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Using Agronomic Data to Minimize the Impact of Field Conditions on Player Injuries and Enhance the Development of a Risk Management Plan

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An important aspect of facility management is the development of a comprehensive risk management plan. Player safety has only recently been a consideration when developing a risk management plan. Field conditions have not received much attention as it relates to player safety. Several injuries at Optus Stadium in Perth Australia raised questions about the playing surface being the cause. The purpose of this study was to determine the ability of established athletic field agronomic measures to predict injuries from football fields and soccer pitches. Logistic regression was used to predict injury based upon soil compaction, soil moisture, surface firmness, and turfgrass quality. Results indicate that athletic fields that met good standards had the lowest probability of injury and injury probability is the highest when field conditions are considered poor. These results provide parameters facility and athletic field managers can use to determine whether an athletic field demonstrates a low risk of injury, needs to be improved, or a game should be canceled.