

Comparison of Warfarin and Bromadiolone Baits for Rat Control in Oil Palm Plantations - Experiences in the 1990s

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*In rat population studies conducted in an oil palm plantation near Kulai, the 19-, 20- and 21-year-old plantings with low percentage fresh damage of 2-3 per cent had low to high rat population of *Rattus rattus diardii* (*R. r. diardii*) ranging from 83-542 rats per hectare. Although, the percentage of fresh damage of rat detected in the tall and older planting palms were low, the rat population on the ground was still high on per hectare basis. When single plot of warfarin and bromadiolone baits were tested to control *R. r. diardii* in the oil palm plantation near Kulai, three treatments were found to be effective. The treatments were ten rounds of bromadiolone bait (0.005%, 14.5 g) at one bait per palm and 50 per cent application density, five rounds of bromadiolone bait (0.005%, 14.5 g) at five baits per palm and 50 per cent application density, and nine rounds of bromadiolone bait (0.005%, 21 g) at one bait per palm and 50 per cent application density. In labour short situation, five rounds of bromadiolone bait (0.005%, 14.5 g) at five baits per palm and 50 per cent application density may be recommended, bearing in mind a higher material cost will be incurred in such application of multiple baits per palm. In another single plot of warfarin and bromadiolone baits were tested to control *Rattus tiomanicus* (*R. tiomanicus*) in an oil palm plantation near Bekok and all the four bromadiolone bait treatments gave good control and recorded no fresh damage in post-baiting assessments. In terms of total bait applied per hectare basis, the best treatment was bromadiolone bait (0.005%, 14.5 g, one bait per palm) at 5.95 kg requiring eight baiting rounds followed by bromadiolone bait (0.005%, 21g, one bait per palm) at 7.71 kg requiring eight baiting rounds per campaign. Baiting with bromadiolone bait (0.005%, 14.5 g, one bait per palm) and 50 per cent application density is recommended for the control of *R. r. diardii* and *R. tiomanicus*, especially if the rat population is in high number in oil palm plantations. In plantations facing labour shortage, baiting with bromadiolone bait (0.005%, 14.5 g, five baits per palm) at 50 per cent application density is recommended as the stopgap measure. Once control is achieved, it is recommended to reverse back to standard baiting of one bait per palm in normal routine six-monthly programmes.*

Keywords: *Rats, oil palm plantations, baiting, warfarin, bromadiolone.*