

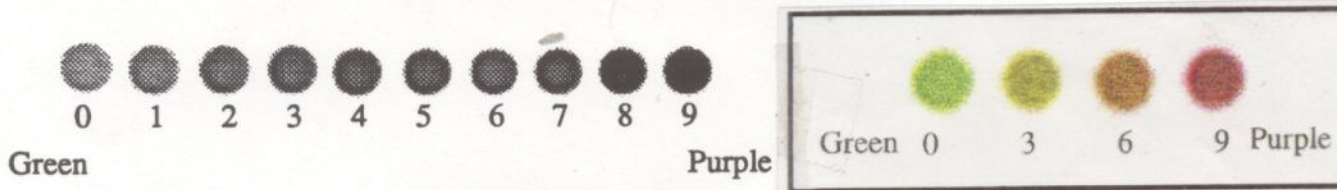


Rapid Cycling Brassica (Fast Plants) Genetic Terminology

The Wisconsin Fast Plants Program follows the standardized rules for the designation of phenotypic and genotypic symbols for Brassica species. In order for students, teachers and scientist to communicate the genetics of Fast Plants it is important to be familiar with the genetic terminology and its usage.

Phenotype:

- Phenotypic symbols are designated by three letters with the first letter capitalized
Yellow-green - Ygr
- Phenotypes with varying degrees of expression may be followed by a number scale from 0-9 in parenthesis to indicate the degree of expression with 1=very low and 9=very high.
Pan(7) - high expression of purple anthocyanin



- Similar phenotypes considered to have different genotypes may be represented by the same three letter code and are distinguished by an additional number, Ygr1, Ygr3

Genotype:

- Genotypic symbols are also three letters, corresponding to the phenotypic symbol, and are italicized or underlined.
Yellow-green - ygr
- Mutant genotypes are lowercase, ygr, while the wildtype genotypes are capitalized, YGR
- Different genotypes with similar phenotypes can be given the same three letter symbol followed by a different number, ygr1, ygr3
- Different alleles are designated by a dash and an additional number, ygr 3-1
- If no allele is specified then it is assumed to be allele 1, ygr=ygr1
- Uniparentally inherited mutations are enclosed in parenthesis, (Var)
- Symbols for similar traits in different species may be the same and are numbered independently for each species, Mst1 in *B. rapa* and Mst1 in *B. oleracea*