In order to prevent such injuries, managers perform a variety of cultural practices. "We aerate often in order to eliminate compaction," says Dunn. "Grass is mowed according to sport and weather conditions.
"We try to keep turf areas even and consistent," Marchesano says. "We have been replacing old brass heads with new plastic pop-up rotors."
"We have formal and informal inspections on a scheduled basis as part of the department of safety program," says Walter Stasavich,
superintendent of parks in Greenville, N.C.

## A standard?

Respondents varied in their opinions of setting a standard for natural fields. "I would like to have a national non-profit organization (not government), research, develop, and promote standards," Stasavich says.
"I do not believe an effective determiner could be set up which would hold up in court," disagrees Gross.
"Ideally, yes, but it's not practical in our case," says Jack Cook, a high
school grounds foreman in Ferguson, Mo. "We have neither the time nor funds available to correct problems."
"Yes, it would reduce injuries and allow athlete's some constitency (practice fields vs. playing fields)," says Marchesano. "This could be done by possibly an egg drop test or some type of pressure compaction test."

Field management problems may vary between warm-season and cool-season turf areas and depending on the soil type, but most managers face the same challenges.

# FIELD COSTS: NATURAL vs. ARTIFICIAL 

by Henry Indyk, Ph.D., Rutgers University

## ESTIMATED FIELD COST BASED ON A 20-YEAR LOAN AT 12 PERCENT INTEREST.

Natural:

| Principle: | $\$ 250,000$ |
| :--- | ---: |
| Interest: | $\$ 315,000$ |
| Total: | $\$ 565,000$ |
| AVERAGE | $\$ 28,250$ |
| ANNUAL COST: |  |

## Synthetic:

Principle: $\$ 1$ million
Interest: $\quad \$ 1,260,000$
Total:
AVERAGE
ANNUAL COST:
\$2,260,000
$\$ 113,000$
(Editor's note: It's important to note that this is based on a 20-year loan . . . studies prove that artificial surfaces must be replaced after about five years.)

## Natural field*

*(A PAT system on a natural field costs an estimated $\$ 750,000$ to $\$ 900,000$ ) $\$ 67,000$ to $\$ 81,000$



Sideline Drain S
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Automatic Irrigation

rainage System |  |
| :--- | :--- | :--- |



Sodding $\$ 25,000$ to $\$ 30,000$
 Total
Estimated Cost: Estimated Cost
$\$ 167,000$ to $\$ 223,000$
 $\$ 500.000$ to $\$ 1.5$ million This figure does not provide for internal drainage of the field.

