PENNSYLVANIA PARK MAINTENANCE INSTITUTE

PUTTING YOUR FIELDS TO BED

Presenter:
Jeff Fowler
Penn State Cooperative Extension
Venango County

LEARNING OBJECTIVES

- Learn proper fall cultural practices for athletic fields
- Learn proper fertilizer applications for late fall turf
- Learn new agronomic practices

FALL IS A GREAT TIME TO MAINTAIN FIELDS

Baseball

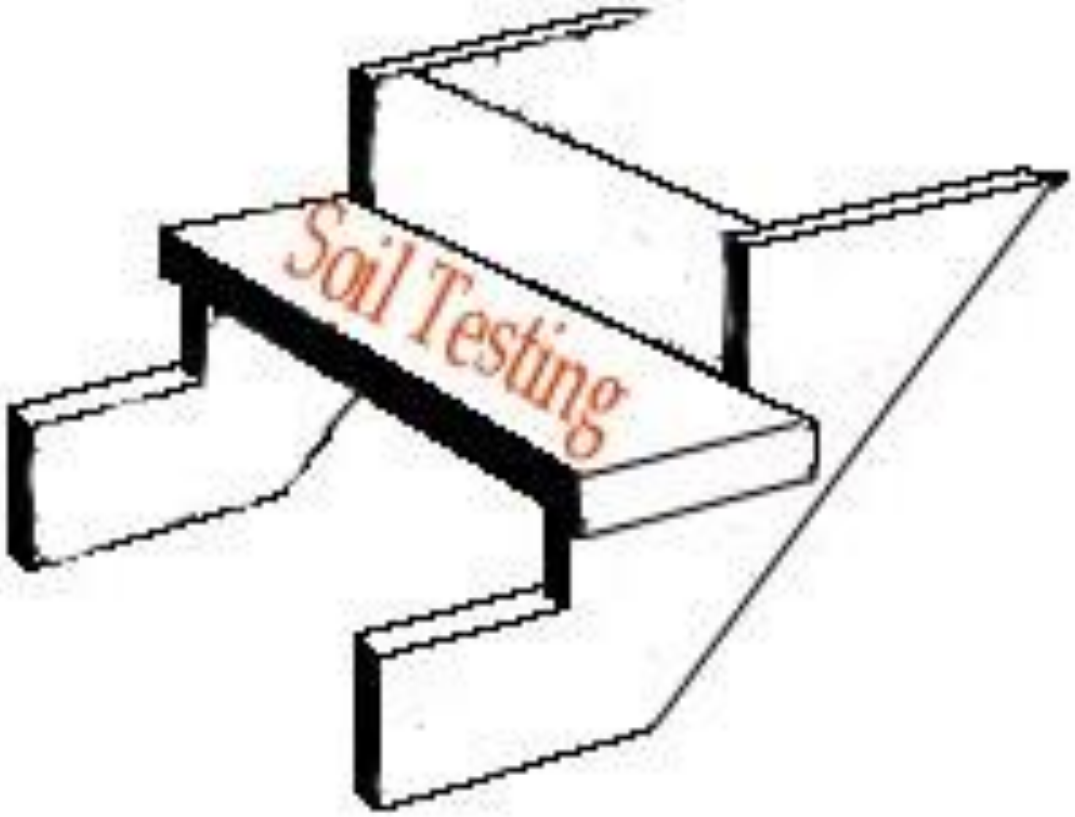
Soccer

Football

IT IS IMPORTANT TO SLOW DOWN

IMPORTANT AGRONOMIC STEPS TO TAKE

Step 1



YOU NEED TO ESTABLISH A BASELINE

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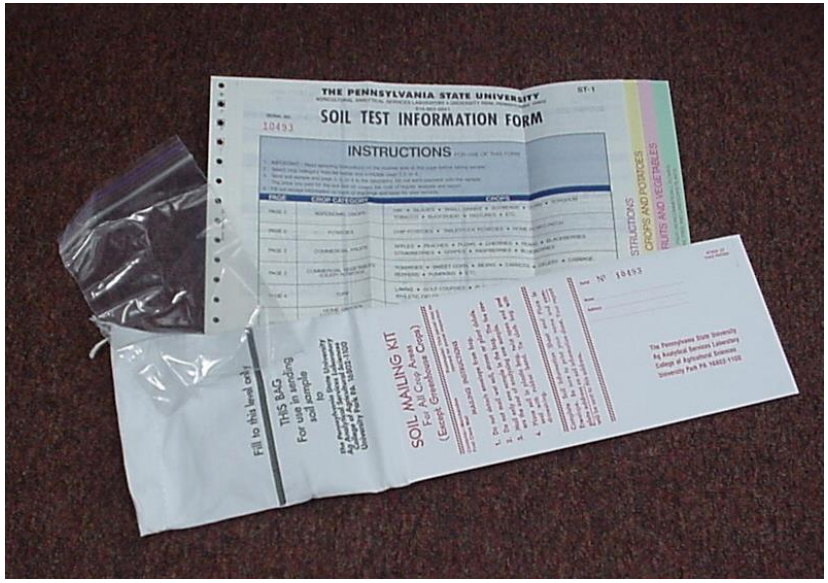
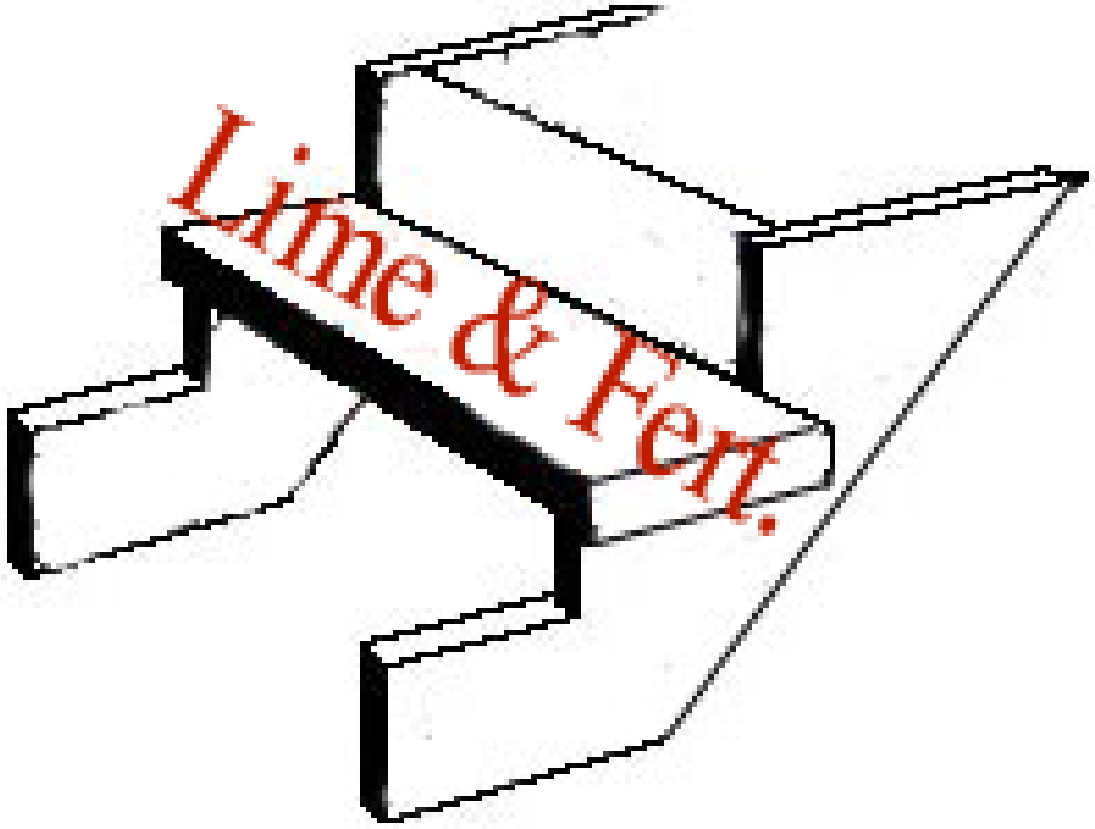


