

Thesis Title	Tagging of Gene for Field Weathering Resistance in Soybean [<i>Glycine max</i> (L.) Merr.] Using Molecular Marker and Bulk Segregant Analysis in F ₂ Population of CM60 and GC2796
Student	Miss Sirikwan Sawatsitang
Student ID	44615100
Degree	Master of science
Programme	Agronomy
Year	2006
Thesis Advisor	Assoc. Prof. Dr. Arom Sripichitt
Thesis Co-advisor	Dr. Vipa Hongtrakul

ABSTRACT

The objective of this study was to tag genes for field weathering resistance in soybean [*Glycine max* (L.) Merr.] using RAPD and AFLP techniques with bulk segregant analysis in F₂ population. A population of 356 F₂ derived lines from a cross between CM60 which was susceptible to field weathering and GC2796 soybean line resistant to field weathering were grown in the field together with their parent. F₃ seeds at physiological maturity were collected from each F₂ plant for standard germination test following seed deterioration by rapid aging under condition 40°C and RH 90% for 3 days. There were high variation in field weathering resistance among F₂ plants with an average standard germination between 58-100% , suggesting polygenic character conferring field weathering resistance. One hundred twenty-three RAPD primer were used for screening resistant and susceptible bulks and 866 RAPD markers were produced. Sixty-nine AFLP primer combinations were selected and 2,272 AFLP markers were obtained. No specific band for field weathering resistance between the two bulks was observed.