

PLANT SCIENCE¹ IN FINLAND 2005–2009

D1. TERMS OF REFERENCE FOR THE EVALUATION PANEL

1 Background and purpose

The Research Council for Biosciences and Environment decided on 9 June 2009 that Finnish Plant Science will be evaluated with respect to the international level. The evaluation combines an external assessment by an international evaluation panel with an internal self-assessment exercise.

This document sets out the standard Terms of Reference applicable to the panel. The content of this document is relevant to the panel members as well as to the units being assessed. The document should be read in conjunction with the Guidance for Units, which will be used by the units being assessed when preparing their evaluation documents. The term ‘unit’ here refers to the department or institute involved in the evaluation.

2 Definition of the field to be evaluated

The evaluation covers all basic research in the field of plant biology, plant molecular biology, plant physiology and plant technology on the molecular, cellular or individual level. Applied research is included in the evaluation insofar as it involves clear basic research aims. Plant research that is clearly focused on population biology, population genetics, evolution research or systematics does not come under this evaluation but will be assessed in connection with an upcoming evaluation of ecology and evolution biology. Neither does the evaluation cover any agricultural and forestry research that is purely applied in nature.

3 Organisation

The Research Council for Biosciences and Environment of the Academy of Finland approved the general agenda for the evaluation of the research field in January 2010. The Council also appointed a Steering Group to lead and support the execution of the evaluation.

The members of the Steering Group are:

Professor Mari Walls, Academy of Finland, Research Council for Biosciences and Environment, Chair
Marina Heinonen, Adjunct Professor, Academy of Finland, Research Council for Biosciences and Environment

Annu Jylhä-Pyykönen, Counsellor of Education, Ministry of Education

Professor Kai Lindström, Academy of Finland, Research Council for Biosciences and Environment

Elina Nikkola, Counsellor, Ministry of Agriculture and Forestry

¹ See definition

4 International evaluation panel

An international group of independent high-level experts will carry out the evaluation. All departments, independent research institutes and research stations will be evaluated by the evaluation panel.

The Academy of Finland has invited six renowned scientists as evaluators:

Professor Dorothea Bartels, University of Bonn, Germany, Chairman of the Panel

Professor Neil Baker, University of Essex, UK

Professor Thomas Boller, University of Basel, Switzerland

Professor Maarten Koornneef, Max Planck Institute for Plant Breeding, Germany

Professor Alison Smith, John Innes Centre, UK

Professor Eva Sundberg, Swedish University of Agricultural Sciences, Sweden

5 Objectives of the Evaluation

The purpose of this exercise is to evaluate Finnish Plant Science and research education. The evaluation covers the period 2005–2009, on which the recommendations to be provided for the future will be based.

The objectives of the evaluation are:

- To form a general picture of the focus, *scientific quality and strategies* of Finnish Plant Science and research education
- To assess the *organisation, strengths and weaknesses* of the research field and research units
- To make *suggestions and recommendations* concerning the needs for development, focus and emphasis of the units and whole research field

The basic unit to be assessed by the panel is a department of a university or an independent research institute or relevant part of it.

6 Evaluation criteria and recommendations

The evaluation panel is asked to give:

- a written statement on the quality of the research, strategies, achieved results, scientific contribution and doctoral training
- a written statement on the quality and efficiency of the research environment and organisation
- a written statement on the research system as a whole, focus, synergies, cooperation
- written feedback on the interaction between research and society, and its impact.

The main emphasis is on the scientific evaluation. The panel should ensure that the evaluation takes into account all relevant material available.

The panel is also asked to give recommendations for the future of the field (Section 6.5).

6.1 Scientific quality of the research

The panel's main task is to evaluate the quality of Finnish Plant Science internationally. The quality statement is based on evaluation *documents* submitted by the units. Panel members will have the opportunity to complete this information during *presentations* and *interviews* in Finland. The quality statement must reflect the work of all the research staff listed in a unit.

Important issues to be considered:

- How do the *quality* and productivity of Finnish Plant Science and research education compare with international standards?
- Does Plant Science in Finland today focus upon *innovative*, challenging and successful research lines, themes and problems (strategy)?
- Which fields of research are strong and which are weak?
- What are the differences between strong and weak fields?
- Strengths and weaknesses, needs for improvement?

6.2 Research environment and organisation in its immediate vicinity

The evaluation deals with the prevailing research practices, research environments and collaborative networks. Does the research environment and organisation promote the quality of research and research education?

Important issues to be considered:

- How innovative and successful are the research *strategies* of the units?
- Balance between research and other duties?
- Relationship between senior and junior researchers?
- Role of national and international *networks* (universities, research centres, enterprises)?
- What is the role of *interdisciplinarity* in the units, and within the whole field? Do the units have relevant research infrastructures?
- Strengths and weaknesses, needs for improvement?

6.3 Research system

On the basis of the assessment of the units, the panel may also evaluate how appropriate the prevailing research system is.

