



HUNGARIAN UNIVERSITY OF AGRICULTURE AND LIFE SCIENCES

THE FORMER FACULTY OF HORTICULTURAL SCIENCE

GUIDE

for preparation of diploma thesis

Budapest, 2021

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## **I. Introduction**

### **1. Goals and targets of thesis preparation**

Preparation of the thesis is demonstration of the fact that students have learnt to apply the merits of the acquired knowledge. Acquiring skills for searching data in the professional literature, data collection, processing, evaluation and drawing correct conclusions from all this. So preparation and defence of a thesis prove that the student possess the merits of problem solving, theoretical and practical backgrounds, application of scientific methods and learned the preparation rules of constructing scientific papers of high quality in English language.

The Thesis as independent student's work will be accepted after the approval and signature of the topic supervisor and of the head of department.

### **2. Choice of subject, preparation and submission of Thesis**

Thesis topics will be offered by the Departments for specialization. Preparation of the thesis is coordinated and supervised by a responsible teacher ("supervisor") at the department nominated for this task. If the topic justifies, an external supervisor can be asked for help, too. Besides, the student is also free to suggest a thesis-topic, if it fits to the research spectrum of the relevant Department and financial background is assured. The acceptance of the suggestion is the right of the supervisor or of the Head of Department.

The activities in connection with successful implementation of the thesis preparation (goal setting, knowledge gathering, data acquisition, data processing, planning, etc.) are collected in an individual work plan which should be approved by the supervisor. Only electronic (PDF file) format has to be submitted in its special elearning course ("Szakdolgozat leadás"). Students have to upload the thesis in one pdf file to the corresponding department, where the thesis was prepared. Thesis in English language should be uploaded to the English name of the department. The thesis should be embossed with the student's name.

The signed supplements of the thesis should be merged with the thesis in order to only one file can be uploaded.

The submission deadline of the Thesis is depending on the actual schedule of the semester.

## **II. Content oriented requirements**

The thesis is a scientific paper, thus, it should be prepared based on the general rules of scientific publications. These rules are valid for choice of subject, structure, language, contents and requirements of the Ethics complying with requirements.

The thesis has two main keywords in the preparation of honesty and fairness. Do not declare others publications and results as your own. Indication of the results of others violates the intellectual property rights!

### **1. The language of the Thesis**

For English courses the language of the thesis is English (United Kingdom).

Books and websites that offer advice on thesis writing commonly tell students to use a style that is clear, concise, and logical. They sometimes warn against trying to sound too

'academic', suggesting that the result is often overly formal, full of jargon, and difficult to follow. On the other hand, students may receive comments from their supervisors that their writing is too informal or too 'simple'. To steer a course between these extremes, you need to know (especially if English is not your first language) what features are expected of academic writing.

The main feature of writing is that it seeks to appear objective; thus, it rarely uses personal pronouns, such as "I" or "you" and it avoids using emotionally expressive language. It also uses language precisely and accurately and is more formal in expression (in other words, it avoids speechlike or journalistic writing). This formality and precision is achieved through choice of vocabulary and grammatical structures. There is often a need to express complex relationships between concepts, which can be done through the process of nominalisation; this also helps to make the writing more concise.

## **2. Length of the thesis**

The thesis scale without the attachments should not exceed fifty typed page. The dissertation itself is not evaluated by the number of pages! Always stay focused and objective.

## **3. Title of thesis**

The title should be short, containing the basic goals and content of the work. The title is the first information for the reader.

## **4. Structure of the Thesis**

Following the supervisor's instructions and taking into account the topic it is suggested to divide the work into the following main chapters:

1. Contents
2. Used abbreviations
3. Introduction
4. Objective
5. Literature review
6. Materials and methods
7. Results
8. Conclusions (discussion of results)
9. Summary
10. Acknowledgments
11. Bibliography
12. Attachments

### **4.1. Content page**

The "Content" of the thesis is placed at the beginning. The list provides the individual chapters, subchapters and page numbers. For the sake of clarity the content should be preferably one-page, chapter titles and subtitle font, highlighting and numbering has to follow the format like in the text (e.g. if the main headings are in bold typeface in the paper, it is in the table of contents similar prominence to choose). For spacing the chapters and subchapters the varying degrees of translators (tab) should be used.