IMPORTANT AGRONOMIC STEPS TO TAKE

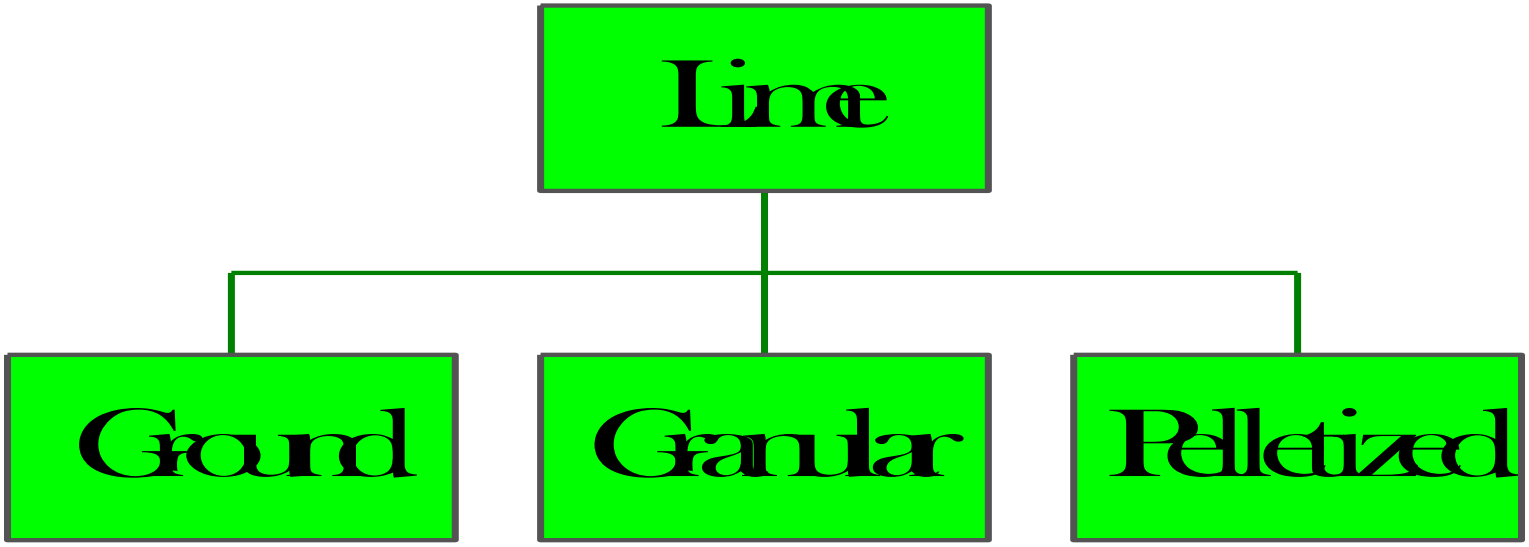
Step 2



Liming:

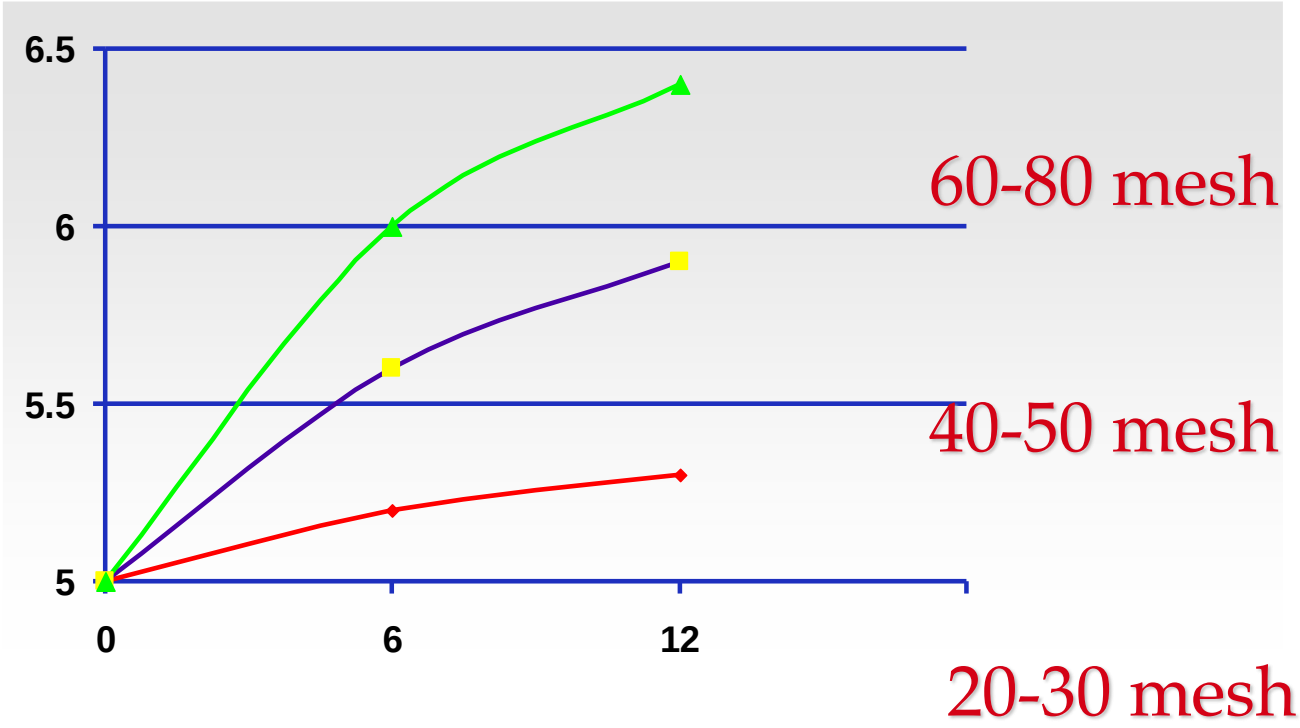
The practice of applying an agent to reduce soil acidity (raise pH) and make soils more favorable for turfgrass growth

