CLEMSON, S.C. (AP) — Clemson left-hander Matthew Crownover kept working on the game in the offseason, even though the Tigers' fall workouts hadn't started until last weekend.

Crownover was part of a study led by Clemson University communications professor Jimmy Sanderson about how baseball teams are constructed, and more specifically if there are positions on the diamond where it's better to have home-grown talent or to go after outside free agents.

The research found over a five-year span from 2009-2013, Major League Baseball playoff teams relied on catchers, leftfielders and relief pitchers developed through their organizations.

Also, the study said American League teams who have brought third- and second-basemen up through their system are more successful than those that don't.

"Thus, teams should protect their home-grown players at these positions and focus acquisition efforts on players at other positions," according to the study's conclusions.
the contests.

"This was a great thrill for me because I figured out something for the game of baseball," Crownover said.

Crownover, from Ringgold, Georgia, led Clemson with eight wins and had a 2.99 ERA. He was drafted by San Francisco in the 21st round last June, yet chose to return for his junior year.

Sanderson and Crownover won an award for their research at the SABR Convention in Houston earlier this summer, Clemson's pitcher even getting a few minutes with Astros GM Jeff Luhnow.

Crownover said he got some good feedback from sabermetricians about expanding the time the study covered to make the results more significant. The pitcher said he's fired up to do more as he prepares himself for life in baseball when his playing days are done.

"This was a big boost of confidence," he said.

Sanderson said Crownover was an eager student with solid ideas about other research projects on how teams are built.

"It's fun to see a different side of him," Sanderson said. "His knowledge of baseball, talking about the draft and breaking down these guys games, just fun to work with him in that capacity."

Expect more and more players to take an interest in analytics and numbers beyond wins and losses, said Vince Gennaro, president of the SABR Board of Directors. Gennaro said players like New York Yankees pitcher Brandon McCarthy continually tracked his rate of ground balls.

"A lot of young people want to know why," Gennaro said. "When a coach says something these days, they want to know the reasoning behind. Data and information help do that."

Crownover hopes to expand the research over the past 30 years and see if the study's results hold up. He said Clemson researchers knew they had some interesting conclusions and were glad to see others at the SABR gathering thought so, too.

"We knew it was pretty good stuff, but we didn't know what people would think when you submit it," he said. "You don't know what all these Ivy League characters have done."

And Crownover hopes his research one day leads him to an MLB front office.