Suggested topics: Remote Sensing Applications - Agriculture & Crops

Paper title: The Application of Satellite Imagery to Estimate Agricultural Losses in Taiwan

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Abstract:

The natural disasters have caused the crop planted areas seriously damaged during the typhoon season from May to September in central and southern Taiwan. Since the authorities of townships do not have the records of planted crop types, the disputations of the agricultural subsidies have been usually happened after the disasters. To fast and accurately acquire the planted crop types and areas in the public river lands before and after the disasters can help to prevent the disputations of the agricultural subsidies. In order to achieve the above tasks, the remote sensing technology can be utilized to obtain planted crop types and areas fast and in a large scale.

Therefore this study uses watermelon as an example and utilizes several Formosat II images (dated from February to April, 2013) to interpret the watermelon planted areas

at the 15 public river lands (including 48 townships) in Taiwan. The cadastral maps have been used to overlap on the satellite images. The texture characteristics of planted watermelon were then employed to help the township staffs to interpret the planted areas from the overlaid maps. The results demonstrate that the application of remote sensing technology can help to fast acquire the watermelon planted areas in the public river lands and to reduce the cost and manpower consuming for the field investigation before and after the disasters. In addition, the resultant change detection maps can help the relating authorities for the task of rescue and subsidy and reduce waste of the public treasury.