Abstract

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***Comparing Vegetation Index and Classification methods for detecting agriculture conservation practice*** ***using Landsat imagery***

In this study, Landsat-8 imagery of west Lancaster, Pennsylvania is examined using different remote sensing techniques to detect agriculture conservation practices. Farmers in this study area practice conservation practices known as contour farming and strip-cropping, where they grow alternate crop strips down a slope on the contour to reduce soil erosion and runoff. It is valuable to map and monitoring the cropland where the conservation techniques are applied. Remote sensing provides the advantage of covering a large area with regular revisit frequency. Two different methods are experimented in this study for their effectiveness of detecting conservation practice using Landsat-8 OLI image. The Image was collected in August 8, 2015. Normalized Difference Vegetation Index (NDVI) is derived from the original dataset to enhance the difference in crop strips. Results based on an unsupervised classification of the NDVI image and high pass filters are compared for detecting the use of contour farming methods.