

ARE THE RIGHTS OF ATHLETES SWEEPED UNDER THE CARPET?

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I. INTRODUCTION

Due to the rise of capitalism and the insatiable quest for profit, the rights of athletes have been swept under the carpet of artificial turf. Professional team owners, scholastic athletic departments, and stadium architects incorrectly assert that artificial turf is the most durable, functional, economical, and safest playing surface for athletic events. This article discusses and incorporates, in place of economic factors, a humanistic foundation to the rights of athletes.

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Athletic surveys,¹ medical reports,² athletic expert testimony,³ and scholastic research⁴ reveal the apparent dangers of synthetic turf and should constitute notice to "all"⁵ artificial turf advocates. Medical studies indicate that the two portions of the athletic body which are most vulnerable to injury from artificial turf are the patella⁶ and the metatarsophalangeal joint.⁷ Studies also reveal that bursitis of the olecranon bursae⁸ is far more common in athletes who perform on synthetic turf.⁹ Moreover, turf abrasions, burns, and infections are caused by the coarse components unique to artificial turf.¹⁰ Although such abrasions, burns, and infections are usually not career threatening, they are painful and may have adverse effects on the athletes performance.¹¹ This article investigates, researches, and exposes the misconceptions surrounding the artificial turf controversy.¹²

The refusal by promoters of competitive sports to acknowledge the rights of athletes dates back as far as 492 B.C.¹³ Fatalities were a recognized risk in sporting events; thus, the law exempted such

1. See, e.g., John Macik, *National Football League Players Association Safety Survey*, PLAYERS ASS'N REP. (1985).

2. See, e.g., Thomas Clanton, et. al, *Injuries to the Metatarsophalangeal Joints in Athletes*, 7 FOOT & ANKLE J. 162 (1986).

3. See, e.g., Telephone Interviews with John Cooper, Ohio State University Head Football Coach (Nov. 15, 1991); Brian Harlan, Director of Public Relations for the Chicago Bears of the National Football League (Nov. 19, 1991).

4. See, e.g., Scott Atkinson & John Tschirhart, *A Preliminary Study of Injuries in the N.F.L. from 1971-1980*, DEP'T OF ECON., UNIV. OF WYOMING STUDY; E. Nortier, *Season Injuries for Colorado State University Football*, COLO. STATE UNIV. STUDY (1991).

5. "All" refers to manufacturers and distributors of artificial turf, college athletic departments, high school athletic departments, and professional team owners.

6. See John Macik, *Sports Turf Injuries Are They Avoidable?*, SPORTS TURF MANAGER, June 1987, at 12; I. Martin Levy, et. al, *Living With Artificial Grass: A Knowledge Update*, 18 AM. J. OF SPORTS MED. 410 (1990). Patella is the medical term for the lens-shaped sesamoid bone situated in the front of the knee in the tendon of the quadriceps femoris muscle. TABER'S CYCLOPEDIA MED. DICTIONARY 1337 (16th ed. 1989) [hereinafter TABER'S].

7. See Clanton, et. al, *supra* note 2; Levy, et. al, *supra* note 6, at 410. Metatarsophalangeal refers to the bones of the toes and the foot. TABER'S, *supra* note 6, at 1118.

8. Olecranon is the elbow region; bursae is the pad-like sac of acuity found in connecting tissue of the joints. TABER'S, *supra* note 6, at 1262.

9. See, e.g., Levy, et. al, *supra* note 6, at 410.

10. See John Underwood, *Just An Awful Toll*, SPORTS ILLUSTRATED, Aug. 12, 1985, at 48, 59. See also Edward Brown, *Deterring Disease*, AM. SCH. & UNIV. STUDY, May 1989, at 12C ("An effective turf program should include a preventive disease management plan.").

11. *Id.*

12. It is the author's opinion that the athlete has no opportunity to exert his or her right to career longevity by determining which type of turf is the safest for athletic competition.

13. See M.I. FINLEY & H.W. PLEKET, *THE OLYMPIC GAMES: THE FIRST THOUSAND YEARS* 39-40 (1976).

deaths from a charge of homicide.¹⁴ Additionally, the Roman amphitheaters exhibited carnage that often led to the commonplace practice of exposing unarmed gladiators to the mercy of lions.¹⁵ The focal point of athletic promotion at the time was the spectator, not the competitor.¹⁶ The total disregard for the health and safety of the athlete playing on artificial turf is analogous to the ancient barbaric customs of past civilizations.

This article attempts to notify the promoters of athletic sporting events that the risk of injury from playing on artificial turf greatly outweighs the benefits of this product. It is essential for team owners, athletic departments, manufacturers of turf alternatives, and the architects of sporting arenas to recognize the dangers to the athlete, and to switch back to natural grass playing surfaces.¹⁷

II. EVOLUTION OF ARTIFICIAL TURF

Artificial Turf, also known as AstroTurf, PolyTurf, Durra Turf, Tartan Turf, Poligrass, ChemGrass, Wyco Turf, Desso Turf, SuperTurf, Omniturf, and All-Pro Turf,¹⁸ was initially developed to provide city children with maximized playing areas, enabling them to maintain a fitness level equal to their peers in more rural locales.¹⁹

14. *Id.* at 40.

15. See H. SCULLARD, *FROM THE GRACCHI TO NERO: A HISTORY OF ROME FROM 133 B.C. TO A.D. 68*, at 353-54 (4th ed. 1976); JEROME CARCOPINO, *DAILY LIFE IN ANCIENT ROME* 8 (1968).

16. See CARCOPINO, *supra* note 15, at 202, 208.

17. See *Turf is Still Under Attack*, *THE CHIEFTAIN* (Colo.), Nov. 30, 1991, at 4C [hereinafter *Turf Under Attack*]; see also Telephone Interview with John Cooper, *supra* note 3.

18. See William Johnson, *Fields*, *SPORTS ILLUSTRATED*, Aug. 12, 1985, at 35; see also Levy, et. al, *supra* note 6, at 411 app. 1. The authors describe the make-up of various artificial turfs as follows:

AstroTurf: ½ inch nylon ribbon pile of 500 denier on a polyester nylon mat which is double bonded to a ⅜ inch closed-cell nitrile rubber and polyvinyl chloride pad on an asphalt base; Tartan Turf: ½ inch cut nylon pile surface of 40 to 60 denier on a knitted polyester backing, double bonded to an open cell ⅜ inch polyurethane pad over an asphalt base; PolyTurf: A first generation artificial grass. A 3/16 inch polypropylene pile of 450 denier fibers matted on a polypropylene mat and single bonded to a ½ inch closed-cell nitrile rubber and polyvinyl chloride pad over an asphalt base; Omniturf: a second-generation turf of 1 inch, 10,000 denier polypropylene tufted fibers with a woven polypropylene backing, coated with durable polyurethane, lined with a round angular-shaped silica sand over a 1 inch porous rubber and urethane underpad; Poligrass: polypropylene grass tapes, knitted together with high-strength polyester fibers and additional polyvinyl chloride (PVC) nap fixation and a welded-on profiled PVC resilient drain mat reinforced by an additional knitted inlay fabric.

