

REVIEWER'S REPORT

Manuscript No.: IJAR- 59447

Title: Systèmes agroforestiers modernes à base de cacaoyer : composition, performance et contraintes d'adoption.

Recommendation:

Accept as it is

Accept after Minor revision.....

Accept after Major revision

Do not accept (*Reasons below*)

Rating	Excel.	Good	Fair	Poor
Originality		✓		
Techn. Quality		✓		
Clarity			✓	
Significance			✓	

Reviewer Name: Dr. ANAPANA GOPAL

Reviewer's Comment for Publication.

General Comments

The manuscript addresses an important topic concerning the composition, establishment, performance, and adoption constraints of modern agroforestry systems in cocoa plantations in the Daloa department of Côte d'Ivoire. The study is relevant to sustainable cocoa production, restoration of tree cover, conservation of biodiversity, and the implementation of agroforestry practices in cocoa-growing landscapes.

The study combines interviews with 100 cocoa producers and field investigations in 60 agroforestry plots. It evaluates the diversity of introduced tree species, the survival of planted trees, farmers' management practices, compliance with the ARS 1000 planting arrangement, and the technical, institutional, and agronomic constraints affecting adoption. The reported findings include nine tree species, a Shannon diversity index of 2.059, a Pielou evenness index of 0.937, and substantial differences in tree survival between planting periods. The study also identifies forestry-related difficulties, inadequate financial incentives, labour shortages, and delays in seedling distribution as important challenges.

The manuscript has practical relevance because it examines the implementation of agroforestry under actual farming conditions rather than relying exclusively on theoretical recommendations. The comparison of tree survival across planting periods and species may provide useful information for improving seedling distribution and field management. The inclusion of farmers' perspectives also offers an opportunity to connect technical performance with adoption constraints.

However, the manuscript contains several important methodological, numerical, statistical, and interpretative weaknesses. The sampling procedure is not sufficiently transparent, the relationship between the 100 interviewed producers and the 60 monitored plots requires clarification, and the calculation and interpretation of tree survival rates need further explanation. Several numerical inconsistencies occur between the abstract, tables, figures, and discussion. In particular, the reporting of

REVIEWER'S REPORT

compliance with ARS 1000, the percentages attributed to forestry-related constraints and financial incentives, and the survival rates for different planting periods require careful verification.

The manuscript also makes broad claims concerning adoption, agroforestry performance, and the effects of planting periods without adequately describing the statistical methods or controlling for potentially confounding factors. Furthermore, the bibliography contains apparent DOI and bibliographic inconsistencies, and the manuscript requires substantial language and formatting corrections in both French and English.

Overall, the study addresses a relevant practical problem and contains potentially useful field observations. Nevertheless, minor revision is required to establish the reliability of the reported results, clarify the methodology, reconcile inconsistencies, and ensure that the conclusions are supported by the evidence presented.

Minor Comments

1. The Sampling Design Requires Clearer Explanation

The manuscript reports interviews with 100 producers, comprising 50 producers supported by ANADER and 50 supported by agricultural cooperatives. It also states that 60 agroforestry plots were investigated, divided equally between the two support structures.

However, the selection process is described partly in terms of accessibility, institutional support, and the presence of planted agroforestry trees. These criteria may introduce selection bias.

The authors should clarify:

- How the 100 producers were identified and recruited.
- Whether the selection of producers was random, purposive, or based on convenience.
- How the 60 plots were selected from the interviewed producers.
- Whether each plot belonged to a different producer.
- Whether the same producer could contribute more than one plot.
- How the 10 villages and campments were selected.
- Whether the sample adequately represents the wider population of cocoa producers in the Daloa department.

The manuscript should acknowledge the implications of a sample selected partly on accessibility and institutional support. The results should not automatically be generalized to all cocoa producers in the region.

2. The Relationship Between Producers, Plots, and Trees Needs Clarification

The study uses different sample sizes for different analyses: 100 interviewed producers, 60 agroforestry plots, and the individual trees recorded during the floristic inventory and survival assessment.

