

PERENNIAL

PROPAGATION

Phlox Open Cultivar(s)

Phlox bifida



TRAY & ROOTING

Form	Unrooted Cuttings (URC)
Rooting Hormone	Yes
Tray Size(s)	72, 105
Plants Per Cell	1
Wks. From Stick To Transplant	6-8
Pinch?	Yes
Days from stick to pinch	21-28

FERTILITY

Fertilize Through Mist?	No
Fertilizer Rate	50-75 ppm N (20-6-22 or 22-5-16 [15-0-15 under low-light conditions])
EC Range	Moderate: (2.0-3.5 mS via SME)
pH Range	5.6-6.2

TEMPERATURE

Average Soil Temperature	18-22°C
Average Air Temperature	18-22°C

IRRIGATION

Irrigation Frequency	Level 3: Keep media moderately moist with mild dry cycles
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LIGHT

Supplemental	No
Benefits From Shade?	No

POTENTIAL DISEASES

powdery mildew, downy mildew

POTENTIAL PESTS

aphids, whitefly

PGR SUGGESTIONS

- Optional 300-500 ppm Florel (3.9% Ethephon)

CULTIVAR LIST

Fort Hill, Snowflake



'Snowflake'

TIPS

- High EC will burn cutting tips. Low fertilizer dosages more frequently is preferable over high dosages less frequently.
- A preventative fungicide should be applied to the roots to reduce disease pressure.

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PERENNIAL

FINISHING

Phlox Open Cultivar(s)

Phlox bifida



VERNALIZATION

Vernalization Required?	Yes
Vernalization Duration Minimum	6-8 weeks
Vernalization Temperature	1.6-4.4°C

CONTAINER SIZE	PLANTS PER POT	TRANSPLANT TO FINISH (WEEKS)
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10-12 cm	1	20-32
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15-16 cm	2	20-32
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FERTILITY

Fertilizer Rate	100-150 ppm N (20-6-22 or 22-5-16 [15-0-15 under low-light conditions])
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EC Range	Moderate: (2.0-3.5 mS via SME)
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pH Range	5.5-6.2
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TEMPERATURE

Day Temperature	7-13°C
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Night Temperature	2-7°C
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IRRIGATION

Irrigation Frequency	Level 3: Keep media moderately moist with mild dry cycles
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LIGHT

Photoperiodic requirements	Daylength Neutral
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Supplemental?	None
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Benefits From Shade?	No
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PINCHING

Finishing Pinch?	No
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Transplant to pinch (days)	N/A
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POTENTIAL DISEASES

powdery mildew, downy mildew

POTENTIAL PESTS

aphids, whitefly

PGR SUGGESTIONS

- None



'Fort Hill'

TIPS

- Keep plants as cool as possible to promote a compact growth habit. Apply PGRs if necessary to complement cool temperatures.
- Reoccurring preventive fungicide applications are recommended.

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PERENNIAL

FEATURES AND BENEFITS

Phlox Open Cultivar(s)

Phlox bifida



KEY INFORMATION

First Year Flowering?	No
Bloom Time	Early Spring to Late Spring
Exposure	Full Sun to Part Shade
Hardiness Zone	3-9
Height	10-30 cm
Width	15-30 cm

DESCRIPTION

Oldies-but-goodies like 'Snowflake' and 'Fort Hill' led to improved cultivars from Dümmen Orange.

CONSUMER APPEAL

- Phlox bifida is a good choice for gardeners interested in a floriferous phlox with a spreading/trailing habit.
- Phlox is a known butterfly magnet. Additionally, it has shown good resistance to deer. Phlox are notorious for their susceptibility to powdery mildew, Phlox bifida is far more resistant than most phlox if sited properly. Good air circulation and foliage is crucial.

GARDEN ATTRIBUTES

- The true flower-power of phlox comes from an abundance of small blooms. With that being said, the fragrant flower clusters can still be used in bouquets or arrangements.
- Phlox bifida is appropriate for woodland gardens or border edges that receive some shade. Additionally, Phlox bifida will thrive in cottage gardens, rock gardens, wildflower gardens, pollinator gardens, and along walkways.
- Well drained soil is an absolute requirement for phlox bifida. Its native environment is rocky ledges and shallow sandy soils so drought tolerance is a natural attribute.
- Phlox bifida spreads over time, its rate of colonization is slow and entirely manageable for any gardener.

NATIVITY

Native to the Midwestern USA, including the Ozark mountains and the cedar glades of Kentucky and Tennessee. It is generally found around rocky steppes and limestone clearings.

