Witchuporn Ruksumruad 2008: Timing of Potassium Chloride Application on Nitrate Content, Fruit Quality and Yield of Pineapple. Master of Science (Agronomy), Major Field: Agronomy, Department of Agronomy. Thesis Advisor: Associate Professor Jindarath Verawudh, Ph.D. 66 pages.

This study focus on timing of potassium chloride application after forcing in rainy season and dry season, on level of nitrate in pineapple fruit. Six treatments were used by spraying 3.6 % of potassium chloride (450 l/rai) at 1, 2, 3 months, 1 and 2 months, 2 and 3 months after forcing and non spraying after forcing. The results in dry season showed that the control had lowest level of nitrate in pineapple fruit (4.9 ppm). The treatment which sprayed 3.6 % of potassium chloride at 1 month after forcing had the highest level of nitrate in pineapple fruit (8.3 ppm) and significantly different from the control treatment. The results in rainy season showed that for the content of nitrate in pineapple fruits ,the application of potassium chloride at 1 and 2 months after forcing(treatment 4) was the lowest at 13.7 ppm. Application of potassium chloride at 3 months after obtained reduced the content of nitrate in pineapple fruits at 15.0 ppm, but the level was not significantly different from the first treatment. As compare to treatment than was not applied potassium chloride the control had the highest content of nitrate at 215.0 ppm and it was highly significant from the other treatments. From the result, application of potassium chloride 3.6 % at 3 months after forcing, is the most effective and economical practice. However, harvesting time do has influence on the level of nitrate in pineapple fruit. In rainy season, pineapple plants can absorb more nitrate from soil than in the dry season. Then pineapple fruits harvested in rainy season tend to have more nitrate content than the fruits harvested in dry season. Average fruit weight and other fruit quality, such as pH, total soluble solids (TSS) and acids content were not significantly affected by treatments of potassium chloride.

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