

When to Resurface and When to Rebuild

by Boyd Montgomery CSFM

This article will discuss the options to look at when faced with the issue of either renovation or rebuilding. With the help of the Field Improvement Data Sheet, readers will learn how to use the information collected on this form to decide if renovation or rebuilding is what is needed. I will discuss what is involved with field renovation in order to be successful, as well as what types of field construction methods are on the market today.

What is the Field Data Survey?

The Field Data Survey is designed to help groundskeepers better understand the fields that he or she is in charge of. It details specific areas, such as existing cultural practices, construction, fertility programs, chemical applications and field use. Once all this data has been collected,

the groundskeeper can make informed decisions toward renovation or rebuilding.

This tool can be looked at in the same light as the "as built" drawings for the fields.

Field Data Survey Breakdown

Following is a list of the sections in the survey, as well as a brief explanation of each:

Information Section

Includes the names of groundskeeper, contractor, maintenance company and project supervisor

Mowing

Height, type of grass and equipment used

Fertility

Includes the types used, methods,

product names and application techniques.

Aspects of field maintenance performed

Aeration, overseeding, soil analysis, topdressing equipment, seed type, sod, weed control, fungicide, insecticide and application techniques.

Description of overall appearance

Activity schedule

Number of games, who schedules the games, policies to protect fields from misuse and field use breakdown.

Site Plan

Includes plans for drainage, irrigation, graded elevations and sub-soil.

Defining your team

List key contacts of individuals that should give input to any changes on that field.

Estimated budget

Amount of money set aside for capital expenses.

What's Next?

After compiling all the data on the Field Data Survey form, a groundskeeper can meet with his or her board, supervisors, management or assembled team to make a decision based on the data collected to either renovate or rebuild.

Also, the groundskeeper can use the field data information collected to make a presentation to the above mentioned members as to the direction he or she feels the group should head-resurfacing or rebuilding.

Resurfacing

One means of resurfacing is through any of several aeration techniques, which include hollow or solid tine equipment, shatter tine equipment and verti-drain equipment.

TYPAR
Turf Blankets



**Perfect for
in-season
Repairs**

- Early Green-Up
- Enhanced Germination
- Winter Kill Protection
- New Fields & Overseeding

PHONE: 800-455-3392
EMAIL: tmsg1@aol.com

Circle 115 on Inquiry Card.

When aerating, be sure to wait until the end of the field's heavy use season. Flag all underground utilities, irrigation systems and heating systems. Make several passes, between four and eight, and cover the field in varying directions. If using a hollow tine unit, be sure to collect the cores when completed.

Some benefits of aeration include: the release of toxic gasses, a decrease in wilting and isolated dry spots, increased water penetration, improved root growth in the hole areas, control of thatch, preparation of a seedbed for overseeding and improve turfgrass response to fertilizer.

Another form of resurfacing is through topdressing. When using this method, managers must first get a soil analysis test to determine the topdressing compatibility with the existing root zone mix. Remember, topdressing with sand on native soil fields will not improve the soils structure and drainage. You must reach 60 to 70 percent in the top three to four inches before topdressing with sand will help drainage and infiltration characteristics.

Layering of different soil textures within the root zone will be extremely detrimental. To eliminate the possibility of layering, make a constant supply of your topdressing material available.

Aeration cores of native soil fields make the best topdressing material when you drag the material back into the field. Diatomaceous earth or calcined clay products can also be used as alternatives for native fields, although this is a costly process.

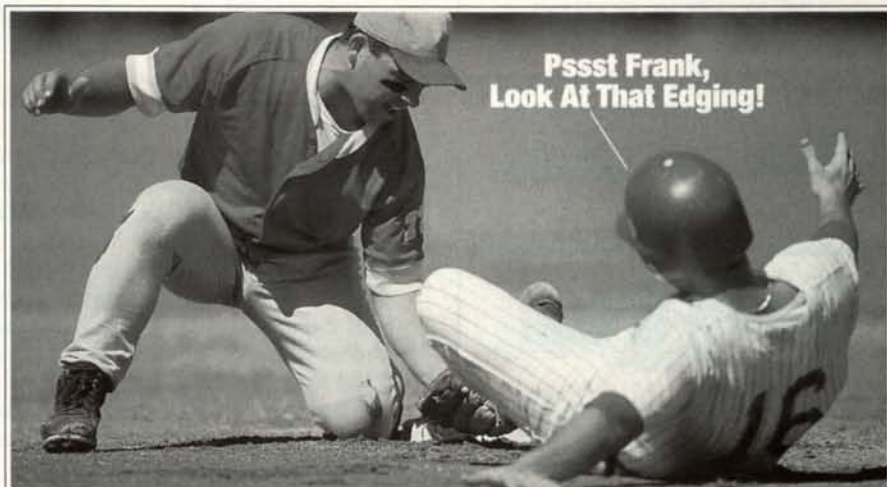
In today's athletic fields, the predominant material used for topdressing is sand. Sand particles vary and a USGA recommendation sheet must be used. Uniformity of particle size is the key.

