

CARIBBEAN JEWELS[®] SUMMARY GUIDELINES

REV. 05/2012

START with GSBG Grower “Clusters”

- Bulbs are pretreated with a blend of fungicides/bactericides intended to get you off to a good start.
- Follow up with preventative drenches as necessary and detailed later in the “*Disease Prevention & Control*”.

MEDIA

Caribbean Jewels are “moisture loving”:

- Use a well draining media with a pH of 5.5-6.5 that is high in organic matter.
 - Suitable medias generally have 50-65% peat plus other coarse components for drainage.
 - Potted plant medias frequently benefit from 10-20% graded sand for ballast and additional drainage.
 - Consider incorporation of Gypsum/lime/dolomite for pH balance and calcium supply.
- RootShield (Trichoderma) @ 1lb/yd³ (593gm/m³) aids to reduce disease pressure using beneficial organisms.

PLANTING

- Noting Caribbean Jewels prefer deep, well-draining soil- bulbs can be planted in raised beds or containers.
- Plant bulbs 1-2" (2.5-5 cm) deep in containers or 3-4" (7.5-10 cm) deep in beds.
 - Growth will be both delayed and stunted if nose of bulb is allowed to protrude above soil surface.

GROWTH & DEVELOPMENT

The crop **withstands a wide range of light conditions** from 2,500 to 5,000 foot-candles (27,000- 54,000 lux).

- Higher light can be tolerated during cool & humid periods.
- 30% shade is often optimum when daytime temperatures are expected to regularly exceed 70°F (21°C).
- Under deeply shaded conditions, stem length increases but is also weakened.
 - *Caribbean Jewels are not sensitive to photoperiod nor does it require hormonal treatments to induce bloom.*

Caribbean Jewels are robust growers that **tolerate various temperatures** but truly prefer relatively cool conditions.

Optimum temperature details for plant growth & flowering are as follows:

- Days @ 40-65°F (10-18°C) while preferably cooler than 70°F (21°C) maximum / Nights @ 35-50°F (10-16°C).
- Production with a sharp and natural diurnal (night to morning) drop in temperature yields the best results.
- Cool nights with clear days will promote stronger and shorter stems.

Other temperature considerations are as follows:

- High daytime temperatures, such as in hoop houses, leads to soft growth and a tendency to “flag” (wilt).
- Any rise in temperatures during far red light period (sunrise to sunset) will severely impact plant stretch.
- Caribbean Jewels plants and bulbs will take some frost; recognized to be hardy to 28-32°F (minus 2 to 0°C).

Caribbean Jewels benefit from relatively high humidities. Low humidity conditions paired with warm winds can result in evapotranspiration exceeding root uptake capacities (leading to plant and flower “flagging”).

WATER MANAGEMENT

- Water freshly planted bulbs, then immediately follow with “cocktail drench” as necessary.
- Maintain soil moist until substantial sprouts emerge.
- Keep constantly moist [but not soggy] until peak bloom and then decrease moderately.

FERTILITY

Caribbean Jewels are low to moderate feeders. Too much fertility can result in undesirably leafy or “grassy” plants.

- Use a soil incorporated 30-day release preplant charge of nitrogen and potassium (containing little or no phosphorous). This will produce good early establishment of roots and improved early vigor.
- At approximately 3-4 weeks, begin a semi-balanced liquid feed @ 75-100 ppm weekly or 50 ppm constant using 20-10-20 or initially as needed.
- Modifications can then be made based on individual growth objectives and conditions.
 - At leaf unfurling, reducing to 25-50 ppm alternated 1:1 with clear water will keep plants from getting leafy.
- *Alternately, consider the use of a low phosphorous fertilizer (i.e. 17-5-17) can result in better plant balance.*

HEIGHT CONTROL

It is important to appropriately time crop spacing and optimize cultural inputs to minimize PGR requirements. **Numerous variables can separately or together affect growth habit**, these include but are not limited to:

- light
- temperature
- fertility
- water management
- morning "cold pulsing"
- far red-light (twilight) exclusion

Production Phase- *Caribbean Jewels* do not generally require the use of PGRs. However, greenhouse/cold frame production in the absence of negative DIF may require several PGR applications.