LIMING



LIMING

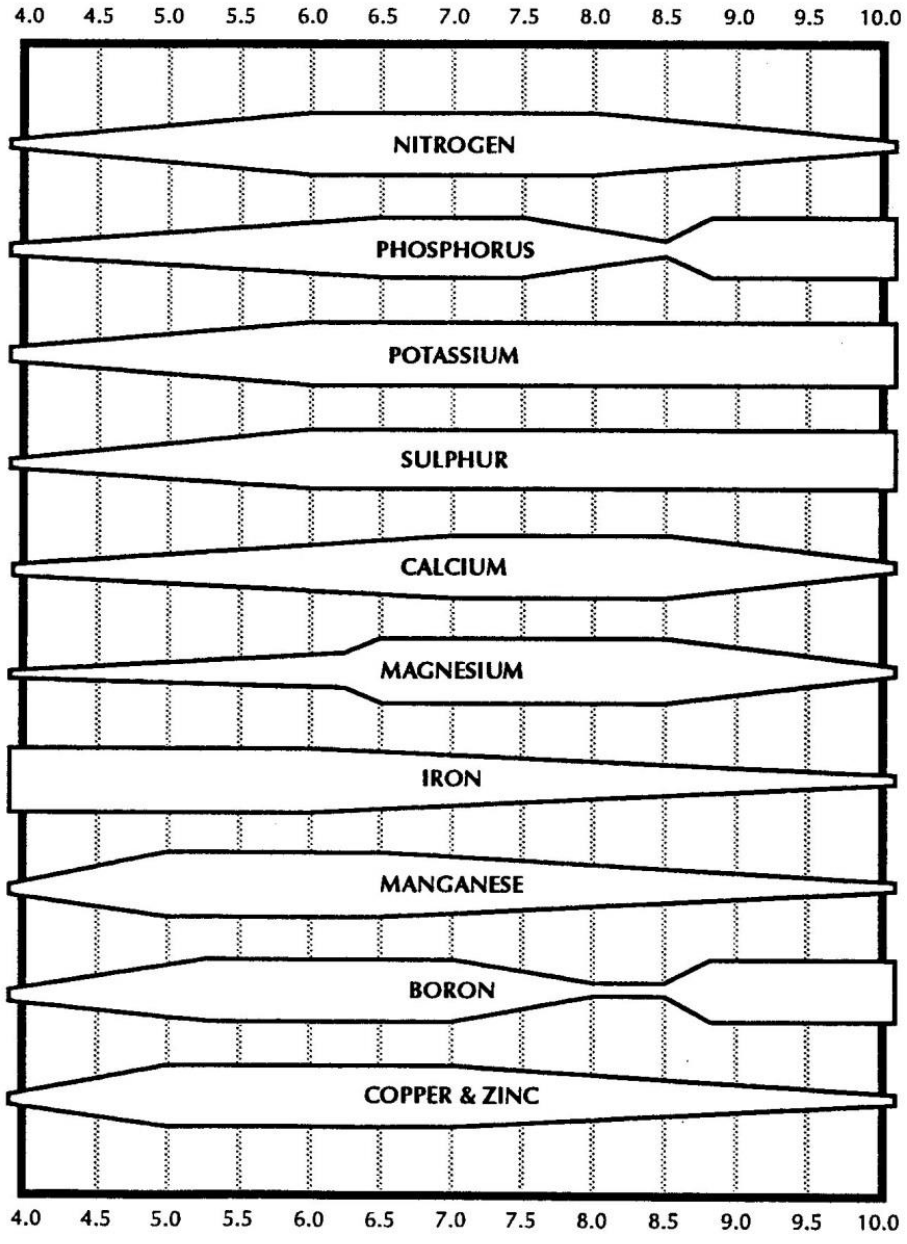
Effect of limestone particle size on speed of reaction in soil



OPTIMUM RANGES

Turfgrass Species	Optimum pH
Kentucky bluegrass Annual bluegrass Perennial ryegrass	6.0 - 7.0
Fine fescues Tall fescues Bentgrasses	5.5 - 6.0

OPTIMUM NUTRIENT ABSORPTION



EFFECT OF SOIL TYPE ON LIME REQUIREMENTS

Soil type	lbs. lime/1000 ft^2 needed to raise pH from 5.5 to 6.5
Sand	30
Loam	85
Clay loam	120
Muck	225

ANNUAL N REQUIREMENTS

- KY bluegrass 3 - 5 lb/1000 ft^2
- Perennial ryegrass 3 - 5
- Tall fescue 2 - 3
- Fine fescues 2 - 3
- Creeping bentgrass 3 - 6
- Annual bluegrass 3 - 6
- Zoysiagrass 1 - 3

TYPICAL FERTILITY PROGRAM

Clippings Returned

Dates	Details
5/1 - 6/10	1-1.25 # N (20%+WIN) .5 # each P and K
9/1 - 9/20	1-1.5 # N (20%+Win) .5 # each P and K
11/10-11/30	1-1.25 # N (50%+WIN) .75# K

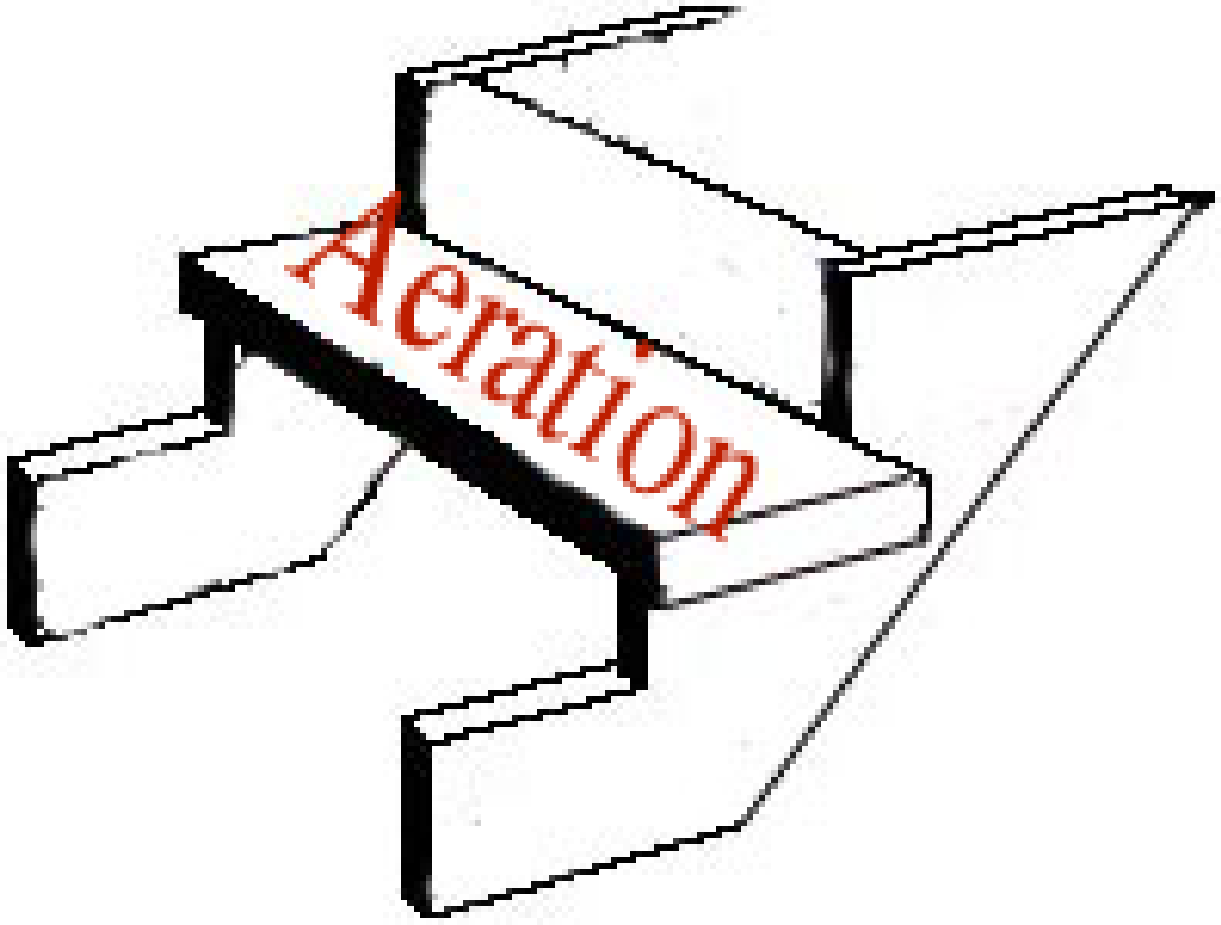
*not fine fescue

TYPICAL FERTILITY PROGRAM

- Use higher rates on bluegrass and perennial ryegrass
- Use higher rates on infertile, high traffic, and/or clippings removed
- Use lower rates in fertile soils and clippings returned
- Use lower rates and skip late application with fine fescue

IMPORTANT AGRONOMIC STEPS TO TAKE

Step 3



AERATION

AERIFICATION PROGRAM

Core spacing inches	Number of holes/sq.ft.	% area removed each pass	50% removed	25% removed	10% removed
			Number of passes over field		
2	36	5.0	10	5	2
3	16	2.2	22	11	5
4	9	1.3	40	20	8
6	4	0.5	90	45	18

Amount of coring required to remove various amounts of soil or sod from a sports field. Calculations based on 0.75-inch diameter (0.44 sq. inches) hollow tines and 100% efficiency on successive passes over the field.

