AutoCBD Greenhouse Cultivation Guide

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Description

AutoCBD is a feminized (99.98% +), day-neutral hemp variety that produces CBD-rich flower for extraction in an average of 75 days. The compact female plants allow for more crop per square foot, maximizing yield and return. Additionally, short time to maturity may allow for multiple cycles annually in regions with long growing seasons.

NOTE: These guidelines have not been validated for every grow environment and are intended to serve as a best practice. The Phylos Technical Development team works with diverse field trial partners to continually improve guidelines.

Soil Preparation

Proper soil preparation is necessary for a successful harvest. AutoCBD performs best in well-draining soils with a pH between 6.0 and 7.0. For greenhouse cultivation, we recommend using ProMix MP or a similar well-drained growing media formulation that will allow for very good drainage.

Sowing

Direct sowing into the final growing medium is highly recommended. Because AutoCBD is a day-neutral variety, transplant stress often triggers early flowering and subsequent low or irregular yields. No seed pretreatment is necessary.

The recommended minimum soil temperature for planting in the greenhouse is 75°F. Seeds should be sown at a depth of ¼ inch. Seeds can be covered with a thin layer of vermiculite to prevent the seeds from floating during watering. Sowing AutoCBD seeds in the pot (three (3) to five (5) gallons) they will mature in is recommended, however, if transplanting is necessary, please refer to the section below.

Germination is expected within three to five (3-5) days. Seedlings should be placed in full-sun conditions two (2) days after germination to prevent hypocotyl stretch.

Transplanting

Due to the delicate flowering response from stress and short vegetative growth period with AutoCBD, growing from transplants is not recommended. However, if it is considered to be necessary for cultivation several factors must be taken into consideration prior to starting the transplants over the direct seeding approach.

To maximize yields from AutoCBD, it is necessary to have a vigorous vegetative growth phase to ensure plant structure is adequate to support the finished flowered plant. Stressors can trigger an early flowering response in AutoCBD reducing the vegetative growth stage. To prevent this from occurring, it is important to not constrict or damage the transplant roots during the seedling growth phase and transplanting. One way to reduce this stress in the seedling phase is to use 50-count, 55mm deep Ellepot trays or other similarly sized trays. Larger plug sizes will reduce the chance of constricting the roots if transplanting is delayed, and the Ellepot plug will limit the damage to the plants root system when removed from the tray. Furthermore, when possible we would recommend starting AutoCBD seed in the same container it will finish in at maturity.

Our recommendation for utilizing Ellepots is based on internal data and is in no way meant to exclude other potting systems, as long as the considerations in this document regarding disturbance and binding of roots are taken into account.

Fertility

Exact fertility targets are not yet well established for hemp. When planted outside, a soil test should be performed before fertilizing to properly amend the soil to achieve 'high' fertility levels.

For the greenhouse, we recommend using 15-5-15 Cal Mag fertilizer for the vegetative stage at an electrical conductivity (EC) of 1.8. When flowers appear, switch to 10-30-20 Bloom Booster at an EC of 1.8 for three (3) weeks. Then switch to 4-31-37 at an EC of 2.0 to finish the crop off.

If plugs are grown in the greenhouse for field purposes or for transplanting into finished pots, fertilize seedlings with a 20-10-20 General Purpose Fertilizer at an EC of 1.5 before transplanting. If plugs are transplanted into a prepared outdoor field, follow the fertility guidelines outlined in the *AutoCBD Field Cultivation Guide*.

Lighting

Using HPS or LED lights to supplement natural lighting is recommended for greenhouse cultivation. Utilize lights that can achieve a minimum of 750-800 PAR.

During the vegetative phase, autoflower hemp varieties require a minimum day length of 16-hours of light but will perform best under 24-hour light conditions. Early flowering and reduced yields may result if day length recommendations are not followed. Autoflower hemp varieties will start to flower naturally without the need for a change in lighting schedule.

Watering

It's critical to monitor the potting media moisture after sowing; too much water during germination can have adverse effects on emergence rate. After seedlings have emerged, irrigation can be used more liberally. We recommend using water with a pH of 5.8-6.0 and always allow 25-30% runoff during each irrigation event to sufficiently flush salts and prevent them from building up in the root zone.

Temperature and Humidity

Maintain temperatures at or close to 80°F with relative humidity between 60-70%. Avoiding temperatures below 70°F or above 88°F is recommended.

Scouting

Scouting early and often, beginning soon after emergence, will allow for early detection of disease onset and pests. Proper identification of diseases and pests is crucial for determining the best control method. For pests, the use of a sticky trap can often be beneficial. Biological Control Agents (BCAs) can often be used to control mildews and insect pests. Proper identification of insects is necessary for choosing a BCA, in many cases. Control agents are often state-specific with the exception of those approved in December 2019 by the EPA. Always refer to the product rules within your state for pest and disease control.

Maturity and Harvest

Hemp maturity is cultivar-dependent. AutoCBD matures on average 75 days after planting. Hemp is considered mature and ready for harvest when the majority of trichomes have shifted from clear to opaque with a cloudy or tan color. The use of a 10x hand lens can help identify the shift in trichome color. Refer to your state-specific guidelines for testing timelines. To ensure compliance, state testing of AutoCBD should occur two (2) weeks after flower initiation.

Lessening the machinery impact on the CBD-rich trichomes at harvest may result in a higher percentage of product for delivery to processing. While there are a multitude of harvesting methods becoming available, as of the publication date of this guide, hand harvesting is still the best way to maximize protection of the trichomes.