



**LiveRoof**<sup>®</sup>  
**Texas** BRAND  
LLC

**Hybrid Green Roof System**  
Natural Function  
Natural Beauty



**FULLY-GROWN INVISIBLE  
MODULAR GREEN ROOF SYSTEM**  
"The Hybrid System"

**SIMPLE**

**EFFECTIVE**

**ATTRACTIVE**

## Getting to Know the Grower

David Scott, owner of Joss Growers, Inc. in Georgetown, Texas, is highly regarded for his knowledge of drought-tolerant species native to Texas as well as new plant materials adapted to the wide range of Texas environments.

Scott started his nursery business in 1993 from his backyard where he quickly found success in his ability to focus on successful plant selections for the ever-changing Texas environment. It was this ability to stay ahead of the growing trends that has led to the current 65,000 square foot under cover nursery along with eight acres of open space that makes up the Joss Growers nursery today.

Scott's expertise in drought-tolerant plants has made him a valuable commodity when it comes to green roof design and plant selection in Texas. He's been involved with supplying plants to multiple green roof projects around Austin, TX since 2003 including the Lady Bird Johnson Wildflower Center and Austin City Hall to name a few.

After a West Austin green roof project, Scott traveled to a trade show in Vancouver where he first saw the LiveRoof Hybrid Green Roof System. "I knew this was a product I wanted to sell my customers," he said. "LiveRoof establishes a green roof as a naturally functioning ecosystem with the soil unified between modules across the rooftop. I could see it would install easily and seamlessly and, most importantly, that it would work."



Hipolito F. Garcia Federal Building and U.S. Courthouse  
San Antonio, TX - 13,400 SF  
LiveRoof Designer: Trivers Associates  
Certified Installer: ValleyCrest Landscape Companies

# LiveRoof<sup>®</sup> Components & Accessories

Texas  
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## LiveRoof Texas Soil

It is no secret that the best gardens are only realized when a high quality soil is paired with proper plant selection. Most growing media in green roofs are 80-90 percent inorganic material, so they do not decompose or settle very much. LiveRoof Texas Engineered Green Roof Soil™ sets the industry standard.

LiveRoof Texas Engineered Green Roof Soil is designed to be sustainable, used in conjunction with the LiveRoof module and to be the best green roof soil on the market. LiveRoof Texas Engineered Green Roof Soil™, a proprietary blend of the finest inorganic and organic materials, is formulated under strictly controlled standards.

LiveRoof Texas Engineered Green Roof Soil™ is designed to:

- Be approximately 94+% inorganic by dry weight, as is the case with ecologically stable, sustainable, mature green roofs.
- Conform to German FLL granulometric standards.
- Filter rainwater and buffer acid rain.
- Effectively grow LiveRoof Texas plants.

LiveRoof Texas Engineered Green Roof Soil™ weighs approximately 27-29 lbs./sq. ft. fully saturated at 4<sup>1</sup>/<sub>4</sub>" depth when fully vegetated with LiveRoof Texas plants.

“Peat-based soil with compost and perlite will decompose and wash away during rains and blow away when it is dry and windy. The volume of material in that kind of mix will shrink, and a year after installation, the green roof will look long gone”

David Scott



LiveRoof soil is engineered, using local components, to be sustainable and horticulturally sound.



# LiveRoof<sup>®</sup> Plant Mix Texas BRAND LLC

## Plant Basics

Not all green roofs are created equal, or are equally green. The rooftop is an unforgiving environment for plants. Our knowledge of your local conditions is essential for figuring out what plants are best for your project. That's why we customize our plant and grass selections for your specific area, unlike other vendors who recommend a sedum roof consisting of exotic species that may have performed well in other states but are known to do poorly in Texas.

## Why Don't Sedums Work in Texas?

Sedums are succulent, water-holding plants that have a special type of metabolism called Crassulacean Acid Metabolism, CAM for short. CAM plants are unique in that under drought conditions their stomates (leaf pores) are open at night rather than during the day (as is the case with most plants). This allows CAM plants to be much more efficient with water conservation than non-CAM plants. **So why don't they work on roofs in Texas?**

Most sedums come from dry temperate climates. They do very well during the cooler months in Texas when the high temperatures and humidity are not around. But when those summer afternoon temperatures reach between 90 F to 100+ F and the air water vapor is high, sedums struggle to keep their cover and then invasive species can take over. But it is not the high heat and humidity, itself, that causes sedums so many problems. These two factors simply provide the perfect environment for the real sedum killer, Southern Blight Fungus, also known as 'crown rot' and 'white mold', to thrive. This fungus is practically impossible to keep at bay once the hot, humid summer months arrive and it will decimate even a well established roof of sedums.