Core spacing inches	Number of holes/sq.ft.	% area removed each pass	50% removed	25% removed	10% removed
			Number of passes over field		
2	36	11	5	2	1
3	16	5	10	5	2
4	9	3	18	9	4
6	4	1.3	40	20	8

IMPORTANT AGRONOMIC STEPS TO TAKE

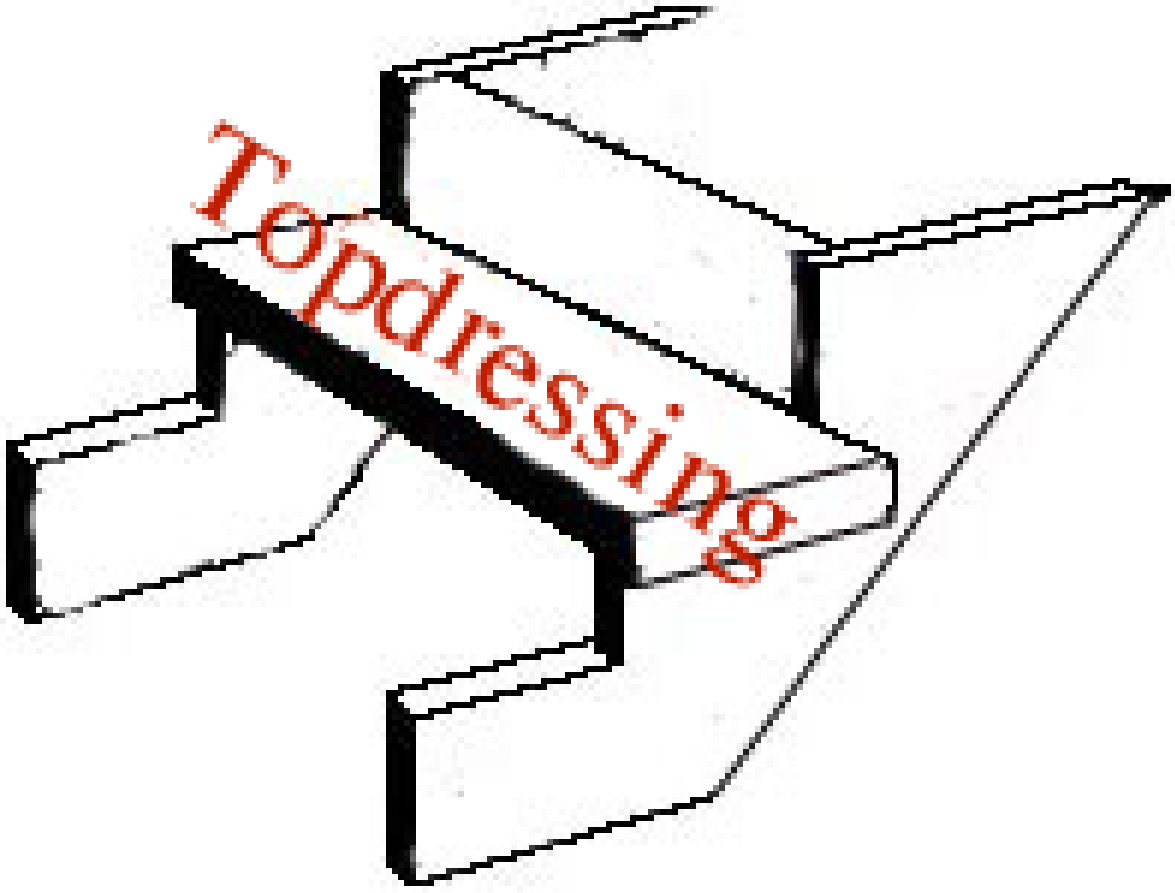
Step 4

METHOD DEPENDS UPON TIME AND STAFF

OBJECTIVE IS TO FILL THE GAPS WITH SEED

IMPORTANT AGRONOMIC STEPS TO TAKE

Step 5



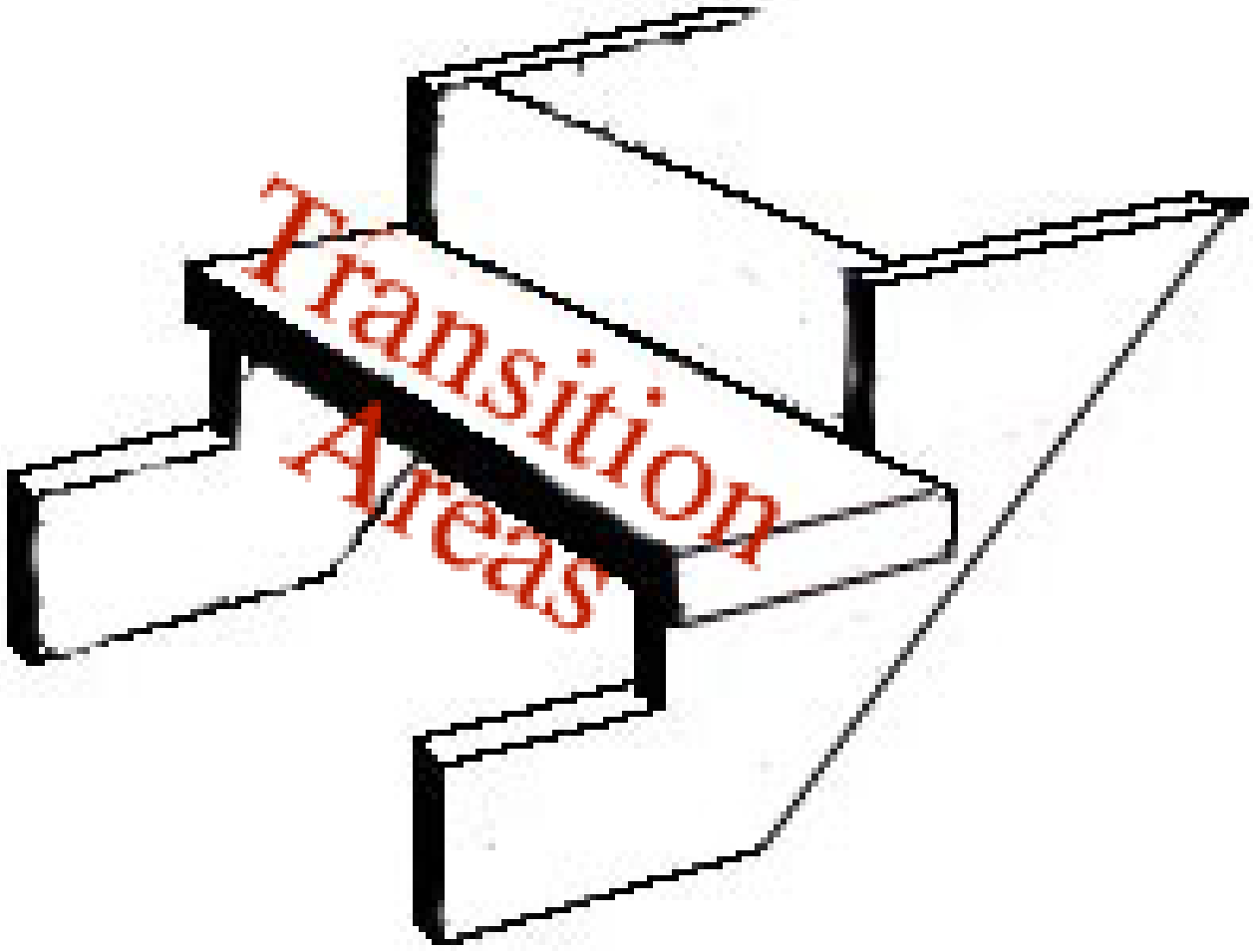
TOPDRESSING WITH THE RIGHT MIX

Compost material is a GREAT topdressing material
Sand alone will NOT help displace water

SPREADING METHOD DEPENDS UPON AREA OF COVERAGE

IMPORTANT AGRONOMIC STEPS TO TAKE

Step 6



TRANSITION AREAS ARE ON THE EDGE OF PLAYING SURFACE

BEWARE OF UNEVEN AREAS

EDGES SHOULD BE CLEAN AND EVEN

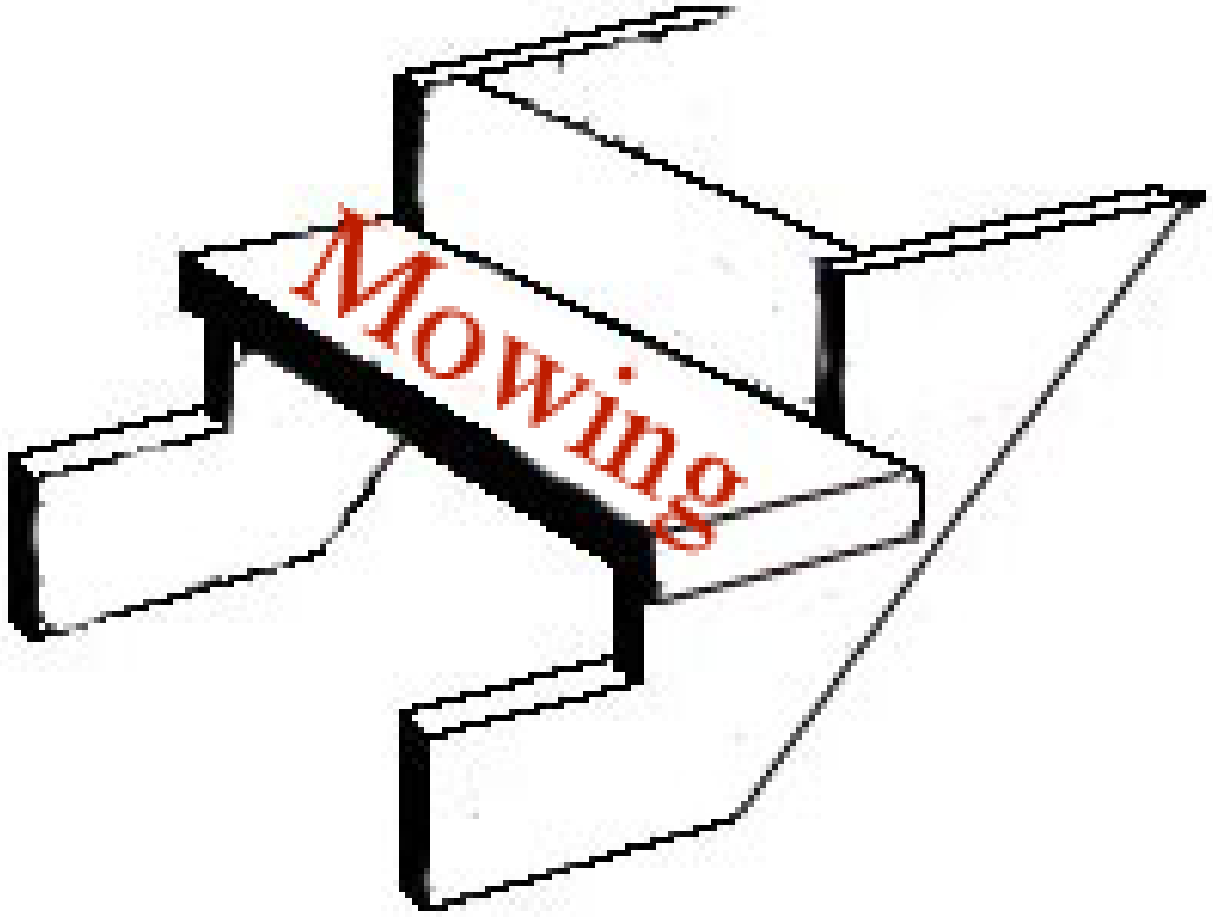
MARK AND CUT EDGE LINES

REMOVE EXCESS MATERIAL

RAKE BACK TO EVEN GRADE

IMPORTANT AGRONOMIC STEPS TO TAKE

Step 7



DO NOT STOP MOWING UNTIL THE SNOW FLIES

MOWING FREQUENCY – RULE OF 1/3

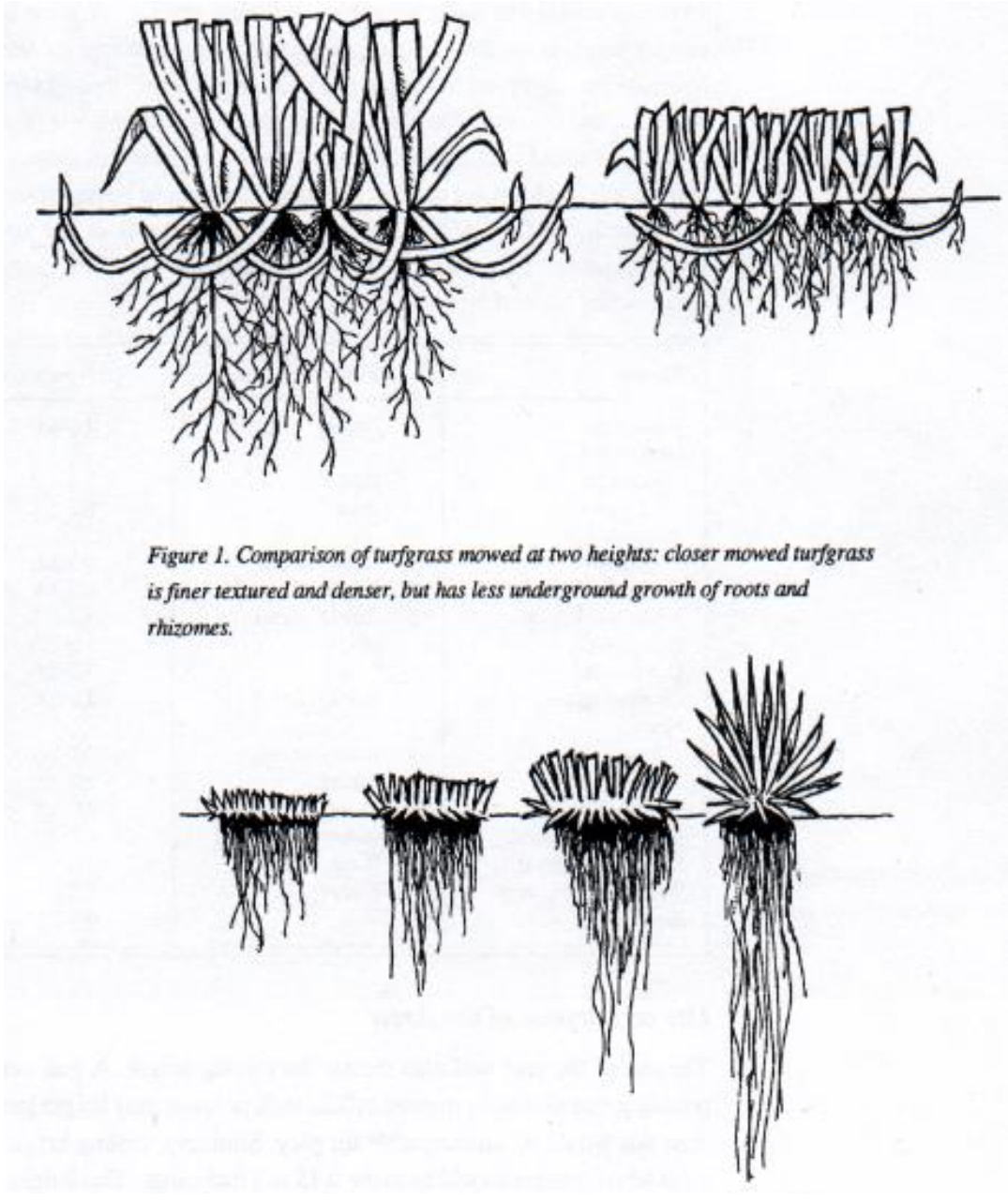
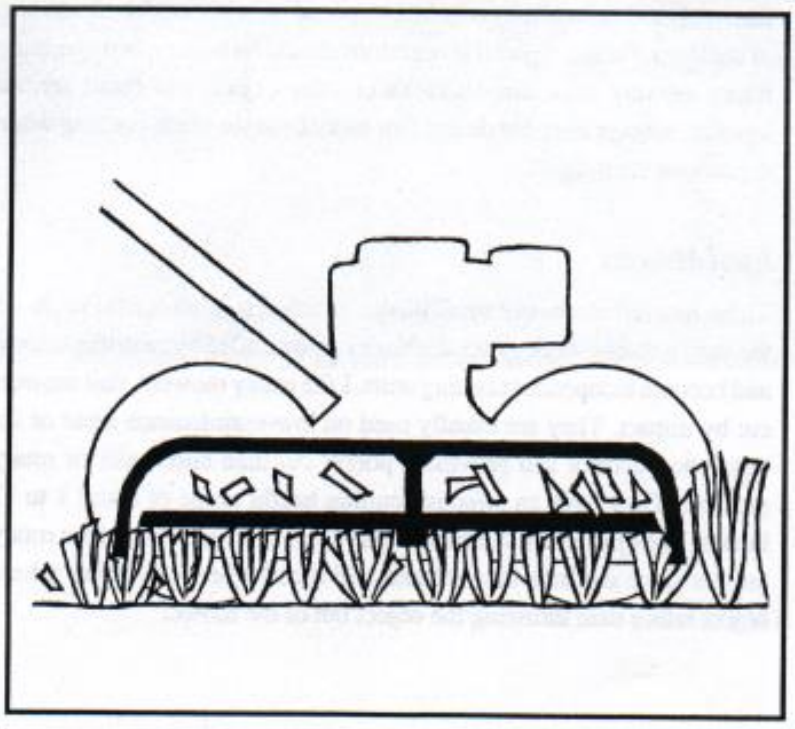


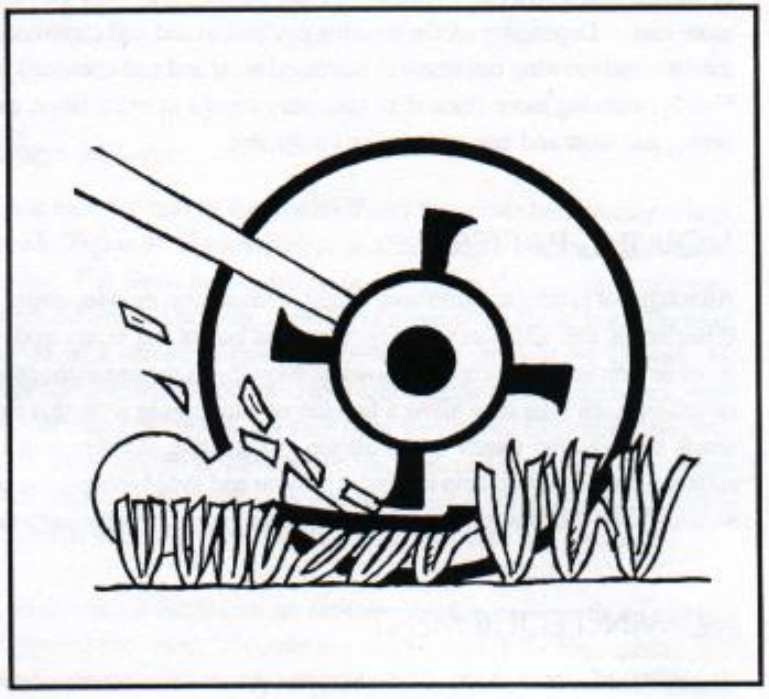
Figure 1. Comparison of turfgrass mowed at two heights: closer mowed turfgrass is finer textured and denser, but has less underground growth of roots and rhizomes.

