GUIDELINES FOR THESIS DRAFT PREPARATION

1. Language

English

2. Paper Specifications

Color: White

Size: 21 cm x 29.7 cm (A4)

Weight: 80 g m-2

3. Typing

Left margin: 3.5 cm Right margin: 2.0 cm Top margin: 3.0 cm Bottom margin: 2.5 cm Spacing: 1.5 lines

Font size: 12 (size 10 is smaller than 12)

Font type: Times New Roman

Font style: Regular Font color: Black

Side: Front single

Corrections with fluid: Not allowed

Overwriting: Not allowed

Crossing out words: Not allowed Typing machine: Computer

Printing quality: Laser or letter quality Copies: High-quality photocopy

4. Illustrations and Photographs

- Place within the thesis draft text at appropriate places
- Paste the photographs or illustration plates, which are printed on special papers
- Type titles at the bottom of the illustration in the font used in the text

5. Top Cover (A sample is given in Appendix A)

Typed in all capital letters, should include

- Thesis draft title typed 7.5 cm below the top margin
- Full name of the author typed in the middle of the page
- Year of thesis draft submission typed 5 cm above the bottom margin

6. Title Page (A sample is given in Appendix B)

Title length commonly not longer than 15 words.

It is the first page under the top cover typed in all capital letters and center justified on each line with the following information.

- Approved thesis title 5 cm below the top of the page
- Full name of the author typed 8 lines below the title
- The following contents typed 8 lines below the title:

THESIS DRAFT
SUBMITTED TO THE
AGRICULTURE AND FORESTRY UNIVERSITY
FACULTY OF AGRICULTURE
RAMPUR, CHITWAN
NEPAL

• Further 3 lines below the following should be typed:

IN PARTIAL FULFILMENT OF THE REQUIREMENTS FOR THE DEGREE OF

• Further 3 lines below the following should be typed:

(name of the degree)

(major subject within parentheses)

 Month and year of final copy of thesis/dissertation submission should be given at the bottom line

7. Certificates

Each thesis draft submitted for evaluation will have one certificate

• Certificate from the Advisory Committee (Appendix D)

8. Acknowledgement

- A short acknowledgement sheet should be next to the title sheet
- It should acknowledge contributions of all concerned, including financial sponsors, if any.

9. Table of Contents

Should include the chapter headings and also the subtitles, if any, with appropriate page references.

Should be placed next to the certificate sheets.

The text of the thesis/dissertation should usually consist of the following chapters:

- Introduction [i) Background, ii) Statement of Problem/Research Question, iii) Rationale of the Study, iv) Objective]
- Literature Review [specifically justifying the research question and objectives]
- Materials and Methods (for Biological Science) /Methodology (for Social Science)
 [showing details of study design, methods, tools and data analysis]
- Results [following the sequence of the study/experiment]
- Discussion [analyzing critically, interpreting and justifying the scientific merit and novelty of the research findings, including the implications and limitations of the study]
- Conclusion [summarizing the research findings that gives answer to the research questions and objective]
- Recommendation for further Research [addressing research limitations and exploring further science of the research findings]
- Literature Cited [using APA 7th edition model]
- Appendices [including list of publications, questionnaire and so on that are useful information/materials but not included in the main text]
- Biographical Sketch (showing academic journey of the student)

10. Literature Cited

A sample is given in Appendix E

11. Submission of Thesis Draft

The thesis draft must be submitted during office hours by the deadline specified in the notice from the Faculty of Agriculture. If this deadline is not met, the student will be required to register and pay all fees for an additional semester. One unbound copy of the thesis draft should be handed in to the Dean or Assistant Dean (Academics) of the Faculty of Agriculture.

12. Abstract (1 to maximum 2 pages, A sample format is given in Appendix F of PG Bulletin 2024)

13. Submission of Thesis Draft

The copy of the thesis draft must contain the following information in the order given below.