An extensive green roof study was conducted at the University of Texas at Arlington by associate professor and landscape architect, David Hopman, ASLA, in 2008. Part of this study included the testing of five sedum plants. The results of the sedums testing produced two major issues. First, the sedums required watering in order for them to not go dormant or die in the summer. The second, and more concerning problem, was that during hot rainy weather some sedums began to rot.

The study concluded that the use of sedums on green roofs in Texas should be avoided due to the two limitations and the non-regional origins of sedums.

## Recommended Plants

LiveRoof Texas approaches each green roof project from a horticultural point of view. We see the rooftop environment as a biological system, and understand what it takes to produce a horticulturally sound, sustainable system designed so plants will flourish.

We provide regional pallette plant mixes with plenty of native xeric groundcovers, several ice plants, succulent perennials with good colors, and short-stature grasses. Please see our plant list page for more details on what plants will work best for you.

"Most green roof systems have been designed by people in the roofing business, not people rooted in horticulture. Growers ought to look for green roof manufacturers who can see the rooftop environment as a biological system, who understand that a green roof has to be green --- a horticulturally sound, sustainable system designed so plants will flourish"

David Scott



LiveRoof Texas Project Installation San Antonio, TX 6.01.12



LiveRoof Texas Project San Antonio, TX on 10.31.12



**Berkeley Sedge (*Carex divulsa*)**  
Drought Tolerant; Average water needs  
Perennial, Evergreen  
Color: Green  
Size: 12-18 inches tall, spread 24 inches  
Full Sun to Light/ Partial/ Full Shade



**Blackfoot Daisy (*Melampodium leucanthum*)**  
Drought Tolerant; Average water needs  
Perennial  
Color: Bright green with white flowers (central yellow discs)  
Bloom Time: Early Spring to Late Fall  
Size: 8 inches tall, spread 12 inches  
Full Sun  
\* Not recommended for Houston



**Blue Grama (*Bouteloua gracilis*)**  
Drought Tolerant; Low water needs  
Perennial, Grass  
Color: Gray-green  
Size: 12-14 inches tall, spread 15-18 inches  
Full Sun



**Deer Grass (*Muhlenbergia rigens*)**  
Drought Tolerant; Low water needs  
Perennial, Grass  
Color: Light-green  
Size: 36-48 inches tall, spread 24-36 inches  
Full Sun



**Dove Weed (*Croton monanthogynus*)**  
Drought Tolerant; Low water needs  
Annual, Forb  
Color: Light green with white flowers  
Size: 8 inches tall, spread 12 inches  
Full Sun



**Four Nerve Daisy (*Hymenoxys scaposa*)**

Drought Tolerant; Low water needs

Perennial

Color: Green with bright yellow flowers

Bloom Time: Early Summer to Early Fall

Size: 8-10 inches tall, spread 12 inches

Full Sun

\* Not recommended for Houston



**Gregg's Mist Flower (*Eupatorium greggii*)**

Drought Tolerant; Average water needs

Perennial

Color: Green with purple-blue flower clusters

Bloom time: Late Spring to Early Summer

Size: 12-24 inches tall, spread 12-36 inches

Full Sun to Partial Shade

\* Recommended only for Houston



**Hamlin Grass (*Pennisetum alopecuroides*)**

Drought Tolerant; Medium water needs

Perennial, Grass

Color: Soft green with cream panicles

Size: 24-36 inches tall, spread 24-36 inches

Full Sun

\* Recommended only for Houston



**Gulf Muhly (*Muhlenbergia capillaris*)**

Drought Tolerant; Low water needs

Perennial, Grass

Color: Bright green with purple spikelets

Size: 18-36 inches tall, spread 15-18 inches

Full Sun



**Horseherb (*Calyptocarpus vialis*)**

Drought Tolerant; Low water needs

Perennial, Evergreen

Color: Bright green with yellow daisy flowers

Bloom time: Off and on all year

Size: 6-12 inches tall, spread 24-36 inches

Full Sun to Shade



**Indian Grass (*Sorghastrum nutans*)**

Drought Tolerant; Low water needs  
Perennial, Grass  
Color: Blue-green to deep orange (Fall)  
Size: 36-72 inches tall, spread 18-24 inches  
Full Sun to Partial Shade