COMPANION PLANTS

Veronica, Leucanthemum, Geranium, Lamium, Lamiastrum, Viola, Paeonia, Campanula, Dianthus

COMMON NAME(S)

cleft phlox, sand phlox, sweet William



'Snowflake'

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PERENNIAL

PROPAGATION

Phlox Open Cultivar(s)

Phlox paniculata



TRAY & ROOTING

Form	Unrooted Cuttings (URC)
Rooting Hormone	Yes
Tray Size(s)	72, 105
Plants Per Cell	1
Wks. From Stick To Transplant	6-8
Pinch?	Yes
Days from stick to pinch	21-28

FERTILITY

Fertilize Through Mist?	50-75 ppm N
Fertilizer Rate	100-150 ppm N (20-6-22 or 22-5-16 [15-0-15 under low-light conditions])
EC Range	Moderate: (2.0-3.5 mS via SME)
pH Range	5.6-6.2

TEMPERATURE

Average Soil Temperature	22-26°C
Average Air Temperature	22-26°C

IRRIGATION

Irrigation Frequency	Level 3: Keep media moderately moist with mild dry cycles
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LIGHT

Supplemental	Yes
Benefits From Shade?	No

POTENTIAL DISEASES

root rot, bacterial leaf spot, powdery mildew

POTENTIAL PESTS

whitefly, aphids, mites

PGR SUGGESTIONS

- Optional 300-500 ppm Florel (3.9% Ethephon)

CULTIVAR LIST

Bright Eyes, Laura



'Bright Eyes'

TIPS

- Fertilize regularly to avoid chlorosis.
- A preventative fungicide should be applied to the roots to reduce disease pressure.

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PERENNIAL

FINISHING

Phlox Open Cultivar(s)

Phlox paniculata



VERNALIZATION

Vernalization Required? **No**

Vernalization Duration Minimum **N/A**

Vernalization Temperature **N/A**

CONTAINER SIZE	PLANTS PER POT	TRANSPLANT TO FINISH (WEEKS)
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15-16 cm	1-2	9-12
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22-30 cm	3-5	11-13
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FERTILITY

Fertilizer Rate 250-300 ppm N (20-6-22 or 22-5-16 [15-0-15 under low-light conditions])

EC Range **High: (3.5-5 mS via SME)**

pH Range **5.5-6.2**

TEMPERATURE

Day Temperature **24-27°C**

Night Temperature **18-24°C**

IRRIGATION

Irrigation Frequency **Level 3: Keep media moderately moist with mild dry cycles**

LIGHT

Photoperiodic requirements **Long day: 12+ hours daily**

Supplemental? **Daylength Extension**

Benefits From Shade? **No**

PINCHING

Finishing Pinch? **No**

Transplant to pinch (days) **N/A**

POTENTIAL DISEASES

root rot, bacterial leaf spot, powdery mildew

POTENTIAL PESTS

whitefly, aphids, mites

PGR SUGGESTIONS

- B-Nine (85% Daminozide) 2500-3750 ppm
- Sumagic (0.055% Uniconazole) 5-15ppm



'Laura'

TIPS

- Drip irrigation and proper fertilization is essential for ideal finish size, habit, and flower count.
- Proper spacing, air circulation, and high EC helps prevent diseases and promote branching.
- Reoccurring preventive fungicide applications are recommended.

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PERENNIAL

FEATURES AND BENEFITS

Phlox Open Cultivar(s)

Phlox paniculata



KEY INFORMATION

First Year Flowering?	Yes
Bloom Time	Summer
Exposure	Full Sun
Hardiness Zone	4-8
Height	46-60 cm
Width	46-60 cm

DESCRIPTION

Oldies-but-goodies like 'Laura' led to improved cultivars like the 'Flame' Series from Dümmen Orange.

CONSUMER APPEAL

- Phlox is a known butterfly and hummingbird magnet. Additionally, it has shown good resistance to deer and the allelopathic biochemicals excreted by black walnut trees.
- The true flower-power of Phlox comes from an abundance of small blooms. With that being said, the fragrant flower clusters can still be used in bouquets or arrangements especially if the entire stalk is removed.

GARDEN ATTRIBUTES

- Under proper conditions, *Phlox paniculata* can be the backbone of most perennial borders. It can also be grown as a cottage plant, as a container piece, in a pollinator garden, or in a naturalized area.
- Soil conditions should be kept moderately moist and relatively rich in organic matter.
- All *Phlox paniculata* are susceptible to powdery mildew, site in a well ventilated area to limit disease pressure.

NATIVITY

Native to the eastern half of North America.

