The Middlesex County Vocational-Technical High School Tigers baseball team and their coach, Ray Cipperly, are students of the game, from the ground up. Working with horticulture students at the East Brunswick, NJ, school, they maintain and improve their own baseball field, which is this year's Diamond of the Year in the high school/municipal/park division. What's more, this award-winning field was built gradually during the years by students, teachers, and coach Cipperly.

"The field is put in shape through a program at our school—the horticulture program," explains Dr. J. Henry Zandalari, superintendent of the Middlesex County Vocational-Tech High School District. "The field is like a laboratory, and maintaining it is a great part of the learning process for them. Cipperly's desire to keep the field in great shape, with their assistance, is what makes the field great. It's his baby."

Twenty-year-old Middlesex County Vocational-Tech in East Brunswick is part of the New Jersey vocational high school system, which may be the oldest such system in the country. There are five of these schools in Middlesex County alone. Traditionally geared toward non-college-bound students, the coeducational schools offer four-year programs in a number of trades such as nursing, carpentry, computer-aided drafting, dry cleaning, and automobile mechanics.

"In the last three years, we've had five kids that have gone on to play college baseball," coach Cipperly points out.

Organized baseball began at the school almost 17 years ago, when students there petitioned the board of education to institute a baseball program. The board agreed and Cipperly, a health and physical education teacher who had played baseball himself through high school, volunteered to coach. The Tigers were born, but they still needed a home field.

From Rocks To Mixes

"One of the administrators and I went to a fescue field on the school's grounds," Cipperly recalls. "We picked out where we wanted to put home plate, based on where..."
the sun would be around three in the afternoon, which is when we knew we would play most of our games, rented a sod cutter, and cut out the infield with the help of the horticulture department kids. The carpentry shop kids built a few benches for us.

"That's the way our field started—nothing but weeds, benches, bare spots, and Hollywood bases. During the first year or so the players would scrape away the rocks before each game. We built a pitcher's mound out of dirt. There were no fences, dugouts, infield dirt, or any real grass to speak of. For a long time we played like that, but it worked."

As Cipperly's involvement with the team grew, he became increasingly interested in field maintenance, and he wanted his team to play on a diamond that was more than just "adequate." He focused first on the field's skinned areas.

"I learned everything by trial and error," he says. "After a couple of years playing on dirt I could see we needed something better, so we put down an infield mix. We have a Beam infield mix now. I tried a lot of infield mixes over the years, and what I like about this one is that it stays where you put it. We're in a very windy area, and the wind blows predominantly from left to right field. The other mixes I used would blow off and tend to collect at third base."

Gaining Definition

Seven years after the first game was played at Tiger Field, a fence was installed around it. Fencing, says Cipperly, helped define the field. "You could see we had something to work with," he adds.

With help from the horticulture students and maintenance personnel, Cipperly and his players began overseeding and aerating with ryegrass in the outfield and a blue-rye mix in the infield. Carpentry students built two dugouts, as well as a backstop 20 feet behind home plate. Cipperly straightened the baselines and began edging the infield by hand.

"One summer I cut out a warning track by hand," he remembers. "I think warning tracks help define a field and really make it look sharp. A friend of mine from county parks hauled the dirt away. In the fall we bought grey cinders for the warning track and the kids and I put them down. We eventually went to a red Beam mix for the warning track. It looks nice against the green grass, and unlike dirt it doesn't become mud when it gets wet.

"We dug out the sides of the field the following summer and put in cinders [which have since been replaced with the same red mix used on the warning track]," Cipperly adds. "We built two practice mounds, one on each side of the field, and on-deck circles."

The Beam infield mix was also installed that summer. Cipperly incorporated Terragreen into the mix for moisture retention. He also uses it to dry wet spots on the skinned areas. "The nice thing about Terragreen is that you don't have to remove it once it's done its job—it's good for the mix," he comments.

Overseeding and aeration were per-
The pitcher's mound in 1982 and today.

**Tiger Field**

formed that fall. The coach hopes that through overseeding the infield will become predominantly ryegrass, since it tolerates low-cutting and the field's clay soil.

Today the field has bleacher seating for approximately 500. The backstop has been moved back 35 feet from home plate to "keep the catcher in the game," says Cipperly. The field has a P.A. system, dugouts, plantings, and a press box. Best of all, almost all of these improvements were made by the students themselves.

