

# GENETIC DIVERSITY ANALYSIS OF SOYBEAN POD SHAPE AND POD NUMBER BY FOURIER ELLIPTIC

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Pod number and pod shape are two important factors influencing final yield in soybean. Pod number of eighty genotypes was recorded, and pod shape was evaluated quantitatively by using elliptic Fourier descriptors. Eighty soybean cultivars from different regions were sown from January to April 2010, Hung Thanh ward, Cai Rang district, Can Tho city. The experiment was carried out in Random Complete Block Design with three replications. Each cultivar was sown on two rows, each row with five metre length. The distance for rows and plants was 40 x 10cm, with 2 plants per hill. Five plants were randomly selected for measuring agronomic traits. Twelve pods per cultivar were used to analyze pod shape. 80 elliptic Fourier coefficients for each kind of pod were calculated for each contour. Vietnamese cultivar group had highest pod number (about 34 pods) as compared with the other groups, but China cultivar group gave more three-seeded pods than others. The cumulative contribution at the fifth principal component was more than 95% for one-seeded pods, and more than 85% and 82% for two-seeded and three-seed pods, respectively.

