

A COMPARISON OF ARTIFICIAL AND REGULAR
TURFS IN REGARD TO ANKLE AND KNEE INJURIES

by

GILBERT LEWIS ROMAINE

B. S., East Stroudsburg State College
East Stroudsburg, Pennsylvania, 1966

3735

A MASTER'S REPORT

submitted in partial fulfillment of the
requirements for the degree

MASTER OF SCIENCE

Department of Physical Education

KANSAS STATE UNIVERSITY
Manhattan, Kansas

1970

Approved by:

R. W. Anthon

ACKNOWLEDGEMENTS

The writer wishes to express his sincere appreciation to each member of my committee:

Professor Raymond A. Wauthier, Chairman

Professor T. M. Evans

Dr. Fred A. Teague

The writer is especially grateful to Professor Wauthier for directing the organization and evaluation of the data.

The writer would also like to express his thanks and appreciation to Mr. "Porky" Morgan and the many athletic trainers who participated in this survey and gave of their time and knowledge in answering the questionnaires.

LD
2668
R4
1970
R65
C.2

TABLE OF CONTENTS

| | <u>Page</u> |
|--|-------------|
| ACKNOWLEDGMENTS | ii |
| TABLE OF CONTENTS | iii |
| LIST OF TABLES | iv |
| INTRODUCTION | 1 |
| PURPOSE | 1 |
| LIMITATIONS OF STUDY | 2 |
| REVIEW OF RELATED LITERATURE | 3 |
| METHOD OF STUDY | 4 |
| RESULTS AND DISCUSSION | 5 |
| SUMMARY AND CONCLUSIONS | 11 |
| FOOTNOTE | 14 |
| BIBLIOGRAPHY | 15 |
| APPENDIX | 16 |
| Letter To Athletic Trainers | 17 |
| Questionnaire | 18 |

LIST OF TABLES

| <u>Table</u> | | <u>Page</u> |
|--------------|---|-------------|
| I | TOTAL NUMBER OF KNEE INJURIES | 5 |
| II | KNEE INJURIES REQUIRING SURGERY | 6 |
| III | SIDELINED OVER ONE WEEK WITHOUT SURGERY | 6 |
| IV | MISSED ONE DAY TO ONE WEEK OF PRACTICE | 7 |
| V | TOTAL NUMBER OF ANKLE INJURIES | 8 |
| VI | ANKLE INJURIES REQUIRING SURGERY | 8 |
| VII | SIDELINED OVER ONE WEEK WITHOUT SURGERY | 9 |
| VIII | MISSED ONE DAY TO ONE WEEK OF PRACTICE | 10 |

INTRODUCTION

The game of football has made tremendous progress since the first game played between Princeton and Rutgers in 1869. It has developed into one of America's most popular and colorful sports attractions.

One phase of the sport that has witnessed drastic changes through the years, is the equipment and it's effect on the players' safety. Early football teams played without helmets and protective pads. This was a drastic difference from the highly elaborate and safety emphasized equipment worn by athletes today.

With the emphasis placed by our present day society on safety, sporting goods companies each year try to outdo their competitor by researching and improving their equipment to the best of their ability. This has had a definite effect on the reduction of football injuries through the years.

Today, one of the most popular topics of discussion among people involved in athletics is concerned with what effect artificial turf has on the athlete's safety. When this topic is brought up, the question usually arises, "Which gives the athlete the greatest amount of protection, artificial or regular turf?".

PURPOSE

The purpose of this report was to determine whether there was any difference between artificial and regular turfs in regard to their effect upon knee and ankle injuries.

All coaches should be interested in the safety of the men playing for them, and it was hoped that this report would provide useful information concerning this matter.

This report may also prove to be a valuable source to other interested people who are surveying the pros and cons with regard to the possibilities of installing artificial turf, in the hope of improving existing facilities.

LIMITATIONS OF STUDY

As previously mentioned, the report dealt only with knee and ankle injuries during game competition. It was felt that it would be difficult to include practice injuries because of the following two reasons:

(1) Practice sessions varied greatly from day to day. One practice may include numerous contact drills while the next practice could include very little or none. One team may rely upon contact drills, making them more susceptible to injury than the team that does not depend as much on contact. Because of the before mentioned facts, game competition gives a much more reliable source of information to follow as basis for a report, since physical activity and contact fluctuates very little from one game to the next, especially when one is trying to determine the number of injuries occurring per activity.

(2) Very few teams practice on artificial turf. Because of this, data concerning practice sessions was not compiled. According to information received from the companies producing artificial turf, the Universities of Alabama and Texas are the only schools that have their practice areas covered with artificial turf.

Also, due to a lack of time, this study dealt only with 1969 statistics. The reliability of the study would obviously improve if it was continued over more than one season.