

Desert Lawn Care

Maintaining a healthy, beautiful, and water-efficient lawn.

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City of Phoenix Water Conservation and Efficiency

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Overview

- Grass in Phoenix
- Types of Grasses
- Maintaining a Healthy Turf
- A Beautiful Lawn
- Water Efficient Grass



Grass in Phoenix



Alternatives to Grass

- Replace lawn with hardscape or minimize the area
 - Create a vegetable garden
 - Use desert adapted plants (Landscape Plants for the Arizona Desert book)
 - Create an outdoor cooking area
 - Build a patio area
 - Install artificial turf
 - Construct a walkway
 - Put down gravel



Types of Grasses

➤ Warm Season Grasses:

- Perennial; do not need to be reseeded every year
- Typically comes from warmer or drier climates
- Bermuda grass, St. Augustine grass, Buffalo grass

➤ Cool Season Grasses:

- Annual; must be reseeded every year
- Typically comes from cooler or wetter climates
- Perennial ryegrass (not perennial in Phoenix!), Annual ryegrass, Kentucky Bluegrass, Tall Fescue

Types of Grasses:

WARM SEASON GRASSES

Bermuda Grass:

- Heat and drought tolerant
- Mow from 1.5" to 2"
- Relatively low water use
- Active April – October, dormant November - March



Types of Grasses:

WARM SEASON GRASSES

St. Augustine Grass:

- Shade and sun tolerant
- Mow from 1.5" to 3"
- Dormant in the winter
- Does not take to being over-seeded with cool season grasses



Types of Grasses:

WARM SEASON GRASSES

Buffalo Grass:

- Heat and drought tolerant
- Does not thrive in shade
- Mow from 2.5" to 3.0"
- Does not take to being over-seeded with cool season grasses



Types of Grasses:

Cool Season Grasses

Perennial Ryegrass:

- High maintenance (watering, mowing, fertilizing, and pest management)
- Shade tolerant
- Mow from 1.5" to 2.5"
- Least drought tolerant grass



Types of Grasses:

Cool Season Grasses

Annual Ryegrass:

- High maintenance
- May be used to overseed Bermuda grass during cooler months
- Mow from 1.5" to 3.0"
- Not drought tolerant



Types of Grasses:

Cool Season Grasses

Kentucky Bluegrass:

- Mow from 2.0" to 3.0"
- Grows best during the fall, winter, and spring
- Prefers full sun, but will tolerate some shade
- Deep bluish green in color



Types of Grasses:

Cool Season Grasses

Tall Fescue:

- More heat tolerant than Ryegrass
- More drought tolerant than Bluegrass
- Establishes from seed in early October
- Does well in either partial shade or sun



Maintaining Healthy Turf

- Mowing
- Dethatching
- Aerating
- Controlling weeds
- Managing disease



Maintaining Healthy Turf:

MOWING

- Avoid scalping your grass
- Keep mower blades sharp
- Mow to recommended height
- Increase the mowing height by 25% in shady areas
- Change up mowing pattern
- Mow when turf is dry



Mow High for Low Maintenance

Mow Low for High Maintenance

Maintaining Healthy Turf: Dethatching

Thatch: A mat of plant material that includes dead and living shoots, grass stems, and roots

- Excessive thatch - caused by over-watering and over-fertilizing
- Remove thatch with a vertical mower or a power rake
- Dethatch during summer months

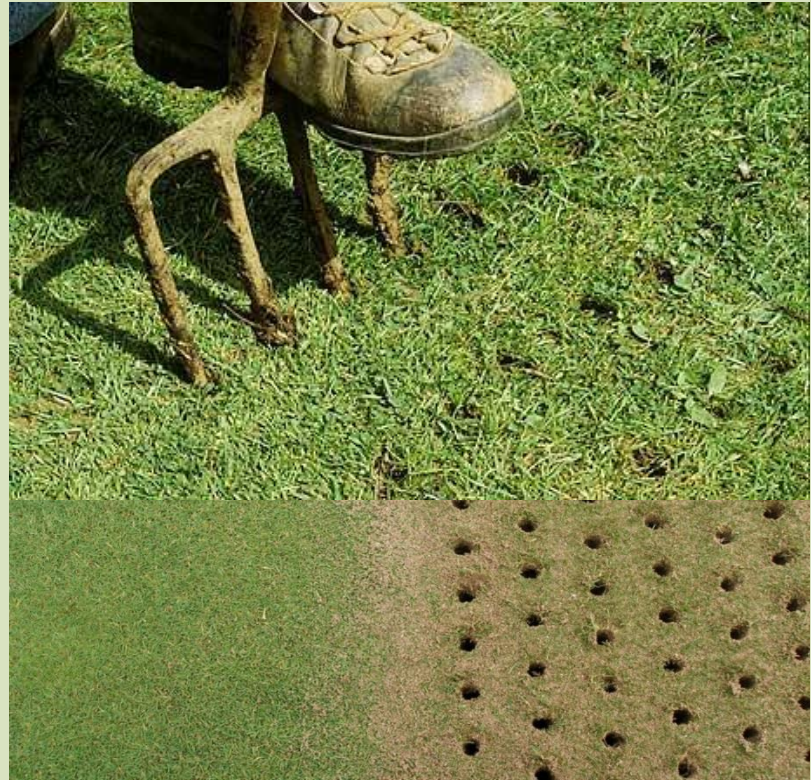


Maintaining Healthy Turf:

