribution to cattle muscle growth. These results are consistent with those reported by Loabe *et al.,* (2020) on the forage quality of different grass species in West Africa.

Prospects and practical implications

Process optimisation

The addition of compost has shown positive effects on forage growth and nutritional quality. However, in order to optimise yields, it would be appropriate to explore the optimal application doses of compost according to the specific needs of each species (Lehmann & Joseph, 2015). A combined approach with other organic amendments could also be explored.

Adoption by farmers

The perception of Faranah's farmers and herders of compost is essential for wider adoption. Awareness campaigns and field demonstrations would be beneficial to promote compost use and reduce dependence on chemical fertilisers (Bationo *et al.,* 2012).

Future research

Long-term studies are required to assess the cumulative effect of compost on soil fertility and forage performance over several production cycles. Moreover, research on combining compost with other sustainable farming practices, such as crop rotation and agroforestry, could offer even more effective alternatives.

Conclusion

This study demonstrated that composting significantly improved the yield and forage quality of *Brachiaria ruziziensis* and *Panicum maximum* under Faranahagro-ecological conditions. Increasing protein levels and reducing insoluble fibre strengthen the appeal of compost as a sustainable alternative to chemical fertilisers. However, the influence of climate factors on yields underscores the need for adaptive management and wider integration of agro-ecological practices.

The results obtained provide a solid basis for optimising agricultural treatments to improve crop productivity and quality. Future research could explore the impact of more specific environmental factors and refine management regimes to maximise the performance of the species studied.

References

Bationo, A., & Waswa, B. (2011) New challenges and opportunities for integrated soil fertility management in Africa. In A. Bationo, B. Waswa, J. M. Okeyo, F. Maina, & J. M. Kihara (Eds.), Innovations as key to the green revolution in Africa. Springer. pp. 3-17.

Bationo, A., Hartemink, A., Lungu, O., Naimi, M., Okoth, P., Smaling, E., Thiombiano, L., & Waswa, B. (2012) Knowing the African Soils to Improve Fertiliser Recommendations. In A. Bationo, B. Waswa, J. Kihara, & J. Kimetu (Eds.), Lessons learned from Long-term Soil Fertility Management Experiments in Africa. Springer. pp. 19-42.

Diatta, A., Fall, S., & Ndiaye, S. (2018) Effect of organic and inorganic fertilisation on the nutritional value of *Panicum maximum*. *African Journal of Agricultural Research,* 13(14), 674-680.

FAO & OECD. (2021) OECD/FAO Agricultural Outlook 2021-2030. Organisation for Economic Cooperation and Development (OECD) and Food and Agriculture Organisation of the United Nations (FAO). Paris, France and Rome, Italy.

Kambiré, S. (2022) Effect of nitrogen fertilisation on forage production and nutritional value of grassland. Master's thesis, University of Liège.

Lehmann, J., & Joseph, S. (Eds.). (2015) Biochar for Environmental Management: Science, Technology and Implementation (2nd ed.): *Science, Technology and Implementation*. Routledge.

Loabe Pahimi, A., TaahYamndou, S., Damba, R., &Dzeufack Djoumessi, A. (2020) Qualitative assessment of forage species present in the Bénoué department, North Cameroon. International Journal of Biological and Chemical Sciences, 14(3), 1021-1033.

Thornton, P. K., & Herrero, M. (2015). Adapting to climate change in the mixed crop and livestock farming systems in sub-Saharan Africa. *Nature Climate change*, 5; 830-836. http://dx.doi.org/10.1038/NCLIMATE2754

Tien, H., Kimou, A., & Kouadio, J. (2017) Effect of organic amendments on drilling crop productivity in West Africa. *Tropical Grasslands*, 5(2), 48-59.

How to cite this article:

Mamadou Habib Diallo, Zaki Bonou-Gbo, Hamidou Bah and Mamadou Aliou Diallo. 2025. Effect of Compost on Yield and Forage Quality of *Brachiaria ruziziensis* and *Panicum maximum* in Faranah, Republic of Guinea. *Int.J.Curr.Res.Aca.Rev*. 13(04), 1-8. doi: https://doi.org/10.20546/ijcrar.2025.1304.001