

Thesis Manual

(Post Graduate studies)



**MAHARASHTRA ANIMAL & FISHERY
SCIENCES UNIVERSITY
NAGPUR – 440 006**

INTRODUCTION

This thesis manual is prepared for guidance of the students preparing thesis in partial fulfillment of the requirements for (the award of) Master's and Doctoral degree awarded by Maharashtra Animal and Fishery Sciences University, Nagpur. While accuracy of text is the responsibility of the Guide (major departments/sections for the subject matter content) the format of the (written) thesis should be governed by a set of criteria and standards, in order to maintain uniformity in the thesis submitted to the Maharashtra Animal and Fishery Sciences University, Nagpur. This manual deals with general principles governing the preparation of the thesis and is expected to provide a guideline to the students and teachers.

'Webstar' has defined "Thesis" as "A proposition advanced which is publicly disputed, defended or maintained by a candidate for a University degree". It is a scientific document, which comprises of the report of bonafide research carried out by the student on a given topic. The researcher, therefore, must check all statistical data and should be objective in its method. The facts and evidences (objective data) must support document and not merely the unsupported opinion (subjective data) of the writer. If the author's opinion is given, it shall either be supported with the data collected in the investigation of the (thesis) research topic or the reader shall cite other investigations, which substantiate the opinion quoted. Any prejudices, feelings and preconceived notions about the (thesis) research topic should not be allowed to form a part of the thesis. The investigation shall be so reported that, if desired, it may readily be duplicated and verified. For this purpose techniques (material and methods) of investigation, the sources of data and other aspects of investigation should be carefully indicated.

This thesis manual will help students to maintain uniformity in the style of presentation. The thesis is not likely to be accepted if it does not conform to the standard laid down in this manual.

THESIS FORMAT

The Thesis will have three main parts excluding cover (Appendix A-i/ii & iii) and the order of contents of each part will be as follows :-

A. The preliminary pages.

1. Title page. (Appendix A- i /ii)
2. Declaration of student. (Appendix B)
3. Certificate. (Appendix C- i & ii)
4. Acknowledgement(s)
5. Table of contents (Appendix D)
6. List of tables.
7. List of figures/Photographs.
8. List of symbols/abbreviations.

B. The text.

1. Introduction.
2. Review of Literature.
3. Materials and Methods.
4. Results and discussion (combined/separate)
5. Summary & conclusion(s).
6. Proposed area of future research (for Ph.D.)

C. The reference matter.

1. Bibliography.
2. Appendices (Optional)
3. Vita.
4. Thesis abstract (English & Marathi) to be given separately.

A. Preliminary Pages

1) Title Page.

The first page of the typed thesis will be the title page. It will include title of thesis, degree, name of the department and the College/Institute to which the candidate belongs, enrolment number and the year of submission. A sample title page is given in Appendix-A (i and ii). Cases where title exceeds one line, an inverted pyramid principle should be followed but words and phrases should not be split. Binomial nomenclature in the title, if any, being in capital letters need not be underlined. The other details should be arranged centrally below the title leaving standard margin.

Thesis cover of the hard bound copy of Master's and Doctorate Degree shall be black and brown rexin coloured respectively with golden embossing. Side bordered shall be as per the specimen enclosed.

2) Declaration of student.

Every student will have to give declaration in the format given in Appendix-B.

3) Certificates.

The certificates are required in each thesis and must be as per the prescribed format as given in appendix.

4) Acknowledgements.

Acknowledgement recognizes the persons to whom the writer is indebted for guidance and assistance during the study and credit institutions for providing funds to implement the study. Student should sign at right side of last page of acknowledgement.

It should be a brief note not exceeding 2 pages of appreciation for assistance received by the candidate in his research work and preparation of thesis from individuals' and organizations. The thesis may be dedicated to any individual and not to organization. Acknowledgement should be given only in English.

5) Table of contents.

There should be table of contents for each thesis showing principal divisions/chapters/headings and subheadings of the matter in the thesis. A sample of the same is given in Appendix-D. Each entry shown should have a page number with leader dots or dashes from the entry to the page number. The divisions' headings and subheadings should agree in wording and style with the divisions' headings and subheadings in the text.

6) List of tables.

A list of tables is given for the convenience of the reader if there are several tables in the thesis. It should be separate from, but immediately after the tables of contents. It should have the pattern of table of contents.

7) List of figures/photographs.

