



ยกเว้น สายพันธุ์ 23, 23-3-1, 40 และ 142-5 มีลักษณะผสมตัวเองไม่ได้ปานกลาง เมื่อทดสอบ  
โดยวิธี fluorescent microscope technique และการจำแนกความแตกต่างระหว่างฝักกาดขาวปลี  
พันธุ์ลูกผสมและพันธุ์พ่อแม่ พบว่าเอนไซม์ acid phosphatase และ esterase เหมาะสมสำหรับ  
การจำแนกสายพันธุ์ลูกผสมของฝักกาดขาวปลีจากพันธุ์พ่อและแม่มากที่สุด

มหาวิทยาลัยเชียงใหม่  
Chiang Mai University

<b>Thesis Title</b>	Development of Male and Female Parents of F <sub>1</sub> Hybrid in Chinese Cabbage	
<b>Author</b>	Mr. Ekapote Payakhapaab	
<b>M.S.</b>	Agriculture ( Horticulture )	
<b>Examining Committee</b>	Assoc. Prof. Dr. Maneechat Nikonpun	Chairman
	Asst. Prof. Dr. Dumneun Karladee	Member
	Assoc. Prof. Dr. Danai Boonyakiat	Member

### ABSTRACT

The bud pollination of 4 Chinese cabbage inbred lines were studied. Results found that line 40-9 gave the highest seed weight, 0.165 grams per plant. The 4 inbred lines with self incompatibility were selected to be studied in seed production. Reciprocal crosses showed that the used of 40-9 as a female parent, crosses 40-9x142-5, 40-9x27-3-7 and 40-9x23-3-4, gave high seed weight : 4.8, 3.9 and 2.7 kilogram per rai, respectively. Eleven hybrid varieties of Chinese cabbage were tested in comparison with the 3 commercial varieties in winter 1998 at Department of Horticulture, Chiang Mai University. It could be concluded that hybrid 142-5x40-9 gave the highest head yield, 6,170 kilogram per rai. It yielded 36.3 % higher than commercial varieties. Hybrids 23x27, 23x142, 27-3-7x23-3-4, 27-3-7x142-5 and 40-9x23-3-4 yielded 4,646 , 5,551 , 3,665 , 5,150 and 3,785 kilogram per rai, respectively. They had good horticulture characteristics. Therefore their parents should be improved to produce a good F<sub>1</sub> hybrid in the future. Seed set analysis and fluorescent microscope techniques were used to check self incompatibility of 9 lines

of Chinese cabbage. Seed set analysis showed that all lines were self incompatible. However, when fluorescent microscope technique was applied, not all lines were self incompatible, such as lines 23, 23-3-1, 40 and 142-5 showed weak self incompatibility. Hybrid varieties and their parents was analysed for their acid phosphatase, esterase and peroxidase enzymes by electrophoresis. Results showed that acid phosphatase and esterase enzymes were the most suitable enzymes for distinguishing hybrid varieties and parent lines.

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