



Straight Talk About Light Moving Systems

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You've probably heard of light moving systems and wondered if you really need another piece of equipment for your indoor garden. The rails, motor and extra wires may seem like overkill when you already have lights that work pretty well. Can moving light fixtures help you grow better plants? Can light movers save you money? Let's take a look at what light movers really offer the indoor gardener.

You can deliver all of the necessary nutrients hungry indoor plants need, but without the right light, at the right time, and in the right concentration, your plants will suffer. They will starve, produce stunted leaves and feeble stems, or fail to flower or grow fruit. Light is so important to plants that providing an indoor garden with this one component is quite possibly a grower's largest expense and accounts for one of the biggest reasons indoor gardeners fail to see the results they expected.

When it comes to lighting, there's a lot to learn, and learning the ins and outs of artificial plant lighting can leave you with a headache, and a hole in your wallet. Fortunately, light movers make it possible to refine your set-up while saving energy dollars that will offset the initial purchase price of the equipment. The cost of energy is going up. The cost of comprehensive lighting technology is also going up. Positioning yourself to manage both more efficiently in your growroom makes good sense.

Types of Light Movers

There are two major types of motor-driven light movers: those that run on straight rails and those that have circular options that rotate either in a controlled arc or in full revolutions. Both rail and circular light movers are often customizable.

Rail or track light movers – Rail-style light movers are the most popular and widely available style on the market. They convey a third party light fixture along a straight ceiling track. Although track lengths vary, 6 ft. or so is pretty typical, while commercial movers are somewhat longer. When reaching the end of the run (length of the rail), the light stops and reverses direction. In some models, a timed stop can be added after each circuit to provide more even light distribution to plants growing at the end points. In some light movers, the length of track the light travels can also be adjusted for a shorter run as needed, and the rails themselves can usually be cut to size if necessary.

Circular light movers – Circular movers operate somewhat differently. They rotate on arms extending from a central ceiling mount, somewhat like a ceiling fan. A basic unit will usually accommodate 2-3 lightweight lamps. Depending on the capacity of the unit, extra lamps can often be added by installing additional arms or crosspieces to the base.

Although choosing one type of light mover over another will most likely be based on price, ease of installation or a combination of factors, the general layout of your growing space is important, too. For instance, a rectangular grow space is clearly better suited to a rail-style light mover system than a circular one. You'll also want to make sure you watch your weight. Weight load maximums for light moving equipment vary from manufacturer to manufacturer and model to model, so check the specifications on different products for maximum weight guidelines and mounting recommendations. Expect a typical load maximum range of 35-100 lbs. for most light movers.

Advantages of Light Movers

Better light and space management – The most obvious advantage to using a light mover is pretty intuitive, and you may think it's the main selling point for the technology: moving the light you have may eliminate the need for additional fixtures. This is a potent argument all by itself. Instead of swaddling every surface of your growroom in Mylar sheeting to eke out more illumination, you can increase your existing light coverage as much as 30% by periodically repositioning your light fixture. The cost of operating a light mover is considered negligible compared to the cost of operating most lamps and purchasing replacement bulbs for them. Better light coverage also allows you to keep plants closer together, maximizing the growing space. With special adaptors, light movers are also suitable for grow tents and greenhouses.

More natural lighting – Static lighting helps plants grow, but it doesn't have the dynamic spatial properties of natural light. In nature, light is constantly shifting. Static light is better than poor light, but it can still cause deficits in plants. Take the Mylar example from earlier. It's one of a number of materials used in grow tents and other hydroponic installations to help redistribute light. One reason light redistribution is so important is that static light favors the tops of plants—the canopy of the growing space—and not the lower or intermediate branches or foliage. Over time, the disparity between the lush growth of the canopy and the poor growth of lower stems and leaves becomes more and more pronounced, until even the effectiveness of reflective materials like Mylar is reduced. This is directly related to overall plant health as well as flowering, fruiting and other considerations.

Heat reduction – High intensity discharge (HID) lights and a number of other grow light technologies produce heat. To help avoid burning or otherwise damaging plants, fixtures are typically positioned high above the canopy. This helps with the heat problem, but it also reduces light efficiency by 50% or more. This constant compromise between light density and heat buildup is sometimes referred to as plant-to-lamp tolerance. A light mover dissipates the heat produced by a grow lamp as it distributes the heat along the path of the track rather than concentrating it in one static location. The lamp doesn't stay in one place long enough to burn plants, making it possible to place fixtures closer to the canopy.

Pricing Out Light Movers

Plants, water and electricity, or electronic gear, aren't natural enemies, but they aren't friends, either. Equipment designed for use with plants, fish and in other potentially challenging environments is usually heavy duty and includes safety features and materials designed to resist oxidation and premature wear. You'll notice a broad price selection among light mover equipment brands, and that's often a function of materials and workmanship. Remember, this equipment is constantly exposed to harsh conditions and typically functions continuously on an extended schedule around the clock.

Although a higher price isn't always indicative of a better product, if a deal looks too good to be true, proceed with caution. If you have the budget to invest in a light mover or two, you'll likely recoup the purchase price in energy savings over time. The initial costs aren't insignificant, though. It may take some time to notice the benefits of owning a light mover, so if you're vulnerable to buyer's remorse, be patient. The only thing nicer than a new, shiny light system is getting better value for the one you already have.

Disadvantages of Light Movers

- Light movers can be noisy. Some products are marketed as quiet, but if you like a pastoral growing space and a little extra noise is a problem, it's a good idea to check out a working model of the brand you have in mind to hear for yourself what the equipment sounds like in action.
- Adding a light mover may require rearranging your growroom and maintaining it in that configuration once the installation is complete.
- After the installation, adding the lights, positioning them properly and tinkering with the speed settings will take some time and attention.
- Adding more equipment to your set-up will mean you'll need another outlet and have to fuss with yet another cord.

At the end of the day, moving your lights along a track helps serve more plants per lamp and better approximates the spatial properties of natural light. Light movers also make it possible to lower a high heat fixture like an HID lamp without the risk of heat damage. With a light mover, you'll improve your energy efficiency, space management and environmental control in no time.