It should be similar to the list of tables and should be presented in the same form. Each figure/photographs in the thesis should have caption or title, which appears in the list of figures/photographs exactly as in the text.

8) List of symbols/abbreviations.

Abbreviations are not normally used in the body of thesis. However, they may be, and frequently should be used in tables or figures.

If the thesis involves symbols and abbreviations, it may be desirable to give a list. Under the heading list of symbols, the symbols should be listed in alphabetical order Greek letter symbols appearing first and Roman letter symbols afterwards with actual symbols on left hand and the meaning attached to it on the right hand. If the meaning of the symbols exceed one line then it should be single spaced, however, between two symbols double spacing should be maintained. In photomicrograph, magnification should be invariably indicated.

B. The Text.

The text forms the main body of the thesis. In this part the research topic should be clearly stated, relevance of other scientific investigations to the research topic mentioned, investigation technique used fully described, observations recorded, results obtained and their interpretations, conclusions drawn and suggestions for further study are included. The presentation of the text should depend on the nature of subject on which the thesis is being written, however, the style of presentation must be consistent.

Each chapter of the thesis must begin with a new page. The text must be precise to the point. The organization of the text needs to be carefully planned so that each section or subdivision represents an important agreed division of the topic being investigated and reported.

Normally Master's thesis should be limited to 75-130 pages. The suggested break-up of the thesis is as below :-

Acknowledgements - Not more than 2 pages.

1. Introduction
2. Review of literature
3. Materials & Methods
4. Results & discussion
5. Summary & Conclusion(s)
6. Bibliography
7. Abstract (English & Marathi) to be given separately.

1) INTRODUCTION.

It should include the purpose of study, the research topic involved, justification for research work, scope of the study and its limitations. The specific objectives of the research work must be mentioned here. Introduction should be brief, precise and pertinent to the research work undertaken. An introductory chapter should usually contain the following :-

- a) A lucid, complete and concise statement of the problem being investigated or the general purpose of the study.
- b) A justification for the study, establishing the importance of the problem.
- c) A preview of the organization of the rest of the thesis to assist the reader in grasping the relationship between various parts of the thesis.
- d) In many disciplines, a resume of history and present status of the problem is delineated by a concise critical review of previous studies into closely related problems. If this approach is accepted, it is important to discuss the contribution of each of these to the question being investigated and to show how the present investigation arose from contradictions of earlier investigations.

2) REVIEW OF LITERATURE.

It is essential to review all relevant material, which has a bearing on the topic. Brief history and present status of the research topic as evidenced by documented literature on similar or closely related problems should be included in this part. It is necessary to show how the problem under investigation relates to previous research studies. The findings of various investigations should be critically examined and interpreted in the light of objectives set forth and presented with proper references. Unrelated references should be avoided.

3) MATERIAL AND METHODS.

This part of thesis must present appropriate methods or techniques to solve the particular problem under investigation. The details of techniques and equipments employed in the investigation being presented must be clearly stated. It should be in the past tense. In case of special experimental setup, their assembly and component details should be described. Analysis of the problem and statistical technique applied may also be included in

this part. While presenting the methodology, if there is a reference, which gives details of the technique used, it should be cited together with any modification made. In such cases details other than modification made could be omitted. Details of routine procedure / observations or computations may be given as an Appendix.

4) RESULTS AND DISCUSSION.

The data from different experiments/investigations/ study should be presented in compiled tabulated form and augmented with graphical presentation of specific trend or behavior of different variables or important observation made. This chapter may be divided into various subheads. In presenting the results, care should be taken to avoid repetition. Certain data can often be presented to the best advantage in a table or graph and there is no need to describe them in details in the text except to indicate the highlights. Only outstanding points which are important in the table or graph should be indicated. All tables and graphs should be numbered, titled and the data presented, be complete enough to be meaningful without referring to the text. Title of table should be above and that of figure should be below. Reference of table in text should start with capital letter.

There should be no hyphen between Table and Table number e.g. Table 1. The level of significance should be indicated by certain symbols in footnotes to the table. All measurements should be expressed in metric system. Inclusion of lengthy and inconvenient sized table should be avoided. A format of the table is given in Appendix-E.

The discussion section ties the results of the study to both theory and application by pulling together the theoretical background, literature review, potential significance for application and results of study. One important function of discussion is to explain the findings of the study in the light of previous work. If the shift has been set to test specific hypothesis then the discussion must report the outcome on each hypothesis along with ancillary findings. These must be integrated and interpreted in this section.