Aerating

Aerating: Piercing the soil with small holes to allow air, water, and nutrient to penetrate the grass roots

- Aerate when soil is hard and compact
- Prevents runoff and puddling
- Aerate after a rainfall event or irrigation
- Manually aerate small properties and mechanically aerate large areas



Maintaining Healthy Turf:

Weeds

Weeds: Unwanted plants growing out of place that interfere with desirable plants

- Hand-pulling is often your best option
- Proper mowing, aerating, and dethatching promotes healthy turf and prevents weed growth



Maintaining Healthy Turf:

Weeds

Annual Weed



Chickweeds (Winter Annual)

Perennial Weed



Quackgrass



Maintaining Healthy Turf: Diseases

Brown Patch:

- Circular patches of thinned, light brown grass
- Affects both warm and cool season grasses
- Caused by fungi



Maintaining Healthy Turf: Diseases

Dollar Spot Fungi:

- Cluster of round, small, light brown patches
- Carried by wind, water and turf equipment
- Triggered by low soil moisture, thatch, low nitrogen fertility, and scalping the grass during hot temperatures
- Active in warmer temperatures



Maintaining Healthy Turf: *Diseases*

Fairy Ring: Lawn Mushrooms:

- Fungus growth in a circular pattern with mushrooms at the surface
- Appears after rain events
- Feeds in the thatch layer or the soil organic matter
- Destroys grass root cells



A Beautiful Lawn: *Fertilizing*

Fertilizing:

- Guidelines
- Types of Fertilizers
- Fertilizing Tips



A Beautiful Lawn: Fertilizing Guidelines

- Apply ½ pound of nitrogen per 1,000 square feet
- Use slow-release nitrogen fertilizer
- Use a rotary spreader to apply quickly and evenly
- Apply the fertilizer to dry grass and then water afterwards
- Use the only the required amount of fertilizer

Growth, Color, & Resiliency!



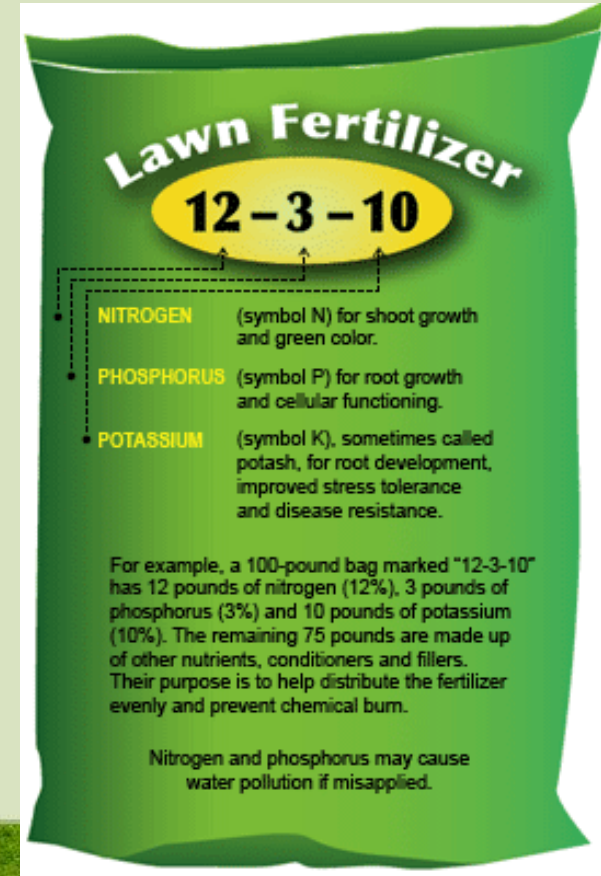
A Beautiful Lawn:

Types of Fertilizers

- Complete and Incomplete
- Soluble and Insoluble
- Organic and Inorganic

A Beautiful Lawn: Types of Fertilizers

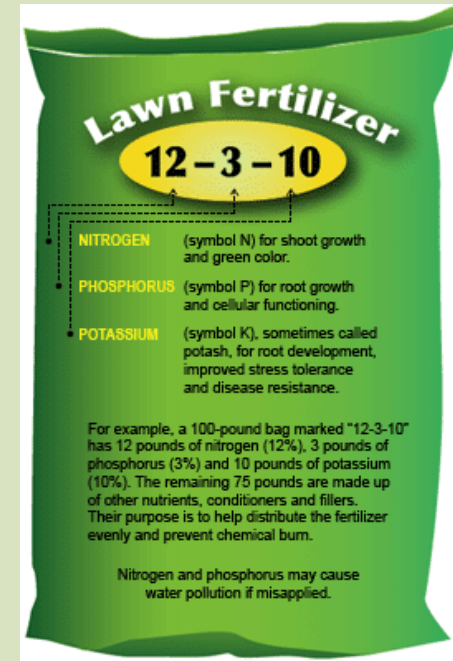
- **Complete fertilizer** contains all three primary plant nutrients
- Each number indicates the pounds of:
 - **N** – Nitrogen: first number on the bag
 - **P** – Phosphorous: second number on the bag
 - **K** – Potassium: third number on the bag