The manuscript does not consistently explain which sample forms the basis of each reported percentage or analysis.

The authors should provide a simple sampling-flow diagram showing the number of producers interviewed, plots assessed, trees recorded, and observations included in each analysis. They should also specify whether questionnaire results are based on all 100 respondents or only the 60 producers associated with monitored plots.

REVIEWER'S REPORT

This clarification is essential for interpreting the percentages and evaluating the statistical validity of the results.

3. The Definition of Modern Agroforestry Requires Operational Clarification

The introduction distinguishes modern agroforestry systems from traditional systems based on naturally regenerated or retained trees. The study then examines plantations in which forest tree species were distributed and planted by farmers.

However, the operational criteria used to classify a plot as a modern agroforestry system are not fully specified.

The authors should explain whether classification depended on the origin of the trees, the species planted, the planting arrangement, the distribution programme, compliance with ARS 1000, or a combination of these characteristics.

They should also clarify whether all 60 plots were established under the same programme or whether their establishment histories differed.

Without these details, it is difficult to determine whether the study evaluates a consistent intervention or a collection of agroforestry arrangements with different histories.

4. The Study Period and Planting Chronology Need Clarification

The manuscript states that fieldwork took place from September 2025 to April 2026. Survival observations were reportedly collected in September 2025 for one planting period and March 2026 for another.

The text also refers to planting periods such as March–June and August–October, but the precise planting years and intervals between planting and survival assessment are not consistently explained.

The authors should provide:

- The exact planting period for each cohort.
- The year in which each cohort was planted.
- The dates of survival assessment.
- The approximate age of the trees at each assessment.
- Whether both planting cohorts were assessed after comparable periods.
- Whether any replacement planting occurred after initial establishment.

These details are important because survival rates measured over different observation periods cannot necessarily be compared directly.

5. The Calculation of Tree Survival Rates Requires More Detail

The manuscript defines survival rate as in formula, the number of living trees and the number initially planted.

This formula is appropriate as a basic survival calculation, but the methods do not adequately explain how the initial number of planted trees was established.

The authors should clarify whether initial planting numbers were obtained from farmer records, distribution records, or retrospective interviews. They should also explain how missing trees, replacement seedlings, and trees of uncertain status were handled.

Because the study estimates survival from field observations and information about previous planting, the reliability of the initial denominator is particularly important.

REVIEWER'S REPORT

6. The Survival Assessment May Be Affected by Unequal Follow-up Periods

The manuscript reports that trees planted during March–June generally achieved higher survival rates than those planted during August–October.

However, the two groups appear to have been assessed at different dates, and the intervals between planting and assessment are not sufficiently documented.

Differences in survival could reflect planting season, seedling age, weather conditions, nursery quality, or the duration of follow-up.

The authors should report the elapsed time between planting and assessment for each cohort and discuss these potential confounding factors. If the observation periods were unequal, the comparison should be qualified accordingly.

The results should not attribute the differences exclusively to rainfall or planting season unless the relevant environmental and management variables were measured.

7. Floristic Inventory and Species Richness Need Clearer Presentation

The manuscript reports nine tree species in the investigated cocoa plantations. Table 2 provides their scientific names, families, relative representation, and contributions to the Shannon diversity index.

However, the reported taxonomic and numerical information needs careful checking.

The authors should verify:

- The spelling and accepted names of all species.
- The botanical family assigned to each species.
- The identification of species with incomplete family information.
- The number of individual trees recorded for each species.
- Whether the percentages refer to individual trees, distributed seedlings, or another denominator.
- Whether the inventory included only planted trees or also naturally occurring individuals.

The text should use a consistent distinction between species richness and the number of individual trees. These are different measures and should not be used interchangeably.

8. The Shannon and Pielou Indices Need Verification

The manuscript reports a Shannon diversity index of $H' = 2.059$ and a Pielou evenness index of $J' = 0.937$, based on nine species. It also reports a theoretical maximum Shannon index of 2.197.

