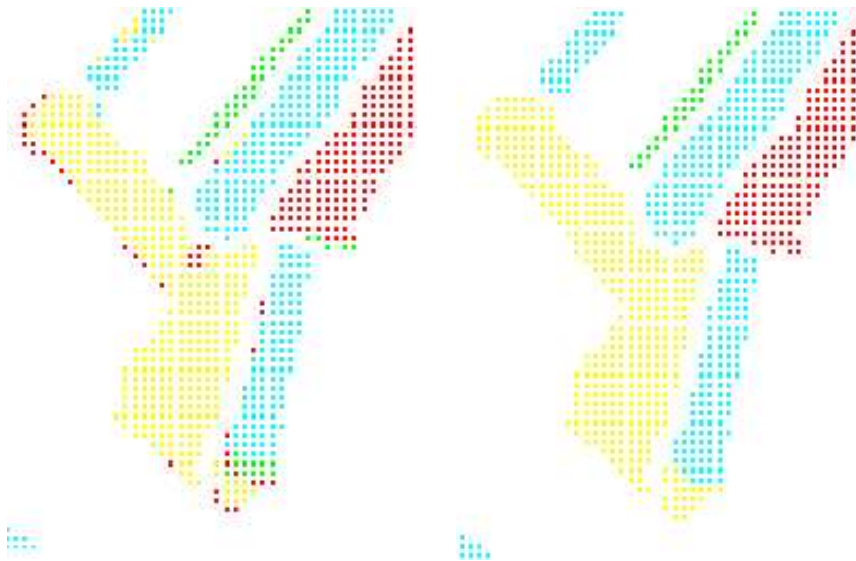We proposed a Markov random field-based approach to decision level fusion for remote sensing image classification The fusion method is applied to the benchmark data set grss_dfc_0006 used for the data fusion contest 2001 for image segmentation. The set is accessible by the IEEE GRSS Data Fusion reference database [10]. The set consists of samples acquired by ATM and SAR (6 and 9 bands, respectively) with five agricultural categories in the Feltwell (UK) region. The numbers of the training and the test data are respectively 5072 and 5760 in a rectangular region of size 350×250.

(a) A sub-area of the test data in grss_dfc_0006

(b) ML method   (c) Proposed with $r = 5$

Figure. Image segmentation of the benchmark data set grss_dfc_0006 with five categories;
beets, stubble, bare soil, potatoes, carrots.