CULTIVAR VERSUS VARIETY

The correctness of use of the terms "cultivars" and "varieties" in the English language is frequently not clearly understood. The International Code of Nomenclature of Cultivated Plants has adopted the term "cultivar" as an international term which is proper for use in any language. In the English language, the term "variety" may be used as an exact equivalent or as a synonym of cultivar. Care should be taken not to confuse the term with the English translation of Variety, also Variety, which is a botanical classification. To insure differentiation between variety when used for a cultivated variety and variety when used as a botanical classification, the abbreviation of the former is cv., whereas the abbreviation for the later is var.

In the English language version of editions of the Code prior to 1969, the term variety was included in parenthesis throughout the Code following each use of the term cultivar. This medium was decided upon so that no one could possibly question the complete equivalence of the terms cultivar and variety. The redundancy of repeating both terms was eliminated in the 1969 edition by the International Commission for Nomenclature of Cultivated Plants. Instead, the following explanations were included:

Article 10, Note 3:
"The term cultivar is equivalent to variety (in the sense of cultivated variety) are exact equivalents. In translations or adaptations of the Code for special purposes either cultivar or variety (or its equivalent in other languages) may be used in the text."

Clearly, the 1969 edition in no way represents a change in policy relative to use of the English term Variety. In fact, if the Code were to be reproduced for popular use in the English language, the International Commission would sanction use of only the term Variety throughout the entire Code. There certainly is no regimentation in the Code for universal use of the term Cultivar when referring to cultivated varieties.

It would seem that good judgment should prevail in the use of the equivalent terms. In scientific papers which have international consumption, the international term Cultivar may be most clearly understood. In papers or documents intended for use by the English-speaking lay public or non-scientific community, the term Variety may often be considered the more desirable synonym.

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The preceding statement was prepared by Dr. M. G. Weiss, Acting Director, International Programs Division, ARS, USDA, and CSSA representative on the International Commission for Nomenclature of Cultivated Plants, to clarify the definition of the term Cultivar. Because Crop Science is distributed internationally, the term Cultivar should be used when referring to a cultivated variety.

J. W. Dudley, Editor, Crop Science

STABILITY OF GENETIC PARAMETERS

Dear Editor:

When a diallel experiment is repeated in different environments (in several locations or years or fertilizer treatments), a major objective is to investigate the stability of the three common genetic parameters over the set of environments: the stability of the additive genetic component can be tested by the analysis of the means of the parental lines entered into the diallel cross; the stability of the dominant genetic component can be detected by the analysis of the variances and covariances of the arrays of the diallel table; epistasis and its stability over environments can also be detected in the latter analysis. The theoretical basis for these procedures is due to R. W. Allard (Genetics 41:309-318, 1956). We have developed a computer program to perform these analyses.

Computer input: For a p x p diallel experiment with r replications repeated over n environments, the input deck for the test of additive component x environment interaction consists of r x n x p cards, each card consisting of p values (i.e., a data card consists of values from each of the p parental lines for a particular replicate from a particular environment). The input deck for the test of dominance component x environment interaction consists of p x n x r cards, each card consists of an adjusted W, (covariance between the parent and its progenies in the rth array) and an adjusted V, (variance of the rth array) value. Adjustment refers to dividing each of Wr and Vr by Var, (variance of the parents). These values can be obtained from the output results of the Jinks-Hayman diallel computer program described by J. Lee and P. J. Kalsikes (Crop Science 12:193, 1972).

Computer output: For the additive component x environment interaction analysis, the model analysed includes the following sources of variation — (1) Replications within environment; (2) environment; (3) parents; (4) parent x environment and (5) remainder. The dominance component x environment interaction analysis yield the following sources of variation — (1) Replications within environment; (2) environment; (3) dominance; (4) dominance x environment; (5) array; (6) array x environment; (7) array x dominance; (8) array x dominance x environment and (9) remainder. The printed output provides the degrees of freedom, sums of square, mean squares and