The theoretical maximum is consistent with $\ln(9)$, but the calculation of the observed indices needs to be verified against the underlying abundance data.

The authors should provide or verify the species counts used to calculate relative abundance, Shannon diversity, and evenness. They should also clarify whether the indices were calculated across all plots combined or separately for each plot and then summarized.

If the indices were calculated from pooled data, the manuscript should avoid suggesting that every individual plot possesses the same level of diversity.

9. The Interpretation of High Floristic Diversity Needs Qualification

The discussion interprets the reported Shannon and Pielou values as evidence of high diversity and a relatively homogeneous distribution of individuals among species.

REVIEWER'S REPORT

Although the reported evenness value suggests a relatively even distribution of the recorded species, the interpretation should remain within the scope of the measured data.

The presence of nine introduced tree species does not, by itself, establish high overall biodiversity or ecological restoration success. The study does not appear to quantify the complete vegetation community, wildlife diversity, natural regeneration, or ecosystem functioning.

The authors should therefore distinguish diversity among the introduced tree species from broader biodiversity outcomes.

10. The Relative Representation of Tree Species Needs Reconciliation

Table 2 reports the relative representation of the nine species, including *Heritiera utilis* at 21.33%, *Terminalia superba* at 19.57%, and *Irvingia gabonensis* at 12.05%.

However, the percentages listed in the table appear to sum to approximately 100%, and the individual species contributions to the Shannon index also require verification against the reported abundances.

The authors should provide the underlying species counts or verify the calculations using the original data. In particular, the reported contribution of *Mansonia altissima* should be checked against its stated relative representation.

All percentage values and Shannon contributions should be recalculated consistently before publication.

11. Botanical Nomenclature and Taxonomic Information Require Correction

The manuscript contains inconsistent formatting of scientific names, including missing spaces between genus and species names and inconsistent author citations.

Examples include *Heritiera utilis*, *Terminalia superba*, *Terminalia ivorensis*, *Khaya ivorensis*, *Entandrophragma angolense*, and *Irvingia gabonensis*.

The authors should verify the accepted botanical names and family assignments against an authoritative taxonomic resource.

Scientific names should be italicized consistently in the text, tables, and figure captions. Botanical authority names should follow the target journal's conventions, and local names should be clearly distinguished from scientific names.

12. The Interpretation of ARS 1000 Compliance Contains Numerical Inconsistencies

The abstract states that 98.9% of producers do not comply with the planting arrangement recommended by ARS 1000. However, Table 4 reports 1.1% compliance and 99.9% non-compliance.

These two percentages cannot both be correct because they sum to 101.0%.

The results section and discussion also report 98.9% non-compliance.

The authors must verify the raw questionnaire data and correct the percentage in Table 4. They should also ensure that the same figures are used consistently in the abstract, results, discussion, and conclusion.

Furthermore, the authors should clarify how compliance was assessed. Was it based on measured distances between trees, farmers' descriptions, or visual inspection? This is important because the assessment method determines the reliability of the reported compliance rate.

REVIEWER'S REPORT

13. The ARS 1000 Planting Arrangement Needs Better Contextualization

The manuscript identifies a rectangular spacing of 15 m × 20 m as the recommended arrangement under ARS 1000.

The authors should specify the relevant provision of the standard and explain how this spacing applies to the agroforestry system investigated.

They should clarify whether compliance was assessed against a single recommended arrangement or whether the standard permits alternative arrangements depending on species, shade requirements, and plantation conditions.

The discussion should distinguish between non-compliance with a specified planting arrangement and failure to establish an agroforestry system. A plot may contain planted trees without following the particular spacing assessed in the study.

14. Training Rates and Institutional Support Need Consistent Denominators

The manuscript reports that 78.9% of producers received agroforestry training. It also reports that ANADER and cooperatives provide technical support.

However, Table 4 reports the distribution of support structures as 57.89% and 42.11%, while the discussion describes these percentages as applying to producers who received training.

