BEACON HEMP™

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Photoperiodic Variety Cultivation Guide

Early Line

The Beacon Hemp 'Early Line' of high CBD, photoperiodic hemp varieties currently include eight distinct cultivars that are earlier to harvest than most other high CBD hemp varieties on the market.

Upon short day flower initiation, plants are typically ready to harvest, on average, in 8-9 weeks, depending on variety, environmental and cultural conditions.

CURRENT 'EARLY LINE' VARIETIES INCLUDE:


Bubba's Early Remedy


Early Blossom


Early Cherry


Early Nueve


Early Remedy™


Early Spectrum


Early Trump


Early Wu

More information on each variety's unique characteristics can be found on their Variety Guide.

HEMP GROWTH STAGES :

- **Seedling** – Emergence occurs 2-5 days following sowing. Depending on plug cell size, seedlings are ready to transplant 14-28 days after sowing.
- **Transplant** – Optimal seedling size for field transplantation depends on climate, season, and plug size; generalized recommendation is 21-day old, hardened seedling in a 72-cell flat.
- **Vegetative –** Period of immature development prior to flower initiation and visible bud
- **Visible Bud –** When flower buds are first visible; in field at 42-degree latitude occurs between July 20 and August 5; in light deprivation condition occurs approximately two weeks following induction of long nights.
- **4 Weeks Prior to Harvest –** Typical timeframe for preharvest, compliance analysis is 7 to 9 weeks after germination.

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PROPAGATION:

- Seeds can be sown into trays with loose fill media or plug with media that holds its shape (polymer-peat plugs like Quick Plug®, Ellepot®, Oasis®).
- Sow seed in 50, 72, 98, or 128 cell trays. Avoid over watering and extreme, prolonged dry downs.
- Start fertilizing at 25-50 ppm N when cotyledons have emerged, increasing to 100 ppm N prior to transplant.
- Depending on plug size seedlings are ready to transplant 14 to 28 days following sowing after good root growth has occurred and seedlings have 3 sets of true leaves. Less time with smaller plugs and/or warm conditions, more time with larger plugs and/or cooler conditions.

Figure 1. Plant shown has 2 sets of true leaves.

GREENHOUSE CULTIVATION:

- **Media –** Seedlings should be transplanted into a well-draining media.
- **Irrigation –** Pulse irrigation with weekly leaching recommended, though it is acceptable to irrigate to container capacity and allow for thorough, but not total, dry down.
- **Fertilization –** At transplant fertigate with a complete fertilizer at 100 ppm N. Approximately 5 days following transplantation increase to 150-200 ppm Nitrogen balanced with Potassium (1.6-2.0 mS/cm EC). After visible bud decrease N to 125-150 ppm and increase K to 175-225 ppm depending on environment and water quality. Calcium is needed for floral development. Periodically irrigate media with clear water to reduce salt content.
- **Light –** Transition from 250-300 µmol/m²/s to 500-600 µmol/m²/s over a course of 3-5 days to reduce transplant shock. To maintain vegetative growth daylength should be 18h with a 30 DLI. Time for vegetative growth is desired final plant size dependent. Flowering daylength is recommended at 12h with a 30 DLI.
- **Planting Density –** Optimal planting density based on container size and number of days of vegetative growth; generally, recommend 2.25-4 sq. ft. per plant in 2-3 gallon containers.

FIELD PRODUCTION:

- **Plant density –** Optimal planting density is dependent on sow date, bed width, and weed control strategy (all factors that are strongly influenced by climate, site, and available equipment).
- **Sow Date –** Sowing before June 1 in most North American regions. A planting density between 1800 and 2500 plants per acre is recommended; if sowing between June 15 and July 1 a planting density between 3600 and 5000 is recommended.
- **Direct sowing –** Plant seed 1/4" to 3/8" into the soil. Overhead irrigate until plants are established. Irrigate properly to reduce pathogen incidence. Switch to drip tape or flood irrigation after plants are at the 2-4 true leaf stage.
- **Start plants –** with a higher N early in the crop cycle. Fertilize with additional Calcium at visible to 1" size buds if soils are deficient or higher in alkalinity. Additional Potassium is recommended in areas of high transpiration and low soil K.

THC TESTING / HARVEST INDEX:

- If testing for THC content 4 weeks prior to harvest flowers will likely be 1" in diameter (Figure 2).
- Signs plants are at maximum cannabinoid accumulation are when trichomes become milky and 50% of stigmas are brown; however, it is the grower's responsibility to ensure THC content is still below 0.3% THC at this stage.

Figure 2. Typical flower size at 4 weeks prior to harvest.

HARVESTING:

- Several methods of harvesting, drying and processing can be used. It is up to the farmer to determine the best method for their operation.
- Generally smaller plants and higher planting densities are better for mechanized harvesting.

PEST / PATHOGENS

- Scouting of common, and regionally specific, pests and pathogens of hemp should be conducted regularly.
- Common pests include aphids, thrips, mites, whiteflies, caterpillars and cucumber beetles.
- Common pathogens include *Pythium*, *Phytophthora sp.*, during the young plant stage. Powdery mildew (*Sphaerotheca macularis* and *Leveillula taurica*), *Botrytis cinerea*, *Fusarium spp.*, *Verticillium spp.*, *Sclerotinia sclerotiorum*, among other pathogens.