

Additional file 1

The ‘Alethea’ plant activator was supplied by Plant Impact PLC (Preston, UK), and was composed of a combination of potassium dihydrojasmonate (PDJ), sodium benzoate (SB), and L-arginine (Arg), as defined by the family of international patents arising from [PCT/GB2005/001562](#). The composition was further augmented by several plant nutrients (Table 1).

Table 1. Nutritional constituents of this experimental formulation of the Alethea formula. All values quoted are prior to dilution of Alethea compound for experimental use.

Nutrient	% contribution to Alethea compound
Zinc (Zn)	2.0
Iron (Fe)	2.0
Manganese (Mn)	1.0
Copper (Cu)	0.5
Magnesium oxide (MgO)	0.5
Boron (B)	0.025