

Title: The genetic basis of modern plant breeding methods*

Instructor: Drs. Yousef Papadopoulos (AAFC/NSAC) and Kathleen Glover (NSAC).

Timing: Winter 2010 - March 8th – April 8th

Course Description:

This module is intended to review key issues in cultivar development: 1) polyploid genetics and their implication on crop breeding; 2) selection theory; and 3) recent advances in breeding methodology. Course emphasis will be determined based on interests of students enrolled.

Format:

There will be four (two hrs) lecture/discussion sessions. Each session will cover subjects presented in reading materials distributed one week ahead of the session. The students will be expected to study the reading material and actively participate in the discussion during the lecture/discussion sessions. Students will also be expected to prepare a research proposal utilizing some of the technologies discussed in this module and should include either the identification specific alleles and/or and quantification of gene expression for the purpose of identifying elite plants to be used in the development of novel cultivars. The proposal will be expected to follow the NSERC Strategic Grant format.

Method of Evaluation:

The final grade will be based on: 1) class preparedness and participation in discussion (40%); and 2) Research proposal (60%).

Prerequisites:

Familiarity and general understanding with subjects covered in an undergraduate plant breeding course

*For further information and to sign up for this module, please contact Dr. Yousef Papadopoulos; Nova Scotia Agricultural College, PO Box 550, 100-5 Haley Institute, Truro, NS, Canada B2N 5E3; Tel: 902-896-2452;
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