

Episode Ten: Climate Friendly Landscapes



Billy Goodnick and Owen Dell offer advice on reducing carbon dioxide emissions through key gardening choices. Carbon dioxide is a significant green-house gas associated with climate change. In 'The Hunt for Big Carbon Footprint' the duo examines everything from lawn mowers to water use and their climate impacts. They also discuss climate friendly alternatives. 'The Greenest Loser' is a game show that asks the big questions like; "What's the difference between a lawn mower and the Exxon Valdez?" Next, Cathie Paré from the City of Santa Barbara explains the proper way to install and use a rain sensor. Finally, the Plant Spotlight describes the climate advantages of proper tree selection and placement.

key concepts

1. The Hunt for Big Carbon Footprint

- Gasoline Powered Mowers, Trimmers, and Weed-Whackers
- These devices have high fuel consumption rates along with being extremely noisy and emit pollution. Alternatives include using push mowers, electric trimmers and weed-whackers.



Flagstone Patios

- Flagstone is generally found in neighboring Arizona and is transported by heavy machinery that emits large amounts of carbon dioxide. Local materials such as Santa Barbara Sand Stone can avoid the transportation related emissions. Another alternative is "Urbanite" or local recycled concrete that can be colored and textured to fit the landscaping.



Aluminum Outdoor Furniture

- Aluminum manufacturing uses large amounts of energy. By using wood or recycled outdoor furniture energy use from production is dramatically reduced.

Plastic Pots

- Plastic uses large amounts of energy to produce and is also made from oil products. In contrast ceramic plant containers are made from naturally found materials.



Water Use

- The storage, movement, and treatment of water for Santa Barbara consumes large amount of electricity. Santa Barbara receives water from the State Water Project which is California's single largest user of electricity. In addition the over use of water can actually harm plants and landscaping. There are three good ways to reduce the carbon footprint of water; reduce lawn size or remove entirely, landscape with native plants, and reduce the over watering of plants.

Stucco and Concrete Walls

- Transportation and production of concrete uses electricity and fossil fuels. By using local stone, or urbanite, walls can be constructed while still having a small carbon footprint. In addition alternative wall construction such as "Dry Stacking" can be used to eliminate the need for concrete mortar.



2. The Greenest Loser

- Lawn Mower vs. Exxon Valdez: Americans spill over 17 million gallons of gasoline every year just refilling lawn mowers and garden equipment. That is more than the oil spill from the Exxon Valdez. In addition, Americans use nearly 800 million gallons of gasoline every year to fuel their garden equipment. Some ways to improve are; remove lawn and re-landscape with native ground cover, or reduce lawn size to what is needed for recreation. Also, replace standard gasoline mowers with a push or electric mowers.



- Transportation and Nitrogen: Transportation of garden products clearly uses fossil fuels. However, fertilizers are often fossil fuel based. Collectively, Americans use more fertilizers on their gardens than the rest of the world combined uses on agriculture / food production. Nearly 60% of the Nitrogen applied to lawns is transported into groundwater or storm drains by run-off. By using native plants the need for fertilizer is reduced since they are already adapted to the local climate and soils.
- PVC Plastic is Oil: PVC plastic is used in pipes, planting pots, and lawn furniture. PVC is not only a toxic material but also requires an enormous amount of energy to produce. Ways to reduce PVC use in the garden are; reducing the amount of piped irrigation needed with native plants, switching to drip irrigation that uses flexible polyethylene plastic pipes, use of wood lawn furniture, and planting in ceramic pots.
- Food from Farm to Dinner Plate: Food travels on average 1500 miles from the farm to the dinner plate. Home gardens are the best solution to reduce the carbon footprint as the result of transportation. Also consider locally grown food from neighbors, agriculture stands, and farmers markets.



3. Irrigation Tip: Rain Sensors

- A rain sensor automatically halt's a home's irrigation controller from watering during and immediately after a rain event. These devices override a scheduled irrigation when the sensor on the shutoff device detects rain water. When the collected water evaporates from the device, scheduled irrigations resume.
- For information on a free rain sensor in the City of Santa Barbara or Goleta please visit Rebates under Water Conservation on <http://www.santabarbaraca.gov/water>



4. **Plant Spotlight: Trees & Climate Control**

Trees provide many benefits to both homeowners and the environment. They release oxygen while absorbing greenhouse gasses. In addition they also filter certain types of air pollution. If properly placed, deciduous trees can be used to cool homes and gardens during summer months with shade, but allow winter sun to warm the area since they annually lose their leaves. Tree selection and care is very important. Do research into the water use, mature size, root habits, and seasonal leaf loss to ensure that a certain tree is right for the intended landscape. Always use a certified arborist for the care and maintenance of large trees.