Reseeding is another means of resurfacing sports fields. There are three forms of reseeding: Dormant seeding, drop or broadcast seeding and pregerminated seeding.

When reseeding, always remember to create a good seed-soil contact on the seedbed, with an appropriate

level of soil surface moisture and a generous amount of seed. Overseeding during the playing season will allow players to cleat the seed into the surface. A drag mat pulled behind a utility vehicle is another good way to work the seed into the seed bed.

For a faster solution, sod can be installed on your fields, either in big rolls or slabs (or small rolls). When applying sod, there are several key factors to consider. Make sure the sod is mature, around 12 to 18 months old. Before laying the sod, the soil needs to be prepared. This is done by performing a soil test and



Great Fields Get Noticed.

TurfcO offers you a strong team of turf building equipment. They're the fastest and most versatile equipment to let you build harder and healthier turf. Your sports fields become safer to play on and easier to maintain. Originators of Mete-R-Matic® top dressers in 1961, TurfcO's professional equipment gives your field a look that gets noticed.

Pro Turf Edger

Special design makes it easy to follow any edge. Eliminates spade work around the diamond. Oscillating blade action cuts fast and clean. Leaves no mess or no thrown debris to clean up.



Economy Aerator

Now you can afford to breathe life into any sports field. This low cost, 62" aerator has no hydraulics or mechanical linkages for easy use and low maintenance. Hooks up to any vehicle in seconds.



Precision Top Dresser

Fast, uniform, versatile. Patented chevron belt lets you handle top dressing, lime, crumb rubber, gypsum, calcine clay, compost and even overseeding with precision. Level fields and amend soil consistently.



For details and the name of your local dealer, call

1-800-679-8201

TurfcO Manufacturing Inc.
1655 101st Avenue Northeast
Minneapolis, MN 55449-4420

*Choice Performers,
Choice Fields.*

TURFCO

Circle 116 on Inquiry Card

**YOUR "ONE-STOP SOURCE"
FOR AMERICA'S LEADING
BASEBALL SURFACES & SUPPLIES**



THE PROFESSIONAL'S CHOICE
... SINCE 1922

USED BY OVER 100 PRO TEAMS,
OVER 600 COLLEGES, PLUS THOUSANDS
OF TOWNS & SCHOOLS WORLDWIDE.
SPECIAL MIXES FOR INFIELDS,
PITCHER'S MOUNDS & HOME PLATE AREAS.

**REGIONAL INFIELD MIXES
AND RED WARNING TRACKS
FOR EVERY STATE & CLIMATE!**

PLUS INFIELD CONDITIONERS
TO IMPROVE EXISTING INFIELDS:

IF TOO HARD AND POORLY DRAINING!



THE REDDER, LESS DUSTY, MORE UNIFORM
SOIL CONDITIONER & DRYING AGENT
"SUPER-RED" FOR INFIELDS
"SUPER-GREEN" FOR TURF
FOR CONSISTENT INFIELD CUSHION
IN WET OR DRY WEATHER!

IF TOO SOFT & DUSTY!

STABILIZER®

FOR FIRM, YET RESILIENT, PLAYING SURFACES

TO QUICKLY DRY INFIELDS!

The Original & Most Absorbent is Now

NEW & IMPROVED GRANULAR

DIAMOND-DRY.



WHAT!
We Came 100 Miles
And You STILL Don't Use
DIAMOND
DRY!



OVER 200 OTHER INFIELD PRODUCTS!

New Lower Prices!

FENCEGUARD®
Safety Covers for Chain Link Fence
Now in 6 Colors!

HOLLYWOOD® BASES · FIELD MARKING MACHINES
TAMPERS · DRAG MATS · YANKEE® · RAKES
WALL PADDING · WINDSCREEN · RAIL PADDING
BATTING PRACTICE COVERS · RAIN COVERS
PITCHER'S MOUND & BATTER'S BOX PADS
ON-DECK CIRCLES WITH TEAM LOGOS
PERMANENT FOUL LINES & MUCH MORE!