The findings should be discussed in the context of the objective setout, or assumptions made at the start of the experiment. Any attempt to prove or substantiate a point should take into consideration and cite the findings of earlier workers.

In the discussion all rational explanations for an observation should be given. The explanation thus offered should be based on work done by others or by the author himself/herself giving overall picture emerging out of studies in the light of findings of others.

6) SUMMARY & CONCLUSION(S).

The summary should emphasize the significant aspects of the investigation and the important findings in relation to the objectives of the investigations. It should enable any one who does not have time or desire to read whole of the thesis, the developments of the previous chapters should be succinctly rested, important findings discussed and conclusions drawn from the whole study. The conclusion should leave the reader with the impression of completeness and of positive gain.

All experimental findings are concluded in this section in brief and restricted to two to three pages along with applicability of research finding in field shall be mentioned.

C. The Reference matter.

I) BIBLIOGRAPHY.

This should include all references cited in the text, arranged in alphabetical order by author's surname. Two or more works by the same author are listed chronologically by date of publication. Two or more works by the same author published in the same year may be identified as, for example, (1965a), (1965b). When there are more than two authors, it should be quoted in the text as say Singh *et al.* Each reference should contain the following in the given order. In case of articles author(s) name(s), year of publication in parenthesis, title of the article, name of journal, volume and pages and in case of books, author(s) name(s), year of publication in parenthesis, title of book, name of publisher, place of publication and pages should be given. In case of unpublished works, authors name(s), year of completion of work in parenthesis, title of the work, name of organization where this work was undertaken and pages should be given.

Examples of References.

a) Articles

- i) Alicata, J. E. (1958) Observations on doses and methods of administration of piperazine citrate to chickens for control of *Ascaridia galli*, Poultry Sci. 37 : 89.
- ii) Dawson, N. J. and J. V. Evans (1967) Effects of anaemia on oxygen transport in sheep with different haemoglobin types.
Austr. J. Exptl. Biol. and Med. Sci. 45 : 437-444.
- iii) Gupta M.B., G.P. Gupta and K.P. Bhargava (1983) Effect of central dopamine, histamine and S. Hydroxytryptamine on stress induced gastric ulceration in rats. Ind. J. Med Res.32 : 281-283.

b) Books

Guilford, J. P. (1965) Fundamental Statistics in Psychology and Education, 4th ed. Mc Grow Hill, New York :(pp)

c) Edited work

Weaver, W. (1966) The mathematics of communication.

In (Smith, A.G.(Ed.) 1966) :15-24

Smith, A.G. (Ed.) 1966 Communication and Culture. New York: Holt, Rinehart and Winstone.

d) Abstract

Aller, B. (1975) Brucellosis in Spain. Int. J. 2 : 10-15
(Abst, Vet, Bull., 46 : 2874)

e) Unpublished work

Deshpande, D. T. (1973) A study of aspiration of Livestock farmers.

Unpublished M.V.Sc. thesis submitted to Dr. Punjabrao Deshmukh
Krishi Vidyapeeth, Akola.

Dhakate, M.S. (2001) Comparative evaluation of different anaesthetics of ocular affections in goat (Paper read at the Indian Veterinary Congress, February' 2001).

Dakshinkar, N.P. (2002) A modified approach for liver biopsy in cattle. Proceedings of the Indian Society for Veterinary Medicine 92 : 265-267.

2) APPENDICES.

Appendix is a useful device to make available the material related to the text but not suitable for inclusion in it. Such materials may be tables too detailed for text presentation, technical notes on method, and schedules and forms in collecting data, copies of documents not generally available to the reader and sometimes figures or other illustrative materials. In case there are more than one appendix, each should be given a number (Appendix-1, Appendix-2 etc).

3) VITA.

Vita is biographical sketch of about 150 words. It should be written in third person, it should be presented in paragraph form & should include a short biography of candidate including date and place of birth, educational institutions attended, qualifications, professional experience and achievements including honors, number of papers published and any other pertinent information.

TYPING INSTRUCTIONS

Computer typing shall be used for thesis typing. It should be ensured that the type write has assured spacing and clean sharp letters with font size 11 (Arial Font) with 1½ spacing between the lines on one side of paper.

All copies of thesis should be printed on Executive or equivalent white bond paper Indian standard. A4 size 210 x 297 mm (which can be rounded to 8 ½ x 11½ inches size)

All pages must have 5 cm margin on the left, 2 cm. to the right, 3 cm on both upper and lower ends of the paper. No borderline or ornamentation of the text pages should be done.

