



Supervisor's Review of USB RIFCH PhD Thesis

Name of the PhD student: Prchal Martin	Name of supervisor: Kocour Martin
Title of PhD thesis: Estimation of genetic variation of performance traits in common carp to predict potential of selective breeding under pond management conditions	

OVERALL COMMENTARY ON THE PhD THESIS

Introductory words

The Ph.D thesis of Martin Prchal aims to estimation of genetic and genomic parameters of the most important performance traits in common carp and to prediction of potential of targeted selection-based breeding for typical pond management conditions. Common carp culture in ponds represents, with respect to the aim of the thesis, very complicated and complex problem with need of long-term observations. On the other hand, common carp breeding needs new and innovative alternatives for sustainable carp culture. From this point of view I see the topic of the thesis very actual and required.

Structure of the thesis

Thesis is divided into i) general introduction part, ii) results represented by published papers and manuscripts prepared for publication, iii) general discussion part and iv) additional information. The structure overall fulfils standards given by the faculty rules.

Content of the thesis

The introductory part summarizes in a well-organized order the state-of-art of fish breeding and even more specifically in common carp. The main focus is given to selective breeding that is the target method in the thesis, but other breeding methods tested and/or used in common carp are mentioned as well. Also tools that have been used in fish selective breeding are mentioned. The information included represents the key or the most recent literature sources and are mostly correctly interpreted. The range of the chapter is adequate and in accordance with the set faculty rules.

The results of the thesis are represented by two published papers, one manuscript in press and two manuscripts ready for publication or being under review process. The student is the first author in one published paper, one manuscript in press and one manuscript under review and co-author in one published paper and one manuscript. The published papers according to Web of Science (WoS) are in journals that are ranked in Q1, Q2 and Q3 in their category. I am sure that at time of Ph.D. thesis defence most of the included manuscripts will be accepted, in press or even published in Q1 or Q2 journals, especially the key one (Chapter 4). All papers or manuscripts presented bring new knowledge that have clear relation to the topic of Ph.D. thesis and that might help to move the selective breeding in common carp to the next level. The important information is that most of the results presented have arisen from solution of EU project under 7th Framework program (FISHBOOST) under cooperation with top European institutions dealing with fish selective breeding. This ensures relevance, quality and potential impact of the results.



The general discussion summarizes and spread the presented knowledge in the context of PhD thesis topic. Overall, this chapter is sufficient and opens new challenges or problems for future research. On the other hand, I must say that the student did not avoid broader repeating of text presented in the papers and manuscripts. I think that this section could be written a bit in different way. Still, the presented discussion of the thesis fulfils the criteria given by the faculty rules.

Language and graphical processing

To me, the text is understandable, well-written and fluent. The student shows that his language skills are adequate to his position. It is sure that possibility for improvement exists and during thesis preparation I did some text corrections. Still, the students' skills to write scientific text are very good. Regarding the graphical formatting student followed well the faculty guideline.

Brief summary of student performance during study

Martin Prchal had no problem to fulfil all conditions given by his individual study plan and he is able to adapt fast to new situations. Finally, he changed his study from daily to combine. It is pity as he absolved only one month of foreign internship instead of three. Martin Prchal get learnt statistical analysis of data from studies focused on quantitative traits that requires advanced statistical knowledge and he has been improving his skills connected to scientific work day by day. He has experience with leading of a small scientific project under Grand Agency of the USB and he has been very valuable member of the research team in the FISHBOOST project. I am sure, he would be also very valuable person for further development of our laboratory. I am glad that Martin selected me as his supervisor.

Overall evaluation of the Ph.D. thesis

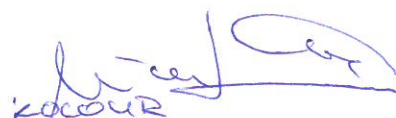
The presented Ph.D. thesis represents very good scientific work in the international context with important scientific results and possible practical applications. The thesis fulfils all criteria given by faculty rules. I can congratulate the student for his performance and the thesis that I can recommend for defence without any doubts.

FINAL RECOMMENDATION

- can be recommended for defence of PhD Thesis*
 can be recommended with reservations for defence of PhD Thesis
 can not be recommended for defence of PhD Thesis

VODŇANY 17/6/2018

.....
Date and place


KOCOUR

.....
Surname and signature