A soil test is needed to help determine which nutrient your soil needs

A Beautiful Lawn: Types of Fertilizers

- **Nitrogen** promotes lush green color and rapid growth. Nitrogen can be either quick release, or slow release
- **Phosphorus** stimulates healthy roots
- **Potassium** helps store food, supports stress tolerance, assists with disease resistance and protects from drought
- **Incomplete fertilizer:**
 - At least one of the major plant nutrient is not included
 - ❖ For example: **22-0-15**; Phosphorus is excluded



Over fertilized lawn requires more water

A Beautiful Lawn:

Types of Fertilizers

➤ Soluble Fertilizer:

- Water soluble for quick release
- Nitrogen available immediately
- Costs less
- Frequently applied
- Could raise soil salt levels
- Examples of quick release
 - Ammonium nitrate
 - Urea

A Beautiful Lawn:

Types of Fertilizers

➤ Insoluble Fertilizer:

- Slow release fertilizer
- Nitrogen available gradually
- Contains both synthetic materials and natural organic materials
- Lasts longer
- Save money and time in the long run

A Beautiful Lawn:

Types of Fertilizers

- Organic:
 - Plant or animal sources
 - Takes a long time to break down
 - Nutrients release slowly
 - No salts present
 - Promotes stronger root growth

A Beautiful Lawn:

Types of Fertilizers

➤ Inorganic:

- Grass quickly absorb nutrients
- Provides immediate boost to grass
- Leaves behind salts that the grass cannot absorb
- Too much salts can harden the soil



A Beautiful Lawn: Fertilizing Tips

- Over-fertilized lawns require more water and mowing
- Do not apply nitrogen at the end of the growing season
- Use “slow release” fertilizer
- Fertilize once per month during active growing season

Water Efficient Grass


- When to Water
- How Often to Water
- How Much to Water
- Over-seeding
- Watering Tips



Water Efficient Grass:

When to Water

- Water at night or during cool morning hours to minimize evaporation
- Avoid peak water consumption hours at 4-9 pm



When it rains, reduce irrigation accordingly

Water Efficient Grass

How Often to Water

- Irrigation frequency depends upon the weather, the turf type, and the soil type
- Water turf once every three days in the summer
- Water established rye grass once a week in the winter and three days per week in the spring



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Water Efficient Grass:

How Much to Water

- Two factors:
 - How quickly your sprinklers put water on your lawn.
 - The amount of water your grass needs to stay healthy. Plant water use varies greatly throughout the year.
- Test to determine if water is needed:
 - Push a 6" long screwdriver shaft into the ground. If it goes in easily, don't water.

Please adjust your watering times throughout the year!



Water Efficient Grass:

Watering Tips

- Irrigate for shorter periods if you have run-off
- Hand water dry grass areas instead of increasing the overall watering time
- Water shaded areas approximately 30% less than sunny areas
- Reduce irrigation accordingly when it rains

Water Efficient Grass:

Overseeding



- During the winter, warm season Bermuda grass becomes dormant
- Overseeding - seeding ryegrass directly into Bermuda grass during the fall
- Ryegrass - better suited to cooler weather; remains green throughout the winter
- Warmer spring temperatures cause ryegrass to die out and the Bermuda grass (a perennial) will naturally re-establish itself.

Save water, time and money – consider not overseeding at all!

References

- Arizona Municipal Water Users Association (AMWUA) Desert Lawn Care Guide.
http://www.amwua.org/resource_documents/desert_lawn_care-english.pdf
- University of Arizona College of Agriculture and Life Sciences Cooperative Extension. Desert Turf School Guide.
<http://turf.Arizona.edu>
- University of Arizona College of Agriculture and Life Sciences Cooperative Extension. Phoenix Lawn Watering Guide.
<http://ag.arizona.edu/azmet/phx/lawnfaqs.htm>

Additional Resources

- City of Phoenix Water Services Website:
<https://www.phoenix.gov/waterservices/>
- Water Use It Wisely: www.wateruseitwisely.com
- Arizona Municipal Water Users Association (AMWUA):
www.amwua.org
- Maricopa County Cooperative Extension:
<http://cals.arizona.edu/maricopa/garden/html/general/hort.htm>

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ANY
QUESTIONS
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THANKS
for
ATTENDING



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