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
of

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Research on Applying an Anchor Mechanism to Orchard and Vineyard Tractors
Produced in Turkey

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Abstract: In recent years, orchard and vineyard tractors have become widespread in Turkey. Owing to their narrow-track width and work environment, these tractors overturn easily. Therefore, tractor manufacturers have to fabricate roll-over protective structures (ROPS) that are high enough to prevent continuous rolling. In this study, an innovative system that increases the safety of the driver and decreases the ROPS height was tested on 20 tractors that are currently available for retail sale in Turkey. In order to determine the effect of an anchor mechanism on the height of the ROPS, the following parameters were investigated: tractor mass, the type of drive capability, the height of the center of gravity, and the moment of inertia. It was observed that an anchor mechanism could decrease the height of the ROPS by between 183 and 455 mm. The use of an anchor mechanism provides the manufacturers with an option that will allow them to produce more effective tractors with lower ROPS heights.

Key Words: Roll-Over Protective Structures, ROPS, orchard and vineyard tractors, narrow-track tractor, safety

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