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PERFBET - IMPROVE PERFORMANCES AND USES OF HARVEST MACHINERY

ABSTRACT

Usually, ITB is studying the beet harvest in terms of beet quality: soil tare, defoliation, broken tips. The objective of this project was to improve the assessment of beet harvesting equipment through the creation of performance indicators. To answer these questions we developed a new experimental device and a method of original analysis. The collection and analysis of data on the behaviour of operators, monitoring of machines and power consumption have been done on an entire harvest period (with 4 harvest machines, different soil types, climatic conditions, drivers). The machines were equipped with: GPS recording and Can-Bus Stream recordings. They recorded all machine travels and harvested fields and their form, and each seconds the consumption and some adjustments that the drivers can do. Indicators like harvesting performance (ha/h) and harvest consumption (l/ha) were designed from field data. These indicators were related to the type of machinery, harvest conditions, the driver or the complexity of the field. All the data collected have been used in a web-based tool to educate the driver to the harvesting conditions according to its schedule workload, to calculate an economic cost and to better know the characteristic of the different harvest machinery.
