

# Landscape 101

Presented by:

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Landscape

NEVADA CHAPTER  
**community**  
ASSOCIATIONS INSTITUTE



# Subjects to be Discussed

Great Basin

Turf Management

10 Minute Break

Turf Diseases, Weeds and

Insects

Plant & Tree Identification

Installation & Care

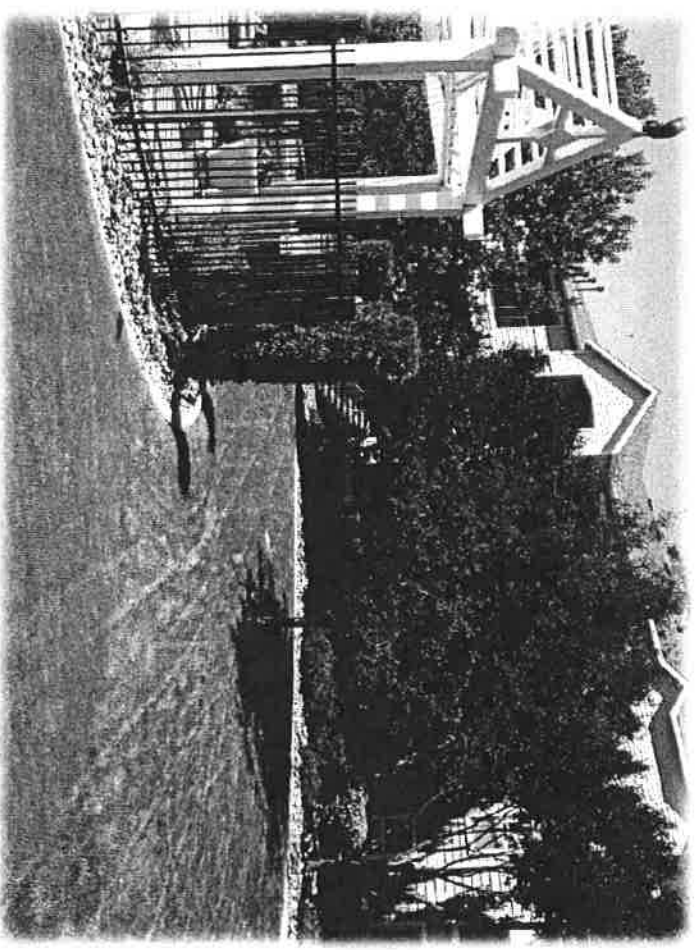
10 Minute Break

Tree Pruning

Irrigation

Xeriscaping

Licensing and Contractor Selection



# Typical Landscaping Problems in Communities

- ▶ Landscaping Irrigation not properly installed
- ▶ Inadequate planning and budgeting
- ▶ Poor plant selection
- ▶ Lack of plans and specifications

# Landscaping Not Properly Installed

- ▶ Developer has a “get in and get out” mentality
- ▶ Local designs standards are not always met
- ▶ Construction may not be adequately monitored
- ▶ Soil preparation ignored
- ▶ Plants are often planted in the wrong place.

▶ Shortcuts often taken



Short cut– Plants planted with the container

# Poor Long Term Planning and Budgeting

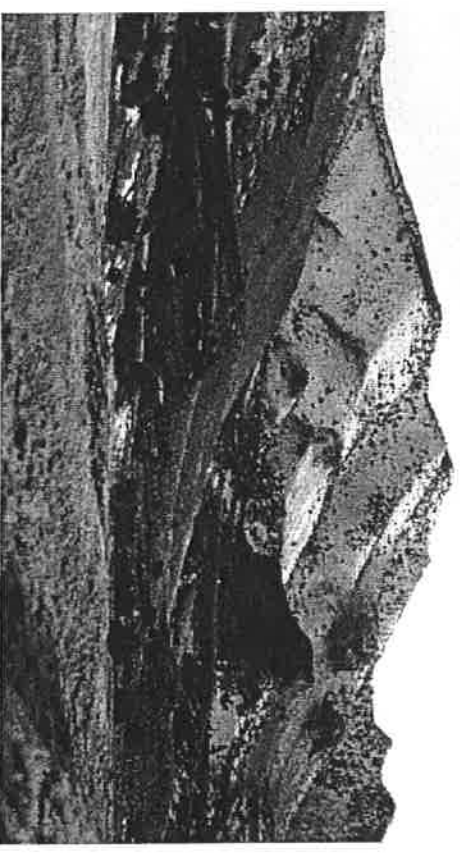
- ▶ Landscaping is a very large asset and investment
- ▶ Planning for irrigation maintenance and repair is overlooked
- ▶ Opportunities for preventive maintenance often missed.
- ▶ Costly plant replacement & irrigation repairs, occurs sooner and more often.

# Managing Landscapes in the Great Basin

- ▶ What you need to know:
  - Geographic location
  - Climate
  - Growing season
  - Annual precipitation
  - Soil conditions

# Managing Landscapes in the Great Basin

- ▶ Nevada is the driest state in the nation.
- ▶ Average annual precipitation rate for Reno 4–8 inches.
- ▶ Geographic region, above 4,500 feet elevation.
- ▶ Climate is extreme.
- ▶ Short growing season 90–160 days at best.
- ▶ Alkaline soil conditions

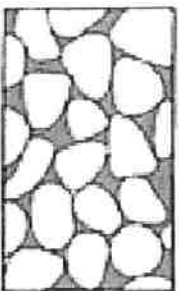


# Soil Basics

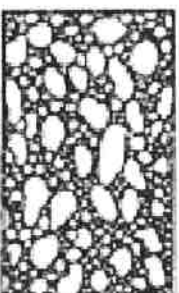
- ▶ Great Basin soils.
  - Hi pH > 7.0
  - Alkaline
  - Sodium affected
  - Nutrient poor
  - Very little organic matter



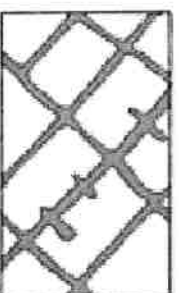
# Northern Nevada Soils



A



B



C

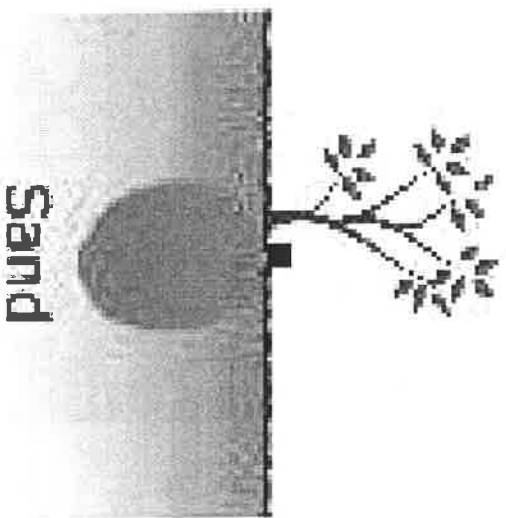
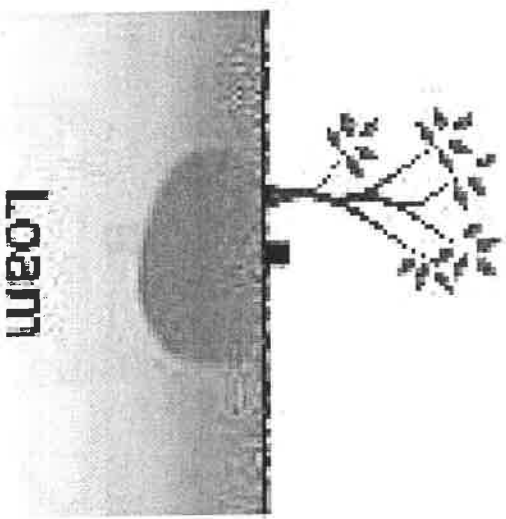
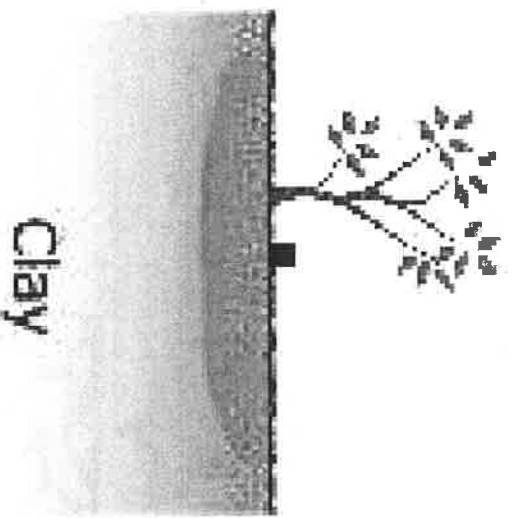
☞ A - Large pore spaces allow water to move freely, sandy soils.

