



More colors. More flowers. More sales.

NEW 'Cheyenne Spirit' Echinacea The most sought-after Echinacea color mix...now from seed!

KieftSeed™

Vibrant color mix makes an impact



- **For the first time, you can bring this vibrant color range to market from seed**, an alternative to traditional tissue-culture material. 'Cheyenne Spirit' shines in landscapes with sought-after shades of red, orange, scarlet, cream, yellow, purple and white.
- **All-America Selections award winner.** Proven to deliver superior garden performance in AAS Trial Grounds across North America. Also a 2012 Fleuroselect Gold Medal Winner.
- **Naturally well-branched plants give you more flowers** on every plant for maximum color impact at retail. Plus, 'Cheyenne Spirit' makes fuller, better-looking containers without chemicals.
- **Suitable for broad-range production containers:** from traditional gallons and quarts to 1801 and 304 trays for "Immediate Prairie-to-Go Meadow Landscape".
- **Excellent first-year-flowering perennial** is also suitable for traditional overwinter production and makes a great companion plant to the popular PowWow™ Echinacea series.
- **Hardy 'Cheyenne Spirit' tolerates heat and drought** and overwinters in Zones 4 to 10. It has good retail shelf life that carries over into the garden and landscape.
- **A sure-fire seller.** Echinacea is a top-five perennial – cash in on its popularity with this exciting mix of novel colors.

Contact your preferred supplier for 'Cheyenne Spirit' Echinacea seed and plugs.

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'Cheyenne Spirit' Echinacea U.S. Utility Patent 7,982,110

Height	First year: 18 to 24 in. (45 to 60 cm) Second year: 22 to 30 in. (55 to 75 cm)
Spread	First year: 10 to 16 in. (25 to 40 cm) Second year: 14 to 20 in. (35 to 50 cm)
USDA Hardiness Zones	4 to 10 (-30 to 30°F/-34 to 1°C minimum temperatures) First-Year-Flowering Perennial.
Plug Production	Find complete Plug Production details at KieftSeed.com.
Container Size	1801 or 304 tray: 1 plug per cell Quart/4.5-in. (11-cm) pots: 1 plug per pot Gallon/6-in. (15-cm) pots: 1 plug per pot
Media	Use well-drained, disease-free, soilless media with a pH of 5.5 to 6.2 and a medium initial nutrient charge (EC 0.75 mmhos/cm). For overwinter production, bark media is recommended for better drainage to protect plants from root rot.
Temperature	Nights: 50 to 60°F (10 to 15°C) Days: 60 to 75°F (15 to 24°C) Note: To keep plant growing, keep daily average temperature above 55°F (13°C).
Light	Maintain light levels as high as possible while maintaining moderate temperature.
Photoperiod	It is an intermediate-day plant and flowers most rapidly and uniformly at 13-14 hours daylength. Under daylength 12 hours or shorter, flower can be initiated but will not elongate and will develop more slowly. Daylength 16 hours or longer including night interruption causes sporadic or unpredictable flowering. When forcing crop, use 14 hours instead of 16 hours daylength or night interruption to promote flowering. Once plant has begun to flower, it will keep blooming regardless of daylength.
Irrigation	Maintain media moisture. Avoid both excessive watering and drought. For overwinter production, keep plants on the dry side during cold period as overwatering could result in plant loss from root rot.
Fertilizer	Apply fertilizer at rate 3 (175 to 225 ppm N/1.2 to 1.5 mS/cm) using predominantly nitrate-form fertilizer with low phosphorus and high potassium. Maintain the media EC at 1.5 to 2.0 mS/cm and pH at 6.0 to 6.5. For constant fertilizer program, can apply fertilizer at rate 2 (100 to 175 ppm N or 0.7 to 1.2 mS/cm) while maintaining the above recommended EC and pH ranges.
Growth Regulators	PGRs may be needed for smaller cell or warmer production situations. See KieftSeed.com for more information.
Pinching	Pinching is not needed.
Spacing	Space plants when foliage is touching.
Crop Scheduling	Sow to transplant (288 cell plug): 5 to 6 weeks; # seeds/plug cell = 1 Transplant to flower: 13 to 17 weeks Under proper daylength and temperature range from 60°F (15°C) to 68°F (20°C) Total crop time: 18 to 23 weeks Under proper daylength and temperature range from 60°F (15°C) to 68°F (20°C) Spring Production: Sow in January for natural flowering in middle to later June. Note: Since daylength of 16 hours or longer will cause non-uniform flowering (see photoperiod section), please refer to the following sowing schedule for different regions to ensure uniform flowering:
Recommended Sow Dates	Latitude lower than N35°: no limits N36° – N40°: no later than week 9 N41° – N45°: no later than week 8 N46° – N50°: no later than week 7 N51° – N55°: no later than week 6 When sowing later than the latest sowing date above, treat the plants with short day (10 hours) for about 6 weeks after transplanting for flower uniformity.
Overwinter Production	Sow in July to early September for natural flowering later May to early June of the following year. Note: Plants from overwinter production will flower slightly earlier than Spring production with better branching and shorter flower stems.
Common Problems	Insect: Aphid, Fungus gnat, etc. Disease: Powdery Mildew

See KieftSeed.com for more culture information.

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