**LIGHT POLLUTION –**

Info compiled from the internet - Barbara Sanders

**How many of you know what light pollution is?**

I’ve been doing some online research about it and wanted to share some things I found out. In 2014 a group of biologists and ecologists staked out several streetlamp-lit suburban areas just outside Wallingford in the UK. They were studying how the streetlights affected the moths' behavior. Their theory was that the artificial light at night would disrupt the moths' flight patterns enough that it would impede how much, or how well, they could pollinate. Sure enough, of the hundreds of moths they observed, over 70% were drawn upwards towards the lights and away from the flowering plants, resulting in a noticeable reduction in plant pollination as well as the number of pollen types that were transported by the moths. This proved true across several different nocturnal moth species and over 28 varieties of plants, meaning the ripple effect could have wide-reaching consequences.

This is just one narrow view into how light pollution is disrupting the natural world. Moths aren't the only pollinators impacted by dazzling city lights. Bees are also feeling the effects, along with all the plants they pollinate. As artificial lights disrupt how nocturnal pollinators interact with plants, their pollen output can be affected, which may, in turn, impact how well bees and other diurnal pollinators can fertilize them during the daytime. Light pollution already encompasses about a quarter of the planet and continues to worsen, increasing by about 6% every year with growing urbanization. Global light pollution has increased by at least 49% over 25 years.

**How plants sense the world**

A primary reason light pollution, or artificial light at night, impacts most living things on this planet is that they have a circadian rhythm. This rhythm is the natural sleep-wake cycle that repeats every 24 hours and is governed by when it's light or dark. Most creatures carry out their living processes by this cycle, so when it is disrupted by, say, a perceived shorter nighttime, it can put undue stress on how internal systems function. And the longer that disruption goes on, the more potential there is for detrimental impacts. Circadian clock disruption can also affect regulating chemicals in humans, plants, and animals, most notably melatonin, a molecule that is produced in response to darkness and helps regulate the circadian rhythm. "[It's] supposed to be elevated overnight, but light pollution suppresses melatonin, which, over time, can cause a whole sweep of negative health effects," says Valentina Alaasam, a researcher at the University of Nevada in the US.

I know many people already take melatonin to help with their sleep. We should not have any lights on in the room we sleep in because they can affect our sleep patterns. As anyone who has a porch light knows, insects are attracted to and seemingly hypnotized by artificial lights. When they collect around lights, it removes them from their natural ecosystems, exhausts them and makes them easy prey.

**How many of you have lights in your yard at night?**

I found out there is a group called International Dark Sky IDA. You can access their website at darksky.org to see what they are doing. The International Dark-Sky Association is the authoritative voice on light pollution. IDA educates lighting designers, manufacturers, technical committees, and the public about controlling light pollution. We recognize that the best way to accomplish our goal of protecting and restoring our natural night environment is through the promotion of quality outdoor lighting. To achieve this, we developed the Fixture Seal of Approval program to provide objective, third-party certification for lighting that minimizes glare, reduces light trespass, and doesn’t pollute the night sky. IDA does not sell lighting itself.

**Here are some tips from the IDA for doing your part to reduce light pollution:**

* Use lights that shine down, not up. Use fully shielded, dark-sky friendly fixtures. That means lights shine down, not up.
* Only use lights when needed. Install timers and dimmer switches and turn off lights when not in use.
* Use the right amount of light. Too much light is wasteful and impairs vision.
* Use long-wavelength lights with a red or yellow tint to minimize negative health effects.

So, while we can’t do much about street lighting, one way we can help with the light pollution problem is to limit use of those lights and when possible change the lighting itself to a less blue type light. The color of light is critical. LED lighting – despite its reputation for energy efficiency – often contains high proportions of blue light in its spectrum, which creates a harsh glare. Simply replacing bulbs with narrow-spectrum or low-color temperature alternatives can minimize harmful light. We require outdoor lighting for a variety of needs, but any required lighting should be used wisely. LOWES AND HOME DEPOT HAVE THE RIGHT KIND OF LIGHTING THAT IS APPROVED BY THE IDA.