



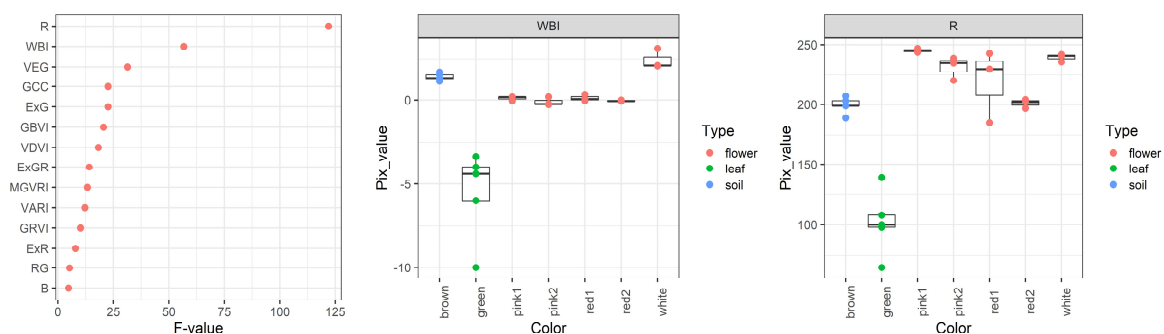
Supplementary Materials

Table S1. Overview of Sarcococca genotypes under field evaluation

Genotype	Experiment	# seedlings manually measured
<i>S. ruscifolia</i> var. <i>chinensis</i> x <i>S. confusa</i> (S1)	SarcoE2	63
<i>S. ruscifolia</i> var. <i>chinensis</i> x <i>S. wallichii</i>	SarcoE2	4
<i>S. saligna</i> (S10) x <i>S. hookeriana</i> var. <i>digyna</i>	SarcoE2	119
<i>S. ruscifolia</i> var. <i>chinensis</i> ‘Dragon Gate’ x <i>S. confusa</i> (S1)	SarcoE2	3
<i>S. hookeriana</i> var. <i>digyna</i> x <i>S. saligna</i> (S4)	SarcoE2	4
<i>S. hookeriana</i> var. <i>digyna</i> x <i>S. confusa</i> (S1)	SarcoE2	5
<i>S. hookeriana</i> var. <i>digyna</i> x <i>S. ruscifolia</i> var. <i>chinensis</i>	SarcoE2	3
<i>S. hookeriana</i> var. <i>humilis</i> x <i>S. hookeriana</i> var. <i>digyna</i>	SarcoE2	8
<i>S. confusa</i> (S1) open pollination	SarcoE2	159
<i>S. orientalis</i> (S3) open pollination	SarcoE2	3
<i>S. humilis</i> open pollination	SarcoE2	2
<i>S. confusa</i> (S12) open pollination	SarcoE2	136
<i>S. ruscifolia</i> var. <i>chinensis</i> ‘Dragon Gate’ open pollination	SarcoE2	4
<i>S. hookeriana</i> var. <i>humilis</i> open pollination	SarcoE2	6
<i>S. orientalis</i> (S11) open pollination	SarcoE2	53
<i>S. saligna</i> (S10) open pollination	SarcoE2	2
<i>S. ruscifolia</i> var. <i>chinensis</i> open pollination	SarcoE2	8
<i>S. saligna</i> (S4) open pollination	SarcoE2	2
<i>S. confusa</i> (S1) open pollination	SarcoE1	10
<i>S. orientalis</i> (S3) open pollination	SarcoE1	10
<i>S. saligna</i> (S4) open pollination	SarcoE1	16
<i>S. ruscifolia</i> var. <i>chinensis</i> open pollination	SarcoE1	7
<i>S. ruscifolia</i> var. <i>chinensis</i> ‘Dragon Gate’ open pollination	SarcoE1	10
<i>S. hookeriana</i> var. <i>digyna</i> open pollination	SarcoE1	12
<i>S. hookeriana</i> var. <i>humilis</i> open pollination	SarcoE1	30

Table S2. Overview of the phenotypic parameters for Sarcococca and rose experiments

