

Nuntaya Wongsasri 2009: Combining Ability of *shrunk 2* Sweet Corn.
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Thesis Advisor: Mr. Witith Chai-ari, Dr. rer. agr. 65 pages.

The combining abilities of 8 *Shrunk 2* sweet corn inbred lines, obtained from Sweet Seeds Co., Ltd., were assessed in 28 crosses with no reciprocal crosses. Two single cross hybrids, Hibrix3 and SK0003, were used as check cultivars. The experiment was conducted in Randomized Complete Block Design (RCBD) with 3 replications at Sweet Seeds Co., Ltd., Saraburi. Combining ability was evaluated using Method 4, Model I, as described by Griffing (1956) for total green ear weight, standard green ear weight, standard dehusked ear weight, sweetness and tenderness. The results showed that all traits had statistically significant difference ($P < 0.01$) in general combining ability (GCA) and specific combining ability (SCA). hB9077 and hA9035 had the highest GCA in standard green ear weight and standard dehusked ear weight, respectively. For qualitative traits, hA2205 had the highest GCA in both sweetness and tenderness. The hA2041/hA2205 cross showed the highest SCA in standard green and dehusked ear weights at 1,144 and 773 kg/rai, respectively. The hA9035/hA2205 cross has the highest SCA in total green ear weight at 3,289 kg/rai. For qualitative traits, the hB9077/hA9035 cross shows the highest combining abilities for both sweetness and tenderness.

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Thesis Advisor's signature

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