

IV. REVISED GENETIC NOMENCLATURE FOR MAIZE

During the 1974 Allerton Park meetings, there was consideration of the proposed nomenclature changes (1973 MNL 47:229-230). Following discussion of possible difficulties, the group voted to accept the recommended changes which are outlined below. It is hoped that these changes will be implemented in all journal papers written after this date.

RECOMMENDATION 1: Each locus be designated by a lower case italicized symbol. Traditionally, this has been a one or two letter symbol, but some three letter symbols have been used. We recommend that all newly assigned symbols have three letters in the future.

RECOMMENDATION 2: As previously, different loci at which mutations produce the same general phenotype are distinguished by italicized numbers following the gene symbol, but the number one will be omitted in the designation of the first locus identified, i.e., the first locus identified would be *sh* and the second *sh2*. The number will appear on the line both when the gene name is written out and when the symbol is used, e.g.: *brittle-2* and *bt2*.

RECOMMENDATION 3: A mutational site or event is designated by an isolation number, laboratory number, or previous designation following the gene symbol and set off by a dash: e.g., *sh2-6801*.

The dominant allele at a locus should be designated by the gene symbol with a capital letter, *Sh2*. Where it is desirable to designate a particular dominant, this can be done as *Sh2-W22*.

The mutation by which a locus was first detected should be designated by a capital R or Ref. as *sh2-R* to indicate the reference allele.

The superscripts that currently indicate different alleles at a locus will be written after the dash following the locus designation. As examples, *R^r* would become *R-r* and *P^{RR}* would become *P-RR*.

RECOMMENDATION 4: A mutation at an unknown locus conditioning a phenotype similar to that conditioned by mutations at one or more known loci can be designated by an appropriate gene symbol, an * to indicate that the locus is unknown and a laboratory number as *bt*-7011*. After tests

establish allelism with mutations at a given locus, the number of that locus can be substituted for the * but the laboratory isolation number retained, as bt2-7011. It would be preferable if the mutations within the locus that appear to represent independent mutational events were designated only by isolation numbers that do not purport to furnish any information about the characteristics of the allele.

Since these recommendations provide only a framework for changes, uncertainties in application are certain to arise. It is suggested that all queries be referred to Dr. R. J. Lambert, Maize Genetics Cooperative, University of Illinois, Urbana, Illinois 61801. Dr. Lambert has agreed to act as a clearinghouse for all questions relating to gene symbols.

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