- 1. Cover Page (unbound)
- 2. Title Page
- 3. Certificate (Appendix D)
- 4. Acknowledgement
- 5. Acronyms and abbreviations
- 6. Table of Contents
- 7. List of Tables
- 8. List of Figures
- 9. List of Appendices
- 10. Abstract in English (one to maximum two pages or 300 to 500 words. The abstract should begin with a brief but precise statement of the problem or issue and research objective, followed by a description of the research method and design, the major findings, and the conclusion). It should be in a single paragraph.
- 11. Abstract in Nepali (one-page simple summary with take-home message in simple Nepali language)
- 12. Text of the thesis draft
- 13. Biographical Sketch (a brief academic journey)

No page number should be shown on the title page and thesis draft certificate form but it should be counted.

Page numbering should start from the acknowledgement in Greek numerals, with the acknowledgement page numbered 'iii' at the bottom in the middle. Greek numbering this way should continue till the abstract page. Arabic numerals should start from the page containing the Introduction near the upper right corner of the page. The pages containing individual chapter titles such as Introduction, Literature Review, Materials and Methods or Methodology, etc., should be counted but should not be numbered.

APPENDIX - A
(Sample of the Top Cover)

ASSESSMENT OF GENETIC DIVERSITY AND MILLING QUALITY TRAITS OF LOCAL GENOTYPES OF RICE (Oryza sativa L.) IN CHITWAN, NEPAL

PRASHANSA PANDEY

APPENDIX - B

(Sample of the Title Page)

ASSESSMENT OF GENETIC DIVERSITY AND MILLING QUALITY TRAITS OF LOCAL GENOTYPES OF RICE (*Oryza sativa* L.) IN CHITWAN, NEPAL

PRASHANSA PANDEY

THESIS SUBMITTED TO THE AGRICULTURE AND FORESTRY UNIVERSITY FACULTY OF AGRICULTURE RAMPUR, CHITWAN NEPAL

APPENDIX - D

(Certificate for draft)

CERTIFICATE

	CERTIFICATE	
We, the undersigned, member	rs of the Advisory Committee of M	Ir./Ms.
Id. No.	, a candidate for the degr	ee of
	the thesis entitled	
may be submitted in partial fu	lfillment of the requirements for the	degree.
27		
(Name)	(Name)	(Name)
Chairperson	Member	Member
Advisory Committee	Advisory Committee	Advisory Committee
Date:	Date:	Date:

(Sample of Certificate for draft)

CERTIFICATE

We, the undersigned, members of the Advisory Committee of Mr./Ms. PRASHANSA PANDEY Id. No. PLB-07M-2022, a candidate for the degree of Master of Science in Agriculture (Plant Breeding) agree that the thesis entitled "ASSESSMENT OF GENETIC DIVERSITY AND MILLING QUALITY TRAITS OF LOCAL GENOTYPES OF RICE (*Oryza sativa* L.) IN CHITWAN, NEPAL" may be submitted in partial fulfillment of the requirements for the degree.

Raju Kharel Krishna Hari Dhakal, PhD Prof. Madhav Prasad Pandey, PhD

Chairperson Member Member

Advisory Committee Advisory Committee Advisory Committee

Date: Date:

APPENDIX - E

CITATIONS

APA citation style (7th or APA latest edition)

Book with Single Author:

Gore, A. (2006). An inconvenient truth: The planetary emergency of global warming and what we can do about it. Emmaus, PA: Rodale.

In-text reference: (Gore, 2006)

Book with Two Authors:

Michaels, P. J., & Balling, R. C., Jr. (2000). The satanic gases: Clearing the air about global

warming. Washington, DC: Cato Institute.

In-text reference: (Michaels & Balling, 2000)

Book with Three or More than Three Authors:

Mention all authors as shown in two authors' pattern.

In-text reference: List only the first author's name followed by "et al."

Book with Editor as Author:

Galley. K. E. (Ed.). (2004). Global climate change and wildlife in North America. Bethesda,

MD: Wildlife Society.

In-text reference: (Galley, 2004)

Brochure or Pamphlet:

New York State Department of Health. (2002). *After a sexual assault*. [Brochure]. Albany, NY: Author.

In-text reference: (New York, 2002)

An Anonymous Book:

Environmental resource handbook. (2001). Millerton, NY: Grey House.