**Trailing Lantana Purple, New Gold, White (*Lantana montevidensis*)**

Drought Tolerant; Average water needs  
Perennial, Semi-Evergreen  
Color: Green with several clustering flowers  
Bloom time: Mid Spring to Early Summer  
Size: 12-16 inches tall, spread 36-72 inches  
Full Sun to Partial Shade  
\* Recommended only for Houston



**Lindheimers Muhly (*Muhlenbergia lindheimeri*)**

Drought Tolerant; Average water needs  
Perennial, Grass  
Color: Light gray-green to light blue-green  
Size: 36-48 inches tall, spread 36-48 inches  
Full Sun



**Little Bluestem (*Schizachyrium scoparium*)**

Drought Tolerant; Low water needs  
Perennial, Grass  
Color: Blue-green to mahogany-red (Fall)  
Size: 24-36 inches tall, spread 24-36 inches  
Full Sun to Part Shade



**Mexican Petunia 'Katie's Dwarf' (*Ruellia brittoniana*)**

Drought Tolerant; Average water needs  
Spreading Perennial  
Color: Green with purple flowers  
Bloom time: Mid Spring to Early Summer  
Size: 6 inches tall, spread 10 inches  
Full Sun



**Orange Bulbine (*Bulbine frutescens*)**

Drought Tolerant; Low water needs

Perennial, Evergreen

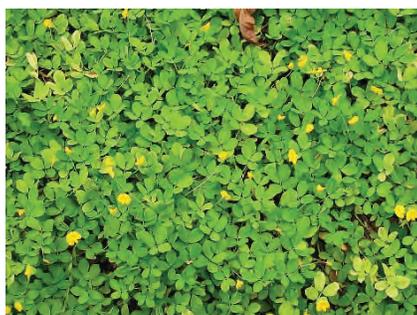
Color: Succulent foliage with star-shaped yellow-orange flowers

Bloom time: Mid Spring to Late Fall

Size: 6-12 inches tall, spread 12-24 inches

Full Sun to Partial Shade

\* Recommended only for Houston



**Ornamental Peanut (*Arachis glabrata*)**

Drought Tolerant; Average water needs

Spreading Perennial

Color: Green with yellow flowers

Bloom time: Off and on all year

Size: 6-12 inches tall, spread 12 inches

Full Sun

\* Recommended only for Houston



**Palisades Zoysia (*Zoysia japonica*)**

Drought Tolerant; Low water needs

Turf Grass

Color: Bright green

Size: .5 -2.5 inches tall

Full Sun to Partial Shade



**Pine Muhly (*Muhlenbergia dubia*)**

Drought Tolerant; Low water needs

Perennial, Grass

Color: Bright green

Size: 24-36 inches tall, spread 48-72 inches

Full Sun

\* Not recommended for Houston



**Purple Heart (*Tradescantia pallida*)**

Drought Tolerant; Low water needs

Perennial, Evergreen

Color: Deep purple with pale pink flowers

Bloom time: Off and on all year

Size: 12-18 inches tall, spread 9-12 inches

Full Sun to Partial Shade



**Red Apple Ice Plant (*Aptenia cordifolia*)**

Drought Tolerant; Low water needs  
Perennial, Evergreen  
Color: Bright green with red daisy flowers  
Bloom time: Off and on all year  
Size: 6 inches tall, spread 12-24 inches  
Full Sun to Partial Shade



**Red Yucca (*Hesperaloe parvifolia*)**

Drought Tolerant; Low water needs  
Perennial, Evergreen  
Color: Green with coral colored, tubular flowers  
Bloom time: Early Spring to Summer  
Size: 36-48 inches tall, spread 24-36 inches  
Full Sun



**Rocky Point Ice Plant (*Malephora luteola*)**

Drought Tolerant; Low water needs  
Perennial, Evergreen  
Color: Bright green with yellow daisy flowers  
Bloom time: Off and on all year  
Size: 6-10 inches tall, spread 24-36 inches  
Full Sun



**Seep Muhly (*Muhlenbergia reverchonii*)**

Drought Tolerant; Medium water needs  
Perennial, Grass  
Color: Green to blue-green to grey-green  
Size: 18-24 inches tall, spread 24-36 inches  
Full Sun  
\* Not recommended for Houston



**Sideoats Grama (*Bouteloua curtipendula*)**

Drought Tolerant; Medium water needs  
Perennial, Grass  
Color: Blue-green, sometimes turning purple/red in fall  
Size: 12-24 inches tall, spread 12-15 inches  
Full Sun to Partial Shade