Id.

19. See Levy, et. al, *supra* note 6, at 406.

Modern fields made of artificial turf serve a multitude of purposes: as an alternative to limited field availability; as a grass substitute where grass will not grow; and as a multipurpose grass alternative that maximizes economic earning potential.²⁰

The development of artificial grass was a consequence of test results obtained through physical examinations of American men eligible for the military draft during the Korean War.²¹ In 1960, the Ford Foundation funded the Educational Facilities Laboratory (EFL) to analyze the results of these physical examinations.²² The tests revealed that candidates from rural areas were in better physical condition than the candidates from urban areas.²³ A direct correlation was drawn to the lack of suitable playing areas for urban children.²⁴ EFL employed Chemstrand, a subsidiary of Monsanto Inc., to develop the first nylon knitted fiber woven into polyester which ultimately covered the playing surface of the Moses Brown School in Providence, Rhode Island.²⁵ In 1964, EFL financed the first ersatz surface, and Monsanto installed the historic synthetic turf for a bargain price of \$200,000.²⁶

Following the precedent established in Rhode Island, the most famous installation of artificial turf was in the renowned Houston Astrodome in Houston, Texas.²⁷ The growth of artificial turf reached epidemic proportions before any negative effects of the synthetic surface were discovered.²⁸ The use of synthetic surfaces has evolved from artificial "turf" to artificial "surfaces." In 1984, Skate USA, Inc. developed ASTRO-ICE, a synthetic surface made of ultra-high molecular-weight plastic.²⁹ In 1988, Oklahoma City's Remington Park introduced the first water repellent horse racing surface called Equi-

20. *See id.*

21. *See Johnson, supra* note 18, at 36. "During the Korean War, millions of young American men took physical examinations for the military draft. After the conflict ended, someone looked at those exams and found that, as a rule, city boys were in worse shape than country boys were." *Id.*

22. *See id.*

23. *See id.* at 36; *see also Levy, supra* note 6, at 406.

24. *See Johnson, supra* note 18, at 36; *Levy, supra* note 6, at 406.

25. *See Johnson, supra* note 18, at 36.

26. *See id.*

27. *See Levy, supra* note 6, at 407. "Without sunlight, the grass inside the Astrodome died, and the playing surface turned to dirt." *Id.*

28. *See id.* By 1980, AstroTurf had been installed in over 300 fields in the United States and abroad. *Id.*

29. *See Barry Shapiro, Dawn of the Artificial Ice Age, SPORT*, Nov. 1984, at 9.

trak.³⁰ As the detrimental effects of artificial turf are beginning to be discovered, realized, and potentially litigated, the future of other synthetic surfaces cannot be predicted.

Currently, the growth of artificial turf is in the midst of turmoil, controversy, and athletic outcry. Sporting advocates repeatedly attack the utility of artificial turf. In 1974, the Stanford Research Institute issued a report directed by executive director Joe Grippo.³¹ Tests were conducted on all parts of the body and the report revealed that natural grass was safer for athletes than artificial turf.³² Many coaches recognize the dangers of artificial turf and sometimes prevent their teams from practicing on it.³³ For example, Tulane University practiced and played on artificial turf for two years; however, the following year the team practiced on grass and reduced their injuries by sixty percent.³⁴

Professional athletes continually voice their distaste for artificial turf. For example, Andre Dawson, a professional baseball player, maintains that playing the majority of his games at Olympic Stadium in Montreal on "phony turf" has limited his career.³⁵ Another baseball superstar, George Brett, contends that artificial turf shortens playing careers.³⁶ When the Kansas City Royals decided to replace their old stadium, the players overwhelmingly voted for a grass playing field.³⁷

30. See William Nack, *It's Stronger Than Dirt*, SPORTS ILLUSTRATED, Oct. 24, 1988, at 104.

31. See, Underwood, *supra* note 10, at 49-50.

32. See *id.* The study found:

[I]n 17 out of 17 categories, natural grass was safer to play on than artificial surfaces then being produced for football. Safer for the head, the face, the teeth, the neck, the shoulders, the arms, the elbows, the wrist, the hands, the fingers, the thorax, the feet, the toes, the back, the hips, the ankles. Despite some claims that turf would reduce the incidence on knee injuries, the bane of football, SRI found that more knees were injured on it.

Id.

33. See *id.* at 57-58. Howard Schnellenberger ordered two new grass practice fields for the University of Louisville, although his team now plays its home games on the turf at Cardinal Stadium. *Id.*

34. *Id.* at 58.

35. See Joel Millman, *The Safety of Phony Turf*, TECHNOLOGY REVIEW, Nov./Dec. 1984, at 70.

36. See Ron Fimrite, *Is It Baseball or Pinball?*, SPORTS ILLUSTRATED, Aug. 12, 1985, at 45, 47.

37. *Id.* The Kansas City players voted 23-3-1 in favor of replacing the artificial turf with grass. *Id.* Former star first baseman, Richie Allen, quipped "If horses won't eat it, I won't play on it." Kelly Costigan, *The Real Thing*, FORBES, Mar. 25, 1985, at 222.