The authors should explicitly identify the denominator used for each percentage. For example, the proportion among all 100 respondents is different from the proportion among only those who received training.

The same principle should be applied to seedling distribution sources and technical monitoring. This would prevent confusion between percentages of the entire sample and percentages within a subgroup.

15. Farmers' Participation in Species Selection Needs Verification

The discussion reports that 73.15% of producers participated in selecting the species distributed to them, while 17.1% stated that they were not consulted.

These values leave a difference that requires explanation. The abstract and main results do not consistently report these figures.

The authors should verify the original responses and indicate whether the remaining respondents did not know, did not answer, or selected another response category.

The discussion should also avoid assuming that participation automatically improves seedling survival unless the study directly examined the association between participation and survival.

16. The Uses of Agroforestry Trees Require More Precise Interpretation

Table 4 identifies timber production (36.8%), shade (28.4%), medicinal use (20%), soil fertility (5.3%), food (1.1%), and other uses (8.4%) as reported purposes of agroforestry trees.

These results are useful for understanding farmers' perceptions. However, the manuscript concludes that farmers primarily seek economic benefits from the trees.

This interpretation is plausible but should be qualified because timber, shade, medicinal products, and other uses can provide different types of direct and indirect benefits.

The authors should clarify whether respondents were allowed to select multiple uses or only one principal use. If multiple responses were permitted, the percentages may not be expected to sum to 100%.

REVIEWER'S REPORT

The paper should distinguish farmers' stated preferences from the measured economic value or actual use of the trees.

17. The Timing of Seedling Distribution and Planting Needs Clarification

The manuscript reports that August–October was the most frequently reported period for introducing agroforestry trees, whereas March–June produced higher survival rates in the monitored cohorts.

This finding may have practical implications for seedling distribution programmes. However, the study needs to clarify whether the dates refer to seedling distribution, planting by farmers, or both.

The authors should also explain how the two planting periods were defined, given that the text refers to March–June in the survival assessment but March–April and June–July in the questionnaire results.

These categories are not directly equivalent. A consistent classification is needed to connect reported farmer practices with observed tree survival.

18. Figure 2 Contains Potential Reporting and Interpretation Problems

Figure 2 presents survival percentages for different tree species across two planting periods. The figure is central to the manuscript because the survival results support several of its main recommendations.

However, the numerical labels, significance letters, and corresponding discussion require careful verification.

The authors should check:

- Whether every species has the correct survival value for each planting period.
- Whether the legend correctly identifies the two periods.
- Whether the significance letters correspond to a valid statistical comparison.
- Whether the underlying sample sizes are comparable across species and periods.
- Whether the reported values represent pooled survival, plot-level means, or another calculation.

The manuscript should also explain how the statistical comparisons were performed. If no valid inferential analysis was conducted, the significance letters should be removed.

19. The Statistical Analysis Is Insufficiently Described

The Methods section describes the calculation of floristic indices and survival percentages, but it does not provide sufficient detail about the statistical analysis underlying the comparisons presented in Figure 2.

The authors should state:

- Which statistical tests were performed.
- The experimental or observational unit used for each analysis.
- The number of observations included in each comparison.
- The statistical software and relevant package or procedure.
- The significance threshold.
- Whether the assumptions of the tests were evaluated.
- How multiple comparisons among species and planting periods were handled.

REVIEWER'S REPORT

If the significance letters in Figure 2 reflect a formal statistical test, the authors must report the test and its results. If the percentages are purely descriptive, they should be presented without unsupported claims of statistical significance.

20. The Effects of Planting Period Should Not Be Attributed Solely to Rainfall

The discussion suggests that the lower survival rates during August–October result from less favourable water availability.

Although water availability may influence seedling establishment, the manuscript does not present direct measurements of rainfall, soil moisture, irrigation, or drought exposure for the monitored plots.

Other factors could also contribute, including seedling quality, transport, handling, planting technique, maintenance, shade, and the time elapsed before assessment.

