



GrowerFacts Extra

Echinacea - Fall Forcing

Additional Culture Research

from

PanAmerican Seed[®]

Echinacea

Fall Forcing, published 2021

PanAmericanSeed.

OBJECTIVE

To illustrate how to use short days to produce Echinacea with uniform Fall flowering, targeting finish week 35.

VARIETIES

- F1- hybrid Echinacea Artisan™ Collection
- Echinacea PowWow® Wild Berry
- Echinacea 'Cheyenne Spirit'



Artisan Red Ombre



PowWow Wild Berry



'Cheyenne Spirit'

Echinacea

Fall Forcing, published 2021

KieftSeed™

Daylength (DL) Manipulation

DL

Optional

SD ($\leq 12h$)

LD

S

2 LF

7 LF

Flowering



Any DL from sowing to 2 true leaves as it is juvenile stage.



At 2 true leaves, start SD (block cloth, $\leq 12h$) in 128-cell or larger plug tray until ≥ 7 true leaves develop.



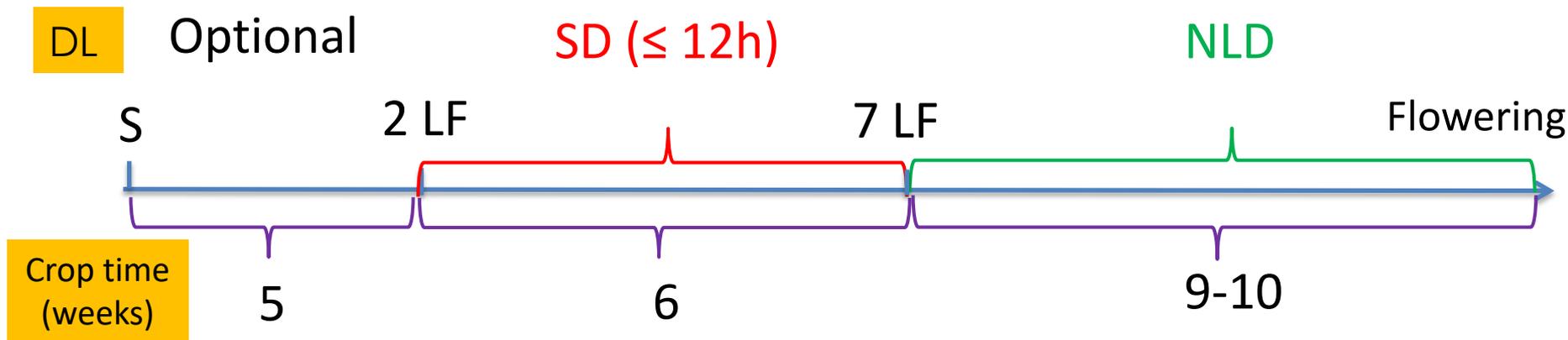
At ≥ 7 true leaves, TP to final containers and grow under natural LD until flowering.

Echinacea

Fall Forcing, published 2021

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Crop time based on ADT 72-75°F/22-25°C



Total crop time is ~20-21 weeks at ~72-75°F/22-25°C ADT.

Echinacea

Fall Flowering, published 2021

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Fall Forcing, target week 35

FALL FORCING PROGRAM

- Week 14
 - Sow in 288-cell or larger plug tray
- Weeks 19
 - TP to a larger plug tray or final container
 - Start SD (black cloth) treatment (at 2 true leaf stage)
- Week 25
 - Finish SD treatment (at ≥ 7 true leaves).
 - Transplant to final containers, if needed.
 - Grow under natural LD.
- Week 35
 - Finish
- Total crop time is ~20-21 weeks at 72-75°F/22-25°C ADT



Fall flowering
without SD
treatment



Fall flowering
with 6-week SD
treatment

Echinacea

Fall Flowering, published 2021

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KEY POINTS FOR SUCCESS:

- 6-week short day treatment from 2-7 true leaves
- SD treatment can be at 10 to 12 hours
- SD treatment can be given in 128-cell or larger plug trays, pack, or finish containers.

Successful Fall Forcing at a Grower

