

The analysis of the cultivation abandoned land by high-precise DEM and digital aerial photography

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In this study, by combining high-precise DEM with interpretation result of aerial photography and land use present condition investigation with digital aerial photography, three-dimensional of the large scale land use map be tried. By this analysis, landform expression and land use change of the Koshimoda district in Izu City were clarified, and extension process and local features of the cultivation abandoned land were examined.

Results of the research are as follows. Especially, in south and west parts, the extension of the cultivation abandoned land is remarkable in Izu Peninsula. Since the landform of the research object area falls to the coast, as the mountain division becomes a sudden precipice, there are small plains. The agricultural land use there has been developed in sloping land. Agricultural activity in 1970's of the Koshimoda district has been developed in field and rice pad and orchard (almost, mandarin orange). However, it enters in 1990's, and the cultivation abandoned land rapidly expands. As a result of digital aerial photography interpretation of the 2004 photographing, the most part became cultivation abandoned land for the farmland over 10 degree tilt angle in the comparison with the land use figure 1970. The analysis of cultivation abandoned land based on the steepest down-slope direction is the progressing the present. From the analysis of land use figure which was visualized three-dimensional, present cultivation abandoned land expanded in the land where approach conditions such as farmland away from the settlement and steep slope are bad.