

Cannabis Cultivation Growth Cycles

Cannabis is considered a photosensitive plant, meaning the number of light hours for which the plant is exposed daily will trigger particular responses. It is one of the few annual plants that have separate male and female plants and can be grown from either seed stock or a clone (a cutting from a mature female plant that contains identical genetic information). In general, cannabis plants complete their entire cycle in 3-8 months. The duration of the cycle is largely dependent on the following factors:

	SHORTER GROWTH	LONGER GROWTH
SOURCE	Clone	Seed
GENETICS	Indica	Sativa
GROWTH MEDIUM	Rockwool	Soil
ENVIRONMENT	Indoor	Outdoor

The life cycle of a cannabis plant consists of 4 to 5 main phases depending on whether the plant is sourced from a seed or clone. Most commercial cannabis farmers use clones as they are more predictable and eliminate the month required to germinate and sex seed stocks. The four major phases in a plant's life cycle are: rooting, vegetative, flowering, and harvesting. Below is a high-level outline of each phase along with a table that outlines the duration in days.

CULTIVATION FROM CLONE			CULTIVATION FROM SEED STOCK		
PHASE	INDOOR	OUTDOOR	PHASE	INDOOR	OUTDOOR
Rooting	7	14	Germination	4	4
Vegetative Stage	14	28	Seedling Stage	16	28
Flowering Stage	56	80	Vegetative Stage	14	28
Harvest	21	21	Flowering Stage	56	80
Total Number of Days	98	143	Harvest	21	21
			Total Number of Days	111	161

Rooting

During the rooting phase, a 6 to 12-inch section is cut from the donor plant (also referred to as a mother plant), planted into the desired medium and placed under fluorescent lighting that is on 24 hours a day. It takes roughly 6 to 12 days for the clone to develop the 2 to 6-inch roots necessary to be transplanted into its final medium for its vegetative and flowering phases.

Vegetative

The vegetative phase is considered the plant's main growing stage. During this phase, the plant continues to grow vertically, produces large fan leaves necessary for photosynthesis and begins to show signs of its sex. Plants are kept under a minimum of 18 hours of light for as long as necessary to develop the proper amount of vegetation and flowering sites. This stage can take anywhere from 7 to 28 days depending on the genetics, light intensity and canopy space. High-intensity discharge (HID) lights used indoor tend to drastically lower the amount of time required to grow vegetation.

Flowering

The flowering phase is when the female plants start to produce the flowers that contain the cannabinoids and terpenes that give cannabis its euphoric and medicinal effects. The plant naturally starts this cycle outdoors during the end of the summer when the sun is out for fewer than 14 hours per day. Indoor growers simply switch the lighting cycle to 12 hours on and 12 hours off.

The duration of this phase is primarily dependent on genetics and environment. Sativas tend to require 63 to 90 days, while Indicas only require 49 to 63 days under identical conditions. Indoor grows drastically reduce the amount of time required for flowering. A strain that requires 63 days outdoors can reduce flowering times to 49 to 56 days under HID lights indoors.

Harvest

The harvesting phase consists of two stages: drying and curing. Immediately after the plant is cut down, it is hung upside down in a dark and environmentally controlled room. It takes seven to 14 days to dry the cannabis to the point where the stems can easily break. The curing process allows the farmer to further control the moisture level in the flowers. This is done by placing them in a cool, dry and light proof container, which is opened once a day to replace the air inside. Curing also allows the bacteria in the plant to break down the remaining chlorophyll, which can cause a harsh smoking experience. The curing process can take anywhere from seven to 28 days depending on the flower structure.