Professional football players have expressed one very simple concern about the surface they play on; due to the violent nature of professional football, the players want the safest playing surface available.³⁸ In a National Football League Player's Association (NFLPA) Safety Survey conducted in 1985, eighty-two percent of the players in the league preferred natural grass over synthetic turf.³⁹ Moreover, the top five fields that the players chose to play on were all natural grass surfaces.⁴⁰ During the early years of collective bargaining between the NFLPA and management, players expressed serious concerns over increased injuries due to playing on artificial turf. The response by management to these concerns was, "it's our prerogative, and ours alone, to determine what type of fields you play on."⁴¹

The trend of colleges in the National Collegiate Athlete Association's (NCAA) Big Ten Conference of switching back to natural grass playing surfaces indicates the concern colleges have for their athletes' health and safety. A number of conference schools are reportedly replacing their fields with natural grass.⁴² Ohio State, Michigan, and Iowa have all converted back to natural grass.⁴³ The University of Purdue, however, did not need to convert back to grass because the University never succumbed to the technological pressure to convert to artificial turf.⁴⁴ The Athletic Department of Purdue has remained loyal to natural grass and their athletes by standing firm on their stance to use Prescription Athletic Turf, a natural grass system.⁴⁵

A limited number of professional football stadiums have also recognized that a player's body has priority over the playing surface.⁴⁶ For instance, in 1979 the city of San Francisco addressed the complaints of players regarding injuries on artificial turf and replaced the

38. See Macik, *supra* note 6, at 12. Bud Grant, ex-head coach of the Minnesota Vikings, stated: "More football players are getting hurt, not due to the increased violence of play by the men themselves, but due to the synthetic surfaces." *Id.*

39. See Macik, *supra* note 1, at 1.

40. See *id.* The top five stadiums of players in 1985 were: 1) The Orange Bowl, a grass field; 2) Tampa Stadium, a grass field, 3) Los Angeles Memorial, a grass field; 4) Mile High Stadium, a grass field; 5) Anaheim Stadium, a grass field. *Id.*

41. See Macik, *supra* note 6, at 12.

42. See Edward Sherman, *Big Ten is Getting Back to Nature*, THE CHICAGO TRIB., Sept. 22, 1991, at 13C.

43. See *id.*

44. See *id.*

45. See *id.*; *Turf Under Attack*, *supra* note 17; Tom Farrey, *Growing Trend: Natural Grass Coming Back*, SEATTLE TIMES, Jan. 12, 1992, at 4C.

46. See *Artificial Turf Hits The Showers*, COMPRESSED AIR MAG., Sept. 1989, at 26.

turf in Candlestick Park with grass.⁴⁷ Soldier Field, home of the Chicago Bears, has also recently converted back to natural grass.⁴⁸

The public outcry has generated the requisite attention necessary to finally recognize and protect the rights of athletes. In order to legally complement these rights, however, the law must also play a vital role in advancing the utilization of natural grass. The merits of the public outcry should be reflected in the principles of tort law; specifically, in the negligence and products liability areas under section 402A of the Second Restatement of Torts.⁴⁹

III. SPRING CLEANING

A. *Exposure of the Flaws in Artificial Turf*

The primary purpose of this article is to establish that manufacturers of synthetic surfaces, distributors of artificial surfaces, stadium owners, and athletic departments should be held liable for the injuries which athletes sustain as a result of synthetic turf. While public outcry has had only a limited effect on the use of artificial turf, the threat of litigation is the best deterrent against corporations and organizations that advocate the use of synthetic surfaces. Due to the lack of recognition of turf liability, however, the modern gladiator presently has limited recourse against the promoter⁵⁰ of modern athletics. In order to recognize athletes' rights and afford athletes adequate remedies, precedent in favor of athletes should be established.

The purpose of this article is to analyze and apply products liability law to the manufacturers of artificial surfaces. First, the article discusses case law acknowledging the rights of spectators in negligence cases, and how the extension of those rights should protect the athlete within the arena of competition as well. Second, the article analyzes the law of products liability and how it affects the manufacture, the purchase, and the use of synthetic turf. Finally, an explanation of how proponents of synthetic turf may possibly avail themselves of affirmative defenses will be discussed.

47. See Roger Rapoport, *Artificial Turf: Is the Grass Greener?*, in NEWTON AT THE BAT: THE SCENE IN SPORTS 63 (Eric W. Schrier & William F. Allman eds. 1987).

48. See Telephone Interview with Brian Harlan, *supra* note 3. The front office of the Chicago Bears is "determined to make the effort to prolong the careers of athletes and reduce the risk of injuries." *Id.*

49. RESTATEMENT (SECOND) OF TORTS § 402A (1965).

50. Promoter includes manufacturers, distributors, college athletic departments, high school athletic departments, professional team owners, organizers of athletic events, and proponents of artificial turf.

B. Negligence

The standard of care owed to spectators and ultimately to athletes is based upon fundamental principles of negligence. Legal commentators summarize negligence as the presupposition of some uniform standard behavior.⁵¹ The courts measure the conduct of each actor against the "reasonable person" standard; how a person of ordinary sense, using ordinary care and skill, would react under similar circumstances.⁵² The reasonable person is held to possess a minimum level of knowledge common to the community where the injury occurs.⁵³

A negligent defendant who possesses superior knowledge, skill, or intelligence, however, will be held to a higher standard of care.⁵⁴ Experienced milk haulers,⁵⁵ hockey coaches,⁵⁶ expert skiers,⁵⁷ construction inspectors,⁵⁸ and doctors⁵⁹ must all use care which is reasonable in view of their superior education and experience.⁶⁰

Case law from the various states has compensated fans who are injured while in attendance at sporting events. For instance, in *Parker v. Warren*,⁶¹ the Tennessee Court of Appeals addressed the liability of a proprietor of a sporting arena and the promoter of a

51. See W. PAGE KEETON, ET. AL, PROSSER AND KEETON ON THE LAW OF TORTS § 32, at 173 (5th ed. 1984).

52. See ROBERT C. BERRY & GLEN M. WONG, LAW AND BUSINESS OF THE SPORTS INDUSTRY: COMMON ISSUES IN AMATEUR AND PROFESSIONAL SPORTS § 4.12-1, at 425 (1986).

53. RESTATEMENT (SECOND) OF TORTS § 283 cmt. c (1977).

54. RESTATEMENT (SECOND) OF TORTS § 289 cmt. m (1977).

55. See, e.g., *Jewell v. Beckstine*, 386 A.2d 597 (Pa. Super. Ct. 1978) (holding that an experienced milk hauler will be held to a higher standard of care than that of the ordinary reasonable person with regard to conduct expected in that field).

56. See, e.g., *Everett v. Bucky Warren Inc.*, 380 N.E.2d 653 (Mass. 1978) (concluding that a high school hockey coach could be held to a standard of care commensurate with his experience and knowledge in the game of hockey).

57. See, e.g., *LaVine v. Clear Creek Skiing Corp.*, 557 F.2d 730 (10th Cir. 1977) (confirming that a skier's level of expertise could be a factor in requiring a higher duty of care than that of an ordinary person who is not an expert skier).

