Post-Season Baseball Diamond Renovation

By Jim Puhalla

If you keep the diamond in shape, baseball season is a lot of work — mowing, dragging, filling holes and performing pre-game first aid. After the season, most field managers want a break from the diamond, a few rounds of golf and time to work on the football field, thinking there's plenty of time for the baseball diamond next spring.

If that scenario sounds familiar, you might want to reconsider. The plain fact is this: the four to six weeks after the competitive season is a crucial time in preparing the diamond for next season. Most of the renovation steps that can really make a difference in the quality of your field will require at least two weeks, and maybe a month, to settle. If you wait until next spring, chances are good that either you'll find yourself out of time for renovations, or you'll have players on the field before it's ready.

But a few days' work now can substantially upgrade the diamond for next year — and save time, money and headaches in the bargain. If you do the right things now, you'll be able to approach next season knowing your field is ready.

Skinned Area Improvements

1. Lip Removal. Every season, dragging and weather push lots of dirt into the grass edge. That forms a lip that interrupts the drainage contours, and keeps rain from draining off into the grass. This lip also causes bad hops on grounders, and it becomes so uneven that players trip.

In order to remove the lip completely, you may need to re-grade as much as 3 to 5 feet into the grass, especially if the lip hasn't been removed for years. Use a sidewalk edger on small lips (1 to 3 inches) or a sod cutter on wider lips and mounded ridges. Remove some of the soil underneath to restore the correct grade, and then install new sod.

2. Regrading Skinned Areas. If you remove a large mounded ridge or grass hill along the edge of the skinned area, you'll probably need to regrade the skinned area to get a consistent slope. Before you make any major grade changes, perform a topographical survey verifying that the grade changes you are considering will really improve the surface drainage. In most cases, it won't be necessary to add soil; but where the skinned area is dished, you may have to add soil to bring it up to the proper grade. This is the best time to add skinned area soil, because there is plenty of time for settling.

Forget internal drainage on skinned areas. If a muddy skinned area was a major headache during the season, you may be considering the installation of drains before next year. Our advice: forget it.

Although installed drain systems

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A field will take weeks to stabilize after you fix a problem like this. The post-season is a good time to remove the grass-edge lip or mounded ridge that causes puddles.

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can work like a charm on *turf* areas of the baseball diamond, they typically work poorly in the skinned area. Water percolates through most skinned area soils at just 1/100 inch per hour, so it doesn't reach drain structures quickly enough to make a difference. Proper positive surface drainage is the only way to prevent standing water on the skinned area.

3. Adding Conditioners. The post-season is a good time to add conditioners, especially since correct addition of conditioners requires tilling. A good rule of thumb is that, for each inch of disturbed soil, the skinned area takes one week to settle. So tilling 3 to 4 inches deep would mean waiting 3 to 4 weeks before using the field. Adding conditioners after the season allows plenty of time for settling.

There are many conditioners on the market, but the most effective are made of calcined clay or calcined diatomaceous earth. Organic products like those made from corn cobs are not marketed as conditioners — they can be used to soak up standing water in the short run, but they should be removed after use to prevent gummy soil in the long run. My own preference is the diatomaceous earth conditioners, because the required volume is half that of clay products.

Step 1: To remove a mounded ridge or lip at the edge of the grass, begin by removing the sod using an edger or sod cutter.

Step 2: Once the sod has been removed, lower the grade to bring the area into the proper contours.

Step 3: With the lip removed, seed or sod to restore the turf. The skinned area can drain itself into the grass and remain playable under a wider variety of conditions.

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Before installing a conditioner, make any grade changes needed for positive surface drainage. Making grade changes first avoids cutting and filling conditioned soil, which results in an uneven layer. For uniform performance, you need a consistent depth of conditioned soil over the entire skinned area.

Place the recommended amount of product evenly over the entire skinned area. Till it in to a depth of 3 to 4 inches. Then go over the skinned area with a pulverizer, a level bar and a roller. The process takes about 40 man-hours for a full-size field.

4. Renovating the Pitcher's Mound and Batter's Boxes. Take time to fill holes on the mound and in batter's boxes instead of leaving them until next year. Holes in these areas get worse if water stands in them, and casual use of the field in the off-season makes the holes deeper, continuing the cycle.

Consider installing one of the new materials designed for pitcher's mounds and batter's boxes. These materials have a clay base with special additives, to resist cupping out. They are installed by excavating the batter's boxes and the cupped-out part of the mound, then refilling the excavated spot with the batter's box and mound material. This is a new material on the market, but initial field trials are promising.

Turfgrass Improvements

1. Seeding and Sodding. After the season is a good time to seed areas without full turf coverage, or to reseed or sod areas that were cut out to remove lips or hills. Now you have time to till, plant and water correctly without concerns about game delays.