**FREE INSTRUCTIONAL BROCHURES
DISTRIBUTION CENTERS NATIONWIDE!**

800-247-BEAM

908-637-4191 / FAX 908-637-8421

PARTAC PEAT CORPORATION
KELSEY PARK, GREAT MEADOWS, NJ 07838

*"The best infield mix I've ever used."
— GEORGE TOMA*

loosening the soil to at least 6 inches. Remember, excessive tilling will destroy the soil structure.

Select a sod that has been grown on the same soil as the existing field. Layering effects will be caused by not following this rule. Washed sod can be purchased, but generally is quite expensive. Water the sod liberally for the first two weeks, and be sure to periodically check for gaps. If gaps are found, fill them with matching soil or plugs.

However you decide to resurface your field, there are two key factors in making the renovation project a success: Timing and communication. For the timing aspect, coordination with the users of the field and the renovation project is a key. The extent of your renovation project will depend on the window in which the work will be performed. For good communication, make sure that all parties involved—users, the boss, board, contractors and yourself—have an open line of communication.

Rebuild

There are three main types of field construction: Natural soil (native soil), modified soil and non-soil medium/perched water table (essentially 100 percent sand). Each of these methods have their own advantages and disadvantages, as described below.

Natural or native soil construction uses the existing soil on site or topsoil hauled in from the area. These fields hold adequate nutrients and have a high water-holding capacity. They are generally crowned, which can be a disadvantage for some sports, and compact easily. Perimeter drain tile lines are generally used to move water runoff—internal drainage within the playing area generally is not recommended. The cost of this type of rebuilding can range from \$3,000 to \$20,000.

Modified soil fields generally have a coarse physical amendment, such as sand, mixed uniformly with the existing site soil. This allows better infiltration rates to the internal drainage. Internal drainage is used to move water to the perimeter tile lines. The fields will need internal irrigation and a semi-aggressive fertilization program. The cost of this

procedure can range from \$70,000 to \$400,000.

The non-soil medium/perched water table method of rebuilding is the most expensive, initially. This method relies on a nearly 100 percent sand profile. Selecting the proper, uniform sand particle size is key. These fields are essentially flat, not crowned, and feature very high infiltration rates. Due to high percolation rates, internal drainage needs to be designed to move large amounts of water away quickly. Irrigation and high fertility programs are needed. The cost for this type of field can range anywhere from \$600,000 to \$1 million.

With a soilless medium construction many new fields are installing new stabilizing technologies that give the athletes better traction by producing a stronger knitting of the root structure with the stabilizing mats or fiber. These products reduce shearing and tearing and allow for better grass growth, recuperation and percentage of ground cover. Examples include mats, carpets, fabrics, fragments of interlocking mesh, fibers and fibers sown into the root zone.

There are several key factors to remember when rebuilding. Budgets will drive the project; communications between groundskeeper, your boss, the user groups and board is essential. Check all references on contractors, and be specific when writing the bid for the project.

Do your homework! Research different types of construction alternatives on the Web and by talking with fellow STMA members who have been through the process. Make sure that once the project is started that a timeline is followed by the contractor. Hold weekly or daily meetings with the contractor, and do not pay them until the work has been inspected and signed off on by you or a project supervisor.

Field Improvement Data Sheet

Sylvania Recreation

Phone: _____
 Fax: _____
 E-mail: _____

B. Contractor Information

If you have the information of the company(s) that constructed this field please include it below.

Company Name: _____
 Name: _____
 Address: _____
 City: _____
 State: _____
 Zip: _____
 Phone: _____
 Fax: _____
 E-mail: _____
 Project Supervisor: _____

Date: _____
 Facility Name: _____
 Field: _____
 Type: [Baseball/Softball] [Football] [Soccer]
 [Lacrosse] [Other] [Facilities Manager/Director]
 Address: _____
 City: _____
 State: _____
 Zip: _____
 Phone: _____
 Fax: _____
 E-mail: _____

A. If you do not perform the maintenance please list the name of the company, address, and contact name and numbers.

Company Name: _____
 Name: _____
 Address: _____
 City: _____
 State: _____
 Zip: _____

1. Is there any maintenance done on this field currently? [Yes] or [No]
2. Do you have a soil analysis done for this field? Yes or No—If yes, please include.
3. Do you have a tissue analysis done for the stand? Yes or No—If yes, please include.
4. What word best describes the maintenance done to this field?
 Daily/Monthly/When ever we get time

Why the Switch?

