

农村发展—农业信息

单时相MERSI数据在冬小麦种植面积监测中的应用

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摘要:

以FY-3A MERSI可见光到近红外波段250 m分辨率数据为信息源, 采用PPI (像元纯净指数) 提取结合实测数据的方法, 经反复试验最终提取了山西南部冬小麦区的不同地物覆盖特征谱, 进而采用基于监督分类的最大似然法、神经网络等方法进行不同地物类型的分类, 同时根据不同地物光谱特征采用混合像元分解技术提取冬小麦种植面积。结果表明: 单时相FY-3A MERSI数据提取作物种植面积是可行的, 神经网络法好于最大似然法, 混合像元分解提取的面积同实际种植面积最为接近。

关键词: 分类研究

Monitoring of Winter Wheat Area Based on Mono Temporal MERSI Data

Abstract:

In this paper, the spectrum characteristics of different objects in Southern Shanxi was obtained through the combination of PPI (pixel purity index) extraction and practical verification that based on FY-3A MERSI 250 m data from visible to near-infrared. The identification of different objects was realized by the methods of supervised classification such as maximum likelihood and neural network, meanwhile, the winter wheat area was extracted by the mixed-pixel decomposition technique. The results indicated that the extraction of winter wheat area was feasible based on mono temporal of FY-3A MERSI data. The accuracy of winter wheat area extracted by neural network method was better than that of maximum likelihood, while the result of mixed-pixel was the closest to actual planting area.

Keywords: classification research

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