- 1st @ 2-2.5" (5-6.5cm) leaf length
- 2nd as necessary
- 3rd as necessary

o We recommend using paclobutrazol at 30ppm @ 1.0oz/gal (7.8ml/L).

↪ Note that PGR effects are negligible, at best if forcing conditions are dark and with "warm" mornings.

Postharvest Phase- It is critical that PGRs are applied to arrest rapid plant and flower postharvest elongation.

- Timed when "almond to walnut-sized" flower buds are observed in leaf rosettes (no color or "neck" development).
- o Apply a single Bonzi (paclobutrazol) application of 10-15ppm @ 0.33-0.5oz/gal (2.6-3.9ml/L).

DISEASE PREVENTION & CONTROL

Caribbean Jewels are naturally durable to soil borne diseases, tending to be easy to grow and be free of root diseases. Unless specific problems are observed, no drenching is generally required.

Our best tank mixed, three-part chemical drench targets the "2-pathogen complex" with the following preferred materials:

- 1) WATER MOLD *part 1- Subdue Maxx* (mefenoxam 25.1% ai) @ 0.5-1oz/100 gal (4-8ml/100 L)
- 2) WATER MOLD *part 2- Aliette* (fosetyl-aluminum 80% ai) @ 13oz/100 gal (98gm/100 L)
- 3) RHIZOCTONIA- *Heritage* (azoxystrobin 50% ai) @ 0.9oz/100 gal (6.7gm/100 L)

◊ Please refer to "CARIBBEAN JEWELS CULTURAL GUIDELINES" for additional details ◊

**3-PART
TANK
MIX***

Pesticide Drench Timing:

Treat preventatively if conditions will cause elevated disease pressure; otherwise, drench for control as necessary.

↪ Always drench in the mornings or early enough for all foliage/runoff to dry thoroughly.

Watch for leaf spot as leaves unfurl. Once leaf spot is observed, spray foliage to runoff with a selection of the following:

- 1) BACTERIAL LEAF SPOT *part 1- Champ II* (copper hydroxide 37.5%)
- 2) BACTERIAL LEAF SPOT *part 2- Dithane* (mancozeb 75%)
- 3) FUNGAL LEAF SPOT *option 1- Daconil Weather Stik* (chlorothalonil @ 54%)
option 2- Chipco 26019 26GT (iprodione @ 23.3%)
option 3- Pageant (pyraclostrobin 12.8% & boscalid 25.2% ai)

↪ DO NOT COMBINE FOLIAR COPPERS WITH ALIETTE OR OTHER ACIDIFYING PRODUCTS.

◊ Please refer to "CARIBBEAN JEWELS CULTURAL GUIDELINES" for lower residue options and additional details ◊

Inspect Crop Weekly. Routinely scout for cleared or browning roots, leaf spots, etc.

- ALWAYS WATCH FOR ERWINIA INFECTED PLANTS TO CAREFULLY ROGUE & DISCARD.
- Re-drench per recommendations if root problems are discovered, up to a total of three times over the life cycle.
- *Sanitation is critical*, especially in multiple cropping programs where rot can progress without an obvious cause.
 - o Sanitize benches, floors, conveyors, pots, soil mixers, etc. between crops.

INSECTS

- **Control Fungus Gnats and Shoreflies due to their ability to spread bacteria and other diseases.**
- **Control white flies, aphids and thrips** on an as-needed basis. If aphid or thrips are present, use aggressive control measures since they are capable of rapidly spreading various viruses.
- **Scout for mealy bugs**, as they can sometimes be a problem. If found, drench with a systemic insecticide.
- Watch for early leaf chewing evidence from larvae after sprouting.

Most materials can safely be applied at label rates; beware of chemical incompatibilities described on label(s). Always inquire with local agricultural advisors if you are in doubt.

↪ "**CARIBBEAN JEWELS CULTURAL GUIDELINES**" more extensive details regarding crop characteristics and optimal culture. Please visit www.goldenstatebulb.com

◊ These instructions are not prescription guarantees, nor are they recommendations and/or endorsements of any of the chemicals mentioned herein ◊