MOWING EQUIPMENT



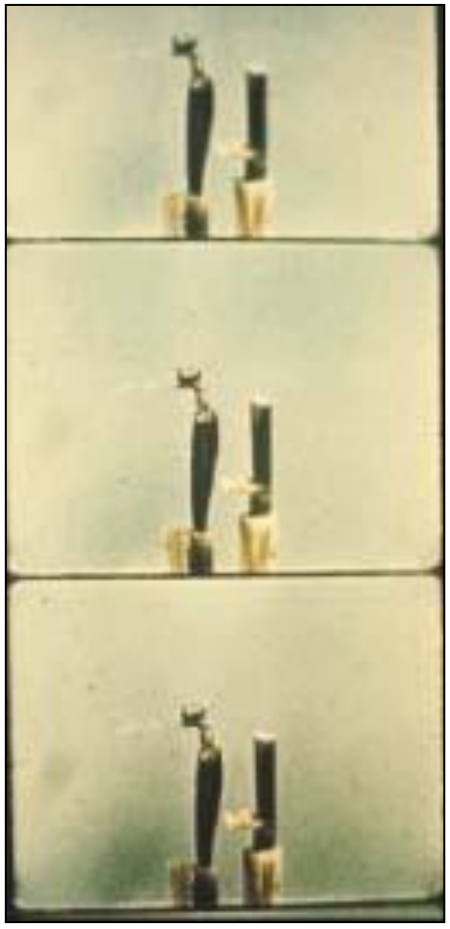
Rotary Mower

Reel Mower

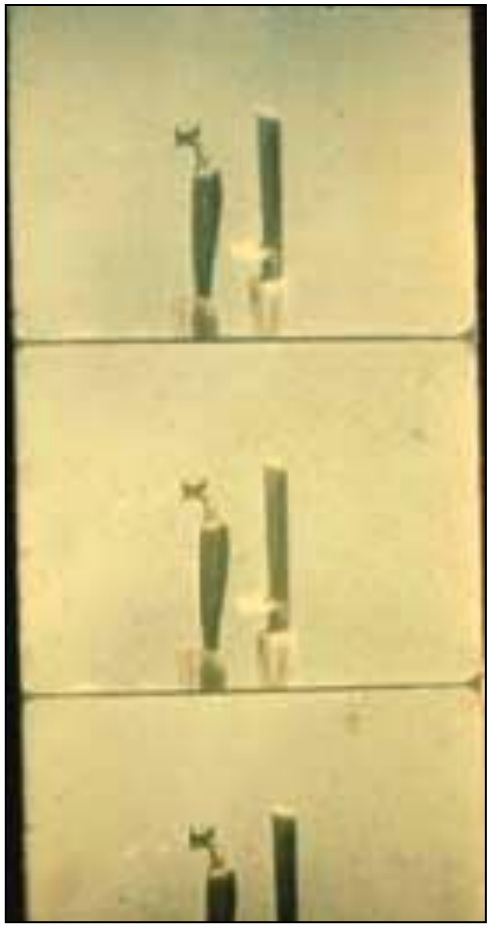


SHARP MOWER BLADE IS ESSENTIAL

Grass on the Left was cut with a dull blade

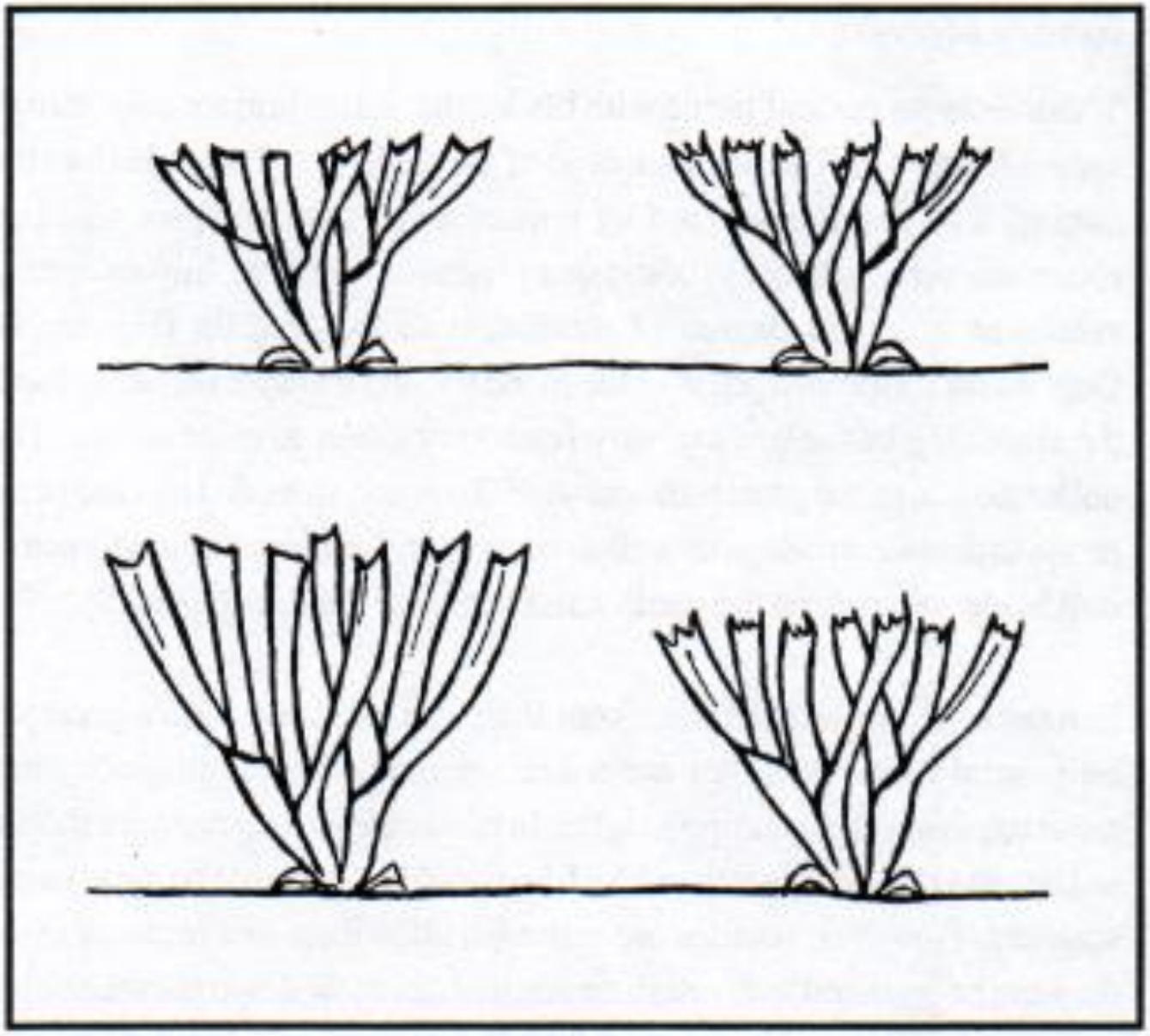


24 Hours



Grass on the Right looks more healthy

CUT GRASS – DON'T TEAR IT

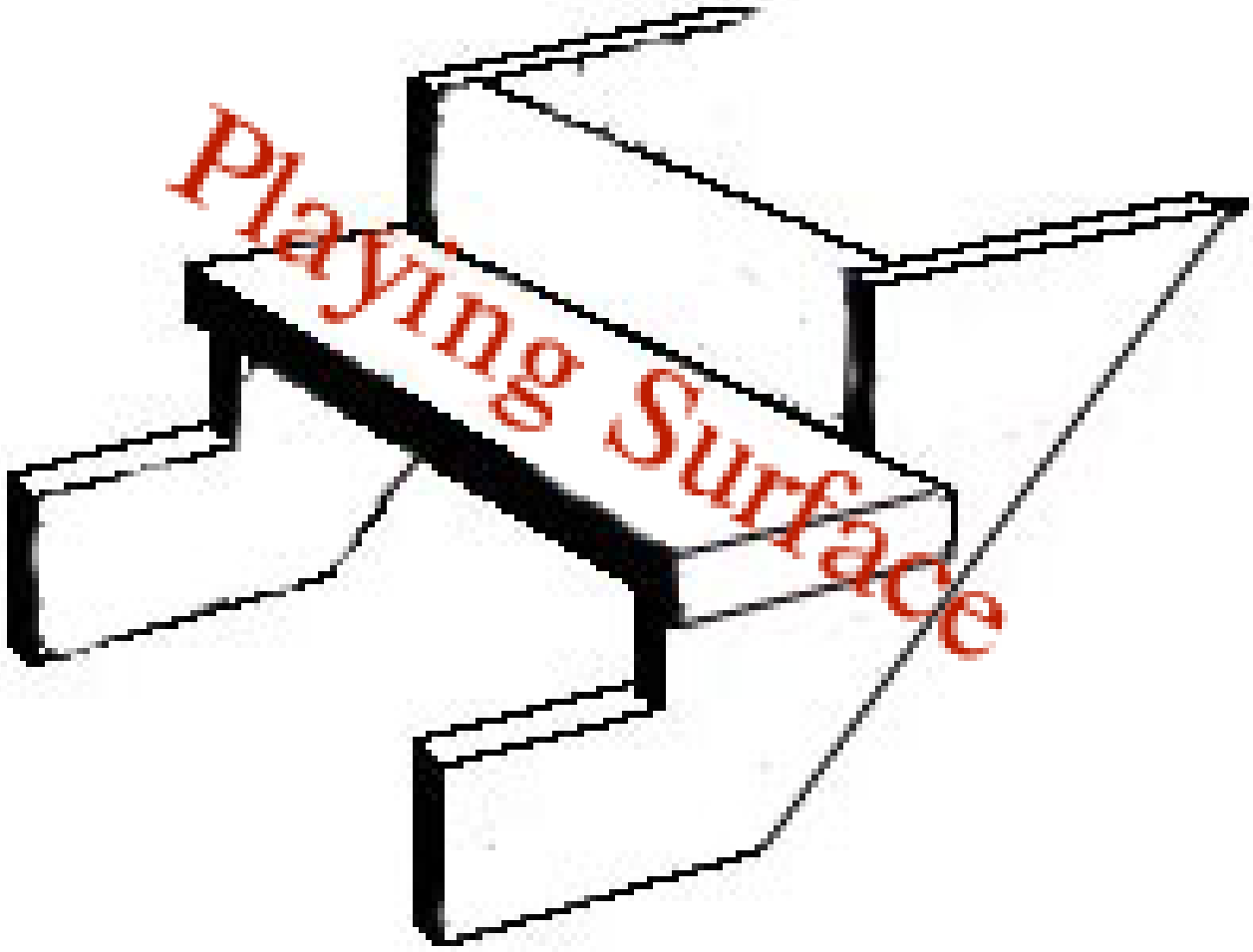


MOWING CAN BE DONE IN VARIOUS PATTERNS

...but that is a topic for another session

IMPORTANT AGRONOMIC STEPS TO TAKE

Step 8



MOST IMPORTANT IS A SAFE PLAYING SURFACE

Surface must be level and free from standing water

DRAGGING IS ESSENTIAL MAINTENANCE

LASER GRADING IS A BONUS

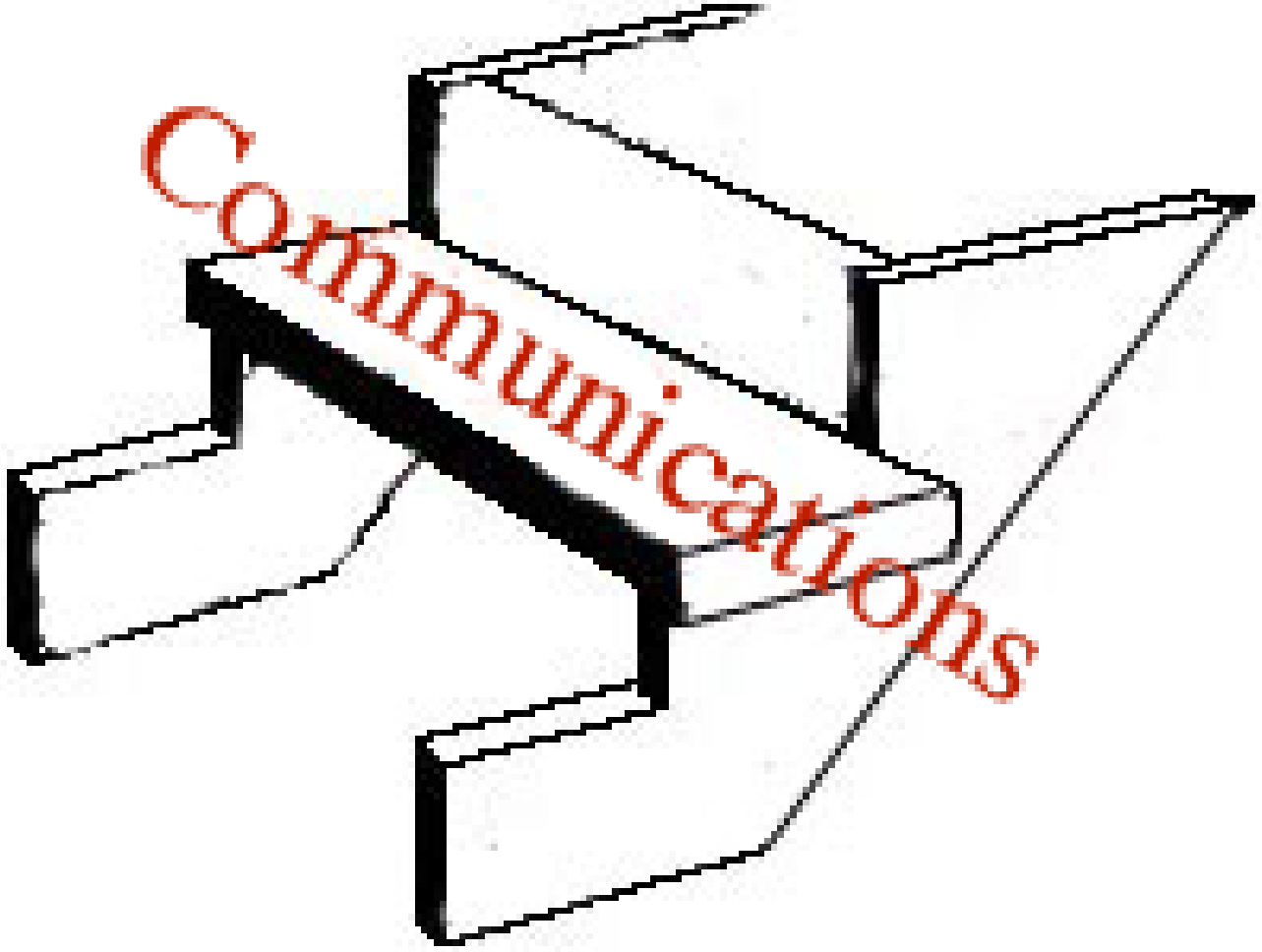
