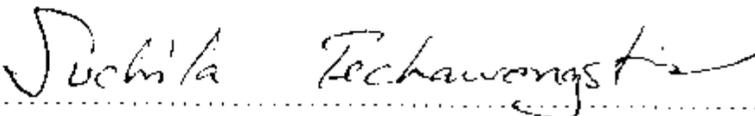
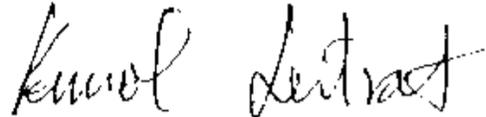


**THESIS TITLE:** SEEDLING AND SEED PRODUCTION EFFICIENCE IN BROCCOLI AND CHINESE KALE F<sub>1</sub>-HYBRIDS.

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#### ABSTRACT

The experiment to determine suitable technique for improving seed yield/seedling number of Broccoli-Chinese Kale hybrid was carried out at the experimental plot of Faculty of Agriculture, Khon Kean University, during September 1996-March 1997. Early type of Selected broccoli variety (B) and two cultivars of Chinese Kale, i.e. Chia tai (Kj) and Chin hua (Kc), and their F<sub>1</sub>-hybrids, i.e. F<sub>1</sub>BKj, F<sub>1</sub>BKc, F<sub>1</sub>KjB and F<sub>1</sub>KcB were used in this experiment. Three following techniques were adopted for improving seed yield and seedling number of the above 4 F<sub>1</sub>-hybrids. There were spraying influorescense with 3 level of sodium chloride (0, 1 and 2 % NaCl) solution, branch cutting with 3 length (3, 5 and 7 cm.) and tissue culture techniques in the combination between 3 tissue plant parts (leaf, shoot tip and node) and 4 different culture media plus growth regulator (NAA and BA).

The result show that NaCl solution could improve seed yield in all given variety. Moreover, seed number per pod and seed number per plant in the treatment spraying 1 % NaCl solution was significantly higher than those in 0 and 2 %. Nevertheless, it was found that 100

seed weight of each variety was differed from each other depend on the level of NaCl concentration. However, it is interesting to note that F<sub>1</sub>KcB hybrid gave a relatively higher 100 seed weight in all level of NaCl concentrations.

For using different length of branch cutting, it was found that plant number after shoot cutting of each variety was differed from each other depend on the cutting length. Branch cutting at the length of 7 cm. gave the highest plant number in broccoli. and Chinese Kale (Chia tai cultivar) had high plant number at 3 cm., while the less gave positive respond to all cutting length.

The result of using tissue culture technique show that shoot tip grown in MS media plus BA 0.1 mg/l. gave the highest shoot number. while in MS media plus NAA 0.01 mg/l. was preferable in root number and root length of all hybrids. Moreover, the high rate of healthy plant after transplanting (>75 %) was observed.