The general text of thesis **should be typed in 1½ space**. However, tables, long quotations, footnotes and figure captions should be single-spaced. Erasures should be kept to minimum and should be made both on original and other copies. Strikeovers, interlinear corrections, crossing out of letters or words must be avoided. Corrections should be made perfectly by use of erasures or with black ink only. All the pages should be numbered in Arabic Numerals from chapter introduction to chapter summary.

Form and spacing of the headings should be consistent all through the thesis. The following headings are suggested.

MAJOR HEADING

The major heading (Title of thesis, chapters etc.) will be in the center of the page in block letters, this heading will be 2 spaces clear from the other text with font size 12 (Arial Bold). If the title is longer than one line, type it in single space and use inverted pyramid form.

Major Sub heading

The major sub-heading will be in the center of the page with first letter in capital. This heading will also be 3 spaces clear from the other text.

Sub heading

The subheading will begin at the left margin and it will be underlined. It will be 2 spaces clear from the text with font 11 (Arial Bold).

Pagination should be done & every page should be assigned a number. On the title page, the numbers should not be shown but pages should be accounted in pagination. The preliminary pages should be numbered with Roman numeral (i, ii, iii, iv etc.) in the middle of the lower margin. In the appendix, literature cited and vita, the pages should be numbered with Roman numerals in the top center at least two spaces above the first line of the text. In case of illustrations, diagrams, photograph etc., the pages between which the figures come should be indicated in the list of figure and no separate page number should be given.

THESIS SUBMISSION

The student must submit his thesis in loose binding and no final bound copy of the thesis will be accepted for the purpose of evaluation and conduct of viva voce examination. The student should submit one copy (three copies in case of Ph.D.) of the thesis complete in all respects in partial fulfillment for the requirements of Master's degree or Doctoral Degree to the Associate Dean/Dean of the college/institute through the Head of the Department/Sectional Head. After scrutinizing and verifying the documents of submission and due satisfaction, the loose bound thesis of PG student shall be sent to the external examiner (as communicated by the University) directly by the Dean/Associate Dean of the college/institute for evaluation. A final viva-voce examination shall be conducted by the Chairman, Advisory Committee after receipt of (all) satisfactory evaluation report(s). Thereafter three copies of hardbound thesis along with the essential documents shall be submitted by the candidate through the Head of Department/Sectional Head to Dean/Associate Dean of the College/Institute. The Dean/Associate Dean shall forward the one copy of thesis to the Controller of Examinations along with the information given in Appendix-F for notification of final result of the student. The Head of the Department/Sectional Head shall have to ensure that a duly corrected hard bound copy of the thesis is sent to the University and retain two copies in the College/Department. After declaration of the result, Controller of Examination will send the copy to University library.

THESIS ABSTRACT

Three copies of the thesis abstract must be submitted separately along with the thesis. All abstracts should be neatly typed on one side of white bond paper as used in the thesis and should not exceed 700 words for the Masters degree and 1250 words for Doctoral degree. The abstract should summaries the contents and conclusions of the research in such a way that it will be self-explanatory and intelligible in itself. The content should indicate the objectives and topics covered methodology and significant findings. The thesis abstract must accompany the information as given in Appendix-G. Out of the three copies of the abstract one copy will be retained by the Head of the Department and one copy each will be sent to the Dean, faculty and Director of Research, MAFSU.

**IMPACT OF TRAINING PROGRAMMES SPONSORED BY
MAHARASHTRA ANIMAL AND FISHERY SCIENCES
UNIVERSITY ON FARMERS**

T H E S I S

Submitted

in partial fulfillment of the requirements for the Degree of

M A S T E R O F V E T E R I N A R Y S C I E N C E

I N

V E T E R I N A R Y E X T E N S I O N

B Y

ISHWAR GANESH BHAGWAT

Enrolment No :

Bombay Veterinary College, Mumbai

MAHARASHTRA ANIMAL AND FISHERY SCIENCES

UNIVERSITY, NAGPUR- 440 006.

(INDIA)

2002

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**IMPACT OF TRAINING PROGRAMMES SPONSORED BY
MAHARASHTRA ANIMAL AND FISHERY SCIENCES
UNIVERSITY ON FARMERS**

T H E S I S

Submitted

in partial fulfillment of the requirements for the Degree of

DOCTOR OF PHYLLOSOPHY

IN

VETERINARY EXTENSION

BY

ISHWAR GANESH BHAGWAT

Enrolment No :

Bombay Veterinary College, Mumbai

MAHARASHTRA ANIMAL AND FISHERY SCIENCES

UNIVERSITY, NAGPUR- 440 006.

