2010

January

Workers' Physiological Impact in the Oil Palm Cultivations in Malaysia*

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The workers' physiological impact with respect to human energy expenditure and heart rate against the various operations at the nursery and field stages in oil palm cultivation has been studied. The involved operations under both the nursery or field stages and the available tasks within each operation were ranked individually under the combinational basis of dawdling, demanding, and exhausting criteria. Holing in large polybags was found to be currently the most critical operation under the nursery stage, while planting germinated seeds in small polybags was the least critical operation. On the other hand, lining was found to be currently the most critical operation under the field stage operation, while pest control was the least critical operation. The established DWD-DEM-EXH Cartesian Plot could be used as the prime basis when formulating the proper mechanisation programme for the oil palm plantations in Malaysia.

***Keywords**: Workers' physiological impact, human energy expenditure, oil palm nursery field operations, oil palm nursery operations.*