Data source	Abbreviation	Description	Sarcococca	Rose
On-ground measurements	GR_Hmax	Maximum plant height	x	x
	GR_Hmean	Average plant height	x	
	GR_W1 and GR_W2	Plant width in two perpendicular directions	x	
	GR_Area	Plant area calculated as GR_W1*GR_W2	x	
	GR_Hratio	GR_Hmax/GR_Hmean	x	
	GR_Wratio	GR_W1/GR_W2	x	
	GR_U	Uniformity scoring		x
	GR_BSS	Black spot leaf spot scoring		x
	GR_BSD	Black spot leaf drop scoring		x
	GR_FIA	Flower abundance		x
	GR_FIC	Flowering continuity		x
UAV imagery	UAV_HQ90	90 th quantile plant height	x	x
	UAV_Hmean	Mean plant height	x	
	UAV_B1 and UAV_B2	Surrounding box widths	x	
	UAV_Area	Plant area (top view)	x	
	UAV_BoxArea	Plant area calculated as UAV_B1xUAV_B2	x	
	UAV_ExG	Excess green mean value		x
	UAV_Hratio	UAV_HQ90/UAV_Hmean	x	
	UAV_Bratio	UAV_B1/UAV_B2	x	
	UAV_Hcv	Plant height coefficient of variation	x	x
	UAV_CC	Canopy height		x

**Figure S1.** Evaluation of spectral bands and vegetation indices to separate colors. Separation of the colors by the index with the highest F-value (WBI).

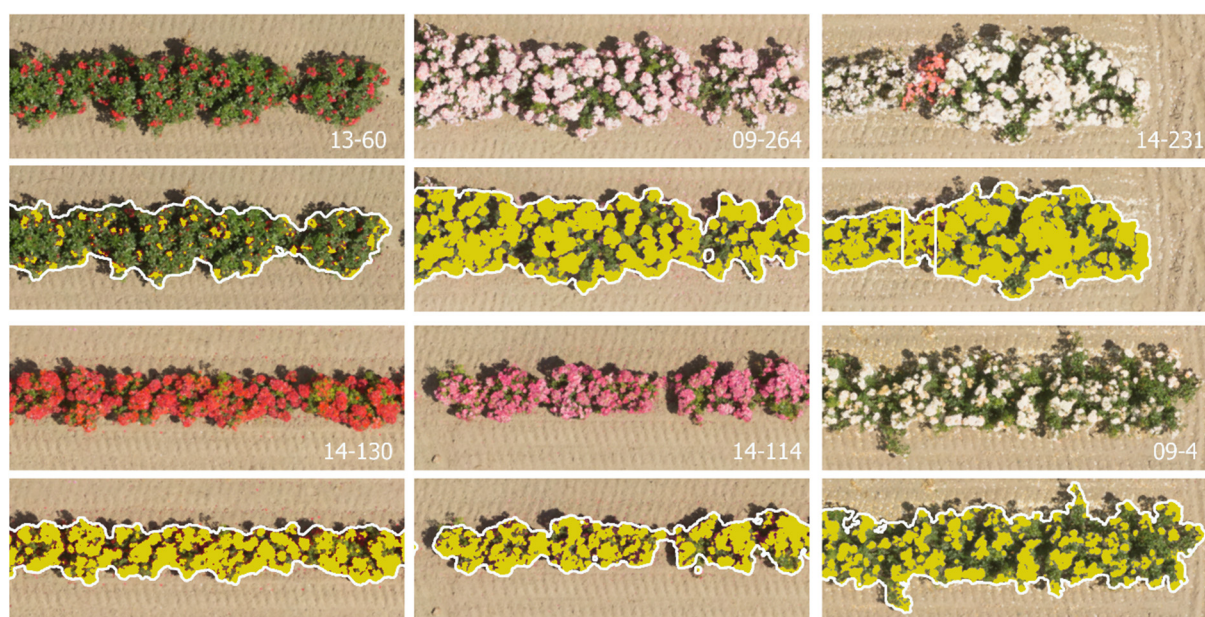


Figure S2. Flight July 1st, examples of genotypes with different flower colors with classification of pixels as flower marked in yellow and bush area delimited in white in roses.