58. See, e.g., *Fisher v. United States*, 299 F. Supp. 1 (E.D. Pa. 1969), *rev'd on other grounds*, 441 F.2d 1288 (3d Cir. 1971) (explaining that the duty of a construction inspector is not limited to the standard of care of an ordinary, reasonable person; rather it is heightened to the degree of a reasonable person with the skill, experience, and knowledge in the construction arena).

59. See, e.g., *Sullivan v. Henry*, 287 S.E.2d 652 (Ga. 1982) (confirming that a physician is held to a duty of care consistent with that of a reasonable person trained and employed in the medical profession).

60. See KEETON, et. al, *supra* note 51, § 32, at 185.

61. 503 S.W.2d 938 (Tenn. Ct. App. 1973).

sporting event for an injury to a spectator at a wrestling match.⁶² In that case, the plaintiff suffered serious injury when the bleachers she was sitting on collapsed, causing her to fall approximately eight feet onto a concrete surface.⁶³ The court held that the proprietor of the arena and the promoter of the event were liable under the doctrine of *res ipsa loquitur*.⁶⁴ The court determined that the plaintiff established the requisite elements of *res ipsa loquitur* because the res causing the harm was under the sole control of the defendants, and the accident would not have occurred had reasonable care been exercised.⁶⁵ The court concluded that proprietors and promoters must use ordinary care when furnishing bleachers for sporting events.⁶⁶

Similarly, in *Benjamin v. State*,⁶⁷ a New York court held the state liable for failing to adequately protect a spectator seated at a state university hockey rink.⁶⁸ The court reasoned that an owner and occupier of land is under a duty to exercise reasonable care under the circumstances to prevent injury to those who come to watch games at its facilities.⁶⁹

Since the protection of a spectator by those in control of the premises at sporting events is undisputed, the case law should also be extended to protect the participant. Applying the reasoning of *Parker* and *Benjamin* to assess liability against the manufacturers, owners, and promoters of artificial turf uncovers a potential claim by the athlete sounding in negligence. The stadium owner, the promoter of an athletic event, and the manufacturer of synthetic turf should

62. *Id.* at 941.

63. *Id.* at 941.

64. *Id.* at 942. The court concluded that the proprietor or promoter of a wrestling match was required to use ordinary care concerning the condition of the bleachers. *Id.* The proprietor had a duty to inspect the seats and make sure they were reasonably safe. *Id.*

65. *Id.*

66. *Id.* at 943. The court stated:

In considering the duty owed by a proprietor of a wrestling match to the patrons attending the event, we find the law established in this state that when one expressly or by implication invites others to come upon his premises, whether for business of for any other purpose, it is his duty to be reasonably sure that he is not inviting them into danger, and to that end he must exercise ordinary care and prudence to render the premises reasonably safe for the visit.

Id.

67. 453 N.Y.S.2d 329 (Ct. Cl. 1982).

68. *Id.* at 331. The plaintiff was struck and injured by a hockey puck while watching a hockey game at the state run facility. *Id.* at 330. To the rear of each goal was a protective fence safeguarding the fans. *Id.* The fence was not continuous and a puck escaped behind the fence and struck the plaintiff. *Id.*

69. *Id.*

bear the same burden of ordinary care towards the athlete as is imposed for the benefit of the spectator.

These basic principles of negligence require that ordinary care be exercised in the management of artificial turf in athletic facilities. Proponents of artificial turf, nevertheless, should be subjected to a higher standard of care since they have superior knowledge concerning its use. Various studies have documented the increased risks of artificial turf. For instance, the *Journal of Clinical Orthopaedics and Related Research* found that over a five year period, used and exposed turf are less likely to absorb impact.⁷⁰ Moreover, injuries on turf increased as surface hardness increased:

[R]esults indicate that as surface hardness increased, the incidence of surface impact-related trauma increased. As surface friction decreased, surface friction-related injuries decreased. [Astro-Turf] is not a stable, static surface. With use and exposure it undergoes undesirable, irreversible alterations in its physical and mechanical properties. The resultant decreased impact absorption capacity is detrimental to player safety contributing to an increased incidence of surface impact related trauma.⁷¹

As a result of such studies, proponents of artificial turf should be held responsible for knowing of the increased risks.

Furthermore, facility owners and advocates of artificial turf are subject to the general rule of liability for dangerous conditions on their premises that they knew or reasonably should have known about and which cause physical harm to an invitee.⁷² Athletes entering the athletic arena for the economic benefit of athletic promoters should be considered invitees.⁷³ Therefore, studies exposing the reduced safety of artificial turf increase the knowledge of manufacturers, owners, and promoters that synthetic surfaces are potentially dangerous and ultimately are sufficient to make these individuals liable to athletes. Accordingly, advocates of synthetic surfaces should be held accountable for the promotion of such a hazardous surface.

Unquestionably, the protection of the rights of fans in attendance at sporting events is appropriate. The protection against personal injury, however, should surpass the barriers of the bleachers

70. K. Douglas Bowers, *Injury Trends With Alterations in the Mechanical Properties of AstroTurf*, *CLINICAL ORTHOPAEDICS AND RELATED RES. J.*, June 1978, at 262.

71. *Id.* at 263.

72. See BERRY & WONG, *supra* note 52, at 359.

73. See KEETON, et. al, *supra* note 51, § 61, at 419 ("those who enter premises upon business which concerns the occupier, and upon his invitation express or implied, the latter is under an affirmative duty to protect them, not only against dangers of which he knows, but also against those which with reasonable care he might discover.").

and extend to the playing field. The modern athlete is not an ancient gladiator. He or she has rights which should be recognized and protected.

Despite the existence of a possible negligence claim, plaintiffs also have the ability to pursue multiple causes of action.⁷⁴ Consequently, the law of products liability should also provide an avenue of redress that injured athletes may consider when drafting a complaint against a manufacturer, purchaser, or promoter of artificial turf.

C. Products Liability

The law of products liability may provide a better course for a plaintiff to follow in attempting to establish liability against a manufacturer or seller of artificial turf.⁷⁵ Liability is imposed to compensate buyers, users, and bystanders for damages or injuries suffered due to defects in purchased goods.⁷⁶ The basis of products liability law is established in section 402A of the Second Restatement of Torts.⁷⁷ Section 402A provides, in part:

One who sells any product in a defective condition unreasonably dangerous to the user or consumer is subject to liability. . . . (a) if the seller is engaged in the business of selling such a product, and (b) it is expected to and does reach the user or the consumer without substantial change in the conditions in which it is sold.⁷⁸

In addition, previously unknown hazards in a product, or techniques for reducing known hazards, discovered between the time a product is distributed in commerce and the time its defectiveness is determined may also be imputed to the manufacturer.⁷⁹

Products liability law has yet to be applied to protect athletes from the defects inherently found in artificial turf. A court almost addressed the issue in a case involving injuries to a football player

74. See JACK A. FRIEDENTHAL, ET. AL, CIVIL PROCEDURE 265 (West 1985) ("A logical and straightforward approach would permit a party honestly to plead in the alternative in a single count according to the facts at her disposal."). See also FED. R. CIV. P. 8(e)(2).

