Grant

FYC 13100

Professor Clauss

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Wood or Aluminum? The Answer is Clear

Situation: As a recent graduate of McQuaid Jesuit High School in Rochester, NY and a former member of the varsity baseball team, I am writing a letter to the commissioners of Section V (my region of the New York State Public High School Athletic Association) about the merits of requiring wood bats to be used by all high school baseball teams instead of the current aluminum ones. There has been discussion lately about the switch because of the danger of sharp line drives coming off of aluminum bats that injure pitchers. Section V commissioners are currently undecided as to whether to institute this sweeping change. I hope to convince them that instituting a wooden bat rule would be beneficial in terms of improving quality of play, having a more economical alternative to aluminum bats, and causing fewer injuries.

Dear Members of the Section V Baseball Executive Committee,

I am writing to you as a former Section V baseball player to address the importance of implementing a wooden bat rule for all teams in the area. As you know, this topic has become increasingly relevant as many leagues around the country are switching from the high-tech aluminum bats to the safer and less costly lumber alternative. This issue has far more to it than trying to replace the unnatural ping of these new age bats with the solid crack that has been a staple of the game since its invention. Wood bats will cause hitters to concentrate on fundamentals, they are much cheaper than aluminum bats, and most importantly, they are safer than metal bats.

One benefit of using wooden bats is that quality of game play would improve. They have smaller “sweet spots” (the areas that give the ball maximum speed coming off the bat) requiring players to have quicker hands and the ability to adjust to different pitches. This is due to physics; aluminum bats have larger sweet spots because of the greater length between their two nodes of

vibration (more energy is transferred to the ball in this region as opposed to staying in the bat as vibrations) (Russell, “Sweet Spot”). Also, aluminum bats continue to vibrate after impact for up to ten times longer than wood bats (Russell, “Sweet Spot”). Because of this, aluminum bats can make up for mistakes in timing or location by a batter because the ball can hit a larger area of the bat and still go far. Wood bats, on the other hand, magnify mistakes because balls that are not hit solidly will result in foul tips, weak grounders, or even cracking or splintering of the bat. It is much more crucial to develop hitting fundamentals when using wooden bats because these mistakes cannot be covered over. Wooden bats require players to spend much more time doing basic drills such as hitting off the tee to improve their swing. With this added practice and focus on fundamentals, the quality of hitting in the league as a whole is sure to improve. I have played with wood bats in several tournaments including the Sandlot World Series Classic in Ontario, Canada and I have to say that I prefer them. It took a little getting used to at first but there is nothing more satisfying than hearing that sharp crack as I rip a line drive up the middle, knowing that my timing and swing were completely on. On the other hand, there is nothing worse than getting jammed on an inside pitch and watching splinters fly off of the bat. My experience with wood bats caused me to be a better hitter because I had to concentrate so much more. Using these bats requires great attention to detail in every aspect of the swing and would result in better-disciplined hitters.

Not only do wood bats improve game play, but also they are much more economical. High-end aluminum bats are extremely expensive. Take, for example, Easton’s Stealth and Louisville Slugger’s Exo, which are two of the most popular models in high school baseball. According to The Hitting Store’s website, the Stealth retails at $429.00 and the Exo retails at $385.00. Compare these to the cheaper wood bats such as Akadema’s A843 that goes for $40.00.

Granted, there are pro models that can run up to around $120.00, but this is still substantially cheaper than aluminum models. There is the argument that wood bats break often and need to be replaced, but the likelihood of going through more than two wood bats in a season is low at the high school level. Pitchers do not throw hard enough to crack the lumber; I myself have never broken a wood bat. The extra expense is unnecessary because these are high school athletes, not professionals who are playing the sport as their full time job. Nobody needs to be asking his parents for a four hundred dollar bat just so he can fit in with the rest of the team. It is also not fair to players who cannot afford these types of bats. I remember playing inner city team such as East High School, and their players would comment on the wide array of new model bats we had, while they were stuck with outdated school-owned bats. Requiring wood bats to be used would level the playing field, as all players would have more equivalent models to choose from.

Though the quality of play and cost are important factors in this decision, the most crucial one is safety. Aluminum bats have become extremely powerful as new technology comes out each year. Bats with features such as nitrogen gas chambers and triple-walled barrels have amplified the effects of the speed of the ball coming off the bat. Metal bats are hollow. This means that the bat will compress and expand as the ball hits it, giving the ball much more speed as it leaves. The compression and expanding gives the bat shapes called hoop modes and creates a “trampoline effect” (Russell, “Sweet Spot”). Wood bats have less ball exit speed because they have no hoop modes to transfer as much energy, (Russell, “Sweet Spot”). The capabilities of aluminum bats are an immediate danger to pitchers and infielders who do not have the time to react and protect themselves. At such high speeds, these batted balls can do a lot of damage. Even a split second delay would make a difference, as a fielder would have slightly more reaction time to duck or get a glove on the ball. This is why wooden bats are a much safer