#### 4.2. Used abbreviations

If the thesis contains numerous abbreviations, it is possible to specify a list of abbreviations and their explanation. If used, we recommend to place it at the beginning.

#### 7.3. Introduction

The introduction is an essential part of any Thesis. The introduction presents the delimitation of the topic, its disposition of science, its importance, the goals and challenges of the work.

#### 7.4. Objectives

This chapter has to contain the problem to be solved, the questions to be answered, has to set up hypothesis what is to be done. The objective is always short and located in the 'Introduction' section at the end, or as a stand-alone chapters after the introduction. The second solution is more acceptable. The Introduction and Objectives together should not exceed two pages.

#### 7.5. Literature review

The literature review collects the up to date knowledge in connection with the Thesis research topic. It shows us the basic information and relevant results of international scientific research. This is an overview of fundamental and applied research results on which our work is based. The main objective is to obtain the necessary knowledge to our work, and to avoid unnecessary work: we do not prove any fact that has been proven one.

By preparing the literature review, students get familiar with the topic and its theoretical background more deeply. This chapter helps us to compare our own results with those having been reached by other researchers until now.

The literature review is usually one third of the Thesis, and not more than half of it.

The ethics of scientific research requires that the author cites the work of others correctly and accurately, in sufficient detail.

For the reference to other's work there are multiple choices:

**Citation:** Taking over a well defined part from the other work. In this case, quotation marks should be used at the beginning and at the end of the text and the text itself can not be altered in any form.

**Takeover:** large-scale citation, which can only be communicated to the author's permission. Takeover of a text longer than a half page is not recommended.

**Citation close to content:** the most important message or data of the original work is provided in own phrases, according to the author's style.

An exact reference always must be provided. For **references** in the text the so-called Harvard system should be followed:

- the author (s) family name and the year of issuance of the work: the case of one author: eg. TAILOR 1991 or Tailor, in 1991, two authors: e.g. Tailor and Smith, 1991, more authors: e.g. Tailor et al. 1991
- in absence of a specific author, the name of the institution and the appearance of years: e.g. Central Bureau of Statistics, 1991

- law, regulation: according to the official name title of the law, eg. 1993rd Act VI. law regime for the agricultural market

The literature available via Internet may often cause a problem. In case of these materials on the Internet, make sure that quoting the text meets the criteria of scientific publications. By the electronic format of scientific journals, the citation rules are the same as by printed media.

#### 7.6. Material and methods

The 'Materials and methods' chapter usually has two sub-heading of 'Material' and 'Method'. The '**Material**' section should specify the (plant and other) materials and their sources, which without any change in our work we have used. Entering the correct data greatly helps repeatability of our work.

The '**Method**' section contains the used experimental, statistics etc. techniques without modification. If necessary, give correct reference literature describing the current methods in detail.

#### 7.7. Results

The "Results" chapter generally follows the "Methods" chapter. The 'Results' chapter describes the progress in our work. It should give information also on the amount of work that has been performed.

The Thesis is a scientific publication, thus, the results should be correctly interpreted and communicated. Negative results may also provide important information for our colleagues. This chapter contains mainly data, description of data, tables, graphs. Evaluation, discussion of new achievements and their comparison with former data should be done in the chapter "Conclusions".

#### 7.8. Conclusions (Discussion of the results)

In this chapter we present not only our results but their connections, consequences, probable backgrounds. Reasons of positive or negative results may be discussed according to our present knowledge on the topic. The "Conclusions" section shows how deep the student is able to see the target topic, how deep his/her knowledge in literature is, how developed his/her skills are and the ability to explain his/her findings and their consequences. This part may contain also suggestions for orientation and extension of future work.

#### 7.9. Summary

This chapter summarizes the results of the thesis, in maximum 2 pages. This section provides an overview practically about all of the formerly mentioned aspects. It is important that the results should be presented according to the point of views described in the "Introduction". For clarity it helps if we arrange our messages into points (what were the objectives: 1, 2, 3... What are the findings..1, 2, 3 etc).