☞ B - Mixture of smaller and larger particles in the soil reduces the movement of water. Water moves laterally, loam soil.

☞ C - Flat particles, like the pages of a book, allows water to move slowly and laterally, clay soils.

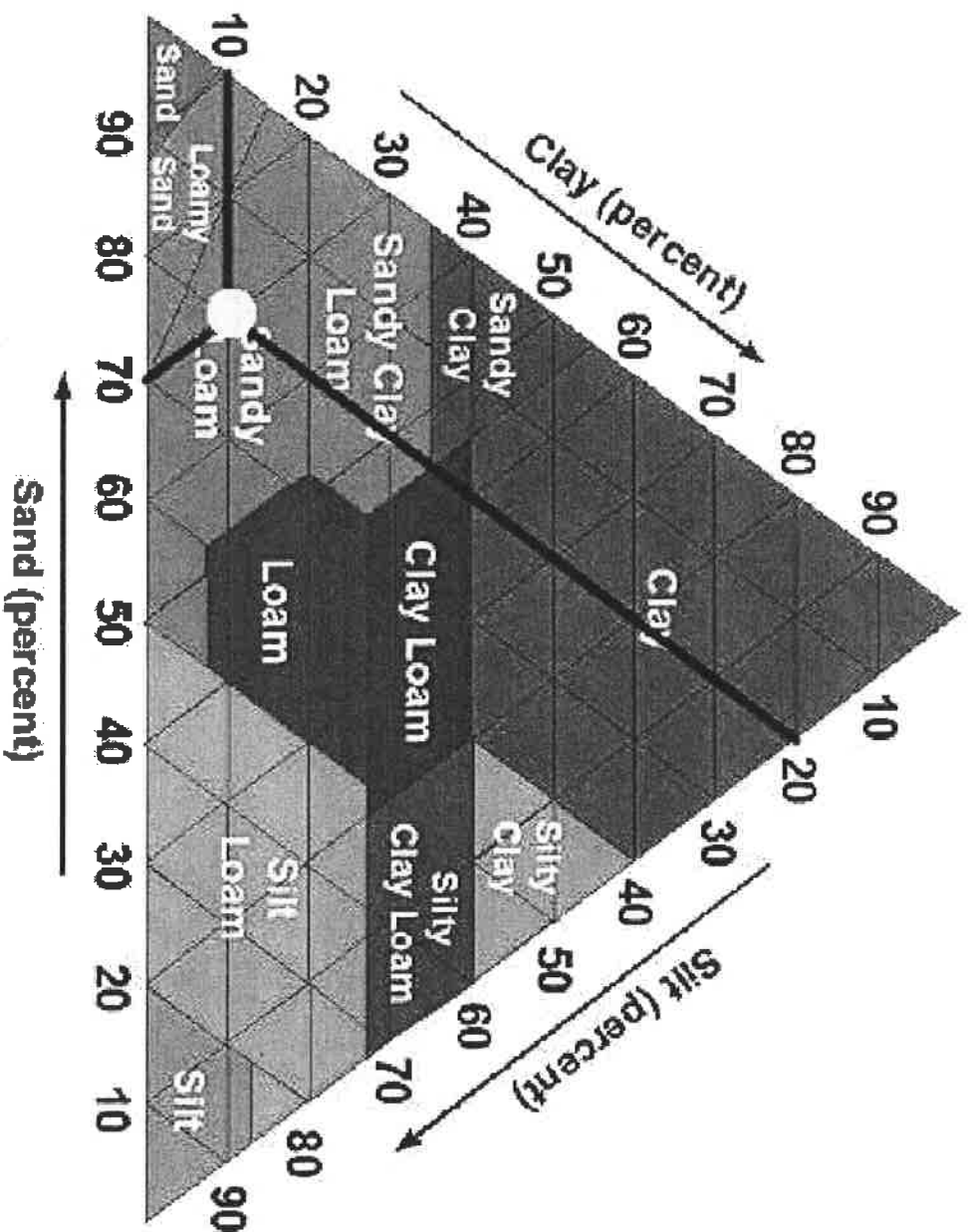


# Example of Water Movement Through Different Soil Textures



# Soil Texture Pyramid

SOIL TEXTURE PYRAMID



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# Turfgrass Management Basics

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# Benefits of Lawn

- ▶ Curb appeal - Attracts homeowners
- ▶ Inexpensive durable ground cover
- ▶ Absorbs heat (global warming)
- ▶ Provides oxygen (55 sqft/person/day)
- ▶ Cost effective for controlling wind and soil erosion.
- ▶ Eliminates dust around homes and businesses.



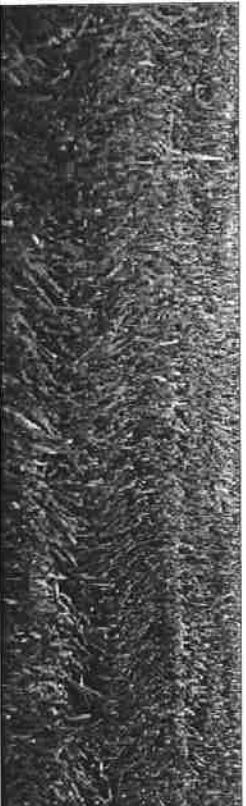
# Benefits of Lawn

- ▶ Serves as a fire barrier.
- ▶ Safe playing surface for children and pets.
- ▶ Reduces A/C cost by 10- to 15 %
- ▶ Healthy turfgrass absorbs rainfall six times more effectively than a wheat field and 4 times more than a hay field (Beard 1992).



# Grasses for Northern Nevada

- ▶ Kentucky Bluegrass (most common)
- ▶ Fine Fescue (Shady areas)
- ▶ Tall fescue
- ▶ Perennial Rye
- ▶ Mixtures and Blends



Rye



Kentucky  
Bluegrass



Fescue

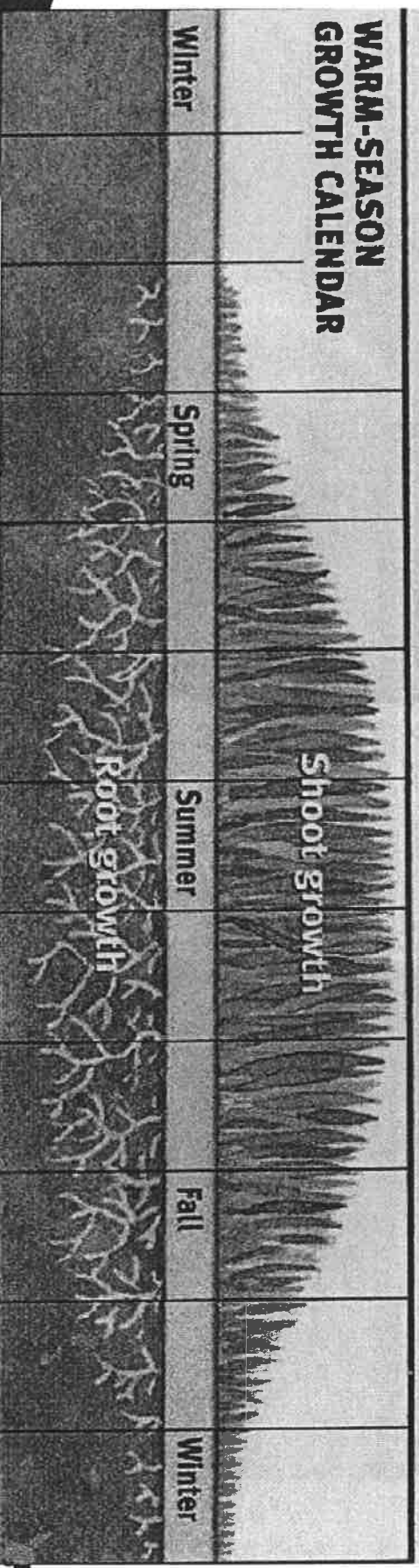
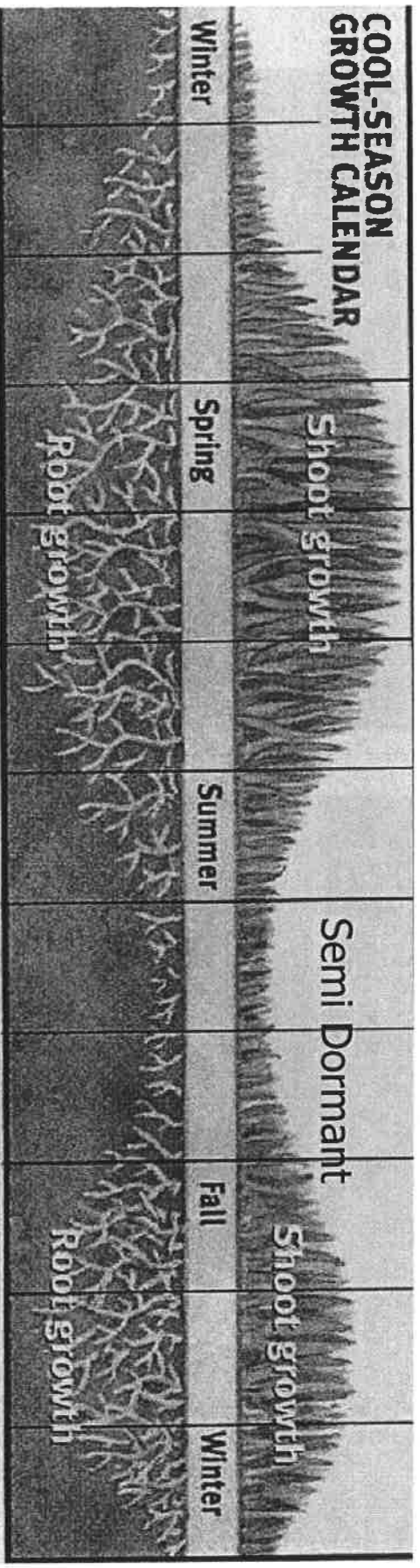
# Considerations for Grassy Common Areas

