IV. RECOMMENDATIONS FOR NOMENCLATURE CHANGES

The following set of tentative recommendations for changes in maize nomenclature and symbols have been formulated by a committee composed of C. R. Burnham, E. H. Coe, O. E. Nelson, E. B. Patterson, and M. M. Rhoades. It is hoped that these recommendations will be studied during 1973 in order that they may be discussed at the 1974 Allerton meeting.

The recommendations have been formulated with three major objectives in mind: 1) to provide a uniform method of designating the reference mutant allele for each locus and of designating independent mutational events. This applies also to wild-type alleles where they can be identified. 2) To make type-setting as economical as possible. This accounts for the on-line symbols which will also be important in information storage and retrieval systems. The deletion of the numeral 1 avoids the potential confusion of the numeral 1 and a lower case l as might otherwise happen with a(1) and al when printed on the same line. 3) To adopt a symbol system that will adapt with the fewest changes in information retrieval systems. It should be kept in mind that all print-outs from computers contain only capital letters and further handle subscripts and superscripts awkwardly if at all. In our system, bt2-7201 would be encoded and printed out as BT2-7201 with the dash (or minus) here indicating that this is a recessive allele. A wild-type allele, Bt2, would appear as BT2+ with the + sign indicating a dominant allele. If desirable to indicate a co-dominant allele, this could be done with an = sign in place of the - or +.

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 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 be 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. 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 wild type allele at a locus can be designated either by the gene symbol with a capital letter, Sh2, or by the lower case gene symbol followed by a plus sign: e.g., sh2+. Where it is desirable to designate a particular wild type, this can be done as Sh2-W22 or sh2+W22.

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

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 its 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.

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