



actosol®

Hemp Cultivation
APPLICATION PROGRAM
Boost Yield Increase Profits

Hemp is an annual plant that grows well and thrives in warm weather and grows best in well-drained soils that are high in organic matter. Hemp seeds are generally sown directly where the plants are to grow, rather than in pots for transplanting. They should be planted after the average date of last frost has passed. Established plants are fairly drought tolerant, but the seedlings require irrigation for the first six weeks whenever the soil is dry. Actosol comprises of unique bioactivated Humic and fulvic acids proven natural growth enhancers that support cultivation in many ways. They increase nutrient uptake, help establish healthier roots, and ensure all-around healthier plant development during all stages of growth. Not only result in greater yield potential, Actosol being made available in water soluble liquid is easy and cost effective for no matter what type of grow-op you run, be it soil or hydroponics. It promotes improved ion-exchange and better soil buffering capabilities. **Actosol proprietary formulation specifically for cultivation of hemp** actively allows for nutrients and minerals such as calcium, iron, magnesium, zinc, and manganese to be absorbed readily, stimulating improved plant **growth**, healthy roots and increased yields. Its use is proven to increase oil in the olives.

Regardless of your preference for either indoor or outdoor marijuana cultivation, it is absolutely possible to grow robust plants from seed to stash. If you have access to clones from a reputable grower and/or club then you can skip straight to vegetative growth. However, the majority growers start a cannabis garden from scratch with seeds. Choose your beans wisely, genetics are the foundation of your grow-op. Cannabis is mostly a dioecious annual plant, but can occasionally display intersex traits, these plants are known as Hermaphrodites and commonly referred to as “hermies”. Only non-pollinated female plants produce Sinsemilla, so unless you’re a breeder, male plants are useless and must be removed before blooming with regular seeds. Of course, any intersex plants must also be removed immediately to keep your bud high-grade and seed-free. High-quality feminized seeds are the obvious solution; although you still need to be vigilant because 99% of the time, in optimal care and conditions, they will deliver a high-grade harvest of seedless weed. The average cannabis crop from seed takes a typical ganja farmer between 3-6 months to bring to harvest, so it needs to be dank stash.

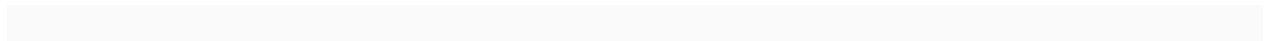
Autoflowering varieties must be even more carefully scrutinized to avoid disappointment later. There is literally no time for mistakes with plants that transition to bloom independently of hours of light within weeks and can be cropped within 60-80 days from seed germination total.

Pedigree genetics are just as important with auto’s as they are with photoperiod strains that flower under a standard 12-12 light-dark cycle and spend anywhere between 7-14 weeks in the bloom phase alone. Cannabis plants will first give you an indication of their sex in the early phase of bloom. Typically, within the first two weeks of flowering females will develop pistils or

“hairs” to confirm their femininity. If you see “nanners” or anything resembling a cluster of grapes protruding from flowers or anywhere on the stem then you have a male cannabis plant. Should you see both hairs and nanners then you have a hermie to remove right away. Photoperiod strains are induced to bloom by the hours of light they receive; indoors the grower changes to a 12-12 light-dark cycle to artificially promote flower growth.

Outdoors Mother Nature dictates the grower’s schedule and flowering will only commence in Summer/Autumn as the hours of daylight naturally diminish, making for a longer more gradual flowering period. Weed growers in the Northern hemisphere don’t refer to October as “Croptober” for nothing. Of course Autoflowering strains don’t follow the rules due to their Ruderalis genetics, so they will begin to bloom in about a month post-germination. Auto’s prefer to stay in 18+ hours of light for flowering and will be more productive on a light-dark cycle that would inhibit photoperiod strains from blooming at all. Flowering generally lasts 7-10 weeks for indica and hybrid photoperiod cannabis strains, while the more Sativa dominant strains can take 10-14 weeks to fully ripen into primo head stash. Autos only flower for 30-45 days with a much more sudden transition into flowering, choosing feminized autos is a wise choice for novices that don’t want a seeded stash.

