Table 2 Image analysis approaches tested.

Technique	Outcome
Geometric pattern matching	No discreet patterns in mixed stand images
Color separation	Relationships break down with multiple cameras and variable field conditions
Blob detection	Each piece (leaf) must be a separate entity to work effectively
Tile method with fast Fourier transform (Polder et al., 2007)	Expressed frequencies visually differ for alfalfa and grass
+ Naïve Bayes classifier artificial intelligence (McRoberts et al., 2012a)	Poor correlation between predicted and actual values
+ Fourier frequencies	Aggregated frequencies performed better than Naïve AI; collinearity problems with multivariate models
+ Support vector machine (Chang & Lin, 2011)	Promising for timothy (McRoberts et al. 2012b), but ineffective with multiple grass species and cameras
Local binary pattern (Jones et al., 2001) on entire images	Poor correlation between predicted and actual values.
Tile method with local binary pattern	Strong bivariate correlation with actual grass fraction; key covariate in a multivariate prediction model