

Mound Construction Fundamentals: From The Ground Up

In Major League baseball, great pitching mounds are like great plate umpires—the less you hear about them, the better they are. When the majority of pitchers don't comment about the conditions of either an ump or a mound, you know you have a winner. And, given the proper construction techniques and care, even the most humble field can have a winning mound.

Ed Mangan, field director for the 1991 National League Champion Atlanta Braves, *knows* mounds. He has built hundreds over his career, and at the ripe old age of 32, is likely to build thousands before he hangs up his rake and tamp. His successful mound-building procedures and tips can be applied to baseball diamonds at all levels.

Position And Measurement

The Major League rules for field preparation stipulate that the front of the pitching rubber must be 60 feet, six inches from the back of home plate. Assuming that home plate is established (and it usually should be before you start building a pitcher's mound), Mangan starts by measuring that 60-foot-six-inch distance, *straight* back toward center field. When he reaches that spot, he drives a stake to mark the position of the pitching rubber. At this time, he also makes a mark exactly 10 inches up

the stake that corresponds, measured either by triangulation or another method, with a 10-inch height off home plate. This will come into play when he builds the mound.

The next step is creating a circle from the center point of the mound. "A mound usually has a nine-foot radius," Mangan says. "The center of your mound must be 18 inches in front of the pitching rubber. Once you find the center, you take a tape measure and run it out [away from the center] to create a radius, and use it to make a circle in the dirt."

Building The Dome

The next step is selecting a mound mix and shaping it into a dome. Choosing the right mix is crucial for field playability under various weather conditions.

"Some people go with a sticky, heavy clay, but I don't recommend it," explains Mangan. "In a rain situation, it can become very slick and oily. There are a lot of mound mixes out there. What you want to do is find one that is right for the conditions in your area."

Budget can be a factor—your facility may not have the money to buy a special mound mix. In this situation, Mangan suggests creating your own mix from native soils.

"If that's the case, use the best mix you can come up with yourself," he says. "It

needs to be heavy enough to that it can be packed and withstand traffic, but not so heavy that the slightest bit of rain makes it slippery."

When you begin to build your dome, Mangan advises applying the mound mix two to three inches at a time. It doesn't require tamping at this point, but does need to be packed firmly.

After the dome reaches the 10-inch mark on the stake, you can begin to prepare your "table," the top, flat portion of the mound, using a three- to four-foot level, rakes, shovels and tamps. The table is usually five-feet-wide. It starts six inches in front of the rubber, extends 22 inches behind it, and is 18 inches on either side of it.

"Once the table is set up and you've made the basic dome shape, start working the clay with tamps and rakes to make your slopes," says Mangan.

"The moisture content of the clay has to be right—too dry and it won't pack, too wet and it's a slippery mess."

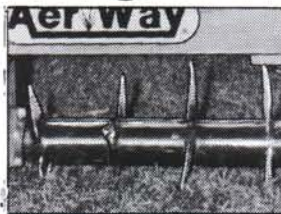
Major League rules require the front slope of the mound to begin six inches in front of the pitching rubber. "You want the slope to fall one inch per foot," Mangan advises. "In the back and along the sides, you want the slope to go, on an even grade, to the edge of your circle."

Setting the pitching rubber follows.

The chemistry of sportsturf management



Turf-Topper
big capacity for precision and speed on large areas



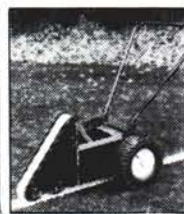
Special Sportsturf Aerifier



Overseeder/Renovator
Fast, accurate overseeding for large areas.



Restores and dresses ball diamonds
FAST and PERFECT



Dri-line and wet line markers

The Chemistry of Sportsturf Program brings immediate benefits:

1. Reduced use of chemicals
2. Smoother playing surface
3. Thicker, healthier turf
4. Less playing field injuries
5. Faster regrowth after use
6. Reduced weed infestation
7. Less drought damage
8. Improved surface drainage

FAX us for your FREE package of 'sports turf magic'—416-247-6540

Gordon Bannerman Limited • 41 Kelfield Street, Rexdale, Ontario M9W 5A3 • Telephone 416-247-7875



Mangan removes a few inches of the mound mix to set the rubber in place. He fills the hollow tube that holds the rubber down with a special heavy clay, which he also uses to pack it in place.

"The rubber has to be leveled from side to side and front to back," says Mangan. "You definitely want to get everything ready before you set the rubber in place, because if you set it too early, and then find that your table needs to come up an inch, you'll have to pull it out," he says.

