

农田土地精平工程优化设计与评价软件

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摘要: 以修正平面法作为平地工程优化设计方法, 开发具有田面高程数据录入与统计分析、田面微地形表述、平地土方量估算等多功能的农田土地精平工程优化设计与评价软件, 并基于土地精平田面高程实测数据, 对比评价3种数据网格插值计算方法的适用性。研究表明, 基于3种插值方法获得的田面相对高程网格化数据都可用来描述田面微地形的整体分布状况, 其中根据Kriging插值法得到的田面相对高程插值估算精度相对较高, 据此估算的土地精平挖、填方量之间的差异和土方总量接近实际状况, 可优先应用于土地精平工程优化设计工作中。 A design and evaluation software for precision farm land levelling engineering was developed with the application of modified plane method. The software has different functions such as farm land elevation data input and statistic analysis, description of microtopography conditions as well as estimation of earthwork. The application effects of three different interpolated methods on software were evaluated based on field data. The results showed that three interpolated methods could be used to produce grid elevation data in farm land and give out the general description of surface condition. However, the Kriging interpolated method gave out the best estimations for both grid elevation data and the earthwork volume. It is suggested that the Kriging interpolated method is applied in designing for farm land precision land levelling engineering.

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