Penerapan Metode *Dempster-Shafer* Dalam Sistem Pakar Diagnosa Penyakit Pada Tanaman Tembakau (*Application of Dempster-Shafer Method in Expert Systems to Diagnose Disease in Tobacco Plants*)

Ergi Shiyam Maghfiroh
Study Program of Informatics Engineering
Majoring of Information Technology
Program Studi Teknik Informatika
Jurusan Teknologi Informasi

ABSTRACT

Tobacco cultivation is an important factor in increasing productivity results which is influenced by several factors such as pests and diseases and natural factors. One of natural factor that affects productivity is climate change. Climate change in addition to harming declining productivity also affects tobacco plants that are vulnerable to disease. In general, traditional farmers' knowledge techniques have deficiencies in the process of determining disease and tobacco plant knowledge information. Tobacco plant diseases can attack plants at any time, while farmers only get information about tobacco plants from the counseling of farmer groups. So that handling in controlling tobacco plant diseases by farmers who are not treated immediately will have an impact on plant growth. From these problems can be resolved by creating an expert system that helps diagnose diseases in Kasturi tobacco plants by providing solutions, as well as providing adaptation information on climate change in order to increase the productivity of Kasturi tobacco plants. The method used in the expert system is Dempster-Shafer. A theory that is able to handle a variety of possibilities that combines one possibility with existing facts by proving based on the belief function and plausible reasoning used to combine separate pieces of information to calculate the likelihood of an event.

***Key words**: disease, expert system, Dempster-Shafer, climate*