

# Geranium BullsEye™

## Culture Guide

**Botanical name:** *Pelargonium × hortorum*

**Product form:** Seed

**Containers:** Pints, Quarts, Gallons, Hanging Baskets

**Habit:** Upright

### Garden Specifications

**Garden Height:** 13–15" (33–38 cm) tall

**Garden Width:** 11–13" (28–33 cm) wide

**Exposure:** Full sun

**USDA zone:** 11

**AHS zone:** 12–1

**Product use:** Containers, Hanging Baskets, Landscapes, Patio Pots, Combos

### Germination

Stages 1 & 2

**Germination time:** 1–3 days

**Media temp:** 73 °F (23 °C)

**Chamber:** Optional

**Light:** Not required for germination

**Seed cover:** Yes

**Moisture level: 5 - SATURATED:** Soil is dark brown and shiny, free water is present at the surface of the soil, water drips freely from the bottom of the tray, and trays are heavy with a visible bend in the middle.

**Rec. tray size:** 288-cell tray

**Seeds per cell:** 1

### Young Plant Production

Stages 3 & 4

#### **Temperature**

**Day:** 70–72 °F (21–22 °C)

**Night:** 64–66 °F (18–19 °C)

**Average daily temperature:** 68 °F (20 °C)

#### **Lighting**

**Day extension lighting:** Not necessary

**Light intensity:** 2,000–3,000 foot candles (400–600 micro mols)

**Day length response:** Day neutral

**Daily light integral:** 12–14 mols/day

**Media pH:** 6.1–6.5

**Media EC:** SME EC: 0.9–1.3 mS/cm

**Fertilizer:** 75–125 ppm N

**Moisture level:** Media should be allowed to dry between irrigations. Alternate between moisture level 3 and 4.

**3 - MOIST:** Soil is brown in color, strongly squeezing the soil will extract a few drops of water, and trays are light with no visible bend.

**4 - WET:** Soil is dark brown but not shiny, no free water is seen at the surface of the soil, when pressed or squeezed water drips easily, and trays are heavy with a visible bend in the middle.

**Pinching:** No

**Plant growth regulators (PGRs):** Spray one time with Cycocel® at 750 ppm when 3–5 leaves are present (around 3 weeks after sowing). Do not apply more than 750 ppm Cycocel® or leaf edge yellowing may occur. Using a spray adjuvant such as CapSil® will reduce the chance of leaf edge yellowing.

**Plug grow time:** 4–5 weeks in a 288-cell tray

**Comments:** Geraniums are irradiance plants so the more light they receive the faster they will flower. Under short days or cloudy conditions it is beneficial to provide supplemental lighting of around 400 foot candles (4,000 lux) especially in the plug tray to speed up flowering. All geraniums are especially sensitive to bacterial diseases so be sure to start with clean plug trays, media and propagation areas. Geranium seed does not carry bacterial diseases so if you start clean you can stay clean. Do not subirrigate or use recycled water. Media pH should not drop below 6.0 or the plants may suffer from iron and/or manganese toxicity.

### Finishing

#### **Temperature**

**Day:** 70–72 °F (21–22 °C)

**Night:** 60–62 °F (16–17 °C)

**Average daily temperature:** 65–66 °F (18–19 °C)

#### **Lighting**

**Day extension lighting:** Not necessary

**Light intensity:** 6,000–8,000 foot candles

**Day length response:** Day neutral

**Daily light integral:** 16–18 mols/day

**Transplanting:** Transplant directly into the finished container. Place the rooting media slightly below the level of media in the container. Make sure that the root ball is covered and that the plug is situated in the center of the pot. Be careful not to damage roots when transplanting since damaged roots increase the likelihood of Pythium infections.

**Media pH:** 6.1–6.5

**Media EC:** SME EC: 1.5–2.1 mS/cm, PourThru EC: 2.3–3.2 mS/cm

**Fertilizer:** 200–250 ppm N

**Pinching:** No. Pinching is not recommended or needed.

**Plant growth regulators (PGRs):** A total of 3–5 sprays of Cycocel® at 750 ppm will help control growth and speed flowering. Do not apply more than 750 ppm Cycocel® or leaf edge yellowing may occur. Using a spray adjuvant such as CapSil® will reduce the chance of leaf edge yellowing. Spray every ten days to two weeks depending on environmental conditions and plant growth. Stop applying Cycocel® when flower buds are plainly visible. Late Cycocel® sprays can result in small and/or malformed flowers.

**Tech tip:** Geraniums are irradiance plants so the more light they receive the faster they will flower. Under short days or cloudy conditions it is beneficial to provide supplemental lighting of around 400 foot candles (4,000 lux) to speed up flowering. All geraniums are especially sensitive to bacterial diseases so be sure to start with clean containers, media and growing areas. Do not subirrigate or use recycled water. Do not grow a hanging Geranium crop over another Geranium crop. Media pH should not drop below 6.0 or the plants may suffer from iron and/or manganese toxicity. Avoid use of ammonium-based fertilizers to help maintain proper media pH. Instead, use nitrate-based Cal-Mag® fertilizers for the entire growth cycle of Geraniums. Keeping media saturated will promote Pythium root rot infections. Proper air circulation is very important at time of flowering to reduce likelihood of Botrytis flower petal blight.

## Scheduling

Size	Crop Time	Plants Per Pot
1.0 pint (4 inch)	7–10 weeks	1 ppp
1.0 quart (4.5 to 5 inch)	8–10 weeks	1 ppp
1.25 to 2.5 quart (5.5 to 6.5 inch, trade gallon)	10–12 weeks	1 ppp
3.0 quart to 2.0 gallon (7.5 to 10 inch)	10–12 weeks	3–5 ppp
1.5 gallon hanging basket (10 inch basket)	10–12 weeks	3–5 ppp
2.0 gallon hanging basket (12 inch basket)	10–12 weeks	5 ppp

Estimated finish crop time is from transplant of a 288-cell tray and finished at an average daily temperature (ADT) of 66 °F (19 °C).

## Example crop schedule for a 1.0 pint

Weeks From Transplant	Description
1 week	Drench media with preventative fungicide to help prevent Pythium
3 weeks	Spray with Cycocel® at 750 ppm
5 weeks	Spray with Cycocel® at 750 ppm
7 weeks	Spray with Cycocel® at 750 ppm
9 weeks	Ready to ship



BullsEye™ Mix



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**Moisture level:** Media should be allowed to dry between irrigations. Alternate between moisture level 2 and 4.

**2 - MEDIUM:** Soil is light brown in color, no water can be extracted from soil, and soil will crumble apart.

**4 - WET:** Soil is dark brown but not shiny, no free water is seen at the surface of the soil, when pressed or squeezed water drips easily, and trays are heavy with a visible bend in the middle.

**Common pests:** Thrips, Aphids

**Common diseases:** Botrytis, Pythium, Alternaria, Rust, Bacterial root and leaf diseases

syngenta® flowers

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