In-text reference: (Environmental Resource Handbook, 2001)

Articles in Reference Books (unsigned and signed):

Greenhouse effect. (2005). American heritage science dictionary. Boston, MA: Houghton Mifflin.

Schneider, S. H. (2000). Greenhouse effect. *World book encyclopedia* (Millennium ed. Vol. 8, pp. 382-383). Chicago, IL: World Book.

In-text references: (Greenhouse effect, 2005)

(Schneider, 2000)

Magazine Articles:

Allen, L. (2004, August). Will Tuvalu disappear beneath the sea? Global warming threatens to swamp a small island nation. *Smithsonian*, *35*(5), 44-52.

Begley, S., & Murr, A. (2007, July 2). Which of these is not causing global warming? A. Sport utility vehicles; B. Rice fields; C. Increased solar output. *Newsweek*, *150*(2), 48-50.

In-text references: (Allen, 2004), (Begley & Murr, 2007)

Newspaper Articles (unsigned and signed):

College official agrees to cut greenhouse gases. (2007, June 13). Albany Times Union, p. A4.

Landler, M. (2007, June 2). Bush's Greenhouse Gas Plan Throws Europe Off Guard.

New York Times, p. A7.

In-text references: ("College Officials", 2007)

(Lander, 2007)

Journal Article with Continuous Paging:

Miller-Rushing, A. J., Primack, R. B., Primack, D., & Mukund, S. (2006). Photographs and herbarium specimens as tools to document phonological changes in response to global warming. *American Journal of Botany*, 93, 1667-1674.

In-text reference: (Miller-Rushinget al., 2006).

Journal Article when each issue begins with p.1:

Bogdonoff, S., & Rubin, J. (2007). The regional greenhouse gas initiative: Taking action in Maine. *Environment*, 49(2), 9-16.

In-text reference: (Bogdonoff & Rubin, 2007)

Journal Article from a Library Subscription Service Database with a DOI (digital object identifier)"

Mora, C., & Maya, M. F. (2006). Effect of the rate of temperature increase of the dynamic method on the heat tolerance of fishes. *Journal of Thermal Biology*, 31, 337-341. doi: 10.101b/jtherbio.2006.01.055

In-text reference: (Mora & Maya, 2006)

Pokharel, N. (2014). Effects of different fertilization and feeding systems on water quality and growth performance in Nile tilapia (Master thesis, Agriculture and Forestry University, Chitwan, Nepal). In-text reference: (Pokharel, 2014)

Website:

United States Environment Protection Agency. (2007, May 4). *Climate Change*. Retrieved From the Environment Protection Agency website: http://www.epa.gov/climatechange

In-text reference: (United States Environment, 2007)

Gelspan, R. (2007). *The Heat Is Online*. Lake Oswego, OR: Green House Network. Retrieved form The Heat Is Online Website: httt://www.heatisonline.org

In-text reference: (Gelspan, 2007)

(Format for Abstract)		
	ABSTRACT	
Name:	Id. No.:	
Semester and year of admission:	Degree:	
Advisory Committee Chair:	Department:	
Advisory Committee Chair.	Department.	
(Name)	(Name)	
Advisory Committee Chair	Student	
Advisory Committee Chair	Student	
(Format for शोधसार)		
(1 ormat for strasse)		
	शोधसार	
नाम:		प. न.:
भर्ना वर्ष र सत्रान्तः		उपाधि:
सल्लाहकार समिति प्रमुखः		बिभाग:
and the second s		
(3777)		(3111)
(नाम)		(नाम)
		
सल्लाहकार सिमिति प्रमुख		विधार्थी

APPENDIX -F

ABSTRACT

Name: Prashansa Pandey	Id. No.: PLB-07M-2023
Semester and year of admission: First, 2022	Degree: M.Sc. Agriculture (Plant breeding)
Advisory Committee Chair: Raju Kharel	Department: Genetics and Plant Breeding
(A single-parag	graph abstract of 1-2 pages)
Raju Kharel	Prashansa Pandey
Advisory Committee Chair	Student

(Sample of Table of Contents)

