Georg-August-University Göttingen

Master Program "Crop Protection"

Dr. C. Möllers

Module M.Agr. 0010 "Biotechnological Applications in Plant Breeding"

Contents, Objectives C/H PER SW Contents: Students will gain advanced knowledge in theory and practice of the 6 C/4 H PER SW application of biotechnology and molecular genetics in plant breeding. The main Workload: topics in the lecture and practical are: 180 h - application of in vitro propagation - production and use of haploids Contact time: - interspecific sexual and somatic hybridization 56 h - direct and indirect gene transfer - biochemical and molecular characterization of transgenic plants Self study time: - present use in gene technology and risk assessment 124 h - quality and use of different types of markers in plant breeding In the seminar the application of biotechnology in plant breeding and agriculture today will be presented and critically discussed. **Objectives:** Students are able to use their knowledge of biotechnological methods to solve present problems. They learn to critically analyze, evaluate and report complex scientific papers. Type of instruction and examination Lecture 28 h, practical 22 h, seminar 6 h Examination: Written test 90 minutes Prerequisite for the examination: Seminar presentation 20 minutes Type of module **Entrance requirements** Elective module none Frequency **Duration** Summer One semester **Number of students** Language **English** 12 Coordinator