The authors should present rainfall as a possible explanation rather than a demonstrated cause unless relevant environmental data are available.

A stronger interpretation would distinguish the observed association between planting period and survival from the mechanisms that might explain it.

21. The Species-Specific Survival Results Need More Careful Reporting

The manuscript identifies *Terminalia superba* as the best-performing species during March–June, with a reported survival rate of 89.33%. It also reports high values for *Terminalia ivorensis* and *Entandrophragma angolense*.

However, the abstract simplifies this result to approximately 89%, while the discussion also reports much lower survival rates for the later planting period.

The authors should clearly identify the species with the highest survival in each period and avoid describing one species as universally superior if its performance depends on the planting period.

The very low reported survival of *Garcinia kola* should also be examined. The authors should report the number of seedlings initially planted and the number surviving, because percentages calculated from small denominators may be unstable.

22. Figure 3 and the Discussion Contain Inconsistent Constraint Percentages

The discussion reports forestry-related constraints at 50.35%, financial incentives at 38%, and lack of training at 4.75%.

However, the text describing the same results gives the financial constraint as “399%,” which appears to be a typographical or numerical error. Figure 3 also displays values that do not fully agree with the prose, including a value of 55.35% for one category.

These discrepancies must be resolved using the original questionnaire data.

The authors should identify precisely what “forestry operators” means in the context of the survey. For example, does it refer to disputes over tree ownership, unauthorized timber extraction, access to trees, or another issue? The current wording does not define the constraint sufficiently.

23. The Agronomic Constraints Need Better Statistical and Practical Interpretation

Figure 4 identifies the lack of labour (29.45%), seedling distribution timing (27.55%), poor seedling quality (21.85%), and drought (16.15%) as reported constraints.

REVIEWER'S REPORT

These findings are relevant to programme implementation. Nevertheless, the authors should explain whether respondents selected one main constraint or could identify several constraints.

If multiple responses were allowed, the percentages should be interpreted as response frequencies rather than mutually exclusive shares of producers.

The discussion should also avoid assuming that poor seedling quality is caused by nursery practices, transportation, or storage unless these factors were investigated directly. These are possible explanations that should be labelled as such.

24. The Study Does Not Directly Measure Cocoa Productivity or Ecosystem Benefits

The title refers to composition, performance, and adoption constraints, and the introduction discusses productivity, soil fertility, microclimate regulation, and biodiversity conservation.

However, the reported field measurements primarily concern tree species composition, seedling survival, farmer management, and perceived constraints.

The manuscript does not present direct measurements of cocoa yield, soil fertility changes, microclimatic conditions, carbon storage, or broader biodiversity outcomes.

The authors should therefore define “performance” explicitly and limit conclusions to the measured indicators. Tree survival is an important establishment indicator, but it does not independently demonstrate improved cocoa productivity or overall ecosystem performance.

25. The Discussion Needs Stronger Separation Between Findings and Explanations

The discussion proposes several explanations for the observed results, including farmer preferences for timber species, limited knowledge of planting requirements, rainfall-related survival differences, and the influence of financial incentives.

These explanations are relevant but are not all directly tested by the study.

The authors should distinguish between:

- Findings directly measured in the field.
- Information reported by producers.
- Interpretations supported by comparisons with previous studies.
- Hypotheses requiring further investigation.

For example, a high proportion of producers reporting financial constraints does not establish the size of the financial incentive required to improve adoption. Similarly, a difference in survival between planting periods does not establish rainfall as the causal factor without environmental measurements.

26. The Conclusions Should Be More Closely Linked to the Study Objectives

The manuscript concludes that the agroforestry practice is being adopted but requires better monitoring to achieve its objectives.

However, the study does not provide a clearly defined benchmark for successful adoption, nor does it evaluate the long-term ecological or economic performance of the systems.