**Maintenance Play-By-Play**

The Tigers begin their season in April and finish in June, and have competed in their current division for five years. The team has finished second twice, won twice, and is the defending Middlesex County champion. They are also the defending New Jersey State Vocational High School champions.

While the playing season started last month, the "maintenance" season began last fall. "In the fall, I string out the infield and edge it by hand," Cipperly explains. "Then I go back and remove any material from underneath the edges of the grass that could cause a lip. After that, I roll down the edges. Because of that, our field has no lips and plays really nice."

Infield mix is added to any low spots in the skinned areas. Cipperly then rototills these areas to a depth of two inches—a trick he learned from Pete Flynn, superintendent at Shea Stadium, home of the New York Mets. "Rototilling freshens the field mix," Cipperly reveals.

The field is overseeded twice in the fall with ryegrass, using a Ryan slit seeder pulled by a 13-hp Honda tractor. It is also aerated with a Ryan tow-behind unit to a depth of 2-1/2 to three inches, followed by a drag screen to break up the cores.

In January or February, Cipperly limes the field with Dolomite 50 lime at one pound per 1,000 square feet. His maintenance duties begin again in the spring, when he re-edges and treats the warning track and skinned areas with Roundup. "We've never had a weed in the infield," he states.

Fertilization begins in March and ends in October. Cipperly used to fertilize the field himself, but has turned over the duty to Joe Fagan, owner of a Spring Green lawn care franchise in New Jersey. "It doesn't cost any more than if I did it myself, and I can always call up Joe and yell if there's something wrong," he jokes.

The field is fertilized with products from Scotts. The first application last year was made on March 1, using one pound of nitrogen per 1,000 square feet, 22-0-6, with pendamethalin to prevent crabgrass. On May 1, a 34-3-7 sulfur-coated, 40-percent slow-release product was applied. A 20-5-3 fertilizer with Dursban for sod webworm was used on June 15, and two months later a 34-3-7 sulfur-coated product, 40 percent slow-release with Dylox for grub and insect control, was used.

"A few weeks later, we had the county tournament here," Cipperly enthuses. "We sprayed the field with Ferromec iron with two percent nitrogen. It was amazing—the field greened-up in a few hours!"

A final application was made in October, using 1-1/2 pounds of nitrogen per 1,000 square feet, 46-0-0 urea. "We used a few other products during the summer, like Chipco 26019 during the hot and humid period in July and Trimec 637 or 899," says Cipperly.

The field is mowed every other day. The outfield is mowed to a 1-1/2-inch height using a used 87-inch Locke Professional mower. It was paid for out of soda machine revenues that go into an athletic depart—
spiked unit is used first, followed by the other, less disruptive scarifier. The area is then dragged until dry. A hand-drag is used close to the turf areas to prevent displacing the infield mix onto the grass.

The mound, which is kept covered with mats during practice, is also wetted and scratched lightly. Cipperly says this makes the mound, which is flat on top and slopes down one inch for each foot forward until it reaches the turf, appear “soft.”

“Our mound is really hard, but there’s 1/4-inch of infield mix on top of it,” he says. The basepaths are raked by hand and

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Warning track mix was used on runways to create infield contrast.

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in the outfield. Cipperly paints and chalks before every game.

"After batting practice, the infield is wetted lightly again," he says. "The kids do it themselves, and they know exactly what to do. They don't want to play on rock."

Cipperly sees the maintenance of Tiger Field, on a $2,500 yearly budget, as a team effort. He says the school's maintenance people, the county freeholders, his family, and Superintendent Dr. Zandalari have been extremely supportive of the baseball program at the high school in general. However, he reserves his highest praise for players and horticulture students, past and present, who in 17 years have transformed a rocky field into an award-winning diamond.

"The only professional jobs on the field are the fence and scoreboard," says Cipperly. "The students and I did the rest. We built the bleachers, put up the flagpole, and built the pressbox and dugouts. We planted the shrubs and poured the sidewalks.

"The shrubs behind the backstop and the screen in center field aid both the hitters and the defense," Cipperly continues. "When a game is played the dugouts, the pressbox, the scoreboard, and the P.A. system all help to make each player feel important-almost like a pro."

Judging from the Tigers' pristine diamond and winning record, feeling "almost like a pro" has its advantages. Tiger Field, the 1990 high school/park/municipal Diamond of the Year, is a training ground, not only for hopeful ballplayers, but also perhaps for future sports field superintendents. It's a living classroom for students of the game, from the ground up.