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## **LED Grow Lighting and Genetic Drift**

Marijuana plants exhibit two distinct hereditary characteristics: "Variability" and "Inherited traits" (I forget the exact, proper, terms here). One trait is the ability for a plant to adapt to its' current environment; the other trait is the plants ability to pass this adaptation down through seeds to the next generation. Marijuana plants are EXTREMELY adept at both of these mechanisms.

Seeds from "weed" found growing along a dirt road in Illinois, when germinated and grown in Hawaii, will produce shorter, more psychoactive, plants with bigger flowers. These traits will be passed on and "improved" upon in future generations. The reverse is also true.

"Pot" is typically grown from cuttings in commercial grow operations. However, the "variability" factor remains in action - this is known to growers as "genetic drift", and plants grown from successive "generations" of cutting with eventually "settle out" into consistency. As consistent product is desired both by growers and state regulators, forcefully changing lighting systems may have unexpected consequences for growers. This is particularly true for growers attempting to produce High-CBD, Low-THC yields for use in medications.

I suggest more study is required before mandating a particular lighting technology for plant growth. Growers already have enough to worry about, (including federal agents descending on California with bullet-proof vests and automatic weapons), they do not need this added concern. I suspect many grow-operators are reluctant to comment to the CEC for many reasons; outside research is required.