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Efficacy of Sequential Applications of MSMA in Combination with Diuron for Weed Control in Young Oil Palm Circle

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Circle weeding within the area covered by oil palm canopy is one of the most important methods of weed management in young oil palm plantations. Application of herbicide mixture has been a common practice to control mixed weeds in oil palm and it also helps to delay herbicide resistance. This study aims to determine the efficacy of MSMA in combination with diuron for weed control in young oil palm circles under field conditions. Three sequential applications of the herbicide combinations with 45 days' interval were carried out while weed control and appearance of oil palm spears were assessed throughout the 18 weeks' of experimental period. The results showed that MSMA + diuron at a rate of 2 945 + 600 g per hectare provided 86 per cent weed control in young oil palm circles with healthy oil palm spears after three sequential applications although scorching was apparent at lower fronds due to drift of spray droplets. Increasing the rate of MSMA + diuron to 5 890 + 1 200 g per hectare gave comparable results and the treatment did not exhibit phytotoxic effect to spears of young oil palm after three sequential applications. These findings suggest that a combination of MSMA + diuron at a rate of 2 945 + 600 g per hectare could be applied to control weeds in young oil palm circle without causing phytotoxicity to the oil palm spears although scorching was observed at the lower fronds.

Keywords: Diuron, herbicide mixture, spears, sequential.