**Society Garlic (*Tulbaghia violacea*)**

Drought Tolerant; Average water needs

Perennial, Semi-Evergreen

Color: Grayish-green with violet flowers

Bloom time: Mid Spring to Early Summer

Size: 12-24 inches tall, spread 6-12 inches

Full Sun

\*Recommended only for Houston



**Texas Bluegrass (*Poa arachnifera*)**

Drought Tolerant; Medium water needs

Perennial, Grass

Color: Blue-green (spring silvery flowers)

Size: 12-24 inches tall

Full Sun to Partial Shade



**Texas Frogfruit (*Phyla nodiflora*)**

Drought Tolerant; Low water needs

Perennial, Semi-Evergreen

Color: Green with white flowers

Bloom time: May to October

Size: 3-6 inches tall, spread 9-12 inches

Full Sun to Partial Shade



**Texas Sedge (*Carex texensis*)**

Drought Tolerant; Average water needs

Perennial, Evergreen

Color: Light green

Size: 6-12 inches tall, spread 6-9 inches

Partial to Full Shade



**Woolly Stemodia (*Stemodia lanata*)**

Drought Tolerant; Low water needs

Perennial, Semi-Evergreen

Color: Silver, greyish with white or purple flowers

Bloom time: April to November

Size: 4-10 inches tall, spread 24 inches

Full Sun

\* Not recommended for Houston

# LiveRoof® Plant Mix

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## **White Yarrow (*Achillea millefolium*)**

Drought Tolerant; Low water needs

Perennial, Evergreen

Color: Green, lacy foliage with white flowers

Bloom time: Spring to Fall

Size: 12-18 inches tall, spread 9-12 inches

Full Sun

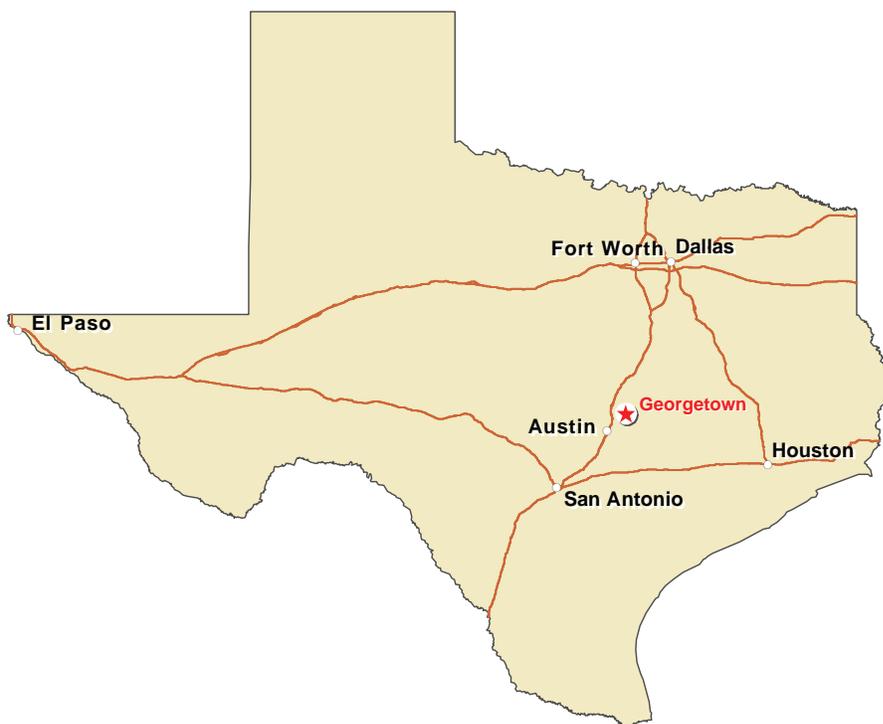
**Please call us for a hands-on demonstration,  
catalog, pricing and specific plant recommendations.**

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Hybrid Green Roof System  
Natural Function  
Natural Beauty

LiveRoof, LLC  
A Subsidiary of Hortech, Inc.

See Inside Back Cover  
For LiveRoof Texas contact  
information, and to arrange  
for a personal consultation.

See [LiveRoof.com](http://LiveRoof.com)  
For Additional Information

PREVEGETATED INVISIBLE  
MODULAR GREEN ROOF SYSTEM  
(Patent Pending)

SIMPLE

EFFECTIVE

ATTRACTIVE