An Extraction and Accuracy Assessment of Dead Tree Using Object-Based Classification

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SUMMARY

Recently the importance of dead tree management having been killed by insect pests in the world is being emphasized, and monitoring researches based on remote sensing technology have been progressed actively for effective dead tree management accordingly. At now, dead tree management has been carried out by utilizing image data having been acquired from airplanes or satellites, but a lot of difficulties in constant dead tree management occur owing to problems such as data acquisition cycle and resolution etc. This study manufactured high-resolution images based on UAV merits to manage dead tree by pests which was one of forest disaster, and executed extraction of dead tree by utilizing the images. Also, optimal parameter to corresponding images was extracted by carrying out repeated experiments so as to apply object-based classification fit to high-resolution image classification. As a result of having extracted dead tree by using Scale 55, Shape 0.1 Color 0.9 Compactness 0.7 Smoothness 0.3 which was an optimal parameter, accuracy of 85.2% was secured. This means that constant monitoring on dead tree-occurring areas by using UAV image data, and it is judged that the outcomes could be utilized as a basic data to manage dead tree including control of insect pests plan etc.