75. See generally James A. Henderson, *Coping with the Time Dimension in Products Liability*, 69 CAL. L. REV. 919 (1981) (discussing the growth in product liability cases during the last decade involving defective product design and a manufacturers' failure to warn).

76. See *id.*

77. RESTATEMENT (SECOND) OF TORTS § 402A (1965).

78. *Id.*

79. See John W. Wade, *On The Effect in Product Liability of Knowledge Unavailable Prior to Marketing*, 58 N.Y.U. L. REV. 734, 751 n.1 (1983) (noting the effects of increased knowledge on the liability of the manufacturer for defective product design).

allegedly resulting from artificial turf.⁸⁰ In 1974, a former football player at Texas Christian University was injured while playing in Alabama.⁸¹ The player brought suit against the manufacturer of the turf and the contractors who installed the turf.⁸² The manufacturer ultimately settled out of court, however, the sentiments of the injured player, Kent Waldrep, captured the very foundation of this article: "safety is not the number one priority in football."⁸³

Major manufacturers of various products in the 1970s and 1980s faced monumental problems with the production of their products, forcing them to redesign their products. For instance, in the late 1970s, the Ford Motor Company was indicted by an Indiana grand jury of criminal manslaughter for the deaths of three girls which resulted when the Pinto they were driving caught fire after being rear-ended by another vehicle.⁸⁴ Due to pressure from the media, products liability lawsuits, and the National Highway Traffic Safety Administration, 1.5 million early model Pintos and Mercury Bobcats were recalled so that Ford could modify their fuel tanks, making them less likely to rupture and explode in rear-end accidents.⁸⁵

Johnson & Johnson faced a similar dilemma in September of 1982 when the nation's leading over-the-counter pain reliever, Tylenol, was lethally laced with cyanide.⁸⁶ Johnson & Johnson immediately removed the product from the market, demonstrating that the possible threat of litigation by potential plaintiffs often causes major manufacturers to re-evaluate their product, marketing strategy, and market longevity.⁸⁷ Due to the potential availability of a products liability cause of action against the advocates of synthetic surfaces, scrutiny of this area of the law is absolutely necessary.

Courts have struggled with the broad issue of when products should be regarded as defective for the purposes of imposing strict

80. See Underwood, *supra* note 10, at 57.

81. *Id.* Kent Waldrep is paralyzed from the neck down as the result of an injury from landing improperly on his head on artificial turf. *Id.* His injuries allegedly occurred due to the hard surface of the artificial turf. *Id.*

82. See Levy, *supra* note 6, at 411. In this case, polyturf was the surface installed. *Id.*

83. See Underwood, *supra* note 10, at 57.

84. See PAUL H. WEAVER, *THE SUICIDAL CORPORATION* 39 (1988). It was alleged that the Pinto was particularly susceptible to fuel tank rupture when rear-ended. *Id.* The design of the Pinto fuel system was essentially the same as that of other cars similar in size. *Id.*

85. See *id.*

86. See Howard M. Berg & Robert A. Kosseff, *Should The Manufacturer Be Held Liable For the Tylenol Murders?*, *FOR THE DEFENSE*, Dec. 1982, at 12.

87. See WEAVER, *supra* note 84, at 40.

liability.⁸⁸ The longer a particular product is in the market place, science and technology permit information regulating the product to become more readily available, ultimately affecting manufacturer liability for defective product design or inadequate warnings.⁸⁹ Courts have addressed the effect that should be given to the increase in scientific and technological knowledge which may occur between the time of marketing and the time of trial.⁹⁰

In the celebrated case of *Beshada v. John-Manville Products Corp.*,⁹¹ the New Jersey Supreme Court addressed whether limits on knowledge about a product's danger available at the time of manufacture should affect liability if that knowledge was later available at trial.⁹² The court in *Beshada* stated that a warning as to the product hazards should have been given regardless of whether that danger was known when the product was distributed.⁹³ The majority of problems involve the question of when the burden of knowledge should be placed on manufacturers in design cases. Particular dangers of a product may not have been ascertainable at the time of manufacturing, but rather may have later become apparent at the time of trial.⁹⁴ Section 402A of the Restatement (Second) of Torts requires that the product's defective condition be unreasonably dangerous.⁹⁵ Courts and commentators have attempted to define the elu-

88. See WILLIAM LLOYD PROSSER, ET. AL, TORTS CASES & MATERIALS 727 (8th ed. 1988).

89. See Wade, *supra* note 79, at 734.

90. See *id.* at 738.

91. 90 N.J. 191, 447 A.2d 539 (1982). In *Beshada*, the plaintiff developed asbestosis and mesothelioma after being exposed to asbestos textile products. *Id.* at 196, 447 A.2d at 542. Although the danger to workers in asbestos mills had been recognized, defendants contended that the medical community was unaware that the same danger existed for electricians working with insulation products containing asbestos. *Id.*

92. *Id.* at 198, 447 A.2d at 543. The court pondered whether the failure to warn may be used as a defense in product liability cases. *Id.* Defendants asserted that the danger of which they failed to warn was undiscoverable given the body of scientific data at that time. *Id.* The issue became whether the medical community's presumed unawareness of the danger of asbestos could be used as a defense. *Id.*

93. *Id.* at 209, 447 A.2d at 548. The court observed that imposing strict liability on the defendants would be consistent with the policy considerations underlying strict liability such as placing the burden of injury from dangerous products on the distributors who reap the profit from its production and not on the one innocent victim who was unaware of the hazards and could not protect himself from injury. *Id.*

94. See, e.g., *Heritage v. Pioneer Brokerage and Sales, Inc.*, 604 P.2d 1059 (Alaska 1979) (formaldehyde fumes in mobile home); see also *Boatland of Houston, Inc. v. Bailey*, 609 S.W.2d 743 (Tex. 1980) (subsequent technological breakthrough regarding the manufacture of outboard motors allowed the company to produce a safer product).