Why are baseball parks around the league switching to Pro Mound® packing clay?

For all-star performance on the pitcher's mound...and in the batter's box!

For the best performance on the mound and in the batter's box, you can't beat Pro Mound. A unique blue gumbo packing clay, Pro Mound bonds to form a solid subsurface that allows players to dig in and establish footing without leaving large holes. It performs all year long – season after season.

It's time you made the switch!

Call (800) 648-1166

For information and samples of our Pro's Choice® products.



Circle 118 on Inquiry Card.

I. Briefly describe the type of mowing that is done on this field:

1. What is the cutting height?
2. What is the type of grass?
3. What type of equipment is used to cut this field?

II. Briefly describe the fertility program for this field.

1. What type of fertilizer is used?
[Slow-release] [Fast-release]
[I don't know]
2. What is your method of delivery?
[Liquid] [Granular]
3. What are the product names/company names used?
4. How is the fertilizer applied?

III. Briefly describe any other aspect of field maintenance performed.

1. Do you have an aeration program?
[Yes] or [No]
- 1a. If yes, what type of equipment is used?
[Hollow] [Slicing] [Deep Tine]
[Verti-Drain] [Water Injection]
[Deep Drilling]
2. Do you have a topdressing program?
[Yes] or [No]
- 2a. If yes, what type of material is used?
- 2b. Do you have an analysis of this material?
Yes or No-If yes, please include.
- 2c. Explain how and when you apply the topdressing.
3. Do you have an overseeding program?
[Yes] or [No]
- 3a. If yes, what type of seed is used and at what rate?
- 3b. If you have a seed tag, please include it.
- 3c. What type of equipment is used?
[Slit-Seeder] [Broadcast]
- 3d. Do you use pre-germinated seed?
[Yes] or [No]
- 3e. If yes, please explain how you pre-germinate and spread:
4. Have you ever used sod before?
[Yes] or [No]
- 4a. If yes, did you use a sod that was grown

on the same profile as your field? Yes or No

5. Do you have a weed control program?
[Yes] or [No]
- 5a. What products are used and what time of the year are they applied?
- 5b. If you have the label of the products you use on file please include it. Also, please include the application record of the products put on this field. If you have an outside company spray your facility, please list contact information below:

Name of Company
Contact Name
Phone
Applicator

6. Do you have a fungicide or insecticide control program? [Yes] or [No]

6a. What products are used and what time of the year are they applied?

- 6b. If you have the label of the products you use on file please include it. Also, please include the application record of the products put on this field. If you have an outside company spray your facility, please list contact information below:

Name of Company
Contact Name
Phone
Applicator

IV. Describe the overall appearance of the field.

V. Activity Schedule

1. How many games are played on this field a year?
2. Who schedules events on this facility?
3. Is there any type of a break between seasons? [Yes] or [No]
- 3a. If yes, please list the specific months that the fields are in use.
4. Are there policies set forth to protect the fields when conditions warrant? Yes or No
- 4a. If yes, please list the policy below or attach.
- 4b. Who enforces the policies?
5. Is the field used for other non-game activities?
- 5a. If yes, please list events and approximately how many participants.
6. Is the field used for another sport activity?

6a. If yes, please explain.

7. Is there an open line of communication between the scheduler and the field manager? [Yes] or [No]

VI. Site Plans

1. Is the field irrigated? [Yes] or [No]
- 1a. If yes, what type of system?
2. Does the field have existing drainage? [Yes] or [No]
- 2a. If yes, what is the depth, spacing, size, backfill and sleeved?
3. Please include a copy of the site plans that list the following:
[Irrigation plan] [Drainage plan]
[Grades & elevations] [Sub-soil]
4. Any other engineering information you can provide? (Boring tests, etc.)
5. Is there a master plan for the site?
[Yes] or [No]
6. Is there any other special feature to this field? Yes or No-If yes, please list:

VII. Please list key contacts and phone numbers for those individuals that should be part of the team in either rebuilding this field or resurfacing (i.e. user-group key members, board members, staff, community leaders).

Name _____
Group _____
Phone _____
E-mail _____

Name _____
Group _____
Phone _____
E-mail _____

Name _____
Group _____
Phone _____
E-mail _____

VII. Estimated Budget

1. What type of dollars are set aside for either new construction/complete rebuild or refurbishing the field?
2. If this is for construction, what is the breakdown for the project (i.e. design, construction, consultant, supervisor, etc.).
3. Does the project need to be bid out? Yes or No-If yes, please list the criteria: