

CZECH UNIVERSITY OF LIFE SCIENCES PRAGUE

Faculty of Tropical AgriSciences

Evaluation of the Diploma Thesis by supervisor

Thesis Title **Soil properties under baobab trees (*Adansonia digitata* L.) and their influence on fruit nutrient contents**

Name of the student **B.Sc. Makuei Joseph Magai Awuol**

Thesis supervisor **doc. Ing. Bohdan Lojka, Ph.D.**

Department **Department of Crop Sciences and Agroforestry**

Cooperation and communication with the supervisor	<input type="checkbox"/> 1	<input checked="" type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4
Schedule and timing of the research process	<input type="checkbox"/> 1	<input checked="" type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4
Engagement of the student	<input type="checkbox"/> 1	<input checked="" type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4
Choice of suitable methods	<input type="checkbox"/> 1	<input checked="" type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4
Fulfilment of the aims	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input checked="" type="checkbox"/> 4
Scientific contribution of the thesis	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input checked="" type="checkbox"/> 3	<input type="checkbox"/> 4
Theoretical background of the author	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input checked="" type="checkbox"/> 3	<input type="checkbox"/> 4
Handling with data and information	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input checked="" type="checkbox"/> 4
Handling with scientific literature (citations)	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input checked="" type="checkbox"/> 3	<input type="checkbox"/> 4
Argumentation and critical thinking	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input checked="" type="checkbox"/> 4
Abstract and keywords	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input checked="" type="checkbox"/> 3	<input type="checkbox"/> 4
Structure of the chapters and paragraphs	<input type="checkbox"/> 1	<input checked="" type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4
Comprehensibility of the text	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input checked="" type="checkbox"/> 4
Accuracy of the terminology	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input checked="" type="checkbox"/> 3	<input type="checkbox"/> 4
Quality of scientific language	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input checked="" type="checkbox"/> 3	<input type="checkbox"/> 4
Formatting, layout and general impression	<input type="checkbox"/> 1	<input checked="" type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4
Evaluation of the work by grade (1, 2, 3, 4)	3			

Evaluation: 1 = the best

Date 05/24/2016

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Supervisor signature

Other comments or suggestions:

The submitted diploma thesis presents original results of a study evaluating influence of soil properties on the fruit nutrient content of baobab trees in Kenya. It is one of the first scientific studies of that type focusing on baobab species. The study was made with cooperation of World Agroforestry Centre and under co-supervision of Dr. Katja Kehlenbeck. Great help was also provided by my colleagues Jakub Houška, Jana Jaklová and Marie Kalousová. Even though, much effort was dedicated to this research by many people, the thesis suffers major shortcomings.

The text is full of spelling and grammar errors and sometimes it is not well understandable. Especially, the explanation of the results is very poor. The literature review is not extensive, however the baobab species is well characterized. What is totally missing is any review of the influence of soil quality of fruit in general and focusing on the baobab or any other tropical fruit in particular. No research is presented in that sense. The chapter 2.2. Soil chemical composition is very weak.

The objectives were quite well stated, several research questions are presented and I also think that the used methodology was appropriate and was sufficiently explained. I would like to highlight the fact, that all soil samples were collected and later analysed by the student himself (of course with the help of other colleagues) so I hope Joseph has learned current methods of classical scientific research. What is missing in methodological part is detailed explanation of statistical methods used for data evaluation.

What I see as the most problematical part of the thesis is the results chapter, which suffers from lots of errors and misunderstandings. To tell the truth, even as a supervisor, I do not understand well explanation of results. The student mixed the soil nutrient content with fruit nutrient content together with geographical locations and from the graphs there is no clear evaluation of influence of one parameter to other (chapters 5.1 and 5.2). Such correlation should be found in chapter 5.3, it could be seen in Figures 4-6, however it is very poorly explained in the text, sometimes with even major errors (e.g. page 33 where it seems that Vitamin C concentration in fruit influenced the soil P content, which I hope is just a grammar error). Joseph tried to explain his results in discussion chapter, however again it suffers major shortcomings. Even though the author cites other authors, it is not very clear what were his own results and what were the results of other authors. Again the author mixes soil fruit nutrients with soil nutrients with no clear explanation (e.g. in chapter 6.2. Variability of pulp nutrient across geographical locations, why there are again mentioned the nutrients in top soil layer?). Even in the most important chapter 6.3. I found lots of errors, misunderstandings and contradictions and the explanations are not clear to me. Throughout the whole results and discussion chapter the student even exchanged the statistical p value (probability level) with correlation coefficient. In the conclusion the student tried to summarize his results but again it is not much clear to me.

However, Joseph proved his ability to execute his first scientific research in a difficult condition of the Africa and his skill to find sufficient resources for financing his study. Despite of all my comments I still think that the thesis fulfils the requirements for diploma thesis (even though some chapter suffer lot of flaws) and finally I recommend it for defence and I hope the student would be able to explain better his results to the commission.

Plagiarism control: The system Theses.cz has assessed the thesis as original.

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