

## Supplementary materials

**Table S1.** Scientific name, family, flower color, ornamentally-important organ, irrigation requirement, propagation method of studied geophytes.

Scientific name	Species/Variety	Family	Flower color	ornamentally-important organ	Water requirement	Propagation method
<i>Polianthes tuberosa</i> L.	Pearl Majesty Mahallati Cinderella Super Gold	<i>Amaryllidaceae</i>	White	flower	High	Daugherty bulb division
<i>Crocasmia aurea</i> L.	Aurora	<i>Iridaceae</i>	Orange	Flower	moderate	Daugherty bulb division
<i>Hedychium coronarium</i> J.Koenig	White Butterfly	<i>Zingiberaceae</i>	White	Flower, leaf	High	Rhizome division
<i>Alstroemeria aurea</i> Graham	Balance	<i>Alstroemeriaceae</i>	Pink	flower	High	Micropropagation/ rhizome division
<i>Freesia refracta</i> (Jacq.) Klatt	Ambassador Bastogne Red beauty Pink Passion	<i>Iridaceae</i>	White, Pink, Yellow, Red	flower	moderate	Seed/ Daugherty bulb division
<i>Narcissus tazetta</i> L. <i>Narcissus jonquilla</i> L.	Tazetta Paperwhite Live green Jonquils	<i>Amaryllidaceae</i>	White, Yellow	flower	moderate to low	Daugherty bulb division
<i>Hyacinthus orientalis</i> L.	Blue Jacket Fondant Blue Roman Aiolos	<i>Amaryllidaceae</i>	Blue, White, Pink	flower	moderate	clove division
<i>Tulipa gesneriana</i> L.	Buster Strong Gold Irani	<i>Liliaceae</i>	Red, Yellow	flower	moderate	Daugherty bulb division
<i>Iris × hollandica</i> H.R. Wehrh.	Blue Magic	<i>Iridaceae</i>	Purple	flower	moderate	Daugherty bulb division
<i>Dahlia pinnata</i> Cav.	Red Runner Aragon Mystic Illusion	<i>Asteraceae</i>	Red, Yellow, Pink	flower	high	tuberous root division
<i>Gladiolus hybrida</i>	Alexander Rose Supreme	<i>Iridaceae</i>	White, Pink	flower	high	Daugherty bulb division
<i>Canna indica</i> L.	Phasion Flaccida Striped Beauty	<i>Cannaceae</i>	Red, Yellow, Orange	Flower, leaf	high	rhizome division

**Table S2.** Distance between plants, number of geophytes per square meter, planting depth and time of underground organs in studied geophytes.

	Species/Variety	Distance between plants (cm)	No. of geophytes/m <sup>2</sup>	Planting depth (cm)	Planting time (First year)	Planting time (Second year)
<i>Polianthes tuberosa</i>	Pearl Majesty Mahallati Cinderella Super Gold	15-20	24	5-8	May 16	March 10 -15
<i>Crocasmia aurea</i>	Aurora	15-20	12	8-10	May 16	Oct 12 – Nov 6
<i>Hedychium coronarium</i>	White Butterfly	20-25	12	5-7	May 16	March 5-10
<i>Alstroemeria aurea</i> cv. <i>Balance</i>	Balance	15-20	24	8-10	May 16	Apr 9 – May 5
<i>Freesia refracta</i>	Ambassador Bastogne Red beauty Pink Passion	10-15	24	7-10	October 7	Oct 2- 7
<i>Narcissus tazetta</i>	<i>Tazetta</i> Paperwhite Live green Jonquils	15-20	24	10-15	September 24	Sep 16-21
<i>Narcissus jonquilla</i>	-	10-15	32	10-12	January 2 October 12	Dec 26 – Jan 5
<i>Hyacinthus orientalis</i>	Blue Jacket Fondant Blue Roman Aiolos	10-15	32	12-15	January 2	Oct 7 -13
<i>Tulipa gesneriana</i>	Buster Strong Gold	15-20	24	8-10	October 7	Dec 26 – Jan 5
<i>Iris</i> × <i>hollandica</i>	Blue Magic	20-25	20	10-15	May 16	Oct 7 -13
<i>Dahlia pinnata</i>	Red Runner Aragon Mystic Illusion	10-15	24	10-15	May 16	March 10 -25
<i>Gladiolus hybrida</i>	Alexander Rose Supreme	20-25	12	5-7	May 16	March 5-10
<i>Canna indica</i>	Phasion Flaccida Striped Beauty	20	20	6-8	May 16	March 10 -15

**Table S3.** Flowering time (month) of studied geophytes.

[illegible]

<i>Hedychium coronarium</i>									*	*	*	
<i>Alstroemeria aurea</i> cv. <i>Balance</i>									*	*	*	*
<i>Freesia refracta</i>						*	*					
<i>Narcissus tazetta</i> <i>Narcissus jonquilla</i>			*	*		*	*					
<i>Hyacinthus orientalis</i>						*	*					
<i>Tulipa gesneriana</i>						*	*					
<i>Iris</i> × <i>hollandica</i>							*	*				
<i>Dahlia pinnata</i>	*										*	*
<i>Gladiolus hybrida</i>									*	*	*	
<i>Canna indica</i>	*	*	*						*	*	*	*

**Table S4.** Soil analysis conducted used in the experiment.

Total neutralizing value	Texture	Clay (%)	Silt (%)	Sand (%)	Saturation percentage	Ec (mmohs/cm)	pH	Organic carbon	N (%)	P (ppm)	K (ppm)
20.2	Sandy loam	12	33	55	38	3.73	7.8	1.8	0.16	14.7	407