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## Preliminary Assessment on the Potential for Use of an Autopilot Tractor on Malaysia's Flat Terrain

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*Currently modern tractor with autopilot steering system has become one of the classy modes in tractor operations system. However, specialised assessment of this system on areas, which are different from its country of origin are of prime interest to be further investigated. Therefore, this preliminary study was conducted to assess the straight-line accuracy of autopilot tractor running at various specified levels of speed on Malaysia's flat terrain conditions. The new tractor<sup>1</sup> equipped with an autopilot mechanism was evaluated on flat terrain that was overgrown with grasses at the UiTM (Universiti Teknologi MARA) farm in Jasin, Melaka, Malaysia. This automation is employed to offer high-accuracy steering for the operator while driving a tractor and improve safety in the field. Three levels of autopilot tractor engine speeds i.e. 1000 rpm, 1500 rpm, 2000 rpm (equivalent to 3.4, 4.2, 5.5 km per hour speed) were selected as the parameters in assessing straight-line accuracy of the tractor. This study found that there is a significant difference between straight-line accuracy of each of the tested speeds. It also showed that there is a relationship between the tested speeds and straight-line accuracy. Thus it is worthwhile to pursue further evaluation of its usefulness in selected field operations.*

**Keywords:** Farm machinery, autopilot tractor, auto-guidance, auto-steering, mechanisation.

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