GOAL IS TO MIX THE SURFACE MATERIALS

MANY TOOLS CAN BE USED TO COMPLETE THE TASK

THE TASK DOES NOT REQUIRE FANCY PROCESSES

IMPORTANT AGRONOMIC STEPS TO TAKE

Step 9



EXPLAIN THE HOW, WHY, AND WHEN

- Communicate with players
- Communicate with educators
- Communicate with administration
- Communicate with parents
- Communicate with coaches

Communication helps to manage expectations, prevent damage, and maintain positive working relationships for all stakeholders involved

MORE QUESTIONS?

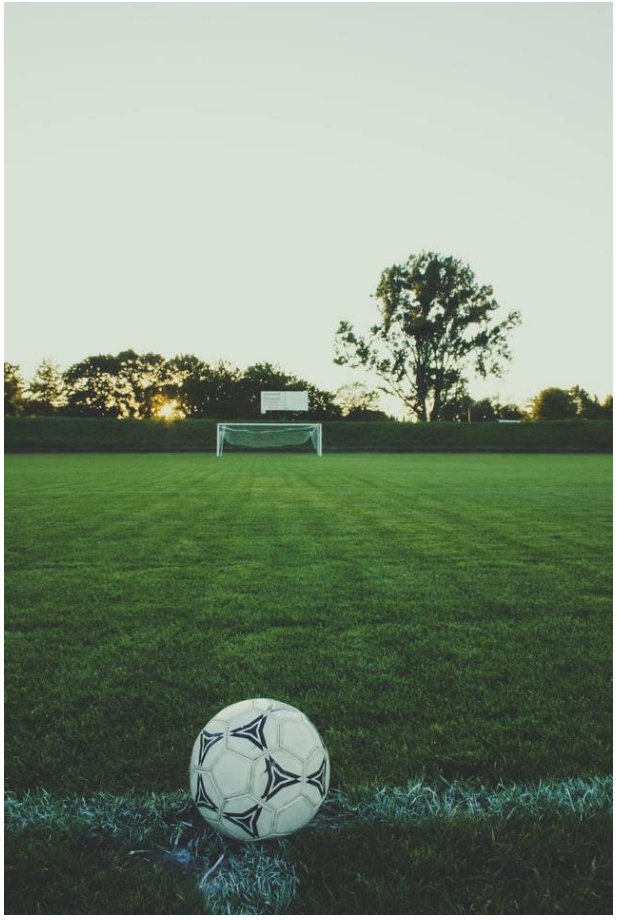


Photo by Markus Spiske on Unsplash

BRIAN "BK" KOEHLER
DIRECTOR

PENNSYLVANIA PARK MAINTENANCE INSTITUTE
BK@PRPS.ORG
814-234-4272

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