COMPANION PLANTS

Veronica, Leucanthemum, Geranium, Lamium, Lamiastrum, Viola, Paeonia, Campanula, Dianthus

COMMON NAME(S)

garden phlox, perennial phlox, summer phlox, sweet William



'Bright Eyes'

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PERENNIAL

PROPAGATION

Phlox Open Cultivar(s)

Phlox subulata



TRAY & ROOTING

Form	Unrooted Cuttings (URC)
Rooting Hormone	Yes
Tray Size(s)	72, 105
Plants Per Cell	1
Wks. From Stick To Transplant	6-8
Pinch?	Yes
Days from stick to pinch	21-28

FERTILITY

Fertilize Through Mist?	No
Fertilizer Rate	50-75 ppm N (20-6-22 or 22-5-16 [15-0-15 under low-light conditions])
EC Range	Moderate: (2.0-3.5 mS via SME)
pH Range	5.6-6.2

TEMPERATURE

Average Soil Temperature	18-22°C
Average Air Temperature	18-22°C

IRRIGATION

Irrigation Frequency	Level 3: Keep media moderately moist with mild dry cycles
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LIGHT

Supplemental	No
Benefits From Shade?	No

POTENTIAL DISEASES

powdery mildew, downy mildew

POTENTIAL PESTS

aphids, whitefly

PGR SUGGESTIONS

- Optional 300-500 ppm Florel (3.9% Ethephon)

CULTIVAR LIST

Amazing Grace, Candy Stripe, Crimson Beauty, Drummond Pink, Emerald Blue, Emerald Pink, Red Wings, Scarlet Flame



'Amazing Grace'

TIPS

- High EC will burn cutting tips. Low fertilizer dosages more frequently is preferable over high dosages less frequently.
- A preventative fungicide should be applied to the roots to reduce disease pressure.

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PERENNIAL

FINISHING

Phlox Open Cultivar(s)

Phlox subulata



VERNALIZATION

Vernalization Required?	Yes
Vernalization Duration Minimum	6-8 weeks
Vernalization Temperature	1.6-4.4°C

CONTAINER SIZE	PLANTS PER POT	TRANSPLANT TO FINISH (WEEKS)
10-12 cm	1	20-32
15-16 cm	2	20-32

FERTILITY

Fertilizer Rate 100-150 ppm N (20-6-22 or 22-5-16 [15-0-15 under low-light conditions])

EC Range **Moderate: (2.0-3.5 mS via SME)**

pH Range **5.5-6.2**

TEMPERATURE

Day Temperature **7-13°C**

Night Temperature **2-7°C**

IRRIGATION

Irrigation Frequency **Level 3: Keep media moderately moist with mild dry cycles**

LIGHT

Photoperiodic requirements **Daylength Neutral**

Supplemental? **None**

Benefits From Shade? **No**

PINCHING

Finishing Pinch? **No**

Transplant to pinch (days) **N/A**

POTENTIAL DISEASES

powdery mildew, downy mildew

POTENTIAL PESTS

aphids, whitefly

PGR SUGGESTIONS

- B-Nine (85% Daminozide) 2500-3750 ppm
- Sumagic (0.055% Uniconazole) 5-15ppm



'Drummond Pink'

TIPS

- Keep plants as cool as possible to promote a compact growth habit. Apply PGRs if necessary to complement cool temperatures.
- Reoccurring preventive fungicide applications are recommended.

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PERENNIAL

FEATURES AND BENEFITS

Phlox Open Cultivar(s)

Phlox subulata



KEY INFORMATION

First Year Flowering?	No
Bloom Time	Spring
Exposure	Full Sun
Hardiness Zone	3-8
Height	10-20 cm
Width	10-25 cm

DESCRIPTION

Phlox subulata is a great choice for consumers interested in a perennial with numerous ecological benefits without sacrificing beauty or reliability.

CONSUMER APPEAL

- Phlox is a known butterfly and hummingbird magnet. Additionally, it has shown good resistance to deer and the allelopathic biochemicals excreted by black walnut trees.
- The true flower-power of Phlox comes from an abundance of small blooms. With that being said, the fragrant flower clusters can still be used in bouquets or arrangements especially if the entire stalk is removed.

GARDEN ATTRIBUTES

- A good choice for patio walkways as *Phlox subulata* is shorter than other phlox cultivars. It's also a versatile choice for rock gardens, around structure foundations, pollinator gardens, woodland gardens, or as a trailing component in containers or along retaining walls.
- Should be grown in well drained soil with a good organic matter content. Compost is an excellent way to amend your soil for this plant's benefit.
- Phlox are notorious for their susceptibility to powdery mildew, *Phlox subulata* is far more resistant than most Phlox if sited properly.

NATIVITY

Native to the eastern and central United States and Canada.

COMPANION PLANTS

Veronica, Leucanthemum, Geranium, Lamium, Lamiastrum, Viola, Paeonia, Campanula, Dianthus

COMMON NAME(S)

moss phlox, creeping phlox, mountain phlox



'Scarlet Flame'

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