Soil preparation is crucial to successful seeding or sodding. Loosen the soil about six inches deep to let the roots of the plants develop. The most common way to loosen the soil is by tilling, but tilling displaces the soil particles. They re-settle in a denser mass, leaving the soil harder. A better way to loosen soil is with an agricultural cultivator (a "scarifier," or an "earthcavator" in some parts of the country). While you're preparing the soil, don't forget to add any nutrients that may be required.

With preparation steps done, it's time to install the turfgrass.

If you're **seeding,** use a drop spreader to apply the seed on the infield and around the edges of the skinned area and warning track. A rotary spreader can be used for the outfield unless it's windy. Rake the seed into the soil using a leaf rake, then go over the area with a light roller to improve seed-to-soil contact. Mulching allows faster germination.

When **sodding,** lay the sod with the seams tight, but *don't pull* the sections into place. That stretches the sod, and it eventually shrinks back to its original size, causing gaps between pieces.

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Choose a sod grown on a soil that is similar to that of the field. Otherwise, you'll have constant maintenance headaches, due to the layering effect of the different soils. The layering inhibits water infiltration and percolation.

2. Core Aeration and Topdressing. Aeration should take place when the grass is actively growing. If the growth has slowed dramatically before the baseball season ends (as in summer dormancy in the North), you'll need to wait until fall to aerate.

When you aerate, consider topdressing to level the surface and improve the quality of the soil. First core aerate the field. Then topdress by spreading matching soil or sand over the entire surface. We like to add about 3/8 inch of material over the field — which normally takes about 135 cubic yards of soil or sand for a full-size field. Then use a level bar to get the surface as smooth as possible.

3. Drainage Improvements. After the games end, tackle those spot-drainage problems that drove you crazy all season. Of course, you could install a complete drain system on turf areas — a good idea if you can afford it.

Most of the time, though, you won't want to get into a project quite that drastic. One effective but less costly answer is "strip drains." These are fiber-wrapped polyethylene structures designed to be laid in problem areas. Strip drains are about 6 inches high and 1 inch thick, and you install them by digging a trench 4 inches wide and 12 inches deep from the problem area to a catch basin. (Don't forget to check the trench to make sure it runs downhill.) Place the strip drains in the trench and fill to the surface with coarse sand.

Procedures That Must Be Performed Year-Round

1. Skinned Area Maintenance. To have the kind of diamond you want, give the skinned area some attention in the off-season. At least once a month, use a pulverizer, nail drag and a mat drag to discourage weeds and cut down on compaction between seasons.

2. Turfgrass Maintenance. It's not uncommon to find fields that are carefully maintained during the season, then ignored until practices begin the next spring. That's a bad idea. If you mow according to the 1/3 rule (removing no more than 1/3 of the plant) and make a point to aerate and fertilize during the off-season, each year the quality of your diamond should improve. If you let the grass get too high and then cut off half of it or more, you'll weaken the plants and leave too many clippings on the turf. Gradually, the quality of the facility will decline.

No good athlete lies on the couch all year, then rises to start getting in shape the first day of practice. Conditioning is a year-round process. And that's true of the field, just as it is of the players.

Trying to whip a field into shape in the last two weeks before the first game is an exercise in futility. But performing the most intrusive processes after the season allows time for the skinned area soil to settle, the turfgrass culture to establish itself, and the overall health and stability of the diamond to stabilize.

This year, do yourself a favor and start working on the baseball diamond when the games are still months in the future. ❐

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Selecting Skinned Area Soils

One of the most important factors in the playability of any baseball diamond is the quality of the skinned area material. We recommend a mixture of 60% sand, 20% silt and 20% clay.

All of the material should pass through a 3/8-inch sieve screen. A minimum of 97% should pass through a number-8 sieve, and at least 60% should pass through a number-140 sieve.

Cup test for performance of skinned area soil samples.

Sending out samples for particle-size analysis is a good idea before you install any skinned area soil, but even that analysis won't tell you everything you need to know. It's a good idea to compare different soils with similar particle sizes by doing a couple of simple tests.

- One test is to punch four or five 1/8-inch holes in the bottom of 9-ounce plastic cups, and then fill the cups 3/4 full with samples of the soils. Add water until it reaches the top of the cup, then allow it to drain, and see how long it takes the various samples to become firm enough to offer some resistance when you try to push a finger into the soil. The soil that firms up quickest will return to a playable condition faster.
- Another test is a visual one. Before you accept skinned area soil, visit the stock yard and look at undisturbed piles of the material. Check the size of the gravel that is present in the material. Choose the soil with the smallest gravel. (This works best if you can visit the stock yard shortly after a rain, which exposes the gravel.)