- ▶ Aesthetics, what are my preferences.
- ▶ What are the conditions of the site.
- ▶ What kind of use? High traffic, low traffic shady location.
- ▶ Synthetic turf? 1 acre of artificial turf will lose 2,400 gallons of water/day.
- ▶ Can't provide cooling effects, will create heat islands.



# Cool Season Grasses Growth Cycle

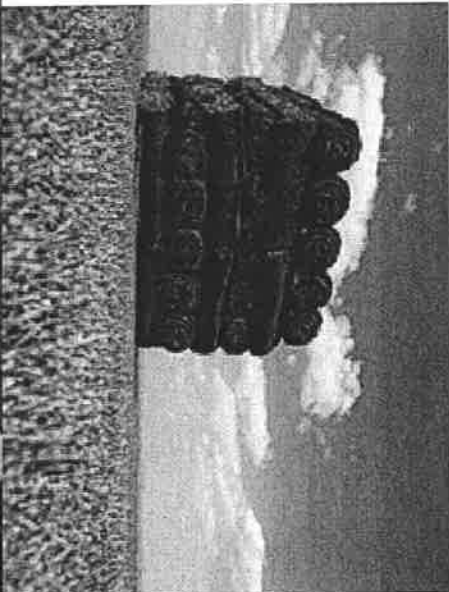
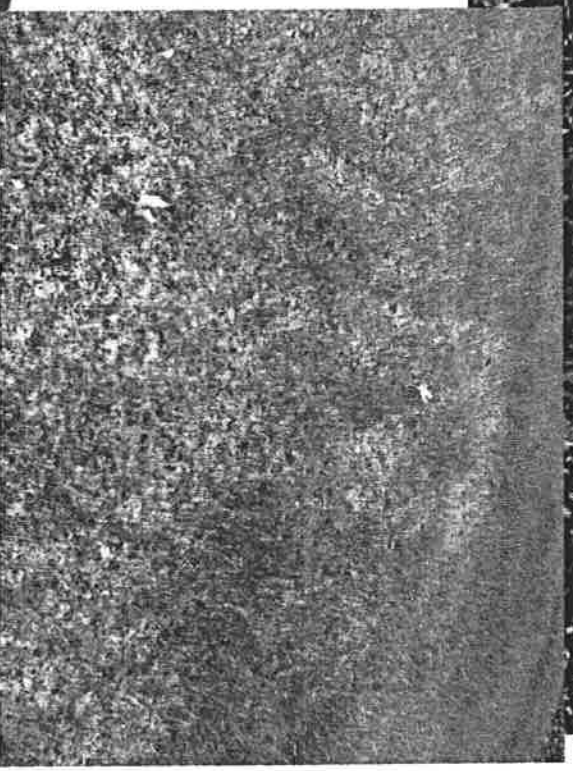
**RENO**



**Las Vegas**



# Seed or Sod

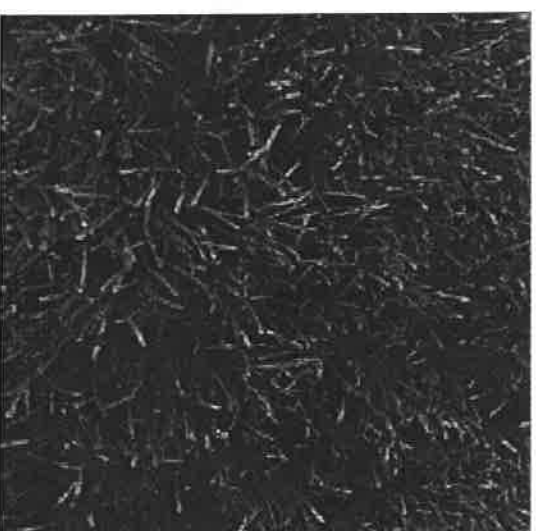
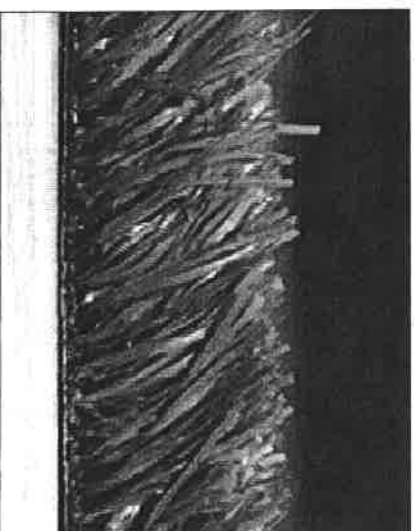


# Seed vs. Sod

<b>Factors</b>	<b>Seed</b>	<b>Sod</b>
Time of year to install	Possible in spring, best in fall for most areas.	Year round installations
Water Requirements	Highest water need	Lowest water needs
Weed Control	Multiple applications	Minimal if any
Soil Prep	Same for both	Same for both
Aesthetics	Patchy, longer to establish	Immediate beauty
Cost	Lowest	Highest
Cost vs. Value	Higher cost & intense management until establishment	Offset by reduce maintenance chemical and water cost

# Synthetic (Artificial) Turf

- ▶ Cost (Expensive)
- ▶ Quality of Turf
- ▶ Heat & Bio-hazards
- ▶ Use in Xeriscape
- ▶ Maintenance
- ▶ Heat island affect



# Maintenance Tasks of Turf

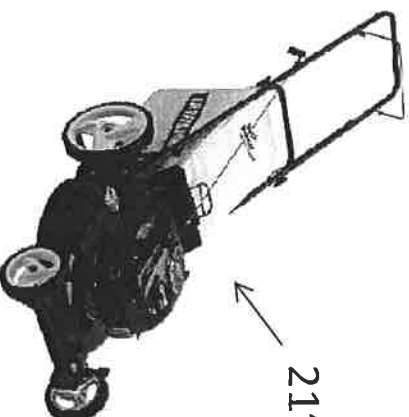
- ▶ Mowing
- ▶ Irrigation
- ▶ Aeration
- ▶ Thatching
- ▶ Fertilizing
- ▶ Managing Turf Diseases



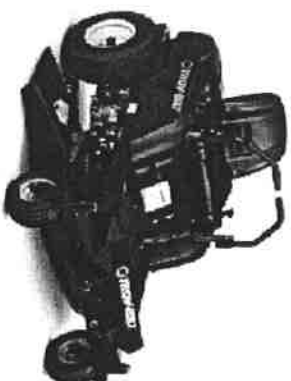
# Turf Care

- Types of Mowers
  - Winter
  - Summer
- Edging
- Blowing

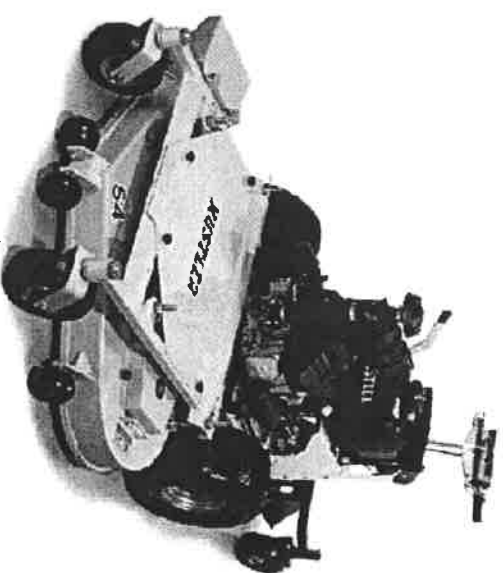
String  
Trimmer &  
Stick Edger



Leaf Blower →



Riding Mower



Walk Behind

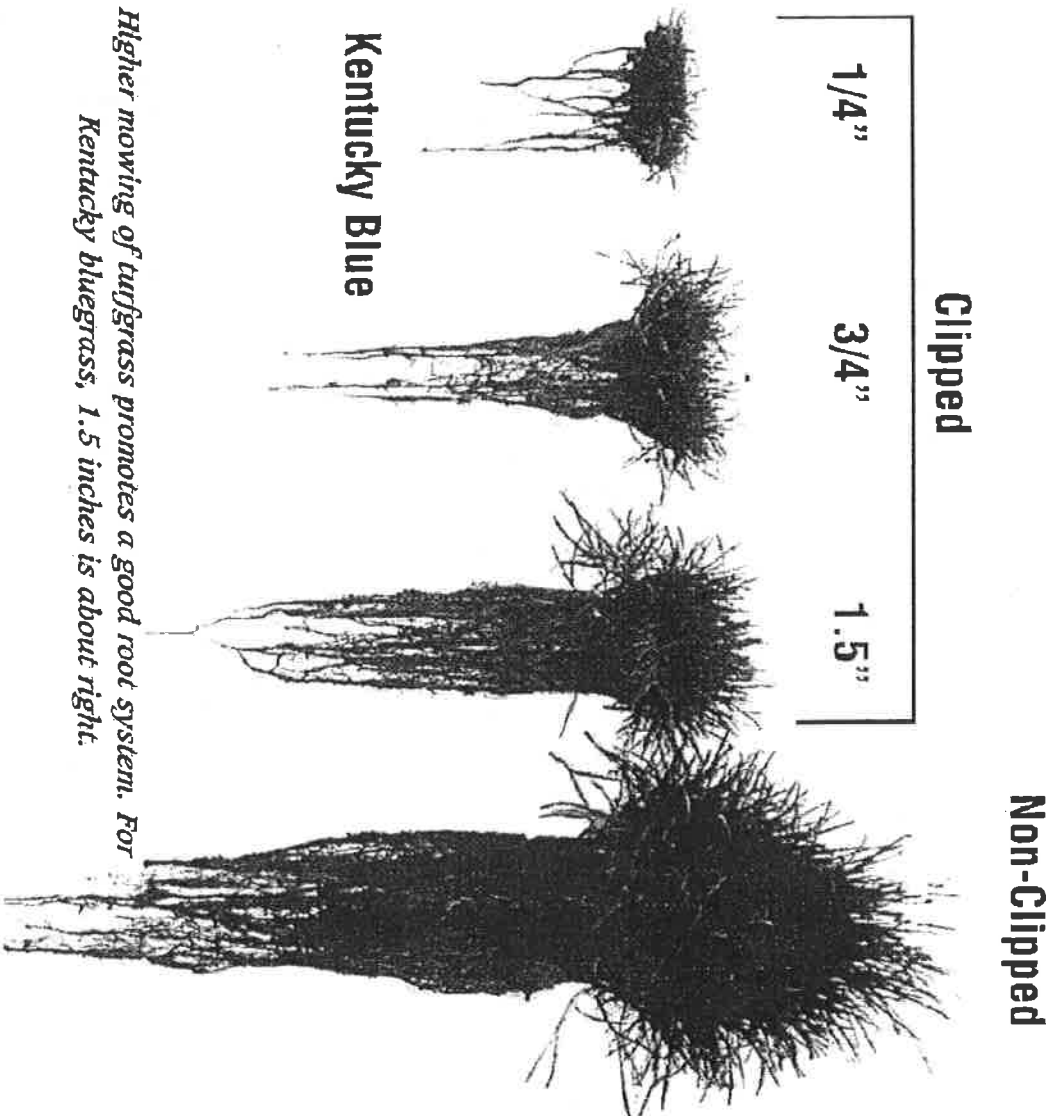


# Effects of Close Mowing



- ▶ Lower cuts increase the incident of disease.
- ▶ Scalping will cause the root and shoot (blade) to stop growing. Depending on the health of the lawn, effects may last several day to weeks.
- ▶ Leaf blades are proportionate to the root growth.

# Mowing vs. Rooting Depth



*Higher mowing of turfgrass promotes a good root system. For Kentucky bluegrass, 1.5 inches is about right.*





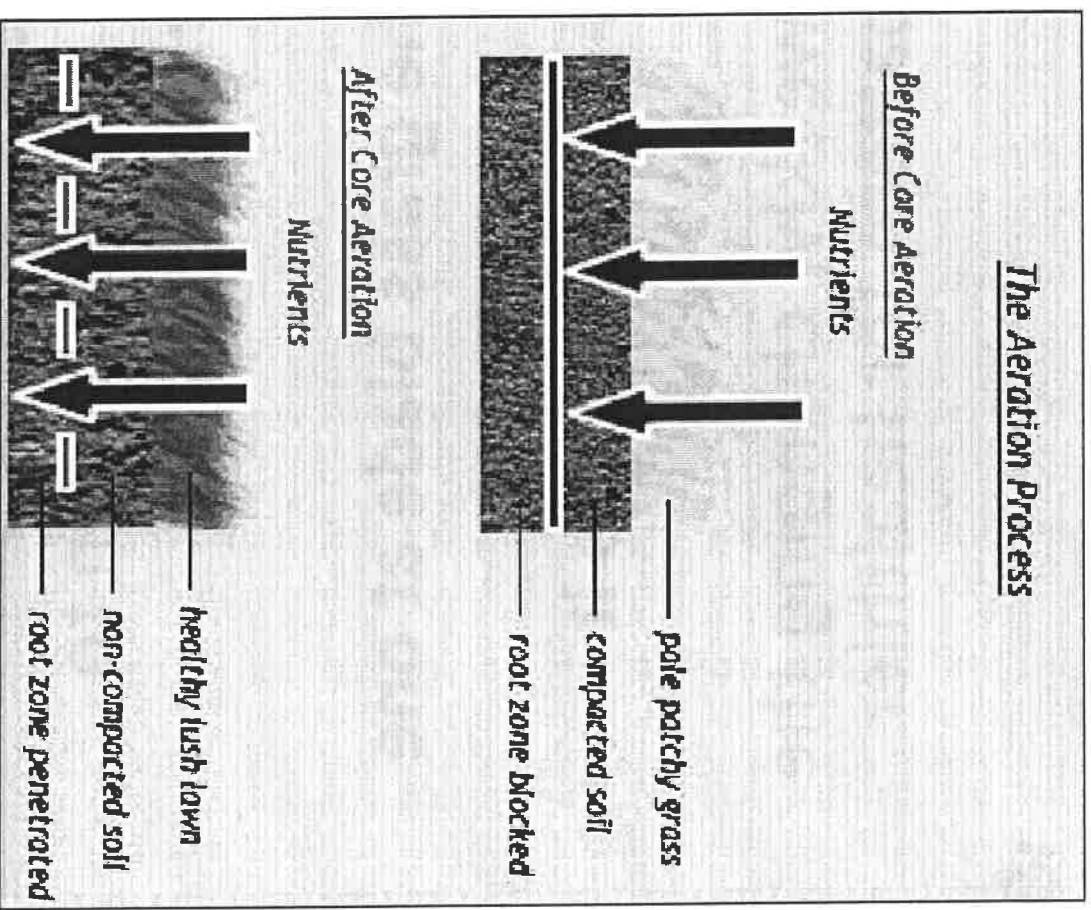
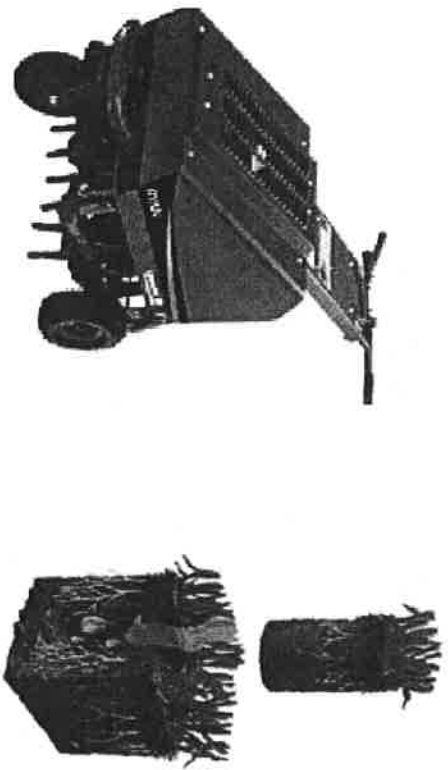
# Effects of Close Mowing

- ▶ Repeated scalping will cause the lawn to eventually thin and die.
- ▶ Follow the 1 / 3 rule:
  - Remove only 1 / 3 of the grass blade at one time.
  - If lowering the blades is required, do it gradually over time.
- ▶ Mowing should occur weekly, changing the direction of the mow pattern for healthier turf.



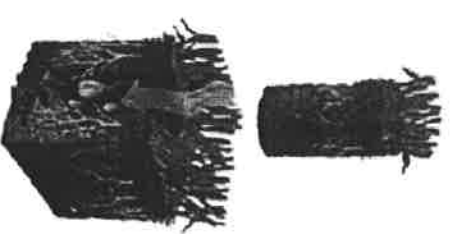
# Aeration

- ▶ Budget for two times per Year
- ▶ Spring and Fall
- ▶ Aerate when needed



# Why Aerate?

- ▶ Benefits:
  - Reduces runoff
  - Quick response from fertilizer
  - Benefits of leaving cores break down the thatch.
  - Decreases compaction
  - Increases water infiltration
  - Increase oxygen exchange
  - Increases fertilizer absorption



# Fertilization

- ▶ Inexpensive fertilizers are taken up by the lawn quicker like Ammonium Sulfate (20-0-0).
- ▶ Inexpensive fertilizer gets quick response but doesn't last. More applications are required. Like giving the lawn "Red Bull" (D.Aguilar 2013).
- ▶ Leaches easily.
- ▶ Harmful to our water quality (Truckee River)

# Fertilization

## Pros

- ▶ Slow Release fertilizers are best. Apply 3 times as much without losing nutrients to leaching
- ▶ Releases fertilizer slowly over time.
- ▶ Feeds the turf when it needs it.
- ▶ Minimizes leaching
- ▶ Environmentally friendlier
- ▶ Less fertilizer applications
- ▶ Need to apply Iron to lawns and shrubs (Fe)



# Fertilization Requirements

- **Quick Release Frequencies**
  - Late March / April
  - Late May / June
  - Summer snack
  - August / September
  - Early October
- **Slow Release Frequencies**
  - Quick Release
  - Late May / June
  - Late August / September

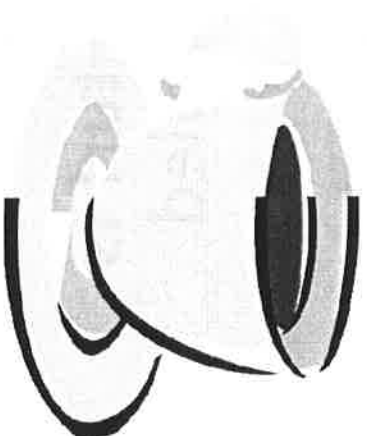


Nitrogen

Phosphorus

Potassium

# 10 Minute Break

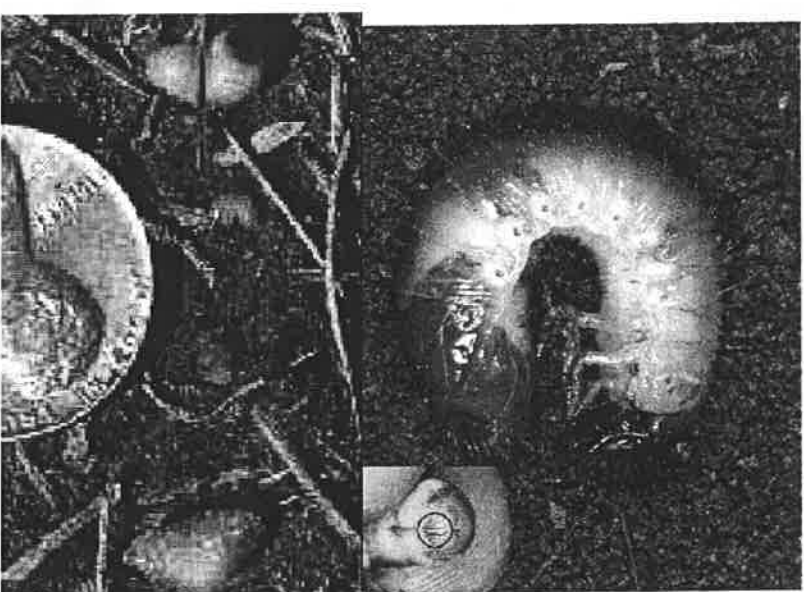


# Questions?



# Turfgrass Insects White Grubs

- ▶ Root feeding
- ▶ Often see damage as irregular dead patches.
- ▶ Turf not anchored, turf is easily removed or rolled back.
- ▶ Weeds will invade dead areas
- ▶ Damage and feeding is seen early spring, early summer and late summer to fall.





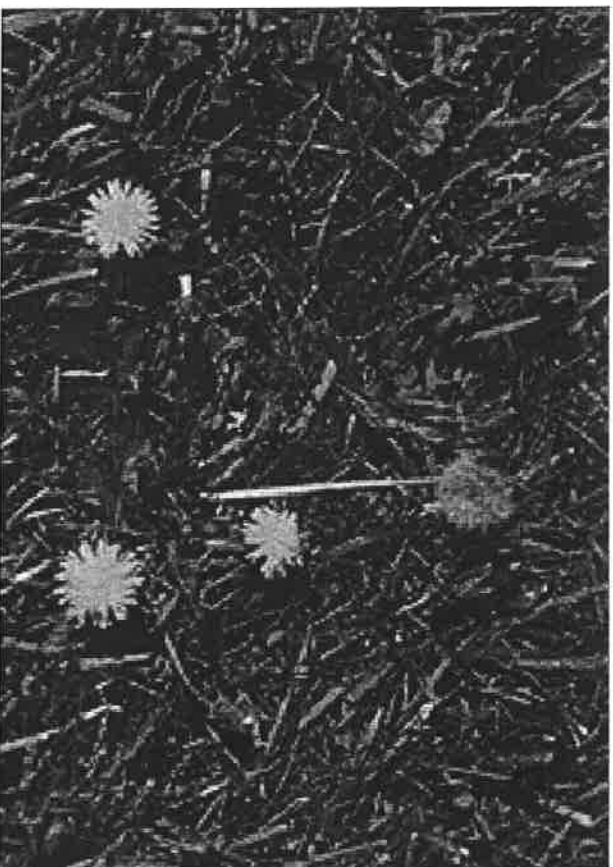
# Billbugs

- ▶ Member of the Weevil Family (snout)
  - Burrow in stems & crown
  - Small, legless larvae similar to grubs
  - Sawdust like packets of grass
  - Larvae feed with the stems and crowns
  - Stems break easily at the crown
  - Dollar spots grow into larger connecting patches, will mimic a disease.

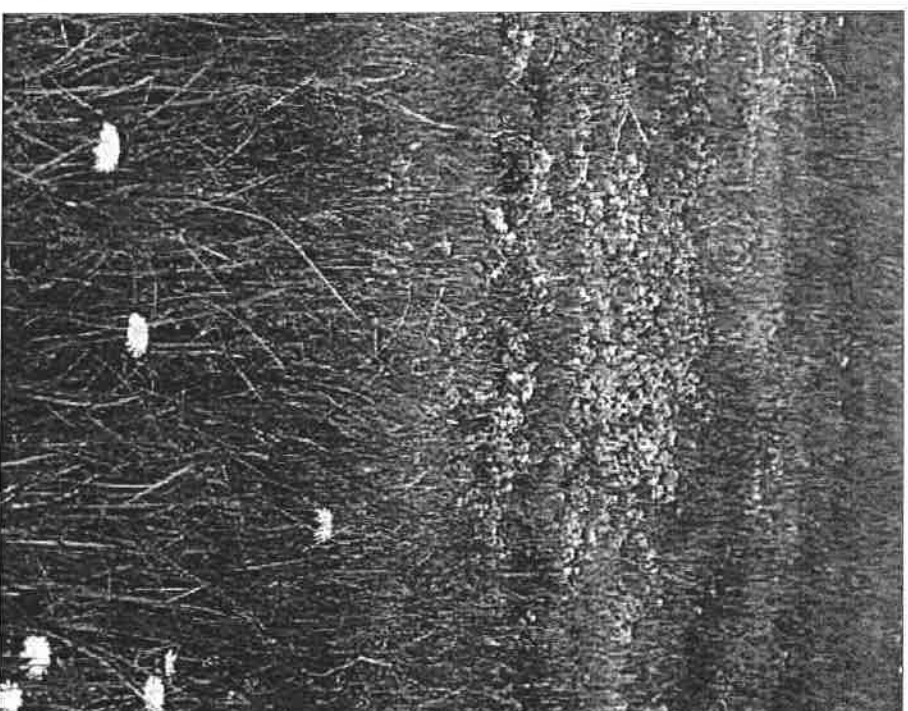
# Common Turf Weeds

- ▶ Dandelion
- ▶ Knotweed
- ▶ Red Stem Filere
- ▶ Puslane
- ▶ Annual Bluegrass
- ▶ Blackmedic
- ▶ Niblewill
- ▶ Tall Fescue
- ▶ Clover
- ▶ Saltgrass
- ▶ Spotted Spurge
- ▶ Cheese Weed
- ▶ Buckthorn or Plantain