The conclusion should emphasize the principal empirical findings: nine introduced tree species were recorded, compliance with the specified planting arrangement was

REVIEWER'S REPORT

low, survival varied by species and planting period, and producers reported several institutional and agronomic constraints.

The recommendations should follow from these findings and should not imply that long-term restoration, improved productivity, or increased household income has already been demonstrated.

27. The English Abstract Requires Substantial Language Editing

The English abstract contains numerous grammatical, punctuation, and spacing errors. Examples include missing spaces between words, duplicated punctuation, awkward sentence construction, and inconsistent use of “agroforestry systems,” “agroforestry trees,” and “success rate.”

The expression “forestry operators” also requires clarification so that it accurately reflects the constraint described in the French text.

The abstract should be rewritten in clear scientific English and should accurately reflect the corrected numerical results. The French and English abstracts should report the same sample sizes, survival results, and principal constraints.

28. The French Text Requires Comprehensive Language Correction

The French manuscript contains numerous typographical and grammatical problems, including missing spaces, duplicated punctuation, inconsistent accents, and errors in agreement.

Examples include “Résultatset discussion,” “Description d de la fiche d'enquêté,” “planting” in place of an appropriate French term, and inconsistent forms of “cacaoyère” and “agroforesterie.”

The authors should also standardize terminology for seedling distribution, planting period, survival rate, and adoption constraints.

A thorough French-language revision is necessary after the scientific content and numerical inconsistencies have been corrected.

29. Tables Require Better Formatting and Consistent Units

Tables 1–4 provide useful information, but their formatting and explanatory notes need improvement.

The authors should:

1. Standardize decimal notation throughout the manuscript.
2. Use consistent headings and capitalization.
3. Define abbreviations and indices in the relevant table footnotes.
4. Identify the denominator used for each percentage.
5. Correct the inconsistent compliance figures in Table 4.
6. Verify the species representation values in Table 2.
7. Ensure that all reported totals agree with the underlying data.
8. Improve the layout of the village and campment list in Table 1.

The table captions should be sufficiently informative to allow readers to understand the data without repeatedly consulting the main text.

30. Figure Captions and Graphical Presentation Need Improvement

Figures 1–4 are relevant to the study, but their captions and graphical presentation need revision.

REVIEWER'S REPORT

Figure 1 provides the geographical location of the study area. The authors should ensure that the map labels are legible and that the localities shown correspond to those listed in Table 1.

Figure 2 should clearly identify the planting periods, species, sample sizes, and statistical comparisons, if applicable.

Figures 3 and 4 should use readable axis labels, consistent decimal formatting, and unambiguous category names. The numerical values in the graphs must agree with the text and tables.

31. The Reference List Contains Apparent Bibliographic Errors

The bibliography requires a comprehensive verification against the original publications.

For example, the Assiri et al. (2009) entry lists the Journal of Animal & Plant Sciences but provides a DOI containing an identifier associated with a different journal format. The Deheuvels et al. (2012) entry appears incomplete, and the Schroth et al. (2016) entry contains a duplicated author list and publication information that should be checked against the intended source.

The authors should also review the references to FAO (2026), CIRAD (2026), and the Council of Coffee and Cocoa. These reports should be traceable to identifiable publications or official institutional records.

Every DOI should be verified, author names should be standardized, and incomplete references should be corrected. The authors should not retain a citation unless the cited source can be identified and its relevance to the associated claim established.

32. In-Text Citations Need Consistency and Verification

The manuscript cites studies in support of claims about agroforestry, species selection, seedling survival, financial incentives, and tree management.

The authors should ensure that each citation directly supports the statement for which it is used. References should not be included merely because they discuss agroforestry in a general sense.

In particular, statements attributing higher seedling survival to a particular planting period or participatory species selection should be supported by studies that investigated those specific relationships.

The authors should also ensure that every in-text citation appears in the reference list and that no unused references remain.

33. Ethical and Institutional Information Should Be Clarified

The study involves interviews with 100 producers and collects information about their farms, management practices, and experiences.