- Does the research system focus upon innovative and successful research lines?
- Does the panel see any synergy benefits in the Finnish Plant research system?
- What kind of action and cooperation could promote them? (e.g. common strategies, cooperation, new division of labour, researcher mobility, better use of infrastructure, critical mass)
- Strengths, weaknesses, needs for improvement?

6.4 Interaction between research and society

The evaluation panel is asked to give feedback on the interaction between research and society and the impacts of research on society (e.g. environmental, technological, economic). The feedback is to be based on the evaluation documents as well as interviews and discussions. The panel should especially consider other activities such as expert tasks, popularised works, patenting, technology transfer and cooperation with other sectors of society.

The panel should pay special attention to the societal contribution of each unit, and to the relevance of its research on a national and international level. The questions to be asked are

- How actively and efficiently does the unit communicate its points and findings to various stakeholders and to society at large?
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- How fruitful is the cooperation between the unit and the communities that ultimately apply the results of the research?
- How can the societal impact of Finnish Plant Science be improved?

6.5 The panel's recommendations for the future

The panel is asked to provide recommendations for the future development of the research field. Recommendations should focus both on the units and the research field as a whole.

Key issues to be addressed are:

- What kinds of means does the panel recommend in order to improve and strengthen research performance at various levels?
- What opportunities do the units and the research field as a whole have and what challenges do they face?
- How can the units and the research field meet these challenges and utilise the opportunities?
- How can the quality and societal impacts of research be improved?
- Better use for infrastructures, needs for new infrastructures?
- What kind of research funding programme could best promote the quality of Plant Science in Finland?

7 Tasks, responsibilities and working arrangements of the panel

Panel members will set responsibilities within the group together with the Expert Secretary. The Evaluation Office will provide all evaluation documents and background information dealing with the Finnish research system. The evaluation material consists of evaluation documents, the units' presentations, interviews and discussions.

For full description of the evaluation documents please see the submission form and related instructions, which will be used by the units assessed in preparing their evaluation documents together with these Terms of Reference.

7.1 Desk research

Desk research will be carried out before the panel's visit to Finland. The material includes

- facts on research staff and funding
- list of publications
- lists of key publications of senior staff
- collection of key publications
- list of doctoral theses
- lists of visits and collaborations
- self-assessment exercise of the unit

The Steering Group suggests that panel members perform a preliminary assessment of each research unit prior to any discussions with research staff. The evaluation panel may supplement their views during the visit to Finland.

7.2 Presentations and discussions

Each research unit is given an opportunity to give a presentation dealing with the focal points of the unit's research.

A sample of researchers will be interviewed during the site visit, e.g. heads of units (research), senior staff, professors, postdoctoral researchers, and visiting foreign scholars. The evaluation panel will also discuss research education with graduate students.

The specific timetable and instructions will be provided by the Evaluation Office.

7.3 Confidentiality

Panel members undertake not to make use of and not to divulge to third parties any non-public facts, information, knowledge, documents or other matters communicated to them or brought to their attention in the performance of the evaluation. The evaluation and the ratings are only for official use and they are confidential until the final summary evaluation report is published.

7.4 Evaluation report and publicity

The evaluation report including the main recommendations is based on the evaluation criteria defined by the Steering Group of the evaluation. The report will be written and edited by the panel members with the assistance of the Expert Secretary. The evaluation report is confidential and only for official use until publication.

Prior to final editing and publishing, the units of assessment are given an opportunity to review the report to correct any factual errors. The evaluation report will be published in the Academy of Finland Publications Series in both printed and electronic form (www.aka.fi/publications).

7.5 Impartiality

Evaluation is subject to the impartiality rules common to the field of evaluation. A panel member will be disqualified if his/her impartiality is endangered or if he/she feels that he/she has a conflict of interest with a research group included in the evaluation.

If you find that you may be unable to evaluate a research group, please notify the Academy and the other panel members of this as soon as possible. Clarification of potential conflicts of interest must preferably be carried out during the first panel meeting.

8 Schedule

Dec	2009	Communication to the field
Jan	2010	Appointment of Steering Group
Jan	2010	Appointment of evaluation panel
Mar	2010	The launch seminar
Apr-Aug	2010	Preparation and delivery of evaluation documents
Week 45	2010	Interviews and discussions with units to be assessed
Nov-Dec	2010	Preparation of report
Mar	2011	Publishing and releasing the report
	2011	Dissemination of information on results
	2012	Follow-up of implementation of recommendations made

9 Coordination of Evaluation

The evaluation team working mainly at the Academy of Finland coordinates the evaluation process. Director Laura Raaska, Senior Adviser Timo Kolu and Project Secretary form the evaluation team together with the Expert Secretary Reetta Kettunen. The Expert Secretary will assist the panel on site visits and in preparing and editing the evaluation report. The duties of the evaluation team are to compile the evaluation documents, organise the site visits in practice and provide administrative support.

10 Funds

The evaluation is funded by the Academy of Finland. The Academy of Finland will pay an expert fee to the panel members. All travel expenses related to the panel's visits and accommodation in Finland will be covered or reimbursed by the Academy of Finland.

