TCME Final State Examination

procedure, thematic areas and sample questions

The State examination in TCME includes **1) Thesis defence** and **2) Examination of professional knowledge**, both being held on the same date. The Examination of professional knowledge is based on discussion on two **compulsory Thematic areas**, i.e. **1) Tropical Crop Management** and **2) Ecology of Tropical Crops**. The aim of the Examination of professional knowledge is to determine i) the level of the student's knowledge in each Thematic area, and ii) the student's ability to put this knowledge into the context of a specific problem (the thesis topic), to understand relevant contexts, link information and think critically.

The step by step procedure

The total time alocated for one student is 70 minutes distributed as follows: 1) Thesis defence = 40 min., 2) Examination of professional knowledge = 30 min.

1) Thesis defence:

1) Thesis presentation: 15 minutes
2) Reading reviews of the thesis
3) Student's response to reviewers' comments
4) Scientific discussion on thesis (based on questions asked by committee members)

2) Examination of professional knowledge (student will be asked questions from subjects covered by Thematic areas in the broader context of the thesis topic):

a) Tropical Crop Management: Questions in this Theme will be oriented on:

- Botany, geographical origin/key production areas, agronomy and utilization of major crops across the commodity groups taught during the study programme.

Notes:

What do we mean by commodity groups? These are cereals, pulses, sugar crops, tuber crops, oil crops, fruits, vegetables, fibre crops, special crops, forage and fodder crops, and ornamental plants.

Crops to ask a particular student about will be selected with respect to geographical, taxonomic, or commodity group focus in the broader context of his/her thesis topic.

b) Ecology of Tropical Crops: Questions in this Theme will be oriented on:

- Geographical distribution reflecting rather biogeographical regions and natural conditions than a political map - relevant ecosystems and environmental characteristics; ecological requirements of major crops.

- Choice of appropriate crop species for cultivation in the particular tropical region, environment or agroecosystem.

- Effect of biotic and abiotic factors on growth and productivity of crops in different agroecosystems (including agroforestry).

- Context of biodiversity and plant genetic resources conservation

- Methods of ethnobotanical and plant genetic resources research

Notes:

Crops to ask a particular student about will be selected with respect to geographical, taxonomic, or commodity group focus in the broader context of his/her thesis topic.

Examples of questions in Examination of professional knowledge

Example 1 – Thesis topic: *Ethnobotany and domestication of edible tuberous plants used in the Peruvian Amazon*

Sample questions: **Tropical Crop Management**

- Name and characterize (botany, key production areas and uses) of globally important crops of Amazonian origin.
- According to the thesis results, yam is a rare tuber crop in the Amazon. Localize yams' globally most important production areas and describe their agronomy.
- What are the nutritive properties of tropical tuber crops?

Sample questions: **Ecology of Tropical Crops**

- Describe examples of agroecological and, on the other hand, conventional cropping systems practised in the Amazon.
- Characterize the domestication centres of cultivated plants in the Neotropics and provide examples of crop species domesticated in these centres.
- What are the agroecological consequences of deforestation in the Amazon?
- Give examples of tree species suitable for multi-strata agroforestry systems in the Amazon and characterize their botany and functions.

Example 2 – Thesis topic: *Antimicrobial activity of extracts from Cambodian medicinal plants*

Sample questions: **Tropical Crop Management**

- Name and characterize (botany, geographical origin/key production areas, uses, agronomy) globally important crops of Southeast Asian origin.
- Name and characterize (botany, geographical origin/key production areas, uses, chemistry, agronomy) industrially important medicinal plants with antimicrobial properties.
- According to the thesis results, the species belonging to the family Myrtaceae produced the strongest antimicrobial action. Name and characterize (botany, geographical origin/key production areas, uses, agronomy) tropical crops belonging to the family.

Sample questions: **Ecology of Tropical Crops**

- What is ethnopharmacology (definition, principles and methods)?

- As it is mentioned in the Materials and methods section of the thesis, plant species were collected in the field in Cambodia and tested in laboratories in the Czech Republic. What are international transporting restrictions and conditions related to plant materials for research purposes?
- As it is mentioned in the Materials and methods section of the thesis, plant materials were selected based on data on their uses in traditional Cambodian medicine. What are the principles and methods of collecting and recording cultural data in ethnobotany?