Doungdao Thongphuag 2009: Effect of Gibberellic Acid and Potassium Chlorate on Yield of Baby Corn. Master of Science (Agronomy), Major Field: Agronomy, Department of Agronomy. Thesis Advisor: Associate Professor Ed Sarobol, Ph.D. 83 pages.

The effect of baby corn varieties and rates of plant growth regulators (PGR) on baby corn yield was tested at the National Corn and Sorghum Researh Center, Pak Chong, Nakhon Ratchasima during January 2007-March 2008. This experiment was carried out for 3 crops and a split plot in RCBD was used with 4 replications. For crop 1 (Jan-Mar 2007), the main plots were 5 baby corn varieties (PAC283, SG17, SG18, SG20 and KBSC605) and the sub plots were the PGR rates (control 0 ppm, GA_3 at 250 and 500ppm and Potassium Chlorate, $KClO_3$ at 2,500 and 5,000ppm). And for crop 2 (June-Aug 2007), the main plots were 5 baby corn varieties (PAC283, SG17, SG18, KBSC304 and KBSC605) and the sub plots were the PGR rates (control 0 ppm; GA_3 at 100, 250 and 500ppm and $KClO_3$ at 500 and 1,000ppm). Because of relatively higher rates of PGR used in crop 1 and 2, leaf burn of all baby corn varieties was observed. Thus, for crop 3, PGR rates were reduced. The main plots, for crop 3 (Jan-Mar 2008), were 3 baby corn varieties (PAC283, SG17 and KBSC605) and the sub plots were the PGR rates (control 0 ppm; GA_3 at 50, 100, 150 and 200ppm and $KClO_3$ at 250 and 500ppm). The results revealed that unhusked ear weight (UEW), husked ear weight(HEW), above ground fresh weight(FW), plant height(Ht) and total ear number(TEN) among the 3 baby corn varieties were significantly different. KBSC605 variety yielded the greatest FW (7,162 kg/rai), HEW (285 kg/rai), Ht(194 cm) and TEN(3,3638 ear/rai) followed by PAC283 and SG17 gave the greatest HEW (1,734 kg/rai). PGR rates did not affect the parameters under this study, however, the trend was that GA_3 at 50 and 100 ppm gave the greatest UEW (1,617 and 1622 kg/rai), HEW (240 and 247 kg/rai) and TEN(3,3209 and 3,3475 ear/rai).

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