TABLE OF CONTENTS

ACKNOWLEDGEMENT		6	
TABLE OF CONTENTS		7	
LIST OF FIGURES		10	
LIST OF TABLES		11	
LIST OF APPENDICES		12	
ACRONYMS AND ABBREBIATION		13	
ABSTRACT		15	
शोधसार			17
1 INTRODU		NTRODUCTION	19
	1.1	Background Study	19
	1.2	Statement of Problem	21
	1.3	Rationale of the study	23
	1.3	Objective	23
2	L	LITERATURE REVIEW	24
	2.1	Origin and taxonomy	24
	2.2	Distribution and significance	25
	2.3	Current Trend of Rice	25
	2	2.3.1 Global Trend	25
3	N	MATERIALS AND METHODS	43

	3.1	Exp	periment location:	43
	3.2	Exp	perimental material	43
4	RES	SULT	TS	.56
	4.1	Ana	alysis of variance of studied characters	.56
	4.1.1	1	Analysis of variance	.56
	4.2.2	2	Flag leaf length	.57
5	DIS	CUS	SSION	.78
	5.1	Ana	alysis of variance	.78
	5.1.1	1	Morphological Traits	.78
	5.1.2	2	Phenological Traits	.80
	5.2	Esti	imate of genetic parameters	.83
	5.3	Cor	rrelation coefficient	.84
	5.4	Mu	ıltivariate analysis	.85
	5.4.1	1	Cluster analysis	.85
	5.4.2	2	Principal Component Analysis	.85
C	ONCLU	JSIC	ON	.87
R	ECOMI	MEN	NDATION FOR FURTHER RESEARCH	.88
L	LITERATURE CITED88			
A	APPENDICES			
В	BIOGRAPHICAL SKETCH113			

(Sample of List of Figures, Tables and Appendices)

LIST OF FIGURES

Figure 1.	Total number of listed and released varieties of rice	18
Figure 2.	Food surplus and deficit districts of Nepal.	19
Figure 3.	Trends in global rice production	23
Figure 4.	Rice diversity map of Nepal. Distribution of rice diversity (more the number of dots more the diversity)	27
Figure 5.	Location map indicating the experimental site used for study	40
Figure 6.	The layout of experimental field	42
Figure 7.	Grain yield of the studied genotypes along with the check varieties	62
Figure 8.	Clustering of the thirty-three studied rice genotypes into dendrogram	67
Figure 9.	Scree plot of contribution of each PC to Eigen value in the phenotypic diversity	72
Figure 10.	Loading plot showing contribution of traits towards the first two PCs	73

LIST OF TABLES

Table 1.	Major initiatives/projects attempted to revolutionize rice yield, sustainability	25
	and quality in the past three decade	
Table 2.	Wild rice and wild relatives of rice and their distribution in Nepal	28
Table 3.	Some unique Nepalese rice landraces	30
Table 4.	Improved rice varieties developed from local landraces in Nepal	32
Table 5.	List of thirty-three genotypes used in the experiment	42
Table 6.	Analysis of variance of the alpha-lattice design used in the experiment	49
Table 7.	Basis for the estimation of genetic parameters of the studied traits	52
Table 8.	Analysis of variance for different phenological, agro-morphological, grain	53
	yield and its attributing traits and grain characters	
Table 9.	Analysis of variance for different milling quality traits	54
Table 10.	Estimates of the genetic variance, phenotypic variance, environmental	64
	variance, GCV, PCV, and heritability	
Table 11.	Trait association between the studied agro-morphological traits based on	67
	Pearson correlation	
Table 12.	List of genotypes in different clusters	69
Table 13.	Mean of all clusters of thirty-three rice genotypes based on studied agro-	70
	morphological characters	
Table 14.	Distances between cluster centroids	71
Table 15.	Eigen analysis and PCA based on correlation matrix of twenty-one traits	71
	measured in thirty-three rice genotypes	

LIST OF APPENDICES

- Appendix 1. Mean value of thirty-three genotypes for different studied agro- 84 morphological traits
- Appendix 2. Mean value of thirty-three genotypes for different studied agro- 86 morphological traits
- Appendix 3. Mean value of thirty-three genotypes for different studied milling quality 89 traits
- Appendix 4. Centroid of the clustering of thirty-three rice genotypes based on studied 91 agro-morphological characters