GETTING THE MOST OUT OF YOUR NATURAL-GRASS SPORTS FIELDS

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FIELD SUPERINTENDENT
GILLETTE STADIUM AND TRAINING FACILITIES OF NE PATRIOTS AND NE REVOLUTION
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SOC CERPLEX OVERVIEW

24 FIELDS
- 21 NATURAL GRASS
  - 9 BERMUDAGRASS
  - 12 COOL-SEASON MIX
  - ONE USGA PROFILE STADIUM FIELD
- 3 SYNTHETIC FIELDS

GILLETTE STADIUM AND TRAINING GROUNDS

- 6 NATURAL GRASS FIELDS
  - ALL COOL-SEASON MIX
  - FOOTBALL: 3 KBG FIELDS
  - SOCCER: 3 KBG FIELDS
  - 1 SYNTHETIC GAME FIELD
  - FIELDTURF DUAL FIBER INFILLED
  - 1 60 YARD INDOOR FIELD

REVOLUTION (MLS) TRAINING FACILITY
REVOLUTION (MLS) TRAINING FACILITY

USAGE RATES OF FIELDS @ THE PLEX

- **SPRING**
  - 8 WEEK LEAGUE
  - 4 CAMP/WEEK: LAX, SOCCER, FOOTBALL, WEEKENDER:
  - WEEKENDER 1: LAX, WEEKENDER 2: SOCCER
  - AVERAGE GAMES: ~3,100
  - AVERAGE HOURS: ~4,700

- **SUMMER**
  - CAMP/LAX SEASON
  - 2 FULL-COMPLEX LAX TOURNAMENTS
  - WEEKEND 1: LAX, WEEKEND 2: SOCCER
  - AVERAGE GAMES: ~1,400
  - AVERAGE HOURS: ~2,100
  - NOTE: NO TRAININGS/CAMPS INCLUDED IN USAGE NUMBER
  - Other estimates: ~1,400 hours

- **FALL**
  - 8 WEEK LEAGUE SEASON
  - 5 FULL-COMPLEX TOURNAMENTS
  - TWO – 600 TEAM TOURNEYS TO END THE YEAR
  - WOMEN’S PROFESSIONAL TEAM SEASON CONCLUDES
  - ADDITIONAL 4-5 FIELDS OF PM TRAININGS 1-2X WEEKLY
  - AVERAGE GAMES: ~3,200
  - AVERAGE HOURS: ~4,800

YEARLY TOTALS:

- GAMES: ~7,700
- HOURS: ~11,550

USAGE RATES OF FOOTBALL PRACTICE FIELDS @ FOXBORO

- **SPRING**
  - PRE-SEASON TRAININGS
  - IN-SEASON TRAININGS:
  - USL TRAININGS
  - ACADEMY TRAININGS

- **SUMMER**
  - IN-SEASON TRAININGS
  - USL TRAININGS
  - ACADEMY TRAININGS

- **FALL**
  - IN-SEASON TRAININGS
  - USL TRAININGS
  - ACADEMY TRAININGS

USAGE RATES OF SOCCER PRACTICE FIELDS @ FOXBORO

- **SPRING**
  - PRE-SEASON TRAININGS
  - IN-SEASON TRAININGS
  - USL TRAININGS
  - ACADEMY TRAININGS

- **SUMMER**
  - IN-SEASON TRAININGS
  - USL TRAININGS
  - ACADEMY TRAININGS

- **FALL**
  - IN-SEASON TRAININGS
  - USL TRAININGS
  - ACADEMY TRAININGS
HOW MUCH IS TOO MUCH!?

- Each facility will answer this question differently!
- Revenue is driving force behind most of what we do.

DIFFERENT TYPES OF CHALLENGES

- Challenges force us to think beyond our normal practices to provide better surfaces.

BALANCING HIGH-USE AND HIGH QUALITY

- Three keys:
  1. Cultural Practices
  2. Managing Fertility/Plant Health
  3. Traffic Management

  Key:
  A: Creativity!

CULTURAL PRACTICES

- Aerify, aerify, and then aerify again!
- Surface Aeration
  - Soil O2 levels ability to move water
  - Proactive for several AC units
  - Fosters soil health
  - Carbon buildup

- Deep-Soil DeCompaction
  - Proactive for hard fast courses
  - Requires equipment, worst point
  - Requires surface point

- Other Techniques
  - Recycle Dresser/Slicer Disc

AERATION TYPES

There is no bad way to aerify, but some are better than others!

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<th>ISTRC</th>
<th>International Sports Turf Research Center</th>
<th>Aeration Performance Chart</th>
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AERATION TYPES

- Surface Aeration
  - There is no bad way to aerify, but some are better than others!
AERATION TYPES
• Surface Aeration
  • Add topdressing sand whenever possible in
    narrow strips

AERATION TYPES
• Surface Aeration
  • Use aeration only where needed (targeted
    management)

AERATION TYPES
• Deep-Soil Decomposition
  • Traditional

AERATION TYPES
• Deep-Soil Decomposition
  • Linear
  • Rotation of different types

AERATION TYPES
• Other types of Aeration
  • Air2G2
  • Recycle Dresser

CULTURAL PRACTICES
• Dryject
CULTURAL PRACTICES

- Thatch Management

WARM-SEASON FRAZE MOWING

- Factors to consider:
  - Timing
  - Depth and amount of removal
  - Sprigging or not sprigging
  - Variety
  - In-house or contract
  - What issues you need to fix
  - Soil management

- Focus on "field 9", winterkill recovery and drainage project.

