

Kris Khiawsaad 2009: Kamphaeng Saen Sugarcane Varietal Trials at Phetchaburi and Prachuap Khiri Khan Province. Master of Science (Agronomy), Major Field: Agronomy, Department of Agronomy. Thesis Advisor: Associate Professor Rewat Lersrutaiyotin, D.Agr. 102 pages.

Varietal trials of Kamphaeng Saen sugarcane varieties were conducted at Prachuap Khiri Khan and Phetchaburi provinces in which 3 trials were conducted at Nong Ta Tam, Prachuap Khiri Khan provinces and 1 trial was conducted at Rai Mai Patana, Cha-um, Phetchaburi provinces. At Prachuap Khiri Khan provinces, the first and second trails of 10 Kamphaeng Saen sugarcane varieties were planted at Jun 2007. Four Promising Kamphaeng Saen varieties namely Kamphaeng Saen 01-30-17, Kamphaeng Saen 01-1-25, Kamphaeng Saen 01-3-5 and Kamphaeng Saen 01-1-60 were received from the first trial, but in the second trial, due to the unfertile soil, could not received the good results for evaluate the promising sugarcane varieties. The third trial was planted at February 2008 with 15 Kamphaeng Saen sugarcane varieties and 10 Kamphaeng Saen sugarcane varieties were evaluated as promising varieties namely Kamphaeng Saen 01-1-25, Kamphaeng Saen 01-10-2, Kamphaeng Saen 00-176, Kamphaeng Saen 01-3-5, Kamphaeng Saen 00-148, Kamphaeng Saen 00-105, Kamphaeng Saen 00-92, Kamphaeng Saen 01-1-46, Kamphaeng Saen 01-1-12 and Kamphaeng Saen 01-11-6. The trial at Phetchaburi provinces was planted at February 2008 with 15 Kamphaeng Saen sugarcane varieties and 9 Kamphaeng Saen sugarcane varieties were evaluated as promising varieties namely Kamphaeng Saen 01-1-25, Kamphaeng Saen 01-8-8, Kamphaeng Saen 01-3-5, Kamphaeng Saen 01-3-15, Kamphaeng Saen 00-148, Kamphaeng Saen 01-1-12, Kamphaeng Saen 00-129, Kamphaeng Saen 00-58 and Kamphaeng Saen 01-4-29. From stability study, sugarcane cultivars that had high cane yield and high stability in cane yield were Kamphaeng Saen 01-1-12, Kamphaeng Saen 00-92 and Kamphaeng Saen 94-13, while Kamphaeng Saen 01-3-5, Kamphaeng Saen 01-1-12 had high CCS and high stability in CCS and Kamphaeng Saen 01-1-12 had high sugar yield and high stability in sugar yield and Kamphaeng Saen 94-13 had high stem number per rai and high stability in stem number per rai. From the study of importance of component characters, suitable sugarcane cultivars for Pranburi should had high stem number per rai, while those for Cha-um should had both high stem number per rai and the long stem length. Pol was the important components for CCS in both Pranburi and Cha-um. For sugar yield, cane yield was the more important component compared to CCS especially in trial that had high variation in cane yield.

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