

CLUSTER ANALYSIS OF MORPHOLOGIC AND PHYSIOLOGIC DATA IN THE
FUNGAL GENERA DIAPORTHE AND PHOMOPSIS

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The aim of this work is to find qualitative and quantitative similarities as well as differences among Phomopsis and Diaporthe cultures isolated in Yugoslavia and in some localities in France from cultivated plants or weeds since 1980. The morphologic and physiologic characters of these cultures were subjected to cluster analysis.

The data matrix comprises 242 morpho-physiological attributes of 60 different cultures belonging to the genera Diaporthe and Phomopsis from 23 hosts.

In order to optimally use the information available in the data matrix the range of variation of each of the attributes was transformed to a unit value.

Dendrogram construction was done according to the agglomerative method based on Ward's criterion to join clusters. The dendrogram shows the relationships of the isolates and the degree of similarity among them.

Clusters were extracted from the dendrogram by computing an optimal splitting level on the basis of ultrametric distance within and between clusters.

The CLUSTER software modul of the SYSTAT computer package was utilized.

Only the dendrogram based on conidiomata attributes on Malt agar is presented in this abstract (Graph. 1).

On the basis of the dendrograms and the clusters it is concluded that the holomorph Diaporthe helianthi Munt.-Cvet. et al. is a distinct species.

GRAPH 1. DENDROGRAM OF CONIDIOMATA ATTRIBUTES ON MALT AGAR