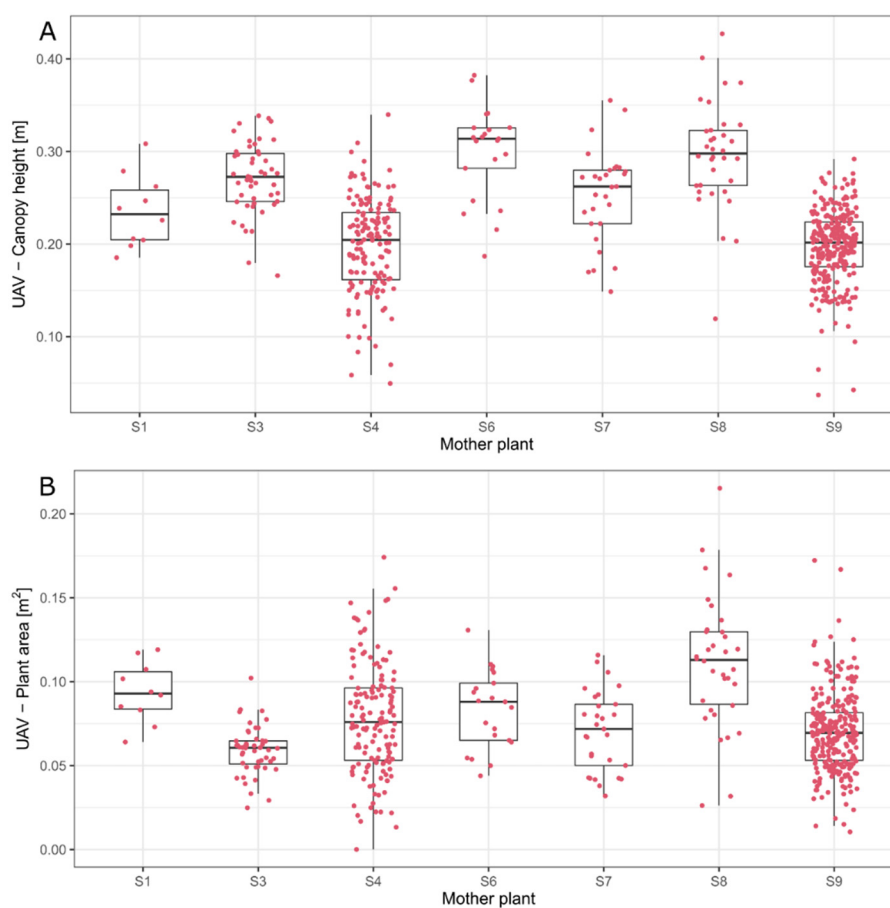


Figure S3. Boxplots per mother plant of all *Sarcococca* plants in SarcoE1 for (A) canopy height and (B) plant area. Every dot corresponds to a plant.

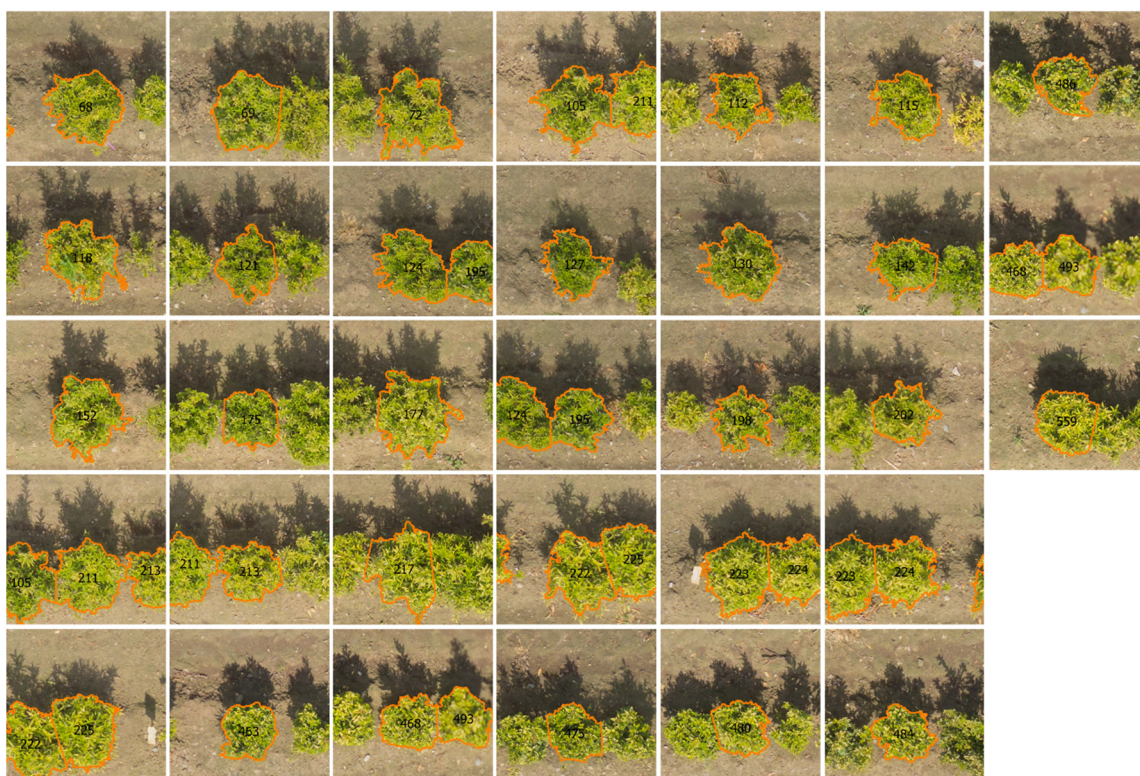


Figure S4. UAV plants selected according to "ideal" plant selection criteria (central part of the image) in *Sarcococca*