

SUMMARY

Piper is a member of the Piperaceae family, which is part of the Piperales group. The genus *Piper* can be found in humid forests and is estimated to have more than 700 species worldwide. Plants in this genus grow optimally at an altitude of 0-500 m.a.s.l., especially at an altitude of around 100 m and in air temperature conditions ranging from 23-32°C so this plant are often found growing in Somagede District, Banyumas Regency. This research objectives are to know the morphological diversity of *Piper* in Somagede District and to know the phenetic relationship of *Piper* in Somagede District.

The method used in this research is survey method with purposive sampling technique. The variable of this research is the morphological character of *Piper* species. The parameters of this study consisted of morphology of roots, stems, leaves, flower and fruits. Character data and morphological traits of *Piper* members were analyzed descriptively to determine their diversity, while to determine the relationship of similarity was analyzed by the UPGMA method using MEGA 11 software.

This study found six species of *Piper* growing in Somagede District, Banyumas Regency, consisting of *P. nigrum*, *P. cubeba*, *P. retrofractum*, *P. betle*, *P. sarmentosum*, and *P. aduncum*. The morphological diversity of *Piper* was obtained from character data in the form of plant height, habit, aerial root color, aerial root length, stem color, stem diameter, internode length, stem surface, leaf shape, leaf venation, leaf base shape, leaf apex shape, leaf upper color, leaf lower color, leaf upper texture, leaf lower texture, leaf length, leaf width, petiole texture, petiole color, leaf petiole length, inflorescence type, flowering type, inflorescence color, flower arrangement length, pedicle length, pedicle color, outer color of ripe fruits, fruit shape, and seed color. The closest phenetic relationship is between *P. nigrum* and *P. cubeba* with a dissimilarity index of 0.355. The furthest phenetic relationship is between *P. sarmentosum* and *P. aduncum* with a dissimilarity index of 0.871.

Keywords: *diversity, morphology, phenetic, Piper, Somagede,*