# Turf Weeds

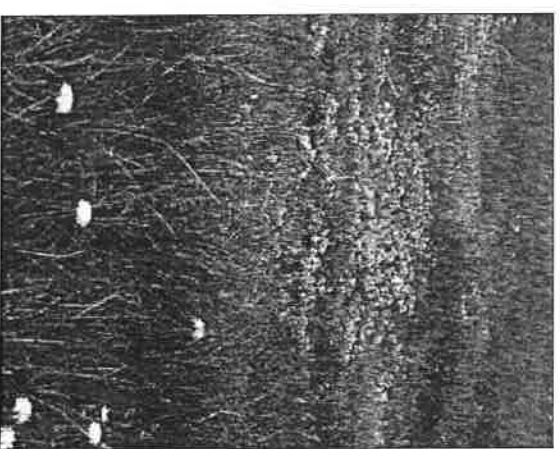
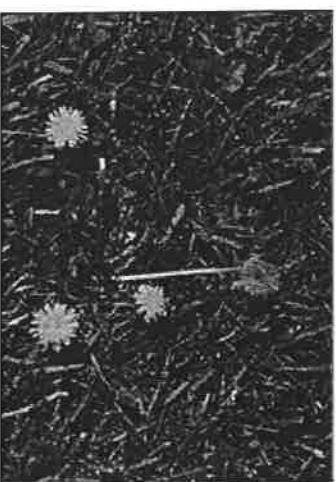


The Definition of a Weed  
a plant where it is not  
wanted and/or without  
proper irrigation.

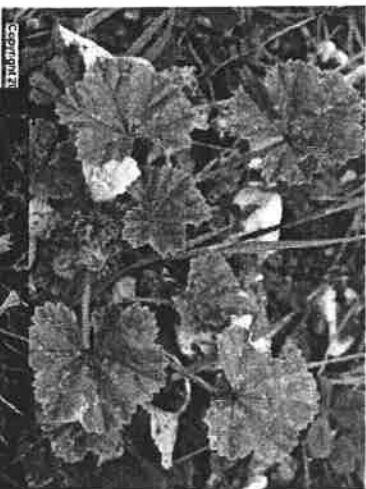


# Turf Weeds

- ▶ **How do weeds spread?**
  - ▶ Wind, water and human movement.
- ▶ **Combating Turf Weeds:**
  - ▶ Pre-Emergent herbicide
  - ▶ When? Early Spring and fall.
  - ▶ Spot treat throughout the season.
- ▶ Weeds compete for nutrients



# Broad leaf weeds



**Cheese Weed,  
Little Mallow**



**Dandelion**



**Red Stem Filere**

# Nimblewill (grass weed)



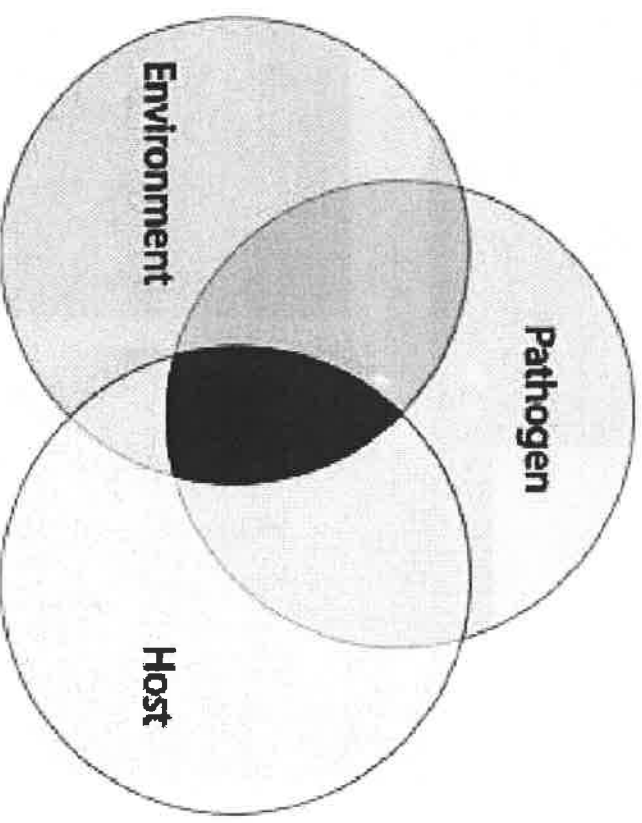
Grass weed



Annual Bluegrass  
(grass weed)

# Why Lawn Diseases Occur

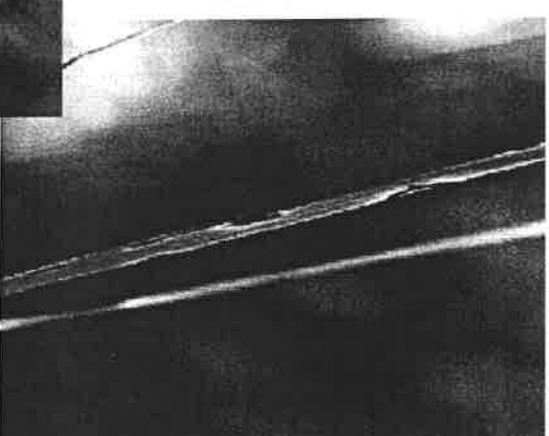
- ▶ Time is a factor.
- ▶ Diseases don't occur overnight.
- ▶ We often create the environment for disease to occur by:
  - Over or under watering
  - Over fertilizing
  - Watering at the wrong time of day
- Species selection



Disease Triangle

# Common Cool Season Turf Diseases

- ▶ Fairy Ring
- ▶ Melting out
- ▶ Dollar Spot
- ▶ Necrotic Ring Spot
- ▶ Brown Patch
- ▶ Snow mold

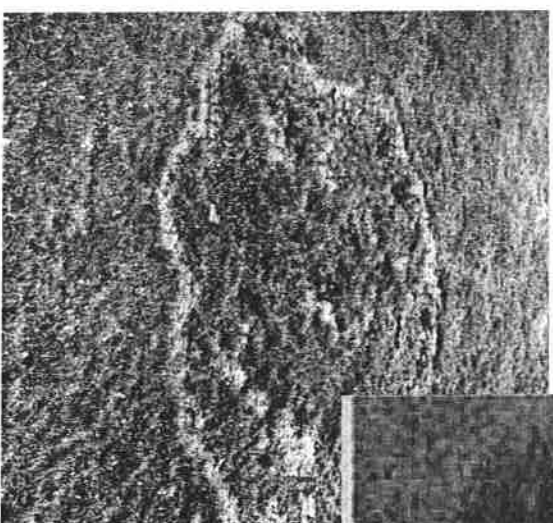
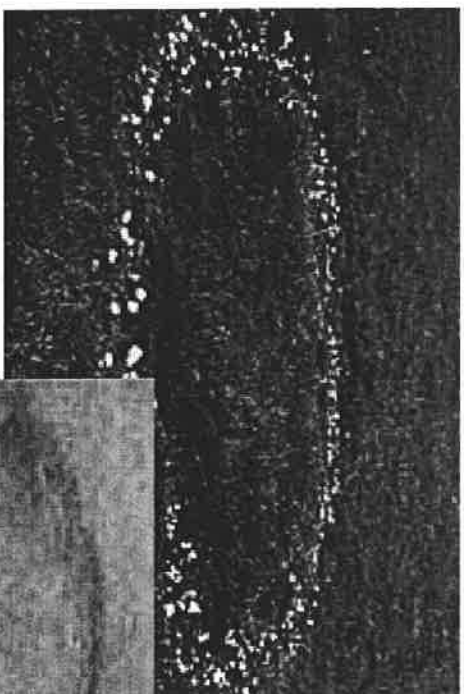




# Fairy Ring

Prefers:

- ▶ Drought stressed lawns
- ▶ Thatchy lawns
- ▶ 50 different species
- ▶ Mushroom fungi

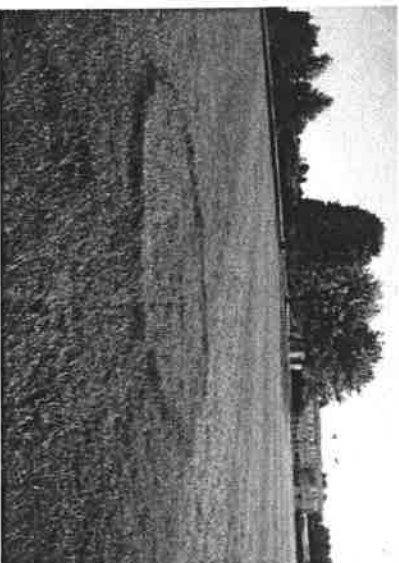


# Three Types of Fairyring



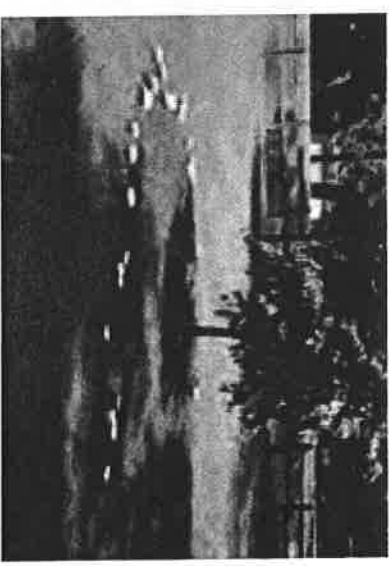
## Type I

Most devastating.  
Soil becomes water repellent.  
Appear during hot dry summer or drought conditions.