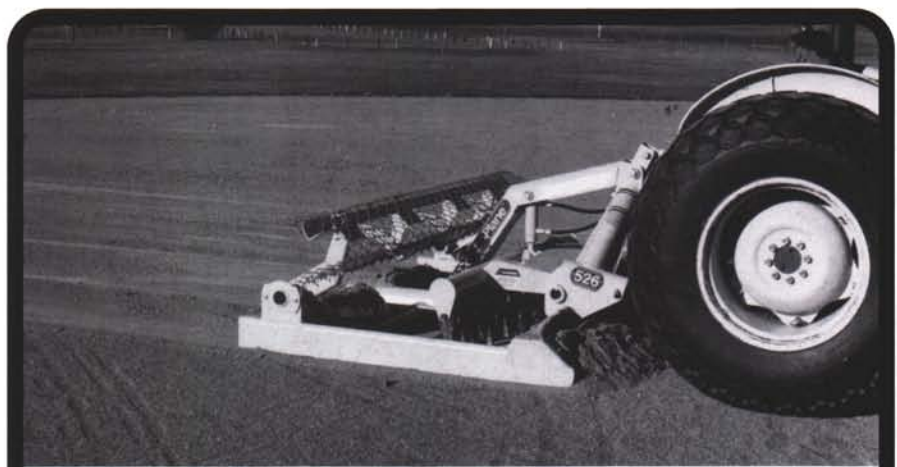
Mangan's next step in mound construction is beefing up the "takeoff" and "landing" areas for the pitcher. The best way to envision this procedure, he says, is to picture a "T," with the bottom of the letter beginning at the front of the rubber and the top part of the letter finishing four to five feet toward home plate. He excavates this T-shaped area to a depth of two to three inches and replaces the basic mound mix with a heavy clay mix.

The reasoning behind the inverted T-shape excavation is that while both right- and left-handed pitchers plant their throwing foot in the center portion of the mound, just in front of the rubber, they land several feet down either side of the front slope. The T-shaped clay replacement provides durability for these high-traffic areas. While this heavy-clay area could be prone to slickness during wet weather, it is a small portion of the total mound area and presents no major maintenance headache. Different drying materials can be used to treat these areas during periods of rain, says Mangan.

That final step is grooming and smoothing the mound. "You can't let the clay get too hard, or the pitchers won't be able to dig their spikes into it, and they'll skid," he says. "It has to be soft enough for the spikes to penetrate, but hard enough so they can get a good push. If it's too soft, the mound will deteriorate and become a problem for the pitchers during the game."

"The pitchers will change the mound during a game once they start walking around on it," he adds. "You must allow the pitcher to become comfortable with your mound, rather than having to fight with it. Each pitcher will have slightly different needs. You want to concentrate on keeping it as consistent as possible."

Adds Mangan, "A lot of people forget this, but you've got to keep the moisture in your mound. Whenever it's not in use, cover it." □



Top Performance on the Ballfield!

MetroTurf ComboPlanes™ have been turning in great grading performance for years on ballfields from coast to coast. Now, check our new lineup. The MT/526 is available in standard and heavy-duty models. Drag mat pull frame/carrier standard. Soil working tines with 4" spacing easily convert to optional scarifiers for landscaping. The MT/586 standard and heavy-duty models feature hydraulically raised and lowered pulverizing roller. MT/ComboPlanes™ level high and low areas for a superior grade, cut grading time by 50%, are a snap—even for novices. That's performance!

For more information,
prices, and literature,
call toll free:
1-800-522-5451

METROTURF, Inc.

The Most Versatile Grading Tools on Earth™

6029 225th St. W. • Farmington, MN 55024
(612) 463-3880

Patents: 4,418,759; 4,448,258; 4,585,075; 4,924,945; 5,024,280; U.S. and Foreign Patents Pending

Circle 112 on Postage Free Card

Blend & Top Dress All in One Operation for High Performance Soil Mixes



Easy to Tow (PTO Drive)



Golf Greens Top Dressing



Meters, Blends & Spreads



You Can
Be A
Professional
Blender

DAKOTA BLENDER & TOP DRESSER #220

Model 220 meters and mixes sand, peat, fertilizers, chemicals, grass seed and top dresses all in one operation.



Fairways Top Dressing

Turf Beyond Tomorrow

SANTA ANITA MAIN TURF TRACK 1989 Beard - Dixon Design
SANTA ANITA HILLSIDE TRACK 1990 Beard - Dixon Design
KANSAS CITY CHIEFS NFL Watson - Toma - Dixon Design
DENVER BRONCOS NFL Kurcab Design
FOXBORO STADIUM NFL Altman - Dixon Design
UNIVERSITY OF FLORIDA GATORS Dixon Design
CASTLE PINES COUNTRY CLUB Suny Design
COAL CREEK GOLF COURSE Phelps Design
RANCH SANTA MARGARITA GOLF CLUB Ted Robinson - Dixon Design



DAKOTA
REED-SEGE PEAT
APPLICATIONS

DAKOTA PEAT

for Golf & Sports Turf
Construction & Top Dressing
Mix Ratio: 10% Dakota Peat - 90% Sand
— Test with Qualified Lab —



Dakota Blenders & Pioneer Peat (701) 746-4300

Circle 113 on Postage Free Card

March, 1992 19