

Germination of Enhanced Perennial Seed

In addition to improvement in overall germination, germination speed and uniformity may be improved with some types of enhanced perennial seed. Germination temperature may also play an important role, and a few crops were germinated at two different temperatures.

When 28 day counts are provided, this percentage factors in overall plant vigor, in addition to germination. Only seedlings considered to be suitable for transplanting are included in 28 day counts.

Baptisia australis - Average of 2 sowings, 3 replications per sowing (65° F, 18° C)

Seed form	Day 14 Germ	Day 21 germ	Day 28 germ
Raw	4.2%	29.7%	64.5%
Acid scarified	83.7%	89.2%	87.3%
Jelitto Gold Nugget	76.7%	81.3%	81.7%

Campanula poscharskyana – Average of 2 sowings, 3 replications per sowing (75° F, 24° C)

Seed form	Day 7 Germ	Day 14 germ	Day 21 germ	Day 28 germ
Raw	0.0%	8.5%	25.7%	37.5%
Jelitto Gold Nugget	0.0%	31.5%	54.2%	63.8%

***Geranium sanguineum* ‘Vision’** - Average of 3 sowings, 3 replications per sowing (75° F, 24° C)

Seed form	Day 7 Germ	Day 14 germ	Day 21 germ
Raw (supplier 1)	0.0%	3.1%	5.1%
Raw (supplier 2)	0.0%	22.7%	39.6%
Benary ApeX	22.8%	67.4%	76.0%
Jelitto Gold Nugget*	24.5%	69.7%	70.7%

*Note: Jelitto Gold Nugget seed did not arrive in time for the initial sowings, results based on 1 sowing only

Hibiscus x hybrida - Average of 3 sowings, 3 replications per sowing (75° F, 24° C)

Seed form	Day 7 Germ	Day 14 germ	Day 21 germ
Galaxy, raw seed	42.9%	55.1%	56.4%
Galaxy, Gold Nugget Seed	78.7%	90.9%	90.2%
Luna Red	93%	96%	100%

Note: Luna Red seed is scarified by supplier, but germination rate is also evaluated in breeding.

***Lavandula angustifolia* ‘Hidcote Blue’**- Average of 2 sowings, 3 replications per sowing (65° F, 18° C)

Seed form	Day 7 Germ	Day 14 germ	Day 21 germ
Raw	0.0%	21.8%	39.7%
Kieft Tuned seed	83.5%	92.8%	91.5%

Malva moschata - Average of 2 sowings, 3 replications per sowing (75° F, 24° C)

Seed form	Day 7 Germ	Day 14 germ	Day 21 germ
Raw	41.5%	57.0%	65.5%
Jelitto Gold Nugget	56.3%	66.2%	86.0%

Rudbeckia fulgida 'Goldsturm'

Trays were germinated at two temperatures. Because of large differences in performance between the two sowings (trays were sown 4 weeks apart, week 34 and week 38), results from the two sowings are presented separately instead of averaged. Germination problems with 'Goldsturm' are often sporadic. Light and moisture levels appear to be important factors for success, in addition to temperature.

Rudbeckia 'Goldsturm' – Sowing 1, Germination at 85° F (30° C) – average of 2 replications

Seed form	Day 14 Germ	Day 21 germ	Day 28 germ
Raw (supplier 1)	83.5%	83.7%	84.2%
Raw (supplier 2)	81.4%	81.3%	81.1%
Jelitto Gold Nugget	54.3%	55.2%	55.6%
Benary ApeX	93.1%	93.1%	93.2%

Rudbeckia 'Goldsturm' – Sowing 2, Germination at 85° F (30° C) – average of 2 replications

Seed form	Day 14 Germ	Day 21 germ	Day 28 germ
Raw (supplier 1)	22.4%	22.4%	24.5%
Raw (supplier 2)	19.6%	22.2%	36.1%
Jelitto Gold Nugget	77.6%	76.2%	80.7%
Benary ApeX	47.6%	52.3%	59.4%

Rudbeckia 'Goldsturm' – Sowing 1, Germination at 75° F (24° C) – average of 2 replications

Seed form	Day 14 Germ	Day 21 germ	Day 28 germ
Raw (supplier 1)	78.6%	79.2%	80.0%
Raw (supplier 2)	85.2%	85.6%	85.6%
Jelitto Gold Nugget	74.3%	73.3%	67.4%
Benary ApeX	81.4%	81.8%	82.3%

Rudbeckia 'Goldsturm' – Sowing 2, Germination at 75° F (24° C) – average of 2 replications

Seed form	Day 14 Germ	Day 21 germ	Day 28 germ
Raw (supplier 1)	20.0%	20.5%	30.9%
Raw (supplier 2)	24.8%	26.6%	38.9%
Jelitto Gold Nugget	84.9%	84.5%	87.3%
Benary ApeX	58.7%	58.9%	64.2%

Trollius chinensis 'Golden Queen' – 65° F (18° C) – Average of 2 sowings, 3 replications per sowing

Seed form	Day 7 Germ	Day 14 germ	Day 21 germ
Raw	8.0%	12.0%	14.2%
Jelitto Gold Nugget	86.8%	88.0%	86.3%

Trollius chinensis 'Golden Queen' – 75° F (24° C) – Average of 2 sowings, 3 replications per sowing

Seed form	Day 14 Germ	Day 21 germ	Day 28 germ
Raw	15.0%	34.5%	34.5%
Jelitto Gold Nugget	58.5%	90.5%	89.2%