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# Res. Agr. Eng.

## Čupera J., Šmerda T.:

### Influence of engine power and shifting

# mode on energy- performance parameters of tractor's set

Res. Agr. Eng., 56 (2010): 47-52

The aim of the paper is to assess the impact of engine power and shifting mode on the parameters of a tractor used in transport operation. To meet the objective, measurements were performed with three tractors of the Case IH product line with different maximum power and with the same trailer and load that crossed a track with 21,8 km of distance. The record files saved following values: altitude, time of trip, tractor velocity, hour fuel consumption, engine speed, actual engine torque, fuel temperature, and position. The measurement results clearly show the unsuitability of aggregation of a tractor in higher performance category, resulting in the increase in its fuel consumption does not increase performance. To improve the utilization of powerful tractors, it is necessary to reduce their weight and aggregate them

with more axles on the trailers in order to better use the potential power caused by possibility of more load.

## **Keywords:**

transport; engine; tractor; fuel consumption; performance

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