ALGORITHMS FOR CALCULATING ACTUAL WORKED SURFACES IN AGRICULTURE

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Abstract

The need to accurately determine the surface of an agriculture field has been a common problem for a long time. The initial solution for this was a manual measuring system. However, this solution is time-consuming and can also generate inaccurate results. Since the popularisation of IoT devices and GPS tracking systems, it has become easier and faster to develop automatic solutions in order to precisely calculate the work area of an agriculture field. This article studies multiple ways to compute the field surface area based on agriculture machinery data in order to easily track and manage machinery usage and efficiency. The focus of this paper is the work area detection and surface calculation of the system using different techniques based on not only latitude and longitude correlations but also the altitude factor that can heavily influence the real surface of a field.

Key words: surface estimation, GPS, agriculture machinery tracking