95. See Wade, *supra* note 79, at 741.

sive element of wrongfulness in the design of a product.⁹⁶ Two different approaches have been utilized in evaluating design hazards: 1) the consumer-purchaser or consumer-user contemplation test, and 2) the risk-utility test.⁹⁷

Under the consumer-contemplation test, a product is dangerously defective if it is dangerous to a degree beyond the contemplation of a purchaser with the ordinary knowledge common to the community as to the product's characteristics.⁹⁸ Because the consumer-contemplation test has been an inadequate mechanism for evaluating the dangerousness of a product, courts have applied a risk-utility analysis.⁹⁹ Under this test, a product is defective if the magnitude of the danger outweighs the utility of the product's use.¹⁰⁰ In addition, the burden to establish the unreasonably dangerous nature of the product falls upon the plaintiff.¹⁰¹ In order for the plaintiff to recover against a target defendant, the plaintiff must introduce evidence

96. *See id.*

97. *See Keeton, et. al, supra* note 51, at 698 n.22. For a general discussion of this area, see Lamberth S. Carsey, *What Constitutes a Design Defect in Product Liability Cases*, 21 FED. INS. COUNSEL Q. 107 (1979); William Page Keeton, *Manufacturer's Liability: The Meaning of "Defect" in the Manufacture and Design of Products*, 20 SYRACUSE L. REV. 559 (1969); William Page Keeton, *Product Liability and the Meaning of Defect*, 5 ST. MARY'S L.J. 30 (1973); John W. Wade, *On the Nature of Strict Tort Liability for Products*, 44 MISS. L.J. 825, 830 (1973); William Page Keeton, *Products Liability—Design Hazards and the Meaning of Defect*, 10 CUMB. L. REV. 293 (1979); John W. Wade, *On Product "Design Defects" and Their Actionability*, 33 VAND. L. REV. 551 (1980); James A. Henderson, *Design Defect Litigation Revisited*, 61 CORNELL L. REV. 541 (1976); John E. Montgomery & David G. Owen, *Reflections on the Theory and Administration of Strict Tort Liability for Defective Products*, 27 S.C. L. REV. 803 (1976).

98. *See* RESTATEMENT (SECOND) OF TORTS § 402A cmt. i (1977). In an attempt to expand the scope of liability and protection to non-purchasers, courts have substituted "ordinary user" or "foreseeable user" for "ordinary purchaser," allowing victims to recover if the hazard was not reasonably foreseeable by the user despite that the danger could be contemplated by the ordinary purchaser-consumer. *See also* Bellotte v. Zayre Corp., 352 A.2d 723 (N.H. 1976) (allowing children to recover despite that the plaintiff was not an ordinary purchaser).

99. *See* Wade, *supra* note 79, at 743 n.32. The consumer-contemplation test has been criticized for three reasons: 1) according to this test, a victim would be unable to recover for injuries suffered as a result of an open or obvious hazard; 2) a new product may be wrongly certified as "defectively dangerous" because a handful of people are victimized by side effects or adverse reactions, not mere unknowable risks; and 3) the nebulous definition and application of "reasonable purchaser" creates inconsistent results. *Id.*

100. *See, e.g.,* Turner v. General Motors Corp., 584 S.W.2d 844 (Tex. 1979). There are three primary reasons for determining whether the danger outweighs the product's utility: 1) the harmful effects from its reasonable use outweigh the benefits; 2) although the harmful consequences do not exceed the benefits, alternative products are available that serve the same goals; and 3) although harmful consequences are not greater than the benefits, the product could have been manufactured with a less injurious effect. William Page Keeton, *Torts*, 35 Sw.L.J. 1, 9 (1981).

101. *See* KEETON, et. al, *supra* note 51, at 712-13.

which would cause a reasonable person to conclude that it was more probable that the claimant's injury or illness was attributable to a dangerous condition, and the product was defectively dangerous at the time that the injury occurred.¹⁰²

Additionally, the requisite amount of knowledge necessary to hold the manufacturer liable has been the subject of debate.¹⁰³ In order to satisfy the knowledge requirement imposed upon manufacturers and advocates of artificial turf, medical experiments, athletic tests, and scholarly reports may be offered as proof. This knowledge of the potential danger of the product may not be required at the time of manufacture, as long as knowledge is available at the time of trial.¹⁰⁴

This author contends that manufacturers of artificial turf possess the requisite knowledge that their product is inherently dangerous. A study of athletic injuries in the NFL from 1971 through 1980 revealed the detrimental effect of synthetic turf on players performing on artificial turf as opposed to those performing on natural grass.¹⁰⁵ For each additional game played on synthetic turf during the season, the number of knee injuries was expected to increase by approximately 1.5 injuries.¹⁰⁶ In 1982, the NCAA also conducted a study¹⁰⁷ which reinforced that the injury rate for artificial surfaces was 1.5 times greater than the injury rate for natural grass.¹⁰⁸

The Division of Orthopedic Surgery at West Virginia University Medical Center, in cooperation with the West Virginia University Department of Intercollegiate Athletics, issued a similar report regarding injuries resulting from artificial turf.¹⁰⁹ The findings read, in part, as follows:

Traction affects both performance and safety. Players must be able to start rapidly from a stationary position, accelerate and decelerate rapidly, change direction, cut sharply and stop suddenly, and in each instance be assured of sound footing. Too firm foot fixation can in effect

102. See *id.* The plaintiff does not have to prove that the manufacturer was negligent in selling the product with a defective condition. *Id.* at 713. The plaintiff only needs to demonstrate that the defect constitutes a breach of warranty or that the product is "unreasonably dangerous" under the strict liability theory of tort. *Id.*

103. See *id.* at 751.

104. See *id.* at 737 n.16.

105. See Atkinson & Tschirhart, *supra* note 4.

106. See *id.* at 3.

107. See Macik, *supra* note 6, at 13.

108. See *id.*

109. See K. Douglas Bowers & R. Bruce Martin, *Cleat-surface Friction on New and Old AstroTurf*, 7 MED. AND SCI. IN SPORTS 132 (1975).

produce "footlock," contributing to knee and ankle trauma. Poor foot fixation results in slipping contributing to player-surface contact trauma. Greater traction results in faster running, faster running results in increased hitting velocity, and increased hitting velocity contributes to more severe player contact trauma. Increased traction allows for sharper cutting angles which can aid performance but produces greater stress to supporting structures of joints.¹¹⁰

