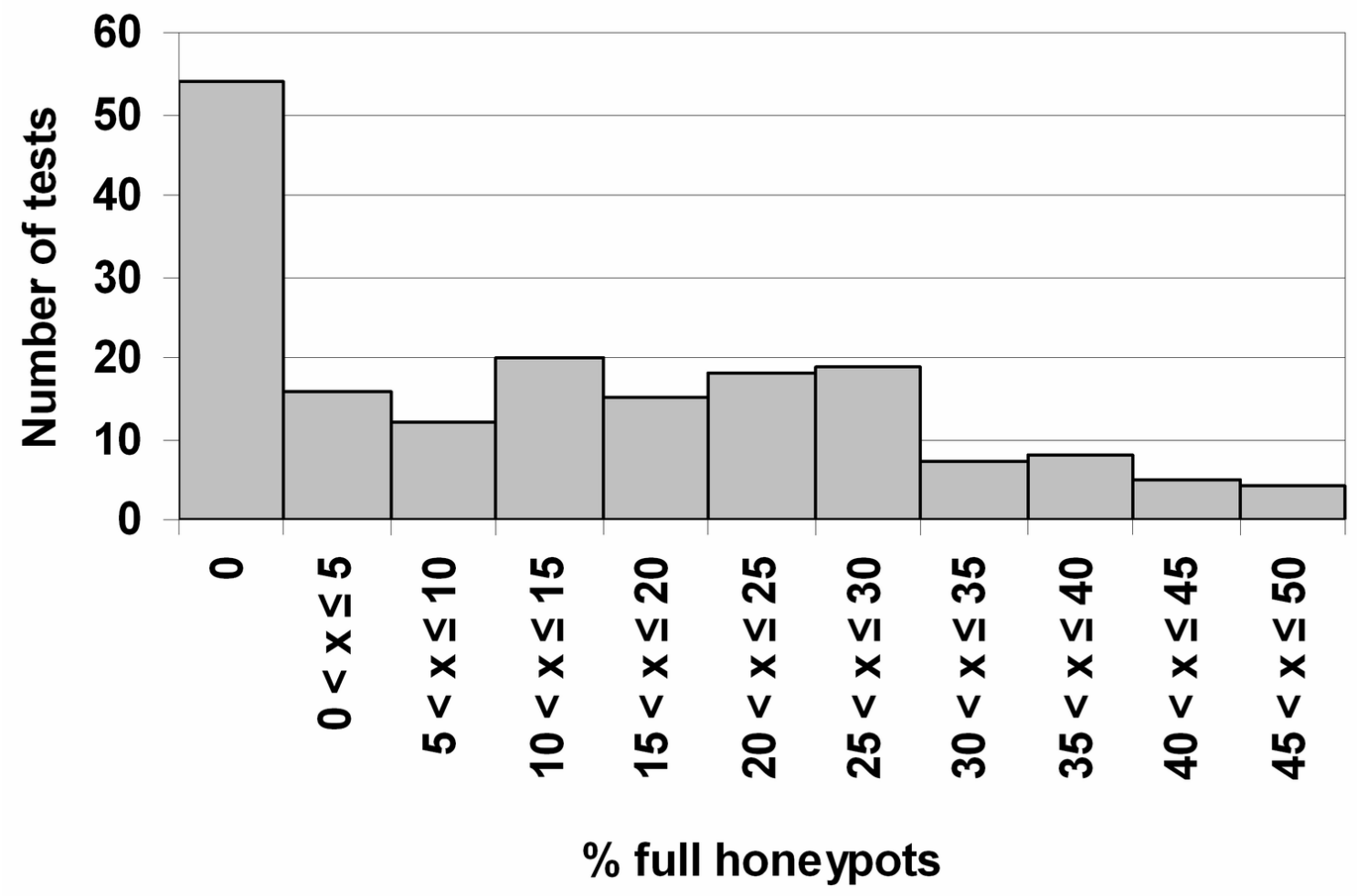
Supplementary Electronic Material 1 Continuous distribution of the percentage of full honeypots data across experiments. There is no clustering of data around 5% full honeypots, which allows for a safe splitting of the dataset at this threshold.



Supplementary Electronic Material 2 Effect of colony nutritional status, pheromone composition and cohort on the percentage increase in the number of foragers and foraging bouts following pheromone application. Results presented are the main effects of three factor ANOVA models: response = nutritional status (either 'low' or 'medium to high' food) + pheromone composition (eucalyptol alone or eucalyptol/ocimene/farnesol mixture) + cohort (1 or 2). The response variables are the residuals of the percentage increases for number of foragers or foraging bouts respectively. Five alternative models are presented here with different thresholds to define nutritional status: 'low food' under (i) 12.63% (the median percentage of full pots), (ii) 5% or (iii) 2% full honeypots (with 'medium to high food' above these values), or (iv) 'low food' defined as less than 5%, 'medium food' 5-15% and 'high food' above 15% full honeypots, or (v) as model iv with the medium food category removed. Regardless of the thresholds used to subdivide our dataset, results remained consistent confirming the pattern shown by regression analyses presented in the main manuscript: i.e. the response to pheromone is higher when colonies have low food reserves. The significance of the nutritional status main effect increases as the low food threshold decreases (here, shown from (i) 12.63 to (iii) 2% full honeypots), indicating that optimal response to pheromone is obtained when colonies are strongly starved (≤2%). Accordingly having 12.63% of all honeypots full indicates a colony has sufficient food reserves. However when the threshold is low (e.g. 2%), sample size issues prevent inclusion of the Cohort effect in the ANOVA. When splitting the dataset in three and only analysing extreme values (≤5% vs >15%), the results are similar although less significant because sample size is lower. Ideally we would have liked to use a lower threshold than 5%, but this was not possible because too few experiments were performed at extremely starved levels in order to avoid worker mortality due to starvation. Thus setting the threshold at 5% represents the best compromise as it is reasonably close to starvation but still allows inclusion of all three factors in the analysis. No interaction terms between main effects were significant so they are not presented here.

	Threshold food level	**(i) <=12.63% vs >12.63%**		**(ii) <=5% vs >5%**		**(iii) <=2% vs >2%**		**(iv) <=5% vs 5 to 15% vs >15%**		**(v) <=5% vs >15%**	
Factors	**Variable (Residuals)**	$F_{1,1}$	***P***	$F_{1,1}$	***P***	$F_{1,1}$	***P***	$F_{1,1}$	***P***	$F_{1,1}$	***P***
Nutritional status	Number of foragers	2.92	0.089	7.83	**0.006**	11.47	**<0.001**	4.41	**0.014**	8.13	**0.005**
	Number of bouts	0.99	0.322	3.97	**0.048**	4.26	**0.041**	1.89	0.154	2.54	0.113
Pheromone Composition	Number of foragers	5.71	**0.018**	5.92	**0.016**	6.75	**0.010**	6.99	**0.009**	4.58	**0.034**
	Number of bouts	0.70	0.403	0.68	0.411	0.74	0.390	0.76	0.385	1.06	0.305
Cohort	Number of foragers	35.24	**<0.001**	26.12	**<0.001**	-	-	29.71	**<0.001**	18.42	**0.000**
	Number of bouts	2.90	0.091	2.07	0.152	-	-	2.18	0.142	1.52	0.220