

## 1 Supplemental Material

2 Table S1: Statistical values for the analysis of morphological traits of forisomes  
 3 according to several explanatory variables (corresponding to Figure 1).

Trait / Transformation	Explanatory variables	F-value	P-value
Forisome width	Forisome length : Plant	0.726	0.537
	Forisome length	896.620	< 0.001
	Plant	16.890	< 0.001
SE diameter (sqrt transformed)	Window distance : Plant	1.610	0.187
	Window distance	783.500	< 0.001
	Plant	222.800	< 0.001
Forisome surface area (sqrt transformed)	SE diameter : Window distance : Plant	0.108	0.955
	SE diameter : Plant	1.034	0.378
	Window distance : Plant	1.452	0.228
	SE diameter : Window distance	6.597	<b>0.011</b>
	SE diameter	1459.418	< 0.001
	Window distance	18.178	< 0.001
	Plant	34.798	< 0.001

4 Significant P-values are given in bold. sqrt – square root; SE – sieve element; window  
 5 distance – the distance from the leaf tip to the observation window in the leaf.

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7 Table S2: Statistical values for the analysis of the ratio between fully dispersed and not  
 8 fully dispersed forisomes in the target leaflet according to the distance to the stimulation  
 9 site (corresponding to Figure 2).

Plant	F-value	P-value
<i>M. sativa</i>	3.470	0.077
<i>P. sativum</i>	0.535	0.472
<i>T. pratense</i>	2.089	0.154
<i>V. faba</i>	16.695	< 0.001

10 The degrees of freedom were 1 in all cases. Significant P-values are given in bold.

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12 **Table S3: Statistical values for the analysis of the time elapsed from burning to the full**  
 13 **dispersion of forisomes and the duration of dispersion according to the traveling**  
 14 **distance, forisome surface area ( $A_F$ ) and plant species (corresponding to Figure 3).**

Trait	Explanatory variables	L-ratio / <i>F-value</i>	<i>P-value</i>
<b>Elapsed time until dispersion*</b>			
	Traveling distance* : $A_F$ *: Plant	7.212	0.066
	Traveling distance* : $A_F$ *	0.259	0.611
	Traveling distance* : Plant	5.189	0.158
	$A_F$ *: Plant	15.263	<b>0.002</b>
	Plant	3.718	0.294
	$A_F$ *	1.096	0.295
	Traveling distance*	46.949	<b>&lt; 0.001</b>
<b>Duration of dispersion*</b>			
	Traveling distance : $A_F$ : Plant	<i>1.360</i>	0.258
	Traveling distance : $A_F$	<i>0.060</i>	0.807
	Traveling distance : Plant	<i>1.507</i>	0.216
	$A_F$ : Plant	<i>0.570</i>	0.635
	Plant	<i>3.966</i>	<b>0.009</b>
	$A_F$	<i>0.913</i>	0.341
	Traveling distance	<i>1.275</i>	0.261

15 Significant *P*-values are given in bold. For the analysis of the elapsed time until dispersion  
 16 the varIdent variance structure was used to account for the variance heterogeneity of the  
 17 residuals introduced by the plant species. Depending which statistical test was used  
 18 Likelihood (L)-ratios or *F*-values are given. *F*-values are given in italics. \* indicates the ln-  
 19 transformation of the respective parameter. Traveling distance – distance from the burning  
 20 site to the observation window.

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22 **Table S4: Statistical values for the analyses of proportions of electrophysiological**  
 23 **reaction in different leaflets of *T. pratense* and *V. faba* (corresponding to Figure 5 D).**

Electrophysiological reaction	<i>Trifolium pratense</i>		<i>Vicia faba</i>	
	Chi <sup>2</sup>	<i>P-value</i>	Chi <sup>2</sup>	<i>P-value</i>
EPW	4.583	<b>0.032</b>	41.539	<b>&lt; 0.001</b>
AP + VP	3.616	0.057	17.455	<b>&lt; 0.001</b>
AP	n.a.	n.a.	7.494	0.058

24 Only electrophysiological reactions which occurred more than 5 times were statistically  
 25 analysed. Significant *P*-values are given in bold. Degrees of freedom for *T. pratense* = 1, for  
 26 *V. faba* = 3. n.a. – not applicable.

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29**Table S5: Statistical values for the analyses of dependence of the depolarization parameters on the site of the stimulus (corresponding to Figure 5 E).**

<b>Depolarization parameter</b>	<b>Plant</b>	<b>Transformation</b>	<b>W / F-value</b>	<b>P-value</b>
<b>Start of depolarization</b>	<i>T. pratense</i>	n.a.	110	<b>&lt; 0.001</b>
	<i>V. faba</i>	ln	84.350	<b>&lt; 0.001</b>
<b>Duration</b>	<i>T. pratense</i>	n.a.	24	<b>0.029</b>
	<i>V. faba</i>	ln	6.801	<b>&lt; 0.001</b>
<b>Velocity</b>	<i>T. pratense</i>	n.a.	~ 0	<b>&lt; 0.001</b>
	<i>V. faba</i>	ln	25.420	<b>&lt; 0.001</b>

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Significant *P*-values are given in bold. Depending which statistical test was used *W*- or *F*-values are given. *W*-values are given in italics. n.a. – not applicable.

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