- 4/18/18
- 5/1/18
- 5/7/18
- 5/21/18

- 25
- 26
- 27
- 28
- 29
- 30
WARM-SEASON FRAZE MOWING
• 10/24/18
• Field 12
• Not fraze mowed

WARM-SEASON FRAZE MOWING
• 10/24/18
• Field 9
• Fraze mowed

CULTURAL PRACTICES - RECAP
• AERIFY, AERIFY, AND THEN AERIFY AGAIN!
• SURFACE AERATION
• Deep Soil Decompression
• OTHER CULTURAL PRACTICES
• Root Zone Deepening/Inoculation
• Vertical Mowing
• SUPERVISION

MANAGING FERTILITY & PLANT HEALTH
• DATA IS YOUR FRIEND!!!
• Make use of analysing of data, NOT YOUR GUT
• CAN BE INTIMIDATING, UTILISE YOUR PARTNERS/COLLEAGUES

• KEY FACTORS
• Nitrogen use
• OTHER ESSENTIAL NUTRIENTS AND THEIR USE
• BIOSTIMULANTS
• PGR’s

NITROGEN USE
• ESSENTIAL COMPONENT FOR PHOTOSYNTHESIS, PROTEIN PRODUCTION
• Too much can promote cell elongation and weakening of cell walls, causing light but DELICATE TURF
• CELL WALL STRENGTH IS CRUCIAL TO DURABILITY, MAKING ENTRY FOR PATHOGENS EASIER

NITROGEN USE - MODERATION!
• TOO MUCH OF A GOOD THING IS ALMOST ALWAYS A BAD THING
• ADEQUATE LEVELS OF N PROMOTE HEALTHY GROWTH OF THE PLANT, STRESSING TURF WAYS MORE RESISTANT TO TRAFFIC DAMAGE
• GOAL TO MAKE THE PLANT AS DURABLE AS POSSIBLE
NITROGEN USE – REGULATION

- **States are starting to cap N usage**
- **Maryland**
  - Single app cannot be over 0.9LBN/M and cannot have more than 0.7LB N per year
  - Yearly limits:
    - Cool-season turf: 3-5LBN/YEAR
    - Bermudagrass: 2-5LBN/YEAR
- **Enhanced Efficiency Fertilizers**
  - Can apply up to 2.5LBN in one year, with monthly release totals below 0.7LB/MONTH

OTHER ESSENTIAL NUTRIENTS

- Macro and micro-nutrients are essential, in moderation.
  - Use Bio-stimulants to help counter specific problems
  - *Bio-stimulants* are any microorganism or substance based on natural resources, in the form in which it is supplied to the user, applied to plants, seeds or the root environment, soil and any other substrate with the intention to stimulate natural processes of plants to benefit their nutrient use efficiency.
  - Give the plant what it needs, without having to work to create it.
  - Plants are almost always under stress, we can provide them with the end product of many natural processes without placing additional stress on the plant.
  - Hormones, amino acids, carbohydrates, etc.

BIOSTIMULANTS

- *A plant bio-stimulant must be based on a natural resource, in a natural resource, in the form in which it is supplied to the user, applied to plants, seeds or the root environment, soil and any other substrate with the intention to stimulate natural processes of plants to benefit their nutrient use efficiency..
- Give the plant what it needs, without having to work to create it.
- Plants are almost always under stress, we can provide them with the end product of many natural processes, for better growth, for better disease resistance, for better yield.
- Enhance growth, quality of turf, color, yield, etc.

MANAGING FERTILITY & PLANT HEALTH - RECAP

- Data is your friend!
- Make decisions based on data, not your gut
- Can be intimidating, utilize your partners/colleagues
- Key factors:
  - Nitrogen use
  - Other essential nutrients and their use
  - Bio-stimulants
  - PGR's

TRAFFIC MANAGEMENT

- Shifting of playing surface
  - Both soccer and LAX have minimum field dimensions
  - Shifting the playing field N/S/E/W on the overall playing surface
  - Allowing the field and use of unused areas of field, without destroying play

TRAFFIC MANAGEMENT

- Shifting of specific lines
  - Warming lines
    - Minimum shift you can make is 3 ft. outside
  - Goal lines
    - Depends on conditions, but will not be for distances of over 30 feet to make sure fun
  - Bench areas
    - Also need shifted, typically from one side to the other
  - 16 players x 2 Banks x 6 Games = 384 players warming up in the same spot in one day
GET CREATIVE!!

- Topdress crease areas with granulated cork prior to use
- Immediately following 16 LAX matches

- Blow out debris, spot spray with fertilizer
- Pull cores in high-traffic spots, topdress to regain levels

WHAT’S NEXT??

“TARGETED TURFGRASS MANAGEMENT”

USING DATA TO DETERMINE MANAGEMENT PRACTICES

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