

Wichita Intharasri 2007: Effect of Hydrogen Cyanamide on Budbreak, Carbohydrates and Proline Contents in Dormant Buds of Kiwifruit Grown in Thailand. Master of Science (Agriculture), Major Field: Horticulture, Department of Horticulture. Thesis Advisor: Associate Professor Krisana Krisanapook, Dr.Agr. 76 pages. ISBN 974-16-2806-4

Study on effect of hydrogen cyanamide (H_2CN_2) on bud break of kiwifruit 'Bruno' grown in Thailand was carried out. In experiment 1, improving bud breaking in kiwifruit by H_2CN_2 at application rates 2.5 or 5% a.i. were compared with untreated plants at Royal Agricultural Station Ang Khang, Amphur Fang and Inthanon Royal Project Development Center, Amphur Jomthong , Chiang Mai province. It showed that the application of H_2CN_2 induced more bud break rate especially buds at the lower part than the control and the consistent result in both areas. However, the rate of applications at 2.5 or 5% a.i. were not significantly different in number of bud break. Thus, the application rate of 2.5% a.i. was selected to use in the next experiment. In experiment 2, the effect of H_2CN_2 on carbohydrate and proline contents were investigated during in the dormant season. Applications of H_2CN_2 did not affect the changes of glucose, fructose and sucrose patterns whereas it tended to increase *myo*-inositol level. Moreover, during 3-12 days after applications of H_2CN_2 , the proline content in the applied buds of both places were increased more than 3 times of the control even after that proline level was not significantly different until bud break.

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Thesis Advisor's signature

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