The study confirmed that with use and exposure, the AstroTurf¹¹¹ alters the friction the player has with the playing surface, affecting both player performance and safety.¹¹² These studies place users and manufacturers of artificial turf on notice to properly inspect, repair, and replace aging artificial turf.¹¹³ The doctors and assistants of the study suggested that professional teams monitor the shock absorbency of their stadiums' artificial turf.¹¹⁴ The newer surfaces closely mirror the shock absorption of grass; however, turf installed more than five years ago has the shock absorption of asphalt.¹¹⁵ A report generated by Penn State University indicated that two factors which lead to a high incidence and severity of knee injuries occurring at all levels of organized football are the design of the playing shoe and the type of playing surface.¹¹⁶ The burden, however, still remains on the manufacturers of synthetic turf, the athletic departments, and the promoters of athletic events to coordinate their goals with playing shoe manufacturers in an attempt to provide the safest turf surface on which to compete.¹¹⁷

Injuries unique to artificial turf have become more apparent in recent years. Traumatic injuries to the metatarsophalangeal joints are a relatively common problem among football players participating on artificial turf.¹¹⁸ Rice University reported that over the past twenty-five years, trainers and team physicians cannot recall a single

110. *Id.* at 132.

111. *Id.* AstroTurf is the generic term for artificial turf. *Id.*

112. *See id.*

113. *See* Jill Lieber, *Turf Toe: The NFL's Most Pesky Agony of Da Feet*, SPORTS ILLUSTRATED, Dec. 12, 1988, at 8. Due to the increasing percentage of foot injuries in the NFL, the New York Giants and the San Francisco Forty-Niners conducted a survey, finding that 83% of the players surveyed injured their metatarsophalangeal joint. *Id.*

114. *See* Bowers & Martin, *supra* note 109, at 132.

115. *See id.*

116. *See* Robert W. Bonstingl, et. al., *Torques Developed by Different Types of Shoes on Various Surfaces*, 7 MED. AND SCI. IN SPORTS 127 (1975).

117. *See* G. Valiant, et. al, *Static Friction Characteristics of Cleated Outsole Samples on AstroTurf*, 17 MED. AND SCI. IN SPORTS AND EXERCISE 222 (1985) (discussing a kinetic test of sport surfaces).

118. *See* Clanton, et. al, *supra* note 2, at 165.

instance of a severe metatarsophalangeal joint sprain by a football player wearing the traditional cleated shoe for use on natural grass.¹¹⁹ In light of the statistical evidence and the uniqueness of the injury, notice and knowledge of the potential danger may be imputed to the manufacturers of artificial turf.¹²⁰

In addition, manufacturers have a duty to warn consumers of the dangers inherent in their products.¹²¹ If in exercising reasonable care, the designer is aware, or should be aware, of the risk inherent in the product, the manufacturer has a duty to warn.¹²² Therefore, a "reasonable" manufacturer or seller of artificial turf should warn the potential user of the product's potential hazards. Failure to warn that artificial turf is dangerous or defective should place liability on the manufacturer because it failed to take precautions that a reasonable manufacturer would consider when placing its product on the market.

Unfortunately, the organized athletic associations selectively have not considered the safety rights of athletes when installing artificial surfaces. While the associations stress the economic advantages of artificial turf, these benefits should not be the exclusive factor in determining whether to install synthetic turf.¹²³ The ultimate goal of this article is to force promoters of athletic competition to recognize the fundamental rights of athletes, rather than advance the economic rights of team owners, athletic departments, and various high school and college athletic promoters.

119. *See id.*

120. For additional research of the metatarsophalangeal joint, see K. Douglas Bowers & R. Bruce Martin, *Turf Toe: A Shoe-surface Related Football Injury*, 8 *MED. AND SCI. IN SPORTS* 81, at 82-83 (1976); T. Cooker, et. al, *Traumatic Lesions of the Metatarsophalangeal Joint of the Great Toe in Athletes*, 6 *AM. J. OF SPORTS MED.* 326 (1978); D. Cooper & J. Fair, *Turf Toe*, 6 *PHYS. SPORTS MED.* 139 (1978).

121. *See* KEETON, et. al, *supra* note 51, at 697 n.20. The authors comment that several courts have refused to find liability unless the designer knew or should have known, in the exercise of ordinary care, of the risk of which he failed to warn. *Id.* Moreover, liability will not be placed on a manufacturer unless he failed to take precautions that a reasonable person would take in designing the product. *Id.*

122. *See id.* The authors maintain:

There will be no liability without a showing that the defendant designer knew or should have known in the exercise of ordinary care of the risk or hazard about which he failed to warn. Moreover, there will be no liability unless manufacturers failed to take the precautions that a reasonable person would take in presenting to the public.

Id.

123. *See infra* notes 140-145 and accompanying text for a discussion of prescription athletic turf.

D. Defenses

Proponents of artificial surfaces are not without defenses. The most common defenses raised by defendants in tort actions for negligence include contributory negligence, assumption of risk, and comparative negligence.¹²⁴ Contributory negligence is conduct by a plaintiff which contributes as a legal cause to the harm suffered.¹²⁵ If proven that the plaintiff's own negligence is the proximate cause of the injury, the defendant will not be liable for the harm.¹²⁶ Because the playing surface is exclusively controlled, tested, and requested by the defendant, the defense of contributory negligence is limited in the artificial turf arena.

In addition to contributory negligence, many courts recognize assumption of the risk as a defense.¹²⁷ Assumption of the risk requires three criteria: 1) there must be a risk of harm to the plaintiff caused by the defendant's conduct or by the condition of the defendant's property; 2) the plaintiff must have actual knowledge of the particular risk and appreciate its magnitude; and 3) the plaintiff must voluntarily choose to accept that particular risk.¹²⁸ Used as a defense, assumption of the risk reflects that the plaintiff has willingly consented to use a product which he or she knows is defective and dangerous; thus relieving the defendant of the obligation of exercising reasonable care toward the plaintiff.¹²⁹ In response to an assumption of the risk defense, however, an invitee, whether a player or a spectator, will not have assumed the risk of an owner who failed to meet a duty of reasonable care.¹³⁰

To ameliorate the potential harshness resulting from the above defenses, a less restrictive governing body of law¹³¹ has emerged

124. See BERRY & WONG, *supra* note 52, § 4.12-5, at 293.

125. See KEETON *et. al*, *supra* note 51, at 451.

126. See Dix Noel, *Defective Products: Abnormal Use, Contributory Negligence and Assumption of Risk*, 25 VAND. L. REV. 93, 105 (1972).