The manuscript acknowledges institutional support and funding, but it does not clearly describe informed consent, confidentiality, or any relevant ethical approval or exemption.

The authors should provide the applicable institutional statement regarding consent and ethical oversight. If formal ethical approval was not required, this should be explained according to the journal's requirements.

The funding and acknowledgement statements should also be edited for grammatical accuracy and should identify the supporting institutions consistently.

REVIEWER'S REPORT

Recommended Additional Analyses and Improvements

The manuscript could be substantially strengthened by incorporating the following analyses and clarifications, provided the original data are available.

1. Recalculation of floristic indices: Verify the species abundances, relative representation, Shannon index, and Pielou evenness using the original inventory data.
2. Species-specific survival analysis: Report the numbers initially planted and surviving for each species and planting cohort, together with sample sizes and uncertainty estimates.
3. Statistical comparison of planting periods: If the data permit, use an appropriate statistical model to assess the association between planting period and survival while accounting for differences among species and plots.
4. Assessment of observation periods: Calculate the elapsed time between planting and survival assessment for each cohort and evaluate whether unequal follow-up could affect comparisons.
5. Analysis of institutional support: If individual-level data are available, explore whether training, technical monitoring, or institutional support is associated with planting compliance or tree survival. Such analyses should be interpreted as associations unless the design supports causal conclusions.
6. Constraint analysis: Verify the original questionnaire responses and recalculate the percentages for forestry-related constraints, financial incentives, labour shortages, seedling quality, and distribution timing.
7. Species-selection analysis: If relevant data exist, examine whether farmers' participation in species selection is associated with species preferences, planting practices, or survival outcomes.
8. Spatial analysis: If plot coordinates and sufficient plot-level observations are available, investigate whether species composition and survival vary among villages or localities.
9. Improved data presentation: Provide a consolidated table showing species, initial planting numbers, surviving trees, survival percentages, observation periods, and any valid statistical comparisons.
10. Evidence-based recommendations: Link recommendations concerning seedling distribution, training, planting arrangements, and monitoring directly to the measured results and clearly identified limitations.

These additions are intended to improve the reliability and interpretability of the existing study rather than require new experiments unnecessarily.

Overall Assessment

The manuscript investigates an important practical issue in sustainable cocoa production and provides useful field observations on tree species composition, seedling survival, farmers' management practices, and constraints affecting agroforestry implementation in Daloa, Côte d'Ivoire.

Its principal strengths are the combination of farmer interviews and field observations, the documentation of nine introduced tree species, the comparison of survival across planting periods, and the identification of institutional and agronomic constraints relevant to agroforestry programmes.

However, several issues currently limit the reliability of the conclusions. The sampling design and denominators for reported percentages require clarification, and the survival assessment needs a more transparent description of initial planting numbers

International Journal of Advanced Research

Publisher's Name: Jana Publication and Research LLP

www.journalijar.com

REVIEWER'S REPORT

and observation periods. The numerical inconsistencies involving ARS 1000 compliance, forestry-related constraints, and the reported survival results must be resolved using the original data.

The statistical methodology is insufficiently described to support the comparisons presented in Figure 2, and some interpretations attribute observed differences to rainfall, farmer preferences, or institutional factors without direct evidence establishing those relationships. In addition, the conclusions concerning agroforestry performance should remain focused on the measured indicators rather than imply demonstrated improvements in cocoa productivity or ecosystem services.

The manuscript also requires substantial correction of the French and English text, tables, figures, and bibliography. These editorial issues should be addressed after the numerical and methodological concerns have been resolved.

The study has potential value for agroforestry implementation and cocoa-sector management, but the reliability of its principal findings must be established before publication.

Final Decision

MINOR REVISION

The manuscript should be reconsidered after substantial revision. The authors should first reconcile all numerical inconsistencies, clarify the sampling and survival-assessment methods, provide an adequate statistical analysis, and moderate conclusions that are not directly supported by the data. A comprehensive review of the tables, figures, scientific terminology, and references is also necessary.