2024 ELLS summer school Darwinian agriculture

Workshop Social evolution under mass selection or under true breeding values

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Practical Session on Phenotypic Value Decomposition and Selection Effects

Introduction

Welcome to this practical session on the decomposition of phenotypic value and the effects of selection. In this session, we will explore how the phenotypic value of a plant is influenced by its genotype and by the genotypes of its neighbors, and how selection on these traits affects the next generation.

Key Concepts

Decomposition of the Phenotypic Value

Classically, in one single macro-environment, the phenotypic value (P) of an individual can be decomposed into multiple components:

$$P = G + E$$

, Where: - **G** represents the genetic contribution to the phenotype. - **E** represents the micro-environmental contribution to the phenotype.