alternative. Wooden bats also have slower bat speed because they have completely solid barrels. This makes the center of gravity farther away from the batter, slowing down the time it takes to swing. All bats used by NCAA and high school teams must be approved by the ball exit speed ratio (BESR) test, but this does not mean that they will not cause injury. This does not measure for actual batted ball speed, but rather the ratio of the combined speeds of the pitched ball and the swung bat. The 97 mph exit speed standard for the test assumes a 34-ounce bat, a 70 mph pitch and a swing speed of 66 mph, (Russell, "Should"). However, high school bats are lighter, the pitches and bat speeds are usually faster, meaning that the ball will get to a pitcher faster than he can react if it is hit solidly. Sure it is still possible to get injured with a wooden bat, but the likelihood is that injuries would occur less often and be less severe. I remember getting hit in the shins or narrowly avoiding countless line drives during my playing days. It still scares me to think what would have happened if the ball had been several inches closer. One of my good friends and a former McQuaid teammate, Joe Sanders, was struck in the face by a line drive as he played first base in our Pittsford Little League All-Star game. I will never forget the tense seconds as he collapsed on the field and my coach running out to him yelling for him to get up. He was taken away in an ambulance but ended up not getting seriously injured except for a large bruise and the seams from the baseball imprinted on his forehead. He was fortunate enough to come away with no grave injuries, but many other athletes have not been as lucky.

Metal bats have caused severe injuries and even death, prodding leagues around the country to require wood bats only. Take the story of Steven Domalewski, whose life has been affected permanently by a sharp line drive. His journey is chronicled by Kevin Armstrong on *Sports Illustrated*'s website. On June 26, 2006 the active 12-year-old little leaguer from New Jersey was pitching when a sharp line drive struck him in the chest. His heart stopped due to

commotio cortis and oxygen flow ceased to his brain. A coach on the opposing team frantically performed CPR as worried parents and players watched until paramedics arrived and took him to the hospital. He was placed on a ventilator and it wasn't until three days later that doctors informed his parents that he would survive. Even a year later, he was unable to speak or walk. He spent eight and a half months in St. Joseph's and Children's Specialized Hospital in Mountainside, New Jersey. The ball that did it was hit off a new Louisville Slugger TPX Platinum model. Jack McKay, formerly in charge of Louisville Slugger's metal bat development and engineering, told Sporting News his opinion on the advanced metal bats, saying: "This is the kind of technology you ought to be throwing at bin Laden, not some baseball pitcher. We've over-engineered it. It's the worst thing I ever did. Aluminum bats and wood bats are not even in the same ballpark" (Keteyian). It is impossible to say that Steven's tragic injury would have surely have been avoided using a wood bat, but it is likely that it would have been less severe. Steven's story is just one among many. Brandon Patch, and 18-year-old American Legion pitcher, died from head injuries suffered when he was struck by a line drive on June 25, 2003 in Montana (Kallas). Chris Palmer, a 16-year-old from Stamford, Connecticut, lost an eye and had other head injuries when he was hit in the face by a line drive during batting practice. He and his family sued the coach, league, and the owners of the field where he was hit (Kallas). Most of these injuries are not only affecting athletes and their families with grief and large medical bills, but are also turning into large lawsuits. Even one accident could cause huge controversy in Section V baseball. Why wait for an accident to happen when you could thwart it right now? Switching to wood bats right now would prevent both tragedies and lawsuits in the future.

As a former pitcher, I can tell you that I felt much safer when facing batters with wood bats. Nothing shook my confidence and rhythm like a screaming line drive that came straight at

me. You can never help but think what might have happened if you had slipped or were not able to get your glove up in time. Most of you are former coaches and I know that you would feel terrible if you had to witness an incident like what happened to Steven Domalewski or Brandon Patch. The Don't Take My Bat Away Coalition (quoting the NCAA Injury Surveillance System) notes that only 32 injuries occurred out of 331,821-batted balls when data was taken in 2005 and 2006 for 93 NCAA teams and 246 summer league teams. They claim that this is too small of a number to warrant switching to wood bats. Is it right to reduce these injuries and fatalities to a simple statistic? These are human beings this is happening to. The potential to prevent any of these life-changing injuries should be convincing enough to implement the rule change. You have seen our neighbors in Buffalo (Section VI) implement this rule change several years ago and it went through smoothly. The added benefits of improving quality of game play, having hitters focus on fundamentals, and lowering costs for athletes is enough to make the switch worthwhile. I hope that you can use the experience of a former player to make an informed decision and make the switch from aluminum to wood bats.

Sincerely,

Grant Smith

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