It’s always best to evaluate if a cannabis plant is ready to harvest by taking a closer look at those resin dripping buds. Using an inexpensive scope to zoom in on those resin heads to make sure they are milky and amber rather than clear removes all the guess work. Once you confirm you’ve got a ripe marijuana crop on your hands it’s time to break out the trimming scissors and get harvesting. After two weeks slow drying in paper bags or hung up, at room temp and approximately 50% RH, you’ve got a stash.



GROWTH CYCLE

GERMINATION / 1 to 7 days



Step one is to **germinate** your carefully selected cannabis seeds. It's always advisable to get your garden off to a great start so make sure you get germination right. If this stage goes wrong, your crop is all done before it even began. Usually, germination takes between 1-7 days before a tap root emerges.

The paper towel method is a tried and trusted technique, but if you are a newbie or perhaps too heavy handed to gently remove little sprouts without damaging the tiny rootlets, then we recommend our Royal Queen Seeds **Starters Kit Feminized**. Pop your beans in and play the waiting game for a few days. It doesn't get much easier to get growing than this.

Sativa leaning strains tend to take a little longer to germinate often 4-7 days. While some Indica strains and vigorous hybrids can take as just a

DIRECTIONS/APPLICATION RATES;

5 Gallons Per Acre Start up Hemp Actosol

Dilute Actosol with 20:1 water apply to soil along with seeds or seedlings by spray, drip or irrigation

day or two. Outdoors Spring time is naturally the time for seed sowing and cannabis is no different.

SEEDLING STAGE / 2 weeks



Once your cannabis seeds have sprouted, they are entering the seedling phase, this is not to be confused with vegetative growth although 18-24 hours of light is common to both stages.

Even if you plan an outdoor crop it doesn't hurt to get your seedlings strong and healthy indoors before moving them into the wild. Cannabis seedlings can even thrive on a windowsill with decent sunlight.

Seedlings transition to vegetative growth usually between 10-15 days and begin to resemble tiny plants. The perfect home for cannabis seedlings is a propagator, ideally with 70% RH and temps 20-25°C, under either white CFL lights or LED's.

Cannabis seeds must be encouraged to develop a vigorous

healthy **roots**. Unless you are planting directly into final containers then small pots with lightly fertilized medium are recommended.

VEGETATIVE GROWTH / 2 to 8 weeks



Vegetative growth is normally associated with a **transplant** at some point as plants outgrow the starter medium be it a Rockwool block or paper cup filled with soil or coco. Continued development of the root zone and robust branching are the top priorities for the grower. High RH of 50% is ideal and cooler temps 20-24°C can promote more females if growing regular seeds.

Autoflower cultivators have even less time to play with than photoperiod growers as most autos will race into flowering after just 2-3 weeks of vegetative growth. It's for this reason that many auto growers plant their autoflowering seeds directly into the final container. The clock is ticking with autos from the moment of germination.

Apply 5 Gallons per acre of Calcium Hemp Actosol

50:1 Dilution with water one every Four weeks -Total 10 Gallons per acre

Photoperiod strains can be kept in vegetative growth indefinitely so long as 18+ hours of light and suitable conditions prevail. This is what allows indoor growers to keep mother plants for years and why outdoor grower's plant in springtime. Indoors or outdoors 18+ hours of light facilitates taking cuttings too.

This is the stage to pot up photoperiod plants into final containers, at least a couple weeks before switching to bloom or prior to Summer outdoors.

While the photoperiod strains can be kept in veg weeks or even months to allow for all kinds of pruning and training to boost yield like topping, FIM, LST or even a ScrOG the Auto grower is somewhat limited by time.

FLOWERING / 6 to 12 weeks



At this stage, the focus of the grower and plants switches to the production of buds and the grower is already dreaming of a frosty marijuana harvest in the near future. RH needs to be reduced to 40-50%

*Apply 5 Gallons Per Acre every four weeks of
Booster Hemp Actosol*

50:1 Dilution with water –Total 10 Gallons