## Type II

Present in dry and under fertilized turf

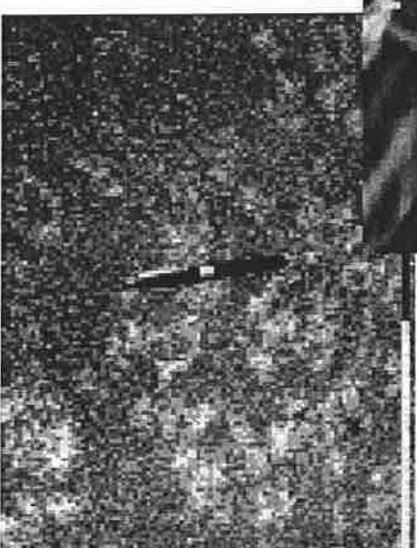


## Type III Most Common

Type II and III occur during wet cool spring

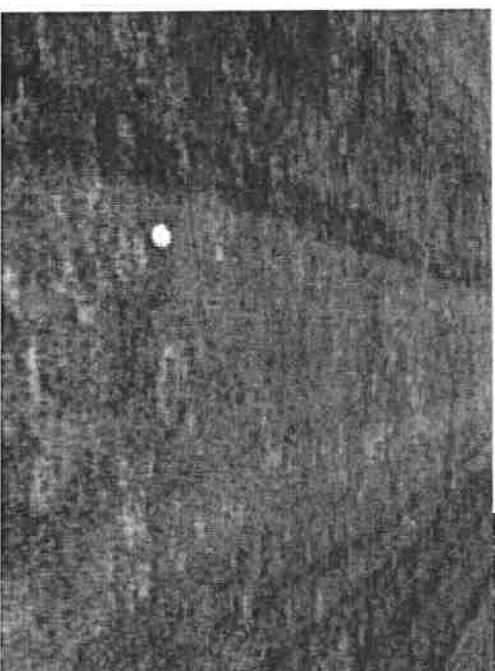
# Dollar Spot

- ▶ Shows up at 59°F to 86°F degrees.
- ▶ Often confused with *Ascochyta* leaf spot.



# Necrotic Ring Spot

- ▶ Resembles small fairy rings
- ▶ Active at 68°F to 86°F.
- ▶ Occurs spring and late fall.



# Necrotic Ring Spot

- ▶ Yellow to light-green in color and
- ▶ 3-15” inches in diameter.
- ▶ Patches can grow up to 3 feet in diameter, eventually turning brown and dying.

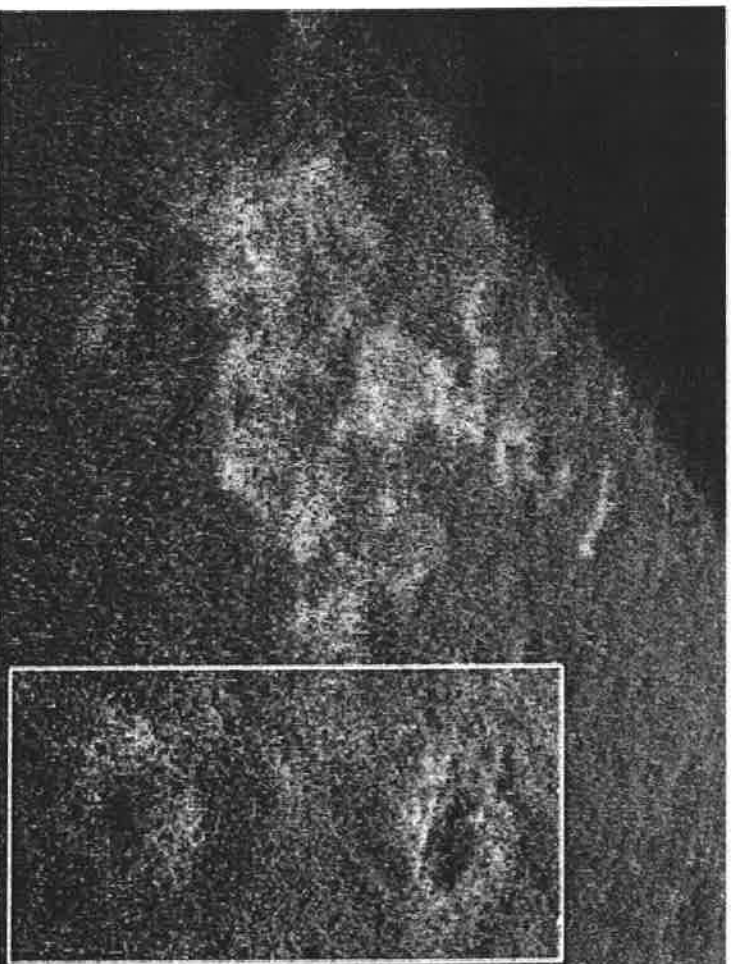


## North

Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec
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## South

Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec
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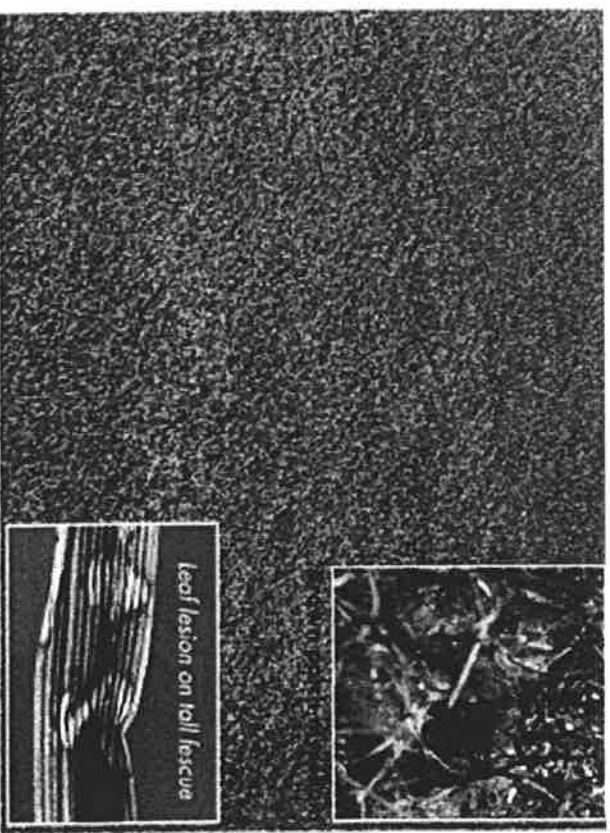
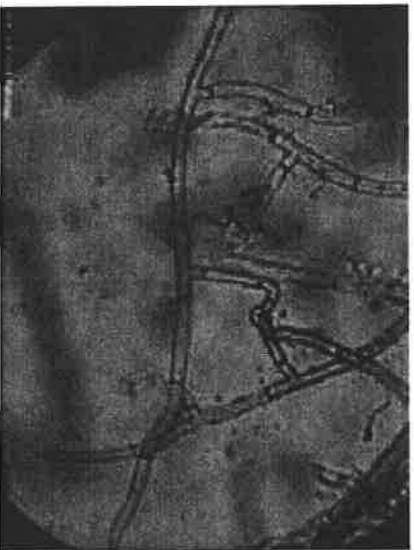
Necrotic ring spot on Kentucky Bluegrass

"Frog-eye" appearance



# Brown Patch

- ▶ Appears mid-summer
- ▶ Prefers hot weather.
- ▶ Standing water
- ▶ Spreads quickly.
- ▶ Often confuse with dry spots.