#### 7.10. Acknowledgements

If we would like to thank for someone for helping us, we can do it. The acknowledgments are not binding.

## 7.11. Bibliography

### *Arrangement of the bibliography chapter*

All works, which were indicated, or from which we have quoted or taken over, are required to be included into the bibliography. On the contrary, any bibliography about which there is no reference in the text should be avoided here. In the bibliography, the literatures should be numbered and alphabetically ordered according to the classification rules. If one or more elements of the same authors are referred, they should be placed in chronological order. If the date of release is the same, these items should be distinguished with lowercase letters (a, b, c ..... ) after indicating the year. Be sure that the citation is correct, e.g. Smith, 1999b.

### *The forms of references*

At the Institute for Horticultural Science, students preparing a Thesis, the regulations have been defined according to the "Bibliographic references to ISO 690," and Principles and Standards formal requirements of the journal HortScience. Giving the references, the key aspects are uniformity, coherency and traceability. The reference can be made to the work as a whole or some part of it. In the latter case the number of pages are required.

**Books:** The family name of the author should be put forward, separated by a comma from the initial(s) of the surname. In the list each author should be separated by comma, and the complete list of the authors should be given. The word "and" stays always before the last authors' name. If there is just only the editor of the book, it shall be indicated in brackets after the name (ed.) designation, then:

- The year of publication,
- The title,
- The edition number
- By multi-volume work, the volume number,
- The location of the publication and the publisher.

### *Examples:*

Davidson, H., Mechlenburg, R. and Peterson C. 1988. Nursery management: Administration and culture. Englewood Cliffs (New Jersey), Prentice Hall.

Peterson, R. T. and Peterson, V. M. 1980. A field guide to the birds of Eastern and Central North America. 2nd edition. Boston. Houghton Mifflin Company.

Davidson, H. (ed.) 1988. Nursery management: Administration and culture. Englewood Cliffs (New Jersey), Prentice Hall.

**Book chapters:** Similar to the above mentioned, however the author of the chapter and the title of the chapter should stay at the beginning, followed by the word "In:" indicating the title of the whole book.

### *Example:*

Monroe, W. 2010. Evaluation of field trials in horticulture, In: Peterson, R. T. (ed.): A field guide for plant research. 3rd edition. Boston. Houghton Mifflin Company.

**Journal article:** It should be given each of

- The author (as indicated by book references)
- The year of publication,

- Title of the article,
- Title of the Journal,
- The location of the article within the journal: volume, number, page number.

*Examples:*

Whipkey, A. and Simon, J. E. 1992. In vitro production of artemisinin from *Artemisia annua* L. In: Journal of Herbs, Spices and Medicinal Plants. 1(1-2): p.15-26.

Gallott, J. C., Lamb, R. C. and Aldwinkle, H. S. 1985. Resistance to powdery mildew from some small fruited *Malus* cultivars. In: HortScience. 20(6): p.1085-1087.

**Conference proceedings articles:**

- The author (as indicated by book references)
- The year of publication,
- Title of the article,
- The official name of the conference,
- Date and location of the conference,
- The location of the article within the publication: volume, page number,
- (Availability if the publication takes the form of CD).

*Example:*

Vargáné S. and Varga, P. 2000. Effect of parent body weight on reproduction and progeny growth in geese. XXI. World's Poultry Congress. August 20-24, 2000 In: Abstracts and Proceedings. Montreal, Canada p. 1-3. [CD: Abstracts\aug24\KOZAK\_1]

**Laws:**

*Example:*

1993rd Act VI. law regulation for the agricultural market

**Electronic publications:**

- The author (as indicated by book references)
- The year of publication,
- Title of the article,
- The electronic journal title or institution name,
- Availability (URL).

*Example:*

Korbuly J. 2004. Evaluation of frost resistance of traditional and newly bred Hungarian wine-grape cultivars. Acta Hort. (ISHS) 652: 337-341.  
[http://www.actahort.org/books/652/652\\_43.htm](http://www.actahort.org/books/652/652_43.htm)

7.12. Attachments

This chapter can be included to add some important information left out from chapters before because of reasons of length or others. E.g. if any material that is necessarily required for the understanding but the inline placement may slow down a quick overview of the text in the main part. Here you can define a recipes, ingredients or preparation methods of solutions, which are known in the literature, but help other students work. Full text of the laws or any background explanation, partly published data sets, calculations, computer programs, flow



charts, photography, drawings, maps etc.. The 'Attachments' chapter should be used only when it is really necessary.

### **III. Requirements about the format of the Thesis**

#### 1. General rules

The formal requirements promote the transparency of the dissertation. The general rule is that the chosen format solutions should be used consistently and uniformly. The well-structured thesis can be useful in the evaluation of the work as well. Microsoft Word processing program should be used.

#### 2. The thesis binding and the internal title page

Two copies of the thesis should be administered in A4 size, black from outside and hard-bound. The bonding cover (outer cover) should be prepared in accordance with Annex 1, the internal title page in accordance with Annex 2. An additional copy on electronic media (CD, DVD) should be submitted where the thesis are saved in a single file provided with watermark and convert to PDF format. The document must not be password protected! The disk should be checked after writing the data and the CD / DVD must be closed after the writing! On the disk and on the disk's storage plastic frame the information should appear in accordance with Annex 2.

#### 3. Text editing

The text is displayed in standard A4 paper, white, normal thickness (70-90 g/m<sup>2</sup>) one or both side black typed, printed or photocopied. A margin of 30 mm on the left (binding) side and 25 mm at each on the bottom, top and right side should be left. In case of two-sided printing the even and odd pages may be accordingly differently arranged.

The text should be displayed with one and a half line spacing, 11-pointed font size, and Arial Narrow font type. The pages should be numbered in the letterhead. The headings (Introduction, Literature review etc), should be written left-closed and numbered with 14 font size, bold, capital letters (by two-sided printing they should be placed on odd-numbered pages). After the chapter titles appropriate spacing (12 pt) should be left. The titles of subchapters should be displayed left-closed with bold, 12 font size. Before and after the titles, adequate spacing (recommended: 6 pt) should be left. For further subdivision of the subchapter format, the clarity of the paper should be taken into consideration and preferably not more than four subdivisions are allowed to be used in lowercase letters.

The paragraph formatting is free to choose, but the editing in the whole text should be uniform. Proposal: one paragraph should contain at least two or three sentences. In the first sentence of the paragraph 1.25 cm text indentation is recommended. Between the paragraphs do not leave space. The highlighted words can be underlined, *italicized*, **bold** or UPPERCASE printed (or a combination of these).

#### 4. Communication of data

Data can be defined in text or represented in tables or in figures. Pay attention, do not give the same information twice, for example in a table and shown even in a figure! Recommended is using the SI system. The decimal fractions should be displayed with points.

## 5. Communication of tables and figures

The tables and figures should be inserted in the text separately, numbered continually and entitled adequately (according to 3<sup>rd</sup> and 4<sup>th</sup> Annex). Larger quantities of data, or some part of tables or figures can be placed even in the Annex. Each table and figure must be understandable in itself!

In the text a reference should be given to the table or figure, when it is necessary for the reader to look at them "in Table 3. we can see the data of plant height " or " the height of the plants (Table 3)". If illustrations are taken over from other works, a proper reference should be given. E.g. "results of Smith, 1990".

A separate list about the tables and diagrams –placed to the beginning or to the end of the thesis- may rise clarity of your work.

The title of a table should be placed **above the table**, and the number of table stays before its title. You need to write the unit or the year of examination behind the title (in brackets) only if they refer all of the data of the table, otherwise the appropriate place of them is in the column header. Between the columns of the table it is not required to draw the vertical lines.

The number and the description of the figures (drawings, photographs, graphs) should be written **below the illustration**. More than one figure can be placed to the same page. If the illustration is not of your own, the name of the author should be referred - eg. (Photo: Taylor).

