Introducing Scotts® ProVista™

The next generation of turfgrasses
We’re one of America’s oldest companies …

Steeped in history …
- Founded 1868 in Marysville, Ohio
- America’s first lawn and garden company
- Two family legacies merged in 1995
- Combined product focus of Scotts with Miracle-Gro marketing to create a powerful team
- Still fulfilling Horace’s “Find a Need and Fill It” motto

Our founders

OM Scott: Shop keeper and Civil War veteran
Horace Hagedorn: Advertising and marketing innovator
Turf is Beneficial to the Environment and Human Health

WHAT ARE THE BENEFITS OF A LAWN?

FILTERS AND CAPTURES RUNOFF
- Hardscapes, parking lots, driveways and roads turn rainwater into fast-moving, storm water runoff. Grass slows down and absorbs runoff, while also cleansing water of impurities and dust. Rainwater filtered through a healthy lawn can be 10 times less acidic than water running off a hard surface.

REDUCES HEAT
- Grass dissipates the heat island effect caused by asphalt, concrete and other hardscapes.

IMPROVES AIR QUALITY
- Grass also plays a vital role in capturing dust, smoke particles and other pollutants. Without grass, these pollutants will remain in the air we breathe, resulting in more “code red” air quality days.

SEQUESTERS CARBON DIOXIDE
- Lawns are the largest carbon sink in the U.S. They suck up and remove greenhouse gas carbon dioxide from the atmosphere. Grass sequesters carbon so well that it outweighs the carbon used for maintaining the lawn by as much as seven-fold.

GENERATES OXYGEN
- A turf area of 50’ x 50’ produces enough oxygen to meet the daily needs of a family of 4.

SUPPORTS BIODIVERSITY
- Grass, trees, shrubs and other plants provide food and habitat for birds and small mammals. Insects, spiders and worms live among the grass blades and below the surface, supporting wildlife.

CONTROLS SOIL EROSION
- Grass controls erosion through its natural, dense and fibrous root system. Without grass, soil erodes into streams and lakes, muddying the waters and limits how sunlight penetrates the water. The nutrients and chemicals carried with soil can cause algae blooms, which steal oxygen from the water and kill fish.

LAWN OR NO LAWN IS NOT THE QUESTION.

So how do we maintain a living landscape—even under drought conditions?

1. Choose the right grass for your climate zone and lifestyle. Some such as buffalo and Bermuda grass—require very little water and survive foot traffic, children’s play and pets well.

2. Don’t overwater. Less water makes grass work harder so roots grow deeper in search of moisture. It then does a better job of trapping carbon and releasing oxygen.

3. Go brown. With less water, grass slows down, goes dormant and turns golden brown. It will “green up” again when the rains return.

4. Diversify. Incorporate native plants with adaptive plants and grasses. Add pollinator plants for local bees, butterflies, hummingbirds and other animals and insects.
Consumers want Turf that does **More with Less**

- **Weed Free:** Less applications of herbicide required
- **Brilliant Green Color:** One application of fertilizer per year
- **Water:** Thrives with less water
- **Time:** Less effort to maintain
- **Less Mowing:** Grows slowly
Delivering Traits via Biotechnology

**Kentucky bluegrass and St. Augustinegrass**

- Kentucky Bluegrass and St. Augustinegrass that requires less mowing and is glyphosate-tolerant
- 50% Less Mowing | Superior Weed Management | Thick and Dark Green | Better for the Earth

**Selected Plant Genes/Traits**

- Dwarf → Less Mowing Required
- Glyphosate Tolerance (up to 8x) → Weed Control

**Breeding**
Scotts® ProVista™ Kentucky Bluegrass

Mowing requirements

- Penn State University
  - 20 cool-season cultivars/blends
    - Individual ProVista and conventional Kentucky bluegrass cultivars
    - Conventional Kentucky bluegrass blends
    - Individual tall fescue cultivars
    - Landscape sun/shade mixtures
- All plots seeded fall, 2016
  - 6’ x 3’ plot size, 3 reps
- Data collection started spring, 2018
  - Plant height
- Mowing height: 3”
- Plot heights measured 3x/week
- A plot was mowed when height reached 4.5”

