MERCHANT'S GARDEN

CLIMATE-SMART URBAN AGRICULTURE

Supporting Historically Underserved Producer

www.merchantsgarden.com

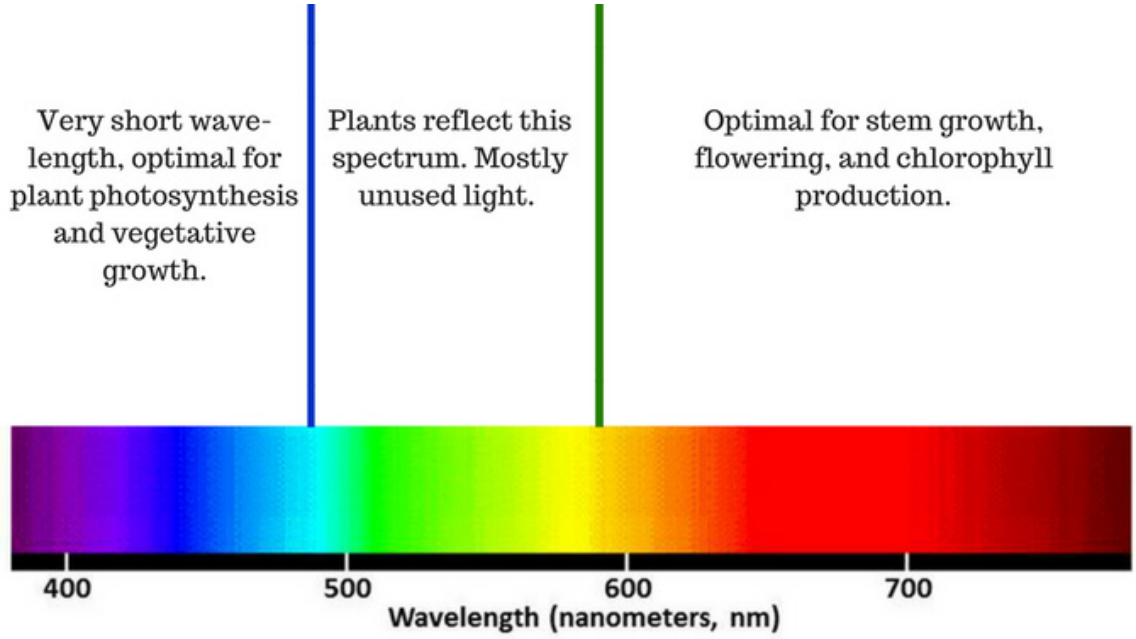
TYPES OF GROW LIGHTS

- Metal Halide – A type of HID light that produces a lot of ambient heat & requires a ballast*. An average lifespan of 20,000 hours and light spectrum that is full spectrum but leans to cool. A full setup will cost between 110-250$ depending on make & wattage.

- High Pressure Sodium – Another type of HID light, that produces even more heat than metal halide bulbs. They have a light cycle of about 24,000 hours and produces a very warm light. A full setup can range between 100-1000$ depending on make & wattage.

- Compact Fluorescent Light – Compact florescent lights are a cheap and effective way to grow. With variable spectrums to choose from, they provide both warm and cool light spectrums. Generally, these lights are not very strong, but draw little power and setups can be found for under 100$

- LED's – LEDS are the newest iteration of grow lights. Providing efficiency, life span, compactness, full spectrum ability, dim and brighten features and low heat out-put. This makes LED's very effective for all growing applications. There are a few drawbacks using LED lights such as the high initial cost. They also put plants at high risk of burning if they are too low to plants. Lastly, because they are relatively new, manufacturers don't have standard specifications and quality varies between manufacturers.



Light Spectrum and Plant Growth

https://www.herbexaminer.com/herbs/best-grow-lights-for-herbs/

IDEAL LIGHTING FOR SEEDLINGS

Seedlings require minimal lighting, and like cooler wavelengths of light. Cooler wavelength will keep plants in their vegetative state and promote lush-healthy leaves and bushy growth. This is ideal for starting plants and keeping them from stretching into the light. CFLs or LED lights would be ideal for seedlings. If using LEDS place more than 18" away to prevent burning. If using CFLs place 4-6" away. Make sure timers are set for 14-18 hours of light for maximum growth.

IDEAL LIGHTING FOR LEAFY GREENS & VEGETATIVE STAGES

Leafy greens such as lettuce, spinach, Swiss chard, and many other plants that growers are not looking to flower can be grown with the same type of lighting indefinitely. If the grower is trying to flower the plants, it is still best to keep plants in the vegetative state to reach desired size before blooming.
Once seedlings are established Metal Hallide bulbs can also be used in the vegetative stage. If using MH bulbs place 7-18" away, as they produce a decent amount of heat as well.

Make sure timers are set for 13-18 hours of light for maximum growth.

IDEAL LIGHTING FOR FLOWERING/BLOOMING

Fruiting and flowering plants require a warmer spectrum of light. The warm spectrum inherently tells the plant to bloom. High Pressure Sodium bulbs are perfect for blooming, as they are powerful and warm colored. LED's can also be purchased that have warm spectrums. Both LEDs and HPS lights should be placed 12-18" away at this stage. Set timers for 12 hours of light to additionally steer plants to bloom.

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These efforts are seen, appreciated, and of the utmost importance.