127. In jurisdictions accepting the Restatement, contributory negligence is not a bar in an action based on strict liability. However, at least two courts have rejected this view. See *Stephan v. Sears, Roebuck & Co.*, 266 A.2d 855 (N.H. 1970); *Dippelo v. Sciano*, 155 N.W.2d 55 (Wisc. 1967).

128. See *e.g.*, *Hildebrand v. Minyard*, 494 P.2d 1328 (Ariz. Ct. App. 1972).

129. See PROSSER, *supra* note 88, at §68. Prosser notes that the plaintiff must not only know the facts that create the danger, but must also understand the danger itself. *Id.* at 447.

130. See *id.* at 359.

131. See KEETON, *supra* note 51, at 468-69, n.1. See also Victor E. Schwartz, *COMPARATIVE NEGLIGENCE* § 21.1, at 336 (1974); Gary T. Schwartz, *Contributory and Comparative Negligence: A Reappraisal*, 87 YALE L.J. 697 (1978).

under the theory of comparative negligence.¹³² Most states have adopted one of two rules: (1) if the plaintiff's negligence as compared with the total negligence or all of the defendants is greater than fifty percent, plaintiff is totally barred from recovery, or, (2) the plaintiff's negligence as compared with the total negligence of all defendants is fifty percent or less, plaintiff's damages are reduced in proportion to plaintiff's negligence.¹³³ Consequently, although the athlete may have contributed to his injury, recovery may still be permissible.

In products liability cases, the majority of courts have abolished contributory negligence and assumption of the risk defenses,¹³⁴ replacing them with a comparative fault system.¹³⁵ As of 1988, thirty jurisdictions applied comparative fault to product liability cases either by statute or by judicial expansion of a comparative negligence rule.¹³⁶ Many negligence cases have held that a seller will not be liable when the injury is a result of abnormal use.¹³⁷ Considering that artificial surfaces are manufactured for use in connection with athletic playing fields, an athlete's performance on artificial turf is not a deviant use of the product. Therefore, the comparative negligence defense should have only a limited application in the artificial turf context.

IV. TURF ALTERNATIVES

The trend among college athletic departments is to convert back to natural grass.¹³⁸ Coincidentally, competition in the artificial turf

132. See BERRY & WONG, *supra* note 52, § 4.12-5(c), at 299.

133. See *id.*

134. See KEETON, et. al, *supra* note 51, §102, at 710 n.1, 712 (information regarding products liability defenses). For some general discussions of product liability defenses based on the claimant's misconduct see, John F. Vargo, *The Defenses to Strict Liability in Tort: A New Vocabulary With an Old Meaning*, 29 MERCER L. REV. 447 (1978); Noel, *supra* note 126; David G. Epstein, *Products Liability: Defenses Based on Plaintiff's Conduct*, 1968 UTAH L. REV. 267 (1968); Aaron D. Twerski, *The Use and Abuse of Comparative Negligence in Products Liability*, 10 IND. L. REV. 797 (1977); Vincent S. Walkowiak, *Reconsidering Plaintiff's Fault in Product Liability Litigation: The Proposed Conscious Design Choice Exception* 33 VAND. L. REV. 651 (1983).

135. See KEETON, et. al, *supra* note 51, at 712.

136. See PROSSER, et. al, *supra* note 88, at 783.

137. See Noel, *supra* note 126, at 95 (explaining that when the plaintiff's injury results from an abnormal use, recovery will be denied on the basis that the harm is not within the risk, or that the harm is not proximately caused by the defendant's conduct).

138. See *Turf Under Attack*, *supra* note 17, at 4C (noting that Alabama, Florida, Iowa, Ohio State, and Michigan returned to real grass).

industry has dwindled.¹³⁹ The forerunner in the natural turf industry is "Prescription Athletic Turf" (PAT).¹⁴⁰ The patented technological features of the PAT system create a safer playing surface for athletes.¹⁴¹ Increased layers of soil and sand provide a cushion to absorb impact, as compared to the aging synthetic turf which lacks absorbency.¹⁴² Moreover, traction is improved by a drainage system which minimizes excess water.¹⁴³ It is estimated that in a ten year period, a conversion to a natural turf system could result in savings of almost a half million dollars.¹⁴⁴ Athletic coaches, players, and organizers of sporting events have endorsed the PAT system as being superior to synthetic turf.¹⁴⁵ In summary, the PAT system, is worthy of consideration as an alternative to artificial turf.

V. CONCLUSION

One nationally recognized collegiate football coach has suggested that high school athletes are recruited based on the athletes personal bias against artificial turf.¹⁴⁶ Another coach has expressed that the NCAA should pass a rule mandating that every college football team utilize a natural grass field.¹⁴⁷ The failure to heed the warning of athletic experts, medical specialists, and scientific research should ultimately subject those responsible to liability for player injuries resulting from artificial turf.

In conclusion, the use and preference of various surfaces have been the subject of frequent debate over the last decade. The recent controversy has caused some concern throughout the athletic turf in-

139. See Farrey, *supra* note 45, at 4C. Currently a German based organization has purchased the rights to AstroTurf, in addition to already owning Omniturf. *Id.*

140. PAT is manufactured by the Turfgrass Services Company, Pueblo, Colorado. Some of the more popular professional and collegiate stadiums that have utilized the PAT system include: Rose Ade Stadium — Purdue University; Scott Field — Mississippi State University; Kennedy Stadium — Washington, D.C.; Mile High Stadium — Denver, Colorado; Orange Bowl Stadium — Miami, Florida; Fulton County Stadium — Atlanta, Georgia; Joe Robbie Stadium — Miami, Florida; Seminole Stadium — Florida State University; Soldier Field Stadium — Chicago, Illinois; Ohio Stadium — Ohio State University; Michigan Stadium — University of Michigan; Bryant — Denny Stadium — University of Alabama; and most recently, Baltimore Orioles Ballpark — Baltimore, Maryland. See Farrey, *supra* note 45, at 4C.

141. See Costigan, *supra* note 37, at 222.

142. *Id.*

143. *Id.*

144. *Id.*

145. See Farrey, *supra* note 45, at 4C.

146. See Telephone Interview with John Cooper, *supra* note 3.

147. Dennis Dodd, *College Football's Turf War*, THE NAT. SPORTS DAILY, Oct. 30, 1990, at

dustry. Currently, the production of synthetic surfaces is governed internally by private manufacturers. Rather than allowing the industry to govern the guidelines for the product they manufacture, standards for controlling the athletic surface industry should be established by laws which would potentially result in the recognition of the rights of athletes. Indeed, the time has come for the judicial system and legislative bodies to recognize and protect the rights of athletes.