Objective: Quantify the number of required mowing events during the 2018 growing season
### Scotts® ProVista™ Kentucky Bluegrass

**Mowing requirements: Penn State University**

<table>
<thead>
<tr>
<th>Spring: 5-7 to 6-22</th>
<th>Summer: 6-25 to 8-31</th>
<th>Fall: 9-3 to 10-19</th>
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<tr>
<td>Scotts SS 7.0</td>
<td>Scotts SS 9.7</td>
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<tr>
<td>Penn KBG 7.0</td>
<td>Penn KBG 10.3</td>
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<tr>
<td>Penn TF 7.0</td>
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<tr>
<td>Kenblue 7.0</td>
<td>Kenblue 12.0</td>
<td>Kenblue 11.0</td>
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### Yearly summary 5-7 to 10-19

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<td>Kenblue</td>
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**Key Findings**

1: Mowing occurred half as much, depending on season.
2: Genetic comparison only
Scotts® ProVista™ Kentucky Bluegrass
Mowing requirements – Sod Farm

• Scotts® ProVista™ vs. conventional Kentucky bluegrass
  ✓ Both seeded week of 14 Sept. 2017
• Started tracking mowing May 1st through Oct. 11th, 2018
  ✓ Mowing heights ranged from 1.50 to 2.25 inches
• Trigger to mow: Based on experience, visually needed

<table>
<thead>
<tr>
<th>Turfgrass</th>
<th># of mows May – Oct</th>
<th>Frequency of mowing</th>
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<tbody>
<tr>
<td>ProVista bluegrass</td>
<td>12</td>
<td>Every 14 days</td>
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<tr>
<td>Conv. bluegrass</td>
<td>38</td>
<td>Every 4 days</td>
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</table>
Scotts® ProVista™ Kentucky Bluegrass

Mowing requirements

3.75"  3.75"

Day 01  #64236
Glyphosate Titration Trial
Marysville, OH
Applied 23 May 2018

Glyphosate treatments
✓ Control
✓ 1X (32oz/A, 0.75lb ae/A)
✓ 2X (64oz/A)
✓ 4X (128oz/A)
✓ 6X (192oz/A)
✓ 8X (256oz/A)

Data Collection
✓ DGCI, weekly

Scotts® ProVista™ Glyphosate Tolerance
Kentucky bluegrass
15 days after a glyphosate application
5-9-18

4-25-18
Columbus Sod Farm

10-16-18
1 year after seeding
Site Overview

- Private Golf Course
- Mowing
  ✓ 3 inches weekly
- Seeded 8-31
  ✓ Scotts® ProVista™ blend
  ✓ 5,000ft² area
- Weed pressure
  ✓ Creeping bentgrass
  ✓ Poa annua
Density and Color Difference

Conv. KBG  Scotts® ProVista™

Scotts® ProVista™

Nitrogen Reduction

P. ryegrass

Conventional Turf 3lbs N/1000sqft/Y
Scotts® ProVista™ 2lbs N/1000sqft/Y
Scotts® ProVista™

Kentucky bluegrass

Model home

Meyers landscaping
• In greenhouse trials, we are seeing a ~6-28% increase in water use efficiency compared to conventional KBG varieties
Scotts® ProVista™ Kentucky Bluegrass

Shade tolerance

Scotts® ProVista™ performs better in shade because it doesn’t use energy stretching to find light
Scotts® ProVista™ Kentucky Bluegrass

Recuperative ability
Throughout the trial, minimal differences were noted between cultivars and blends.

Repair characteristics of ProVista KBG is similar to conventional KBG.
Thank You