## 6. Practical tips for thesis editing

Before completing the thesis the following overview is recommended:

- page numbering,
- each chapter has the final version (table of contents, introduction, summary, etc..)
- numbers of tables and figures are correct,
- the internal references correspond to the number and content of figures and tables,
- consequent arrangement of references and bibliography,
- format of bibliography (title, year, page numbers, format, first and last names, etc..)
- inspection of the text for spelling and grammatical point of view
- before printing (especially if you print on a different machine than you edited the paper) inspection of editing, text wrapping and formatting charts and tables.

It is suggested to store the dissertation in the form of multiple copies and physically different store locations in your computer. Always check that the stored material can be opened, before turn off your computer!

## **IV. Preparation of summary**

For the members of the final examination committee a summary should be prepared about the main results of the thesis, but it is not exactly the same as the "Summary" chapter of the thesis. This is necessary for the committee members who did not read the Thesis as a whole.

This summary should be prepared in accordance with Annex 7. On the top of the first page the name of the University, Institute and Department appears together with the chosen specialization (s). Underneath in the middle follow the name of the author and the title of the thesis. The summary should include a very brief explanation of the motives and methods, the key results (preferably without figures) and conclusions. The **maximum range is 2 pages**.

## **V. Appendices**

1. Annex: Model of the cover of the thesis binding (front page).
2. Annex: Layout of the cover page.
3. Annex: Communication of tables.
4. Annex: Placement and descriptions of figures.
5. Annex: Declaration of originality
6. Annex: Statement on public access and originality of the thesis.
7. Annex: Form of the first page of Summary.

DIPLOMA THESIS

.....(name)

.....(year)

HUNGARIAN UNIVERSITY OF AGRICULTURE AND LIFE SCIENCES  
INSTITUTE FOR HORTICULTURAL SCIENCE  
BUDAPEST

.....(Title of the dissertation)

Name of the student

Name of the spezialization

Made at the Department of.....

Collaborator Department(s):.....*if any*.....

Department's supervisor:.....

Supervisor(s):.....*if any*.....

Reviewers:.....*will be given by the Dept!*.....

20...., Budapest

.....  
Head of Department

.....  
Supervisor

### Annex 3.

#### A.) Way of communication of own table

**Table 1.:** concise and accurate title of the table –must be clear in itself without the main text!  
(Budapest, 2012)

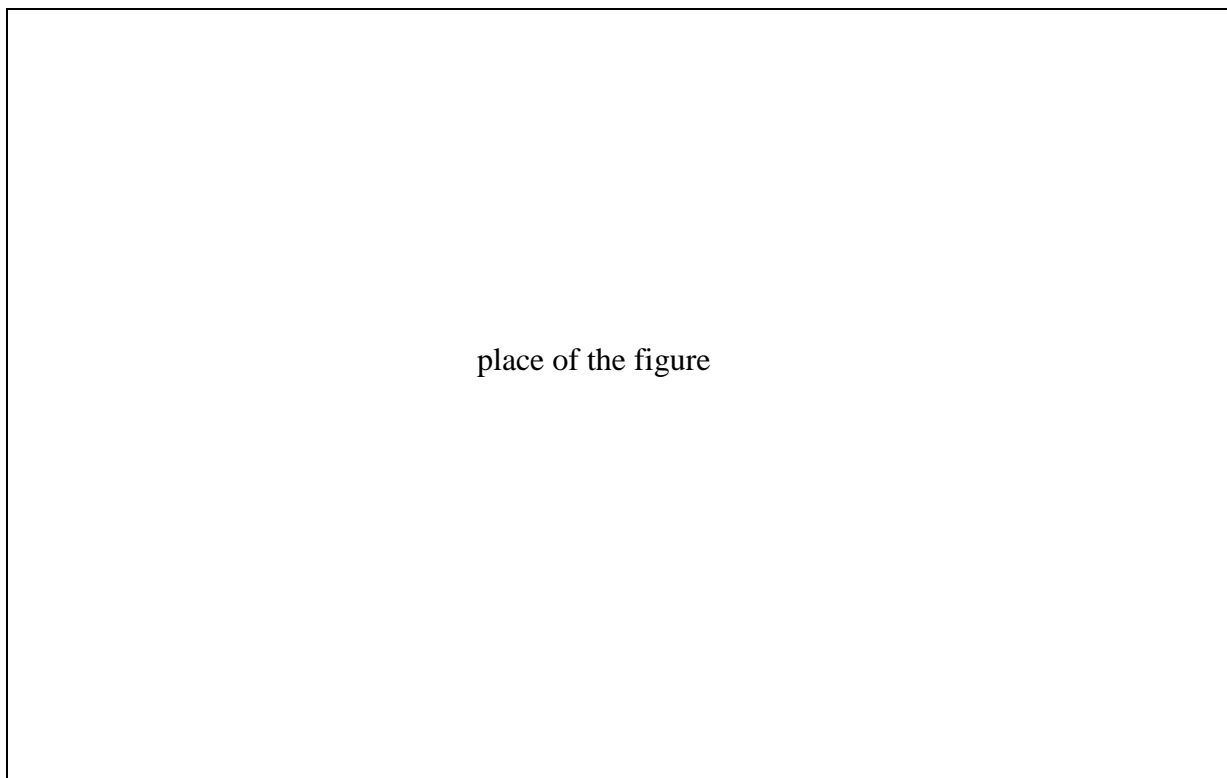
Apellation	Letterhead1 unit	Letterhead2 unit	Letterhead3 unit
Control	18,45	23,60	3,18
Treatment A	3,70	16,70	4,17

