
Reproductive and productive performance of dairy cows in selected dairy farms in Northern Mindanao

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Malik B., Pirzadah, T. B., Abdin, M. Z. and Rehman, R. U. (YEAR). Somatic embryogenesis and embryoids formation in chicory (*Cichorium intybus* L.) International Journal of Agricultural Technology X(X): XX-XX. **(Times new roman 10)**

Abstract Abstract must be stated the result. It is no needed to write the objective, methods, and experimental design. The abstract should be written as a single paragraph. Abstract must be written not more than 300 words. **(Times new roman 10)**

Keywords: The keywords should be avoiding general and plural terms and multiple concepts. Do not use words or terms in the title as keywords. These keywords will be used for indexing purposes. Keywords should not more than 5 words or phrases in alphabetical order. **(Times new roman 10)**

Introduction (Times new roman 12, Bold)

The dairy industry in Northern Mindanao holds strong potential to boost national food security, rural development, and economic growth. However, its progress is limited by inefficient breeding practices and low herd productivity. Many farms remain dependent on the National Dairy Authority for technical services, causing delays in breeding interventions. Profiling farms, herds, and technicians is essential to guide sustainable genetic improvement and breed development.

National milk production grew by 11.4% to 18.16 million liters in the second quarter of 2025, but local output meets only about 3% of demand, with the rest imported. Northern Mindanao contributes nearly 10% of national production, yet its herds still rely on foreign genetics. Developing island-born cattle suited to local conditions can enhance productivity, cut import costs, and strengthen rural livelihoods.

Artificial insemination (AI) offers key advantages in the Philippines' archipelagic setting by spreading superior genetics, enhancing conception rates,

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preventing disease transmission, and lowering genetic improvement costs (Ybañez et al., 2017; Daas et al., 2021).

Materials and methods (Times new roman 12, Bold)

The study was conducted in Northern Mindanao, covering Misamis Oriental and Bukidnon, which account for about 94% of the region's dairy farms. The area's highland terrain, fertile soils, and frequent rainfall promote pasture growth, while its cool climate (18°C–28°C, 71–85% relative humidity) and elevations ranging from 600 to 3,000 meters above sea level favor dairy farming (PAGASA-DOST, 2025). Most farms are concentrated in Claveria, Misamis Oriental. Using the National Dairy Authority's Dairy Monitoring System, 24 dairy farms were identified through purposive sampling, classified as small (1–5 cows), medium (6–50 cows), or commercial (over 50 milking cows). With consent, semi-structured questionnaires were administered to farm owners and workers, supported by interviews, site visits, and secondary farm records to assess management practices and evaluate productive and reproductive performance, including milk yield, lactation length, calving interval, days from calving to estrus, and insemination frequency. Data were analyzed using descriptive statistics (mean, percentage, and ranks) through SPSS.

Results

(Text in Times New Roman 12 Font, single spacing). Result must be explained clearly with statistical analysis. Writing the output of the experiments, model or computation in each part. This part is not needed to express your opinion or interpretation including stated Tables and/or Figures. (Times new roman 12)

Tables and Figures: All tables and Figures are to be numbered using Arabic numerals. Tables and figures should always be cited in text in consecutive numerical order. For each table or figure, please supply a caption

(title) explaining the components of the table or figures. Footnotes to tables and figures should be indicated by superscript lower-case letters.



Figure 1. XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX (Times new roman 12)

Table 1. XXXXXXXXXXXXXXXXXXXXXXXX (Times new roman 12)

Crude extracts (Times new roman 10)	Concentration (ppm)	Number of spores ¹ (10 ⁶)	inhibition(%) ^{2,3}	ED ₅₀

Template

^{1/}XX

^{2/}XX

^{3/}XX

Table 2. XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX

Antagonist fungi	<i>Colletotrichum coffeanum</i>	
	Colony(cm)	% inhibition of colony
Control	9.00 ^{a1/}	-
<i>Nigrospora</i> spp.	5.66 ^d	37.02 ^a
<i>Fusarium chamydosporum</i>	5.82 ^d	35.28 ^a
<i>Phoma exigua</i>	6.68 ^b	25.75 ^c
<i>Phialophora</i> spp.	6.25 ^c	30.55 ^b
CV%	1.77	4.57

1/: XXX

Discussion (with cited references) (Times new roman 12, Bold)

The discussion part, it would be compared your result with the other research works with reference cited. Compare your results that as same as others or contradict to the other with references cited. Recommendation, suggestion, comment, and summary must be included in the last paragraph. (Times new roman 12)

Acknowledgements (Times new roman 12, Bold)

Acknowledgments of people, grants, funds, etc. should be placed in this section. The names of funding organizations should be written in full. (Times new roman 10)

Conflicts of interest (Times new roman 12, Bold)

The authors declare no conflict of interest. (Times new roman 10)

(Conflicts of interest must be declared by the authors in the International Journal of Agricultural Technology (IJAT). Authors should disclose any potential conflicts of interest which could influence the published research article including financial, personal and institutional affiliations to maintain the integrity of review and decision-making processes. In the manuscript, authors should explicitly state any conflicts of interest or declare "The authors declare no conflict of interest" if applicable.)

References (Times new roman 12, Bold)

The referenced documents (including citations in tables and legends) should be listed individually at the end of the manuscript and sorted alphabetically. All references must be in English, if reference document is in other languages, the author must translate them into English. Sample references as bellow: (Times new roman 10)

Journal article

Abdin, M. Z. and Ilah, A. (2007). Plant regeneration through somatic embryogenesis from stem and petiole explant of chicory (*Cichorium intybus* L). Indian Journal of Biotechnology, 6:250-255.

Textbook

Vasseur, J., Dubois, J., Hilbert, J. L. and Couillerot, J. P. (1995). Somatic embryogenesis in chicory (*Cichorium* species). In: Bajaj YS ed. Biotechnology in agriculture and forestry, Berlin, Springer Verlag, pp. 125-137.

International Conference

Yeung, E. C., Aitken, J., Biondi, S. and Thorpe, T. A. (1981). Somatic embryogenesis from Coffea callus and protoplast. VIth International Conference of Plant Tissue and Cell Culture, Minneapolis, MN, 137 p.

Thesis

Malapit, G (2001). Low Temperature PECVD Diamond and DLC Thin Films. (Master Thesis). University of the Philipines Diliman, Philippines.

Online

Clay, R. (2008). Science vs ideology: Psychologists fight back about the misuse of research. Monitor on Psychology 39(6). Retrieved from <http://www.apa.org/monitor/>

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