(INDIA)

2002

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M.V.Sc. Thesis

2002

Ishwar Ganesh Bhagwat

DECLARATION OF STUDENT

I hereby declare that the experimental Research work and interpretation of the thesis entitled _____

_____ or part thereof has not been submitted for any other degree or diploma of any University, nor the data have been derived from any thesis/publication of any University or scientific organization. The sources of materials used and all assistance received during the course of investigation have been duly acknowledged.

Date :

Signature

(Name of Student)
Enrolment No:

Counter signed by
Chairman, Advisory Committee
with date

Declaration of Advisory Committee

Shri/Smt/Ku _____ has satisfactorily prosecuted his course of research for a period of not less than one semester (for M.V.Sc.)/ two semesters (for Ph.D.) and that the thesis entitled, “ _____ ” submitted by him/her is the result of research work is sufficient to warrant its presentation to the examination in the subject of _____ for the award of _____ degree by the Maharashtra Animal and Fishery Sciences University, Nagpur.

We also certify that the thesis or part there of has not been previously submitted by him/her for a degree of any other University.

Place :.....

Date :.....

Signature
(Name)
Advisor/Guide
Designation

Advisory Committee

Name and Designation	Signature
1) _____	
2) _____	
3) _____	
4) _____	
5) _____	
6) _____	
7) _____	

CERTIFICATE

This is to certify that the thesis entitled, “_____”
_____”
submitted by Shri/Miss _____ to the Maharashtra
Animal and Fishery Sciences University in partial fulfillment of the requirement
for the degree of _____ has been approved by the Student's
Advisory Committee after examination in collaboration with the External
Examiner.

Name & Signature of
External Examiner

Signature with Seal
Head of Department

Name & Signature
Advisor/Guide
Designation

Advisory Committee

Name and Designation	Signature
1) _____	
2) _____	
3) _____	
4) _____	
5) _____	
6) _____	

Signature with seal
Dean/Associate Dean
(Name)

TABLE OF CONTENTS

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a) Analysis of Variance showing the effect of ... different dietary treatments on growth rate of calves.	
b) Analysis of Variance for Nutrients Uptake.	
C) VITA	

Table 3 *In vitro* N-fractions as influenced by probiotics

Parameter	High concentrate	Medium Concentrat	Low concentrate
Total-N (mg)/100ml incubation medium			
Control	50.17 ± 0.31	45.15 ± 0.85	42.70 ± 1.01
T ₁	51.22 ± 0.91	45.38 ± 0.47	43.63 ± 0.51
T ₂	51.99 ± 0.51	46.38 ± 0.47	43.63 ± 0.51
Level of Significance	NS	NS	NS
Non-protein-N (mg)/100 ml incubation medium			
Control	25.72 ± 0.10 ^c	22.87 ± 0.26 ^b	21.53 ± 0.56 ^b
T ₁	23.45 ± 0.18 ^b	21.35 ± 0.18 ^a	19.25 ± 0.71 ^a
T ₂	22.05 ± 0.10 ^a	20.48 ± 0.44 ^a	18.03 ± 0.17 ^a
Level of Significance	**	*	*

a,b,c Means with different superscripts in a column differ significantly *P < 0.05 ; ** P < 0.01

To,
The Controller of Examination,
Maharashtra Animal & Fishery Sciences
University, Seminary Hills, Nagpur-6.

Through : Dean/Associate Dean/Principal.

1. Name of the Student :
2. Enrolment Number :
3. College/Institute :
4. Date of First Registration :
5. Whether regular student
or In-service candidate. :
6. Title of the thesis :
7. Major subject. :
8. Date of approval by the
Advisory Committee. :
9. Number of copies of the
thesis. :
10. Number of copies of the
thesis Abstract. :

Date :

Head of Department
College/ Institution.

Appendix - G

THESIS ABSTRACT

- a) Title of the thesis (in Capital letters) :
- b) Full name of student :
- c) Name and address of Major Advisor :
- d) Degree to be awarded :
- e) Year of award of degree :
- f) Major subject :
- g) Total number of pages in the thesis :
- h) Number of words in the abstract :
- i) Signature of Student :
- j) Signature, Name and address of forwarding authority (HOD/SH). :

ABSTRACT