#### B.) Way of communication of taken over table

**Table 2.:** The title of the table (result of Smith, 1991)

Apellation	Letterhead1 unit	Letterhead2 unit	Letterhead3 unit

Notation



**Figure 23.:** Title of the figure  
must be clear in itself without the main text!

DECLARATION

Me, as the undersigned.....*students name*.....(Code-  
Neptun:.....) declare, that the Diploma Thesis entitled  
.....*title*..... submitted on .....*date*.....  
is my own intellectual property.

I hereby acknowledge that the presentation of my thesis in the Dean's Office according the shedule does not mean at the same time the acceptance of my dissertation from professional and content related aspects.

*Date*....., Budapest

.....  
signature of the student



STATEMENT  
of origin and public access of the thesis

Author's name:.....

Title of the thesis:.....

Year of publication:.....

Name of the Department:.....

I declare that the submitted thesis is the product of my personal, original work.

**The submitted thesis is defended. It is a pdf document embossed with the name of the author. I authorise to survey and print thesis but not to compile it.**

I take note that the electronic version of my thesis will be uploaded into the Archives of Thesis at Entz Ferenc -Library and Archives.

The bibliography format of the thesis can be reached in Huntéka database of -Entz Ferenc Library and Archives: <http://opac.szie.hu/entzferenc/>. The fulltext can be available only at the Buda Campus.

I take note that the copyright of the submitted thesis without embossment can be damaged.

The Statement is valid with giving data of thesis, I give it together with the digital version of the thesis.

*Date* ....., Budapest

.....  
signature of the author

STATEMENT  
of origin and public access of the thesis

Author's name:.....

Title of the thesis:.....

Year of publication:.....

Name of the Department:.....

I declare that the submitted thesis is the product of my personal, original work.

**My thesis is classified. Expiration of the encryption:  
.....year.....month.....day.**

The submitted thesis is defended. It is a pdf document embossed with the name of the author.  
I authorise limited to survey and print thesis but not to compile it.

I take note that the electronic version of my thesis will be uploaded into the Archives of  
Thesis at Entz Ferenc Library and Archives.

The bibliography format of the thesis can be reached in the OPAC of Entz Ferenc Library  
and Archives: <http://opac.szie.hu/entzferenc/>. The fulltext – with the expiration of the  
encryption – can be available solely at the Buda Campus from the Library OPAC.

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The Statement is valid with giving data of thesis, I give it together with the digital version of  
the thesis.

*Date....., Budapest*

.....  
signature of the author