The Holy Grail of public attitude research towards agricultural biotechnology is too often to try and find a simple single statistic that will capture public support or rejection of GM foods and crops, often to suit political or media needs. Public attitude research, however, shows that opinions are too complex and variable to be captured by a single statistic and, indeed, more complex forms of analyses are needed to better capture these complexities and variabilities. The Australian Department of Innovation sought to capture such complexities through a large-scale multiple-methodology study that induded: longitudinal data, measuring attitudes across a broad scale of support or rejection, seeking relative comparisons of attitudes to other food types, analysing what would change attitudes and, vitally, examining the values that influence attitudes. Taken together the findings allowed for a values segmentation of the public, into four key segments, with distinct homogenous attitudes and values that demonstrate there is not a single 'Holy Grail figure' that defines public support for agricultural biotechnology. A deeper understanding of the distinct values segments, however, allows for not just a better understanding of the diversity of views that exist, but a better understanding of what messages will most aligned with those segments to best reach them.