

Do metal halide lamps grow stonier buds?

I have to disagree with you about lights. I've been growing under metal halides (MH) lamps for more than 20 years. In CC issue #34 you stated that MH lamps are useful only when the amber light of a high-pressure sodium (HPS) lamp would cause a problem. My associates and I would disagree. The consensus among us is that HPS lamps produce more weight, but the stoniest, longest-lasting high comes from metal halide lamps. Ultra-violet (UV) light is the key. MH lamps produce more than HPS lamps and the more UV, the higher the potency climbs in normally high potency plants. I grow for buzz, not weight, or you could say for love, not money, so the MH lamps suit my purpose. I use a Sunmaster MH lamp. The plants produce a little more weight under them than the old 5500K (Color temperature) bulbs, but they've kept the UV light strong.

The article that you refer to, Pot Potency by DMT, discusses the environmental aspects of THC production. In the issue, I recommended HPS rather than MH lamps. One of the factors that DMT covered was ultraviolet light. There are three spectrums of UV light. UVA is the least harmful. This is the spectrum produced by black lights. UVC light is dangerous to all life. It is used in water purification systems to sterilize water. The light spectrum of interest to us is UVB. It affects life in many ways. In humans it causes tanning, skin aging, eye damage and cancers. Other animals are affected by it in all sorts of ways. The Earth's atmosphere filters UVB light. There is more UVB light at high altitudes than at sea level. Also, sunlight at the equator takes the shortest route through the atmosphere. As the latitude increases, sunlight reaches Earth after going through more atmosphere because of its slanted path. Therefore UVB at the equator is much more intense than in temperate zones. That's one reason people tan or burn so fast in the tropics and why skin cancer rates are higher in southern than northern states. A researcher conducted a controlled experiment in a greenhouse. He lit a group of high potency plants similarly except with the addition of UVB light to some groups. He found that the percentage of THC increased in a direct ratio with the increase in UVB light. This research confirms the adage that high altitude plants are more potent than those grown at low altitudes. If you look at old-world land races cannabis, plants that have become adapted to the climate and latitude, the ratio of THC to CBD starts at 100 : 1 at the equator. At the 30th parallel (The Hindu-Kush Valley) the plants have a ratio of 50 : 50. At the 45th parallel the ratio is near 1 : 100. This corresponds roughly with the amount of UVB light received at these latitudes. There is much more UVB at the equator than the 45th parallel. How can you get more UVB light to your plants? Certainly it's true that MH lamps emit more UVB light than HPS lamps. Still the amount that MH lamps emit is small. In fact, many manufacturers use UVB shielding glass to filter out most of the UVB that's produced. The UVB light the plant receives from an MH lamp does increase the plant's potency slightly at the cost of yield, but there are better ways to introduce UVB light into the grow room. They include reptile lights, which emit about 10% UVB, and tanning lamps. The problem with using these lamps is that they are associated with increased number of cancers and many other problems. They should not be on when you are in the grow room. Not much research has been conducted on using them to produce higher THC values. I will do a full report in a future issue.