*Brown patch can form a "purple smoke ring" along the edge when active.*

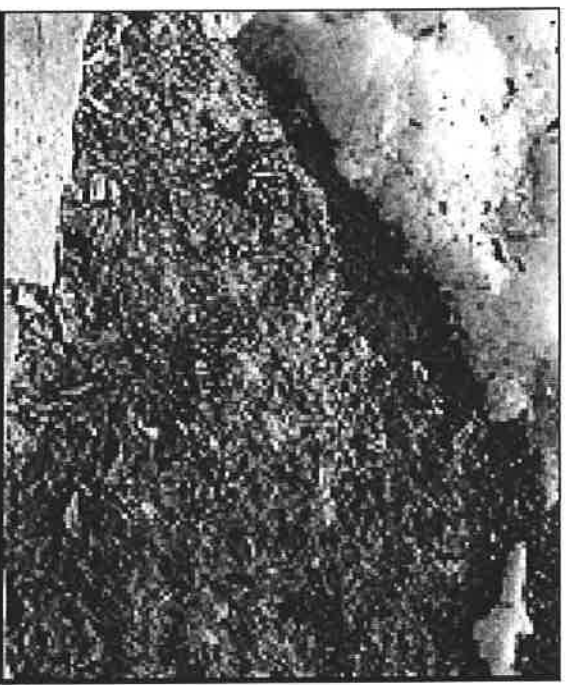


J.E. Watkins, Univ. of Nebraska



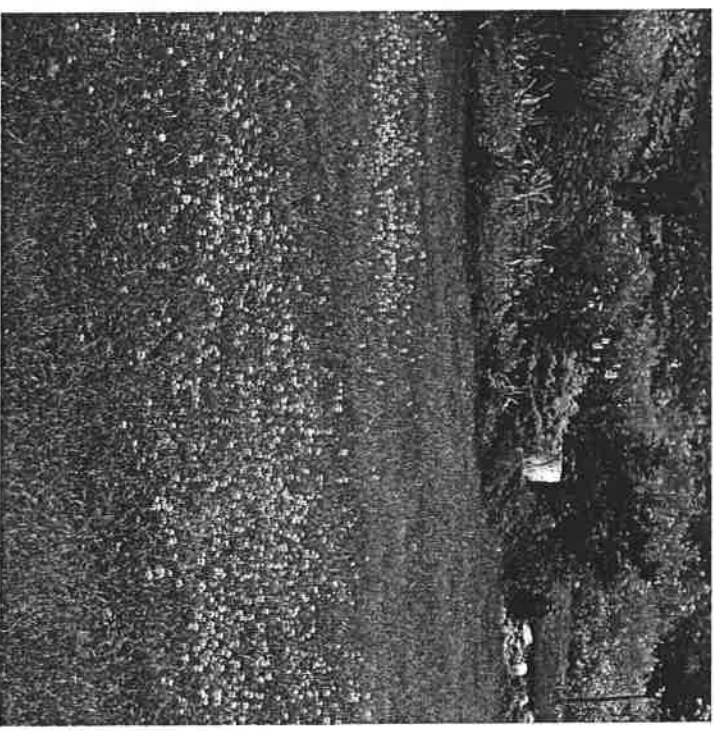
# Gray Snow Mold

- ▶ Caused by a layer of snow over a long period of time.
- ▶ Found on shady locations or north side of property.
- ▶ Causes the leaves to die and leaves unsightly dead spots



# Turf Summary

- ▶ Turf weeds will have controlled annually
- ▶ Weeds will always grow in Xeriscape plantings and mulched areas and flower beds.
- ▶ Turf disease occur but can be controlled.



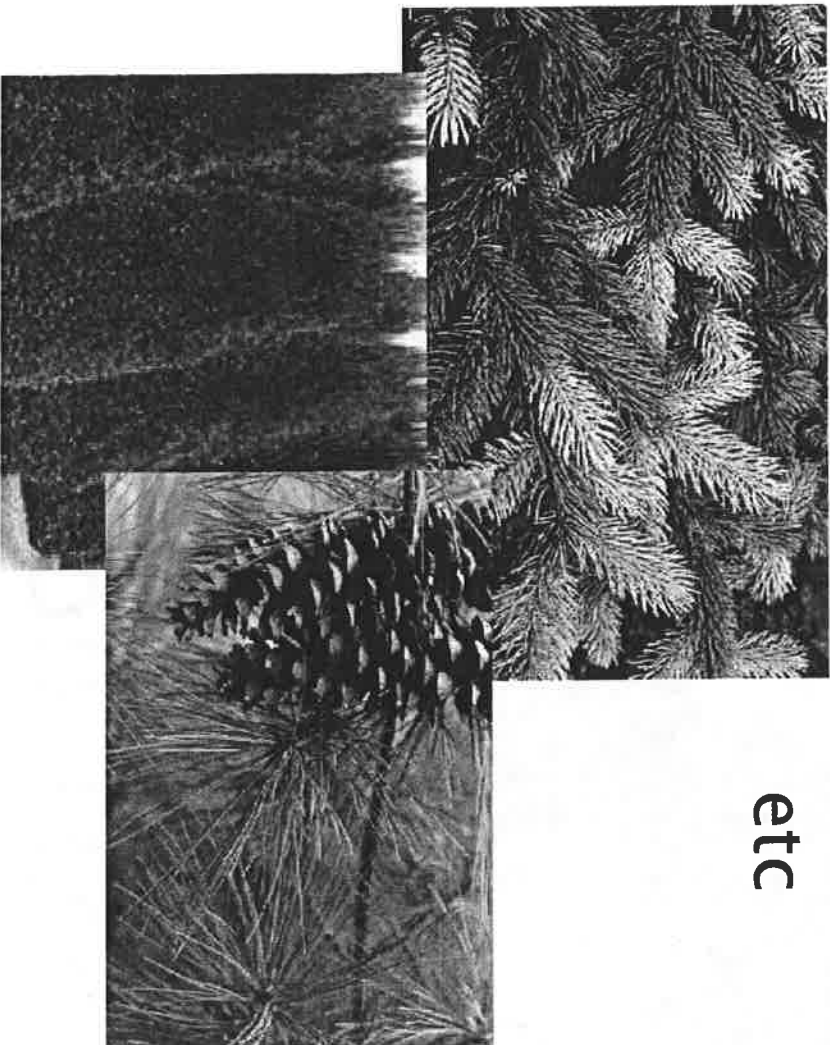


# Common Trees & Shrubs



# Types of Plants and Trees

Deciduous: Maples, Oaks, Ash  
etc



Evergreens:

Spruce, Pines, etc.



# Types of Plants / Shrubs



Succulents



Groundcover



Low Water Use



Annual Flowers and Perennials



Accents



# Selecting Plants for the Great Basin

- ▶ Consider:
  - What are your goals?
  - Maintenance
  - Existing landscape
  - Deciduous vs. Evergreen
  - Fruit/Flowers
  - Fall color

# Plant Selection Considerations

- Micro-climate (north / south exposure)
- Sun and shade requirements
- Location (*fence, driveway, near building*)
- Mature height and spread
- Fast growing vs. Slow growing
- Soil Conditions (*Double Diamond/Sparks*)
- Water
- Insect and disease problems

# Wrong plant wrong place?



# Common Planting Mistakes

1. Inaccurate irrigation, scheduling.
2. Drip emitters are not modified as the tree gets older.
3. Drip emitters are placed in the wrong area
4. Wrong plant for the type of soil and location
5. Trees planted too deep

**BUT WAIT THERE'S MORE.....**

# Common Planting Mistakes

6. Trees planted too high
7. Staked incorrectly
8. Twine or wire basket not removed at planting
9. Handling
10. Herbicide Damage



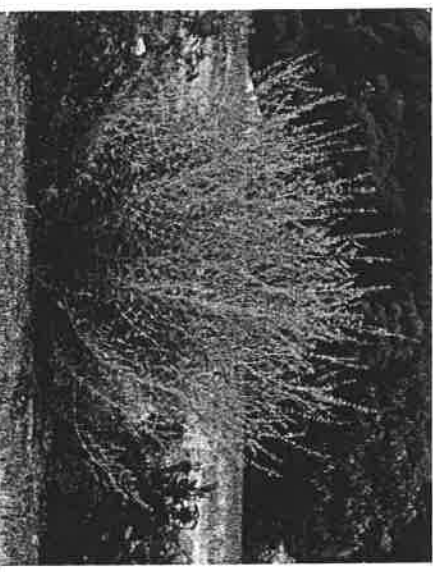
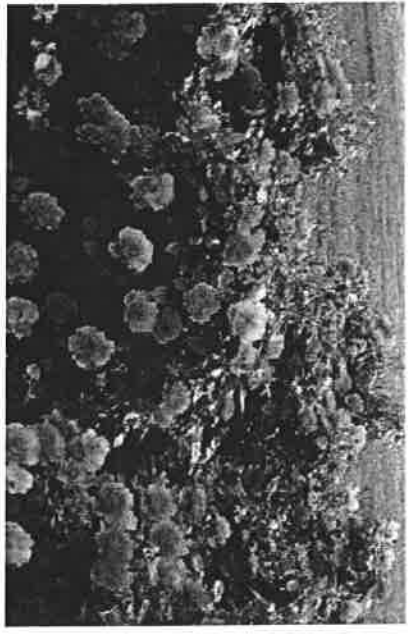
# Plant Identification for Northern Nevada



Roses, Day Lilies

Marigold

Potentilla



Roses

Petunias

Russian Sage

